

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

FORM 10-Q

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
FOR THE QUARTERLY PERIOD ENDED SEPTEMBER 30, 2024

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 000-19319

Vertex Pharmaceuticals Incorporated

(Exact name of registrant as specified in its charter)

Massachusetts

(State or other jurisdiction of incorporation or organization)

04-3039129

(I.R.S. Employer Identification No.)

50 Northern Avenue , Boston , Massachusetts

(Address of principal executive offices)

02210

(Zip Code)

Registrant's telephone number, including area code (617) 341-6100

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, \$0.01 Par Value Per Share	VRTX	The Nasdaq Global Select Market

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

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

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

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

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

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Common Stock, par value \$0.01 per share	257,529,290	Outstanding at October 31, 2024
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VERTEX PHARMACEUTICALS INCORPORATED
FORM 10-Q
FOR THE QUARTER ENDED SEPTEMBER 30, 2024

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"Vertex," "we," "us," and "our" as used in this Quarterly Report on Form 10-Q refer to Vertex Pharmaceuticals Incorporated, a Massachusetts corporation, and its subsidiaries.

"Vertex®," "KALYDECO®," "ORKAMBI®," "SYMDEKO®," "SYMKEVI®," "TRIKAFTA®," "KAFTRIO®," and CASGEVY®" are registered trademarks of Vertex. Other brands, names and trademarks contained in this Quarterly Report on Form 10-Q are the property of their respective owners.

We use the brand name for our products when we refer to the product that has been approved and with respect to the indications on the approved label. Otherwise, including in discussions of our development programs, we refer to our compounds and therapies by their scientific (or generic) name or VX developmental designation.

Part I. Financial Information
Item 1. Financial Statements

VERTEX PHARMACEUTICALS INCORPORATED
Condensed Consolidated Statements of Income
(in millions, except per share amounts)(unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Product revenues, net	\$ 2,771.9	\$ 2,483.5	\$ 8,108.1	\$ 7,351.5
Costs and expenses:				
Cost of sales	392.6	318.7	1,107.1	894.2
Research and development expenses	875.9	810.0	2,631.6	2,338.3
Acquired in-process research and development expenses	15.0	51.7	4,540.9	509.3
Selling, general and administrative expenses	371.8	263.8	1,086.7	767.5
Change in fair value of contingent consideration	0.3	1.2	0.7	(1.3)
Total costs and expenses	1,655.6	1,445.4	9,367.0	4,508.0
Income (loss) from operations	1,116.3	1,038.1	(1,258.9)	2,843.5
Interest income	132.2	167.9	469.9	435.2
Interest expense	(7.5)	(10.9)	(27.8)	(33.5)
Other expense, net	(16.9)	(15.9)	(71.2)	(13.0)
Income (loss) before provision for income taxes	1,224.1	1,179.2	(888.0)	3,232.2
Provision for income taxes	178.7	143.9	560.6	581.4
Net income (loss)	\$ 1,045.4	\$ 1,035.3	\$ (1,448.6)	\$ 2,650.8
Net income (loss) per common share:				
Basic	\$ 4.05	\$ 4.01	\$ (5.61)	\$ 10.29
Diluted	\$ 4.01	\$ 3.97	\$ (5.61)	\$ 10.18
Shares used in per share calculations:				
Basic	258.0	258.0	258.1	257.7
Diluted	261.0	260.6	258.1	260.4

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

VERTEX PHARMACEUTICALS INCORPORATED
Condensed Consolidated Statements of Comprehensive Income
(in millions)(unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Net income (loss)	\$ 1,045.4	\$ 1,035.3	\$ (1,448.6)	\$ 2,650.8
Other comprehensive income (loss):				
Unrealized holding gains (losses) on available-for-sale debt securities, net of tax of \$(18.3), \$ 1.7 , \$(11.4) and \$ 5.2 , respectively	66.7	(6.2)	41.6	(18.8)
Unrealized (losses) gains on foreign currency forward contracts, net of tax of \$ 17.3 , \$(13.2), \$ 1.8 and \$(1.6) , respectively	(63.0)	48.0	(6.7)	5.9
Foreign currency translation adjustment	2.6	(5.0)	8.2	9.1
Total other comprehensive income (loss)	6.3	36.8	43.1	(3.8)
Comprehensive income (loss)	\$ 1,051.7	\$ 1,072.1	\$ (1,405.5)	\$ 2,647.0

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

VERTEX PHARMACEUTICALS INCORPORATED
Condensed Consolidated Balance Sheets
(in millions, except share data)(unaudited)

	September 30, 2024	December 31, 2023
Assets		
Current assets:		
Cash and cash equivalents	\$ 5,239.2	\$ 10,369.1
Marketable securities	1,285.3	849.2
Accounts receivable, net	1,750.6	1,563.4
Inventories	1,079.8	738.8
Prepaid expenses and other current assets	449.2	623.7
Total current assets	9,804.1	14,144.2
Property and equipment, net	1,117.8	1,159.3
Goodwill	1,088.0	1,088.0
Other intangible assets, net	831.6	839.9
Deferred tax assets	2,308.9	1,812.1
Operating lease assets	1,396.1	293.6
Long-term marketable securities	4,703.5	2,497.8
Other assets	990.2	895.3
Total assets	\$ 22,240.2	\$ 22,730.2
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	\$ 395.8	\$ 364.9
Accrued expenses	3,219.7	2,655.3
Other current liabilities	357.6	527.2
Total current liabilities	3,973.1	3,547.4
Long-term finance lease liabilities	114.0	376.1
Long-term operating lease liabilities	1,588.9	348.6
Other long-term liabilities	933.3	877.7
Total liabilities	6,609.3	5,149.8
Commitments and contingencies	—	—
Shareholders' equity:		
Preferred stock, \$ 0.01 par value; 1,000,000 shares authorized; none issued and outstanding	—	—
Common stock, \$ 0.01 par value; 500,000,000 shares authorized, 257,739,599 and 257,695,221 shares issued and outstanding, respectively	2.6	2.6
Additional paid-in capital	6,905.7	7,449.7
Accumulated other comprehensive income (loss)	28.8	(14.3)
Retained earnings	8,693.8	10,142.4
Total shareholders' equity	15,630.9	17,580.4
Total liabilities and shareholders' equity	\$ 22,240.2	\$ 22,730.2

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

VERTEX PHARMACEUTICALS INCORPORATED
Condensed Consolidated Statements of Shareholders' Equity
(in millions)(unaudited)

	Three Months Ended					
	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Shareholders' Equity
	Shares	Amount				
Balance at June 30, 2023	257.8	\$ 2.6	\$ 7,369.1	\$ (39.8)	\$ 8,138.3	\$ 15,470.2
Other comprehensive income, net of tax	—	—	—	36.8	—	36.8
Net income	—	—	—	—	1,035.3	1,035.3
Repurchases of common stock	(0.4)	(0.0)	(123.0)	—	—	(123.0)
Common stock withheld for employee tax obligations	(0.1)	(0.0)	(53.2)	—	—	(53.2)
Issuance of common stock under benefit plans	0.5	0.0	15.0	—	—	15.0
Stock-based compensation expense	—	—	131.7	—	—	131.7
Balance at September 30, 2023	257.8	\$ 2.6	\$ 7,339.6	\$ (3.0)	\$ 9,173.6	\$ 16,512.8
Balance at June 30, 2024	258.0	\$ 2.6	\$ 7,101.2	\$ 22.5	\$ 7,648.4	\$ 14,774.7
Other comprehensive income, net of tax	—	—	—	6.3	—	6.3
Net income	—	—	—	—	1,045.4	1,045.4
Repurchases of common stock	(0.6)	(0.0)	(307.6)	—	—	(307.6)
Common stock withheld for employee tax obligations	(0.2)	(0.0)	(83.7)	—	—	(83.7)
Issuance of common stock under benefit plans	0.5	0.0	7.6	—	—	7.6
Stock-based compensation expense	—	—	188.2	—	—	188.2
Balance at September 30, 2024	257.7	\$ 2.6	\$ 6,905.7	\$ 28.8	\$ 8,693.8	\$ 15,630.9

	Nine Months Ended					
	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Retained Earnings	Total Shareholders' Equity
	Shares	Amount				
Balance at December 31, 2022	257.0	\$ 2.6	\$ 7,386.5	\$ 0.8	\$ 6,522.8	\$ 13,912.7
Other comprehensive loss, net of tax	—	—	—	(3.8)	—	(3.8)
Net income	—	—	—	—	2,650.8	2,650.8
Repurchases of common stock	(0.9)	(0.0)	(284.1)	—	—	(284.1)
Common stock withheld for employee tax obligations	(0.7)	(0.0)	(222.9)	—	—	(222.9)
Issuance of common stock under benefit plans	2.4	0.0	85.7	—	—	85.7
Stock-based compensation expense	—	—	374.4	—	—	374.4
Balance at September 30, 2023	257.8	\$ 2.6	\$ 7,339.6	\$ (3.0)	\$ 9,173.6	\$ 16,512.8
Balance at December 31, 2023	257.7	\$ 2.6	\$ 7,449.7	\$ (14.3)	\$ 10,142.4	\$ 17,580.4
Other comprehensive income, net of tax	—	—	—	43.1	—	43.1
Net loss	—	—	—	—	(1,448.6)	(1,448.6)
Repurchases of common stock	(1.7)	(0.0)	(763.8)	—	—	(763.8)
Common stock withheld for employee tax obligations	(0.9)	(0.0)	(397.7)	—	—	(397.7)
Issuance of common stock under benefit plans	2.6	0.0	79.3	—	—	79.3
Stock-based compensation expense	—	—	538.2	—	—	538.2
Balance at September 30, 2024	257.7	\$ 2.6	\$ 6,905.7	\$ 28.8	\$ 8,693.8	\$ 15,630.9

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

VERTEX PHARMACEUTICALS INCORPORATED
Condensed Consolidated Statements of Cash Flows
(in millions)(unaudited)

	Nine Months Ended September 30,	
	2024	2023
Cash flows from operating activities:		
Net (loss) income	\$ (1,448.6)	\$ 2,650.8
Adjustments to reconcile net (loss) income to net cash (used in) provided by operating activities:		
Stock-based compensation expense	530.7	372.6
Depreciation and amortization expense	160.7	122.3
Deferred income taxes	(400.4)	(405.5)
Loss on equity securities	50.5	0.2
Increase (decrease) in fair value of contingent consideration	0.7	(1.3)
Other non-cash items, net	(16.2)	(9.6)
Changes in operating assets and liabilities:		
Accounts receivable, net	(168.3)	(99.5)
Inventories	(369.8)	(252.9)
Prepaid expenses and other assets	(35.7)	(94.4)
Accounts payable	41.1	80.5
Accrued expenses	533.0	786.1
Other liabilities	45.1	153.4
Net cash (used in) provided by operating activities	(1,077.2)	3,302.7
Cash flows from investing activities:		
Purchases of available-for-sale debt securities	(5,279.6)	(2,798.0)
Sales and maturities of available-for-sale debt securities	3,005.4	621.0
Acquisition of available-for-sale debt securities from Alpine Immune Sciences, Inc.	(258.0)	—
Purchases of property and equipment	(205.1)	(142.3)
Net payments related to finite-lived intangible assets	(187.7)	—
Sale of equity securities	—	95.1
Other investing activities	(23.1)	(31.0)
Net cash used in investing activities	(2,948.1)	(2,255.2)
Cash flows from financing activities:		
Issuances of common stock under benefit plans	80.3	88.2
Repurchases of common stock	(759.2)	(278.1)
Payments in connection with common stock withheld for employee tax obligations	(397.7)	(222.9)
Payments on finance leases	(32.3)	(32.9)
Other financing activities	5.3	3.3
Net cash used in financing activities	(1,103.6)	(442.4)
Effect of changes in exchange rates on cash	4.7	(0.5)
Net (decrease) increase in cash, cash equivalents and restricted cash	(5,124.2)	604.6
Cash, cash equivalents and restricted cash—beginning of period	10,372.3	10,512.0
Cash, cash equivalents and restricted cash—end of period	\$ 5,248.1	\$ 11,116.6
Supplemental disclosure of cash flow information:		
Cash paid for income taxes	\$ 810.3	\$ 919.1
Cash paid for interest	\$ 27.8	\$ 32.6

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

VERTEX PHARMACEUTICALS INCORPORATED
Notes to Condensed Consolidated Financial Statements (unaudited)

A. Basis of Presentation and Accounting Policies

Basis of Presentation

The accompanying condensed consolidated financial statements are unaudited and have been prepared by Vertex Pharmaceuticals Incorporated ("Vertex," "we," "us" or "our") in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP").

The condensed consolidated financial statements reflect the operations of Vertex and our wholly-owned subsidiaries. All material intercompany balances and transactions have been eliminated. We operate in one segment, pharmaceuticals.

Certain information and footnote disclosures normally included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023 (the "2023 Annual Report on Form 10-K") have been condensed or omitted. These interim financial statements, in the opinion of management, reflect all normal recurring adjustments necessary for a fair presentation of the financial position and results of income for the interim periods ended September 30, 2024 and 2023.

The results of operations for the interim periods are not necessarily indicative of the results of operations to be expected for the full fiscal year. These interim financial statements should be read in conjunction with the audited financial statements for the year ended December 31, 2023, which are contained in our 2023 Annual Report on Form 10-K.

Use of Estimates

The preparation of condensed consolidated financial statements in accordance with U.S. GAAP requires us to make certain estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of our condensed consolidated financial statements, and the amounts of revenues and expenses during the reported periods. We base our estimates on historical experience and various other assumptions, including in certain circumstances future projections that we believe to be reasonable under the circumstances. Actual results could differ from those estimates. Changes in estimates are reflected in reported results in the period in which they become known.

Recently Adopted Accounting Standards

As noted in Note A, "Nature of Business and Accounting Policies," in our 2023 Annual Report on Form 10-K, we did not adopt any accounting standards that had a significant impact on our consolidated financial statements in the three years ended December 31, 2023.

Recently Issued Accounting Standards

Segment Reporting

In 2023, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures* ("ASU 2023-07"), which requires public entities to disclose significant segment expenses and other segment items. ASU 2023-07 also requires public entities to provide in interim periods all disclosures about a reportable segment's profit or loss and assets that are currently required annually. ASU 2023-07 becomes effective for the annual period starting on January 1, 2024, and for the interim periods starting on January 1, 2025. We are in the process of analyzing the impact that the adoption of ASU 2023-07 will have on our segment disclosures.

Income Tax Disclosures

In 2023, the FASB issued ASU 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures* ("ASU 2023-09"), which requires public entities to disclose in their rate reconciliation table additional categories of information about federal, state and foreign income taxes and to provide more details about the reconciling items in some categories if items meet a quantitative threshold. ASU 2023-09 becomes effective for the annual period starting on January 1, 2025. We are in the process of analyzing the impact that the adoption of ASU 2023-09 will have on our income tax disclosures.

Summary of Significant Accounting Policies

Our significant accounting policies are described in Note A, "Nature of Business and Accounting Policies," in our 2023 Annual Report on Form 10-K.

VERTEX PHARMACEUTICALS INCORPORATED
Notes to Condensed Consolidated Financial Statements (unaudited)

B. Revenue Recognition

Disaggregation of Revenue

Revenues by Product

"Product revenues, net" consisted of the following:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
(in millions)				
TRIKAFTA/KAFTRIO	\$ 2,585.0	\$ 2,274.3	\$ 7,517.8	\$ 6,611.4
Other product revenues	186.9	209.2	590.3	740.1
Total product revenues, net	<u>\$ 2,771.9</u>	<u>\$ 2,483.5</u>	<u>\$ 8,108.1</u>	<u>\$ 7,351.5</u>

In the three and nine months ended September 30, 2024, "Other product revenues" included CASGEVY product revenues of \$ 2.0 million.

Product Revenues by Geographic Location

"Product revenues, net" by geographic region, based on the location of the customer, consisted of the following:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
(in millions)				
United States	\$ 1,713.5	\$ 1,554.2	\$ 4,847.7	\$ 4,465.8
Outside of the United States				
Europe	847.7	766.5	2,621.9	2,373.7
Other	210.7	162.8	638.5	512.0
Total product revenues outside of the United States	<u>1,058.4</u>	<u>929.3</u>	<u>3,260.4</u>	<u>2,885.7</u>
Total product revenues, net	<u>\$ 2,771.9</u>	<u>\$ 2,483.5</u>	<u>\$ 8,108.1</u>	<u>\$ 7,351.5</u>

Contract Liabilities

We had contract liabilities of \$ 220.0 million and \$ 170.3 million as of September 30, 2024 and December 31, 2023, respectively, related to annual contracts with government-owned and supported customers in international markets that limit the amount of annual reimbursement we can receive for our cystic fibrosis ("CF") products. Upon exceeding the annual reimbursement amount provided by the customer's contract with us, our CF products are provided free of charge, which is a material right. These contracts include upfront payments and fees. If we estimate that we will exceed the annual reimbursement amount under a contract, we defer a portion of the consideration received for shipments made up to the annual reimbursement limit as a portion of "Other current liabilities." Once the reimbursement limit has been reached, we recognize the deferred amount as revenue when we ship the free products. Our CF product revenue contracts include performance obligations that are one year or less.

Our contract liabilities at the end of each fiscal year relate to contracts with CF annual reimbursement limits in international markets in which the annual period associated with the contract is not the same as our fiscal year. In these markets, we recognize revenues related to performance obligations satisfied in previous years; however, these revenues do not relate to any performance obligations that were satisfied more than 12 months prior to the beginning of the current year.

C. Collaboration, License and Other Arrangements

We have entered into numerous business development agreements with third parties to collaborate on research, development and commercialization programs, license technologies, or acquire assets. Our "Acquired in-process research and development expenses" ("AIPR&D") included \$ 15.0 million and \$ 4.5 billion in the three and nine months ended September

VERTEX PHARMACEUTICALS INCORPORATED
Notes to Condensed Consolidated Financial Statements (unaudited)

30, 2024, respectively. Our AIPR&D in the nine months ended September 30, 2024, primarily included \$ 4.4 billion associated with our asset acquisition of Alpine Immune Sciences, Inc. ("Alpine") as discussed below. Our AIPR&D included \$ 51.7 million and \$ 509.3 million in the three and nine months ended September 30, 2023, respectively, related to upfront, contingent milestone, or other payments pursuant to our business development transactions.

Our collaboration, licensing and asset acquisition agreements that had a significant impact on our financial statements for the three and nine months ended September 30, 2024 and 2023 or were new or materially revised during the three and nine months ended September 30, 2024, are described below. Additional agreements are described in Note B, "Collaboration, License and Other Arrangements," of our 2023 Annual Report on Form 10-K.

