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, 2022

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 22, 2022, the registrant had 534,199,933 shares of common stock, $0.0001 par value, outstanding.

AMGEN INC.

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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
ANDA	Abbreviated New Drug Application
AOCI	accumulated other comprehensive income (loss)
ASR	accelerated share repurchase
BeiGene	BeiGene, Ltd.
BiTE®	bispecific T-cell engager
COVID-19	coronavirus disease 2019
EPS	earnings per share
ESA	erythropoiesis-stimulating agent
EU	European Union
FASB	Financial Accounting Standards Board
FDA	U.S. Food and Drug Administration
Fitch	Fitch Ratings, Inc.
GAAP	U.S. generally accepted accounting principles
HGRAC	Human Genetic Resources Administration of China
IPR&D	in-process research and development
IRS	Internal Revenue Service
LIBOR	London Interbank Offered Rate
mCRPC	metastatic castration-resistant prostate cancer
MD&A	management's discussion and analysis
Moody's	Moody's Investors Service, Inc.
Neumora	Neumora Therapeutics, Inc.
NSCLC	non-small cell lung cancer
OECD	Organization for Economic Co-operation and Development
ORR	objective response rate
PFS	progression-free survival
PTAB	Patent Trial and Appeal 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
SOFR	Secured Overnight Financing Rate
SG&A	selling, general and administrative
Teneobio	Teneobio, Inc.
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
Aimovig	Aimovig® (erenumab-aooe)
AMGEVITA	AMGEVITA™ (adalimumab)
Aranesp	Aranesp® (darbepoetin alfa)
BLINCYTO	BLINCYTO® (blinatumomab)
ENBREL	Enbrel® (etanercept)
EPOGEN	EPOGEN® (epoetin alfa)
EVENITY	EVENITY® (romosozumab-aqqg)
KANJINTI	KANJINTI® (trastuzumab-anns)
KYPROLIS	KYPROLIS® (carfilzomib)
LUMAKRAS/LUMYKRAS	LUMAKRAS® / LUMYKRAS™ (sotorasib)
MVASI	MVASI® (bevacizumab-awwb)
Neulasta	Neulasta® (pegfilgrastim)
NEUPOGEN	NEUPOGEN® (filgrastim)
Nplate	Nplate® (romiplostim)
Onpro	Onpro®
Otezla	Otezla® (apremilast)
Parsabiv	Parsabiv® (etelcalcetide)
Prolia	Prolia® (denosumab)
Repatha	Repatha® (evolocumab)
Sensipar/Mimpara	Sensipar®/Mimpara™ (cinacalcet)
TEZSPIRE	TEZSPIRE™ (tezepelumab-ekko)
Vectibix	Vectibix® (panitumumab)
XGEVA	XGEVA® (denosumab)

Item 1. FINANCIAL STATEMENTS

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

	Three months ended March 31,	
	2022	2021
Revenues:		
Product sales	$ 5,731	$ 5,592
Other revenues	507	309
Total revenues	6,238	5,901
Operating expenses:		
Cost of sales	1,561	1,490
Research and development	959	967
Selling, general and administrative	1,228	1,254
Other	(10)	61
Total operating expenses	3,738	3,772
Operating income	2,500	2,129
Other income (expense):		
Interest expense, net	(295)	(285)
Other (expense) income, net	(530)	13
Income before income taxes	1,675	1,857
Provision for income taxes	199	211
Net income	$ 1,476	$ 1,646
Earnings per share:		
Basic	$ 2.69	$ 2.85
Diluted	$ 2.68	$ 2.83
Shares used in calculation of earnings per share:		
Basic	548	577
Diluted	551	581

See accompanying notes.

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

	Three months ended March 31,	
	2022	2021
Net income	$ 1,476	$ 1,646
Other comprehensive income, net of reclassification adjustments and taxes:		
Foreign currency translation	(51)	(39)
Cash flow hedges	84	190
Other	—	1
Other comprehensive income, net of reclassification adjustments and taxes	33	152
Comprehensive income	$ 1,509	$ 1,798

See accompanying notes.

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

	March 31, 2022 (Unaudited)	December 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents	$ 6,528	$ 7,989
Marketable securities	16	48
Trade receivables, net	5,077	4,895
Inventories	4,411	4,086
Other current assets	2,488	2,367
Total current assets	18,520	19,385
Property, plant and equipment, net	5,142	5,184
Intangible assets, net	14,567	15,182
Goodwill	14,897	14,890
Other noncurrent assets	6,070	6,524
Total assets	$ 59,196	$ 61,165
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 1,403	$ 1,366
Accrued liabilities	10,639	10,731
Current portion of long-term debt	844	87
Total current liabilities	12,886	12,184
Long-term debt	36,010	33,222
Long-term tax liabilities	6,652	6,594
Other noncurrent liabilities	2,732	2,465
Contingencies and commitments		
Stockholders' equity:		
Common stock and additional paid-in capital; $0.0001 par value; 2,750.0 shares authorized; outstanding—534.2 shares in 2022 and 558.3 shares in 2021	31,247	32,096
Accumulated deficit	(29,568)	(24,600)
Accumulated other comprehensive loss	(763)	(796)
Total stockholders' equity	916	6,700
Total liabilities and stockholders' equity	$ 59,196	$ 61,165

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, 2021	558.3	$ 32,096	$ (24,600)	$ (796)	$ 6,700
Net income	—	—	1,476	—	1,476
Other comprehensive income, net of taxes	—	—	—	33	33
Dividends declared on common stock ($1.94 per share)	—	—	(1,034)	—	(1,034)
Issuance of common stock in connection with the Company's equity award programs	0.5	18	—	—	18
Stock-based compensation expense	—	78	—	—	78
Tax impact related to employee stock-based compensation expense	—	(45)	—	—	(45)
Repurchases of common stock (Note 10)	(24.6)	(900)	(5,410)	—	(6,310)
Balance as of March 31, 2022	534.2	$ 31,247	$ (29,568)	$ (763)	$ 916

	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, 2020	578.3	$ 31,802	$ (21,408)	$ (985)	$ 9,409
Net income	—	—	1,646	—	1,646
Other comprehensive income, net of taxes	—	—	—	152	152
Dividends declared on common stock ($1.76 per share)	—	—	(1,012)	—	(1,012)
Issuance of common stock in connection with the Company's equity award programs	0.7	6	—	—	6
Stock-based compensation expense	—	57	—	—	57
Tax impact related to employee stock-based compensation expense	—	(59)	—	—	(59)
Repurchases of common stock	(3.7)	—	(865)	—	(865)
Balance as of March 31, 2021	575.3	$ 31,806	$ (21,639)	$ (833)	$ 9,334

See accompanying notes.

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

	Three months ended March 31,	
	2022	**2021**
Cash flows from operating activities:		
Net income	$ 1,476	$ 1,646
Depreciation, amortization and other	841	841
Deferred income taxes	(251)	(91)
Adjustments for equity method investments	305	(85)
Other items, net	240	164
Changes in operating assets and liabilities, net of acquisitions:		
Trade receivables, net	(195)	91
Inventories	(230)	(126)
Other assets	(43)	(146)
Accounts payable	42	(29)
Accrued income taxes, net	318	52
Long-term tax liabilities	57	69
Other liabilities	(396)	(282)
Net cash provided by operating activities	2,164	2,104
Cash flows from investing activities:		
Purchases of marketable securities	—	(7,597)
Proceeds from sales of marketable securities	—	3,999
Proceeds from maturities of marketable securities	32	3,524
Purchases of property, plant and equipment	(190)	(166)
Other	47	(79)
Net cash used in investing activities	(111)	(319)
Cash flows from financing activities:		
Net proceeds from issuance of debt	3,952	—
Repurchases of common stock (Note 10)	(6,360)	(871)
Dividends paid	(1,080)	(1,016)
Other	(26)	(52)
Net cash used in financing activities	(3,514)	(1,939)
Decrease in cash and cash equivalents	(1,461)	(154)
Cash and cash equivalents at beginning of period	7,989	6,266
Cash and cash equivalents at end of period	$ 6,528	$ 6,112

See accompanying notes.

