UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2024

or

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

Commission File Number: 001-37702

Amgen Inc.

(Exact name of registrant as specified in its charter)

Delaware	**95-3540776**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
One Amgen Center Drive Thousand Oaks California	**91320-1799**
(Address of principal executive offices)	(Zip Code)

(805) 447-1000

(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, $0.0001 par value	**AMGN**	**The Nasdaq Stock Market LLC**
2.00% Senior Notes due 2026	**AMGN26**	**The Nasdaq Stock Market LLC**

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 ☑

As of April 29, 2024, the registrant had 536,434,692 shares of common stock, $0.0001 par value, outstanding.

AMGEN INC.

INDEX

Defined Terms and Products

Defined terms

We use several terms in this Form 10-Q, including but not limited to those that are finance, regulation and disease-state related as well as names of other companies, which are given below.

Term	Description
AOCI	accumulated other comprehensive income (loss)
ASR	accelerated share repurchase
AstraZeneca	AstraZeneca plc
BeiGene	BeiGene, Ltd.
ChemoCentryx	ChemoCentryx, Inc.
CMS	Centers for Medicare & Medicaid Services
COVID-19	coronavirus disease 2019
EMA	European Medicines Agency
EPS	earnings per share
EU	European Union
FDA	U.S. Food and Drug Administration
Fitch	Fitch Ratings, Inc.
FTC	Federal Trade Commission
GAAP	U.S. generally accepted accounting principles
HHS	U.S. Department of Health and Human Services
Horizon	Horizon Therapeutics plc
IPR&D	in-process research and development
IRA	Inflation Reduction Act of 2022
IRS	Internal Revenue Service
MD&A	management's discussion and analysis
Moody's	Moody's Investors Service, Inc.
Neumora	Neumora Therapeutics, Inc.
OECD	Organisation for Economic Co-operation and Development
PBM	pharmacy benefit manager
PDAB	Prescription Drug Affordability Board
R&D	research and development
RAR	Revenue Agent Report
ROW	rest of world
S&P	Standard & Poor's Financial Services LLC
SEC	U.S. Securities and Exchange Commission
SG&A	selling, general and administrative
SOFR	Secured Overnight Financing Rate
U.S. Treasury	U.S. Department of Treasury
UTB	unrecognized tax benefit

Products

The brand names of our products, our delivery devices and certain of our product candidates and their associated generic names are given below.

Term	Description
ACTIMMUNE	ACTIMMUNE® (interferon gamma-1b)[1]
Aimovig	Aimovig® (erenumab-aooe)
AMJEVITA/AMGEVITA	AMJEVITA® (adalimumab-atto)/AMGEVITA™ (adalimumab)
Aranesp	Aranesp® (darbepoetin alfa)
AVSOLA	AVSOLA® (infliximab-axxq)
BEKEMV	BEKEMV™ (eculizumab)
BLINCYTO	BLINCYTO® (blinatumomab)
BUPHENYL	BUPHENYL® (sodium phenylbutyrate)[1]
Corlanor	Corlanor® (ivabradine)
DUEXIS	DUEXIS® (ibuprofen and famotidine)[1]
ENBREL	Enbrel® (etanercept)
EPOGEN	EPOGEN® (epoetin alfa)
EVENITY	EVENITY® (romosozumab-aqqg)
IMLYGIC	IMLYGIC® (talimogene laherparepvec)
KANJINTI	KANJINTI® (trastuzumab-anns)
KRYSTEXXA	KRYSTEXXA® (pegloticase)[1]
KYPROLIS	KYPROLIS® (carfilzomib)
LUMAKRAS/LUMYKRAS	LUMAKRAS®/LUMYKRAS™ (sotorasib)
MVASI	MVASI® (bevacizumab-awwb)
Neulasta	Neulasta® (pegfilgrastim)
NEUPOGEN	NEUPOGEN® (filgrastim)
Nplate	Nplate® (romiplostim)
Otezla	Otezla® (apremilast)
Parsabiv	Parsabiv® (etelcalcetide)
PENNSAID	PENNSAID® (diclofenac sodium topical solution) 2% [1]
PROCYSBI	PROCYSBI® (cysteamine bitartrate)[1]
Prolia	Prolia® (denosumab)
QUINSAIR	QUINSAIR® (levofloxacin)[1]
RAVICTI	RAVICTI® (glycerol phenylbutyrate)[1]
RAYOS	RAYOS® (prednisone)[1]
Repatha	Repatha® (evolocumab)
RIABNI	RIABNI® (rituximab-arrx)
Sensipar/Mimpara	Sensipar®/Mimpara™ (cinacalcet)
TAVNEOS	TAVNEOS® (avacopan)
TEPEZZA	TEPEZZA® (teprotumumab-trbw)[1]
TEZSPIRE	TEZSPIRE® (tezepelumab-ekko)
UPLIZNA	UPLIZNA® (inebilizumab-cdon)[1]
Vectibix	Vectibix® (panitumumab)
WEZLANA/WEZENLA	WEZLANA™/WEZENLA™ (ustekinumab-auub)
XGEVA	XGEVA® (denosumab)

[1] Products were acquired from our Horizon acquisition on October 6, 2023.

Item 1. FINANCIAL STATEMENTS

AMGEN INC.
CONDENSED CONSOLIDATED STATEMENTS OF (LOSS) INCOME
(In millions, except per-share data)
(Unaudited)

	Three months ended March 31,	
	2024	2023
Revenues:		
Product sales	$ 7,118	$ 5,846
Other revenues	329	259
Total revenues	7,447	6,105
Operating expenses:		
Cost of sales	3,200	1,720
Research and development	1,343	1,058
Selling, general and administrative	1,808	1,258
Other	105	148
Total operating expenses	6,456	4,184
Operating income	991	1,921
Other income (expense):		
Interest expense, net	(824)	(543)
Other (expense) income, net	(235)	2,064
(Loss) income before income taxes	(68)	3,442
Provision for income taxes	45	601
Net (loss) income	$ (113)	$ 2,841
(Loss) earnings per share:		
Basic	$ (0.21)	$ 5.32
Diluted	$ (0.21)	$ 5.28
Shares used in calculation of (loss) earnings per share:		
Basic	536	534
Diluted	536	538

See accompanying notes.

AMGEN INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME
(In millions)
(Unaudited)

	Three months ended March 31,	
	2024	**2023**
Net (loss) income	$ (113)	$ 2,841
Other comprehensive income (loss), net of reclassification adjustments and taxes:		
Foreign currency translation	(24)	28
Cash flow hedges	126	(86)
Other	(3)	21
Other comprehensive income (loss), net of reclassification adjustments and taxes	99	(37)
Comprehensive (loss) income	$ (14)	$ 2,804

See accompanying notes.

AMGEN INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(In millions, except per-share data)

	March 31, 2024	December 31, 2023
	(Unaudited)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 9,708	$ 10,944
Trade receivables, net	6,776	7,268
Inventories	8,724	9,518
Other current assets	2,821	2,602
Total current assets	28,029	30,332
Property, plant and equipment, net	6,002	5,941
Intangible assets, net	31,372	32,641
Goodwill	18,570	18,629
Other noncurrent assets	9,007	9,611
Total assets	$ 92,980	$ 97,154
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 1,628	$ 1,590
Accrued liabilities	14,127	15,359
Current portion of long-term debt	3,959	1,443
Total current liabilities	19,714	18,392
Long-term debt	60,061	63,170
Long-term deferred tax liabilities	1,862	2,354
Long-term tax liabilities	3,964	4,680
Other noncurrent liabilities	2,357	2,326
Contingencies and commitments		
Stockholders' equity:		
Common stock and additional paid-in capital; $ 0.0001 par value; 2,750.0 shares authorized; outstanding —536.4 shares in 2024 and 535.4 shares in 2023	33,082	33,070
Accumulated deficit	(27,870)	(26,549)
Accumulated other comprehensive loss	(190)	(289)
Total stockholders' equity	5,022	6,232
Total liabilities and stockholders' equity	$ 92,980	$ 97,154

See accompanying notes.

AMGEN INC.
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In millions, except per-share data)
(Unaudited)

	Number of shares of common stock	Common stock and additional paid-in capital	Accumulated deficit	Accumulated other comprehensive loss	Total
Balance as of December 31, 2023	535.4	$ 33,070	$ (26,549)	$ (289)	$ 6,232
Net loss	—	—	(113)	—	(113)
Other comprehensive income, net of taxes	—	—	—	99	99
Dividends declared on common stock ($ 2.25 per share)	—	—	(1,208)	—	(1,208)
Issuance of common stock in connection with the Company's equity award programs	1.0	34	—	—	34
Stock-based compensation expense	—	103	—	—	103
Tax impact related to employee stock-based compensation expense	—	(125)	—	—	(125)
Balance as of March 31, 2024	536.4	$ 33,082	$ (27,870)	$ (190)	$ 5,022

	Number of shares of common stock	Common stock and additional paid-in capital	Accumulated deficit	Accumulated other comprehensive loss	Total
Balance as of December 31, 2022	534.0	$ 32,514	$ (28,622)	$ (231)	$ 3,661
Net income	—	—	2,841	—	2,841
Other comprehensive loss, net of taxes	—	—	—	(37)	(37)
Dividends declared on common stock ($ 2.13 per share)	—	—	(1,138)	—	(1,138)
Issuance of common stock in connection with the Company's equity award programs	0.3	11	—	—	11
Stock-based compensation expense	—	47	—	—	47
Tax impact related to employee stock-based compensation expense	—	(37)	—	—	(37)
Balance as of March 31, 2023	534.3	$ 32,535	$ (26,919)	$ (268)	$ 5,348

See accompanying notes.

AMGEN INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)
(Unaudited)

	Three months ended March 31,	
	2024	**2023**
Cash flows from operating activities:		
Net (loss) income	$ (113)	$ 2,841
Depreciation, amortization and other	1,399	900
Stock-based compensation expense	103	47
Deferred income taxes	(401)	(49)
Adjustments for equity method investments	(27)	(31)
Losses (gains) on equity securities	515	(1,830)
Other items, net	(95)	(60)
Changes in operating assets and liabilities, net of acquisitions:		
Trade receivables, net	486	(144)
Inventories	806	(58)
Other assets	(89)	(139)
Accounts payable	23	(253)
Accrued income taxes, net	223	443
Long-term tax liabilities	(715)	107
Accrued liabilities	(1,054)	(230)
Accrued sales incentives and allowance	(316)	(402)
Other liabilities	(56)	(78)
Net cash provided by operating activities	689	1,064
Cash flows from investing activities:		
Proceeds from sales of marketable securities	—	1,124
Proceeds from maturities of marketable securities	—	550
Purchases of property, plant and equipment	(230)	(344)
Other	13	28
Net cash (used in) provided by investing activities	(217)	1,358
Cash flows from financing activities:		
Net proceeds from issuance of debt	—	23,798
Extinguishment of debt	(410)	(420)
Repayment of debt	—	(704)
Dividends paid	(1,208)	(1,137)
Other	(90)	(28)
Net cash (used in) provided by financing activities	(1,708)	21,509
(Decrease) increase in cash and cash equivalents	(1,236)	23,931
Cash and cash equivalents at beginning of period	10,944	7,629
Cash and cash equivalents at end of period	$ 9,708	$ 31,560

See accompanying notes.

AMGEN INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
March 31, 2024
(Unaudited)

1. Summary of significant accounting policies

Business

Amgen Inc. (including its subsidiaries, referred to as “Amgen,” “the Company,” “we,” “our” or “us”) is a global biotechnology pioneer that discovers, develops, manufactures and delivers innovative human therapeutics. We operate in one business segment: human therapeutics.

Basis of presentation

The financial information for the three months ended March 31, 2024 and 2023, is unaudited but includes all adjustments (consisting of only normal, recurring adjustments unless otherwise indicated), which Amgen considers necessary for a fair presentation of its condensed consolidated results of operations for those periods. Interim results are not necessarily indicative of results for the full fiscal year.

The condensed consolidated financial statements should be read in conjunction with our consolidated financial statements and the notes thereto contained in our Annual Report on Form 10-K for the year ended December 31, 2023.

Principles of consolidation

The condensed consolidated financial statements include the accounts of Amgen as well as its majority-owned subsidiaries. In determining whether we are the primary beneficiary of a variable interest entity, we consider whether we have both the power to direct activities of the entity that most significantly impact the entity’s economic performance and the obligation to absorb losses of or the right to receive benefits from the entity that could potentially be significant to that entity. We do not have any significant interests in any variable interest entities of which we are the primary beneficiary. All material intercompany transactions and balances have been eliminated in consolidation. Certain reclassifications have been made to prior periods in the condensed consolidated financial statements and accompanying notes to conform with the current presentation.

Use of estimates

The preparation of condensed consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and accompanying notes. Actual results may differ from those estimates.

Property, plant and equipment, net

Property, plant and equipment is recorded at historical cost, net of accumulated depreciation and amortization, of $ 9.9 billion and $9.8 billion as of March 31, 2024 and December 31, 2023, respectively.

Recent accounting pronouncements

In November 2023, the Financial Accounting Standards Board (FASB) issued a new accounting standard that improves reportable segment disclosure requirements. The new standard requires enhanced disclosures about a public company’s significant segment expenses and more timely and detailed segment information reporting throughout the fiscal period, including for companies with a single reportable segment. The standard is effective for public business entities for annual periods beginning after December 15, 2023 and interim periods beginning after December 15, 2024, and early adoption is permitted. We are currently evaluating the impact of this new standard on our related disclosures.

In December 2023, the FASB issued a new accounting standard that improves income tax disclosure requirements. The new standard requires more detailed information on several income tax disclosures, such as income taxes paid and the income tax rate reconciliation table. The standard is effective for public business entities for annual periods beginning after December 15, 2024, and early adoption is permitted. We are currently evaluating the impact of this new standard on our related disclosures.

2. Acquisitions

Acquisition of Horizon Therapeutics plc

On October 6, 2023, Amgen completed its acquisition of Horizon for $ 116.50 per share in cash, representing a total consideration of approximately $27.8 billion. Horizon is a global biotechnology company focused on the discovery, development and commercialization of medicines that address critical needs of patients impacted by rare, autoimmune and severe inflammatory diseases. The acquisition, which was accounted for as a business combination, aligns with Amgen's core strategy of delivering innovative medicines that make a significant difference for patients suffering from serious diseases and strengthens Amgen's leading rare disease portfolio by adding first-in-class, early-in-lifecycle medicines, including TEPEZZA for thyroid eye disease, KRYSTEXXA for chronic refractory gout and UPLIZNA for neuromyelitis optica spectrum disorder. Upon its acquisition, Horizon became a wholly owned subsidiary of Amgen, and its operations have been included in our consolidated financial statements commencing on the acquisition date.

Measurement period adjustments during the three months ended March 31, 2024, included changes to the purchase price allocation, resulting in a net decrease of approximately $49 million to goodwill. The measurement period adjustments resulted primarily from adjustments to acquired assets and liabilities, including sales reserve and allowances as well as right-of-use assets and liabilities based on facts and circumstances that existed as of the acquisition date and did not result from events subsequent to the acquisition date. The adjustments did not have a significant impact on Amgen's results of operations during the three months ended March 31, 2024, and would not have had a significant impact on prior period results if the adjustments had been made as of the acquisition date.

The following table summarizes the total consideration and allocated acquisition date fair values of assets acquired and liabilities assumed, inclusive of measurement period adjustments (in millions):

	Amounts
Cash and cash equivalents	$ 681
Inventories	5,025
Property, plant and equipment, net	318
Finite-lived intangible assets – developed-product-technology rights	19,590
IPR&D	1,060
Goodwill	3,062
Deferred tax asset	834
Deferred tax liability	(2,492)
Other assets and liabilities, net	(245)
Total assets acquired, net	$ 27,833

The $27.8 billion total consideration for this transaction consisted of (i) cash consideration transferred to common shareholders of $ 26.7 billion; (ii) cash consideration transferred to vested and outstanding options, outstanding restricted stock unit (RSU) awards, and outstanding performance share unit (PSU) awards of $523 million; (iii) fair value of Amgen replacement awards (based on conversion of outstanding employee RSU awards) of $ 180 million representing non-cash consideration; and (iv) a portion of Horizon's debt, settled by Amgen on the closing date, of $382 million. Amgen issued 1.7 million replacement equity awards with the original vesting conditions, and fair value was determined based on acquisition date fair value based on the conversion calculation.

The estimated fair values of $20.7 billion for the developed-product-technology rights and IPR&D intangible assets were determined using a multi-period excess earnings income approach that discounts expected future cash flows to present value by applying a discount rate that represents the estimated rate that market participants would use to value the intangible assets. The projected cash flows were based on certain assumptions attributable to the respective intangible asset, including estimates of future revenues and expenses, the time and resources needed to complete development and the probabilities of obtaining marketing approval from the FDA and other regulatory agencies. The developed-product-technology rights are being amortized on a straight-line basis over a weighted-average period of approximately 10 years from the acquisition date using the straight-line methodology.

The estimated fair value of the acquired inventory of $ 5.0 billion was determined using the comparative sales method, which uses actual or expected selling prices of inventory as the base amount to which adjustments for selling effort and a profit on the buyer's effort are applied. The inventory fair value adjustment is being amortized using a weighted-average inventory turnover, which we estimate to approximate 27 months from the acquisition date.

A deferred tax liability of $ 2.5 billion was recognized on the temporary differences related to the book bases and tax bases of the acquired identifiable assets and assumed liabilities, primarily driven by the intangible assets acquired, as well as associated deferred tax asset for anticipatory foreign tax credits of $834 million.

The excess of the acquisition date consideration over the fair values assigned to the assets acquired and the liabilities assumed of $ 3.1 billion was recorded as goodwill, which is not deductible for tax purposes. The goodwill value represents expected synergies from the marketed products acquired and other benefits.

Our accounting for this acquisition is preliminary and will be finalized upon completion of our analysis to determine the acquisition date fair values of certain assets acquired, liabilities assumed and tax-related items as we obtain additional information during the measurement period of up to one year from the acquisition date.

Supplemental Pro Forma Financial Information

The following table presents the unaudited supplemental pro forma results of a hypothetical combined Amgen and Horizon entity for the three months ended March 31, 2023, as if the acquisition of Horizon had occurred on January 1, 2022 (in millions):

	Three months ended March 31, 2023
Total revenue	$ 6,941
Net income	$ 2,182

The unaudited supplemental pro forma combined financial information was prepared using the acquisition method of accounting and was based on the historical financial information of Amgen and Horizon. In order to reflect the occurrence of the acquisition on January 1, 2022, the unaudited supplemental pro forma financial information includes adjustments to reflect the following: (i) incremental amortization expense based on the current preliminary fair values of the identifiable intangible assets and inventory step-up; (ii) the additional interest expense associated with the issuance of debt to finance the acquisition; and (iii) the income tax impact using an estimated effective tax rate applied to the combined entity. The unaudited supplemental pro forma financial information is not necessarily indicative of what the condensed consolidated results of operations would have been had the acquisition been completed on January 1, 2022. In addition, the unaudited supplemental pro forma financial information is not a projection of future results of operations of the combined company, nor does it reflect the expected realization of any synergies or cost savings associated with the acquisition.

3. Revenues

We operate in one business segment: human therapeutics. Therefore, results of our operations are reported on a consolidated basis for purposes of segment reporting, consistent with internal management reporting. Revenues by product and by geographic area, based on customers' locations, are presented below. The majority of ROW revenues relates to products sold in Europe.

Revenues were as follows (in millions):

	Three months ended March 31,					
	2024			2023		
	U.S.	ROW	Total	U.S.	ROW	Total
Prolia	$ 657	$ 342	$ 999	$ 623	$ 304	$ 927
ENBREL	561	6	567	564	15	579
XGEVA	366	195	561	384	152	536
Repatha	273	244	517	197	191	388
TEPEZZA[1]	419	5	424	—	—	—
Otezla	293	101	394	294	98	392
KYPROLIS	234	142	376	234	124	358
Aranesp	100	249	349	115	240	355
EVENITY	236	106	342	164	90	254
Nplate	190	127	317	246	116	362
Vectibix	120	127	247	111	122	233
BLINCYTO	153	91	244	126	68	194
KRYSTEXXA[1]	235	—	235	—	—	—
TEZSPIRE[2]	173	—	173	96	—	96
Other products[3]	963	410	1,373	821	351	1,172
Total product sales[4]	$ 4,973	$ 2,145	7,118	$ 3,975	$ 1,871	5,846
Other revenues			329			259
Total revenues			$ 7,447			$ 6,105

(1) TEPEZZA and KRYSTEXXA were acquired from the acquisition of Horizon on October 6, 2023, and include product sales in the periods after the acquisition date.