Asset Acquisitions

Alpine Immune Sciences, Inc. - povetacept

On May 20, 2024, we acquired all of the issued and outstanding shares of common stock of Alpine, a publicly traded biotechnology company focused on discovering and developing innovative, protein-based immunotherapies for approximately \$ 5.0 billion in cash. We funded the Alpine acquisition with our cash and cash equivalents.

Alpine's lead molecule, povetacept, is a highly potent and effective dual antagonist of B cell activating factor ("BAFF") and a proliferation inducing ligand ("APRIL"). As of the acquisition date, povetacept was through Phase 2 development and had shown potential best-in-class efficacy in IgA nephropathy ("IgAN"), a serious, progressive, autoimmune disease of the kidney that can lead to end-stage-renal disease. Due to its mechanism of action as a dual BAFF/APRIL antagonist, povetacept also holds the potential to benefit patients with other serious autoimmune diseases of the kidney, such as membranous nephropathy and lupus nephritis. We accounted for the Alpine transaction as an asset acquisition because povetacept represented substantially all of the fair value of the gross assets that we acquired. As a result, \$ 4.4 billion of fair value attributed to povetacept was expensed to AIPR&D in the second quarter of 2024 and is included in AIPR&D in the nine months ended September 30, 2024.

We paid total cash of \$ 5.0 billion at the acquisition date, which included \$ 4.8 billion to acquire Alpine and \$ 197.6 million for cash-settled unvested Alpine equity awards. The \$ 197.6 million represents post-acquisition expense, which was recorded as \$ 165.0 million of "Research and development expenses" and \$ 32.6 million of "Selling, general and administrative expense" in the nine months ended September 30, 2024.

The total cash paid to acquire Alpine, allocation of consideration to the assets acquired and liabilities assumed and AIPR&D was as follows:

	(in millions)
Cash consideration to acquire Alpine's outstanding common stock	\$ 4,536.9
Cash consideration for Alpine's vested and unvested equity awards	420.6
Total cash consideration paid to Alpine	4,957.5
Less: Expense related to unvested equity awards	(197.6)
Transaction costs	40.7
Total consideration allocated	\$ 4,800.6
Cash and cash equivalents	\$ 31.9
Current marketable securities	209.5
Long-term marketable securities	48.5
Deferred tax asset	105.5
Total other assets	19.5
Total liabilities	(37.5)
Total identifiable assets acquired, net	377.4
Acquired in-process research and development expense	4,423.2
Total consideration allocated	\$ 4,800.6

VERTEX PHARMACEUTICALS INCORPORATED
Notes to Condensed Consolidated Financial Statements (unaudited)

Septerna, Inc. - Novel G Protein-coupled Receptor Program

In September 2023, pursuant to an asset purchase agreement, we acquired a novel G protein-coupled receptor ("GPCR") program from Septerna, Inc. We accounted for this transaction as an asset acquisition because the GPCR program represented substantially all of the fair value of the gross assets that we acquired, it did not constitute a business, and for which we determined there is no alternative future use. As a result, we recorded \$ 47.5 million to AIPR&D in the three and nine months ended September 30, 2023.

In-license Agreements

CRISPR Therapeutics AG

CRISPR-Cas9 Gene-editing Therapies Agreements

In 2015, we entered into a strategic collaboration, option, and license agreement (the "CRISPR Agreement") with CRISPR Therapeutics AG and its affiliates ("CRISPR") to collaborate on the discovery and development of potential new treatments aimed at the underlying genetic causes of human diseases using CRISPR-Cas9 gene-editing technology. We had the exclusive right to license certain targets. In 2019, we elected to exclusively license three targets, including CF, pursuant to the CRISPR Agreement. For each of the three targets that we elected to license, CRISPR has the potential to receive up to an additional \$ 410.0 million in development, regulatory and commercial milestones as well as royalties on resulting net product sales.

In 2017, we entered into a joint development and commercialization agreement with CRISPR (the "CRISPR JDCA"), which we amended and restated in 2021, pursuant to the terms of the CRISPR Agreement. Under the CRISPR JDCA, we and CRISPR were co-developing and preparing to co-commercialize CASGEVY for the treatment of hemoglobinopathies, including treatments for severe sickle cell disease ("SCD") and transfusion-dependent beta thalassemia.

Pursuant to the CRISPR JDCA, we lead global development, manufacturing and commercialization of CASGEVY, with support from CRISPR. We also conduct all research, development, manufacturing, and commercialization activities relating to other product candidates and products under the CRISPR JDCA throughout the world subject to CRISPR's reserved right to conduct certain activities.

CASGEVY was approved by the U.S. Food and Drug Administration in December 2023 for the treatment of SCD. In connection with this approval, we made a \$ 200.0 million milestone payment to CRISPR in January 2024, which we accrued to "Other current liabilities" and recorded within "Other intangible assets, net" on our consolidated balance sheet as of December 31, 2023. Subsequent to receiving marketing approval for CASGEVY, we continue to lead the research and development activities under the CRISPR JDCA, subject to CRISPR's reserved right to conduct certain activities. We are reimbursed by CRISPR for its 40 % share of these research and development activities, subject to certain adjustments, and we record this reimbursement from CRISPR as a credit within "Research and development expenses." We also share with CRISPR 40 % of the net commercial profits or losses incurred with respect to CASGEVY, subject to certain adjustments, which is recorded to "Cost of sales." The net commercial profits or losses equal the sum of the product revenues, cost of sales and selling, general and administrative expenses that we have recognized related to the CRISPR JDCA.

In the three and nine months ended September 30, 2024, we recognized net reimbursements from CRISPR pursuant to the CRISPR JDCA as credits to "Cost of sales" of \$ 15.8 million and \$ 47.5 million, respectively, related to CRISPR's share of the CRISPR JDCA's net commercial loss, and to "Research and development expenses" of \$ 11.7 million and \$ 35.0 million, respectively, related to CRISPR's share of the CRISPR JDCA's research and development activities.

Prior to receiving marketing approvals for CASGEVY in various markets beginning in December 2023, we accounted for the CRISPR JDCA as a cost-sharing arrangement, with costs incurred related to CASGEVY allocated 60 % to us and 40 % to CRISPR, subject to certain adjustments. In the three and nine months ended September 30, 2023, we recognized net reimbursements from CRISPR as credits to "Research and development expenses" of \$ 12.5 million and \$ 48.3 million, respectively, and to "Selling, general and administrative expenses" of \$ 7.0 million and \$ 21.1 million, respectively, related to CRISPR's share of the CRISPR JDCA's operating expenses.

CRISPR-Cas9 Gene-editing Hypoimmune Cell Therapies Agreement

In March 2023, we entered into a non-exclusive license agreement (the "CRISPR T1D Agreement") for the use of CRISPR's CRISPR-Cas9 gene-editing technology to accelerate the development of our hypoimmune cell therapies for type 1 diabetes ("T1D"). Pursuant to the CRISPR T1D Agreement, we made a \$ 100.0 million upfront payment to CRISPR, and we determined that substantially all the fair value of our upfront payment was attributable to in-process research and

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development, for which there is no alternative future use, and that no substantive processes were acquired that would constitute a business. In the second quarter of 2023, we achieved a research milestone that resulted in a \$ 70.0 million payment to CRISPR. We recorded the upfront payment and the research milestone to AIPR&D in the first and second quarters of 2023, respectively, resulting in \$ 170.0 million of AIPR&D in the nine months ended September 30, 2023. CRISPR is eligible to receive up to an additional \$ 160.0 million in research, development, regulatory and commercial milestones for any products that may result from the agreement, as well as royalties on resulting net product sales.

Entrada Therapeutics, Inc.

In February 2023, we closed a strategic collaboration and license agreement (the "Entrada Agreement") with Entrada Therapeutics, Inc. ("Entrada") focused on discovering and developing intracellular therapeutics for myotonic dystrophy type 1 ("DM1"). Upon closing, we made an upfront payment of \$ 225.1 million to Entrada, and purchased \$ 24.9 million of Entrada's common stock in connection with the Entrada Agreement. We determined that substantially all the fair value of our upfront payment was attributable to in-process research and development, for which there is no alternative future use, and that no substantive processes were acquired that would constitute a business. We recorded the upfront payment to AIPR&D in the three months ended March 31, 2023. We recorded the investment in Entrada's common stock at fair value on our condensed consolidated balance sheet within "Marketable securities." In the first quarter of 2024, Entrada earned a \$ 75.0 million milestone, which we recorded to AIPR&D in the three months ended March 31, 2024. Entrada is eligible to receive up to an additional \$ 335.0 million in development, regulatory and commercial milestones for any products that may result from the Entrada Agreement, as well as royalties on resulting net product sales.

Cystic Fibrosis Foundation

In 2004, we entered into a collaboration agreement with the Cystic Fibrosis Foundation, as successor in interest to the Cystic Fibrosis Foundation Therapeutics, Inc., to support research and development activities. Pursuant to the collaboration agreement, as amended, we have agreed to pay tiered royalties ranging from single digits to sub-teens on covered compounds first synthesized and/or tested during a research term on or before February 28, 2014, including ivacaftor, lumacaftor and tezacaftor, and royalties ranging from low-single digits to mid-single digits on potential net sales of certain compounds first synthesized and/or tested between March 1, 2014 and August 31, 2016, including elexacaftor. We do not have any royalty obligations on compounds first synthesized and tested on or after September 1, 2016. For combination products, such as ORKAMBI, SYMDEKO/SYMKEVI and TRIKAFTA/KAFTRIO, sales are allocated equally to each of the active pharmaceutical ingredients in the combination product. We record expenses related to these royalty obligations to "Cost of sales."

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D. Earnings Per Share

The following table sets forth the computation of basic and diluted net income (loss) per common share for the periods ended:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
(in millions, except per share amounts)				
Net income (loss)	\$ 1,045.4	\$ 1,035.3	\$ (1,448.6)	\$ 2,650.8
Basic weighted-average common shares outstanding	258.0	258.0	258.1	257.7
Effect of potentially dilutive securities:				
Restricted stock units (including performance-based restricted stock units ("PSUs"))	1.9	1.4	—	1.5
Stock options	1.1	1.2	—	1.2
Employee stock purchase program	0.0	0.0	—	0.0
Diluted weighted-average common shares outstanding	261.0	260.6	258.1	260.4
Basic net income (loss) per common share	\$ 4.05	\$ 4.01	\$ (5.61)	\$ 10.29
Diluted net income (loss) per common share	\$ 4.01	\$ 3.97	\$ (5.61)	\$ 10.18

We did not include the securities in the following table in the computation of the diluted net income (loss) per common share because the effect would have been anti-dilutive during each period:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
(in millions)				
Unvested restricted stock units (including PSUs)	0.0	—	1.1	0.2
Stock options	—	—	0.6	0.0

E. Fair Value Measurements

The following fair value hierarchy is used to classify assets and liabilities based on observable inputs and unobservable inputs used to determine the fair value of our financial assets and liabilities:

- Level 1: Quoted prices in active markets for identical assets or liabilities. An active market for an asset or liability is a market in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing information on an ongoing basis.
- Level 2: Observable inputs other than Level 1 inputs. Examples of Level 2 inputs include quoted prices in active markets for similar assets or liabilities and quoted prices for identical assets or liabilities in markets that are not active.
- Level 3: Unobservable inputs based on our assessment of the assumptions that market participants would use in pricing the asset or liability.

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The following table sets forth our financial assets and liabilities subject to fair value measurements by level within the fair value hierarchy:

	As of September 30, 2024				As of December 31, 2023			
	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3
(in millions)								
Financial instruments carried at fair value (asset positions):								
Cash equivalents	\$ 2,159.1	\$ 1,544.7	\$ 614.4	\$ —	\$ 7,033.9	\$ 5,397.3	\$ 1,636.6	\$ —
Marketable securities:								
Corporate equity securities	33.4	33.4	—	—	46.0	46.0	—	—
U.S. Treasury securities	1,536.8	1,495.4	41.4	—	546.5	546.5	—	—
U.S. government agency securities	253.7	—	253.7	—	425.2	—	425.2	—
Asset-backed securities	1,052.3	—	1,052.3	—	306.0	—	306.0	—
Certificates of deposit	2.5	—	2.5	—	33.7	—	33.7	—
Corporate debt securities	3,042.1	—	3,042.1	—	1,802.8	—	1,802.8	—
Commercial paper	68.0	—	68.0	—	186.8	—	186.8	—
Prepaid expenses and other current assets:								
Foreign currency forward contracts	1.6	—	1.6	—	1.8	—	1.8	—
Other assets:								
Foreign currency forward contracts	0.5	—	0.5	—	—	—	—	—
Total financial assets	\$ 8,150.0	\$ 3,073.5	\$ 5,076.5	\$ —	\$ 10,382.7	\$ 5,989.8	\$ 4,392.9	\$ —
Financial instruments carried at fair value (liability positions):								
Other current liabilities:								
Foreign currency forward contracts	\$ (38.4)	\$ —	\$ (38.4)	\$ —	\$ (33.7)	\$ —	\$ (33.7)	\$ —
Other long-term liabilities:								
Foreign currency forward contracts	(4.1)	—	(4.1)	—	—	—	—	—
Contingent consideration	(78.1)	—	—	(78.1)	(77.4)	—	—	(77.4)
Total financial liabilities	\$ (120.6)	\$ —	\$ (42.5)	\$ (78.1)	\$ (111.1)	\$ —	\$ (33.7)	\$ (77.4)

Please refer to Note F, "Marketable Securities and Equity Investments," for the carrying amount and related unrealized gains (losses) by type of investment. Our cash equivalents primarily include money market funds and time deposits.

Fair Value of Corporate Equity Securities

We classify our investments in publicly traded corporate equity securities as "Marketable securities" on our condensed consolidated balance sheets. Generally, our investments in the common stock of publicly traded companies are valued based on Level 1 inputs because they have readily determinable fair values. However, certain of our investments in publicly traded companies have been or continue to be valued based on Level 2 inputs due to transfer restrictions associated with these investments.

As of September 30, 2024, one of our investments in publicly traded corporate equity securities was subject to a contractual sales restriction expiring in the first quarter of 2025 with a fair value of \$ 13.0 million. We purchased this investment directly from the publicly traded company in the first quarter of 2023, and do not anticipate any circumstances that would cause this restriction to lapse prior to the first quarter of 2025.

Please refer to Note F, "Marketable Securities and Equity Investments," for further information on these investments.

Fair Value of Contingent Consideration

In 2019, we acquired Exonics Therapeutics, Inc. ("Exonics"), a privately-held company focused on creating transformative gene-editing therapies to repair mutations that cause Duchenne muscular dystrophy ("DMD") and other severe neuromuscular diseases, including DM1. Our Level 3 contingent consideration liabilities are related to \$ 678.3 million of development and regulatory milestones potentially payable to former Exonics equity holders. We base our estimates of the probability of achieving the milestones relevant to the fair value of contingent payments on industry data attributable to gene therapies and our knowledge of the progress and viability of the programs. The discount rates used in the valuation model for contingent payments, which were between 4.3 % and 4.4 % as of September 30, 2024, represent a measure of credit risk and

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market risk associated with settling the liabilities. Significant judgment is used in determining the appropriateness of these assumptions at each reporting period.

The following table represents a rollforward of the fair value of our contingent consideration liabilities:

	Nine Months Ended September 30, 2024
	(in millions)
Balance at December 31, 2023	\$ 77.4
Increase in fair value of contingent payments	0.7
Balance at September 30, 2024	\$ 78.1

F. Marketable Securities and Equity Investments

A summary of our cash equivalents and marketable debt and equity securities, which are recorded at fair value, is shown below:

	As of September 30, 2024				As of December 31, 2023			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
	(in millions)							
Cash equivalents	\$ 2,159.1	\$ —	\$ —	\$ 2,159.1	\$ 7,033.9	\$ —	\$ —	\$ 7,033.9
Marketable securities:								
U.S. Treasury securities	1,518.7	18.4	(0.3)	1,536.8	544.5	3.0	(1.0)	546.5
U.S. government agency securities	251.7	2.0	(0.0)	253.7	424.8	0.9	(0.5)	425.2
Asset-backed securities	1,043.8	8.5	(0.0)	1,052.3	304.9	1.4	(0.3)	306.0
Certificates of deposit	2.5	0.0	—	2.5	33.7	0.0	(0.0)	33.7
Corporate debt securities	3,005.5	36.9	(0.3)	3,042.1	1,794.0	10.5	(1.7)	1,802.8
Commercial paper	67.9	0.1	—	68.0	186.8	0.1	(0.1)	186.8
Total marketable available-for-sale debt securities	5,890.1	65.9	(0.6)	5,955.4	3,288.7	15.9	(3.6)	3,301.0
Corporate equity securities	72.1	0.9	(39.6)	33.4	72.1	—	(26.1)	46.0
Total marketable securities	5,962.2	66.8	(40.2)	5,988.8	3,360.8	15.9	(29.7)	3,347.0
Total cash equivalents and marketable securities	\$ 8,121.3	\$ 66.8	\$ (40.2)	\$ 8,147.9	\$ 10,394.7	\$ 15.9	\$ (29.7)	\$ 10,380.9

Amounts in the table above at fair value were classified on our condensed consolidated balance sheets as follows:

	As of September 30, 2024	As of December 31, 2023
	(in millions)	
Cash and cash equivalents	\$ 2,159.1	\$ 7,033.9
Marketable securities	1,285.3	849.2
Long-term marketable securities	4,703.5	2,497.8
Total	\$ 8,147.9	\$ 10,380.9

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Marketable available-for-sale debt securities by contractual maturity were as follows:

	As of September 30, 2024	As of December 31, 2023
	(in millions)	
Matures within one year	\$ 1,251.9	\$ 803.2
Matures after one year through five years	4,644.3	2,495.6
Matures after five years	59.2	2.2
Total	<u>\$ 5,955.4</u>	<u>\$ 3,301.0</u>

We did not record any allowances for credit losses to adjust the fair value of our marketable available-for-sale debt securities. Additionally, we did not record any realized gains or losses that were material to our condensed consolidated statements of income during the three and nine months ended September 30, 2024 and 2023. As of September 30, 2024, we held marketable available-for-sale debt securities with a total fair value of \$ 443.8 million that were in unrealized loss positions totaling \$ 0.6 million. Included in this amount were marketable available-for-sale debt securities with a total fair value of \$ 68.6 million and total unrealized loss of \$ 0.1 million that had been in unrealized loss positions for greater than twelve months. We intend to hold these investments until maturity and do not expect to incur realized losses on these investments when they mature.