AMGEN INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
March 31, 2022
(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, 2022 and 2021, 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, 2021.

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.

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 $8.9 billion and $8.8 billion as of March 31, 2022 and December 31, 2021, respectively.

Recent accounting pronouncements

In March 2020, the FASB issued a new accounting standard to ease the financial reporting burdens caused by the expected market transition from LIBOR and other interbank offered rates to alternative reference rates, commonly referred to as reference rate reform. The new standard provides temporary optional expedients and exceptions to current GAAP guidance on contract modifications and hedge accounting. Specifically, a modification to transition to an alternative reference rate is treated as an event that does not require contract remeasurement or reassessment of a previous accounting treatment. Moreover, for all types of hedging relationships, an entity is permitted to change the reference rate without having to dedesignate the hedging relationship. The standard is generally effective for all contract modifications made and hedging relationships evaluated through December 31, 2022. In January 2021, the FASB issued a new accounting standard that expanded the scope of the original March 2020 standard to include derivative instruments on discounting transactions. We do not expect the two standards to have a material impact on our condensed consolidated financial statements.

In November 2021, the FASB issued a new accounting standard around the recognition and measurement of contract assets and contract liabilities from revenue contracts with customers acquired in a business combination. The new standard clarifies that contract assets and contract liabilities acquired in a business combination from an acquiree should initially be recognized by applying revenue recognition principles and not at fair value. The standard is effective for interim and annual periods beginning on January 1, 2023, and early adoption is permitted. The impact of this standard will depend on the facts and circumstances of future transactions.

2. Acquisitions

Teneobio, Inc.

On October 19, 2021, we acquired all of the outstanding stock of Teneobio, a privately held, clinical-stage biotechnology company developing a new class of biologics called human heavy-chain antibodies, which are single-chain antibodies composed of the human heavy-chain domain. The transaction, which was accounted for as a business combination, includes Teneobio's proprietary bispecific and multispecific antibody technologies, which complement Amgen's existing antibody capabilities and BiTE® platform and will enable significant acceleration and efficiency in the discovery and development of new molecules to treat diseases across Amgen's core therapeutic areas. Upon its acquisition, Teneobio became a wholly owned subsidiary of Amgen, and its operations have been included in our condensed consolidated financial statements commencing on the acquisition date.

Measurement period adjustments for the three months ended March 31, 2022, included changes to the purchase price allocation and total consideration, resulting in a net increase of $22 million to goodwill. The measurement period adjustments resulted primarily from valuation inputs pertaining to certain acquired assets based on facts and circumstances that existed as of the acquisition date and did not result from events subsequent to the acquisition date. These adjustments did not have a significant impact on Amgen's results of operations for the three months ended March 31, 2022, and would not have had a significant impact on prior-period results if these 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 purchase price	$ 993
Contingent consideration	299
Total consideration	$ 1,292
Cash and cash equivalents	$ 100
IPR&D	991
Finite-lived intangible asset – R&D technology rights	115
Finite-lived intangible assets – licensing rights	41
Goodwill	273
Other assets, net	16
Deferred tax liability	(244)
Total assets acquired, net	$ 1,292

The consideration for this transaction comprised (i) an upfront cash payment of $993 million, which included a working-capital adjustment, and (ii) future contingent milestone payments to Teneobio's former equity holders of up to $1.6 billion in cash, based on the achievement of various development and regulatory milestones with regard to the leading asset (AMG 340, formerly TNB-585) and to various development milestones for other drug candidates. The estimated fair values of the contingent consideration obligations aggregated $299 million as of the acquisition date and were determined using a probability-weighted expected return methodology. The assumptions in this method include the probability of achieving the milestones and the expected payment dates, with such amounts discounted to present value based on our pre-tax cost of debt. See Note 11, Fair value measurement, for information regarding the estimated fair value of these obligations as of March 31, 2022.

The estimated fair values of acquired IPR&D assets totaled $991 million, of which $784 million relates to AMG 340, that is in a phase 1 clinical trial for the treatment of mCRPC, and the balance relates to four separate preclinical oncology programs. The R&D technology rights of $115 million relate to Teneobio's proprietary bispecific and multispecific antibody technologies and will be amortized over 10 years using the straight-line method. Teneobio has also licensed its technology and certain identified targets to various third parties, representing contractual agreements valued at $41 million. The estimated fair values for these 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.

A deferred tax liability of $244 million 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.

The excess of the acquisition date consideration over the fair values assigned to the assets acquired and the liabilities assumed of $273 million was recorded as goodwill, which is not deductible for tax purposes. The goodwill value represents expected synergies from both AMG 340 and the technologies acquired.

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.

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,					
	2022			2021		
	U.S.	ROW	Total	U.S.	ROW	Total
Enbrel	$ 843	$ 19	$ 862	$ 894	$ 30	$ 924
Prolia	582	270	852	501	257	758
XGEVA	368	134	502	334	134	468
Otezla	350	101	451	366	110	476
Aranesp	137	221	358	125	230	355
Neulasta	304	44	348	421	61	482
Repatha	165	164	329	139	147	286
KYPROLIS	196	91	287	159	92	251
Nplate	156	110	266	112	115	227
Other products	936	540	1,476	852	513	1,365
Total product sales[1]	$ 4,037	$ 1,694	5,731	$ 3,903	$ 1,689	5,592
Other revenues			507			309
Total revenues			$ 6,238			$ 5,901

[1] Hedging gains and losses, which are included in product sales, were not material for the three months ended March 31, 2022 and 2021.

4. Income taxes

The effective tax rates for the three months ended March 31, 2022 and 2021, were 11.9% and 11.4%, respectively.

The increase in our effective tax rate for the three months ended March 31, 2022, was primarily due to current year net unfavorable items compared to last year, offset by changes in earnings mix. The effective tax rates differ from the federal statutory rate primarily as a result of foreign earnings from the Company's operations conducted in Puerto Rico, a territory of the United States treated as a foreign jurisdiction for U.S. tax purposes, that are subject to a tax incentive grant through 2035. In addition, the Company's operations conducted in Singapore are subject to a tax incentive grant through 2034. These foreign earnings are also subject to U.S. tax at a reduced rate of 10.5%.

The U.S. territory of Puerto Rico imposes an excise tax on the gross intercompany purchase price of goods and services from our manufacturer in Puerto Rico. The rate of 4% is effective through December 31, 2027. We account for the excise tax as a manufacturing cost that is capitalized in inventory and expensed in cost of sales when the related products are sold. For U.S. income tax purposes, in 2022 the excise tax results in foreign tax credits that are generally recognized in our provision for income taxes when the excise tax is incurred.

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, 2011 and 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 2010, 2011 and 2012 that we received in May and July 2021, which seek to increase our U.S. taxable income for 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 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, 2014 and 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, 2011 and 2012. We disagreed with the proposed adjustments and calculations and pursued resolution with the IRS appeals office but were unable to reach resolution. In April 2022, we received a Notice that seeks to increase our U.S. taxable income for 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 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 Notices through the judicial process, and we expect to file a Petition in the U.S. Tax Court to contest the 2013-2015 Notice through the judicial process. We will seek consolidation of the two periods into one case in Tax Court.

We are also currently under examination by the IRS for the years 2016, 2017 and 2018 and by a number of state and foreign tax jurisdictions.

Final resolution of these complex matters is not likely within the next 12 months. We 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.

We are no longer subject to U.S. federal income tax examinations for years ended on or before December 31, 2009.

See Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations, Income Taxes for further discussion and Part II, Item 1A, Risk Factors—*The adoption and interpretation of new tax legislation or exposure to additional tax liabilities could affect our profitability*.