(2) TEZSPIRE is marketed by our collaborator AstraZeneca outside the United States.

(3) Consists of product sales of our non-principal products.

(4) Hedging gains and losses, which are included in product sales, were not material for the three months ended March 31, 2024 and 2023.

4. Income taxes

The income tax provisions for the three months ended March 31, 2024 and 2023, were tax expenses of $ 45 million and $601 million, respectively, on a pretax loss of $68 million and a pretax income of $ 3,442 million, respectively. The effective tax rates for the three months ended March 31, 2024 and 2023, were (66.2)% and 17.5%, respectively.

The decrease in our effective tax rate for the three months ended March 31, 2024, was primarily due to the earnings mix as a result of the inclusion of the Horizon business, amortization of Horizon acquired assets and the first quarter 2024 unrealized loss on our BeiGene investment. See Note 6, Investments—*BeiGene, Ltd*. The effective tax rates differ from the federal statutory rate primarily due to impacts of the jurisdictional mix of income and expenses. Substantially all of the benefit to our effective tax rate from foreign earnings results from locations where the Company has significant manufacturing operations, including Singapore, Ireland and Puerto Rico, a territory of the United States that is treated as a foreign jurisdiction for U.S. tax purposes. Our operations in Puerto Rico are subject to a tax incentive grant through 2050. Additionally, the Company's operations conducted in Singapore are subject to a tax incentive grant through 2036. Our foreign earnings are also subject to U.S. tax at a reduced rate of 10.5%. Additionally, effective January 1, 2024, selected individual countries, including the United Kingdom and EU member countries, have enacted the global minimum tax agreement. Our legal entities in such countries, along with their direct and indirect subsidiaries, are now subject to a 15% minimum tax rate on adjusted financial statement income.

Beginning on January 1, 2023, we were no longer subject to a 4% excise tax in the U.S. territory of Puerto Rico on the gross intercompany purchase price of goods and services from our manufacturer in Puerto Rico. We qualify for and are subject to the alternative income tax rate on industrial development income of our Puerto Rico affiliate. In the United States, this income tax qualifies for foreign tax credits. Both this income tax and the associated foreign tax credits are generally recognized in our provision for income taxes. We accounted for the 2022 excise tax that was capitalized in Inventories as an expense in Cost of sales when the related products were sold in the first half of 2023, and a foreign tax credit was not recognized with respect to the excise tax expense in 2023. We do not have this excise tax exposure in 2024.

One or more of our legal entities file income tax returns in the U.S. federal jurisdiction, various U.S. state jurisdictions and certain foreign jurisdictions. Our income tax returns are routinely examined by tax authorities in those jurisdictions. Significant disputes can and have arisen with tax authorities involving issues regarding the timing and amount of deductions, the use of tax credits and allocations of income and expenses among various tax jurisdictions because of differing interpretations of tax laws, regulations and relevant facts. Tax authorities, including the IRS, are becoming more aggressive and are particularly focused on such matters.

In 2017, we received an RAR and a modified RAR from the IRS for the years 2010–2012, proposing significant adjustments that primarily relate to the allocation of profits between certain of our entities in the United States and the U.S. territory of Puerto Rico. We disagreed with the proposed adjustments and calculations and pursued resolution with the IRS appeals office but were unable to reach resolution. In July 2021, we filed a petition in the U.S. Tax Court to contest two duplicate Statutory Notices of Deficiency (Notices) for the years 2010–2012 that we received in May and July 2021, which seek to increase our U.S. taxable income for the years 2010–2012 by an amount that would result in additional federal tax of approximately $3.6 billion plus interest. Any additional tax that could be imposed for the years 2010–2012 would be reduced by up to approximately $900 million of repatriation tax previously accrued on our foreign earnings.

In 2020, we received an RAR and a modified RAR from the IRS for the years 2013–2015, also proposing significant adjustments that primarily relate to the allocation of profits between certain of our entities in the United States and the U.S. territory of Puerto Rico similar to those proposed for the years 2010–2012. We disagreed with the proposed adjustments and calculations and pursued resolution with the IRS appeals office but were unable to reach resolution. In July 2022, we filed a petition in the U.S. Tax Court to contest a Notice for the years 2013–2015 that we previously reported receiving in April 2022 that seeks to increase our U.S. taxable income for the years 2013–2015 by an amount that would result in additional federal tax of approximately $5.1 billion, plus interest. In addition, the Notice asserts penalties of approximately $2.0 billion. Any additional tax that could be imposed for the years 2013–2015 would be reduced by up to approximately $2.2 billion of repatriation tax previously accrued on our foreign earnings.

We firmly believe that the IRS positions set forth in the 2010–2012 and 2013–2015 Notices are without merit. We are contesting the 2010–2012 and 2013–2015 Notices through the judicial process. The two cases were consolidated in the U.S. Tax Court on December 19, 2022. The trial is currently scheduled to begin on November 4, 2024.

We are currently under examination by the IRS for the years 2016–2018 with respect to issues similar to those for the 2010 through 2015 period. In addition, we are under examination by a number of state and foreign tax jurisdictions.

Final resolution of these complex matters is not likely within the next 12 months. We continue to believe our accrual for income tax liabilities is appropriate based on past experience, interpretations of tax law, application of the tax law to our facts and judgments about potential actions by tax authorities; however, due to the complexity of the provision for income taxes and uncertain resolution of these matters, the ultimate outcome of any tax matters may result in payments substantially greater than amounts accrued and could have a material adverse impact on our condensed consolidated financial statements.

During the three months ended March 31, 2024, the gross amounts of our UTBs increased by $ 40 million as a result of tax positions taken during the current year. Substantially all of the UTBs as of March 31, 2024, if recognized, would affect our effective tax rate.

5. Earnings per share

The computation of basic EPS is based on the weighted-average number of our common shares outstanding. The computation of diluted EPS is based on the weighted-average number of our common shares outstanding and dilutive potential common shares, which primarily include shares that may be issued under our stock option, restricted stock and performance unit award programs (collectively, dilutive securities), as determined by using the treasury stock method. As the Company recorded a net loss for the three months ended March 31, 2024, 5 million shares of employee stock-based awards were excluded in the computation of diluted loss per share because the effect would have been antidilutive.

The computations for basic and diluted (loss) earnings per share were as follows (in millions, except per-share data):

	Three months ended March 31,	
	2024	2023
Income (Numerator):		
Net (loss) income for basic and diluted (loss) earnings per share	$ (113)	$ 2,841
Shares (Denominator):		
Weighted-average shares for basic (loss) earnings per share	536	534
Effect of dilutive securities	—	4
Weighted-average shares for diluted (loss) earnings per share	536	538
Basic (loss) earnings per share	$ (0.21)	$ 5.32
Diluted (loss) earnings per share	$ (0.21)	$ 5.28

For the three months ended March 31, 2023, the number of antidilutive employee stock-based awards excluded from the computation of diluted EPS was not significant.

6. Investments

Available-for-sale investments

The amortized cost, gross unrealized gains, gross unrealized losses and fair values of interest-bearing securities, which are considered available-for-sale, by type of security were as follows (in millions):

Types of securities as of March 31, 2024	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair values
Money market mutual funds	$ 9,099	$ —	$ —	$ 9,099
Other short-term interest-bearing securities	138	—	—	138
Total interest-bearing securities	$ 9,237	$ —	$ —	$ 9,237

Types of securities as of December 31, 2023	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair values
Money market mutual funds	$ 10,266	$ —	$ —	$ 10,266
Other short-term interest-bearing securities	138	—	—	138
Total interest-bearing securities	$ 10,404	$ —	$ —	$ 10,404

The fair values of interest-bearing securities by location in the Condensed Consolidated Balance Sheets were as follows (in millions):

Condensed Consolidated Balance Sheets locations	March 31, 2024	December 31, 2023
Cash and cash equivalents	$ 9,237	$ 10,404
Total interest-bearing securities	$ 9,237	$ 10,404

Cash and cash equivalents in the above table excludes bank account cash of $ 471 million and $ 540 million as of March 31, 2024 and December 31, 2023, respectively.

All interest-bearing securities as of March 31, 2024 and December 31, 2023, mature in one year or less.

For the three months ended March 31, 2024 and 2023, realized gains and losses on interest-bearing securities were not material. Realized gains and losses on interest-bearing securities are recorded in Other (expense) income, net, in the Condensed Consolidated Statements of (Loss) Income. The cost of securities sold is based on the specific-identification method.

The primary objective of our investment portfolio is to maintain safety of principal, prudent levels of liquidity and acceptable levels of risk. Our investment policy limits interest-bearing security investments to certain types of debt and money market instruments issued by institutions with investment-grade credit ratings, and it places restrictions on maturities and concentration by asset class and issuer.

Equity securities

BeiGene, Ltd.

Effective January 30, 2023, we relinquished our right to appoint a director to BeiGene's Board of Directors. We no longer have the ability to exert significant influence over BeiGene. As a result, in the first quarter of 2023, we began to account for our ownership interest as an equity security with a readily determinable fair value, with changes in fair value recorded in Other (expense) income, net. See Note 11, Fair value measurement. During the three months ended March 31, 2024 and 2023, we recognized an unrealized loss of $454 million and an unrealized gain of $ 1.9 billion, respectively, recorded in Other (expense) income, net, in our Condensed Consolidated Statements of (Loss) Income. As of March 31, 2024 and December 31, 2023, the carrying and fair values of our equity investment in BeiGene were $3.0 billion and $3.4 billion, respectively, and were included in Other noncurrent assets in the Condensed Consolidated Balance Sheets.

Subject to certain exceptions or otherwise agreed to by BeiGene, while Amgen holds at least 5.0% of BeiGene's outstanding common stock, (A) we may only sell our BeiGene equity investment via: (i) a registered public offering, (ii) a sale under Rule 144 of the Securities Act of 1933 (the "Securities Act") or (iii) a private sale exempt from registration requirements under the Securities Act, and (B) we may not sell more than 5.0% of BeiGene's outstanding common stock in any rolling 12-month period.

Other equity securities

Excluding our equity investments in BeiGene and Neumora (discussed below), we held investments in other equity securities with readily determinable fair values (publicly traded securities) of $536 million and $494 million as of March 31, 2024 and December 31, 2023, respectively, which are included in Other noncurrent assets in the Condensed Consolidated Balance Sheets. During the three months ended March 31, 2024 and 2023, net unrealized gains on these publicly traded securities were $50 million and $5 million, respectively. Realized gains and losses on sales of publicly traded securities for the three months ended March 31, 2024 and 2023, were not material.

We held investments of $333 million and $309 million in equity securities without readily determinable fair values as of March 31, 2024 and December 31, 2023, respectively, which are included in Other noncurrent assets in the Condensed Consolidated Balance Sheets. During the three months ended March 31, 2024 and 2023, upward and downward adjustments on these securities were not material. Adjustments were based on observable price transactions.

Equity method investments

Neumora Therapeutics, Inc.

As of March 31, 2024 and December 31, 2023, our ownership interests in Neumora were approximately 22.3% and 23.2%, respectively, and the fair values of our investment were $486 million and $603 million, respectively. During the three months ended March 31, 2024 and 2023, we recognized net losses of $117 million and $47 million, respectively. Although our equity investment qualifies us for the equity method of accounting, we have elected the fair value option to account for our investment. Under the fair value option, changes in the fair value of the investment are recognized through earnings in Other (expense) income, net, in our Condensed Consolidated Statements of (Loss) Income each reporting period. See Note 11, Fair value measurement. We believe the fair value option best reflects the economics of the underlying transaction.

We are contractually restricted from selling more than 5.0% of Neumora's outstanding common stock in any rolling 12-month period for as long as we hold at least 10.0% of their outstanding common stock, subject to certain exceptions or otherwise agreed to by Neumora.

Limited partnerships

We held limited partnership investments of $278 million and $251 million as of March 31, 2024 and December 31, 2023, respectively, which are included in Other noncurrent assets in the Condensed Consolidated Balance Sheets. These investments, primarily investment funds of early-stage biotechnology companies, are accounted for by using the equity method of accounting and are measured by using our proportionate share of the net asset values of the underlying investments held by the limited partnerships as a practical expedient. These investments are typically redeemable only through distributions upon liquidation of the underlying assets. As of March 31, 2024, unfunded additional commitments to be made for these investments during the next several years amounted to $164 million. For the three months ended March 31, 2024 and 2023, net unrealized gains from our limited partnership investments were $ 27 million and $20 million, respectively, recorded in Other (expense) income, net, in our Condensed Consolidated Statements of (Loss) Income.

7. Inventories

Inventories consisted of the following (in millions):

	March 31, 2024	December 31, 2023
Raw materials	$ 928	$ 993
Work in process	5,270	5,747
Finished goods	2,526	2,778
Total inventories	$ 8,724	$ 9,518

8. Goodwill and other intangible assets

Goodwill

The change in the carrying amount of goodwill was as follows (in millions):

	Three months ended March 31, 2024
Beginning balance	$ 18,629
Adjustments to goodwill resulting from acquisitions [1]	(49)
Currency translation adjustment	(10)
Ending balance	$ 18,570

[1] For the three months ended March 31, 2024, adjustments to goodwill consisted of a measurement period adjustment related to our Horizon acquisition. See Note 2, Acquisitions.

Other intangible assets

Other intangible assets consisted of the following (in millions):

	March 31, 2024			December 31, 2023		
	Gross carrying amounts	Accumulated amortization	Other intangible assets, net	Gross carrying amounts	Accumulated amortization	Other intangible assets, net
Finite-lived intangible assets:						
Developed-product-technology rights	$ 48,625	$ (19,184)	$ 29,441	$ 48,631	$ (18,049)	$ 30,582
Licensing rights	3,864	(3,297)	567	3,865	(3,265)	600
Marketing-related rights	1,203	(1,148)	55	1,339	(1,264)	75
Research and development technology rights	1,388	(1,229)	159	1,394	(1,228)	166
Total finite-lived intangible assets	55,080	(24,858)	30,222	55,229	(23,806)	31,423
Indefinite-lived intangible assets:						
In-process research and development	1,150	—	1,150	1,218	—	1,218
Total other intangible assets	$ 56,230	$ (24,858)	$ 31,372	$ 56,447	$ (23,806)	$ 32,641

Developed-product-technology rights consists of rights related to marketed products. Licensing rights primarily consists of contractual rights to receive future milestone, royalty and profit-sharing payments; capitalized payments to third parties for milestones related to regulatory approvals to commercialize products; and upfront payments associated with royalty obligations for marketed products. Marketing-related rights primarily consists of rights related to the sale and distribution of marketed products. R&D technology rights pertains to technologies used in R&D that have alternative future uses.

IPR&D consists of R&D projects acquired in a business combination that are not complete at the time of acquisition due to remaining technological risks and/or lack of receipt of required regulatory approvals. We review IPR&D projects for impairment annually, whenever events or changes in circumstances indicate that the carrying amounts may not be recoverable and upon the establishment of technological feasibility or regulatory approval.

During the three months ended March 31, 2024 and 2023, we recognized amortization associated with our finite-lived intangible assets of $ 1.2 billion and $693 million, respectively. Amortization of intangible assets is primarily included in Cost of sales in the Condensed Consolidated Statements of (Loss) Income. As of March 31, 2024, the total estimated amortization of our finite-lived intangible assets for the remaining nine months ending December 31, 2024, and the years ending December 31, 2025, 2026, 2027, 2028 and 2029, are $3.6 billion, $4.5 billion, $3.9 billion, $3.9 billion, $2.9 billion and $2.2 billion, respectively.

9. Financing arrangements

Our borrowings consisted of the following (in millions):

	March 31, 2024	December 31, 2023
3.625% notes due 2024 (3.625% 2024 Notes)	$ 1,400	$ 1,400
1.90% notes due 2025 (1.90% 2025 Notes)	500	500
5.25% notes due 2025 (5.25% 2025 Notes)	2,000	2,000
Term loan due April 2025	2,000	2,000
3.125% notes due 2025 (3.125% 2025 Notes)	1,000	1,000
2.00% €750 million notes due 2026 (2.00% 2026 euro Notes)	809	828
5.507% notes due 2026 (5.507% 2026 Notes)	1,500	1,500
2.60% notes due 2026 (2.60% 2026 Notes)	1,250	1,250
Term loan due October 2026	2,000	2,000
5.50% £475 million notes due 2026 (5.50% 2026 pound sterling Notes)	600	605
2.20% notes due 2027 (2.20% 2027 Notes)	1,724	1,724
3.20% notes due 2027 (3.20% 2027 Notes)	1,000	1,000
5.15% notes due 2028 (5.15% 2028 Notes)	3,750	3,750
1.65% notes due 2028 (1.65% 2028 Notes)	1,234	1,234
3.00% notes due 2029 (3.00% 2029 Notes)	750	750
4.05% notes due 2029 (4.05% 2029 Notes)	1,250	1,250
4.00% £700 million notes due 2029 (4.00% 2029 pound sterling Notes)	884	892
2.45% notes due 2030 (2.45% 2030 Notes)	1,250	1,250
5.25% notes due 2030 (5.25% 2030 Notes)	2,750	2,750
2.30% notes due 2031 (2.30% 2031 Notes)	1,250	1,250
2.00% notes due 2032 (2.00% 2032 Notes)	1,001	1,001
3.35% notes due 2032 (3.35% 2032 Notes)	1,000	1,000
4.20% notes due 2033 (4.20% 2033 Notes)	750	750
5.25% notes due 2033 (5.25% 2033 Notes)	4,250	4,250
6.375% notes due 2037 (6.375% 2037 Notes)	478	478
6.90% notes due 2038 (6.90% 2038 Notes)	254	254
6.40% notes due 2039 (6.40% 2039 Notes)	333	333
3.15% notes due 2040 (3.15% 2040 Notes)	1,768	1,803
5.75% notes due 2040 (5.75% 2040 Notes)	373	373
2.80% notes due 2041 (2.80% 2041 Notes)	828	949
4.95% notes due 2041 (4.95% 2041 Notes)	600	600
5.15% notes due 2041 (5.15% 2041 Notes)	729	729
5.65% notes due 2042 (5.65% 2042 Notes)	415	415
5.60% notes due 2043 (5.60% 2043 Notes)	2,750	2,750
5.375% notes due 2043 (5.375% 2043 Notes)	185	185
4.40% notes due 2045 (4.40% 2045 Notes)	2,250	2,250
4.563% notes due 2048 (4.563% 2048 Notes)	1,415	1,415
3.375% notes due 2050 (3.375% 2050 Notes)	1,914	2,132
4.663% notes due 2051 (4.663% 2051 Notes)	3,541	3,541
3.00% notes due 2052 (3.00% 2052 Notes)	919	999
4.20% notes due 2052 (4.20% 2052 Notes)	895	950
4.875% notes due 2053 (4.875% 2053 Notes)	1,000	1,000
5.65% notes due 2053 (5.65% 2053 Notes)	4,250	4,250
2.77% notes due 2053 (2.77% 2053 Notes)	940	940
4.40% notes due 2062 (4.40% 2062 Notes)	1,165	1,200

	March 31, 2024	December 31, 2023
5.75% notes due 2063 (5.75% 2063 Notes)	2,750	2,750
Other notes due 2097	100	100
Unamortized bond discounts, premiums and issuance costs, net	(1,404)	(1,420)
Fair value adjustments	(363)	(314)
Other	33	17
Total carrying value of debt	64,020	64,613
Less current portion	(3,959)	(1,443)
Total long-term debt	$ 60,061	$ 63,170

There are no material differences between the effective interest rates and coupon rates of any of our borrowings, except for the 4.563% 2048 Notes, the 4.663% 2051 Notes and the 2.77% 2053 Notes, which have effective interest rates of 6.3%, 5.6% and 5.2%, respectively.

The Term loans have an interest rate of three-month SOFR plus 1.225%.

Debt extinguishment

During the three months ended March 31, 2024, we repurchased portions of the 3.15% 2040 Notes, 2.80% 2041 Notes, 3.375% 2050 Notes, 3.00% 2052 Notes, 4.20% 2052 Notes and 4.40% 2062 Notes for an aggregate cost of $ 410 million, which resulted in the recognition of a $ 133 million gain on extinguishment of debt recorded in Other (expense) income, net, in the Condensed Consolidated Statements of (Loss) Income.

10. Stockholders' equity

Stock repurchase program

During the three months ended March 31, 2024 and 2023, we did not repurchase shares under our stock repurchase program. As of March 31, 2024, $ 7.0 billion of authorization remained available under our stock repurchase program.