We record changes in the fair value of our investments in corporate equity securities to "Other expense, net" in our condensed consolidated statements of income. During the three and nine months ended September 30, 2024 and 2023, our net unrealized gains (losses) on corporate equity securities with readily determinable fair values held at the conclusion of each period were as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
	(in millions)			
Net unrealized gains (losses)	\$ 2.8	\$ (6.2)	\$ (12.6)	\$ (7.1)

During the nine months ended September 30, 2023, we received proceeds of \$ 95.1 million related to the sale of the common stock of a publicly traded company, which had a total original cost basis of \$ 57.3 million. There were no sales of the common stock of publicly traded companies during the nine months ended September 30, 2024.

As of September 30, 2024, the carrying value of our equity investments without readily determinable fair values, which are recorded in "Other assets" on our condensed consolidated balance sheets, was \$ 74.1 million. During the three and nine months ended September 30, 2024, we reduced the carrying value of one of our equity investments without a readily determinable fair value by \$ 13.3 million and \$ 37.6 million, respectively, based on an observable change in price.

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G. Accumulated Other Comprehensive Income (Loss)

The following table summarizes the changes in accumulated other comprehensive income (loss) by component:

		Unrealized Holding Gains (Losses), Net of Tax			
	Foreign Currency Translation Adjustment	On Available-For- Sale Debt Securities	On Foreign Currency Forward Contracts		Total
	(in millions)				
Balance at December 31, 2023	\$ 1.1	\$ 9.6	\$ (25.0)	\$	(14.3)
Other comprehensive income (loss) before reclassifications	8.2	39.2	2.1		49.5
Amounts reclassified from accumulated other comprehensive income (loss)	—	2.4	(8.8)		(6.4)
Net current period other comprehensive income (loss)	8.2	41.6	(6.7)		43.1
Balance at September 30, 2024	\$ 9.3	\$ 51.2	\$ (31.7)	\$	28.8
Balance at December 31, 2022	\$ (25.0)	\$ (0.1)	\$ 25.9	\$	0.8
Other comprehensive income (loss) before reclassifications	9.1	(18.8)	31.8		22.1
Amounts reclassified from accumulated other comprehensive income (loss)	—	—	(25.9)		(25.9)
Net current period other comprehensive income (loss)	9.1	(18.8)	5.9		(3.8)
Balance at September 30, 2023	\$ (15.9)	\$ (18.9)	\$ 31.8	\$	(3.0)

H. Hedging

Foreign currency forward contracts - Designated as hedging instruments

We maintain a hedging program intended to mitigate the effect of changes in foreign exchange rates for a portion of our forecasted product revenues denominated in certain foreign currencies. The program includes foreign currency forward contracts that are designated as cash flow hedges under U.S. GAAP having contractual durations from one to eighteen months. We recognize realized gains and losses for the effective portion of such contracts in "Product revenues, net" in our condensed consolidated statements of income in the same period that we recognize the product revenues that were impacted by the hedged foreign exchange rate changes.

We formally document the relationship between foreign currency forward contracts (hedging instruments) and forecasted product revenues (hedged items), as well as our risk management objective and strategy for undertaking various hedging activities, which includes matching all foreign currency forward contracts that are designated as cash flow hedges to forecasted transactions. We also formally assess, both at the hedge's inception and on an ongoing basis, whether the foreign currency forward contracts are highly effective in offsetting changes in cash flows of hedged items on a prospective and retrospective basis. If we were to determine that a (i) foreign currency forward contract is not highly effective as a cash flow hedge, (ii) foreign currency forward contract has ceased to be a highly effective hedge or (iii) forecasted transaction is no longer probable of occurring, we would discontinue hedge accounting treatment prospectively. We measure effectiveness based on the change in fair value of the forward contracts and the fair value of the hypothetical foreign currency forward contracts with terms that match the critical terms of the risk being hedged. As of September 30, 2024, all hedges were determined to be highly effective.

We consider the impact of our counterparties' credit risk on the fair value of the foreign currency forward contracts. As of September 30, 2024 and December 31, 2023, credit risk did not change the fair value of our foreign currency forward contracts.

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The following table summarizes the notional amount in U.S. dollars of our outstanding foreign currency forward contracts designated as cash flow hedges under U.S. GAAP:

	As of September 30, 2024	As of December 31, 2023
Foreign Currency	(in millions)	
Euro	\$ 2,233.5	\$ 1,720.6
British pound sterling	303.8	225.0
Canadian dollar	295.2	229.5
Australian dollar	187.0	153.3
Swiss Franc	80.5	63.9
Total foreign currency forward contracts	\$ 3,100.0	\$ 2,392.3

Foreign currency forward contracts - Not designated as hedging instruments

We also enter into foreign currency forward contracts with contractual maturities of less than one month, which are designed to mitigate the effect of changes in foreign exchange rates on monetary assets and liabilities, including intercompany balances. These contracts are not designated as hedging instruments under U.S. GAAP. We recognize realized gains and losses for such contracts in "Other expense, net" in our condensed consolidated statements of income each period. As of September 30, 2024 and December 31, 2023, we did not have any outstanding foreign currency forward contracts where hedge accounting under U.S. GAAP was not applied.

During the three and nine months ended September 30, 2024 and 2023, we recognized the following related to foreign currency forward contracts in our condensed consolidated statements of income:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
	(in millions)			
Designated as hedging instruments - Reclassified from AOCI				
Product revenues, net	\$ (3.1)	\$ 2.8	\$ 11.2	\$ 33.0
Not designated as hedging instruments				
Other expense, net	\$ 0.1	\$ (22.0)	\$ (15.7)	\$ (17.8)
Total reported in the Condensed Consolidated Statements of Income				
Product revenues, net	\$ 2,771.9	\$ 2,483.5	\$ 8,108.1	\$ 7,351.5
Other expense, net	\$ (16.9)	\$ (15.9)	\$ (71.2)	\$ (13.0)

The following table summarizes the fair value of our outstanding foreign currency forward contracts designated as cash flow hedges under U.S. GAAP included on our condensed consolidated balance sheets:

As of September 30, 2024			
Assets		Liabilities	
Classification	Fair Value	Classification	Fair Value
(in millions)			
Prepaid expenses and other current assets	\$ 1.6	Other current liabilities	\$ (38.4)
Other assets	0.5	Other long-term liabilities	(4.1)
Total assets	\$ 2.1	Total liabilities	\$ (42.5)

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As of December 31, 2023

Assets		Liabilities	
Classification	Fair Value	Classification	Fair Value
(in millions)			
Prepaid expenses and other current assets	\$ 1.8	Other current liabilities	\$ (33.7)

As of September 30, 2024, we expect the amounts that are related to foreign exchange forward contracts designated as cash flow hedges under U.S. GAAP recorded in "Prepaid expenses and other current assets" and "Other current liabilities" to be reclassified to earnings within twelve months.

We present the fair value of our foreign currency forward contracts on a gross basis within our condensed consolidated balance sheets. The following table summarizes the potential effect of offsetting derivatives by type of financial instrument designated as cash flow hedges under U.S. GAAP on our condensed consolidated balance sheets:

As of September 30, 2024					
	Gross Amounts Recognized	Gross Amounts Offset	Gross Amounts Presented	Gross Amounts Not Offset	Legal Offset
Foreign currency forward contracts	(in millions)				
Total assets	\$ 2.1	\$ —	\$ 2.1	\$ (2.1)	\$ —
Total liabilities	(42.5)	—	(42.5)	2.1	(40.4)

As of December 31, 2023					
	Gross Amounts Recognized	Gross Amounts Offset	Gross Amounts Presented	Gross Amounts Not Offset	Legal Offset
Foreign currency forward contracts	(in millions)				
Total assets	\$ 1.8	\$ —	\$ 1.8	\$ (1.8)	\$ —
Total liabilities	(33.7)	—	(33.7)	1.8	(31.9)

I. Inventories

Inventories consisted of the following:

	As of September 30, 2024	As of December 31, 2023
	(in millions)	
Raw materials	\$ 141.1	\$ 78.7
Work-in-process	750.1	525.1
Finished goods	188.6	135.0
Total	<u>\$ 1,079.8</u>	<u>\$ 738.8</u>

During the first quarter of 2024, following positive results we announced related to our two Phase 3 trials for suzetrigine (formerly VX-548) for acute pain and vanzacaftor/tezacaftor/deutivacaftor for CF, we began capitalizing inventories produced in preparation for our planned product launches. As of September 30, 2024, we continued to conclude that capitalization of these inventories, which were \$ 146.5 million, was appropriate. We made these determinations based on our evaluation, among other factors, the safety and efficacy results, and expected likelihood of regulatory approval and commercial success. Prior to the first quarter of 2024, we expensed inventoriable and related costs associated with these product candidates as "Research and development expenses."

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J. Stock-based Compensation Expense and Share Repurchase Programs

Stock-based compensation expense

During the three and nine months ended September 30, 2024 and 2023, we recognized the following stock-based compensation expense:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
(in millions)				
Stock-based compensation expense by type of award:				
Restricted stock units (including PSUs)	\$ 184.8	\$ 129.1	\$ 522.7	\$ 358.6
ESPP share issuances	3.4	2.4	13.7	11.8
Stock options	—	0.2	1.8	4.0
Stock-based compensation expense related to inventories	(3.6)	(0.8)	(7.5)	(1.8)
Total stock-based compensation expense included in "Total costs and expenses"	<u>\$ 184.6</u>	<u>\$ 130.9</u>	<u>\$ 530.7</u>	<u>\$ 372.6</u>
Stock-based compensation expense by line item:				
Cost of sales	\$ 1.9	\$ 1.7	\$ 5.5	\$ 5.4
Research and development expenses	111.0	81.1	327.5	231.9
Selling, general and administrative expenses	71.7	48.1	197.7	135.3
Total stock-based compensation expense included in costs and expenses	184.6	130.9	530.7	372.6
Income tax effect	(64.6)	(37.1)	(224.3)	(109.0)
Total stock-based compensation expense, net of tax	<u>\$ 120.0</u>	<u>\$ 93.8</u>	<u>\$ 306.4</u>	<u>\$ 263.6</u>

Share repurchase program

In February 2023, our Board of Directors approved a share repurchase program, pursuant to which we are authorized to repurchase up to \$ 3.0 billion of our common stock. The program does not have an expiration date and can be discontinued at any time. During the nine months ended September 30, 2024 and 2023, we repurchased 1.7 million and 0.9 million shares of our common stock under the program, respectively, for aggregate repurchases of \$ 763.8 million and \$ 284.1 million, respectively. As of September 30, 2024, we had \$ 1.8 billion remaining authorization under this program.

K. Income Taxes

We are subject to U.S. federal, state, and foreign income taxes. During the three and nine months ended September 30, 2024 and 2023, we recorded the following provisions for income taxes and effective tax rates as compared to our income (loss) before provision for income taxes.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
(in millions, except percentages)				
Income (loss) before provision for income taxes	\$ 1,224.1	\$ 1,179.2	\$ (888.0)	\$ 3,232.2
Provision for income taxes	\$ 178.7	\$ 143.9	\$ 560.6	\$ 581.4
Effective tax rate	14.6 %	12.2 %	(63.1)%	18.0 %

Our effective tax rates for the three months ended September 30, 2024 and 2023 and for the nine months ended September 30, 2023 were lower than the U.S. statutory rate primarily due to benefits from research and development tax

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credit studies that were completed in the third quarter of each year and excess tax benefits related to stock-based compensation, partially offset by changes in uncertain tax positions.

Our effective tax rate for the nine months ended September 30, 2024 was materially different than the U.S. statutory rate primarily due to the \$ 4.4 billion of non-deductible AIPR&D resulting from our acquisition of Alpine, which drove our pre-tax loss for the period.

We have reviewed the tax positions taken, or to be taken, in our tax returns for all tax years currently open to examination by a taxing authority. As of September 30, 2024 and December 31, 2023, we had \$ 344.5 million and \$ 288.7 million, respectively, of net unrecognized tax benefits, which would affect our tax rate if recognized.

We file U.S. federal income tax returns and income tax returns in various state, local and foreign jurisdictions. We have various income tax audits ongoing at any time throughout the world. Except for jurisdictions where we have net operating losses or tax credit carryforwards, we are no longer subject to any tax assessment from tax authorities for years prior to 2015 in jurisdictions that have a material impact on our consolidated financial statements. In 2023, we came to settlement with the United Kingdom's HM Revenue & Customs ("HMRC") with respect to our tax positions for 2015 through 2020 and subsequently received Closure Notices for those periods during the three months ended March 31, 2024. Due to the nature of the adjustments, we are asserting our rights under the U.S./U.K. Income Tax Convention pursuant to the mutual agreement procedures for the relief of double taxation for these matters.

In December 2022, European Union member states reached an agreement to implement the minimum tax component ("Pillar Two") of the Organization for Economic Co-operation and Development's (the "OECD's"), global international tax reform initiative with effective dates of January 1, 2024 and 2025. In July 2023, the OECD published Administrative Guidance proposing certain safe harbors that effectively extend certain effective dates to January 1, 2027. The assessment of our potential 2024 exposure for the global per-country minimum tax of 15%, based on our forecasted 2024 results, is immaterial to our condensed consolidated financial statements as the effective tax rates in most of the jurisdictions in which we operate are above 15%.

L. Commitments and Contingencies

2022 Credit Facility

In July 2022, Vertex and certain of its subsidiaries entered into a \$ 500.0 million unsecured revolving facility (the "Credit Agreement") with Bank of America, N.A., as administrative agent and the lenders referred to therein (the "Lenders"), which matures on July 1, 2027. The Credit Agreement was not drawn upon at closing and we have not drawn upon it to date. Amounts drawn pursuant to the Credit Agreement, if any, will be used for general corporate purposes. Subject to satisfaction of certain conditions, we may request that the borrowing capacity for the Credit Agreement be increased by an additional \$ 500.0 million. Additionally, the Credit Agreement provides a sublimit of \$ 100.0 million for letters of credit.

Any amounts borrowed under the Credit Agreement will bear interest, at our option, at either a base rate or a Secured Overnight Financing Rate ("SOFR"), in each case plus an applicable margin. Under the Credit Agreement, the applicable margins on base rate loans range from 0.000 % to 0.500 % and the applicable margins on SOFR loans range from 1.000 % to 1.500 %, in each case based on our consolidated leverage ratio (the ratio of our total consolidated funded indebtedness to our consolidated EBITDA for the most recently completed four fiscal quarter period).

Any amounts borrowed pursuant to the Credit Agreement are guaranteed by certain of our existing and future domestic subsidiaries, subject to certain exceptions.

The Credit Agreement contains customary representations and warranties and affirmative and negative covenants, including a financial covenant to maintain subject to certain limited exceptions, a consolidated leverage ratio of 3.50 to 1.00, subject to an increase to 4.00 to 1.00 following a material acquisition. As of September 30, 2024, we were in compliance with the covenants described above. The Credit Agreement also contains customary events of default. In the case of a continuing event of default, the administrative agent would be entitled to exercise various remedies, including the acceleration of amounts due under outstanding loans.

Direct costs related to the Credit Agreement are recorded over its term and were not material to our financial statements.

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Guaranties and Indemnifications

As permitted under Massachusetts law, our Articles of Organization and By-laws provide that we will indemnify certain of our officers and directors for certain claims asserted against them in connection with their service as an officer or director. The maximum potential amount of future payments that we could be required to make under these indemnification provisions is unlimited. However, we have purchased directors' and officers' liability insurance policies that could reduce our monetary exposure and enable us to recover a portion of any future amounts paid. No indemnification claims currently are outstanding, and we believe the estimated fair value of these indemnification arrangements is minimal.

We customarily agree in the ordinary course of our business to indemnification provisions in agreements with clinical trial investigators and sites in our product development programs, sponsored research agreements with academic and not-for-profit institutions, various comparable agreements involving parties performing services for us, and our real estate leases. We also customarily agree to certain indemnification provisions in our drug discovery, development and commercialization collaboration agreements. With respect to our clinical trials and sponsored research agreements, these indemnification provisions typically apply to any claim asserted against the investigator or the investigator's institution relating to personal injury or property damage, violations of law or certain breaches of our contractual obligations arising out of the research or clinical testing of our compounds or product candidates. With respect to lease agreements, the indemnification provisions typically apply to claims asserted against the landlord relating to personal injury or property damage caused by us, to violations of law by us or to certain breaches of our contractual obligations. The indemnification provisions appearing in our collaboration agreements are similar to those for the other agreements discussed above, but in addition provide some limited indemnification for our collaborator in the event of third-party claims alleging infringement of intellectual property rights. In each of the cases above, the indemnification obligation generally survives the termination of the agreement for some extended period, although we believe the obligation typically has the most relevance during the contract term and for a short period of time thereafter. The maximum potential amount of future payments that we could be required to make under these provisions is generally unlimited. We have purchased insurance policies covering personal injury, property damage and general liability that reduce our exposure for indemnification and would enable us in many cases to recover all or a portion of any future amounts paid. We have never paid any material amounts to defend lawsuits or settle claims related to these indemnification provisions. Accordingly, we believe the estimated fair value of these indemnification arrangements is minimal.

Other Contingencies

We have certain contingent liabilities that arise in the ordinary course of our business activities. We accrue for such contingent liabilities when it is probable that future expenditures will be made and such expenditures can be reasonably estimated. Other than our contingent consideration liabilities discussed in Note E, "Fair Value Measurements," there were no material contingent liabilities accrued as of September 30, 2024 or December 31, 2023.

M. Leases

Corporate Headquarters Lease Amendments

We lease approximately 1.1 million square feet of office and laboratory space in two buildings in Boston, Massachusetts that serve as our corporate headquarters (the "Buildings"). In August 2024, we amended the existing lease agreements to, among other terms, extend the lease termination dates from December 2028 to June 2044 (the "Amendments"). We have the option to extend the amended leases for up to two additional ten-year periods.

The Amendments did not grant us any additional rights of use not contemplated in the existing lease agreements. As a result, we have accounted for the Amendments as modifications that extend the terms of the existing leases and reassessed the classification of the leases as of their effective dates. As of September 30, 2024, we remeasured the lease liabilities using our incremental borrowing rate as of the effective date of the Amendments and classified the leases associated with the Buildings as operating leases because none of the finance lease criteria were met. As of September 30, 2024, the adjusted right-of-use assets associated with the Buildings, totaling \$ 845.9 million, were recorded within "Operating lease assets" and the long-term portion of the remeasured lease liabilities of \$ 1.0 billion were recorded within "Long-term operating lease liabilities."

Prior to the Amendments, we classified the leases associated with the Buildings as finance leases because the present value of the sum of the lease payments exceeded substantially all of the fair value of the Buildings at lease inception. As of December 31, 2023, the Buildings were recorded as assets with net book values of \$ 177.0 million within "Property and equipment, net" and long-term liabilities of \$ 258.1 million within "Long-term finance lease liabilities."

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As of September 30, 2024 and December 31, 2023, the amounts recorded within “Other current liabilities” related to the Buildings were not material to our condensed consolidated balance sheets.