During the three months ended March 31, 2022, the gross amounts of our UTBs increased $45 million, as a result of tax positions taken during the current year. Substantially all of the UTBs as of March 31, 2022, 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.

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

	Three months ended March 31,	
	2022	2021
Income (Numerator):		
Net income for basic and diluted EPS	$ 1,476	$ 1,646
Shares (Denominator):		
Weighted-average shares for basic EPS	548	577
Effect of dilutive securities	3	4
Weighted-average shares for diluted EPS	551	581
Basic EPS	$ 2.69	$ 2.85
Diluted EPS	$ 2.68	$ 2.83

For the three months ended March 31, 2022 and 2021, 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, 2022	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair values
U.S. Treasury notes	$ 16	$ —	$ —	$ 16
U.S. Treasury bills	—	—	—	—
Money market mutual funds	5,837	—	—	5,837
Other short-term interest-bearing securities	—	—	—	—
Total interest-bearing securities	$ 5,853	$ —	$ —	$ 5,853

Types of securities as of December 31, 2021	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair values
U.S. Treasury notes	$ 47	$ —	$ —	$ 47
U.S. Treasury bills	1,400	—	—	1,400
Money market mutual funds	5,856	—	—	5,856
Other short-term interest-bearing securities	1	—	—	1
Total interest-bearing securities	$ 7,304	$ —	$ —	$ 7,304

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, 2022	December 31, 2021
Cash and cash equivalents	$ 5,837	$ 7,256
Marketable securities	16	48
Total interest-bearing securities	$ 5,853	$ 7,304

Cash and cash equivalents in the above table excludes bank account cash of $691 million and $733 million as of March 31, 2022 and December 31, 2021, respectively.

The fair values of available-for-sale investments by contractual maturity were as follows (in millions):

Contractual maturities	March 31, 2022	December 31, 2021
Maturing in one year or less	$ 5,853	$ 7,304
Total available-for-sale investments	$ 5,853	$ 7,304

For the three months ended March 31, 2022 and 2021, 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 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

We held investments in equity securities with readily determinable fair values (publicly traded securities) of $473 million and $611 million as of March 31, 2022 and December 31, 2021, respectively, which are included in Other noncurrent assets in the Condensed Consolidated Balance Sheets. For the three months ended March 31, 2022 and 2021, net unrealized losses on publicly traded securities were $170 million and $56 million, respectively. Realized gains and losses on sales of publicly traded securities for the three months ended March 31, 2022 and 2021, were not material.

We held investments of $261 million and $262 million in equity securities without readily determinable fair values as of March 31, 2022 and December 31, 2021, respectively, which are included in Other noncurrent assets in the Condensed Consolidated Balance Sheets. For the three months ended March 31, 2022 and 2021, upward adjustments and downward adjustments on these securities were not material. Adjustments were based on observable price transactions.

Equity method investments

BeiGene, Ltd.

As of March 31, 2022 and December 31, 2021, we had an ownership interest of approximately 18.4% in BeiGene, which is included in Other noncurrent assets in the Condensed Consolidated Balance Sheets and accounted for under the equity method of accounting. We amortize the difference between the fair value of equity securities acquired and our proportionate share of the carrying value of the underlying net assets of BeiGene over the useful lives of the assets that gave rise to this basis difference. This amortization and our share of the results of operations of BeiGene are included in Other (expense) income, net, in the Condensed Consolidated Statements of Income one quarter in arrears.

During the three months ended March 31, 2022 and 2021, the carrying value of our equity investment was adjusted by our share of BeiGene's net losses of $108 million and $97 million, respectively, and amortization of the basis difference of $47 million and $42 million, respectively. As of March 31, 2022 and December 31, 2021, the carrying values of our investment in BeiGene totaled $2.6 billion and $2.8 billion, respectively, and the fair values of the investment totaled $3.6 billion and $5.1 billion, respectively. As of March 31, 2022, we believe the carrying value of our equity investment in BeiGene is fully recoverable.

Neumora Therapeutics, Inc.

On September 30, 2021, we acquired approximately 25.9% ownership interest in Neumora, a privately held company, for $257 million, which is included in Other noncurrent assets in the Condensed Consolidated Balance Sheets, in exchange for a $100 million cash payment and $157 million in noncash consideration primarily related to future services. Although our equity investment provides us with the ability to exercise significant influence over Neumora, we have elected the fair value option to account for our equity investment. Under the fair value option, changes in the fair value of the investment are recognized through earnings each reporting period. We believe the fair value option best reflects the economics of the underlying transaction. As of March 31, 2022 and December 31, 2021, our ownership interest in Neumora was 25.8% and 25.9%, respectively, and the fair values of our investment were $170 million and $220 million, respectively. Accordingly, during the three months ended March 31, 2022, we recognized a loss of $50 million for the reduction in fair value of our investment in Other (expense) income, net, in the Condensed Consolidated Statements of Income. For information on determination of fair values, see Note 11, Fair value measurement.

Limited partnerships

We held limited partnership investments of $403 million and $573 million as of March 31, 2022 and December 31, 2021, 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, 2022, unfunded additional commitments to be made for these investments during the next several years were $182 million. During the three months ended March 31, 2022 and 2021, we recognized net losses of $160 million and net gains of $208 million, respectively, in Other (expense) income, net in the Condensed Consolidated Statements of Income on these investments.

7. Inventories

Inventories consisted of the following (in millions):

	March 31, 2022	December 31, 2021
Raw materials	$ 750	$ 647
Work in process	2,582	2,367
Finished goods	1,079	1,072
Total inventories	$ 4,411	$ 4,086

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, 2022
Beginning balance	$ 14,890
Goodwill resulting from acquisition of a business[(1)]	22
Currency translation adjustment	(15)
Ending balance	$ 14,897

[(1)] Composed of adjustments to goodwill resulting from changes to the acquisition date fair values of net assets acquired in the acquisition of Teneobio (see Note 2, Acquisitions).

Other intangible assets

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

	March 31, 2022			December 31, 2021		
	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	$ 25,550	$ (13,316)	$ 12,234	$ 25,561	$ (12,769)	$ 12,792
Licensing rights	3,864	(3,013)	851	3,807	(2,973)	834
Marketing-related rights	1,350	(1,129)	221	1,354	(1,112)	242
Research and development technology rights	1,386	(1,146)	240	1,377	(1,133)	244
Total finite-lived intangible assets	32,150	(18,604)	13,546	32,099	(17,987)	14,112
Indefinite-lived intangible assets:						
In-process research and development	1,021	—	1,021	1,070	—	1,070
Total other intangible assets	$ 33,171	$ (18,604)	$ 14,567	$ 33,169	$ (17,987)	$ 15,182

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, 2022 and 2021, we recognized amortization associated with our finite-lived intangible assets of $637 million and $654 million, respectively. Amortization of intangible assets is primarily included in Cost of sales in the Condensed Consolidated Statements of Income. The total estimated amortization for our finite-lived intangible assets for the remaining nine months ending December 31, 2022, and the years ending December 31, 2023, 2024, 2025, 2026 and 2027, are $1.9 billion, $2.5 billion, $2.5 billion, $2.4 billion, $1.7 billion and $1.8 billion, respectively.