Dividends

In March 2024, the Board of Directors declared a quarterly cash dividend of $ 2.25 per share, which will be paid in June 2024. In December 2023, the Board of Directors declared a quarterly cash dividend of $2.25 per share, which was paid in March 2024.

Accumulated other comprehensive income (loss)

The components of AOCI were as follows (in millions):

	Foreign currency translation	Cash flow hedges	Other	AOCI
Balance as of December 31, 2023	$ (298)	$ (22)	$ 31	$ (289)
Foreign currency translation adjustments	(24)	—	—	(24)
Unrealized gains	—	178	—	178
Reclassification adjustments to income	—	(20)	—	(20)
Other	—	—	(3)	(3)
Income taxes	—	(32)	—	(32)
Balance as of March 31, 2024	$ (322)	$ 104	$ 28	$ (190)

Reclassifications out of AOCI and into earnings, including related income tax expenses, were as follows (in millions):

	Three months ended March 31,		
Components of AOCI	2024	2023	Condensed Consolidated Statements of (Loss) Income locations
Cash flow hedges:			
Foreign currency contract gains	$ 51	$ 52	Product sales
Cross-currency swap contract losses	(31)	(22)	Other (expense) income, net
	20	30	(Loss) income before income taxes
	(4)	(6)	Provision for income taxes
	$ 16	$ 24	Net (loss) income

11. Fair value measurement

To estimate the fair value of our financial assets and liabilities, we use valuation approaches within a hierarchy that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing an asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that market participants would use in pricing an asset or liability and are developed based on the best information available in the circumstances. The fair value hierarchy is divided into three levels based on the sources of inputs as follows:

Level 1 — Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access

Level 2 — Valuations for which all significant inputs are observable either directly or indirectly—other than Level 1 inputs

Level 3 — Valuations based on inputs that are unobservable and significant to the overall fair value measurement

The availability of observable inputs can vary among different types of financial assets and liabilities. To the extent that the valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. In certain cases, inputs used for measuring fair value may fall into different levels of the fair value hierarchy. In such cases, for financial statement disclosure purposes, the level in the fair value hierarchy within which the fair value measurement is categorized is based on the lowest level of input used that is significant to the overall fair value measurement.

The fair values of each major class of the Company's financial assets and liabilities measured at fair value on a recurring basis were as follows (in millions):

Fair value measurement as of March 31, 2024, using:	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Total
Assets:				
Available-for-sale securities:				
Money market mutual funds	$ 9,099	$ —	$ —	$ 9,099
Other short-term interest-bearing securities	—	138	—	138
Equity securities	3,985	—	—	3,985
Derivatives:				
Foreign currency forward contracts	—	225	—	225
Total assets	$ 13,084	$ 363	$ —	$ 13,447
Liabilities:				
Derivatives:				
Foreign currency forward contracts	$ —	$ 43	$ —	$ 43
Cross-currency swap contracts	—	429	—	429
Interest rate swap contracts	—	600	—	600
Contingent consideration obligations	—	—	96	96
Total liabilities	$ —	$ 1,072	$ 96	$ 1,168

Fair value measurement as of December 31, 2023, using:	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Total
Assets:				
Available-for-sale securities:				
Money market mutual funds	$ 10,266	$ —	$ —	$ 10,266
Other short-term interest-bearing securities	—	138	—	138
Equity securities	4,514	—	—	4,514
Derivatives:				
Foreign currency forward contracts	—	145	—	145
Total assets	$ 14,780	$ 283	$ —	$ 15,063
Liabilities:				
Derivatives:				
Foreign currency forward contracts	$ —	$ 116	$ —	$ 116
Cross-currency swap contracts	—	405	—	405
Interest rate swap contracts	—	571	—	571
Contingent consideration obligations	—	—	96	96
Total liabilities	$ —	$ 1,092	$ 96	$ 1,188

Interest-bearing and equity securities

The fair values of our money market mutual funds and equity investments in publicly traded securities, including our equity investments in BeiGene and Neumora, as of March 31, 2024 and December 31, 2023, are based on quoted market prices in active markets, with no valuation adjustment.

Derivatives

All of our foreign currency forward contracts, cross-currency swap contracts and interest rate swap contracts are with counterparties that have minimum credit ratings of A– or equivalent by S&P, Moody's or Fitch. We estimate the fair values of these contracts by taking into consideration valuations obtained from a third-party valuation service that uses an income-based industry-standard valuation model for which all significant inputs are observable either directly or indirectly. These inputs, as applicable, include foreign currency exchange rates, SOFR, swap rates, obligor credit default swap rates and cross-currency basis swap spreads. Certain inputs, when applicable, are at commonly quoted intervals. See Note 12, Derivative instruments.

Contingent consideration obligations

As a result of our business acquisitions, we have incurred contingent consideration obligations as discussed below. The contingent consideration obligations are recorded at their fair values by using probability-adjusted discounted cash flows, and we revalue these obligations each reporting period until the related contingencies have been resolved. The fair value measurements of these obligations are based on significant unobservable inputs related to licensing rights and product candidates acquired in business combinations, and they are reviewed quarterly by management in our R&D and commercial sales organizations. The inputs include, as applicable, estimated probabilities and the timing of achieving specified development, regulatory and commercial milestones as well as estimated annual sales. Significant changes that increase or decrease the probabilities of achieving the related development, regulatory and commercial events or that shorten or lengthen the time required to achieve such events or that increase or decrease estimated annual sales would result in corresponding increases or decreases in the fair values of the obligations, as applicable. Changes in the fair values of contingent consideration obligations are recognized in Other operating expenses in the Condensed Consolidated Statements of (Loss) Income.

Changes in the carrying amounts of contingent consideration obligations were as follows (in millions):

	Three months ended March 31,	
	2024	2023
Beginning balance	$ 96	$ 270
Payments	(2)	(2)
Net changes in valuations	2	5
Ending balance	$ 96	$ 273

As of March 31, 2024 and December 31, 2023, our contingent consideration obligations are primarily the result of our acquisition of Teneobio, Inc. in October 2021, which obligates us to pay the former shareholders payments upon achieving separate development and regulatory milestones with regard to various R&D programs.

Summary of the fair values of other financial instruments

Cash equivalents

The fair values of cash equivalents are approximated at their carrying values due to the short-term nature of such financial instruments.

Borrowings

We estimated the fair values of our borrowings by using Level 2 inputs. As of March 31, 2024 and December 31, 2023, the aggregate fair values of our borrowings were $57.8 billion and $59.2 billion, respectively, and the carrying values were $ 64.0 billion and $64.6 billion, respectively.

During the three months ended March 31, 2024 and 2023, there were no transfers of assets or liabilities between fair value measurement levels, and there were no material remeasurements to the fair values of assets and liabilities that are not measured at fair value on a recurring basis.

12. Derivative instruments

The Company is exposed to foreign currency exchange rate and interest rate risks related to its business operations. To reduce our risks related to such exposures, we use or have used certain derivative instruments, including foreign currency forward, foreign currency option, cross-currency swap, forward interest rate and interest rate swap contracts. We have designated certain of our derivatives as cash flow and fair value hedges; we also have derivatives not designated as hedges. We do not use derivatives for speculative trading purposes.

Cash flow hedges

We are exposed to possible changes in the values of certain anticipated foreign currency cash flows resulting from changes in foreign currency exchange rates primarily associated with our euro-denominated international product sales. The foreign currency exchange rate fluctuation exposure associated with cash inflows from our international product sales is partially offset by corresponding cash outflows from our international operating expenses. To further reduce our exposure, we enter into foreign currency forward contracts to hedge a portion of our projected international product sales up to a maximum of three years into the future; and at any given point in time, a higher percentage of nearer-term projected product sales is being hedged than in successive periods.

As of both March 31, 2024 and December 31, 2023, we had outstanding foreign currency forward contracts with aggregate notional amounts of $ 6.6 billion. We have designated these foreign currency forward contracts, which are primarily euro based, as cash flow hedges. Accordingly, we report the unrealized gains and losses on these contracts in AOCI in the Condensed Consolidated Balance Sheets, and we reclassify them to Product sales in the Condensed Consolidated Statements of (Loss) Income in the same periods during which the hedged transactions affect earnings.

To hedge our exposure to foreign currency exchange rate risk associated with certain of our long-term debt denominated in foreign currencies, we enter into cross-currency swap contracts. Under the terms of such contracts, we paid euros and pounds sterling and received U.S. dollars for the notional amounts at the inception of the contracts; and based on these notional amounts, we exchange interest payments at fixed rates over the lives of the contracts by paying U.S. dollars and receiving euros and pounds sterling. In addition, we will pay U.S. dollars to and receive euros and pounds sterling from the counterparties at the maturities of the contracts for these same notional amounts. The terms of these contracts correspond to the related hedged debt, thereby effectively converting the interest payments and principal repayment on the debt from euros and pounds sterling to U.S. dollars. We have designated these cross-currency swap contracts as cash flow hedges. Accordingly, the unrealized gains and losses on these contracts are reported in AOCI in the Condensed Consolidated Balance Sheets and reclassified to Other (expense) income, net, in the Condensed Consolidated Statements of (Loss) Income in the same periods during which the hedged debt affects earnings.

The notional amounts and interest rates of our cross-currency swaps as of March 31, 2024, were as follows (notional amounts in millions):

	Foreign currency			U.S. dollars	
Hedged notes	**Notional amounts**		**Interest rates**	**Notional amounts**	**Interest rates**
2.00% 2026 euro Notes	€	750	2.0 %	$ 833	3.9 %
5.50% 2026 pound sterling Notes	£	475	5.5 %	$ 747	6.0 %
4.00% 2029 pound sterling Notes	£	700	4.0 %	$ 1,111	4.6 %

In connection with the anticipated issuance of long-term fixed-rate debt, we occasionally enter into forward interest rate contracts in order to hedge the variability in cash flows due to changes in the applicable U.S. Treasury rate between the time we enter into these contracts and the time the related debt is issued. Gains and losses on forward interest rate contracts, which are designated as cash flow hedges, are recognized in AOCI in the Condensed Consolidated Balance Sheets and are amortized into Interest expense, net, in the Condensed Consolidated Statements of (Loss) Income over the lives of the associated debt issuances. Amounts recognized in connection with forward interest rate contracts during the three months ended March 31, 2024, and amounts expected to be recognized during the subsequent 12 months are not material.

Gains and losses recognized in AOCI for our derivative instruments designated as cash flow hedges were as follows (in millions):

	Three months ended March 31,	
Derivatives in cash flow hedging relationships	**2024**	**2023**
Foreign currency forward contracts	$ 202	$ —
Cross-currency swap contracts	(24)	(40)
Forward interest rate contracts	—	(31)
Total unrealized gains (losses)	$ 178	$ (71)

Fair value hedges

To achieve a desired mix of fixed-rate and floating-rate debt, we entered into interest rate swap contracts that qualified for and were designated as fair value hedges. These interest rate swap contracts effectively convert fixed-rate coupons to floating-rate coupons over the terms of the related hedge contracts. As of both March 31, 2024 and December 31, 2023, we had interest rate swap contracts with aggregate notional amounts of $6.7 billion that hedge certain portions of our long-term debt issuances.

For interest rate swap contracts that qualify for and are designated as fair value hedges, we recognize in Interest expense, net, in the Condensed Consolidated Statements of (Loss) Income the unrealized gain or loss on the derivative resulting from the change in fair value during the period, as well as the offsetting unrealized loss or gain of the hedged item resulting from the change in fair value during the period attributable to the hedged risk. If a hedging relationship involving an interest rate swap contract is terminated, the gain or loss realized on contract termination is recorded as an adjustment to the carrying value of the debt and amortized into Interest expense, net, over the remaining life of the previously hedged debt.

The hedged liabilities and related cumulative-basis adjustments for fair value hedges of those liabilities were recorded in the Condensed Consolidated Balance Sheets as follows (in millions):

	Carrying amounts of hedged liabilities[1]		Cumulative amounts of fair value hedging adjustments related to the carrying amounts of the hedged liabilities[2]	
Condensed Consolidated Balance Sheets locations	**March 31, 2024**	**December 31, 2023**	**March 31, 2024**	**December 31, 2023**
Current portion of long-term debt	$ 1,454	$ 1,441	$ 54	$ 41
Long-term debt	$ 4,728	$ 4,788	$ (417)	$ (355)

[1] Current portion of long-term debt includes $64 million and $69 million of carrying value with discontinued hedging relationships as of March 31, 2024 and December 31, 2023, respectively. Long-term debt includes $273 million and $288 million of carrying value with discontinued hedging relationships as of March 31, 2024 and December 31, 2023, respectively.

[2] Current portion of long-term debt includes $64 million and $69 million of hedging adjustments on discontinued hedging relationships as of March 31, 2024 and December 31, 2023, respectively. Long-term debt includes $173 million and $188 million of hedging adjustments on discontinued hedging relationships as of March 31, 2024 and December 31, 2023, respectively.

Impact of hedging transactions

The following tables summarize the amounts recorded in income and expense line items and the effects thereon from fair value and cash flow hedging, including discontinued hedging relationships (in millions):

	Three months ended March 31, 2024		
	Product sales	Other (expense) income, net	Interest expense, net
Total amounts recorded in income and (expense) line items presented in the Condensed Consolidated Statements of (Loss) Income	$ 7,118	$ (235)	$ (824)
The effects of cash flow and fair value hedging:			
Gains (losses) on cash flow hedging relationships reclassified out of AOCI:			
Foreign currency forward contracts	$ 51	$ —	$ —
Cross-currency swap contracts	$ —	$ (31)	$ —
Gains (losses) on fair value hedging relationships—interest rate swap agreements:			
Hedged items[1]	$ —	$ —	$ 49
Derivatives designated as hedging instruments	$ —	$ —	$ (28)

	Three months ended March 31, 2023		
	Product sales	Other (expense) income, net	Interest expense, net
Total amounts recorded in income and (expense) line items presented in the Condensed Consolidated Statements of (Loss) Income	$ 5,846	$ 2,064	$ (543)
The effects of cash flow and fair value hedging:			
Gains (losses) on cash flow hedging relationships reclassified out of AOCI:			
Foreign currency forward contracts	$ 52	$ —	$ —
Cross-currency swap contracts	$ —	$ (22)	$ —
(Losses) gains on fair value hedging relationships—interest rate swap agreements:			
Hedged items[1]	$ —	$ —	$ (88)
Derivatives designated as hedging instruments	$ —	$ —	$ 114

[1] Gains on hedged items do not exactly offset losses on the related designated hedging instruments due to amortization of the cumulative amounts of fair value hedging adjustments included in the carrying amount of the hedged debt for discontinued hedging relationships and the recognition of gains on terminated hedges when the corresponding hedged item was paid down in the period.

No portions of our cash flow hedge contracts were excluded from the assessment of hedge effectiveness. As of March 31, 2024, we expected to reclassify $97 million of net gains on our foreign currency and cross-currency swap contracts out of AOCI and into earnings during the next 12 months.

Derivatives not designated as hedges

To reduce our exposure to foreign currency fluctuations in certain assets and liabilities denominated in foreign currencies, we enter into foreign currency forward contracts that are not designated as hedging transactions. Most of these exposures are hedged on a month-to-month basis. As of March 31, 2024 and December 31, 2023, the total notional amounts of these foreign currency forward contracts were $300 million and $457 million, respectively. Gains and losses recognized in earnings for our derivative instruments not designated as hedging instruments were not material for the three months ended March 31, 2024 and 2023.

Fair values of derivatives

The fair values of derivatives included in the Condensed Consolidated Balance Sheets were as follows (in millions):

	Derivative assets		Derivative liabilities	
March 31, 2024	**Condensed Consolidated Balance Sheets locations**	**Fair values**	**Condensed Consolidated Balance Sheets locations**	**Fair values**
Derivatives designated as hedging instruments:				
Foreign currency forward contracts	Other current assets/ Other noncurrent assets	$ 225	Accrued liabilities/ Other noncurrent liabilities	$ 43
Cross-currency swap contracts	Other current assets/ Other noncurrent assets	—	Accrued liabilities/ Other noncurrent liabilities	429
Interest rate swap contracts	Other current assets/ Other noncurrent assets	—	Accrued liabilities/ Other noncurrent liabilities	600
Forward interest rate contracts	Other current assets/ Other noncurrent assets	—	Accrued liabilities/ Other noncurrent liabilities	—
Total derivatives designated as hedging instruments		225		1,072
Total derivatives		$ 225		$ 1,072

	Derivative assets		Derivative liabilities	
December 31, 2023	**Condensed Consolidated Balance Sheets locations**	**Fair values**	**Condensed Consolidated Balance Sheets locations**	**Fair values**
Derivatives designated as hedging instruments:				
Foreign currency forward contracts	Other current assets/ Other noncurrent assets	$ 145	Accrued liabilities/ Other noncurrent liabilities	$ 116
Cross-currency swap contracts	Other current assets/ Other noncurrent assets	—	Accrued liabilities/ Other noncurrent liabilities	405
Interest rate swap contracts	Other current assets/ Other noncurrent assets	—	Accrued liabilities/ Other noncurrent liabilities	571
Forward interest rate contracts	Other current assets/ Other noncurrent assets	—	Accrued liabilities/ Other noncurrent liabilities	—
Total derivatives designated as hedging instruments		145		1,092
Total derivatives		$ 145		$ 1,092

For additional information, see Note 11, Fair value measurement.

Our derivative contracts that were in liability positions as of March 31, 2024, contain certain credit-risk-related contingent provisions that would be triggered if (i) we were to undergo a change-in-control and (ii) our or the surviving entity's creditworthiness deteriorates, which is generally defined as having either a credit rating that is below investment grade or a materially weaker creditworthiness after the change-in-control. If these events were to occur, the counterparties would have the right, but not the obligation, to close the contracts under early-termination provisions. In such circumstances, the counterparties could request immediate settlement of these contracts for amounts that approximate the then current fair values of the contracts. In addition, our derivative contracts are not subject to any type of master netting arrangement, and amounts due either to or from a counterparty under the contracts may be offset against other amounts due either to or from the same counterparty only if an event of default or termination, as defined, were to occur.

The cash flow effects of our derivative contracts in the Condensed Consolidated Statements of Cash Flows are included in Net cash provided by operating activities, except for the settlement of notional amounts of cross-currency swaps, which are included in Net cash (used in) provided by financing activities.

13. Contingencies and commitments

Contingencies

In the ordinary course of business, we are involved in various legal proceedings, government investigations and other matters that are complex in nature and have outcomes that are difficult to predict. See our Annual Report on Form 10-K for the year ended December 31, 2023, Part I, Item 1A. Risk Factors—*Our business may be affected by litigation and government investigations.* We describe our legal proceedings and other matters that are significant or that we believe could become significant in this footnote; and in Note 20, Contingencies and commitments, to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2023.

We record accruals for loss contingencies to the extent that we conclude it is probable that a liability has been incurred and the amount of the related loss can be reasonably estimated. We evaluate, on a quarterly basis, developments in legal proceedings and other matters that could cause an increase or decrease in the amount of the liability that has been accrued previously.

Our legal proceedings involve various aspects of our business and a variety of claims, some of which present novel factual allegations and/or unique legal theories. In each of the matters described in this filing; and in Note 20, Contingencies and commitments, to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2023, in which we could incur a liability, our opponents seek an award of a not-yet-quantified amount of damages or an amount that is not material. In addition, a number of the matters pending against us are at very early stages of the legal process, which in complex proceedings of the sort we face often extend for several years. As a result, none of the matters described in this filing; and in Note 20, Contingencies and commitments, to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2023, in which we could incur a liability, have progressed sufficiently through discovery and/or the development of important factual information and legal issues to enable us to estimate a range of possible loss, if any, or such amounts are not material. While it is not possible to accurately predict or determine the eventual outcomes of these matters, an adverse determination in one or more of these matters currently pending could have a material adverse effect on our consolidated results of operations, financial position or cash flows.

Certain recent developments concerning our legal proceedings and other matters are discussed below.

Repatha Patent Litigation

Patent Disputes in the International Region

Germany

On February 29, 2024, in Amgen's Nullity Action before the German Federal Patent Court seeking invalidation of Regeneron Pharmaceuticals, Inc.'s (Regeneron) European Patent No. 2,756,004 (the EP'004 Patent), the Federal Patent Court issued a preliminary opinion that the EP'004 Patent is likely to be invalid and scheduled the main hearing for November 25, 2025.

European Patent Office

On November 16, 2023 and February 29, 2024, Sanofi-Aventis and Regeneron each filed a notice of opposition against Amgen's European Patent No. 3,666,797 before the European Patent Office's Opposition Division.

On February 29, 2024, Amgen filed a Notice of Opposition and Grounds of Opposition before the European Patent Office against Regeneron's European Patent No. 3,536,712.