For further information on the accounting treatment for our finance and operating leases, please refer to our accounting policy, Leases, in Note A, “Nature of Business and Accounting Policies,” in our 2023 Annual Report on Form 10-K. The following disclosures reflect significant changes in our total leases subsequent to the Amendments.

Our leases are included on our consolidated balance sheets as follows:

	As of September 30, 2024	As of December 31, 2023
	(in millions)	
Finance leases		
Property and equipment, net	\$ 90.3	\$ 272.8
Total finance lease assets	\$ 90.3	\$ 272.8
Other current liabilities	\$ 5.1	\$ 50.6
Long-term finance lease liabilities	114.0	376.1
Total finance lease liabilities	\$ 119.1	\$ 426.7
Operating leases		
Operating lease assets	\$ 1,396.1	\$ 293.6
Total operating lease assets	\$ 1,396.1	\$ 293.6
Other current liabilities	\$ 66.1	\$ 33.1
Long-term operating lease liabilities	1,588.9	348.6
Total operating lease liabilities	\$ 1,655.0	\$ 381.7

Maturities of our finance and operating lease liabilities as of September 30, 2024 were as follows:

Year	Finance Leases	Operating Leases	Total
	(in millions)		
Remainder of 2024	\$ 1.9	\$ 20.6	\$ 22.5
2025	11.0	167.0	178.0
2026	11.3	168.3	179.6
2027	11.7	167.6	179.3
2028	12.1	164.4	176.5
Thereafter	143.6	2,106.9	2,250.5
Total lease payments	191.6	2,794.8	2,986.4
Less: tenant allowance	—	(206.4)	(206.4)
Less: amount representing interest	(72.5)	(933.4)	(1,005.9)
Present value of lease liabilities	\$ 119.1	\$ 1,655.0	\$ 1,774.1

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The weighted-average remaining lease terms and discount rates related to our leases were as follows:

	As of September 30, 2024	As of December 31, 2023
Weighted-average remaining lease term (in years)		
Finance leases	22.29	10.06
Operating leases	15.60	11.24
Weighted-average discount rate		
Finance leases	4.59 %	8.20 %
Operating leases	4.63 %	2.42 %

Refer to Note N, "Additional Cash Flow Information," for a description of the non-cash operating activities resulting from the Amendments.

N. Additional Cash Flow Information

The cash, cash equivalents and restricted cash at the beginning and ending of each period presented in our condensed consolidated statements of cash flows consisted of the following:

	Nine Months Ended September 30,			
	2024		2023	
	Beginning of period	End of period	Beginning of period	End of period
	(in millions)			
Cash and cash equivalents	\$ 10,369.1	\$ 5,239.2	\$ 10,504.0	\$ 11,110.2
Prepaid expenses and other current assets	3.2	8.9	8.0	6.4
Cash, cash equivalents and restricted cash per condensed consolidated statement of cash flows	<u>\$ 10,372.3</u>	<u>\$ 5,248.1</u>	<u>\$ 10,512.0</u>	<u>\$ 11,116.6</u>

Consistent with our policy for asset acquisitions, we have presented the cost to acquire the AIPR&D associated with Alpine, including attributable direct costs, as an operating cash flow within "Cash flows used in operating activities" for the nine months ended September 30, 2024.

Non-cash operating activities for the nine months ended September 30, 2024 include the addition of \$ 1.1 billion of right-of-use operating lease assets and \$ 1.3 billion of operating lease obligations, including \$ 847.9 million of right-of-use operating lease assets and \$ 1.0 billion of operating lease obligations related to the amended leases for our corporate headquarters. Additional non-cash activities related to these amended leases included a reduction to our finance leases of \$ 275.3 million and a net reduction to our property and equipment of \$ 107.5 million.

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

OVERVIEW

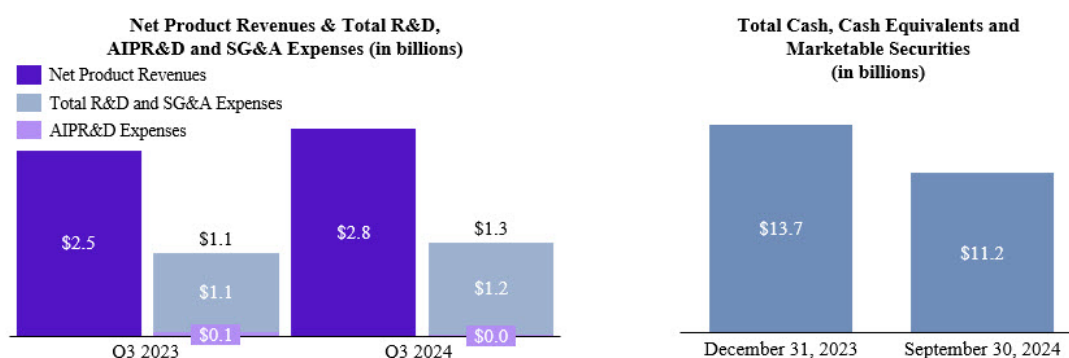
We are a global biotechnology company that invests in scientific innovation to create transformative medicines for people with serious diseases, with a focus on specialty markets. We have four approved medicines that treat the underlying cause of cystic fibrosis (“CF”), a life-threatening genetic disease, and one approved therapy that treats severe sickle cell disease (“SCD”) and transfusion dependent beta thalassemia (“TDT”), life-shortening inherited blood disorders. Our pipeline includes clinical-stage programs in CF, sickle cell disease, beta thalassemia, acute and neuropathic pain, APOL1-mediated kidney disease, IgA nephropathy (as well as other autoimmune renal diseases and cytopenias), type 1 diabetes, myotonic dystrophy type 1, and autosomal dominant polycystic kidney disease.

Our four approved CF medicines, led by TRIKAFTA/KAFTRIO (elexacaftor/tezacaftor/ivacaftor and ivacaftor), are being used to treat nearly three quarters of the approximately 92,000 people with CF in North America, Europe, and Australia. We are evaluating our CF medicines in additional patient populations, including younger children, with the goal of having small molecule treatments for all people who have at least one mutation in their cystic fibrosis transmembrane conductance regulator (“CFTR”) gene that is responsive to our CFTR modulators. We also are pursuing messenger ribonucleic acid (“mRNA”) and genetic therapies for people with CF who do not make full-length CFTR protein and, as a result, cannot benefit from our current CF medicines.

In late 2023 and early 2024, CASGEVY (exagamglogene autotemcel or “exa-cel”), an ex-vivo, non-viral CRISPR/Cas9 gene-edited cell therapy, was approved in the U.S., the European Union (the “E.U.”), the United Kingdom (“U.K.”), the Kingdom of Saudi Arabia (“Saudi Arabia”), and the Kingdom of Bahrain (“Bahrain”) for the treatment of people 12 years of age and older with SCD or TDT. We estimate approximately 35,000 people with severe SCD or TDT could be eligible for CASGEVY in the U.S. and Europe, with additional people in Saudi Arabia and Bahrain. In addition, we are preparing for near-term launches of potential new products in CF and acute pain.

Financial Highlights

Revenues	In the third quarter of 2024, our net product revenues increased to \$2.8 billion as compared to \$2.5 billion in the third quarter of 2023, primarily due to increased TRIKAFTA/KAFTRIO product revenues resulting from strong demand globally, including in younger age groups, and higher net realized pricing in the U.S.
Expenses	Our total research and development (“R&D”) and selling, general and administrative (“SG&A”) expenses increased to \$1.2 billion in the third quarter of 2024 as compared to \$1.1 billion in the third quarter of 2023, primarily due to increased commercial investments to support launches of Vertex’s therapies globally and continued investment to support additional therapies in mid-to-late stage development. Acquired in-process research and development expenses (“AIPR&D”) was not significant in the third quarter of 2024 and 2023, but includes a \$4.4 billion asset acquisition in the nine months ended September 30, 2024 related to our acquisition of Alpine Immune Sciences, Inc. (“Alpine”) in May 2024. Cost of sales was 14% in the third quarter of 2024 as compared to 13% in the third quarter of 2023, primarily due to costs associated with CASGEVY.
Cash	Our total cash, cash equivalents and marketable securities decreased to \$11.2 billion as of September 30, 2024 as compared to \$13.7 billion as of December 31, 2023 primarily due to cash paid to acquire Alpine and repurchases of our common stock, partially offset by cash flows provided by other operating activities.



Note: Charts above may not add due to rounding.

Business Updates

Marketed Products

Cystic Fibrosis

We expect to grow our CF business with (i) label expansions, including into younger patient groups and rare mutations, (ii) continued uptake in younger patient groups, and (iii) growth in the number of people living with CF. Recent progress in activities supporting continued uptake and label expansions is included below:

- KAFTRIO is reimbursed in all 27 countries of the European Union.
- Health Canada approved TRIKAFTA for an additional 152 rare mutations in the CFTR gene.
- We submitted regulatory applications to the U.S. Food and Drug Administration (the "FDA") and the European Medicines Agency (the "EMA") for TRIKAFTA/KAFTRIO for the treatment of people with CF and rare responsive mutations.

Sickle Cell Disease and Beta Thalassemia

- CASGEVY received approval in Switzerland and Canada for people 12 years of age and older with SCD or TDT.
- We have activated 45 authorized treatment centers globally. Patients across all regions have initiated cell collection.
- We entered into a reimbursement agreement with NHS England for eligible people with TDT to access CASGEVY. We have also entered into commercial discussions with NHS England to secure access to CASGEVY for eligible people with SCD.
- The Italian Medicines Agency approved our request for the implementation of an early access program for CASGEVY for the treatment of people with TDT and SCD.

Potential Near-Term Launch Opportunities

We are preparing for the following near-term launches of potential new products:

Vanzacaftor/tezacaftor/deutivacaftor in CF

- The FDA assigned the once-daily vanzacaftor triple in people with CF 6 years of age and older a Prescription Drug User Fee Act ("PDUFA") target action date of January 2, 2025. The FDA granted Priority Review for the vanzacaftor triple.
- We have completed regulatory submissions for the vanzacaftor triple in the E.U., the U.K., Canada, Australia, New Zealand, and Switzerland.

Suzetrigine in Acute Pain

- The FDA assigned a PDUFA target action date of January 30, 2025 for suzetrigine for the treatment of moderate-to-severe acute pain. The FDA granted Priority Review to suzetrigine.

Pipeline

We continue to advance a diversified pipeline of potentially transformative medicines for serious diseases utilizing a range of modalities. Recent and anticipated progress in activities supporting these efforts is included below:

Cystic Fibrosis

- We are enrolling and dosing in a Phase 3 clinical trial evaluating the vanzacaftor triple in children with CF 2 to 5 years of age who have at least one F508del mutation or a mutation responsive to triple combination CFTR modulators.
- In collaboration with Moderna, Inc. ("Moderna"), we are developing VX-522, a nebulized mRNA therapy for the treatment of people with CF who do not produce full-length CFTR protein. The multiple ascending dose portion of the Phase 1/2 clinical trial of VX-522 in people with CF is ongoing. We expect to share data from this clinical trial in the first half of 2025.

- We continue to advance new oral small molecule combination therapies through preclinical and clinical development. The most advanced next-wave CFTR modulators have completed, or are in the process of completing, Phase 1 clinical trials.

Sickle Cell Disease and Transfusion-Dependent Beta Thalassemia

- We have completed enrollment in two global Phase 3 clinical trials evaluating CASGEVY in children 5 to 11 years of age with SCD or TDT, and the trials are ongoing.
- We continue to work on preclinical assets for myeloablative conditioning agents that would have milder side-effects and could be used in connection with CASGEVY, which could broaden the eligible patient population.

Acute Pain

- We have initiated a Phase 2 clinical trial evaluating an oral formulation of VX-993, a next-generation selective NaV1.8 pain signal inhibitor, for the treatment of moderate-to-severe acute pain following bunionectomy surgery.
- We are enrolling and dosing healthy volunteers in a Phase 1 clinical trial evaluating an intravenous formulation of VX-993.
- The FDA has granted Fast Track Designation to VX-993 in moderate-to-severe acute pain in both the oral and intravenous formulations.
- We are advancing additional NaV1.8 inhibitors and NaV1.7 pain signal inhibitors, which could be used alone or in combination, for the treatment of acute pain.

Peripheral Neuropathic Pain

- We have initiated the Phase 3 pivotal program evaluating suzetrigine in people with diabetic peripheral neuropathy, a common form of chronic peripheral neuropathic pain. The FDA has granted suzetrigine Breakthrough Therapy designation in diabetic peripheral neuropathy.
- We have completed the Phase 2 clinical trial evaluating suzetrigine in people with lumbosacral radiculopathy, a second type of peripheral neuropathic pain. We expect to share results from this clinical trial in the fourth quarter of 2024.
- We have initiated a Phase 2 clinical trial evaluating the oral formulation of VX-993 for the treatment of diabetic peripheral neuropathy.
- We are advancing additional NaV1.8 inhibitors and NaV1.7 pain signal inhibitors, which could be used alone or in combination, for the treatment of peripheral neuropathic pain.

APOL1-Mediated Kidney Disease

- Inaxaplin is our small molecule for the treatment of APOL1-mediated kidney disease ("AMKD"), including APOL1-mediated focal segmental glomerulosclerosis ("FSGS"). We continue to enroll and dose people with AMKD in the Phase 3 portion of the global Phase 2/3 pivotal clinical trial.

IgA Nephropathy and Other B Cell-Mediated Diseases

- We are developing povetacept, a dual inhibitor of the BAFF and APRIL pathways, as a potentially best-in-class approach to treat immunoglobulin A ("IgA") nephropathy ("IgAN"), a serious progressive, autoimmune kidney disease that can lead to end-stage renal disease. We have initiated the Phase 3 clinical trial evaluating povetacept in people with IgAN (the "RAINIER" trial).
- RAINIER is a global pivotal trial evaluating povetacept in approximately 480 people with IgAN. The trial is designed to have a pre-planned interim analysis evaluating the change from baseline in urine protein creatinine ratio ("UPCR") after a certain number of patients reach 36 weeks of treatment. If positive, the interim analysis may serve as the basis for seeking accelerated approval in the U.S. Final analysis will occur at two years of treatment, with a primary endpoint of total eGFR slope through Week 104.
- We are studying primary membranous nephropathy and additional renal diseases in the RUBY-3 basket trial and hematologic conditions in the RUBY-4 basket trial, both of which are ongoing.

Type 1 Diabetes

- VX-880 is an allogeneic, stem cell-derived, fully differentiated, insulin-producing islet cell replacement therapy, using standard immunosuppression to protect the implanted cells. We are evaluating VX-880 as a potential treatment for type 1 diabetes ("T1D") in a sequential, three-part clinical trial. Following successful end of Phase 2 meetings with the FDA, the EMA and the Medicines and Healthcare products Regulatory Agency in the U.K., we have reached an agreement to advance VX-880 into pivotal development with the conversion of the ongoing Phase 1/2 clinical trial to a Phase 1/2/3 clinical trial. The Phase 1/2/3 clinical trial will include a total of 50 people with T1D infused with a single target dose of VX-880, and the primary endpoint is the proportion of patients with insulin independence and absence of severe hypoglycemic episodes.
- Our second Phase 1/2 program in T1D evaluates VX-264, which encapsulates the same VX-880 islet cells in a novel device designed to eliminate the need for immunosuppression. This trial is a sequential, multi-part study to evaluate the safety, tolerability and efficacy of VX-264. We have completed Part A of the clinical trial and we are enrolling and dosing people with T1D in Part B of the clinical trial, where patients receive the full-target dose with a stagger period between patients. In Part C, we expect that patients will receive the full target dose with no stagger period. We expect to share initial data from this clinical trial in 2025.
- Our hypimmune islet cell program uses CRISPR/Cas9 technology to gene-edit the same allogeneic stem cell-derived, fully differentiated islet cells used in the VX-880 and VX-264 programs. The goal is to protect the cells from the immune system to explore another possible path to eliminate the need for immunosuppressive therapy. This program continues to progress through the research stage.

Myotonic Dystrophy Type 1

- Our lead approach for myotonic dystrophy type 1 ("DM1"), VX-670, was in-licensed from Entrada Therapeutics, Inc. ("Entrada"). VX-670 is an oligonucleotide connected to a cyclic peptide to promote effective delivery into cells, which holds the potential to address the underlying cause of DM1.
- We completed the single ascending dose portion of the global Phase 1/2 clinical trial for VX-670 in people with DM1. We have initiated the multiple ascending dose portion of the trial, which will evaluate the safety and efficacy of VX-670.

Autosomal Dominant Polycystic Kidney Disease

- We are enrolling and dosing in a Phase 1 clinical trial in healthy volunteers evaluating VX-407, our first-in-class small molecule corrector that targets the underlying cause of autosomal dominant polycystic kidney disease ("ADPKD") in people with a subset of PKD1 variants.

Our Business Environment

In the nine months ended September 30, 2024, our net product revenues came primarily from the sale of our medicines for the treatment of CF. Our CF strategy involves continuing to develop and obtain approval and reimbursement for treatment regimens that will provide benefits to all people with CF and increasing the number of people with CF eligible and able to receive our medicines, including through label expansions, expanded reimbursement, and the development of new medicines. We are advancing our pipeline of product candidates for the treatment of serious diseases outside of CF, including CASGEVY, which has received marketing approvals in the U.S., the E.U., the U.K., Saudi Arabia, Bahrain, Switzerland and Canada for the treatment of SCD and TDT.

Our strategy is to combine transformative advances in the understanding of causal human biology and the science of therapeutics to discover and develop innovative medicines. This approach includes advancing multiple compounds or therapies from each program, spanning multiple modalities, into early clinical trials to obtain patient data that can inform selection of the most promising therapies for later-stage development, as well as to inform discovery and development efforts. We aim to rapidly follow our first-in-class therapies that achieve proof-of-concept with potential best-in-class candidates to provide durable clinical and commercial success.

In pursuit of new product candidates and therapies in specialty markets, we invest in research and development. We believe that pursuing research in diverse areas allows us to balance the risks inherent in product development and may provide product candidates that will form our pipeline in future years. To supplement our internal research programs, we acquire technologies and programs and collaborate with biopharmaceutical and technology companies, leading academic

research institutions, government laboratories, foundations and other organizations, as needed, to advance research in our areas of therapeutic interest and to access technologies needed to execute on our strategy.

Discovery and development of a new pharmaceutical or biological product is a difficult and lengthy process that requires significant financial resources along with extensive technical and regulatory expertise. Across the industry, most potential drug or biological products never progress into development, and most products that do advance into development never receive marketing approval. Our investments in product candidates are subject to considerable risks. We closely monitor the results of our discovery, research, nonclinical studies and clinical trials and frequently evaluate our product development programs in light of new data and scientific, business and commercial insights, with the objective of balancing risk and potential. This process can result in rapid changes in focus and priorities as new information becomes available and as we gain additional understanding of our ongoing programs and potential new programs, as well as those of our competitors.