9. Financing arrangements

Our borrowings consisted of the following (in millions):

	March 31, 2022	December 31, 2021
0.41% CHF700 million bonds due 2023 (0.41% 2023 Swiss franc Bonds)	$ 759	$ 767
2.25% notes due 2023 (2.25% 2023 Notes)	750	750
3.625% notes due 2024 (3.625% 2024 Notes)	1,400	1,400
1.90% notes due 2025 (1.90% 2025 Notes)	500	500
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)	830	853
2.60% notes due 2026 (2.60% 2026 Notes)	1,250	1,250
5.50% £475 million notes due 2026 (5.50% 2026 pound sterling Notes)	624	643
2.20% notes due 2027 (2.20% 2027 Notes)	1,750	1,750
3.20% notes due 2027 (3.20% 2027 Notes)	1,000	1,000
1.65% notes due 2028 (1.65% 2028 Notes)	1,250	1,250
3.00% notes due 2029 (3.00% 2029 Notes)	750	—
4.00% £700 million notes due 2029 (4.00% 2029 pound sterling Notes)	920	947
2.45% notes due 2030 (2.45% 2030 Notes)	1,250	1,250
2.30% notes due 2031 (2.30% 2031 Notes)	1,250	1,250
2.00% notes due 2032 (2.00% 2032 Notes)	1,250	1,250
3.35% notes due 2032 (3.35% 2032 Notes)	1,000	—
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)	2,000	2,000
5.75% notes due 2040 (5.75% 2040 Notes)	373	373
2.80% notes due 2041 (2.80% 2041 Notes)	1,150	1,150
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
5.375% 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)	2,250	2,250
4.663% notes due 2051 (4.663% 2051 Notes)	3,541	3,541
3.00% notes due 2052 (3.00% 2052 Notes)	1,350	1,350
4.20% notes due 2052 (4.20% 2052 Notes)	1,000	—
2.77% notes due 2053 (2.77% 2053 Notes)	940	940
4.40% notes due 2062 (4.40% 2062 Notes)	1,250	—
Other notes due 2097	100	100
Unamortized bond discounts, premiums and issuance costs, net	(1,253)	(1,213)
Fair value adjustments	(53)	284
Other	14	15
Total carrying value of debt	36,854	33,309
Less current portion	(844)	(87)
Total long-term debt	$ 36,010	$ 33,222

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.

During the three months ended March 31, 2022, we issued $4.0 billion of debt consisting of $750 million of the 3.00% 2029 Notes, $1.0 billion of the 3.35% 2032 Notes, $1.0 billion of the 4.20% 2052 Notes and $1.25 billion of the 4.40% 2062 Notes. The 3.00% 2029 Notes were issued to finance eligible projects that meet specified criteria to benefit the environment. In the event of a change-in-control triggering event, as defined in the terms of the notes, we may be required to purchase all or a portion of these notes at a price equal to 101% of the principal amount of the notes plus accrued and unpaid interest. In addition, these notes may be redeemed at any time at our option, in whole or in part, at the principal amount of the notes being redeemed plus accrued and unpaid interest and a make-whole amount, which are defined by the terms of the notes. The notes may be redeemed without payment of make-whole amounts if redemption occurs during a specified period of time immediately prior to the maturing of the notes. Such time periods range from two months to six months prior to maturity.

10. Stockholders' equity

Stock repurchase program

Activity under our stock repurchase program, on a trade date basis, was as follows (in millions):

	2022		2021	
	Shares	Dollars	Shares	Dollars
First quarter	24.6	$ 5,410	3.7	$ 865

On February 24, 2022, the Company entered into ASR agreements with three third-party financial institutions (Dealers). Under the ASR agreements, the Company made payments in an aggregate amount of $6.0 billion on February 25, 2022, to the Dealers and received and retired an initial 23.3 million shares of the Company's common stock from the Dealers. The payments were recorded as reductions to shareholders' equity, consisting of a $5.1 billion increase to accumulated deficit, which reflects the value of the initial shares received, and a $0.9 billion decrease in additional paid-in capital, which reflects the value of the stock that remains to be delivered by the Dealers pending final settlement. The final number of shares to be repurchased by the Company will be based on the daily volume-weighted average stock price of the Company's common stock during the terms of the ASR agreements, less a discount and subject to adjustments pursuant to the terms and conditions of the ASR agreements. At settlement, under certain circumstances, one or more of the Dealers may be required to deliver additional shares of common stock to the Company, or under certain circumstances, the Company may be required to deliver shares of common stock or to make a cash payment, at its election, to a Dealer. The final settlement under the ASR agreements is scheduled to occur in the third quarter of 2022, subject to an earlier termination under certain limited circumstances, as set forth in the ASR agreements. In total, we repurchased 24.6 million shares of common stock in the first quarter of 2022, including shares received under the ASR agreements.

As of March 31, 2022, $4.6 billion of authorization remained available under our stock repurchase program.

Dividends

In March 2022, the Board of Directors declared a quarterly cash dividend of $1.94 per share, which will be paid in June 2022. In December 2021, the Board of Directors declared a quarterly cash dividend of $1.94 per share, which was paid in March 2022.

Accumulated other comprehensive income (loss)

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

	Foreign currency translation	Cash flow hedges	Available-for-sale securities	Other	AOCI
Balance as of December 31, 2021	$ (844)	$ 61	$ —	$ (13)	$ (796)
Foreign currency translation adjustments	(51)	—	—	—	(51)
Unrealized gains	—	56	—	—	56
Reclassification adjustments to income	—	51	—	—	51
Income taxes	—	(23)	—	—	(23)
Balance as of March 31, 2022	$ (895)	$ 145	$ —	$ (13)	$ (763)

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	2022	2021	Condensed Consolidated Statements of Income locations
Cash flow hedges:			
Foreign currency contract gains (losses)	$ 27	$ (1)	Product sales
Cross-currency swap contract losses	(78)	(132)	Other (expense) income, net
	(51)	(133)	Income before income taxes
	11	28	Provision for income taxes
	$ (40)	$ (105)	Net 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 source 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 abilit 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, the 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, 2022, 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:				
U.S. Treasury notes	$ 16	$ —	$ —	$ 16
U.S. Treasury bills	—	—	—	—
Money market mutual funds	5,837	—	—	5,837
Other short-term interest-bearing securities	—	—	—	—
Equity securities	473	—	170	643
Derivatives:				
Foreign currency contracts	—	235	—	235
Cross-currency swap contracts	—	65	—	65
Interest rate swap contracts	—	—	—	—
Total assets	$ 6,326	$ 300	$ 170	$ 6,796
Liabilities:				
Derivatives:				
Foreign currency contracts	$ —	$ 51	$ —	$ 51
Cross-currency swap contracts	—	358	—	358
Interest rate swap contracts	—	456	—	456
Contingent consideration obligations	—	—	330	330
Total liabilities	$ —	$ 865	$ 330	$ 1,195

Fair value measurement as of December 31, 2021, 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:				
U.S. Treasury notes	$ 47	$ —	$ —	$ 47
U.S. Treasury bills	1,400	—	—	1,400
Money market mutual funds	5,856	—	—	5,856
Other short-term interest-bearing securities	—	1	—	1
Equity securities	611	—	220	831
Derivatives:				
Foreign currency contracts	—	183	—	183
Cross-currency swap contracts	—	66	—	66
Interest rate swap contracts	—	16	—	16
Total assets	$ 7,914	$ 266	$ 220	$ 8,400
Liabilities:				
Derivatives:				
Foreign currency contracts	$ —	$ 39	$ —	$ 39
Cross-currency swap contracts	—	339	—	339
Interest rate swap contracts	—	156	—	156
Contingent consideration obligations	—	—	342	342
Total liabilities	$ —	$ 534	$ 342	$ 876

Interest-bearing and equity securities

The fair values of our U.S. Treasury securities, money market mutual funds and equity investments in publicly traded securities are based on quoted market prices in active markets, with no valuation adjustment. The fair value of equity securities without readily determinable fair values are initially valued at the transaction price and subsequently valued based upon a combination of market performance and publicly available market information for similar companies that have actively traded equity securities.

Derivatives

All of our foreign currency forward derivative contracts have maturities of three years or less, and all 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 include foreign currency exchange rates, LIBOR, swap rates and obligor credit default swap rates. In addition, inputs for our foreign currency option contracts include implied volatility measures. These inputs, when applicable, are at commonly quoted intervals. See Note 12, Derivative instruments.

Our cross-currency 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 include foreign currency exchange rates, LIBOR, swap rates, obligor credit default swap rates and cross-currency-basis swap spreads. See Note 12, Derivative instruments.