Prolia/XGEVA Biologics Price Competition and Innovation Act (BPCIA) Litigation

Amgen Inc. et al. v. Sandoz Inc., et al.

On April 29, 2024, the U.S. District Court for the District of New Jersey (the New Jersey District Court) entered judgment in the lawsuit pending against Sandoz Inc. based on Sandoz's submission to the FDA of a Biologics License Application seeking approval to market and sell a biosimilar version of Amgen's Prolia and XGEVA products ("Sandoz's biosimilar denosumab products"). The complaint asserted infringement of patents listed in the FDA's Purple Book for Amgen's Prolia and XGEVA products. A preliminary injunction hearing, held between October 30 and December 21, 2023, focused on a composition of matter patent U.S. Patent No. 7,364,736 (the '736 Patent) and two manufacturing patents. The judgment entered by the New Jersey District Court found the asserted claims of Amgen's '736 Patent valid, enforceable and infringed by Sandoz's biosimilar denosumab products and included an injunction prohibiting Sandoz and third parties acting on behalf of or in active concert with Sandoz from making, using, selling, or offering to sell in the United States or importing into the United States Sandoz's biosimilar denosumab products before the expiry of the '736 Patent on February 19, 2025, except as specifically authorized by a confidential settlement agreement. As a result of the settlement, the parties' remaining claims and counterclaims related to the other asserted patents were dismissed with prejudice and Sandoz is permitted to launch the Sandoz biosimilar denosumab products in the United States on May 31, 2025, unless accelerated pursuant to the terms of a confidential settlement agreement, and subject to confidential financial terms stated therein.

ABP 938 (aflibercept) Patent Litigation

On April 11, 2024, the Judicial Panel on Multidistrict Litigation granted Regeneron's motion to transfer Regeneron's patent infringement lawsuit pending against Amgen in the U.S. District Court for the Central District of California to the U.S. District Court for the Northern District of West Virginia for coordinated and consolidated pretrial proceedings.

Antitrust Class Action

Sensipar Antitrust Class Actions

On February 17, 2024, Amgen and the indirect purchasers filed a stipulation in the U.S. District Court for the District of Delaware (the Delaware District Court) to dismiss the indirect purchasers' claims. On February 22, 2024, Amgen and the indirect purchasers filed a stipulation in the U.S. Court of Appeals for the Third Circuit (the Third Circuit Court) dismissing the portion of the Third Circuit Court's appeal relating to the claims of the indirect purchasers. Amgen and the direct purchasers filed a stipulation on April 12, 2024 in the Delaware District Court, dismissing with prejudice the direct purchasers' claims that were at issue in the appeal and seeking entry of final judgment in Amgen's favor. On April 15, 2024, the Delaware District Court entered an order pursuant to the stipulation and closed the case. The direct purchasers retain a right to appeal the claims that were dismissed by the Delaware District Court on March 11, 2022.

U.S. Tax Litigation and Related Matters

Amgen Inc. & Subsidiaries v. Commissioner of Internal Revenue

See Note 4, Income taxes, for discussion of the IRS tax dispute and the Company's petitions in the U.S. Tax Court.

ChemoCentryx, Inc. Securities Matters

On March 6, 2024, the U.S. District Court for the Northern District of California certified a class of all persons who purchased or otherwise acquired the common stock of ChemoCentryx between November 26, 2019 and May 6, 2021. Trial is scheduled to begin on September 22, 2025.

On March 20, 2024, ChemoCentryx filed a petition with the U.S. Court of Appeals for the Ninth Circuit, seeking permission to have the district court's order on class certification heard on appeal. The lead plaintiff's response to ChemoCentryx's petition was submitted on April 2, 2024.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following MD&A is intended to assist the reader in understanding Amgen's business. MD&A is provided as a supplement to and should be read in conjunction with our Annual Report on Form 10-K for the year ended December 31, 2023. Our results of operations discussed in MD&A are presented in conformity with GAAP. Amgen operates in one business segment: human therapeutics. Therefore, our results of operations are discussed on a consolidated basis.

Forward-looking statements

This report and other documents we file with the SEC contain forward-looking statements that are based on current expectations, estimates, forecasts and projections about us, our future performance, our business, our beliefs and our management's assumptions. In addition, we, or others on our behalf, may make forward-looking statements in press releases, written statements or our communications and discussions with investors and analysts in the normal course of business through meetings, webcasts, phone calls and conference calls. Such words as "expect," "anticipate," "outlook," "could," "target," "project," "intend," "plan," "believe," "seek," "estimate," "should," "may," "assume" and "continue" as well as variations of such words and similar expressions are intended to identify such forward-looking statements. These statements are not guarantees of future performance, and they involve certain risks, uncertainties and assumptions that are difficult to predict. We describe our respective risks, uncertainties and assumptions that could affect the outcome or results of operations in Item 1A. Risk Factors in Part II herein and in Part I, Item 1A. Risk Factors of our Annual Report on Form 10-K for the year ended December 31, 2023. We have based our forward-looking statements on our management's beliefs and assumptions based on information available to our management at the time the statements are made. We caution you that actual outcomes and results may differ materially from what is expressed, implied or forecasted by our forward-looking statements. Reference is made in particular to forward-looking statements regarding product sales, regulatory activities, clinical trial results, reimbursement, expenses, EPS, liquidity and capital resources, trends, planned dividends, stock repurchases, and collaborations. Except as required under the federal securities laws and the rules and regulations of the SEC, we do not have any intention or obligation to update publicly any forward-looking statements after the distribution of this report, whether as a result of new information, future events, changes in assumptions or otherwise.

Overview

Amgen Inc. (including its subsidiaries, referred to as "Amgen," "the Company," "we," "our" or "us") discovers, develops, manufactures and delivers innovative medicines to fight some of the world's toughest diseases. Amgen focuses on areas of high unmet medical need and leverages its expertise to strive for solutions that dramatically improve people's lives, while also reducing the social and economic burden of disease. We helped launch the biotechnology industry more than 40 years ago and have grown to be one of the world's leading independent biotechnology companies. Our robust pipeline includes potential first-in-class medicines at all stages of development.

Our principal products are Prolia, ENBREL, XGEVA, Repatha, TEPEZZA, Otezla, KYPROLIS, Aranesp, EVENITY, Nplate, Vectibix, BLINCYTO, KRYSTEXXA and TEZSPIRE. We also market a number of other products, including but not limited to MVASI, AMJEVITA/AMGEVITA, Neulasta, Parsabiv, RAVICTI, LUMAKRAS/LUMYKRAS, UPLIZNA, Aimovig, TAVNEOS, PROCYSBI and EPOGEN.

Macroeconomic and other challenges

Uncertain macroeconomic conditions, including higher inflation, rising interest rates and instability in the financial system, as well as rising healthcare costs continue to pose challenges to our business. Further, ongoing geopolitical conflicts continue to create additional uncertainty in global macroeconomic conditions. Additionally, with public and private healthcare-provider focus, the industry continues to be subject to cost containment measures and significant pricing pressures, resulting in net price declines. Moreover, legislation enacted to reduce healthcare expenditures, including provisions of the IRA, have affected, and are likely to continue to affect, our business. Finally, wholesale and end-user buying patterns can affect our product sales. These buying patterns can cause fluctuations in quarterly product sales but have generally not been significant to date when comparing full-year product performance to the prior year. See Part II, Item 1A. Risk Factors, of this Quarterly Report on Form 10-Q.

Significant developments

Following is a summary of selected significant developments affecting our business that occurred since the filing of our Annual Report on Form 10-K for the year ended December 31, 2023. For additional developments, see our Annual Report on Form 10-K for the year ended December 31, 2023.

Obesity Program Update

On May 2, 2024, the Company provided an update on the interim analysis of the maridebart cafraglutide (MariTide) Phase 2 study in adults with overweight or obesity, with or without type 2 diabetes mellitus. The Company reported that the interim analysis of this ongoing Phase 2 study is complete and it is actively planning and expects to initiate a broad Phase 3 program, including obesity, obesity related conditions, and diabetes. The Company also announced its plans to initiate an additional, dedicated Phase 2 trial investigating MariTide for the treatment of diabetes in patients with and without obesity. As part of this announcement, the Company also indicated that it is not planning to pursue further development of AMG 786, a small molecule obesity program.

Selected financial information

The following is an overview of our results of operations (in millions, except percentages and per-share data):

	Three months ended March 31,		
	2024	2023	Change
Product sales			
U.S.	$ 4,973	$ 3,975	25 %
ROW	2,145	1,871	15 %
Total product sales	7,118	5,846	22 %
Other revenues	329	259	27 %
Total revenues	$ 7,447	$ 6,105	22 %
Operating expenses	$ 6,456	$ 4,184	54 %
Operating income	$ 991	$ 1,921	(48) %
Net (loss) income	$ (113)	$ 2,841	*
Diluted (loss) earnings per share	$ (0.21)	$ 5.28	*
Diluted shares	536	538	0 %

* Change in excess of 100%

In the following discussion of changes in product sales, any reference to unit demand growth or decline refers to changes in purchases of our products by healthcare providers (such as physicians or their clinics), dialysis centers, hospitals and pharmacies. In addition, any reference to increases or decreases in inventory refers to changes in inventory held by wholesaler customers and end users (such as pharmacies) as may be noted.

Total product sales increased 22% for the three months ended March 31, 2024, primarily driven by 25% volume growth. U.S. volume grew 29% and ROW volume grew 17%. Product sales from acquired Horizon products contributed $914 million to product sales, and volume growth from our other brands, including Repatha, TEZSPIRE, EVENITY, Prolia and BLINCYTO, was 9%. Net selling price remained relatively unchanged for the three months ended March 31, 2024, compared to the prior period. For the remainder of 2024, we expect product sales growth from acquired Horizon products and volume growth from our other brands to be partially offset by net selling price declines on a year-over-year basis at a portfolio level.

Uncertain macroeconomic conditions, changes in the healthcare ecosystem and geopolitical conflicts have the potential to introduce variability into product sales. Furthermore, product sales continue to be impacted by actions from governments and other entities to curb high inflation, provisions of the IRA and growth in numbers of Medicaid enrollees and uninsured individuals. See Part I, Item 1A. Risk Factors of our Annual Report on Form 10-K for the year ended December 31, 2023, and Part II, Item 1A. Risk Factors, of this Quarterly Report.

Other revenues increased for the three months ended March 31, 2024, primarily driven by higher corporate partner revenue from a licensed product.

Operating expenses increased for the three months ended March 31, 2024, driven by higher amortization and acquisition-related expenses incurred as a result of the Horizon acquisition, higher SG&A and R&D expenses, including expenses related to Horizon-acquired products and programs, and higher profit share and royalty expense.

Results of operations

Product sales

Worldwide product sales were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
Prolia	$ 999	$ 927	8 %
ENBREL	567	579	(2) %
XGEVA	561	536	5 %
Repatha	517	388	33 %
TEPEZZA[1]	424	—	N/A
Otezla	394	392	1 %
KYPROLIS	376	358	5 %
Aranesp	349	355	(2) %
EVENITY	342	254	35 %
Nplate	317	362	(12) %
Vectibix	247	233	6 %
BLINCYTO	244	194	26 %
KRYSTEXXA[1]	235	—	N/A
TEZSPIRE[2]	173	96	80 %
Other products[3]	1,373	1,172	17 %
Total product sales	$ 7,118	$ 5,846	22 %

N/A = not applicable

[1] TEPEZZA and KRYSTEXXA were acquired from the acquisition of Horizon on October 6, 2023, and include product sales in the periods after the acquisition date.

[2] TEZSPIRE is marketed by our collaborator AstraZeneca outside the United States.

[3] Consists of product sales of our non-principal products.

Future sales of our products will depend in part on the factors discussed below and in the following sections of this report: (i) Part I, Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations—Overview, and Selected financial information; and (ii) Part II, Item 1A. Risk Factors, and in the following sections of our Annual Report on Form 10-K for the year ended December 31, 2023: (i) Part I, Item 1. Business—Marketing, Distribution and Selected Marketed Products; (ii) Part I, Item 1A. Risk Factors; and (iii) Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Overview, and Results of operations—Product sales.

Prolia

Total Prolia sales by geographic region were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
Prolia — U.S.	$ 657	$ 623	5 %
Prolia — ROW	342	304	13 %
Total Prolia	$ 999	$ 927	8 %

The increase in global Prolia sales for the three months ended March 31, 2024 was primarily driven by volume growth.

For a discussion of litigation related to Prolia, see Part IV—Note 20, Contingencies and commitments, to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2023; and Note 13, Contingencies and commitments, to the condensed consolidated financial statements in this Quarterly Report.

ENBREL

Total ENBREL sales by geographic region were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
ENBREL — U.S.	$ 561	$ 564	(1) %
ENBREL — Canada	6	15	(60) %
Total ENBREL	$ 567	$ 579	(2) %

The decrease in ENBREL sales for the three months ended March 31, 2024 was driven by lower volume, partially offset by higher inventory levels. ENBREL typically has lower sales in the first quarter relative to subsequent quarters of the year due to the impact of benefit plan changes, insurance reverifications and increased co-pay expenses as U.S. patients work through deductibles. Moving forward, we expect modest volume growth offset by declining net selling price.

XGEVA

Total XGEVA sales by geographic region were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
XGEVA — U.S.	$ 366	$ 384	(5) %
XGEVA — ROW	195	152	28 %
Total XGEVA	$ 561	$ 536	5 %

The increase in global XGEVA sales for the three months ended March 31, 2024 was primarily driven by volume growth outside the United States and higher net selling price, partially offset by lower volume in the United States.

For a discussion of litigation related to XGEVA, see Part IV—Note 20, Contingencies and commitments, to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2023; and Note 13, Contingencies and commitments, to the condensed consolidated financial statements in this Quarterly Report.

Repatha

Total Repatha sales by geographic region were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
Repatha — U.S.	$ 273	$ 197	39 %
Repatha — ROW	244	191	28 %
Total Repatha	$ 517	$ 388	33 %

The increase in global Repatha sales for the three months ended March 31, 2024 was driven by volume growth of 44%, partially offset by lower net selling price of 13%.

For a discussion of ongoing litigation related to Repatha, see Part IV—Note 20, Contingencies and commitments, to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2023, and Note 13, Contingencies and commitments, to the condensed consolidated financial statements in this Quarterly Report.

TEPEZZA

Total TEPEZZA sales by geographic region were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
TEPEZZA — U.S.	$ 419	$ —	N/A
TEPEZZA — ROW	5	—	N/A
Total TEPEZZA	$ 424	$ —	N/A

N/A = not applicable

TEPEZZA was acquired on October 6, 2023 from our Horizon acquisition and generated $424 million in product sales for the three months ended March 31, 2024. As TEPEZZA was acquired on October 6, 2023, there were no recorded product sales for the comparative prior period.

Otezla

Total Otezla sales by geographic region were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
Otezla — U.S.	$ 293	$ 294	0 %
Otezla — ROW	101	98	3 %
Total Otezla	$ 394	$ 392	1 %

Global Otezla sales for the three months ended March 31, 2024 increased 1%. Otezla typically has lower sales in the first quarter relative to subsequent quarters of the year due to the impact of benefit plan changes, insurance reverifications and increased co-pay expenses as U.S. patients work through deductibles.

KYPROLIS

Total KYPROLIS sales by geographic region were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
KYPROLIS — U.S.	$ 234	$ 234	— %
KYPROLIS — ROW	142	124	15 %
Total KYPROLIS	$ 376	$ 358	5 %

The increase in global KYPROLIS sales for the three months ended March 31, 2024 was primarily driven by volume growth outside the United States.

Aranesp

Total Aranesp sales by geographic region were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
Aranesp — U.S.	$ 100	$ 115	(13) %
Aranesp — ROW	249	240	4 %
Total Aranesp	$ 349	$ 355	(2) %

The decrease in global Aranesp sales for the three months ended March 31, 2024 was driven by unfavorable changes to estimated sales deductions of 3%, partially offset by volume growth outside the United States.

U.S. Aranesp sales were impacted by independent and medium-sized dialysis organizations transitioning from Aranesp to EPOGEN.

EVENITY

Total EVENITY sales by geographic region were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
EVENITY — U.S.	$ 236	$ 164	44 %
EVENITY — ROW	106	90	18 %
Total EVENITY	$ 342	$ 254	35 %

The increase in global EVENITY sales for the three months ended March 31, 2024 was primarily driven by volume growth.

Nplate

Total Nplate sales by geographic region were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
Nplate — U.S.	$ 190	$ 246	(23) %
Nplate — ROW	127	116	9 %
Total Nplate	$ 317	$ 362	(12) %

The decrease in global Nplate sales for the three months ended March 31, 2024 was primarily driven by lower volume in comparison to the first quarter of 2023, which included a U.S. government order of $82 million. Excluding the U.S. government order from this comparison, global Nplate sales grew 13% for the three months ended March 31, 2024, primarily driven by

volume growth.

Vectibix

Total Vectibix sales by geographic region were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
Vectibix — U.S.	$ 120	$ 111	8 %
Vectibix — ROW	127	122	4 %
Total Vectibix	$ 247	$ 233	6 %

The increase in global Vectibix sales for the three months ended March 31, 2024 was driven by higher net selling price and volume growth, partially offset by unfavorable changes to foreign currency exchange rates.

BLINCYTO

Total BLINCYTO sales by geographic region were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
BLINCYTO — U.S.	$ 153	$ 126	21 %
BLINCYTO — ROW	91	68	34 %
Total BLINCYTO	$ 244	$ 194	26 %

The increase in global BLINCYTO sales for the three months ended March 31, 2024 was driven by volume growth resulting from broad prescribing across academic and community segments for patients with B-cell precursor acute lymphoblastic leukemia.

KRYSTEXXA

Total KRYSTEXXA sales by geographic region were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
KRYSTEXXA — U.S.	$ 235	$ —	N/A
KRYSTEXXA — ROW	—	—	N/A
Total KRYSTEXXA	$ 235	$ —	N/A

N/A = not applicable

KRYSTEXXA was acquired on October 6, 2023 from our Horizon acquisition and generated $235 million in product sales for the three months ended March 31, 2024. As KRYSTEXXA was acquired on October 6, 2023, there were no recorded product sales for the comparative prior period.

TEZSPIRE

Total TEZSPIRE sales by geographic region were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
TEZSPIRE — U.S.	$ 173	$ 96	80 %

The increase in TEZSPIRE sales for the three months ended March 31, 2024 was primarily driven by volume growth.

Other products

Other product sales by geographic region were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
MVASI — U.S.	$ 105	$ 121	(13) %
MVASI — ROW	97	81	20 %
AMJEVITA — U.S.	30	51	(41) %
AMGEVITA — ROW	138	113	22 %
Neulasta — U.S.	87	211	(59) %
Neulasta — ROW	31	38	(18) %
Parsabiv — U.S.	65	58	12 %
Parsabiv — ROW	40	33	21 %
RAVICTI — U.S.[1]	92	—	N/A
RAVICTI — ROW[1]	2	—	N/A
LUMAKRAS — U.S.	53	48	10 %
LUMYKRAS — ROW	29	26	12 %
UPLIZNA — U.S.[1]	70	—	N/A
UPLIZNA — ROW[1]	10	—	N/A
Aimovig — U.S.	65	64	2 %
Aimovig — ROW	5	5	— %
TAVNEOS — U.S.	45	23	96 %
TAVNEOS — ROW	6	—	N/A
PROCYSBI — U.S.[1]	49	—	N/A
PROCYSBI — ROW[1]	1	—	N/A
EPOGEN — U.S.	41	60	(32) %
Other — U.S.[2]	261	185	41 %
Other — ROW[2]	51	55	(7) %
Total other products	$ 1,373	$ 1,172	17 %
Total U.S. — other products	$ 963	$ 821	17 %
Total ROW — other products	410	351	17 %
Total other products	$ 1,373	$ 1,172	17 %

N/A = not applicable

---

[1] RAVICTI, UPLIZNA and PROCYSBI were acquired from our Horizon acquisition on October 6, 2023, and include product sales in the periods after the acquisition date.

[2] Consists of product sales from (i) KANJINTI, RIABNI, Corlanor, NEUPOGEN, AVSOLA, IMLYGIC, Sensipar/Mimpara, BEKEMV and WEZLANA/WEZENLA; and (ii) ACTIMMUNE, RAYOS, BUPHENYL, PENNSAID, QUINSAIR and DUEXIS in the periods after our Horizon acquisition on October 6, 2023.