Our business also requires ensuring appropriate manufacturing and reimbursement of our products. As we advance our product candidates through clinical development toward commercialization and market and sell our approved products, we build and maintain our supply chain and quality assurance resources. We rely on a global network of third parties, including some in China, and our internal capabilities to manufacture and distribute our products for commercial sale and post-approval clinical trials and to manufacture and distribute our product candidates for clinical trials. In addition to establishing supply chains for each new approved product, we adapt our supply chain for existing products to include additional formulations or to increase scale of production for existing products as needed. Our foreign third-party manufacturers and suppliers may be subject to U.S. legislation, including the BIOSECURE Act, sanctions, trade restrictions and other foreign regulatory requirements which could increase costs or reduce the supply of material available to us, or delay the procurement or supply of such material. The processes for cell and genetic therapies can be more complex than those required for small molecule drugs and require additional investments in different systems, equipment, facilities and expertise. We are focused on ensuring the stability of the supply chains for our current products, as well as for our pipeline programs.

Sales of our products depend, to a large degree, on the extent to which our products are reimbursed by third-party payors, such as government health programs, commercial insurance and managed health care organizations. Reimbursement for our products, including our potential pipeline therapies, cannot be assured and may take significant periods of time to obtain. We dedicate substantial management and other resources to obtain and maintain appropriate levels of reimbursement for our products from third-party payors, including governmental organizations in the U.S. and ex-U.S. markets.

In the U.S., we have worked successfully with third-party payors to promptly obtain appropriate levels of reimbursement for our CF medicines. In addition, we are working with U.S. government and commercial payors with respect to CASGEVY. We anticipate broad access with government and commercial payors for CASGEVY in the U.S., and we have recently entered into multiple agreements with government and commercial health insurance providers to provide access to CASGEVY. We plan to continue to engage in discussions with numerous commercial insurers and managed health care organizations, along with government health programs that are typically managed by authorities in the individual states, to ensure that payors recognize the significant benefits that all of our therapies provide and provide patients with appropriate levels of access to our medicines and therapies now and in the future. We cannot, however, predict how recent changes in the law, including through the Inflation Reduction Act of 2022 and passage of state laws (e.g., transparency laws and prescription drug affordability boards), will affect our ability to negotiate successfully with third-party payors and distribute our products. Similarly, in ex-U.S. markets, we seek government reimbursement for our medicines on a country-by-country or region-by-region basis, as required. This is necessary for each new medicine, as well as for label expansions for our current medicines. We are working with ex-U.S. payors with respect to CASGEVY, and we are pursuing long-term reimbursement agreements. We have secured reimbursed access for people with SCD or TDT in Saudi Arabia and Bahrain, and for people with TDT in England. In addition, the Italian Medicines Agency has approved our request for the implementation of an early access program for people with TDT and SCD. We expect to continue to focus significant resources to expand and maintain reimbursement for our CF medicines, CASGEVY and, ultimately, pipeline therapies, in U.S. and ex-U.S. markets.

Strategic Transactions

Acquisitions

As part of our business strategy, we seek to acquire technologies, products, product candidates and other businesses that are aligned with our corporate and research and development strategies and complement and advance our ongoing research and development efforts. We have engaged in a number of acquisitions of biotechnology companies over the last several years and expect to continue to identify and evaluate opportunities to acquire additional biotechnology companies. The accounting for these acquisitions can vary significantly based on whether we conclude the transactions represent business combinations or asset acquisitions. In May 2024, we acquired Alpine for approximately \$5.0 billion in cash. Alpine's lead molecule, povetacicept, has shown potential best-in-class efficacy in IgAN through Phase 2 development. We accounted for

the Alpine transaction as an asset acquisition because povetacicept represents substantially all of the fair value of the gross assets that we acquired. As a result, \$4.4 billion of the fair value attributed to povetacicept was expensed as AIPR&D in the nine months ended September 30, 2024. In 2022, we acquired ViaCyte, Inc. ("ViaCyte"), which had intellectual property, tools, technologies and assets with the potential to accelerate development of our T1D programs. We accounted for our acquisition of ViaCyte as a business combination.

Collaboration and In-Licensing Arrangements

We enter into arrangements with third parties, including collaboration and licensing arrangements, for the development, manufacture and commercialization of products, product candidates and other technologies that have the potential to complement our ongoing research and development efforts. Over the last several years, we entered into collaboration agreements with a number of companies, including CRISPR Therapeutics AG ("CRISPR"), Entrada, and Moderna. In July 2024, we entered into a multi-target license and option agreement with Orum Therapeutics, Inc. for the use of their degrader-antibody conjugate technology for the discovery of novel targeted conditioning agents for gene-edited therapies, such as CASGEVY, which included an upfront payment of \$14.8 million.

Generally, when we in-license a technology or product candidate, we make upfront payments to the collaborator, assume the costs of the program and/or agree to make contingent payments, which could consist of milestone, royalty and option payments. Most of these collaboration payments are expensed as AIPR&D, including a \$75.0 million milestone due to Entrada in the first quarter of 2024, and our upfront payment of \$225.1 million to Entrada and \$170.0 million in total upfront and milestone payments to CRISPR related to T1D in the nine months ended September 30, 2023. These payments were expensed to AIPR&D because they were primarily attributable to acquired in-process research and development for which there was no alternative future use. However, depending on many factors, including the structure of the collaboration, the stage of development of the acquired technology, the significance of the in-licensed product candidate to the collaborator's operations and the other activities in which our collaborators are engaged, the accounting for these transactions can vary significantly. We expect to continue to identify and evaluate collaboration and licensing opportunities that may be similar to or different from the collaborations and licenses that we have engaged in previously.

Acquired In-Process Research and Development Expenses

In the nine months ended September 30, 2024 and 2023, our AIPR&D included \$4.5 billion and \$509.3 million, respectively, related to upfront, contingent milestone, or other payments pursuant to our business development transactions, including the asset acquisitions, collaborations, and licenses of third-party technologies described above. Please refer to Note C, "Collaboration, License and Other Arrangements," for further information regarding our asset acquisitions, collaborations and in-license agreements.

RESULTS OF OPERATIONS

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2024	2023	Change	2024	2023	Change
(in millions, except percentages and per share amounts)						
Product revenues, net	\$ 2,771.9	\$ 2,483.5	12%	\$ 8,108.1	\$ 7,351.5	10%
Acquired in-process research and development expenses	15.0	51.7	(71)%	4,540.9	509.3	**
Other operating costs and expenses	1,640.6	1,393.7	18%	4,826.1	3,998.7	21%
Income (loss) from operations	1,116.3	1,038.1	8%	(1,258.9)	2,843.5	**
Other non-operating income, net	107.8	141.1	(24)%	370.9	388.7	(5)%
Provision for income taxes	178.7	143.9	24%	560.6	581.4	(4)%
Net income (loss)	\$ 1,045.4	\$ 1,035.3	1%	\$ (1,448.6)	\$ 2,650.8	**
Net income (loss) per diluted common share	\$ 4.01	\$ 3.97		\$ (5.61)	\$ 10.18	
Diluted shares used in per share calculations	261.0	260.6		258.1	260.4	

** Not meaningful

Product Revenues, net

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2024	2023	Change	2024	2023	Change
(in millions, except percentages)						
TRIKAFTA/KAFTRIO	\$ 2,585.0	\$ 2,274.3	14%	\$ 7,517.8	\$ 6,611.4	14%
Other product revenues	186.9	209.2	(11)%	590.3	740.1	(20)%
Product revenues, net	<u>\$ 2,771.9</u>	<u>\$ 2,483.5</u>	12%	<u>\$ 8,108.1</u>	<u>\$ 7,351.5</u>	10%

In the third quarter and nine months ended September 30, 2024, our net product revenues increased by \$288.4 million and \$756.6 million, or 12% and 10%, as compared to the third quarter and nine months ended September 30, 2023, respectively. Increases in our TRIKAFTA/KAFTRIO product revenues were due to strong demand globally, including in younger age groups, and higher net realized pricing in the U.S. Decreases in revenues for our other CF products were primarily the result of patients switching from these medicines to TRIKAFTA/KAFTRIO. In the three and nine months ended September 30, 2024, "Other product revenues" included \$2.0 million related to CASGEVY.

Our net product revenues from the U.S. and from ex-U.S. markets were as follows:

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2024	2023	Change	2024	2023	Change
(in millions, except percentages)						
United States	\$ 1,713.5	\$ 1,554.2	10%	\$ 4,847.7	\$ 4,465.8	9%
ex-U.S.	1,058.4	929.3	14%	3,260.4	2,885.7	13%
Product revenues, net	<u>\$ 2,771.9</u>	<u>\$ 2,483.5</u>	12%	<u>\$ 8,108.1</u>	<u>\$ 7,351.5</u>	10%

Operating Costs and Expenses

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2024	2023	Change	2024	2023	Change
(in millions, except percentages)						
Cost of sales	\$ 392.6	\$ 318.7	23%	\$ 1,107.1	\$ 894.2	24%
Research and development expenses	875.9	810.0	8%	2,631.6	2,338.3	13%
Acquired in-process research and development expenses	15.0	51.7	(71)%	4,540.9	509.3	**
Selling, general and administrative expenses	371.8	263.8	41%	1,086.7	767.5	42%
Change in fair value of contingent consideration	0.3	1.2	**	0.7	(1.3)	**
Total costs and expenses	<u>\$ 1,655.6</u>	<u>\$ 1,445.4</u>	15%	<u>\$ 9,367.0</u>	<u>\$ 4,508.0</u>	108%

** Not meaningful

Cost of Sales

Our cost of sales primarily consists of third-party royalties payable on net sales of our CF products as well as the cost of producing inventories. Pursuant to our agreement with the Cystic Fibrosis Foundation, our tiered third-party royalties on sales of TRIKAFTA/KAFTRIO, SYMDEKO/SYMKEVI, KALYDECO, and ORKAMBI, calculated as a percentage of net sales, range from the single digits to the sub-teens, with lower royalties on sales of TRIKAFTA/KAFTRIO than for our other products. Over the last several years, our cost of sales has been increasing due to increased net product revenues. Our cost of sales as a percentage of our net product revenues increased to 14% in each of the third quarter and nine months ended September 30, 2024 as compared to 13% and 12% in the third quarter and nine months ended September 30, 2023, respectively, primarily due to cost of sales associated with CASGEVY following its regulatory approval in the fourth quarter of 2023.

Research and Development Expenses

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2024	2023	Change	2024	2023	Change
(in millions, except percentages)						
Research expenses	\$ 193.8	\$ 173.9	11%	\$ 597.2	\$ 511.4	17%
Development expenses	682.1	636.1	7%	2,034.4	1,826.9	11%
Total research and development expenses	<u>\$ 875.9</u>	<u>\$ 810.0</u>	8%	<u>\$ 2,631.6</u>	<u>\$ 2,338.3</u>	13%

Our research and development expenses include internal and external costs incurred for research and development of our products and product candidates. We do not assign our internal costs, such as salary and benefits, stock-based compensation expense, laboratory supplies and other direct expenses and infrastructure costs, to individual products or product candidates, because the employees within our research and development groups typically are deployed across multiple research and development programs. We assign external costs of services provided to us by clinical research organizations and other outsourced research by individual program. Our internal costs are greater than our external costs. All research and development costs for our products and product candidates are expensed as incurred.

Since January 2022, we have incurred approximately \$8.3 billion in total research and development expenses associated with product discovery and development. The successful development of our product candidates is highly uncertain and subject to a number of risks. In addition, the duration of clinical trials may vary substantially according to the type, complexity and novelty of the product candidate and the disease indication being targeted. The FDA and comparable agencies in foreign countries impose substantial requirements on the introduction of therapeutic pharmaceutical products, typically requiring lengthy and detailed laboratory and clinical testing procedures, sampling activities and other costly and time-consuming procedures. Data obtained from nonclinical and clinical activities at any step in the testing process may be adverse and lead to discontinuation or redirection of development activities. Data obtained from these activities also are susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. The duration and cost of discovery, nonclinical studies and clinical trials may vary significantly over the life of a project and are difficult to predict. Therefore, accurate and meaningful estimates of the ultimate costs to bring our product candidates to market are not available.

Any estimates regarding development and regulatory timelines for our product candidates are highly subjective and subject to change. Until we have data from Phase 3 clinical trials, we cannot make a meaningful estimate regarding when, or if, a clinical development program will generate revenues and cash flows.

Research Expenses

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2024	2023	Change	2024	2023	Change
(in millions, except percentages)						
Research Expenses:						
Salary and benefits	\$ 48.3	\$ 46.3	4%	\$ 163.2	\$ 137.5	19%
Stock-based compensation expense	29.4	20.5	43%	87.9	59.2	48%
Outsourced services and other direct expenses	64.1	61.8	4%	195.5	176.0	11%
Infrastructure costs	52.0	45.3	15%	150.6	138.7	9%
Total research expenses	<u>\$ 193.8</u>	<u>\$ 173.9</u>	11%	<u>\$ 597.2</u>	<u>\$ 511.4</u>	17%

Our research expenses have been increasing over the last several years as we have invested in our pipeline and expanded our cell and genetic therapy capabilities, resulting in increased headcount and stock-based compensation expense, and outsourced services, other direct expenses and infrastructure costs. We expect to continue to invest in our research programs with a focus on creating transformative medicines for serious diseases.

Development Expenses

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2024	2023	Change	2024	2023	Change
(in millions, except percentages)						
Development Expenses:						
Salary and benefits	\$ 172.8	\$ 152.3	13%	\$ 510.1	\$ 438.8	16%
Stock-based compensation expense	81.6	60.6	35%	239.6	172.7	39%
Compensation expense for cash-settled unvested Alpine equity awards	—	—	**	151.9	—	**
Outsourced services and other direct expenses	319.4	332.6	(4)%	822.7	957.0	(14)%
Infrastructure costs	108.3	90.6	20%	310.1	258.4	20%
Total development expenses	\$ 682.1	\$ 636.1	7%	\$ 2,034.4	\$ 1,826.9	11%

** Not meaningful

Our development expenses increased by \$46.0 million and \$207.5 million, or 7% and 11%, in the third quarter and nine months ended September 30, 2024 as compared to the third quarter and nine months ended September 30, 2023, respectively. Development expenses in the nine months ended September 30, 2024 included compensation expense associated with cash-settled unvested equity awards related to our acquisition of Alpine from the second quarter of 2024.

Increased development expenses as compared to the three and nine months ended September 30, 2023 were due to continued investments in internal headcount and related expenses and infrastructure to support advancement of additional therapies into mid-to-late-stage development, including our T1D program. Additional headcount over the last several years has increased our stock-based compensation expense, which has historically fluctuated and is expected to continue to fluctuate from one period to another based on the probability of achieving milestones associated with our performance-based awards. These increases were partially offset by decrease outsourced services and other direct expenses. The decreases were primarily due to lower clinical trial costs resulting from advancements in both our suzetrigine program in acute pain and the vanzacaftor triple for CF, as well as the commercialization of CASGEVY.

Acquired In-process Research and Development Expenses

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2024	2023	Change	2024	2023	Change
(in millions, except percentages)						
Acquired in-process research and development expenses	\$ 15.0	\$ 51.7	(71)%	\$ 4,540.9	\$ 509.3	**

** Not meaningful

AIPR&D in the three months ended September 30, 2024 was primarily related to an upfront payment associated with a collaboration arrangement. AIPR&D in the nine months ended September 30, 2024 was primarily related to \$4.4 billion of AIPR&D resulting from our acquisition of Alpine, which was accounted for as an asset acquisition, and also included the \$75.0 million milestone to Entrada from the first quarter of 2024. AIPR&D in the third quarter of 2023 was primarily related to our \$47.5 million acquisition of a novel GPCR program from Septerna. AIPR&D in the nine months ended September 30, 2023 also included our \$225.1 million upfront payment to Entrada and our \$100.0 million upfront payment and \$70.0 million research milestone to CRISPR related to T1D. Our AIPR&D has historically fluctuated, and is expected to continue to fluctuate, from one period to another due to upfront, contingent milestone, and other payments pursuant to our existing and future business development transactions, including collaborations, licenses of third-party technologies, and asset acquisitions.

Selling, General and Administrative Expenses

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2024	2023	Change	2024	2023	Change
(in millions, except percentages)						
Selling, general and administrative expenses	\$ 371.8	\$ 263.8	41%	\$ 1,086.7	\$ 767.5	42%

Selling, general and administrative expenses increased by 41% and 42% in the third quarter and nine months ended September 30, 2024 as compared to the third quarter and nine months ended September 30, 2023, respectively, primarily due to increased commercial investments to support the launches of our therapies globally and prepare for near-term launches of multiple potential new products, and stock-based compensation expense.

Contingent Consideration

The fair value of our contingent consideration increased by \$0.3 million and \$0.7 million in the third quarter and nine months ended September 30, 2024, respectively, and increased by \$1.2 million and decreased by \$1.3 million in the third quarter and nine months ended September 30, 2023, respectively.

Other Non-Operating Income (Expense), Net

Interest Income

Interest income decreased from \$167.9 million in the third quarter of 2023 to \$132.2 million in the third quarter of 2024, primarily due to decreased cash equivalents and available-for-sale debt securities following our acquisition of Alpine in the second quarter of 2024. Interest income increased from \$435.2 million in the nine months ended September 30, 2023 to \$469.9 million in the nine months ended September 30, 2024, primarily due to the mix of our cash equivalents and available-for-sale debt securities partially offset by the impact from our acquisition of Alpine on the amount of our cash equivalents and available-for-sale debt securities. Our future interest income is dependent on the amount of, and prevailing market interest rates on, our outstanding cash equivalents and available-for-sale debt securities.

Interest Expense

Interest expense was \$7.5 million and \$10.9 million in the third quarter of 2024 and 2023, respectively, and \$27.8 million and \$33.5 million in the nine months ended September 30, 2024 and 2023, respectively. The majority of our interest expense in these periods was related to imputed interest expense associated with finance leases for our corporate headquarters in Boston. As discussed in Note M, "Leases," our corporate headquarters leases were amended in August 2024, which resulted in a classification change to operating leases as of September 30, 2024. As a result, we expect our interest expense to decrease in future periods because operating lease expenses are recorded entirely within operating expenses in our condensed consolidated statements of operations.