Our 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 using an income-based industry-standard valuation model for which all significant inputs are observable either directly or indirectly. These inputs include LIBOR, swap rates and obligor credit default swap rates. 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 Income.

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

	Three Months Ended March 31,	
	2022	2021
Beginning balance	$ 342	$ 33
Payments	(2)	(1)
Net changes in valuations	(10)	7
Ending balance	$ 330	$ 39

As of March 31, 2022 and December 31, 2021, our contingent consideration obligations are primarily the result of our acquisition of Teneobio in October 2021, which obligates us to pay the former shareholders up to $1.6 billion upon achieving separate development and regulatory milestones with regard to various R&D programs. See Note 2, Acquisitions.

Summary of the fair values of other financial instruments

Cash equivalents

The fair values of cash equivalents approximate 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, 2022 and December 31, 2021, the aggregate fair values of our borrowings were $38.4 billion and $37.9 billion, respectively, and the carrying values were $36.9 billion and $33.3 billion, respectively.

During the three months ended March 31, 2022 and 2021, there were no material remeasurements to the fair values of assets and liabilities that are not measured at fair value on a recurring basis.

Investment in BeiGene

We estimated the fair value of our investment in BeiGene by using Level 1 inputs. As of March 31, 2022 and December 31, 2021, the fair values were $3.6 billion and $5.1 billion, and the carrying values were $2.6 billion and $2.8 billion, respectively.

During the three months ended March 31, 2022 and 2021, 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, cross-currency swap, forward interest rate and interest rate swap contracts. 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. Increases and decreases in the cash flows associated with our international product sales due to movements in foreign currency exchange rates are partially offset by corresponding increases and decreases in the cash flows from our international operating expenses resulting from these foreign currency exchange rate movements. To further reduce our exposure to foreign currency exchange rate fluctuations with regard to our international product sales, 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 are being hedged than in successive periods.

As of March 31, 2022 and December 31, 2021, we had outstanding foreign currency forward contracts with aggregate notional amounts of $5.6 billion and $5.7 billion, respectively. 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 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, pounds sterling and Swiss francs 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, pounds sterling and Swiss francs. In addition, we will pay U.S. dollars to and receive euros, pounds sterling and Swiss francs 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, pounds sterling and Swiss francs 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 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, 2022, were as follows (notional amounts in millions):

	Foreign currency			U.S. dollars		
Hedged notes	**Notional amounts**		**Interest rates**	**Notional amounts**		**Interest rates**
0.41% 2023 Swiss franc Bonds	CHF	700	0.4 %	$	704	3.4 %
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	4.5 %

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 Income over the lives of the associated debt issuances. Amounts recognized in connection with forward interest rate swaps during the three months ended March 31, 2022, and amounts expected to be recognized during the subsequent 12 months are not material.

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

Derivatives in cash flow hedging relationships	Three months ended March 31, 2022	2021
Foreign currency contracts	$ 78	$ 183
Cross-currency swap contracts	(22)	(75)
Total unrealized gains	$ 56	$ 108

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 LIBOR-based coupons over the terms of the related hedge contracts. As of both March 31, 2022 and December 31, 2021, 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 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):

Condensed Consolidated Balance Sheets locations	Carrying amounts of hedged liabilities[1]		Cumulative amounts of fair value hedging adjustments related to the carrying amounts of the hedged liabilities[2]	
	March 31, 2022	December 31, 2021	March 31, 2022	December 31, 2021
Current portion of long-term debt	$ 83	$ 85	$ 83	$ 85
Long-term debt	$ 6,395	$ 6,729	$ (136)	$ 199

(1) Current portion of long-term debt includes $83 million and $85 million of carrying value with discontinued hedging relationships as of March 31, 2022 and December 31, 2021, respectively. Long-term debt includes $419 million and $440 million of carrying value with discontinued hedging relationships as of March 31, 2022 and December 31, 2021, respectively.

(2) Current portion of long-term debt includes $83 million and $85 million of hedging adjustments on discontinued hedging relationships as of March 31, 2022 and December 31, 2021, respectively. Long-term debt includes $319 million and $340 million of hedging adjustments on discontinued hedging relationships as of March 31, 2022 and December 31, 2021, 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, 2022		
	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 Income	$ 5,731	$ (530)	$ (295)
The effects of cash flow and fair value hedging:			
Gains (losses) on cash flow hedging relationships reclassified out of AOCI:			
Foreign currency contracts	$ 27	$ —	$ —
Cross-currency swap contracts	$ —	$ (78)	$ —
Gains (losses) on fair value hedging relationships—interest rate swap agreements:			
Hedged items[(1)]	$ —	$ —	$ 337
Derivatives designated as hedging instruments	$ —	$ —	$ (315)

	Three months ended March 31, 2021		
	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 Income	$ 5,592	$ 13	$ (285)
The effects of cash flow and fair value hedging:			
Losses on cash flow hedging relationships reclassified out of AOCI:			
Foreign currency contracts	$ (1)	$ —	$ —
Cross-currency swap contracts	$ —	$ (132)	$ —
Gains (losses) on fair value hedging relationships—interest rate swap agreements:			
Hedged items[(1)]	$ —	$ —	$ 175
Derivatives designated as hedging instruments	$ —	$ —	$ (152)

(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, 2022, we expected to reclassify $120 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, 2022 and December 31, 2021, the total notional amounts of these foreign currency forward contracts were $655 million and $680 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, 2022 and 2021.

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

	Derivative assets		Derivative liabilities	
March 31, 2022	**Condensed Consolidated Balance Sheets locations**	**Fair values**	**Condensed Consolidated Balance Sheets locations**	**Fair values**
Derivatives designated as hedging instruments:				
Foreign currency contracts	Other current assets/ Other noncurrent assets	$ 235	Accrued liabilities/ Other noncurrent liabilities	$ 51
Cross-currency swap contracts	Other current assets/ Other noncurrent assets	65	Accrued liabilities/ Other noncurrent liabilities	358
Interest rate swap contracts	Other current assets/ Other noncurrent assets	—	Accrued liabilities/ Other noncurrent liabilities	456
Total derivatives designated as hedging instruments		$ 300		$ 865

	Derivative assets		Derivative liabilities	
December 31, 2021	**Condensed Consolidated Balance Sheets locations**	**Fair values**	**Condensed Consolidated Balance Sheets locations**	**Fair values**
Derivatives designated as hedging instruments:				
Foreign currency contracts	Other current assets/ Other noncurrent assets	$ 183	Accrued liabilities/ Other noncurrent liabilities	$ 39
Cross-currency swap contracts	Other current assets/ Other noncurrent assets	66	Accrued liabilities/ Other noncurrent liabilities	339
Interest rate swap contracts	Other current assets/ Other noncurrent assets	16	Accrued liabilities/ Other noncurrent liabilities	156
Total derivatives designated as hedging instruments		$ 265		$ 534

Our derivative contracts that were in liability positions as of March 31, 2022, 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 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, 2021, 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 19, Contingencies and commitments, to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2021.

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 19, Contingencies and commitments, to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2021, 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 19, Contingencies and commitments, to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2021, 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

Amgen Inc., et al. v. Sanofi, et al.

On March 28, 2022, Amgen filed a reply brief in support of its petition for certiorari to the U.S. Supreme Court. On April 18, 2022, the Supreme Court requested that the Office of the Solicitor General of the United States submit a brief providing the government's view on the issues raised by Amgen's petition.

Patent Disputes in the International Region

On March 23, 2022, Amgen filed counterclaims alleging that PRALUENT® infringes Amgen's European Patent 2,641,917 (the '917 Patent). A European Patent Office (EPO) opposition to the '917 Patent, filed by Sanofi on February 5, 2021, is pending, and the hearing before the EPO's Opposition Division is scheduled for February 21, 2023.

NEUPOGEN (filgrastim)/Neulasta Patent Litigation

Amgen Inc., et al. v. Hospira Inc. et al.