Operating expenses

Operating expenses were as follows (dollar amounts in millions):

	Three months ended March 31,		
	2024	2023	Change
Operating expenses:			
Cost of sales	$ 3,200	$ 1,720	86 %
% of product sales	45.0 %	29.4 %	
% of total revenues	43.0 %	28.2 %	
Research and development	$ 1,343	$ 1,058	27 %
% of product sales	18.9 %	18.1 %	
% of total revenues	18.0 %	17.3 %	
Selling, general and administrative	$ 1,808	$ 1,258	44 %
% of product sales	25.4 %	21.5 %	
% of total revenues	24.3 %	20.6 %	
Other	$ 105	$ 148	(29) %
Total operating expenses	$ 6,456	$ 4,184	54 %

Cost of sales

Cost of sales increased to 43.0% of total revenues for the three months ended March 31, 2024, driven by higher amortization expense from Horizon acquisition-related assets and, to a lesser extent, higher profit share and royalty expense. This increase was partially offset by the impact of the 2022 Puerto Rico tax law change, which replaced an excise tax with an income tax beginning in 2023. See Note 4, Income taxes, to the condensed consolidated financial statements.

Research and development

The increase in R&D expense for the three months ended March 31, 2024, was driven by higher spend in later-stage clinical programs and marketed product support, including Horizon-acquired programs.

Selling, general and administrative

The increase in SG&A expense for the three months ended March 31, 2024, was primarily driven by commercial expenses related to Horizon-acquired products, general and administrative expenses and acquisition-related expenses.

Other

Other operating expenses for the three months ended March 31, 2024, consisted primarily of a net impairment charge associated with an IPR&D asset and changes in the fair values of contingent consideration liabilities, both related to our Teneobio, Inc. acquisition from 2021.

Other operating expenses for the three months ended March 31, 2023, consisted of expenses related to our restructuring plan initiated in the first quarter of 2023.

Nonoperating expense/income and income taxes

Nonoperating expense/income and income taxes were as follows (dollar amounts in millions):

	Three months ended March 31,	
	2024	2023
Interest expense, net	$ (824)	$ (543)
Other (expense) income, net	$ (235)	$ 2,064
Provision for income taxes	$ 45	$ 601
Effective tax rate	(66.2)%	17.5 %

Interest expense, net

The increase in Interest expense, net, for the three months ended March 31, 2024, was primarily due to higher average debt outstanding and higher weighted-average fixed and variable interest rates on the debt.

Other (expense) income, net

The change in Other (expense) income, net, for the three months ended March 31, 2024, was primarily due to unrealized losses on our strategic equity investments, primarily BeiGene and Neumora, compared with unrealized gains on these investments in the prior period. Prior period gains were principally composed of amounts recognized on our BeiGene investment as a result of a change from the equity method of accounting for this investment to recording the investment at fair value, with changes in fair value recognized in earnings. See Note 6, Investments, to the condensed consolidated financial statements.

Income taxes

The decrease in our effective tax rate for the three months ended March 31, 2024, was primarily due to the earnings mix as a result of the inclusion of the Horizon business, amortization of Horizon acquired assets and the first quarter 2024 unrealized loss on BeiGene investment. See Note 6, Investments—*BeiGene, Ltd.,* to the condensed consolidated financial statements.

As previously reported, the OECD reached an agreement to align countries on a minimum corporate tax rate and an expansion of the taxing rights of market countries. Effective January 1, 2024, selected individual countries, including the United Kingdom and EU member countries, have enacted the global minimum tax agreement. Our legal entities in the countries that have enacted the agreement, along with their direct and indirect subsidiaries, are now subject to a 15% minimum tax rate on adjusted financial statement income. Other countries, including the United States and the U.S. territory of Puerto Rico, have not yet enacted the OECD agreement, and implementation remains highly uncertain. The continued enactment of the agreement, either by all OECD participants or unilaterally by individual countries, could result in tax increases or double taxation in the United States or foreign jurisdictions.

As of January 1, 2023, we are no longer subject to a 4% excise tax in the U.S. territory of Puerto Rico on the gross intercompany purchase price of goods and services from our manufacturer in Puerto Rico. We qualify for and are subject to the alternative income tax rate on industrial development income of our Puerto Rico affiliate. In the United States, this income tax qualifies for foreign tax credits under the U.S. Treasury final foreign tax credit regulations. See Note 4, Income taxes, to the condensed consolidated financial statements.

In 2017, we received an RAR and a modified RAR from the IRS for the years 2010–2012, proposing significant adjustments that primarily relate to the allocation of profits between certain of our entities in the United States and the U.S. territory of Puerto Rico. We disagreed with the proposed adjustments and calculations and pursued resolution with the IRS appeals office but were unable to reach resolution. In July 2021, we filed a petition in the U.S. Tax Court to contest two duplicate Statutory Notices of Deficiency (Notices) for the years 2010–2012 that we received in May and July 2021, which seek to increase our U.S. taxable income for the years 2010–2012 by an amount that would result in additional federal tax of approximately $3.6 billion plus interest. Any additional tax that could be imposed for the years 2010–2012 would be reduced by up to approximately $900 million of repatriation tax previously accrued on our foreign earnings.

In 2020, we received an RAR and a modified RAR from the IRS for the years 2013–2015, also proposing significant adjustments that primarily relate to the allocation of profits between certain of our entities in the United States and the U.S. territory of Puerto Rico similar to those proposed for the years 2010–2012. We disagreed with the proposed adjustments and calculations and pursued resolution with the IRS appeals office but were unable to reach resolution. In July 2022, we filed a petition in the U.S. Tax Court to contest a Notice for the years 2013–2015 that we previously reported receiving in April 2022 that seeks to increase our U.S. taxable income for the years 2013–2015 by an amount that would result in additional federal tax of approximately $5.1 billion, plus interest. In addition, the Notice asserts penalties of approximately $2.0 billion. Any additional tax that could be imposed for the years 2013–2015 would be reduced by up to approximately $2.2 billion of repatriation tax previously accrued on our foreign earnings.

We firmly believe that the IRS positions set forth in the 2010–2012 and 2013–2015 Notices are without merit. We are contesting the 2010–2012 and 2013–2015 Notices through the judicial process. The two cases were consolidated in the U.S. Tax Court on December 19, 2022. The trial is currently scheduled to begin on November 4, 2024.

We are currently under examination by the IRS for the years 2016–2018 with respect to issues similar to those for the 2010 through 2015 period. In addition, we are under examination by a number of state and foreign tax jurisdictions.

Final resolution of these complex matters is not likely within the next 12 months. We continue to believe our accrual for income tax liabilities is appropriate based on past experience, interpretations of tax law, application of the tax law to our facts and judgments about potential actions by tax authorities; however, due to the complexity of the provision for income taxes and uncertain resolution of these matters, the ultimate outcome of any tax matters may result in payments substantially greater than amounts accrued and could have a material adverse impact on our condensed consolidated financial statements.

See our Annual Report on Form 10-K for the year ended December 31, 2023, Part I, Item 1A, Risk Factors— *We could be subject to additional tax liabilities, including from an adverse outcome in our ongoing tax dispute with the IRS and other tax examinations, enactment of the OECD minimum corporate tax rate agreement and the adoption and interpretation of new tax legislation, and we anticipate additional tax liabilities from certain provisions of the 2017 Tax Act that will go into effect in 2026; such tax liabilities could adversely affect our profitability and results of operations,* and Note 4, Income taxes, to the condensed consolidated financial statements in this filing for further discussion.

Financial condition, liquidity and capital resources

Selected financial data were as follows (in millions):

	March 31, 2024	December 31, 2023
Cash and cash equivalents	$ 9,708	$ 10,944
Total assets	$ 92,980	$ 97,154
Current portion of long-term debt	$ 3,959	$ 1,443
Long-term debt	$ 60,061	$ 63,170
Stockholders' equity	$ 5,022	$ 6,232

Cash and cash equivalents

Our balance of cash and cash equivalents was $9.7 billion as of March 31, 2024. The primary objective of our investment portfolio is to maintain safety of principal, prudent levels of liquidity and acceptable levels of risk. Our investment policy limits interest-bearing security investments to certain types of debt and money market instruments issued by institutions with primarily investment-grade credit ratings, and it places restrictions on maturities and concentration by asset class and issuer.

Capital allocation

Consistent with the objective to optimize our capital structure, we deploy our accumulated cash balances in a strategic manner and consider a number of alternatives, including investments in innovation both internally and externally (including investments that expand our portfolio of products in areas of therapeutic interest), capital expenditures, repayment of debt, payment of dividends and stock repurchases.

We intend to continue investing in our business while reducing our debt and returning capital to stockholders through the payment of cash dividends and stock repurchases. This reflects our desire to optimize our cost of capital and our confidence in the future cash flows of our business. The timing and amount of future dividends and stock repurchases will vary based on a number of factors, including future capital requirements for strategic transactions, debt levels and debt service requirements, our credit rating, availability of financing on acceptable terms, changes to applicable tax laws or corporate laws, changes to our business model and periodic determination by our Board of Directors that cash dividends and/or stock repurchases are in the best interests of stockholders and are in compliance with applicable laws and the Company's agreements. In addition, the timing and amount of stock repurchases may also be affected by our overall level of cash, stock price and blackout periods, during which we are restricted from repurchasing stock. The manner of stock repurchases may include block purchases, tender offers, ASRs and market transactions.

In December 2023, our Board of Directors declared a quarterly cash dividend of $2.25 per share of common stock for the first quarter of 2024, an increase of 6% for this period, which was paid in March 2024. In March 2024, our Board of Directors declared a quarterly cash dividend of $2.25 per share of common stock to be paid in June 2024.

During the three months ended March 31, 2024, we did not repurchase any of our common stock. As of March 31, 2024, $7.0 billion of authorization remained available under our stock repurchase program.

As a result of stock repurchases and quarterly dividend payments, we have an accumulated deficit as of March 31, 2024 and December 31, 2023. Our accumulated deficit is not anticipated to affect our future ability to operate, repurchase stock, pay dividends or repay our debt given our strong financial position.

We opportunistically repurchase our debt when market conditions are favorable. During the three months ended March 31, 2024 and 2023, we spent $410 million and $420 million to extinguish principal amounts of debt of $544 million and $539 million, respectively.

We believe that existing funds, cash generated from operations and existing sources of and access to financing are adequate to satisfy our needs for working capital, capital expenditure and debt service requirements, as well as our plans to reduce debt, pay dividends and repurchase stock, and other business initiatives we plan to strategically pursue, including acquisitions and licensing activities. We anticipate that our liquidity needs can be met through a variety of sources, including cash provided by operating activities, sales of marketable securities, borrowings through commercial paper and/or syndicated credit facilities and access to other domestic and foreign debt markets and equity markets. See our Annual Report on Form 10-K for the year ended December 31, 2023, Part I, Item 1A. Risk Factors—*Global economic conditions may negatively affect us and may magnify certain risks that affect our business.*

Certain of our financing arrangements contain nonfinancial covenants. In addition, our revolving credit agreement and term loan credit agreement include a financial covenant that requires us to maintain a specified minimum interest coverage ratio of (i) the sum of consolidated net income, interest expense, provision for income taxes, depreciation expense, amortization expense, unusual or nonrecurring charges and other noncash items (consolidated earnings before interest, taxes, depreciation and amortization) to (ii) Consolidated Interest Expense, each as defined and described in the respective agreements. We were in compliance with all applicable covenants under these arrangements as of March 31, 2024.

Cash flows

Our summarized cash flow activity was as follows (in millions):

	Three months ended March 31,	
	2024	**2023**
Net cash provided by operating activities	$ 689	$ 1,064
Net cash (used in) provided by investing activities	$ (217)	$ 1,358
Net cash (used in) provided by financing activities	$ (1,708)	$ 21,509

Operating

Cash provided by operating activities has been and is expected to continue to be our primary recurring source of funds. Cash provided by operating activities during the three months ended March 31, 2024, decreased compared with the prior year period due to higher payments to the IRS related to an advance deposit of $800 million, partially offset by timing of working capital items.

Investing

Cash used in investing activities during the three months ended March 31, 2024, was primarily due to capital expenditures of $230 million, including construction costs of new plants in North Carolina and Ohio. Cash provided by investing activities during the three months ended March 31, 2023, was primarily due to net cash inflows related to marketable securities activity of $1.7 billion, partially offset by capital expenditures of $344 million. We currently estimate 2024 spending on capital projects to be approximately $1.1 billion.

Financing

Cash used in financing activities during the three months ended March 31, 2024, was primarily due to the payment of dividends of $1.2 billion and the extinguishment of debt of $410 million. Cash provided by financing activities during the three months ended March 31, 2023, was primarily due to proceeds from the issuance of debt of $23.8 billion, partially offset by the payment of dividends of $1.1 billion as well as the repayment and extinguishment of debt of $1.1 billion. See Note 9, Financing arrangements, and Note 10, Stockholders' equity, to the condensed consolidated financial statements for further discussion.

Critical Accounting Policies and Estimates

The preparation of our condensed consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and the notes to the financial statements. Some of those judgments can be subjective and complex, and therefore, actual results could differ materially from those estimates under different assumptions or conditions. A summary of our critical accounting policies and estimates is presented in Part II, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, of our Annual Report on Form 10-K for the year ended December 31, 2023.

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Information about our market risk is disclosed 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, and is incorporated herein by reference. There were no material changes during the three months ended March 31, 2024, to the information provided 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.

Item 4. CONTROLS AND PROCEDURES

We maintain "disclosure controls and procedures," as such term is defined under the Securities Exchange Act Rule 13a-15(e) that are designed to ensure that information required to be disclosed in Amgen's Exchange Act reports gets recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information gets accumulated and communicated to Amgen's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to facilitate timely decisions regarding required disclosures. In designing and evaluating the disclosure controls and procedures, Amgen's 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 in reaching a reasonable level of assurance, Amgen's management necessarily was required to apply its judgment in evaluating the cost–benefit relationship of possible controls and procedures. We carried out an evaluation under the supervision and with the participation of our management, including Amgen's Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of Amgen's disclosure controls and procedures. Based on their evaluation and subject to the foregoing, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of March 31, 2024.

Management determined that as of March 31, 2024, no changes in our internal control over financial reporting had occurred during the fiscal quarter then ended that materially affected or are reasonably likely to materially affect our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. LEGAL PROCEEDINGS

See Part I—Note 13, Contingencies and commitments, to the condensed consolidated financial statements included in our Quarterly Report on Form 10-Q for the period ended March 31, 2024, for discussions that are limited to certain recent developments concerning our legal proceedings. Those discussions should be read in conjunction with Part IV—Note 20, Contingencies and commitments, to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2023.

Item 1A. RISK FACTORS

This report and other documents we file with the SEC contain forward-looking statements that are based on current expectations, estimates, forecasts and projections about us, our future performance, our business, our beliefs and our management's assumptions. These statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions that are difficult to predict. You should carefully consider the risks and uncertainties our business faces. The risks described below are not the only ones we face. Our business is also subject to the risks that affect many other companies, such as employment relations, general economic conditions, geopolitical events and international operations. Further, additional risks not currently known to us or that we currently believe are immaterial may in the future materially and adversely affect our business, operations, liquidity and stock price.

Below we provide in supplemental form the material changes to our risk factors that occurred during the past quarter. Our risk factors disclosed in Part I, Item 1A, of our Annual Report, on Form 10-K for the year ended December 31, 2023, provide additional disclosure for these supplemental risks and are incorporated herein by reference.

Our sales depend on coverage and reimbursement from government and commercial third-party payers, and pricing and reimbursement pressures have affected, and are likely to continue to affect, our profitability.

Sales of our products depend on the availability and extent of coverage and reimbursement from third-party payers, including government healthcare programs and private insurance plans. Governments and private payers continue to pursue initiatives to manage drug utilization and contain costs. Further, pressures on healthcare budgets from the economic downturn and inflation continue and are likely to increase across the markets we serve. Payers are increasingly focused on costs, which have resulted, and are expected to continue to result, in lower reimbursement rates for our products or narrower populations for which payers will reimburse. Continued intense public scrutiny of the price of drugs and other healthcare costs, together with payer dynamics, have limited, and are likely to continue to limit, our ability to set or adjust the price of our products based on their value, which can have a material adverse effect on our business. In the United States, particularly over the past few years, a number of legislative and regulatory proposals have been introduced and/or signed into law that attempt to lower drug prices. These include the IRA legislation that enables the U.S. government to set prices for certain drugs in Medicare, redesigns Medicare Part D benefits to shift a greater portion of the costs to manufacturers and enables the U.S. government to impose penalties if drug prices are increased at a rate faster than inflation (IRA Inflation Penalties). Additional proposals focused on drug pricing continue to be debated, and additional executive orders focused on drug pricing and competition are likely to be adopted and implemented in some form. In March 2024, the Administration released its budget plan for fiscal year 2025 that included proposals to expand the IRA's drug price setting to more drugs and sooner after launch and making IRA Inflation Penalties applicable to commercial health insurance. Government actions or ballot initiatives at the state level also represent a highly active area of policymaking and experimentation, including pursuit of proposals that limit drug reimbursement under state run Medicaid programs based on reference prices or permitting importation of drugs from Canada. Such state policies may also eventually be adopted at the federal level.

We are unable to predict which or how many policy, regulatory, administrative or legislative changes may ultimately be, or effectively estimate the consequences to our business if, enacted and implemented. However, to the extent that payer actions further decrease or modify the coverage or reimbursement available for our products, require that we pay increased rebates or shift other costs to us, limit or affect our decisions regarding the pricing of or otherwise reduce the use of our products, such actions could have a material adverse effect on our business and results of operations.

—Changing U.S. federal coverage and reimbursement policies and practices have affected and are likely to continue to affect access to, pricing of and sales of our products

A substantial portion of our U.S. business relies on reimbursement from federal government healthcare programs and commercial insurance plans regulated by federal and state governments. See Part I, Item 1. Business—Reimbursement, of our Annual Report on Form 10-K for the year ended December 31, 2023. Our business has been and will continue to be affected by legislative actions changing U.S. federal reimbursement policy. For example, in 2022, the IRA was enacted and includes

provisions requiring that beginning in 2026, mandatory price setting be introduced in Medicare for certain drugs paid for under Parts B and D, whereby manufacturers must accept a price established by the government or face penalties on all U.S. sales (starting with 10 drugs in 2026, adding 15 in 2027 and 2028, and adding 20 in 2029 and subsequent years such that by 2031 approximately 100 drugs could be subject to such set prices). The Medicare price setting process began on August 29, 2023 when CMS announced the first 10 drugs for Medicare price setting, which includes ENBREL. Our wholly owned subsidiary, Immunex Corporation, which holds the rights to the ENBREL Biologics License Application, entered into an agreement with the U.S. government to participate in the price setting process and submitted the required data to CMS for ENBREL, including certain price, cost and patent data. On April 2, 2024, HHS announced that CMS responded to counteroffers from all manufacturers and invited manufacturers to participate in further discussions. The Medicare price setting process will conclude by August 1, 2024, and by September 1, 2024, CMS will publish prices that will be applicable to these 10 drugs in the Medicare program beginning January 1, 2026. Also under the IRA, starting on January 1, 2024, Medicare Part D was redesigned to cap beneficiary out-of-pocket costs and, beginning January 1, 2025, Federal reinsurance will be reduced in the catastrophic phase (resulting in a shift and increase of such costs to Part D plans and manufacturers, including by requiring manufacturer discounts on certain drugs). Further, the IRA created a mechanism for CMS to collect rebates from manufacturers if price increases outpace inflation. Rebate obligations began to accrue October 1, 2022 for Medicare Part D and January 1, 2023 for Medicare Part B, but CMS has not yet issued invoices and has some discretion as to when to issue such invoices to manufacturers. We expect that several of our products will be subject to these inflation rebates, and several of our products have been on lists that are issued and updated on a quarterly basis by CMS under a related program under which Medicare beneficiaries are charged reduced coinsurance if price increases exceed inflation. The IRA's drug pricing controls and Medicare redesign are likely to have a material adverse effect on our sales, our business and our results of operations, and such impact is expected to increase through the end of the decade and will depend on factors including the extent of our portfolio's exposure to Medicare reimbursement, the rate of inflation over time, the number of our products selected for mandatory price setting and the timing of market entry of generic or biosimilar competition. Further, following the passage of the IRA, the environment remains dynamic and U.S. policymakers continue to demonstrate interest in health care and drug pricing changes. For example, CMS issued a proposed Medicaid Drug Rebate Program rule that, if finalized, would require manufacturers to aggregate or "stack" all rebates, discounts, or other price concessions made to separate, unrelated entities across the pharmaceutical supply chain on a given unit of product to determine the "Best Price," a metric that is used to determine Medicaid rebates and 340B statutory rates. On March 22, 2024, a final rule that could address this topic was received by the Office of Management and Budget for review. As another approach, in April 2024, CMS finalized policy changes that will give Part D plans more flexibility to substitute biosimilars for reference products on formularies in 2025. In early 2023, the HHS selected new healthcare payment and delivery models for testing, in response to an October 2022 Executive Order on Lowering Prescription Drug Costs for Americans, including the Accelerating Clinical Evidence Model, which could introduce new payment methods that reduce reimbursement for drugs approved under accelerated approval. That Executive Order followed a 2021 Executive Order designed to increase competition in the healthcare sector, including by calling for the FDA to develop prescription drug importation programs and the FTC to apply greater scrutiny of anticompetitive activity and responses to which include actions from the HHS (which released a report with drug pricing proposals that seek to promote competition) and from the U.S. Patent and Trademark Office (which has taken steps to strengthen coordination with the FDA to address impediments to generic drug and biosimilar competition). Other CMS policy changes and demonstration projects to test new care, delivery and payment models can also significantly affect how drugs, including our products, are covered and reimbursed. In the fourth quarter of 2021, HHS released a plan to address drug pricing that included potential future mandatory models that link payment for prescription drugs and biologics to certain factors, including the overall cost of care. In March 2023, the Administration released its budget plan for fiscal year 2024 that included proposals to expand the number of drugs subject to mandatory Medicare price setting under the IRA, imposing such price setting activity earlier, and extending to commercial health insurance the requirement that drug manufacturers pay rebates if price increases outpace inflation. While those proposed expansions of the IRA's drug pricing controls have not been enacted, the proposals demonstrate that this area continues to be a focus of the Administration.