Other Income (Expense), Net

Other income (expense), net was expenses of \$16.9 million and \$15.9 million in the third quarter of 2024 and 2023, respectively, and \$71.2 million and \$13.0 million in the nine months ended September 30, 2024 and 2023, respectively. These amounts related primarily to net unrealized gains or losses resulting from changes in the fair value of our strategic equity investments, which consist of investments in our collaborators that may be public or private companies. To the extent that we continue to hold strategic equity investments in publicly traded companies, we expect that due to the volatility of the stock price of biotechnology companies, our other income (expense), net will fluctuate in future periods based on increases or decreases in the fair value of our strategic equity investments. As of September 30, 2024, the fair value of our investments in publicly traded companies was \$33.4 million.

Income Taxes

Our effective tax rate fluctuates from period to period due to the global nature of our operations. The factors that most significantly impact our effective tax rate include changes in tax laws, variability in the allocation of our taxable earnings among multiple jurisdictions, the amount and characterization of our research and development expenses, the levels of certain deductions and credits, adjustments to the value of our uncertain tax positions, acquisitions and third-party collaboration and licensing transactions.

We recorded provisions for income taxes of \$178.7 million and \$143.9 million in the third quarter of 2024 and 2023, respectively, and \$560.6 million and \$581.4 million in the nine months ended September 30, 2024 and 2023, respectively. Our effective tax rate of (63.1)% in the nine months ended September 30, 2024 was materially different than the U.S. statutory rate primarily due to the \$4.4 billion of AIPR&D resulting from our acquisition of Alpine, which drove our pre-tax loss in this period. Our effective tax rate of 18.0% in the nine months ended September 30, 2023 was lower than the U.S. statutory rate primarily due to a benefit from a research and development tax credit study that was completed during the third quarter of 2023 and excess tax benefits related to stock-based compensation, partially offset by changes in uncertain tax positions.

LIQUIDITY AND CAPITAL RESOURCES

The following table summarizes the components of our financial condition as of September 30, 2024 and December 31, 2023:

	As of September 30, 2024	As of December 31, 2023	Change
	(in millions, except percentages)		
Cash, cash equivalents and marketable securities:			
Cash and cash equivalents	\$ 5,239.2	\$ 10,369.1	
Marketable securities	1,285.3	849.2	
Long-term marketable securities	4,703.5	2,497.8	
Total cash, cash equivalents and marketable securities	<u>\$ 11,228.0</u>	<u>\$ 13,716.1</u>	(18)%
Working Capital:			
Total current assets	\$ 9,804.1	\$ 14,144.2	(31)%
Total current liabilities	<u>(3,973.1)</u>	<u>(3,547.4)</u>	12%
Total working capital	\$ 5,831.0	\$ 10,596.8	(45)%

Working Capital

As of September 30, 2024, total working capital was \$5.8 billion, which represented a decrease of \$4.8 billion from \$10.6 billion as of December 31, 2023 primarily due to the cash consideration paid to acquire Alpine.

Cash Flows

	Nine Months Ended September 30,	
	2024	2023
	(in millions)	
Net cash provided by (used in):		
Operating activities	\$ (1,077.2)	\$ 3,302.7
Investing activities	\$ (2,948.1)	\$ (2,255.2)
Financing activities	\$ (1,103.6)	\$ (442.4)

Operating Activities

Cash used in operating activities was \$1.1 billion in the nine months ended September 30, 2024 primarily due to our acquisition of Alpine partially offset by cash flows provided by other operating activities. Cash provided by operating activities was \$3.3 billion in the nine months ended September 30, 2023 primarily due to income from operations of \$2.8 billion driven by our net product revenues.

Investing Activities

Cash used in investing activities were \$2.9 billion and \$2.3 billion in the nine months ended September 30, 2024 and 2023, respectively. The largest portion of our investing activities in each of these periods were net purchases of available-for-sale debt securities.

Financing Activities

Cash used in financing activities were \$1.1 billion and \$442.4 million in the nine months ended September 30, 2024 and 2023, respectively. Our financing activities in each of these periods were primarily related to repurchases of our common stock pursuant to our share repurchase program and payments related to our employee stock benefit plans.

Sources and Uses of Liquidity

We intend to rely on our existing cash, cash equivalents and current marketable securities together with cash flows from product sales as our primary source of liquidity. We expect that cash flows from our product sales together with our cash, cash equivalents and current marketable securities will be sufficient to fund our operations for at least the next twelve months. The adequacy of our available funds to meet our future operating and capital requirements will depend on many factors, including our future product sales, and the potential introduction of one or more of our other product candidates to the market, our business development activities, and the number, breadth, cost and prospects of our research and development programs.

Credit Facilities & Financing Strategy

We may borrow up to a total of \$500.0 million pursuant to a revolving credit facility that we entered into in July 2022 and could repay and reborrow amounts under this revolving credit agreement without penalty. Subject to certain conditions, we could request that the borrowing capacity be increased by an additional \$500.0 million, for a total of \$1.0 billion. Negative covenants in our credit agreement could prohibit or limit our ability to access this source of liquidity. As of September 30, 2024, the facility was undrawn, and we were in compliance with these covenants.

We may also raise additional capital by borrowing under credit agreements, through public offerings or private placements of our securities or securing new collaborative agreements or other methods of financing. We will continue to manage our capital structure and will consider all financing opportunities, whenever they may occur, that could strengthen our long-term liquidity profile. There can be no assurance that any such financing opportunities will be available on acceptable terms, if at all.

Future Capital Requirements

We have significant future capital requirements, including:

- Expected operating expenses to conduct research and development activities, manufacture and commercialize our existing and future products, and to operate our organization.
- Cash that we pay for income taxes.
- Royalties we pay related to sales of our CF products.
- Facility, operating and finance lease obligations, including obligations through 2044 related to our corporate headquarters as a result of the extension that we signed in August 2024.
- Firm purchase obligations related to our supply and manufacturing processes.

In addition, other potential significant future capital requirements may include:

- We have entered into certain business development-related and strategic agreements with third parties that include the funding of certain research, development, manufacturing and commercialization efforts. Certain of our transactions, including collaborations, licensing arrangements, and asset acquisitions, include the potential for future milestone and royalty payments by us upon the achievement of pre-established developmental and regulatory targets and/or commercial targets. Other transactions include the potential for future lease-related expenses and other costs. Our obligation to fund these research and development and commercialization efforts and to pay these potential milestones, expenses and royalties is contingent upon continued involvement in the programs and/or the lack of any adverse events that could cause their discontinuance. We may enter into additional business development transactions and strategic agreements, including acquisitions, collaborations, licensing arrangements and equity investments, which require additional capital.
- To the extent we borrow amounts under our existing credit agreement, we would be required to repay any outstanding principal amounts in 2027.

- As of September 30, 2024, we had \$1.8 billion remaining authorization available under our Share Repurchase Program that our Board of Directors approved in February 2023. We expect to fund repurchases of our common stock through a combination of cash on hand and cash generated by operations. This program does not have an expiration date and can be discontinued at any time.

Other than the extension to our corporate headquarters leases noted above, there have not been any material changes to our future capital requirements disclosed in our Annual Report on Form 10-K for the year ended December 31, 2023, which was filed with the Securities and Exchange Commission, or SEC, on February 15, 2024.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our discussion and analysis of our financial condition and results of operations are based upon our condensed consolidated financial statements prepared in accordance with generally accepted accounting principles in the U.S. The preparation of these financial statements requires us to make certain estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements and the reported amounts of revenues and expenses during the reported periods. These items are monitored and analyzed by management for changes in facts and circumstances, and material changes in these estimates could occur in the future. Changes in estimates are reflected in reported results for the period in which the change occurs. We base our estimates on historical experience and various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from our estimates if past experience or other assumptions do not turn out to be substantially accurate. During the nine months ended September 30, 2024, there were no material changes to our critical accounting policies as reported in our Annual Report on Form 10-K for the year ended December 31, 2023, which was filed with the SEC on February 15, 2024.

RECENT ACCOUNTING PRONOUNCEMENTS

For a discussion of recent accounting pronouncements, please refer to Note A, "Basis of Presentation and Accounting Policies."

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Information required by this item is incorporated by reference from the discussion in Part II, Item 7A, "Quantitative and Qualitative Disclosures About Market Risk," of our Annual Report on Form 10-K for the year ended December 31, 2023, which was filed with the SEC on February 15, 2024.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management (under the supervision and with the participation of our chief executive officer and chief financial officer), after evaluating the effectiveness 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) as of the end of the period covered by this Quarterly Report on Form 10-Q, has concluded that, based on such evaluation, as of September 30, 2024 our disclosure controls and procedures were effective and designed to provide reasonable assurance that the information required to be disclosed is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. In designing and evaluating our disclosure controls and procedures, our management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and our management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Changes in Internal Controls Over Financial Reporting

No change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended) occurred during the three months ended September 30, 2024 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

We are not currently subject to any material legal proceedings.

Item 1A. Risk Factors

The information presented below supplements the risk factors set forth in Part I, Item 1A. "Risk Factors" of our Annual Report on Form 10-K for the year ended December 31, 2023, which was filed with the SEC on February 15, 2024.

We may be unable to successfully realize the value of Alpine's pipeline and candidates which could adversely affect our business and financial condition.

Our realization of the value from the acquisition of Alpine relies on successful integration, continued operations of the Alpine business and continued successful development of the pipeline products and candidates that we acquired. We may not be able to make Alpine's business profitable, retain key employees or realize anticipated cost savings or synergies, if any, from this acquisition, which could adversely affect our business and financial condition.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q and, in particular, our Management's Discussion and Analysis of Financial Condition and Results of Operations set forth in Part I, Item 2, contain a number of forward-looking statements. Forward-looking statements are not purely historical and may be accompanied by words such as "anticipates," "may," "forecasts," "expects," "intends," "plans," "potentially," "believes," "seeks," "estimates," and other words and terms of similar meaning. Such statements may relate to:

- our expectations regarding the amount of, timing of, and trends with respect to our financial performance, including revenues, costs and expenses, and other gains and losses;
- our expectations regarding our clinical trials and pipeline programs, including expectations for patient enrollment, development timelines, the expected timing of data from our ongoing and planned clinical trials, regulatory authority filings and other submissions for our therapies, communications with regulatory authorities and anticipated regulatory approvals;
- our ability to maintain and obtain adequate reimbursement for our products, our ability to launch, commercialize and market our products or any of our other therapies for which we obtain regulatory approval and our ability to obtain label expansions for existing therapies;
- our expectations regarding our ability to continue to grow our CF business by increasing the number of people with CF eligible and able to receive our medicines, providing improved treatment options for people who are already eligible for one of our medicines, and pursuing genetic therapies for people with CF who cannot currently benefit from our medicines;
- the data that will be generated by ongoing and planned clinical trials and the ability to use that data to advance compounds, continue development or support regulatory filings;
- our beliefs regarding the support provided by clinical trials and preclinical and nonclinical studies of our therapies for further investigation, clinical trials or potential use as a treatment;
- our plans to continue investing in our research and development programs, including anticipated timelines for our programs, and our strategy to develop our pipeline programs, alone or with third party-collaborators;

- our beliefs regarding the approximate patient populations for the disease areas on which we focus;
- plans for and prospects of our business development activities, including the potential benefits and therapeutic scope of our collaborations, our ability to integrate and continue operations of acquired businesses, and our ability to successfully capitalize on these opportunities;
- the establishment, development and maintenance of collaborative relationships, including potential milestone payments or other obligations;
- potential business development activities, including the identification of potential collaborative partners or acquisition targets;
- our ability to expand and protect our intellectual property portfolio and otherwise maintain exclusive rights to products;
- potential fluctuations in foreign currency exchange rates and the effectiveness of our foreign currency management program;
- our expectations regarding cash generated by operations, our cash balance and expected generation and interest income;
- our expectations regarding our provision for or benefit from income taxes and the utilization of our deferred tax assets;
- our ability to use our research programs to identify and develop new product candidates to address serious diseases and significant unmet medical needs;
- our plans to build and maintain our global supply chains and manufacturing infrastructure and capabilities, including for cell and gene therapies; and
- our liquidity and our expectations regarding the possibility of raising additional capital.

Forward-looking statements are subject to certain risks, uncertainties, or other factors that are difficult to predict and could cause actual events or results to differ materially from those indicated in any such statements. These risks, uncertainties, and other factors include, but are not limited to, those described in our "Risk Factors" in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2023, which was filed with the SEC on February 15, 2024, and those described from time to time in our future reports filed with the Securities and Exchange Commission.

Any such forward-looking statements are made on the basis of our views and assumptions as of the date of the filing and are not estimates of future performance. Except as required by law, we undertake no obligation to publicly update any forward-looking statements. The reader is cautioned not to place undue reliance on any such statements.

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

Issuer Repurchases of Equity Securities

In February 2023, our Board of Directors approved a share repurchase program (our "Share Repurchase Program"), pursuant to which we are authorized to repurchase up to \$3.0 billion of our common stock. Our Share Repurchase Program does not have an expiration date and can be discontinued at any time. The table set forth below shows repurchases of securities by us during the three months ended September 30, 2024 under our Share Repurchase Program.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1)	Approximate Dollar Value of Shares that May Yet be Purchased Under the Plans or Programs (1)
July 1, 2024 to July 31, 2024	220,000	\$ 488.85	220,000	\$ 2,008,636,716
August 1, 2024 to August 31, 2024	220,000	\$ 480.63	220,000	\$ 1,902,897,342
September 1, 2024 to September 30, 2024	200,000	\$ 471.48	200,000	\$ 1,808,601,824
Total	640,000	\$ 480.60	640,000	\$ 1,808,601,824

(1) Under our Share Repurchase Program, we are authorized to purchase shares from time to time through open market or privately negotiated transactions. Such purchases may be pursuant to Rule 10b5-1 plans or other means as determined by our management and in accordance with the requirements of the Securities and Exchange Commission.

Item 5. Other Information

Rule 10b5-1 Trading Plans

Our policy governing transactions in our securities by our directors, officers, and employees permits our officers, directors and employees to enter into trading plans complying with Rule 10b5-1 under the Securities Exchange Act of 1934, as amended. The following table describes the written plans for the sale of our securities adopted by our directors and officers (as defined in Rule 16a-1(f) under the Securities Exchange Act of 1934) during the third quarter of 2024, each of which is intended to satisfy the affirmative defense conditions of Rule 10b5-1 (each, a "Trading Plan").

Name and Title	Date of Adoption of Trading Plan	Scheduled Expiration Date of Trading Plan (1)	Maximum Shares Subject to Trading Plan
David Altshuler <i>EVP, Chief Scientific Officer</i>	8/08/2024	8/01/2025	30,510 ⁽²⁾
Charles F. Wagner, Jr <i>EVP, Chief Financial Officer</i>	8/08/2024	8/01/2025	6,298
Kristen Ambrose <i>SVP, Chief Accounting Officer</i>	8/08/2024	8/01/2025	4,914 ⁽²⁾

(1) A Trading Plan may expire on an earlier date if all contemplated transactions are completed before such Trading Plan's expiration date, upon termination by broker or the holder of the Trading Plan, or as otherwise provided in the Trading Plan.

(2) The maximum shares listed has not been reduced by the number of shares of common stock that will be withheld to satisfy tax withholding obligations at future vesting dates because such number of shares is not yet determinable.

Jeffrey Leiden Amendment

On November 1, 2024, we entered into an amendment to Dr. Jeffrey Leiden's employment agreement, which was scheduled to expire on March 31, 2025. Among other things, the amendment extends the term for two years through March 31, 2027 and provides that Dr. Leiden's equity compensation for each of the final two years of the amended employment agreement will have an aggregate grant date value of \$8,000,000.

The foregoing description of the amendment to Dr. Leiden's employment agreement does not purport to be complete and is qualified in its entirety by reference to the full text of such agreement, which is filed as Exhibit 10.3 to this Quarterly Report on Form 10-Q and incorporated herein by reference.

Item 6. Exhibits

Exhibit Number	Exhibit Description
10.1	2024 Amendment to the Lease (50 Northern Avenue), dated August 15, 2024, between Vertex Pharmaceuticals Incorporated and SNH Seaport LLC. [†]
10.2	2024 Amendment to Lease (11 Fan Pier Boulevard), dated August 15, 2024, between Vertex Pharmaceuticals Incorporated and SNH Seaport LLC. [†]
10.3	Amendment No. 3 to Employment Agreement, between Jeffrey M. Leiden and Vertex Pharmaceuticals Incorporated, dated as of November 1, 2024. [*]
31.1	Certification of the Chief Executive Officer under Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of the Chief Financial Officer under Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of the Chief Executive Officer and the Chief Financial Officer under Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation
101.LAB	XBRL Taxonomy Extension Labels
101.PRE	XBRL Taxonomy Extension Presentation
101.DEF	XBRL Taxonomy Extension Definition
104	Cover Page Interactive Data File—the cover page interactive data file does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
†	Confidential portions of this document have been redacted according to the applicable rules.
*	Management contract, compensatory plan or agreement.

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.

Vertex Pharmaceuticals Incorporated

November 5, 2024

By:

/s/ Charles F. Wagner, Jr.

Charles F. Wagner, Jr.

*Executive Vice President, Chief Financial Officer
(principal financial officer and
duly authorized officer)*

2024 AMENDMENT TO LEASE (50 NORTHERN AVENUE)

This is a 2024 Amendment to Lease (50 Northern Avenue) (this "Amendment") dated as of August 15, 2024 ("Effective Date") by and between SNH Seaport LLC, a Delaware limited liability company ("Landlord") and Vertex Pharmaceuticals Incorporated, a Massachusetts corporation ("Tenant").

WHEREAS, Fifty Northern Avenue LLC, a Delaware limited liability company ("Original Lessor") and Tenant entered into a Lease dated May 5, 2011, as amended by First Amendment to Lease dated as of April 11, 2012 and Second Amendment to Lease dated as of March 28, 2014 (as so amended, the "Lease") with respect to premises consisting of approximately [***] square feet of rentable area and containing a portion of the first (1st) floor, all of the second (2nd) through sixteenth (16th) floors (including a mechanical floor), a two-story mechanical penthouse, and a portion of a three-level below grade structure, and including the Storage Space as defined in the Lease, of the building located at 50 Northern Avenue, Boston, Massachusetts; and

WHEREAS, Landlord has succeeded to the interest of Original Lessor under the Lease; and

WHEREAS, the term of the Lease is set to expire on December 31, 2028 (i.e. the fifteenth Lease Year as defined in the Lease), and Landlord and Tenant wish to extend the term through June 30, 2044.

NOW, THEREFORE, in consideration of the foregoing, Landlord and Tenant agree as follows:

1. Capitalized Terms. Capitalized terms use herein without definition shall have the meanings ascribed to them by the Lease.