On March 18, 2022, the parties filed a stipulation of dismissal, and the U.S. District Court for the District of Delaware (the Delaware District Court) dismissed the case on March 21, 2022.

Patent Trial and Appeal Board (PTAB) Challenge

Apotex PTAB Challenge

On April 4, 2022, Amgen's appeal of the PTAB's decision, holding all claims of Amgen's U.S. Patent No. 8,952,138 (the '138 Patent) unpatentable, was submitted to the U.S. Court of Appeals for the Federal Circuit (the Federal Circuit Court) for determination on the briefs without oral argument. On April 14, 2022, the Federal Circuit Court held that the PTAB misconstrued the patent claims and reversed the PTAB's decision because Apotex failed to prove the invention of the '138 Patent unpatentable.

Pfizer PTAB Challenge

On March 18, 2022, the parties filed a joint motion to terminate the inter partes review proceeding at the U.S. Patent and Trademark Office of U.S. Patent No. 8,273,707. On April 20, 2022, the PTAB granted the motion and terminated the proceeding.

Antitrust Class Action

Sensipar Antitrust Class Actions

On March 11, 2022, the Delaware District Court granted defendants' (including Amgen's) motion to dismiss except as to the reverse payment claim and various state law claims from ten of the states in which plaintiffs reside.

U.S. Tax Litigation

Amgen Inc. & Subsidiaries v. Commissioner of Internal Revenue

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

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, 2021. 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, 2021. 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, collaborations and effects of pandemics. 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 is a biotechnology company committed to unlocking the potential of biology for patients suffering from serious illnesses. A biotechnology pioneer since 1980, Amgen has grown to be one of the world's leading independent biotechnology companies, has reached millions of patients around the world and is developing a pipeline of medicines with breakaway potential.

Our principal products are ENBREL, Prolia, XGEVA, Otezla, Aranesp, Neulasta, Repatha, KYPROLIS and Nplate. We also market a number of other products, including MVASI, Vectibix, EVENITY, BLINCYTO, EPOGEN, AMGEVITA, Aimovig, KANJINTI, Parsabiv, LUMAKRAS/LUMYKRAS, NEUPOGEN, Sensipar/Mimpara and TEZSPIRE.

COVID-19 pandemic

Since the onset of the pandemic in 2020, we have been closely monitoring the pandemic's effects on our global operations. We continue to take appropriate steps to minimize risks to our employees, a significant number of whom have continued to work virtually. To date, our remote working arrangements have not significantly affected our ability to maintain critical business operations, and we have not experienced disruptions to or shortages of our supply of medicines.

Since the beginning of the COVID-19 pandemic, we have seen changes in demand for some of our products driven by changes in the frequency of patient visits to doctors' offices that has impacted the provision of treatments to existing patients and reduced diagnoses in new patients. During 2021, there was gradual recovery in both patient visits and diagnoses that approached pre-COVID-19 levels early in the fourth quarter. However, in late 2021, Omicron and other variants began to impact the healthcare sector and, as a result, COVID-19 continued to affect our business around the world through the first quarter of 2022. Going forward, we may experience ongoing variability in demand patterns from COVID-19 for 2022. Further, the cumulative decrease in diagnoses over the course of the pandemic has suppressed the volume of new patients starting treatment, which continues to impact our business. We will continue to closely monitor the effects of COVID-19 on patient behavior and access to care.

Since early 2021, global vaccination efforts have been under way to control the pandemic. Challenges to vaccination efforts, new variants and other causes of virus spread may require governments to issue additional restrictions and/or order shutdowns in various geographies. As a result, we expect to see continued volatility for at least the duration of the pandemic as governments respond to current local conditions.

With respect to our drug development activities, we are continuously monitoring COVID-19 infection rates, including changes from new variants, and working to mitigate effects on future study enrollment in our clinical trials and evaluating the impacts in all countries where our clinical trials occur. We remain focused on supporting our active clinical sites in their provision of care to patients and in our provision of investigational drug supply.

Despite the ongoing pandemic and business impacts noted above, 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 expenditures and debt service requirements as well as to engage in capital-return and other business initiatives that we plan to pursue. For a discussion of the risks the COVID-19 pandemic presents to our results, see Part 1, Item 1A. Risk Factors of our Annual Report on Form 10-K for the year ended December 31, 2021.

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, 2021. For additional developments or for a more comprehensive discussion of certain developments discussed below, see our Annual Report on Form 10-K for the year ended December 31, 2021.

Operations

New manufacturing facilities

- In March 2022, we broke ground to build a drug substance plant in North Carolina that will increase our manufacturing network capacity.

Products/Pipeline

Oncology/Hematology

LUMAKRAS/LUMYKRAS

- In April 2022, we announced long-term efficacy and safety data from the CodeBreaK 100 Phase 1/2 trial in patients with KRAS G12C-mutated advanced NSCLC who received LUMAKRAS. Data from 174 heavily pre-treated patients (172 with baseline measurable lesion(s)) were featured in an oral presentation at the American Association for Cancer Research annual meeting. LUMAKRAS demonstrated a centrally confirmed ORR of 40.7%, disease control rate of 83.7% and median duration of response of 12.3 months. The results also showed median PFS of 6.3 months and overall survival of 12.5 months, with 32.5% of patients still alive at two years. No new safety signals for LUMAKRAS were identified with the long-term follow-up.

Inflammation

ABP 654

- In April 2022, we announced preliminary results from a Phase 3 study evaluating the efficacy and safety of ABP 654 compared to STELARA® (ustekinumab) in adult patients with moderate to severe plaque psoriasis. The study met the primary efficacy endpoint, demonstrating no clinically meaningful differences between ABP 654 and STELARA®.

Repatha

- In April 2022, we announced top-line results from the Repatha FOURIER-OLE studies, two open label extension (OLE) studies to the Phase 3 FOURIER cardiovascular outcomes trial, composed of a study with 5,035 patients enrolled in Eastern Europe and the United States and a study with 1,600 patients enrolled in Western Europe. FOURIER-OLE was designed to assess the long-term safety and tolerability of Repatha over five years in adults with clinically evident atherosclerotic cardiovascular disease. The FOURIER-OLE studies showed that Repatha, administered at 140 mg every two weeks or 420 mg monthly, was safe and well-tolerated. Patients received Repatha for approximately 5 years, with some patients receiving Repatha for up to 8.5 years in aggregate across the FOURIER and OLE studies. No new long-term safety findings were observed. In addition, medically significant and sustained reduction in low-density lipoprotein cholesterol (LDL-C) levels were observed in most patients, with greater than 85 percent of patients achieving an LDL-C level of <40 mg/dL during the OLE period.

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,		
	2022	2021	Change
Product sales			
U.S.	$ 4,037	$ 3,903	3 %
ROW	1,694	1,689	— %
Total product sales	5,731	5,592	2 %
Other revenues	507	309	64 %
Total revenues	$ 6,238	$ 5,901	6 %
Operating expenses	$ 3,738	$ 3,772	(1)%
Operating income	$ 2,500	$ 2,129	17 %
Net income	$ 1,476	$ 1,646	(10)%
Diluted EPS	$ 2.68	$ 2.83	(5)%
Diluted shares	551	581	(5)%

In the following discussion of changes in product sales, any reference to unit demand growth or decline refers to changes in the 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).

Total product sales increased for the three months ended March 31, 2022, primarily driven by higher unit demand for certain brands, including Repatha, Prolia, EVENITY and LUMAKRAS/LUMYKRAS, and by favorable changes to estimated sales deductions, partially offset by declines in the net selling prices of certain products and the negative impact of foreign currency exchange. For the remainder of 2022, we expect that net selling prices will continue to decline at a portfolio level driven by increased competition. In addition, in the first quarter of 2022, ENBREL and Otezla followed the historic pattern of lower first quarter sales relative to the remainder 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.