We also face risks related to the reporting of pricing data that affects reimbursement of and discounts provided for our products. U.S. government price reporting regulations are complex and may require biopharmaceutical manufacturers to update certain previously submitted data. If our submitted pricing data are incorrect, we may become subject to substantial fines and penalties or other government enforcement actions, which could have a material adverse effect on our business and results of operations. In addition, as a result of restating previously reported price data, we may be required to pay additional rebates and provide additional discounts.

—Changing reimbursement and pricing actions in various states have negatively affected and may continue to negatively affect access to and have affected and may continue to affect sales of our products

At the state level, government actions or ballot initiatives can also affect how our products are covered and reimbursed and/or create additional pressure on our pricing decisions. Existing and proposed state pricing laws have added complexity to the pricing of drugs and may already be affecting industry pricing decisions. A number of states have adopted, and many other

states are considering, drug importation programs and other pricing actions, including proposals designed to require biopharmaceutical manufacturers to report to the state proprietary pricing information or provide advance notice of certain price increases.

States are also enacting laws referencing the IRA and seeking to regulate the 340B Drug Pricing Program. For example, following the passage of the IRA, bills have been proposed in multiple states that would apply the drug price caps set by HHS for Medicare to drug prices in an individual state. For Medicaid patients, states have established a Medicaid drug spending cap (New York) and implemented a new review and supplemental rebate negotiation process (Massachusetts). Eight states (Colorado, Maine, New Hampshire, New Jersey, Maryland, Minnesota, Oregon and Washington) have enacted laws that establish PDABs to identify drugs that pose affordability challenges, and four such states include authority for the state PDAB to set upper payment limits on certain drugs for in-state patients, payers and providers. So far in 2024, no fewer than 15 states have pending PDAB legislation. States with enacted PDAB laws are in various phases of implementation, with Colorado's PDAB being the furthest along. In August 2023, the Colorado PDAB announced the first five drugs to undergo an affordability review, one of which is ENBREL. In February of 2024, the Colorado PDAB determined that ENBREL is "unaffordable" and is moving forward on rulemaking to establish an Upper Payment Limit (UPL) for ENBREL that could be effective beginning in the second quarter of 2025. Further, Louisiana, Arkansas and West Virginia enacted laws with mandates on manufacturers participating in the 340B drug pricing program, and thus far in 2024, no fewer than 23 states have considered similar legislation. These bills vary, but include provisions on restricting a manufacturer's ability to direct drugs in 340B channels, recognizing 340B contract pharmacies and a prohibition on requiring the inclusion of 340B claims modifiers. In March 2024, the U.S. Court of Appeals for the 8th Circuit ruled that Arkansas' Act 1103, which prohibits drugmakers from restricting the acquisition or delivery of 340B drugs to covered entities and their contract pharmacies, was not preempted by the federal 340B statute. The decision could increase the number of states that will consider similar legislation. Further, in *Genesis Health Care, Inc. v. Becerra* , the U.S. District Court for the District of South Carolina issued an order in November 2023 that enjoins the Health Resources and Services Administration from enforcing its more restrictive interpretation of what is considered a patient under the 340B program, to the potential benefit of healthcare systems seeking to expand the application of 340B discounts.

Additionally, on January 5, 2024, the FDA authorized Florida to move forward with its importation program proposal. Colorado, Maine, New Hampshire, New Mexico, Texas and Vermont have also enacted state importation laws, and some have submitted plans for approval to the FDA. Other states could adopt similar approaches or could pursue different policy changes in a continuing effort to reduce their costs.

Ultimately, as with U.S. federal government actions, existing or future state government actions or ballot initiatives may also have a material adverse effect on our product sales, business and results of operations.

—U.S. commercial payer actions have affected and may continue to affect access to and sales of our products

Payers, including healthcare insurers, PBMs, integrated healthcare delivery systems (vertically-integrated organizations built from consolidations of healthcare insurers and PBMs) and group purchasing organizations, increasingly seek ways to reduce their costs. With increasing frequency, payers are adopting benefit plan changes that shift a greater proportion of drug costs to patients. Such measures include more limited benefit plan designs, high deductible plans, higher patient co-pay or coinsurance obligations and more significant limitations on patients' use of manufacturer commercial co-pay assistance programs. Further, government regulation of payers may affect these trends. For example, CMS finalized a policy for plan years starting on or after January 1, 2021 that has caused commercial payers to more widely adopt co-pay accumulator adjustment programs. While the U.S. District Court for the District of Columbia struck down this policy in September 2023 and further clarified in December 2023 that its ruling had the effect of reinstating the co-pay accumulator adjustment policy from 2020, CMS and HHS have signaled that they do not intend to enforce certain restrictions from the 2020 policy that would reduce the adoption of co-pay accumulator adjustment programs. Payers, including PBMs, have sought, and continue to seek, price discounts or rebates in connection with the placement of our products on their formularies or those they manage, and to also impose restrictions on access to or usage of our products (such as Step Therapy), require that patients receive the payer's prior authorization before covering the product, and/or chosen to exclude certain indications for which our products are approved. For example, some payers require physicians to demonstrate or document that the patients for whom Repatha has been prescribed meet their utilization criteria, and these requirements have served to limit and may continue to limit patient access to Repatha treatment. In an effort to reduce barriers to access, we reduced the net price of Repatha by providing greater discounts and rebates to payers (including PBMs that administer Medicare Part D prescription drug plans), and in response to a very high percentage of Medicare patients abandoning their Repatha prescriptions rather than paying their co-pay, we introduced a set of new National Drug Codes to make Repatha available at a lower list price. However, affordability of patient out-of-pocket co-pay cost has limited and may continue to limit patient use. Further, despite these net and list price reductions, some payers have restricted, and may continue to restrict, patient access and may seek further discounts or rebates or take other actions, such as changing formulary coverage for Repatha, that could reduce our sales of Repatha. These factors have limited, and may continue to limit, patient affordability and use, negatively affecting Repatha sales.

Further, significant consolidation in the health insurance industry has resulted in a few large insurers and PBMs, which places greater pressure on pricing and usage negotiations with biopharmaceutical manufacturers, significantly increasing discount and rebate requirements and limiting patient access and usage. For example, in the United States, as of the beginning of 2024, the top five integrated health plans and PBMs controlled about 92% of all pharmacy prescriptions. This high degree of consolidation among insurers, PBMs and other payers, including integrated healthcare delivery systems and/or with specialty or mail-order pharmacies and pharmacy retailers, has increased the negotiating leverage such entities have over us and other biopharmaceutical manufacturers and has resulted in greater price discounts, rebates and service fees realized by those payers from our business. Each of CVS, Express Scripts and United Health Group (among the top five integrated health plans and PBMs), have Rebate Management Organizations that further increase their leverage to negotiate deeper discounts. Ultimately, additional discounts, rebates, fees, coverage changes, plan changes, restrictions or exclusions imposed by these commercial payers could have a material adverse effect on our product sales, business and results of operations. Policy reforms advanced by Congress or the Administration that refine the role of PBMs in the U.S. marketplace could have downstream implications or consequences for our business and how we interact with these entities. For example, in June 2022, the FTC launched an inquiry into the business practices of PBMs and subsequently expanded the investigation to the three rebate management organizations owned by the three largest PBMs. In addition, multiple Congressional Committees are investigating PBM practices and have also proposed legislation that could increase transparency and reporting of these practices and/or impact rebates and service fees. The results of such inquiry could have an effect on manufacturer interactions with PBMs, resulting in changes to access for certain medicines. See our Annual Report on Form 10-K for the year ended December 31, 2023, Part I, Item 1A. Risk Factors—*Concentration of sales at certain of our wholesaler distributors, and consolidation of private payers, such as insurers, and PBMs has negatively affected, and may continue to negatively affect, our business.*

Our business is also affected by policies implemented by private healthcare entities that process Medicare claims, including Medicare Administrative Contractors. For example, in the second quarter of 2022, several Medicare Administrative Contractors issued notice that TEZSPIRE would be added to their “self-administered drug” exclusion lists. Although the Medicare Administrative Contractors subsequently removed TEZSPIRE from their exclusion lists, these exclusions, if reintroduced and/or implemented, would result in Medicare beneficiaries with severe asthma losing access to TEZSPIRE coverage under Medicare Part B and potentially also under Medicare Advantage.

—Government and commercial payer actions outside the United States have affected and will continue to affect access to and sales of our products

Outside the United States, we expect countries will also continue to take actions to reduce their drug expenditures and to reduce intellectual property protections. See Part I, Item 1. Business—Reimbursement, of our Annual Report on Form 10-K for the year ended December 31, 2023. Pressures to decrease drug expenditures may intensify as governments take actions to address budgets strained by high inflation, expenditures to respond to the COVID-19 pandemic and weak economic conditions, including in Europe where the effects of the Russia–Ukraine conflict have challenged the economies in that region. Further, the EU is currently undergoing a review and revision of its pharmaceutical legislation that, while full implementation is not expected before 2027, could lead to proposals that will reduce intellectual property protection for new products (including potentially shortening the duration of regulatory data exclusivity and orphan drug exclusivity protections), as well as change the reimbursement and regulatory landscape. International reference pricing has been widely used by many countries outside the United States to control costs based on an external benchmark of a product’s price in other countries. International reference pricing policies can change quickly and frequently and may not reflect differences in the burden of disease, indications, market structures or affordability differences across countries or regions. Other expenditure control practices, including but not limited to the use of revenue clawbacks, rebates and caps on product sales, are used in various foreign jurisdictions as well. In addition, countries may refuse to reimburse or may restrict the reimbursed population for a product when their national health technology assessments do not consider a medicine to demonstrate sufficient clinical benefit beyond existing therapies or to meet certain cost effectiveness thresholds. For example, despite the EMA’s approval of Repatha for the treatment of patients with established atherosclerotic disease, prior to 2020, the reimbursement of Repatha in France was limited to a narrower patient population (such as those with homozygous familial hypercholesterolemia (HoFH)) following a national health technology assessment. Many countries decide on reimbursement between potentially competing products through national or regional tenders that often result in one product receiving most or all of the sales in that country or region. Failure to obtain coverage and reimbursement for our products, a deterioration in their existing coverage and reimbursement or a decline in the timeliness or certainty of payment by payers to hospitals and other providers has negatively affected, and may further negatively affect, the ability or willingness of healthcare providers to prescribe our products for their patients and otherwise negatively affect the use of our products or the prices we realize for them. Such changes have had, and could in the future have, a material adverse effect on our product sales, business and results of operations.

A breakdown of our information technology systems, cyberattack or information security breach could significantly compromise the confidentiality, integrity and availability of our information technology systems, network-connected control systems and/or our data, interrupt the operation of our business and/or affect our reputation.

To achieve our business objectives, we rely on sophisticated information technology systems, including hardware, software, technology infrastructure, online sites and networks for both internal and external operations, mobile applications, cloud services and network-connected control systems, some of which are managed, hosted, provided or serviced by third parties. Internal or external events that compromise the confidentiality, integrity and availability of our systems and data may significantly interrupt the operation of our business, result in significant costs and/or adversely affect our reputation.

Our information technology systems are highly integrated into our business, including our R&D efforts, our clinical and commercial manufacturing processes and our product sales and distribution processes. Further, as the majority of our employees work remotely for some portion of their jobs in our hybrid work environment, our reliance on our and third-party information technology systems has increased substantially and is expected to continue to increase. Remote and hybrid working arrangements, including those of at many third-party providers, can increase cybersecurity risks due to the challenges associated with managing remote computing assets and security vulnerabilities that are present in many non-corporate and home networks. The complexity and interconnected nature of software, hardware and our systems make them vulnerable to breakdown or other service interruptions, and to software errors or defects, misconfiguration and other security vulnerabilities. Upgrades or changes to our systems or the software that we use have resulted and we expect, in the future, will result in the introduction of new cybersecurity vulnerabilities and risks. In 2022, we identified a number of security vulnerabilities introduced into our information systems as a result of flaws that we subsequently identified in software that we had purchased and installed, and these flaws required that we apply emergency patches to certain of our systems. While we did not experience any significant adverse effects as a result of these vulnerabilities, there can be no assurance that we will timely identify and address future vulnerabilities. Our systems are also subject to frequent perimeter network reconnaissance and scanning, phishing and other cyberattacks. For example, as a result of our cybersecurity monitoring of the Horizon legacy information systems, we detected phishing activity in the accounts of two Horizon executives. These accounts were de-activated, the incidents were investigated and the determination was made separately by both our internal cybersecurity team and our external digital forensics and incident response supplier that no confidential information had been exfiltrated. As the cyber-threat landscape evolves, these attacks are growing in frequency, sophistication, and intensity, and are becoming increasingly difficult to detect and increasingly sophisticated in using techniques and tools—including artificial intelligence—that circumvent security controls, evade detection and remove forensic evidence. Such attacks could include the use of harmful and virulent malware, including ransomware or other denials of service, which can be deployed through various means, including the software supply chain, e-mail, malicious websites and/or the use of social engineering/phishing.

We have also experienced denial of service attacks against our network, and, although such attacks did not succeed, there can be no assurance that our efforts to guard against the wide and growing variety of potential attack techniques will be successful in the future. Attacks such as those experienced by government entities (including those that approve and/or regulate our products, such as the EMA) and other multi-national companies, including some of our peers, could leave us unable to utilize key business systems or access or protect important data, and could have a material adverse effect on our ability to operate our business, including developing, gaining regulatory approval for, manufacturing, selling and/or distributing our products. For example, in 2017, a pharmaceutical company experienced a cyberattack involving virulent malware that significantly disrupted its operations, including its research and sales operations and the production of some of its medicines and vaccines. As a result of the cyberattack, its orders and sales for certain products were negatively affected. In late 2020, SolarWinds Corporation, a leading provider of software for monitoring and managing information technology infrastructure, disclosed that it had suffered a cybersecurity incident whereby attackers had inserted malicious code into legitimate software updates for its products that were installed by myriad private and government customers, enabling the attackers to access a backdoor to such systems. In 2022, Okta, Inc., a provider of software that helps companies manage user authentication, disclosed that several hundred of its corporate customers were vulnerable to a security breach that allowed attackers to access Okta's internal network. Although this breach did not have a significant effect on our business, there can be no assurance that a similar future breach would not result in a material adverse effect on our business or results of operations.

Our systems also contain and use a high volume of sensitive data, including intellectual property, trade secrets and other proprietary business information, financial information, regulatory information, strategic plans, sales trends and forecasts, litigation materials and/or personal identifiable information belonging to us, our staff, our patients, customers and/or other parties. In some cases, we utilize third-party service providers to collect, process, store, manage or transmit such data, which have increased our risk. Intentional or inadvertent data privacy or security breaches (including cyberattacks) resulting from attacks or lapses by employees, service providers (including providers of information technology-specific services), business partners, nation states (including groups associated with or supported by foreign intelligence agencies), organized crime organizations, "hacktivists" or others, create risks that our sensitive data may be exposed to unauthorized persons, our competitors or the public. System vulnerabilities and/or cybersecurity breaches experienced by our third-party service providers have constituted a substantial share of the information security risks that have affected us. For example, in the first half of 2021, a supplier experienced a data breach in which an unauthorized third party acquired access to certain information provided to the supplier in the course of its provision of services to us, including business documents and certain personally identifiable patient information (not including social security or other financial or health insurance information). As required, we promptly notified the applicable state attorneys general and the individuals whose personally identifiable information was affected of this data breach at the supplier. In the third quarter of 2022, another service provider experienced a similar cybersecurity breach in which an attacker exfiltrated certain data (including non-significant Amgen data) from the service provider's systems. Although these supplier data breaches have not resulted in material adverse effects on our business, there can be no assurance that a similar future cybersecurity incident would not result in a material adverse effect on our business or results of operations. Further, the timeliness of our awareness of a cybersecurity incident affects our ability to respond to and work to mitigate the severity of such events. For example, in 2020 and 2022, two of our vendors experienced cyberattacks and each initially reported to us that neither event involved our data. However, upon further investigation, they each subsequently informed us that the attackers had accessed limited, non-significant Amgen information. Although neither of these breaches had a significant adverse effect on our business, in the future we may again not receive timely reporting of cybersecurity events and such events could have a material adverse effect on our business.

Cyberattackers are also increasingly exploiting vulnerabilities in commercially available software from shared or open-source code. We rely on third party commercial software that have had and may have such vulnerabilities, but as use of open-source code is frequently not disclosed, our ability to fully assess this risk to our systems is limited. For example, in December 2021, a remote code execution vulnerability was discovered in a software library that is widely used in a variety of commercially available software and services. Although this vulnerability has not resulted in any significant adverse effects on us, there can be no assurances that a similar future vulnerability in the software and services that we use would not result in a material adverse effect on our business or results of operations.

Domestic and global government regulators, our business partners, suppliers with whom we do business, companies that provide us or our partners with business services and companies we have acquired or may acquire face similar risks. Security breaches of their systems or service outages have adversely affected systems and could, in the future, affect our systems and security, leave us without access to important systems, products, raw materials, components, services or information, or expose our confidential data or sensitive personal information. For example, in 2019, two vendors that perform testing and analytical services that we use in developing and manufacturing our products experienced cyberattacks, and in April and September of 2020, vendors that provide us with information technology services and clinical data services, respectively, each experienced ransomware attacks. Although there was no breach of our systems, each of these incidents required us to disconnect our systems from those vendors' systems. While we were able to reconnect our systems following restoration of these vendors' capabilities without significantly affecting product availability, a more extended service outage affecting these or other vendors, particularly where such vendor is the single source from which we obtain the services, could have a material adverse effect on our business or results of operations. In February 2024, Change Healthcare, a large U.S. insurance claim and co-pay card processing clearinghouse, experienced a ransomware attack that has caused significant disruptions to healthcare provider and pharmacy operations. While Change Healthcare does not directly provide us with services, disruptions to co-pay card support, insurance billing and Medicaid rebate processing led to lost sales and required us to take action to help patients access their medications and to provide extended payment terms to certain customers. Although services have been rerouted, and in some cases restored, and the impact on our business has been immaterial, similar disruptions may occur in the future stemming from the interconnectedness of the U.S. healthcare ecosystem and industry reliance on centralized claims processing systems and networks, and such future disruptions may have a material adverse effect on our business or results of operations. In addition, we distribute our products in the United States primarily through three pharmaceutical wholesalers, and a security breach that impairs the distribution operations of our wholesalers could significantly impair our ability to deliver our products to healthcare providers and patients. There can be no assurance that our cybersecurity risk management program and processes, including our policies, controls, or procedures, will be fully implemented, complied with or effective in protecting our information technology systems and sensitive data.

Although we have experienced system breakdowns, attacks and information security breaches, we do not believe such breakdowns, attacks and breaches have had a material adverse effect on our business or results of operations. We will continue to experience varying degrees of cyberattacks and other incidents in the future. Even though we continue to invest in the monitoring, protection and resilience of our critical and/or sensitive data and systems, there can be no assurances that our efforts will detect, prevent or fully recover systems or data from all breakdowns, service interruptions, attacks and/or breaches of our systems that could adversely affect our business and operations and/or result in the loss or exposure of critical, proprietary, private, confidential or otherwise sensitive data, which could result in material financial, legal business or reputational harm to us or negatively affect our stock price. While we maintain cyber-liability insurance, our insurance is not sufficient to cover us against all losses that could potentially result from a service interruption, breach of our systems or loss of our critical or sensitive data.