2. Term. The Term is hereby extended beyond the Initial Term and through June 30, 2044. The definition of "Extension Term" set forth in Basic Terms Section 1.08 is deleted and replaced with the following:

Extension Terms: Two (2) additional periods of ten (10) years each (July 1, 2044 – June 30, 2054 being the "First Extension Term" and July 1, 2054 – June 30, 2064 being the "Second Extension Term", and each being an "Extension Term")

3. Base Rent. Commencing as of January 1, 2029, Base Rent for the Premises and the Storage Space shall be as follows:

Premises Excluding the Storage Space: [***]

Storage Space: [***]

4. Inducements. The first [***] of Base Rent due in 2029 shall be abated (the Initial Abatement). An additional [***] (the General Abatement) shall be applied against monthly installments of Base Rent commencing with the first monthly Base Rent coming due after the Effective Date.

Landlord shall also reimburse Tenant for up to [***] (the Extension TI Allowance) of the cost of any improvements to the Premises or to the premises demised under the lease between the parties at 11 Fan Pier Boulevard (the Fan Pier Lease) which Tenant shall have performed up to twelve (12) months prior to the Effective Date or at any time thereafter up to December 31, 2030 provided any request for such reimbursement is submitted prior to December 31, 2030, together with paid invoices for any requisitioned amount; each such reimbursement shall be made within thirty (30) days of request therefor. Tenant may, by notice to Landlord at any time prior to the full application of the Initial Abatement, convert all or any portion of the then-remaining Initial Abatement to an increase in the Extension TI Allowance. If Landlord fails to reimburse Tenant for any portion of the Extension TI Allowance within forty five (45) days following Tenant request for reimbursement, then Tenant shall have the right to recover the same by an abatement of Base Rent, provided that such abatement (and the accrual of any interest on such amounts) shall cease at such time as and to the extent that payment is tendered to Tenant and to the extent an abatement of Base Rent extends beyond such forty five (45) day period (either due to the amount owed to Tenant or a pre-existing Base Rent abatement during the time period), interest shall accrue on the unpaid and uncredited balance owed Tenant at the annual rate of the Bank of America (or its successor) prime rate of interest until credited against Base Rent or paid by Landlord to Tenant. Any Extension TI Allowance not applied to reimburse improvements costs by December 31, 2030 shall remain available to be applied to Base Rent next coming due after December 31, 2030.

5. Right to Extend. Section 3.03(a)-(c) of the Lease shall be deleted and replaced with the following.

3.03. Right to Extend.

(a) Extension Terms. This Lease may be extended for the First Extension Term or, having timely exercised its option to extend for the First Extension Term, the Second Extension Term, by unconditional written notice from Tenant to Landlord delivered at least eighteen (18) months before the end of the then-current Term, time being of the essence. If Tenant does not timely exercise this option, or if on the date of such notice or at the beginning of the applicable Extension Term an Event of Default is then continuing, then at Landlord's election, Tenant's right to extend the Term pursuant to this Section 3.03(a) shall irrevocably lapse, Tenant shall have no further right to extend, and this Lease shall expire at the end of the then current Term.

(b) References. All references to the Term shall mean the Term as it may be extended by the First Extension Term and the Second Extension Term. Each Extension Term shall be on all the same terms and conditions applied to the Term (including without limitation the obligation to pay Additional Rent) except that the Base Rent for each Extension Term shall be as set forth below and Tenant shall have no further right to extend the term of this Lease except as expressly set forth above.

(c) Market Rent. If Tenant gives Landlord timely notice of its intention to extend the then-current Term of this Lease, whether for the First Extension Term or the Second Extension Term, then at least seventeen (17) months before the end of the then-scheduled expiration of the Term, Landlord shall give Tenant written notice of the then applicable market rent for Tenant's space, based on similar space in similar Class A office and laboratory buildings in the Seaport District (excluding owner-occupied space) of the City of Boston, Massachusetts (such buildings, the "Comparable Properties", and such rent, the "Market Rent"), taking into account all of the factors that a landlord and tenant would consider in negotiating an arms-length rent for a lease (including without limitation whether or not a brokerage fee is payable in connection therewith). Base Rent for any Extension Term shall be established as one hundred percent (100%) of the Market Rent. Within thirty (30) days after Tenant receives such notice, Tenant shall notify Landlord of its agreement with or objection to Landlord's determination of the Market Rent, whereupon, if Tenant objects to such determination, the Market Rent shall be determined in the manner set forth below. If Tenant does not notify Landlord within such thirty (30) day period of Tenant's agreement with or objection to Landlord's determination of the Market Rent, then the Market Rent for the applicable Extension Term shall be deemed to be Landlord's termination of the Market Rent as set forth in the notice from Landlord described in this subsection and Tenant shall be irrevocably bound to lease the Premises for the applicable Extension Term. In the event Tenant's notice objects to such determination, from the date Tenant provides such notice through the date that is sixteen (16) months before the end of the then scheduled expiration of the Term (the "Decision Date"), Landlord and Tenant shall negotiate in an attempt to reach agreement on the Base Rent for the applicable Extension Term. Prior to the Decision Date, Tenant shall send a notice rescinding its exercise of the right to extend or requesting arbitration pursuant to Section 3.03(d) below (a "Decision Notice"). If Tenant fails to send such Decision Notice prior to the Decision Date or sends a notice requesting arbitration pursuant to Section 3.03(d) below, then Tenant shall be irrevocably bound to lease the Premises for the applicable Extension Term and the Market Rent for such Extension Term shall be determined by arbitration in the manner set forth in Section 3.03(d).

Section 3.03(d) of the Lease shall be amended by deleting "or the Longwood Medical Area".

6. Deleted Sections. Sections 1.12, 1.13, 2.01(g), 3.01(b), 3.01(c), 3.01(e), 4.07, the middle paragraph of Section 13.02, and Article 17 shall all be deleted from the Lease.

7. Parking. Effective as of the first of the month following the month in which the Effective Date occurs, the verbiage in Section 1.14 of the Lease shall be deleted and replaced with [***].

Tenant shall be credited with [***] per month against the monthly charges for spaces in the Parking Garage from the first month following the month in which this Amendment is dated through the expiration of Lease Year 15 (i.e. through December 31, 2028).

In the twelve (12) months following the Effective Date (the Parking Period), Landlord shall seek to cause the Parking Garage operator to install additional EV charging stations in the Parking Garage, subject to infrastructure power restraints, and coordinate with Tenant and use commercially reasonable efforts to maximize the EV charging stations in the Parking Garage. Thereafter throughout the Term, upon request of Tenant, Landlord shall evaluate the number of EV charging stations in the Parking Garage and where commercially reasonable shall seek to cause the Parking Garage operator to install additional EV charging stations in the Parking Garage commensurate with the demand therefor and subject to infrastructure power restraints.

Landlord shall engage with the Parking Garage operator to provide for a system where Tenant has the right to park up to [***] vehicles (under this Lease and the Fan Pier Lease in the aggregate) in the Parking Garage using the passes at any time. Individuals entering the Parking Garage when [***] vehicles are in the Parking Garage under Tenant passes may (subject to parking availability) enter the Parking Garage by pulling a ticket and paying on exit. The purpose of the foregoing is to enable Tenant to administer its parking rights in as efficient a means as reasonably possible so that Tenant is able to apply the economic benefit of the parking privileges for which it pays for monthly parking passes to any daily parking charges it incurs for any day when the number of cars parked via a pass is fewer than the number of parking passes paid for by Tenant.

During the Parking Period and thereafter throughout the Term, Landlord will cooperate with Tenant and use commercially reasonable efforts to assist Tenant in implementing Tenant safety and security protocols in the Parking Garage for the safety of Tenant's employees. As part of such obligation, Landlord will cooperate with Tenant to explore the possibility of an exclusive, dedicated and secure parking area for Tenant employees in an area of the Parking Garage.

8. Insurance. Section 7.02 of the Lease shall be amended by deleting all but the first paragraph thereof. Tenant may self-insure any of the risks for which Tenant is required to maintain insurance (other than statutory workers compensation insurance). Landlord shall continue to maintain the insurance required under Section 7.04 of the Lease, and will cooperate with Tenant as to management of Landlord's insurance requirements under the Lease, consistent with the parties' prior practices.

9. Alterations. The Tenant Work Threshold Amount set forth in Section 10.05(a) of the Lease is [***]. Landlord shall not impose any management, coordination or supervisory fees in connection with any alterations Tenant may seek to perform, nor shall Landlord impose a charge for use by Tenant or its contractors of any elevators, restrooms or loading docks in

connection with such alterations. Tenant shall, however, reimburse Landlord for any actual, out-of-pocket costs Landlord may incur to obtain advice from third party professionals whose review Landlord shall solicit in connection with any request for consent by Tenant for approval of its plans for any alterations. Subject to approval of plans therefor to assure compliance with applicable law and insurance requirements and any customary engineering practices, Landlord shall not prohibit Tenant from installing one or multiple interconnecting stairs in the Premises.

10. Restoration. Notwithstanding the provisions of Section 10.06 of the Lease to the contrary, Landlord may not require removal by Tenant on or before the expiration of the term of the Lease of (1) any code compliant cabling or wiring or (2) any improvements existing in the Premises as of the date of this Amendment, or (3) any Tenant Work that (x) shall hereafter have been installed in compliance with the terms of the Lease, and (y) constitutes standard office, research and development or manufacturing improvements (including any interconnecting staircases) or standard laboratory equipment and improvements customarily found in comparable first class laboratory building. Nothing herein shall release Tenant from its obligation to remove all personal property brought to the Premises during the term or Tenant's obligations under Section 10.07 of the Lease.

11. Operating Expenses. Commencing as of January 1, 2029, in no event shall the amount of Controllable Operating Expenses (as hereinafter defined) included in Operating Expenses for any Lease Year exceed the Controllable Expense Cap (as hereinafter defined) for such Lease Year. "Controllable Operating Expenses" shall mean all Operating Expenses, except for: (i) any utility costs; (ii) any insurance costs; and (iii) the costs of snow and ice treatment and removal. "Controllable Expense Cap" shall mean (i) for the 2029 Lease Year, [***] of the Controllable Operating Expense for the 2028 Lease Year, and (ii) for each succeeding Lease Year, [***] of the amount of the Controllable Expense Cap for the immediately preceding Lease Year. The parties acknowledge that the initial housing exactions described in the second paragraph of Section 8.01 have been paid, and Operating Expenses shall not include any governmental fees or exactions for housing. The administrative fee described in Section 8.01 shall [***] per square foot of rentable area of the Building [***] effective on January 1, 2029. The administrative fee shall [***] through the remainder of the Term as it may be extended by the Extension Terms.

12. Right of First Offer. So long as the ROFO Conditions shall prevail, then if Landlord intends to solicit offers, or to accept an unsolicited offer, to purchase its fee interest in the Property, Landlord first shall offer to sell the Property to Tenant at a price to be identified by Landlord in such offer. If Tenant shall elect to accept such offer, it shall give Landlord notice of such election within thirty (30) days after the date of Landlord's offer. If Tenant elects to accept such offer within such thirty (30) day period, Landlord and Tenant shall, for a period of thirty (30) days after the date of Tenant's election, engage in good faith negotiations of a mutually acceptable purchase and sale agreement incorporating such terms and conditions as shall be contained in Landlord's offer. In the event Tenant fails to accept Landlord's offer within such thirty (30) day period, or the parties, having negotiated in good faith, fail to execute and deliver a mutually acceptable purchase and sale agreement within such thirty (30) day period, or Tenant shall breach its obligations under such purchase and sale agreement, then (except as hereinafter

provided) Tenant shall have no further rights hereunder, and Landlord shall be free to accept an offer and/or enter into an agreement to sell and/or to sell the Property, at any time to any party on any terms; provided, however, Landlord shall not convey fee title to the Property to a third party as to which Tenant's rights hereunder would otherwise apply (x) later than nine (9) months after the date on which Tenant's rights shall have expired pursuant to the above or (y) for less than ninety-five percent (95%) of the sales price identified in Landlord's offer to Tenant unless in either case (x) or (y) Landlord shall first re-offer the Property to Tenant as provided above. Tenant's rights under this paragraph shall not apply to (i) any transfer in connection with any financing (or a foreclosure sale or deed in lieu thereof); (ii) a transfer to any entity that is a successor to Landlord either by merger, consolidation or reorganization, (iii) a sale or other transfer pursuant to or in lieu of taking by eminent domain, or (iv) any transfer of equity interests in Landlord or in any member or other party directly or indirectly holding an interest in Landlord.

"ROFO Conditions" shall mean (i) the Lease and the Fan Pier Lease are still in full force and effect; (ii) there then exists no Event of Default hereunder or under the Fan Pier Lease, (iii) Vertex Pharmaceuticals Incorporated or any Successor Entity or Related Entity holds Tenant's interest under the Lease and the Fan Pier Lease; and (iv) not more than twenty-five percent (25%) of the Premises or the premises demised by the Fan Pier Lease are subject to one or more subleases (other than to a Related Entity [***]).

13. Broker. Tenant warrants and represents that it has dealt with no broker in connection with the consummation of this Amendment, other than [***], representing Landlord, and [***], representing Tenant (the "Brokers"), and in the event of any brokerage claims or liens, other than by the Brokers, against Landlord or the Property predicated upon or arising out of prior dealings with Tenant, Tenant agrees to defend the same and indemnify and hold Landlord harmless against any such claim, and to discharge any such lien. Landlord warrants and represents that it has dealt with no broker in connection with the consummation of this Amendment, other than the Brokers, and in the event of any brokerage claims against Tenant predicated upon or arising out of prior dealings with Landlord and not arising out of any agreement by or with Tenant, Landlord agrees to defend the same and indemnify and hold Tenant harmless against any such claim. Landlord shall pay each Broker a commission in connection with this Amendment pursuant to separate agreements between Landlord and each Broker.

14. Repair and Maintenance. Tenant shall have the right to suggest to Landlord that Tenant undertake responsibility for one or more components of Landlord's repair and maintenance obligations under Section 10.03(c) of the Lease. Landlord shall consider any such suggestion in good faith in light of its obligations to other tenants, its contractual commitments to third party vendors, insurance considerations and any other legitimate concerns.

15. [***]

16. Notice Address.

- (a) Section 1.18, Original Address of Landlord for Notice is amended to delete it in its entirety and replace with:

1.18. Address of Landlord for Notices:

SNH Seaport LLC
c/o The RMR Group LLC
Two Newton Place
255 Washington Street, Suite 300
Newton, MA 02458
Attn: Yael Duffy

With a copy to:
The RMR Group LLC
Two Newton Place
255 Washington Street, Suite 300
Newton, MA 02458
Attn: Jennifer B. Clark

- (b) Section 1.19, Original Address of Tenant for Notice is amended to delete it in its entirety and replace with:

1.19 Address of Tenant for Notices:

Vertex Pharmaceuticals Incorporated
50 Northern Avenue
Boston, MA 02110
Attn: Charles Pappalardo

With a copy to:

Bowditch & Dewey, LLP
101 Federal Street, Suite 1405
Boston, Massachusetts 02110
Attn: Paul C. Bauer

17. Affirmation. As amended hereby, the Lease is hereby ratified and confirmed.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the Effective Date.

LANDLORD:

SNH Seaport LLC

By: The RMR Group LLC, its
agent

By: /s/ Matthew P. Jordan

Matthew P. Jordan

Executive Vice President

TENANT:

Vertex Pharmaceuticals
Incorporated

By: /s/ Charles F. Wagner, Jr.

Charles F. Wagner, Jr.

Executive Vice President and Treasurer

2024 AMENDMENT TO LEASE (11 FAN PIER BOULEVARD)

This is a 2024 Amendment to Lease (11 Fan Pier Boulevard) (this "Amendment") dated as of August 15, 2024 ("Effective Date") by and between SNH Seaport LLC, a Delaware limited liability company ("Landlord") and Vertex Pharmaceuticals Incorporated, a Massachusetts corporation ("Tenant").

WHEREAS, Eleven Fan Pier Boulevard LLC, a Delaware limited liability company ("Original Lessor") and Tenant entered into a Lease dated May 5, 2011, as amended by First Amendment to Lease dated as of October 31, 2011, Second Amendment to Lease dated as of April 11, 2012, Third Amendment to Lease dated as of November 26, 2012, and Fourth Amendment to Lease dated as of March 28, 2014 (as so amended, the "Lease") with respect to premises consisting of approximately [***] square feet of rentable area and containing a portion of the first (1st) floor, all of the second (2nd) through sixteenth (16th) floors (including a mechanical floor), a two-story mechanical penthouse, and a portion of a three-level below grade structure, and including the Storage Space as defined in the Lease, of the building located at 11 Fan Pier Boulevard, Boston, Massachusetts; and

WHEREAS, Landlord has succeeded to the interest of Original Lessor under the Lease; and

WHEREAS, the term of the Lease is set to expire on December 31, 2028 (i.e. the fifteenth Lease Year as defined in the Lease), and Landlord and Tenant wish to extend the term through June 30, 2044.

NOW, THEREFORE, in consideration of the foregoing, Landlord and Tenant agree as follows:

1. Capitalized Terms. Capitalized terms use herein without definition shall have the meanings ascribed to them by the Lease.

2. Term. The Term is hereby extended beyond the Initial Term and through June 30, 2044. The definition of "Extension Term" set forth in Basic Terms Section 1.08 is deleted and replaced with the following:

Extension Terms: Two (2) additional periods of ten (10) years each (July 1, 2044 – June 30, 2054 being the "First Extension Term" and July 1, 2054 – June 30, 2064 being the "Second Extension Term", and each being an "Extension Term")

3. Base Rent. Commencing as of January 1, 2029, Base Rent for the Premises and the Storage Space shall be as follows:

Premises Excluding the Storage Space: [***]

Storage Space: [***]

4. Inducements. The first [***] of Base Rent due in 2029 shall be abated (the Initial Abatement). An additional [***] (the General Abatement) shall be applied against monthly installments of Base Rent commencing with the first monthly Base Rent coming due after the Effective Date.

Landlord shall also reimburse Tenant for up to [***] (the Extension TI Allowance) of the cost of any improvements to the Premises or to the premises demised under the lease between the parties at 50 Northern Avenue (the Northern Avenue Lease) which Tenant shall have performed up to twelve (12) months prior to the Effective Date or at any time thereafter up to December 31, 2030 provided any request for such reimbursement is submitted prior to December 31, 2030, together with paid invoices for any requisitioned amount; each such reimbursement shall be made within thirty (30) days of request therefor. Tenant may, by notice to Landlord at any time prior to the full application of the Initial Abatement, convert all or any portion of the then-remaining Initial Abatement to an increase in the Extension TI Allowance. If Landlord fails to reimburse Tenant for any portion of the Extension TI Allowance within forty five (45) days following Tenant request for reimbursement, then Tenant shall have the right to recover the same by an abatement of Base Rent, provided that such abatement (and the accrual of any interest on such amounts) shall cease at such time as and to the extent that payment is tendered to Tenant and to the extent an abatement of Base Rent extends beyond such forty five (45) day period (either due to the amount owed to Tenant or a pre-existing Base Rent abatement during the time period), interest shall accrue on the unpaid and uncredited balance owed Tenant at the annual rate of the Bank of America (or its successor) prime rate of interest until credited against Base Rent or paid by Landlord to Tenant. Any Extension TI Allowance not applied to reimburse improvements costs by December 31, 2030 shall remain available to be applied to Base Rent next coming due after December 31, 2030.