Throughout the COVID-19 pandemic, we experienced changes in demand for some of our products. The pandemic has interrupted many physician–patient interactions, which has led to delays in diagnoses and treatments, with varying degrees of impact across our portfolio. In general, declines in the sales of our products that were impacted by the dynamics of the pandemic were most significant in the early months of the pandemic, with product demand beginning to show some recovery in late 2020. During 2021, we observed gradual recovery from the COVID-19 pandemic, with patient visits and diagnosis rates that approached pre-pandemic levels early in the fourth quarter. However, late in 2021, Omicron and other variants began to impact the healthcare sector. This led to diminished capacity in the healthcare sector and reduced working days for our own sales force. In March and continuing into April we have seen the impact of Omicron in the U.S. recede, which allowed us to engage in increased field-facing activities. Provider and patient activity has also increased leading to improvements in demand for our products. However, the cumulative decrease in diagnoses over the course of the pandemic has suppressed the volume of new patients starting treatment, which continues to impact our business. Given the unpredictable nature of the pandemic, we expect there could be ongoing intermittent disruptions in physician–patient interactions, and as a result, we may experience quarter-to-quarter variability. In addition, other changes in the healthcare ecosystem have the potential to introduce variability into product sales trends. For example, changes in U.S. employment have led to changes to the insured population. Growth in numbers of Medicaid enrollees and uninsured individuals may have a negative impact on product demand and sales. Overall, uncertainty remains around the timing and magnitude of our sales during the COVID-19 pandemic. See Part I, Item 1A. Risk Factors of our Annual Report on Form 10-K for the year ended December 31, 2021.

Other revenues increased for the three months ended March 31, 2022, primarily driven by the sale of COVID-19 antibody material.

Operating expenses decreased for the three months ended March 31, 2022, primarily driven by lower SG&A expense and expenses associated with cost-saving initiatives that occurred in the three months ended March 31, 2021, partially offset by higher cost of sales. Our operating expenses are expected to be higher in the remaining quarters of the year as we continue to invest in innovation and long-term growth.

Although changes in foreign currency exchange rates result in increases or decreases in our reported international product sales, the benefit or detriment that such movements have on our international product sales is partially offset by corresponding increases or decreases in our international operating expenses and our related foreign currency hedging activities. Our hedging activities seek to offset the impacts, both positive and negative, that foreign currency exchange rate changes may have on our net income by hedging our net foreign currency exposure, primarily with respect to product sales denominated in euros. The net impact from changes in foreign currency exchange rates was not material for the three months ended March 31, 2022 and 2021.

Results of operations

Product sales

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

	Three months ended March 31,		
	2022	2021	Change
ENBREL	$ 862	$ 924	(7)%
Prolia	852	758	12 %
XGEVA	502	468	7 %
Otezla	451	476	(5)%
Aranesp	358	355	1 %
Neulasta	348	482	(28)%
Repatha	329	286	15 %
KYPROLIS	287	251	14 %
Nplate	266	227	17 %
Other products	1,476	1,365	8 %
Total product sales	$ 5,731	$ 5,592	2 %

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, 2021: (i) Item 1. Business—Marketing, Distribution and Selected Marketed Products, (ii) Item 1A. Risk Factors and (iii) Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Overview, and Results of Operations—Product Sales.

ENBREL

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

	Three months ended March 31,		
	2022	2021	Change
ENBREL — U.S.	$ 843	$ 894	(6)%
ENBREL — Canada	19	30	(37)%
Total ENBREL	$ 862	$ 924	(7)%

The decrease in ENBREL sales for the three months ended March 31, 2022, was driven by declines in net selling price and unfavorable changes in inventory.

Prolia

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

	Three months ended March 31,		
	2022	2021	Change
Prolia — U.S.	$ 582	$ 501	16 %
Prolia — ROW	270	257	5 %
Total Prolia	$ 852	$ 758	12 %

The increase in global Prolia sales for the three months ended March 31, 2022, was driven by higher unit demand and net selling price.

XGEVA

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

	Three months ended March 31,		
	2022	2021	Change
XGEVA — U.S.	$ 368	$ 334	10 %
XGEVA — ROW	134	134	— %
Total XGEVA	$ 502	$ 468	7 %

The increase in global XGEVA sales for the three months ended March 31, 2022, was driven by favorable changes to estimated sales deductions and higher net selling price partially offset by lower unit demand.

Otezla

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

	Three months ended March 31,		
	2022	2021	Change
Otezla — U.S.	$ 350	$ 366	(4)%
Otezla — ROW	101	110	(8)%
Total Otezla	$ 451	$ 476	(5)%

The decrease in global Otezla sales for the three months ended March 31, 2022, was primarily driven by lower net selling price and unfavorable changes in inventory, partially offset by higher unit demand.

For a discussion of litigation related to Otezla, see Part IV—Note 19, Contingencies and commitments, to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2021.

Aranesp

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

	Three months ended March 31,		
	2022	2021	Change
Aranesp — U.S.	$ 137	$ 125	10 %
Aranesp — ROW	221	230	(4)%
Total Aranesp	$ 358	$ 355	1 %

The increase in global Aranesp sales for the three months ended March 31, 2022, was driven by favorable changes to estimated sales deductions, partially offset by lower net selling price due to competition.

Aranesp continues to face competition from a long-acting ESA and also faces competition from biosimilar versions of EPOGEN, which will continue to impact sales in the future.

Neulasta

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

	Three months ended March 31,		
	2022	2021	Change
Neulasta — U.S.	$ 304	$ 421	(28)%
Neulasta — ROW	44	61	(28)%
Total Neulasta	$ 348	$ 482	(28)%

The decrease in global Neulasta sales for the three months ended March 31, 2022, was driven by net selling price and unit demand. Increased competition as a result of biosimilar versions of Neulasta has had and will continue to have a significant adverse impact on brand sales, including accelerating net price erosion and lower unit demand. We also expect other biosimilar versions, including biosimilars that will use an on-body injector that would compete with our Onpro injector, to be approved in the future.

For a discussion of ongoing patent litigations related to biosimilars, see Part IV—Note 19, Contingencies and commitments, to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2021 and Note 13, Contingencies and commitments, to the condensed consolidated financial statements.

Repatha

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

	Three months ended March 31,		
	2022	2021	Change
Repatha — U.S.	$ 165	$ 139	19 %
Repatha — ROW	164	147	12 %
Total Repatha	$ 329	$ 286	15 %

The increase in global Repatha sales for the three months ended March 31, 2022, was driven by higher unit demand, partially offset by lower net selling price. Contracting changes to improve Medicare Part D and commercial patient access resulted in the decrease to net selling price.

For a discussion of ongoing litigation related to Repatha, see Part IV—Note 19, Contingencies and commitments, to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2021 and Note 13, Contingencies and commitments, to the condensed consolidated financial statements.

KYPROLIS

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

	Three months ended March 31,		
	2022	2021	Change
KYPROLIS — U.S.	$ 196	$ 159	23 %
KYPROLIS — ROW	91	92	(1)%
Total KYPROLIS	$ 287	$ 251	14 %

The increase in global KYPROLIS sales for the three months ended March 31, 2022, was driven by higher unit demand.

The FDA has reported that it has granted tentative or final approval of ANDAs for generic carfilzomib products filed by a number of companies. The date of approval of those ANDAs for generic carfilzomib products is governed by the Hatch–Waxman Act and any applicable settlement agreements between us and certain companies that seek to develop generic carfilzomib products.

Nplate

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

	Three months ended March 31,		
	2022	2021	Change
Nplate — U.S.	$ 156	$ 112	39 %
Nplate — ROW	110	115	(4)%
Total Nplate	$ 266	$ 227	17 %

The increase in global Nplate sales for the three months ended March 31, 2022, was driven by higher unit demand and favorable changes to estimated sales deductions.