We are also subject to various laws and regulations globally regarding privacy and data protection, including laws and regulations relating to the collection, storage, handling, use, disclosure, transfer and security of personal data. The legislative and regulatory environment regarding privacy and data protection is continuously evolving and developing and the subject of significant attention globally. For example, we are subject to the EU's General Data Protection Regulation (GDPR), which became effective in May 2018, and the California Consumer Privacy Act (CCPA), which became effective in January 2020, both of which provide for substantial penalties for noncompliance. The CCPA was amended in late 2020, to create the California Privacy Rights Act to create opt in requirements for the use of sensitive personal data and the formation of a new dedicated agency for the enforcement of the law, the California Privacy Protection Agency. Similar consumer privacy laws went into effect in Virginia, Colorado, Utah, Connecticut and Florida in 2023. Consumer privacy laws were also passed in 11 other states, with the earliest effective dates later this year, and proposed in three additional states. Outside the United States, other jurisdictions where we operate have passed, or continue to propose, similar legislation and/or regulations. For example, in China, the Personal Information Protection Law and the Data Security Law, which regulate data processing activities associated with personal and nonpersonal data, are in effect and build upon the existing Cybersecurity Law. Failure to comply with these current and future laws could result in significant penalties and reputational harm and could have a material adverse effect on our business and results of operations.

Our sales and operations are subject to the risks of doing business internationally, including in emerging markets.

As we continue our expansion efforts in emerging markets around the world, through acquisitions and l icensing transactions as well as through the development and introduction, both independently and through collaborations such as our collaboration with BeiGene, of our products in new markets, we face numerous risks to our business. There is no guarantee that our efforts and strategies to expand sales in emerging markets will succeed. Our international business, including in China and emerging market countries, may be especially vulnerable to periods of global and local political, legal, regulatory and financial instability, including issues of geopolitical relations, the imposition of international sanctions in response to certain state actions and/or sovereign debt issues, and management of health policy in response to pressures such as global pandemics. For example, the BIOSECURE Act that would prohibit federal contracting with companies that have commercial connections with enumerated "biotechnology companies of concern" located in certain geographies, including China, has been proposed in the U.S. Congress, and, if enacted, could restrict our ability to contract or collaborate with such biotechnology companies. If relations between the United States and other governments deteriorate, our business and investments in such markets may also be adversely affected. We may also be required to increase our reliance on third-party agents and unfamiliar operations and arrangements including those previously utilized by companies we partner with or acquire in emerging markets. See *We must conduct clinical trials in humans before we commercialize and sell any of our product candidates or existing products for new indications*. Our expansion efforts in China and emerging markets around the world are dependent upon the establishment of an environment that is predictable, navigable and supportive of biopharmaceutical innovation, sustained access for our products and predictable pricing controls. For example, China continues to strengthen regulations on the collection, use and transmission of Chinese human genetic resources, and has expanded regulations on the conduct of biotechnology R&D activities in China. Between 2020 and 2022, we experienced delays in our applications to the Human Genetic Resources Administration of China that sought approval to conduct clinical trials in China. Our international operations and business may also be subject to less protective intellectual property or other applicable laws, diverse data privacy and protection requirements, changing tax laws and tariffs, trade restrictions or other barriers designed to protect industry in the home country against foreign competition, far-reaching antibribery and anticorruption laws and regulations and/or evolving legal and regulatory environments. For example, recent cross-border data transfer compliance requirements in China may also impose additional costs of doing business, including costs associated with localizing operations.

In response to the ongoing armed conflict in Ukraine, the U.S. government, numerous state governments, the EU and other countries in which we conduct business have imposed a wide range of economic sanctions that restrict commerce and business dealings with Russia, certain regions of Ukraine and certain entities and individuals. Additionally, the armed conflict in the Middle East that has been ongoing since October 2023 has caused regional disruptions to economic activity. For a description of the conflict's impact on our third-party contract manufacturing of KRYSTEXXA, see our Annual Report on Form 10-K for the year ended December 31, 2023, Part I, Item 1A. Risk Factors—*Our efforts to collaborate with or acquire other companies, products, or technology, and to integrate the operations of companies or to support the products or technology we have acquired, may not be successful, and may result in unanticipated costs, delays or failures to realize the benefits of the transactions*. These conflicts may also precipitate or amplify the other risks described herein, including risks relating to cybersecurity, global economic conditions, clinical trials and supply chains, which could adversely affect our business, operations and financial condition and results.

As we expand internationally, we are subject to fluctuations in foreign currency exchange rates relative to the U.S. dollar. While we have a program in place that is designed to reduce our exposure to foreign currency exchange rate fluctuations through foreign currency hedging arrangements, our hedging efforts do not completely offset the effect of these fluctuations on our revenues and earnings. Overall, the legal and operational challenges of our international business operations, along with government controls, the challenges of attracting and retaining qualified personnel and obtaining and/or maintaining necessary regulatory or pricing approvals of our products, may result in material adverse effects on our international product sales, business and results of operations.

We must conduct clinical trials in humans before we commercialize and sell any of our product candidates or existing products for new indications.

Before a product may be sold, we must conduct clinical trials to demonstrate that our product candidates are safe and effective for use in humans. The results of those clinical trials are used as the basis to obtain approval from regulatory authorities such as the FDA and EMA. See our Annual Report on Form 10-K for the year ended December 31, 2023, Part I, Item 1A. Risk Factors—*Our current products and products in development cannot be sold without regulatory approval*. We are required to conduct clinical trials using an appropriate number of trial sites and patients to support the product label claims. The length of time, number of trial sites and number of patients required for clinical trials vary substantially, and we may spend several years and incur substantial expense in completing certain clinical trials. In addition, we may have difficulty finding a sufficient number of clinical trial sites and/or patients to participate in our clinical trials, particularly if competitors are conducting clinical trials in similar patient populations and/or in rare disease therapy clinical trials due to the inherently small patient population potentially served by such therapies. Patients may withdraw from clinical trials at any time (including trials in which patients believe that they may not be receiving a clinical benefit), and privacy laws and/or other restrictions in certain countries may restrict the ability of clinical trial investigators to conduct further follow-up on such patients, which may adversely affect the interpretation of study results. Delays and complications in planned clinical trials can result in increased development costs, associated delays in regulatory approvals and in product candidates reaching the market and revisions to existing product labels.

Further, to increase the number of patients available for enrollment in our clinical trials, we have opened, and will continue to open, clinical sites and enroll patients in a number of locations where our experience conducting clinical trials is more limited, including India, China, South Korea, the Philippines, Singapore and some Central and South American countries, either through utilization of third-party contract clinical trial providers entirely or in combination with local staff. Conducting clinical trials in locations where we have limited experience requires substantial time and resources to understand the unique regulatory environments of individual countries. For other examples of the risks of conducting clinical trials in China, see also *Our sales and operations are subject to the risks of doing business internationally, including in emerging markets*. Further, we must ensure the timely production, distribution and delivery of the clinical supply of our product candidates to numerous and varied clinical trial sites. Additionally, regional disruptions, including natural and man-made disasters, health emergencies (such as novel viruses or pandemics, including the COVID-19 pandemic), or geopolitical conflicts (such as the ongoing armed conflicts in Ukraine and the Middle East) have significantly disrupted the timing of clinical trials, and in the future could disrupt the timing, execution and outcome of clinical trials. If we fail to adequately manage the design, execution and diverse regulatory aspects of our clinical trials or to manage the production or distribution of our clinical supply, or such sites experience disruptions as a result of a natural/man-made disaster, health emergency or geopolitical conflict, corresponding regulatory approvals may be delayed or we may fail to gain approval for our product candidates or could lose our ability to market existing products in certain therapeutic areas or altogether. For example, our clinical trials were adversely affected by the COVID-19 pandemic. If we are unable to market and sell our products or product candidates or to obtain approvals in the timeframe needed to execute our product strategies, our business and results of operations could be materially and adversely affected.

We rely on independent third-party clinical investigators to recruit patients and conduct clinical trials on our behalf in accordance with applicable study protocols, laws and regulations. We also rely on unaffiliated third-party vendors to perform certain aspects of our clinical trial operations. Further, the disease states that we are studying, such as cancers, require complex treatment protocols that may be difficult to consistently apply across global trial sites, which can impact the quality, interpretability and/or registrability of the data generated. In some circumstances, we enter into co-development arrangements with other pharmaceutical and medical devices companies that provide for the other company to conduct certain clinical trials for the product we are co-developing or to develop a diagnostic test used in screening or monitoring patients in our clinical trials. See our Annual Report on Form 10-K for the year ended December 31, 2023, Part I, Item 1A. Risk Factors—*Some of our pharmaceutical pipeline and our commercial product sales rely on collaborations with third parties, which may adversely affect the development and sales of our products.* We also may acquire companies that have past or ongoing clinical trials or rights to products or product candidates for which clinical trials have been or are being conducted. These trials may not have been conducted to the same standards as ours; however, once an acquisition has been completed we assume responsibility for the conduct of these trials, including any potential risks and liabilities associated with the past and prospective conduct of those trials. If regulatory authorities determine that we or others, including our licensees or co-development partners, or the independent investigators or vendors selected by us, our co-development partners or by a company we have acquired or from which we have acquired rights to a product or product candidate, have not complied with regulations applicable to the clinical trials, those authorities may refuse or reject some or all of the clinical trial data or take other actions that could delay or otherwise negatively affect our ability to obtain or maintain marketing approval of the product or indication. In addition, delays or failures to develop diagnostic tests for our clinical trials can affect the timely enrollment of such trials and lead to delays or inability to obtain marketing approval. If we were unable to market and sell our products or product candidates, our business and results of operations could be materially and adversely affected.

In addition, some of our clinical trials utilize drugs and combination products manufactured and marketed by other pharmaceutical companies or vendors. These drugs, devices and/or products may be administered or used in clinical trials in combination with one of our products or product candidates or in a head-to-head study comparing the products' or product candidates' relative efficacy and safety. In the event that any of these vendors or pharmaceutical companies have unforeseen issues that negatively affect the quality of their work product or create a shortage of supply, or if we are otherwise unable to obtain an adequate supply of these other drugs, our ability to complete our applicable clinical trials and/or evaluate clinical results may also be negatively affected. As a result, such quality or supply problems could adversely affect our ability to timely file for, gain or maintain regulatory approvals worldwide.

Clinical trials must generally be designed based on the current standard of medical care. However, in certain diseases, such as cancer, the standard of care is evolving rapidly. In some cases, we may design a clinical trial based on the standard of care we anticipate will exist at the time our study is completed. The duration of time needed to complete certain clinical trials may result in the design of such clinical trials being based on standards of medical care that are no longer or that have not become the current standards by the time such trials are completed, limiting the utility and application of such trials. Additionally, the views of regulatory agencies relating to the requirements for accelerated approval may change over time, and trial designs that were sufficient to support accelerated approvals for some oncology products may not be considered sufficient for later candidates. We may not obtain favorable clinical trial results and therefore may not be able to obtain regulatory approval for new product candidates or new indications for existing products and/or maintain our current product labels. Participants in clinical trials of our products and product candidates may also suffer adverse medical events or side effects that could, among other factors, delay or terminate clinical trial programs and/or require additional or longer trials to gain approval.

Even after a product is on the market, safety concerns may require additional or more extensive clinical trials as part of a risk management plan for our product or for approval of a new indication. Additional clinical trials we initiate, including those required by the FDA, could result in substantial additional expense, and the outcomes could result in further label restrictions or the loss of regulatory approval for an approved indication, each of which could have a material adverse effect on our product sales, business and results of operations. Additionally, any negative results from such trials could materially affect the extent of approvals, the use, reimbursement and sales of our products, our business and results of operations.

We rely on third-party suppliers for certain of our raw materials, medical devices and components.

We rely on unaffiliated third-party suppliers for certain raw materials, medical devices and components necessary for the manufacturing of our commercial and clinical products. Certain of those raw materials, medical devices and components are proprietary products of those unaffiliated third-party suppliers and are specifically cited in our drug applications with regulatory agencies so that they must be obtained from that specific sole source or sources and could not be obtained from another supplier unless and until the regulatory agency approved such supplier. For example, we rely on a single source for the SureClick® autoinjectors used in the drug delivery of Repatha, ENBREL, Aimovig, AMJEVITA/AMGEVITA and Aranesp, and we also rely on a single source for the Pushtronex® automated mini doser used in the drug delivery of Repatha. Recently, to uphold the high standards that we have set for patient experience and the need for a reliable supply of components, we have decided to discontinue the Repatha automated mini doser presentation in all countries and are working with health care professionals to transition patients to alternative Repatha delivery options. Also, certain of the raw materials required in the commercial and clinical manufacturing of our products are sourced from other countries and/or derived from biological sources, including mammalian tissues, bovine serum and human serum albumin.

Among the reasons we may be unable to obtain these raw materials, medical devices and components include:

- regulatory requirements or action by regulatory agencies or others;
- adverse financial or other strategic developments at or affecting the supplier, including bankruptcy;
- unexpected demand for or shortage of raw materials, medical devices or components;
- failure to comply with our quality standards which results in quality and product failures, complaints, product contamination and/or recall;
- a material shortage, contamination, recall and/or restrictions on the use of certain biologically derived substances or other raw materials;
- discovery of previously unknown or undetected imperfections in raw materials, medical devices or components;
- cyberattacks on supplier systems;
- natural or other disasters, including hurricanes, earthquakes, volcanoes or fires;
- labor disputes (such as strikes) or shortages, including from the effects of health emergencies (such as novel viruses or pandemics) or natural disasters; and
- geopolitical conflicts (such as the ongoing conflicts in Ukraine and the Middle East).

For example, in prior years we have experienced shortages in certain components necessary for the formulation, fill and finish of certain of our products in our Puerto Rico facility, and we have also experienced shortages related to single use systems and packaging which has caused disruptions to our manufacturing plans. Further quality issues that result in unexpected additional demand for certain components have resulted in shortages and in the future may lead to shortages of required raw materials or components (such as we have experienced with EPOGEN glass vials). We may experience similar or other shortages in the future resulting in delayed shipments, supply constraints, clinical trial delays, contract disputes and/or stock-outs of our products. These or other similar events could negatively affect our ability to satisfy demand for our products or conduct clinical trials, which could have a material adverse effect on our product sales, business and results of operations.

Item 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

During the three months ended March 31, 2024, we had one outstanding stock repurchase program, under which we had no repurchase activity.

Period	Total number of shares purchased	Average price paid per share	Total number of shares purchased as part of publicly announced program	Maximum dollar value that may yet be purchased under the program
January 1–31	—		—	$ 6,979,263,848
February 1–29	—		—	$ 6,979,263,848
March 1–31	—		—	$ 6,979,263,848
Total	—		—	

Item 5. OTHER INFORMATION

Trading Arrangements

During the three months ended March 31, 2024, none of our directors or officers (as defined in Rule 16a-1(f) of the Exchange Act) adopted or terminated any "Rule 10b5-1 trading arrangement" or "non-Rule 10b5-1 trading arrangement," as each term is defined in Item 408 of Regulation S-K.

Item 6. EXHIBITS

Reference is made to the Index to Exhibits included herein.

INDEX TO EXHIBITS

Exhibit No.	Description
2.1	Agreement and Plan of Merger, dated July 27, 2021, by and among Amgen Inc., Teneobio, Inc., Tuxedo Merger Sub, Inc., and Fortis Advisors LLC. (portions of the exhibit have been omitted because they are both (i) not material and (ii) is the type of information that the Company treats as private or confidential)(Filed as an exhibit to Form 10-Q for the quarter ended September 30, 2021 on November 3, 2021 and incorporated herein by reference.)
2.2	Agreement and Plan of Merger, dated as of August 3, 2022, among ChemoCentryx, Inc., Amgen Inc. and Carnation Merger Sub, Inc. (Filed as an exhibit to Form 8-K on August 4, 2022 and incorporated herein by reference.)
2.3	Transaction Agreement, dated as of December 11, 2022, by and among Amgen Inc., Pillartree Limited and Horizon Therapeutics plc. (Filed as an exhibit to Form 8-K on December 12, 2022 and incorporated herein by reference.)
2.4	Appendix 3 to the Rule 2.7 Announcement, dated as of December 12, 2022 (Conditions Appendix). (Filed as an exhibit to Form 8-K on December 12, 2022 and incorporated herein by reference.)
3.1	Restated Certificate of Incorporation of Amgen Inc. (As Restated March 6, 2013.) (Filed as an exhibit to Form 10-Q for the quarter ended March 31, 2013 on May 3, 2013 and incorporated herein by reference.)
3.2	Amended and Restated Bylaws of Amgen Inc. (As Amended and Restated February 15, 2016.) (Filed as an exhibit to Form 8-K on February 17, 2016 and incorporated herein by reference.)
4.1	Form of stock certificate for the common stock, par value $.0001 of the Company. (Filed as an exhibit to Form 10-Q for the quarter ended March 31, 1997 on May 14, 1997 and incorporated herein by reference.)
4.2	Form of Indenture, dated January 1, 1992. (Filed as an exhibit to Form S-3 Registration Statement filed on December 19, 1991 and incorporated herein by reference.)
4.3	Agreement of Resignation, Appointment and Acceptance dated February 15, 2008. (Filed as an exhibit to Form 10-K for the year ended December 31, 2007 on February 28, 2008 and incorporated herein by reference.)
4.4	First Supplemental Indenture, dated February 26, 1997. (Filed as an exhibit to Form 8-K on March 14, 1997 and incorporated herein by reference.)
4.5	8-1/8% Debentures due April 1, 2097. (Filed as an exhibit to Form 8-K on April 8, 1997 and incorporated herein by reference.)
4.6	Officer's Certificate of Amgen Inc., dated April 8, 1997, establishing a series of securities entitled "8 1/8% Debentures due April 1, 2097." (Filed as an exhibit to Form 8-K on April 8, 1997 and incorporated herein by reference.)
4.7	Indenture, dated August 4, 2003. (Filed as an exhibit to Form S-3 Registration Statement on August 4, 2003 and incorporated herein by reference.)
4.8	Corporate Commercial Paper - Master Note between and among Amgen Inc., as Issuer, Cede & Co., as Nominee of The Depository Trust Company, and Citibank, N.A., as Paying Agent. (Filed as an exhibit to Form 10-Q for the quarter ended March 31, 1998 on May 13, 1998 and incorporated herein by reference.)
4.9	Officers' Certificate of Amgen Inc., dated May 30, 2007, including form of the Company's 6.375% Senior Notes due 2037. (Filed as an exhibit to Form 8-K on May 30, 2007 and incorporated herein by reference.)
4.10	Officers' Certificate of Amgen Inc., dated May 23, 2008, including form of the Company's 6.90% Senior Notes due 2038. (Filed as exhibit to Form 8-K on May 23, 2008 and incorporated herein by reference.)
4.11	Officers' Certificate of Amgen Inc., dated January 16, 2009, including form of the Company's 6.40% Senior Notes due 2039. (Filed as exhibit to Form 8-K on January 16, 2009 and incorporated herein by reference.)
4.12	Officers' Certificate of Amgen Inc., dated March 12, 2010, including form of the Company's 5.75% Senior Notes due 2040. (Filed as exhibit to Form 8-K on March 12, 2010 and incorporated herein by reference.)