5. Right to Extend. Section 3.03(a)-(c) of the Lease shall be deleted and replaced with the following.

3.03. Right to Extend.

(a) Extension Terms. This Lease may be extended for the First Extension Term or, having timely exercised its option to extend for the First Extension Term, the Second Extension Term, by unconditional written notice from Tenant to Landlord delivered at least eighteen (18) months before the end of the then-current Term, time being of the essence. If Tenant does not timely exercise this option, or if on the date of such notice or at the beginning of the applicable Extension Term an Event of Default is then continuing, then at Landlord's election, Tenant's right to extend the Term pursuant to this Section 3.03(a) shall irrevocably lapse, Tenant shall have no further right to extend, and this Lease shall expire at the end of the then current Term.

(b) References. All references to the Term shall mean the Term as it may be extended by the First Extension Term and the Second Extension Term. Each Extension Term shall be on all the same terms and conditions applied to the Term (including without limitation the obligation to pay Additional Rent) except that the Base Rent for each Extension Term shall be as set forth below and Tenant shall have no further right to extend the term of this Lease except as expressly set forth above.

(a) Market Rent. If Tenant gives Landlord timely notice of its intention to extend the then-current Term of this Lease, whether for the First Extension Term or the Second Extension Term, then at least seventeen (17) months before the end of the then-scheduled expiration of the Term, Landlord shall give Tenant written notice of the then applicable market rent for Tenant's space, based on similar space in similar Class A office and laboratory buildings in the Seaport District (excluding owner-occupied space) of the City of Boston, Massachusetts (such buildings, the "Comparable Properties", and such rent, the "Market Rent"), taking into account all of the factors that a landlord and tenant would consider in negotiating an arms-length rent for a lease (including without limitation whether or not a brokerage fee is payable in connection therewith). Base Rent for any Extension Term shall be established as one hundred percent (100%) of the Market Rent. Within thirty (30) days after Tenant receives such notice, Tenant shall notify Landlord of its agreement with or objection to Landlord's determination of the Market Rent, whereupon, if Tenant objects to such determination, the Market Rent shall be determined in the manner set forth below. If Tenant does not notify Landlord within such thirty (30) day period of Tenant's agreement with or objection to Landlord's determination of the Market Rent, then the Market Rent for the applicable Extension Term shall be deemed to be Landlord's termination of the Market Rent as set forth in the notice from Landlord described in this subsection and Tenant shall be irrevocably bound to lease the Premises for the applicable Extension Term. In the event Tenant's notice objects to such determination, from the date Tenant provides such notice through the date that is sixteen (16) months before the end of the then scheduled expiration of the Term (the "Decision Date"), Landlord and Tenant shall negotiate in an attempt to reach agreement on the Base Rent for the applicable Extension Term. Prior to the Decision Date, Tenant shall send a notice rescinding its exercise of the right to extend or requesting arbitration pursuant to Section 3.03(d) below (a "Decision Notice"). If Tenant fails to send such Decision Notice prior to the Decision Date or sends a notice requesting arbitration pursuant to Section 3.03(d) below, then Tenant shall be irrevocably bound to lease the Premises for the applicable Extension Term and the Market Rent for such Extension Term shall be determined by arbitration in the manner set forth in Section 3.03(d).

Section 3.03(d) of the Lease shall be amended by deleting "or the Longwood Medical Area".

6. Deleted Sections. Sections 1.12, 1.13, 2.01(g), 3.01(b), 3.01(c), 3.01(e), 4.07, the middle paragraph of Section 13.02, and Article 17 shall all be deleted from the Lease.

7. Parking. Effective as of the first of the month following the month in which the Effective Date occurs, the verbiage in Section 1.14 of the Lease shall be deleted and replaced with [***].

Tenant shall be credited with [***] per month against the monthly charges for spaces in the Parking Garage from the first month following the month in which this Amendment is dated through the expiration of Lease Year 15 (i.e. through December 31, 2028).

In the twelve (12) months following the Effective Date (the Parking Period), Landlord shall seek to cause the Parking Garage operator to install additional EV charging stations in the Parking Garage, subject to infrastructure power restraints, and coordinate with Tenant and use commercially reasonable efforts to maximize the EV charging stations in the Parking Garage. Thereafter throughout the Term, upon request of Tenant, Landlord shall evaluate the number of EV charging stations in the Parking Garage and where commercially reasonable shall seek to cause the Parking Garage operator to install additional EV charging stations in the Parking Garage commensurate with the demand therefor and subject to infrastructure power restraints.

Landlord shall engage with the Parking Garage operator to provide for a system where Tenant has the right to park up to [***] vehicles (under this Lease and the Northern Avenue Lease in the aggregate) in the Parking Garage using the passes at any time. Individuals entering the Parking Garage when [***] vehicles are in the Parking Garage under Tenant passes may (subject to parking availability) enter the Parking Garage by pulling a ticket and paying on exit. The purpose of the foregoing is to enable Tenant to administer its parking rights in as efficient a means as reasonably possible so that Tenant is able to apply the economic benefit of the parking privileges for which it pays for monthly parking passes to any daily parking charges it incurs for any day when the number of cars parked via a pass is fewer than the number of parking passes paid for by Tenant.

During the Parking Period and thereafter throughout the Term, Landlord will cooperate with Tenant and use commercially reasonable efforts to assist Tenant in implementing Tenant safety and security protocols in the Parking Garage for the safety of Tenant's employees. As part of such obligation, Landlord will cooperate with Tenant to explore the possibility of an exclusive, dedicated and secure parking area for Tenant employees in an area of the Parking Garage.

8. Insurance. Section 7.02 of the Lease shall be amended by deleting all but the first paragraph thereof. Tenant may self-insure any of the risks for which Tenant is required to maintain insurance (other than statutory workers compensation insurance). Landlord shall continue to maintain the insurance required under Section 7.04 of the Lease, and will cooperate with Tenant as to management of Landlord's insurance requirements under the Lease, consistent with the parties' prior practices.

9. Alterations. The Tenant Work Threshold Amount set forth in Section 10.05(a) of the Lease is [***]. Landlord shall not impose any management, coordination or supervisory fees in connection with any alterations Tenant may seek to perform, nor shall Landlord impose a charge for use by Tenant or its contractors of any elevators, restrooms or loading docks in

connection with such alterations. Tenant shall, however, reimburse Landlord for any actual, out-of-pocket costs Landlord may incur to obtain advice from third party professionals whose review Landlord shall solicit in connection with any request for consent by Tenant for approval of its plans for any alterations. Subject to approval of plans therefor to assure compliance with applicable law and insurance requirements and any customary engineering practices, Landlord shall not prohibit Tenant from installing one or multiple interconnecting stairs in the Premises.

10. Restoration. Notwithstanding the provisions of Section 10.06 of the Lease to the contrary, Landlord may not require removal by Tenant on or before the expiration of the term of the Lease of (1) any code compliant cabling or wiring or (2) any improvements existing in the Premises as of the date of this Amendment, or (3) any Tenant Work that (x) shall hereafter have been installed in compliance with the terms of the Lease, and (y) constitutes standard office, research and development or manufacturing improvements (including any interconnecting staircases) or standard laboratory equipment and improvements customarily found in comparable first class laboratory building. Nothing herein shall release Tenant from its obligation to remove all personal property brought to the Premises during the term or Tenant's obligations under Section 10.07 of the Lease.

11. Operating Expenses. Commencing as of January 1, 2029, in no event shall the amount of Controllable Operating Expenses (as hereinafter defined) included in Operating Expenses for any Lease Year exceed the Controllable Expense Cap (as hereinafter defined) for such Lease Year. "Controllable Operating Expenses" shall mean all Operating Expenses, except for: (i) any utility costs; (ii) any insurance costs; and (iii) the costs of snow and ice treatment and removal. "Controllable Expense Cap" shall mean (i) for the 2029 Lease Year, [***] of the Controllable Operating Expense for the 2028 Lease Year, and (ii) for each succeeding Lease Year, [***] of the amount of the Controllable Expense Cap for the immediately preceding Lease Year. The parties acknowledge that the initial housing exactions described in the second paragraph of Section 8.01 have been paid, and Operating Expenses shall not include any governmental fees or exactions for housing. The administrative fee described in Section 8.01 shall [***] per square foot of rentable area of the Building [***] effective on January 1, 2029. The administrative fee shall [***] through the remainder of the Term as it may be extended by the Extension Terms.

12. Right of First Offer. So long as the ROFO Conditions shall prevail, then if Landlord intends to solicit offers, or to accept an unsolicited offer, to purchase its fee interest in the Property, Landlord first shall offer to sell the Property to Tenant at a price to be identified by Landlord in such offer. If Tenant shall elect to accept such offer, it shall give Landlord notice of such election within thirty (30) days after the date of Landlord's offer. If Tenant elects to accept such offer within such thirty (30) day period, Landlord and Tenant shall, for a period of thirty (30) days after the date of Tenant's election, engage in good faith negotiations of a mutually acceptable purchase and sale agreement incorporating such terms and conditions as shall be contained in Landlord's offer. In the event Tenant fails to accept Landlord's offer within such thirty (30) day period, or the parties, having negotiated in good faith, fail to execute and deliver a mutually acceptable purchase and sale agreement within such thirty (30) day period, or Tenant shall breach its obligations under such purchase and sale agreement, then (except as hereinafter

provided) Tenant shall have no further rights hereunder, and Landlord shall be free to accept an offer and/or enter into an agreement to sell and/or to sell the Property, at any time to any party on any terms; provided, however, Landlord shall not convey fee title to the Property to a third party as to which Tenant's rights hereunder would otherwise apply (x) later than nine (9) months after the date on which Tenant's rights shall have expired pursuant to the above or (y) for less than ninety-five percent (95%) of the sales price identified in Landlord's offer to Tenant unless in either case (x) or (y) Landlord shall first re-offer the Property to Tenant as provided above. Tenant's rights under this paragraph shall not apply to (i) any transfer in connection with any financing (or a foreclosure sale or deed in lieu thereof); (ii) a transfer to any entity that is a successor to Landlord either by merger, consolidation or reorganization, (iii) a sale or other transfer pursuant to or in lieu of taking by eminent domain, or (iv) any transfer of equity interests in Landlord or in any member or other party directly or indirectly holding an interest in Landlord.

"ROFO Conditions" shall mean (i) the Lease and the Fan Pier Lease are still in full force and effect; (ii) there then exists no Event of Default hereunder or under the Fan Pier Lease, (iii) Vertex Pharmaceuticals Incorporated or any Successor Entity or Related Entity holds Tenant's interest under the Lease and the Northern Avenue Lease; and (iv) not more than twenty-five percent (25%) of the Premises or the premises demised by the Northern Avenue Lease are subject to one or more subleases (other than to a Related Entity [***]).

13. Broker. Tenant warrants and represents that it has dealt with no broker in connection with the consummation of this Amendment, other than [***], representing Landlord, and [***], representing Tenant (the "Brokers"), and in the event of any brokerage claims or liens, other than by the Brokers, against Landlord or the Property predicated upon or arising out of prior dealings with Tenant, Tenant agrees to defend the same and indemnify and hold Landlord harmless against any such claim, and to discharge any such lien. Landlord warrants and represents that it has dealt with no broker in connection with the consummation of this Amendment, other than the Brokers, and in the event of any brokerage claims against Tenant predicated upon or arising out of prior dealings with Landlord and not arising out of any agreement by or with Tenant, Landlord agrees to defend the same and indemnify and hold Tenant harmless against any such claim. Landlord shall pay each Broker a commission in connection with this Amendment pursuant to separate agreements between Landlord and each Broker.

14. Repair and Maintenance. Tenant shall have the right to suggest to Landlord that Tenant undertake responsibility for one or more components of Landlord's repair and maintenance obligations under Section 10.03(c) of the Lease. Landlord shall consider any such suggestion in good faith in light of its obligations to other tenants, its contractual commitments to third party vendors, insurance considerations and any other legitimate concerns.

15. [***]

16. Notice Address.

(a) Section 1.18, Original Address of Landlord for Notice is amended to delete it in its entirety and replace with:

1.18. Address of Landlord for Notices:

SNH Seaport LLC
c/o The RMR Group LLC
Two Newton Place
255 Washington Street, Suite 300
Newton, MA 02458
Attn: Yael Duffy

With a copy to:
The RMR Group LLC
Two Newton Place
255 Washington Street, Suite 300
Newton, MA 02458
Attn: Jennifer B. Clark

(b) Section 1.19, Original Address of Tenant for Notice is amended to delete it in its entirety and replace with:

1.19 Address of Tenant for Notices:

Vertex Pharmaceuticals Incorporated
50 Northern Avenue
Boston, MA 02110
Attn: Charles Pappalardo

With a copy to:

Bowditch & Dewey, LLP
101 Federal Street, Suite 1405
Boston, Massachusetts 02110
Attn: Paul C. Bauer

17. Affirmation. As amended hereby, the Lease is hereby ratified and confirmed.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the Effective Date.

LANDLORD:

SNH Seaport LLC

By: The RMR Group LLC, its
agent

By: /s/ Matthew P. Jordan

Matthew P. Jordan
Executive Vice President

TENANT:

Vertex Pharmaceuticals
Incorporated

By: /s/ Charles F. Wagner, Jr.

Charles F. Wagner, Jr.
Executive Vice President and Treasurer

**AMENDMENT NO. 3 TO
EMPLOYMENT AGREEMENT**

This AMENDMENT NO. 3 is made and entered into effective as of November 1, 2024 (the Effective Date) to the employment agreement dated as of April 1, 2020, as most recently amended effective as of February 8, 2023 (the Employment Agreement), between Vertex Pharmaceuticals Incorporated (the Company) and Jeffrey M. Leiden, MD., Ph.D. (the Executive).

NOW, THEREFORE, in consideration of the mutual covenants set forth herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and Executive agree as follows:

1. That Section 2 of the Employment Agreement is hereby amended by deleting "March 31, 2025" and replacing it with "March 31, 2027".
2. That Section 3(d) of the Employment Agreement is hereby amended by deleting "2025" and replacing it with "2027".
3. That Section 4(c) of the Employment Agreement is hereby amended in its entirety by replacing it with the following:

"(c) Equity Awards. During the Term of this Agreement, and provided that the Executive has remained in continuous service with the Company through the applicable grant date, subject to the approval of the Board or the Compensation Committee thereof, the Executive will receive the following annual grants of equity awards (the Annual Stock Awards). Each Annual Stock Award will be made during the applicable time period set forth below. Fifty percent (50%) of each Annual Stock Award will be in the form of fully vested shares of Company common stock and fifty percent (50%) will be in the form of performance stock units and the Annual Stock Award will have an aggregate grant date value (with performance stock units valued based on target, and the number of shares or units granted, as applicable, determined by dividing such values by the fair market value of the Company's common stock) as follows:

- (i) \$9,000,000 for fiscal year 2020 (to be granted in the first calendar quarter of 2021) (Year 1);
 - (ii) \$8,500,000 for fiscal year 2021 (to be granted in the first calendar quarter of 2022) (Year 2);
 - (iii) \$6,500,000 for fiscal year 2022 (to be granted in the first calendar quarter of 2023) (Year 3);
 - (iv) \$6,500,000 for fiscal year 2023 (to be granted in the first calendar quarter of 2024) (Year 4);
-

- (v) \$6,500,000 for fiscal year 2024 (to be granted in the first calendar quarter of 2025) (Year 5);
- (vi) \$8,000,000 for fiscal year 2025 (to be granted in the first calendar quarter of 2026) (Year 6); and
- (vii) \$8,000,000 for fiscal year 2026 (to be granted in the first calendar quarter of 2027) (Year 7).

Both one-year and three-year performance criteria will apply to the performance stock units granted in Year 1, and one-year performance criteria will apply to the performance stock units granted in Year 2, Year 3, Year 4, Year 5, Year 6 and Year 7. The terms and conditions applicable to each Annual Stock Award shall otherwise be as prescribed by the Compensation Committee, with each Annual Stock Award evidenced by an award agreement that is substantially similar to the form of award agreement used for such type of award for Company executives generally, except for such changes as are necessary or desirable to reflect the terms of the Executive's employment hereunder."

4. That Section 4(d) of the Employment Agreement is hereby amended by replacing the final sentence of such Section in its entirety with the following:

"In order to facilitate the Executive's receipt of benefits under the Employee Benefit Plans in 2022, 2023, 2024, 2025, 2026 and 2027, the Company will make a cash payment to the Executive of (i) \$65,000 in February 2022, (ii) \$67,000 in February 2023, (iii) \$70,000 in February 2024, and (iv) in each of February 2025, February 2026 and February 2027, an amount up to \$80,000."

5. Except as amended hereby and expressly provided herein, the Employment Agreement shall remain in full force and effect.

IN WITNESS WHEREOF, this Amendment No. 3 has been executed as a sealed instrument by the Company, by its duly authorized representative, and by the Executive, as of the date first above written.

THE COMPANY:

THE EXECUTIVE:

VERTEX PHARMACEUTICALS
INCORPORATED

By: /s/ Bruce I. Sachs /s/ Jeffrey M. Leiden
Bruce I. Sachs Jeffrey M. Leiden, M.D., Ph.D
Lead Independent Director and
Chairman of MDCC

CERTIFICATION

I, Reshma Kewalramani, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Vertex Pharmaceuticals Incorporated;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 5, 2024

/s/ Reshma Kewalramani

Reshma Kewalramani

Chief Executive Officer and President

CERTIFICATION

I, Charles F. Wagner, Jr., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Vertex Pharmaceuticals Incorporated;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 5, 2024

/s/ Charles F. Wagner, Jr.

Charles F. Wagner, Jr.

Executive Vice President and Chief Financial Officer

SECTION 906 CEO/CFO CERTIFICATION

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 Vertex Pharmaceuticals Incorporated, a Massachusetts corporation (the "Company"), does hereby certify, to such officer's knowledge, that the Quarterly Report on Form 10-Q for the quarter ended September 30, 2024 (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, and the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 5, 2024

/s/ Reshma Kewalramani

Reshma Kewalramani

Chief Executive Officer and President

Date: November 5, 2024

/s/ Charles F. Wagner, Jr.

Charles F. Wagner, Jr.

Executive Vice President and Chief Financial Officer