4.13	Officers' Certificate of Amgen Inc., dated September 16, 2010, including form of the Company's 4.95% Senior Note 2041. (Filed as an exhibit to Form 8-K on September 17, 2010 and incorporated herein by reference.)
4.14	Officers' Certificate of Amgen Inc., dated June 30, 2011, including form of the Company's 5.65% Senior Notes due 2 (Filed as an exhibit to Form 8-K on June 30, 2011 and incorporated herein by reference.)
4.15	Officers' Certificate of Amgen Inc., dated November 10, 2011, including form of the Company's 5.15% Senior Notes 2041. (Filed as an exhibit to Form 8-K on November 10, 2011 and incorporated herein by reference.)
4.16	Officers' Certificate of Amgen Inc., dated December 5, 2011, including form of the Company's 5.50% Senior Notes 2026. (Filed as an exhibit to Form 8-K on December 5, 2011 and incorporated herein by reference.)
4.17	Officers' Certificate of Amgen Inc., dated May 15, 2012, including form of the Company's 5.375% Senior Notes due 2 (Filed as an exhibit to Form 8-K on May 15, 2012 and incorporated herein by reference.)
4.18	Officers' Certificate of Amgen Inc., dated September 13, 2012, including form of the Company's 4.000% Senior Note 2029. (Filed as an exhibit to Form 8-K on September 13, 2012 and incorporated herein by reference.)
4.19	Indenture, dated May 22, 2014, between Amgen Inc. and The Bank of New York Mellon Trust Company, N.A., as Trus (Filed as an exhibit to Form 8-K on May 22, 2014 and incorporated herein by reference.)
4.20	Officers' Certificate of Amgen Inc., dated May 22, 2014, including form of the Company's 3.625% Senior Notes due 2 (Filed as an exhibit to Form 8-K on May 22, 2014 and incorporated herein by reference.)
4.21	Officer's Certificate of Amgen Inc., dated May 1, 2015, including forms of the Company's 3.125% Senior Notes due 202 4.400% Senior Notes due 2045. (Filed as an exhibit on Form 8-K on May 1, 2015 and incorporated herein by reference.)
4.22	Officer's Certificate of Amgen Inc., dated as of February 25, 2016, including form of the Company's 2.000% Senior due 2026. (Filed as an exhibit on Form 8-K on February 26, 2016 and incorporated herein by reference.)
4.23	Officer's Certificate of Amgen Inc., dated as of June 14, 2016, including forms of the Company's 4.563% Senior Note 2048 and 4.663% Senior Notes due 2051. (Filed as an exhibit to Form 8-K on June 14, 2016 and incorporated herein by referer
4.24	Officer's Certificate of Amgen Inc., dated as of August 19, 2016, including forms of the Company's 2.600% Senior Note 2026. (Filed as an exhibit to Form 8-K on August 19, 2016 and incorporated herein by reference.)
4.25	Officer's Certificate of Amgen Inc., dated as of November 2, 2017, including in the form of the Company's 3.200% S Notes due 2027. (Filed as an exhibit to Form 8-K on November 2, 2017 and incorporated herein by reference.)
4.26	Officer's Certificate of Amgen Inc., dated as of February 21, 2020, including forms of the Company's 1.900% Senior due 2025, 2.200% Senior Notes due 2027, 2.450% Senior Notes due 2030, 3.150% Senior Notes due 2040 and 3.375% S Notes due 2050. (Filed as an exhibit to Form 8-K on February 21, 2020 and incorporated herein by reference.)
4.27	Officer's Certificate of Amgen Inc., dated as of May 6, 2020, including form of the Company's 2.300% Senior Notes 2031. (Filed as an exhibit to Form 8-K on May 6, 2020 and incorporated herein by reference.)
4.28	Officer's Certificate of Amgen Inc., dated as of August 17, 2020, including forms of the Company's 2.770% Senior Note 2053. (Filed as an exhibit to Form 8-K on August 18, 2020 and incorporated herein by reference.)
4.29	Officer's Certificate of Amgen Inc., dated as of August 9, 2021, including forms of the Company's 1.650% Senior Notes 2028, 2.000% Senior Notes due 2032, 2.800% Senior Notes due 2041 and 3.000% Senior Notes due 2052. (Filed as an exh Form 8-K on August 9, 2021 and incorporated herein by reference.)

4.30	Officer's Certificate of Amgen Inc., dated as of February 22, 2022, including forms of the Company's 3.000% Senior due 2029, 3.350% Senior Notes due 2032, 4.200% Senior Notes due 2052 and 4.400% Senior Notes due 2062. (Filed exhibit to Form 8-K on February 22, 2022 and incorporated herein by reference.)
4.31	Officer's Certificate of Amgen Inc., dated as of August 18, 2022, including forms of the Company's 4.050% Senior due 2029, 4.200% Senior Notes due 2033 and 4.875% Senior Notes due 2053. (Filed as an exhibit to Form 8-K on Augu 2022 and incorporated herein by reference.)
4.32	Officer's Certificate of the Company, dated as of March 2, 2023, including forms of the Company's 5.250% Senior due 2025, 5.507% Senior Notes due 2026, 5.150% Senior Notes due 2028, 5.250% Senior Notes due 2030, 5.250% Senior due 2033, 5.600% Senior Notes due 2043, 5.650% Senior Notes due 2053 and 5.750% Senior Notes due 2063. (Filed exhibit to Form 8-K on March 2, 2023 and incorporated herein by reference.)
4.33	Description of Amgen Inc.'s Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934. (F an exhibit to Form 10-K for the year ended December 31, 2023 on February 14, 2024 and incorporated herein by reference.)
10.1+	Amgen Inc. Amended and Restated 2009 Equity Incentive Plan. (Filed as Appendix C to the Definitive Proxy Statem Schedule 14A on April 8, 2013 and incorporated herein by reference.)
10.1.1+	First Amendment to Amgen Inc. Amended and Restated 2009 Equity Incentive Plan, effective March 4, 2015. (Filed exhibit to Form 10-Q for the quarter ended March 31, 2015 on April 27, 2015 and incorporated herein by reference.)
10.1.2+	Second Amendment to Amgen Inc. Amended and Restated 2009 Equity Incentive Plan, effective March 2, 2016. (Fi an exhibit to Form 10-Q for the quarter ended March 31, 2016 on May 2, 2016 and incorporated herein by reference.)
10.2+	Form of Grant of Stock Option Agreement for the Amgen Inc . Amended and Restated 2009 Equity Incentive Plan Amended and Restated on December 11, 2023.) (Filed as an exhibit to Form 10-K for the year ended December 31, 20 February 14, 2024 and incorporated herein by reference.)
10.3+	Form of Restricted Stock Unit Agreement for the Amgen Inc. Amended and Restated 2009 Equity Incentive Plan. Amended and Restated on December 11, 2023.) (Filed as an exhibit to Form 10-K for the year ended December 31, 20 February 14, 2024 and incorporated herein by reference.)
10.4+	Amgen Inc. 2009 Performance Award Program. (As Amended on December 12, 2017.) (Filed as an exhibit to Form for the year ended December 31, 2017 on February 13, 2018 and incorporated herein by reference.)
10.5+	Form of Performance Unit Agreement for the Amgen Inc. 2009 Performance Award Program. (As Amended Reinstated on December 11, 2023.) (Filed as an exhibit to Form 10-K for the year ended December 31, 2023 on Februa 2024 and incorporated herein by reference.)
10.6+	Amgen Inc. 2009 Director Equity Incentive Program. (As Amended and Restated on October 24, 2023.) (Filed exhibit to Form 10-K for the year ended December 31, 2023 on February 14, 2024 and incorporated herein by reference.)
10.7+	Form of Restricted Stock Unit Agreement for the Amgen Inc. 2009 Director Equity Incentive Program. (As Amende December 11, 2019.) (Filed as an exhibit to Form 10-K for the year ended December 31, 2019 on February 12, 202 incorporated herein by reference.)
10.8+	Form of Cash-Settled Restricted Stock Unit Agreement for the Amgen 2009 Director Equity Incentive Program Amended on December 11, 2019.) (Filed as an exhibit to Form 10-K for the year ended December 31, 2019 on February 12, and incorporated herein by reference.)
10.9+	Amgen Inc. Supplemental Retirement Plan. (As Amended and Restated effective October 16, 2013.) (Filed as an ex Form 10-K for the year ended December 31, 2013 on February 24, 2014 and incorporated herein by reference.)
10.9.1+	First Amendment to the Amgen Inc. Supplemental Retirement Plan, effective October 14, 2016. (Filed as an exh Form 10-Q for the quarter ended September 30, 2016 on October 28, 2016 and incorporated herein by reference.)

10.9.2+	Second Amendment to the Amgen Inc. Supplemental Retirement Plan, effective October 23, 2019. (Filed as an exh Form 10-K for the year ended December 31, 2019 on February 12, 2020 and incorporated herein by reference.)
10.9.3+	Third Amendment to the Amgen Inc. Supplemental Retirement Plan, effective October 20, 2021. (Filed as an exh Form 10-K for the year ended December 31, 2021 on February 16, 2022 and incorporated herein by reference.)
10.9.4+	Fourth Amendment to the Amgen Inc. Supplemental Retirement Plan, effective October 20, 2022. (Filed as an exh Form 10-K for the year ended December 31, 2022 on February 9, 2023 and incorporated herein by reference.)
10.9.5+	Fifth Amendment to the Amgen Inc. Supplemental Retirement Plan, effective January 1, 2024. (Filed as an exh Form 10-K for the year ended December 31, 2023 on February 14, 2024 and incorporated herein by reference.)
10.10+	Amended and Restated Amgen Change of Control Severance Plan. (As Amended and Restated effective Decemb 2010 and subsequently amended effective March 2, 2011.) (Filed as an exhibit to Form 10-Q for the quarter ended Marc 2011 on May 10, 2011 and incorporated herein by reference.)
10.11+	Amgen Inc. Executive Incentive Plan. (As Amended and Restated effective January 1, 2022.) (Filed as an exhibit to 10-Q for the quarter ended March 31, 2022 on April 28, 2022 and incorporated herein by reference.)
10.12+	Amgen Nonqualified Deferred Compensation Plan. (As Amended and Restated effective October 16, 2013.) (Filed exhibit to Form 10-K for the year ended December 31, 2013 on February 24, 2014 and incorporated herein by reference.)
10.12.1+	First Amendment to the Amgen Nonqualified Deferred Compensation Plan, effective October 14, 2016. (Filed exhibit to Form 10-Q for the quarter ended September 30, 2016 on October 28, 2016 and incorporated herein by reference.)
10.12.2+	Second Amendment to the Amgen Nonqualified Deferred Compensation Plan, effective January 1, 2020. (Filed exhibit to Form 10-K for the year ended December 31, 2019 on February 12, 2020 and incorporated herein by reference.)
10.12.3+	Third Amendment to the Amgen Nonqualified Deferred Compensation Plan, effective January 1, 2022. (Filed as an to Form 10-K for the year ended December 31, 2021 on February 16, 2022 and incorporated herein by reference.)
10.12.4+	Fourth Amendment to the Amgen Nonqualified Deferred Compensation Plan, effective January 1, 2024 (Filed exhibit to Form 10-K for the year ended December 31, 2023 on February 14, 2024 and incorporated herein by reference.)
10.13+	Aircraft Time Sharing Agreement, dated December 3, 2021, by and between Amgen Inc. and Robert A. Bradway. as an exhibit to Form 10-K for the year ended December 31, 2021 on February 16, 2022 and incorporated herein by referenc
10.14+	Agreement between Amgen Inc. and James Bradner, dated December 13, 2023. (Filed as an exhibit to Form 10-K f year ended December 31, 2023 on February 14, 2024 and incorporated herein by reference.)
10.15	Term Loan Credit Agreement, dated as of December 22, 2022, by and among Amgen Inc., Citibank, N.A administrative agent, Bank of America, N.A., as syndication agent, Citibank, N.A., Bank of America, N.A., Goldman Sachs USA and Mizuho Bank, Ltd., as lead arrangers and book runners, Goldman Sachs Bank USA and Mizuho Bank, Lt documentation agents, and the other banks party thereto. (Filed as an exhibit to Form 8-K on December 22, 202 incorporated herein by reference.)
10.16	Third Amended and Restated Credit Agreement, dated as of March 9, 2023, among Amgen Inc., the Banks th named, Citibank, N.A., as Administrative Agent, and JPMorgan Chase Bank, N.A., as Syndication Agent. (Filed as an exh Form 8-K on March 9, 2023 and incorporated herein by reference.)

10.17	Collaboration and License Agreement between Amgen Inc. and Celltech R&D Limited dated May 10, 2002 (portions exhibit have been omitted because they are both (i) not material and (ii) is the type of information that the Company trea private or confidential.) and Amendment No. 1, effective June 9, 2003, to Collaboration and License Agreement between Ar Inc. and Celltech R&D Limited (portions of the exhibit have been omitted because they are both (i) not material and (ii) is the t information that the Company treats as private or confidential.) (Filed as an exhibit to Form 10-K for the year ended Decemb 2023 on February 14, 2024 and incorporated herein by reference.)
10.17.1	Amendment No. 2 to Collaboration and License Agreement, effective November 14, 2016, between Amgen Inc Celltech R&D Limited. (portions of the exhibit have been omitted because they are both (i) not material and (ii) is the ty information that the Company treats as private or confidential.) (Filed as an exhibit to Form 10-K for the year ended Decemb 2023 on February 14, 2024 and incorporated herein by reference.)
10.18	Letter Agreement, dated June 25, 2019, by and between Amgen Inc. and UCB Celltech (portions of the exhibit have omitted because they are both (i) not material and (ii) would be competitively harmful if publicly disclosed). (Filed as an exh Form 10-Q for the quarter ended June 30, 2019 on July 31, 2019 and incorporated herein by reference.)
10.19	Collaboration Agreement, dated October 31, 2019, by and between Amgen Inc. and BeiGene Switzerland Gml wholly-owned subsidiary of BeiGene, Ltd. (portions of the exhibit have been omitted because they are both (i) not material a would be competitively harmful if publicly disclosed). (Filed as an exhibit to Form 10-K for the year ended December 31, 20 February 12, 2020 and incorporated herein by reference.)
10.19.1	First Amendment to Collaboration Agreement, dated April 20, 2022, by and between Amgen Inc. and BeiGene Switze GmbH, and BeiGene, Ltd. (portions of the exhibit have been omitted because they are both (i) not material and (ii) is the ty information that the Company treats as private or confidential.) (Filed as an exhibit to Form 10-Q for the quarter ended Jur 2022 on August 5, 2022 and incorporated herein by reference.)
10.19.2	Second Amendment to Collaboration Agreement, entered into as of February 26, 2023, by and between Amgen Inc BeiGene Switzerland GmbH, and BeiGene, Ltd. (portions of the exhibit have been omitted because they are both (i) not ma and (ii) is the type of information that the Company treats as private or confidential.) (Filed as an exhibit to Form 10-Q fo quarter ended March 31, 2023 on April 28, 2023 and incorporated herein by reference.)
10.20	Guarantee, dated as of October 31, 2019, made by and among BeiGene, Ltd. and Amgen Inc. (Filed as an exhibit to 10-K for the year ended December 31, 2019 on February 12, 2020 and incorporated herein by reference.)
10.21	Share Purchase Agreement, dated October 31, 2019, by and between Amgen Inc. and BeiGene, Ltd. (portions exhibit have been omitted because they are both (i) not material and (ii) would be competitively harmful if publicly disclosed). as an exhibit to Schedule 13D on January 8, 2020 and incorporated herein by reference.)
10.21.1	Amendment No. 1 to Share Purchase Agreement, dated December 6, 2019, by and among BeiGene, Ltd. and Amger (Filed as an exhibit to Schedule 13D on January 8, 2020 and incorporated herein by reference.)
10.21.2	Restated Amendment No. 2 to Share Purchase Agreement, dated September 24, 2020, by and among BeiGene, Ltd Amgen Inc. (Filed as an exhibit to Form 10-Q for the quarter ended September 30, 2020 on October 29, 2020 and incorpo herein by reference.)
10.21.3	Amendment No. 3 to Share Purchase Agreement, dated January 30, 2023, by and among BeiGene, Ltd. and Amgen (Filed as an exhibit to Form 8-K on January 31, 2023 and incorporated herein by reference.)
10.22	Collaboration Agreement dated March 30, 2012 by and between Amgen Inc. and AstraZeneca Collaboration Vent LLC, a wholly owned subsidiary of AstraZeneca Pharmaceuticals LP (portions of the exhibit have been omitted because the both (i) not material and (ii) is the type of information that the Company treats as private or confidential.) (Filed as an exh Form 10-Q for the quarter ended June 30, 2022 on August 5, 2022 and incorporated herein by reference.)

10.22.1	Amendment No. 1 to the Collaboration Agreement, dated October 1, 2014, by and among Amgen Inc., AstraZe Collaboration Ventures, LLC and AstraZeneca Pharmaceuticals LP (portions of the exhibit have been omitted because the both (i) not material and (ii) is the type of information that the Company treats as private or confidential.) (Filed as an exh Form 10-Q for the quarter ended June 30, 2022 on August 5, 2022 and incorporated herein by reference.)
10.22.2	Amendment Nos. 2 through 6 to the March 30, 2012 Collaboration Agreement between Amgen Inc. and AstraZe Collaboration Ventures, LLC, dated May 2 and 27 and October 2, 2016, January 31, 2018, and May 15, 2020, respec (portions of the exhibit have been omitted because they are both (i) not material and (ii) would be competitively harmful if pu disclosed.) (Filed as an exhibit to Form 10-Q for the quarter ended June 30, 2020 on July 29, 2020 and incorporated her reference.)
10.22.3	Amendment No. 7 to the Collaboration Agreement, dated December 17, 2020, by and between Amgen Inc AstraZeneca Collaboration Ventures, LLC (portions of the exhibit have been omitted because they are both (i) not material a would be competitively harmful if publicly disclosed.) (Filed as an exhibit to Form 10-K for the year ended December 31, 20 February 9, 2021 and incorporated herein by reference.)
10.22.4	Amendment No. 8 to the Collaboration Agreement, dated November 19, 2021, by and between Amgen Inc AstraZeneca Collaboration Ventures, LLC (portions of the exhibit have been omitted because they are both (i) not material a is the type of information that the Company treats as private or confidential.) (Filed as an exhibit to Form 10-K for the year e December 31, 2021 on February 16, 2022 and incorporated herein by reference.)
10.22.5	Letter Agreement Regarding the Collaboration Agreement, dated as of December 1, 2023, by and between Amge and AstraZeneca Collaboration Ventures, LLC (portions of the exhibit have been omitted because they are both (i) not ma and (ii) is the type of information that the Company treats as private or confidential.) (Filed as an exhibit to Form 10-K for the ended December 31, 2023 on February 14, 2024 and incorporated herein by reference.)
10.23	License and Collaboration Agreement, dated June 1, 2021, by and between Amgen Inc. and Kyowa Kirin Co. (portions of the exhibit have been omitted because they are both (i) not material and (ii) is the type of information th Company treats as private or confidential). (Filed as an exhibit to Form 10-Q for the quarter ended June 30, 2021 on Aug 2021 and incorporated herein by reference.)
31*	Rule 13a-14(a) Certifications.
32**	Section 1350 Certifications.
101.INS	Inline XBRL Instance Document - The instance document does not appear in the interactive data file because its tags are embedded within the Inline XBRL document.
101.SCH*	Inline XBRL Taxonomy Extension Schema Document.
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

(* = filed herewith)

(** = furnished herewith and not “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended)

(+ = management contract or compensatory plan or arrangement)

SIGNATURES

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

Amgen Inc.
(Registrant)

Date: May 2, 2024

By: /s/ PETER H. GRIFFITH

Peter H. Griffith
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

Exhibit 31

CERTIFICATIONS

I, Robert A. Bradway, Chairman of the Board, Chief Executive Officer and President of Amgen Inc., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Amgen Inc.;

2. Based on my knowledge, this quarterly 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 quarterly report;

3. Based on my knowledge, the financial statements, and other financial information included in this quarterly 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 quarterly report;

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

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

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

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

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

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

May 2, 2024

/s/ ROBERT A. BRADWAY

Robert A. Bradway

Chairman of the Board,

Chief Executive Officer and President

CERTIFICATIONS

I, Peter H. Griffith, Executive Vice President and Chief Financial Officer of Amgen Inc., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Amgen Inc.;

2. Based on my knowledge, this quarterly 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 quarterly report;

3. Based on my knowledge, the financial statements, and other financial information included in this quarterly 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 quarterly report;

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

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

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

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

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

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

May 2, 2024

/s/ PETER H. GRIFFITH

Peter H. Griffith

Executive Vice President and Chief Financial Officer

Exhibit 32

Certification of Chief Executive Officer

Pursuant to 18 U.S.C. § 1350, as created by Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officer of Amgen Inc. (the "Company") hereby certifies that:

(i) the accompanying Quarterly Report on Form 10-Q of the Company for the period ended March 31, 2024 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

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

May 2, 2024

/s/ ROBERT A. BRADWAY

Robert A. Bradway

Chairman of the Board,

Chief Executive Officer and President

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 ("Section 906"), or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to Amgen Inc. and will be retained by Amgen Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

Certification of Chief Financial Officer

Pursuant to 18 U.S.C. § 1350, as created by Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officer of Amgen Inc. (the "Company") hereby certifies that:

(i) the accompanying Quarterly Report on Form 10-Q of the Company for the period ended March 31, 2024 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

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

May 2, 2024

/s/ PETER H. GRIFFITH

Peter H. Griffith

Executive Vice President and Chief Financial Officer

A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 ("Section 906"), or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to Amgen Inc. and will be retained by Amgen Inc. and furnished to the Securities and Exchange Commission or its staff upon request.