Other products

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

	Three months ended March 31,		
	2022	2021	Change
MVASI — U.S.	$ 168	$ 224	(25)%
MVASI — ROW	76	70	9 %
Vectibix — U.S.	85	79	8 %
Vectibix— ROW	116	112	4 %
EVENITY — U.S.	110	57	93 %
EVENITY— ROW	60	50	20 %
BLINCYTO — U.S.	79	65	22 %
BLINCYTO — ROW	59	42	40 %
EPOGEN — U.S.	120	125	(4)%
AMGEVITA — ROW	108	106	2 %
Aimovig — U.S.	98	66	48 %
Aimovig — ROW	3	—	NA
KANJINTI — U.S.	80	130	(38)%
KANJINTI — ROW	16	31	(48)%
Parsabiv — U.S.	57	46	24 %
Parsabiv — ROW	29	33	(12)%
LUMAKRAS — U.S.	48	—	NA
LUMYKRAS — ROW	14	—	NA
NEUPOGEN — U.S.	23	18	28 %
NEUPOGEN — ROW	15	16	(6)%
Sensipar — U.S.	4	—	NA
Sensipar/Mimpara — ROW	16	23	(30)%
Other — U.S.	64	42	52 %
Other — ROW	28	30	(7)%
Total other products	$ 1,476	$ 1,365	8 %
Total U.S. — other products	$ 936	$ 852	10 %
Total ROW — other products	540	513	5 %
Total other products	$ 1,476	$ 1,365	8 %

NA - not applicable

Operating expenses

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

	Three months ended March 31,		
	2022	2021	Change
Operating expenses:			
Cost of sales	$ 1,561	$ 1,490	5 %
% of product sales	27.2 %	26.6 %	
% of total revenues	25.0 %	25.2 %	
Research and development	$ 959	$ 967	(1)%
% of product sales	16.7 %	17.3 %	
% of total revenues	15.4 %	16.4 %	
Selling, general and administrative	$ 1,228	$ 1,254	(2)%
% of product sales	21.4 %	22.4 %	
% of total revenues	19.7 %	21.3 %	
Other	$ (10)	$ 61	*
Total operating expenses	$ 3,738	$ 3,772	(1)%

* - Change in excess of 100%

Cost of sales

Cost of sales decreased to 25.0% of total revenues for the three months ended March 31, 2022, primarily driven by the COVID-19 antibody profit share agreement and lower amortization expense from acquisition-related assets, partially offset by higher manufacturing costs and increased royalties and profit share.

Research and development

The decrease in R&D expense for the three months ended March 31, 2022, was driven by lower marketed product support and research and early pipeline spend, which included a business development acquisition in the three months ended March 31, 2021, partially offset by higher late-stage development program spend.

Selling, general and administrative

The decrease in SG&A expense for the three months ended March 31, 2022, was primarily driven by lower spend in general and administrative activities.

Other

Other operating expenses for the three months ended March 31, 2022, consisted primarily of an IPR&D asset adjustment. Other operating expenses for the three months ended March 31, 2021, consisted primarily of expenses related to cost savings initiatives.

Nonoperating expense/income and income taxes

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

	Three months ended March 31,	
	2022	2021
Interest expense, net	$ (295)	$ (285)
Other (expense) income, net	$ (530)	$ 13
Provision for income taxes	$ 199	$ 211
Effective tax rate	11.9 %	11.4 %

Interest expense, net

The increase in Interest expense, net, for the three months ended March 31, 2022, was primarily due to higher overall debt outstanding and higher LIBOR rates in the current year period on debt for which we effectively pay a variable rate of interest through the use of interest rate swaps.

Other (expense) income, net

The decrease in Other (expense) income, net, for the three months ended March 31, 2022, was primarily due to net losses recognized on our strategic equity investments in the current year compared with net gains recognized in the prior year.

Income taxes

The increase in our effective tax rate for the three months ended March 31, 2022, was primarily due to current year net unfavorable items compared to last year, offset by changes in earnings mix.

The Administration proposed and Congress is considering significant changes to existing tax law. These changes, if enacted, could substantially increase taxes we pay to the U.S. government. Further, the OECD recently reached agreement to align countries on a minimum corporate tax rate and an expansion of the taxing rights of market countries. If enacted, this agreement could result in tax increases in both the United States and foreign jurisdictions. The U.S. Treasury recently released final foreign tax credit regulations that eliminate U.S. creditability of the Puerto Rico Excise Tax beginning in 2023, which will increase our U.S. tax liability. The U.S. territory of Puerto Rico is considering changes to its tax system that may minimize or eliminate this impact, but the outcome of such potential changes is uncertain. Changes to existing tax law in the United States, the U.S. territory of Puerto Rico, or other jurisdictions, including the potential changes discussed above, could result in tax increases where we do business and could have a material adverse effect on the results of our operations.

In 2017, we received an RAR and a modified RAR from the IRS for the years 2010, 2011 and 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 2010, 2011 and 2012 that we received in May and July 2021, which seek to increase our U.S. taxable income for 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 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, 2014 and 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, 2011 and 2012. We disagreed with the proposed adjustments and calculations and pursued resolution with the IRS appeals office but were unable to reach resolution. In April 2022, we received a Notice that seeks to increase our U.S. taxable income for 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 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 Notices through the judicial process, and we expect to file a Petition in the U.S. Tax Court to contest the 2013-2015 Notice through the judicial process. We will seek consolidation of the two periods into one case in Tax Court.

We are also currently under examination by the IRS for the years 2016, 2017 and 2018 and by a number of state and foreign tax jurisdictions.

Final resolution of these complex matters is not likely within the next 12 months. We 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.

We are no longer subject to U.S. federal income tax examinations for years ended on or before December 31, 2009.

See Part II, Item 1A, Risk Factors—*The adoption and interpretation of new tax legislation or exposure to additional tax liabilities could affect our profitability,* and Note 4, Income taxes, to the condensed consolidated financial statements for further discussion.

Financial condition, liquidity and capital resources

Selected financial data were as follows (in millions):

	March 31, 2022	December 31, 2021
Cash, cash equivalents and marketable securities	$ 6,544	$ 8,037
Total assets	$ 59,196	$ 61,165
Current portion of long-term debt	$ 844	$ 87
Long-term debt	$ 36,010	$ 33,222
Stockholders' equity	$ 916	$ 6,700

Cash, cash equivalents and marketable securities

Our balance of cash, cash equivalents and marketable securities was $6.5 billion at March 31, 2022. 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 strategic transactions (including those that expand our portfolio of products in areas of therapeutic interest), payment of dividends, stock repurchases and repayment of debt.

We intend to continue to invest in our business while returning capital to stockholders through the payment of cash dividends and stock repurchases, thereby reflecting our confidence in the future cash flows of our business and our desire to optimize our cost of capital. 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, availability of financing on acceptable terms, debt service requirements, our credit rating, 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 2021, the Board of Directors declared a quarterly cash dividend of $1.94 per share of common stock for the first quarter of 2022, an increase of 10% for this period, which was paid on March 8, 2022. In March 2022, the Board of Directors declared a quarterly cash dividend of $1.94 per share of common stock, which will be paid on June 8, 2022.

We also returned capital to stockholders through our stock repurchase program. During the three months ended March 31, 2022, we executed trades to repurchase $5.4 billion of common stock, including $5.1 billion of an initial purchase under the ASR agreements described below. As of March 31, 2022, $4.6 billion of authorization remained available under our stock repurchase program.

In February 2022, we entered into ASR agreements under which we paid an aggregate amount of $6.0 billion to the Dealers and retired an initial 23.3 million shares of common stock. Approximately $0.9 billion of stock remains to be delivered by the Dealers pending final settlement, which will be based on the daily volume-weighted average stock price of our common stock during the terms of the ASR agreements, less a discount and subject to adjustments pursuant to the terms and conditions of the ASR agreements. At settlement, which is scheduled to occur in the third quarter of 2022, the Dealers may be required to deliver additional shares of common stock to us, or under certain circumstances, we may be required to deliver shares of common stock or to make a cash payment, at our election, to the Dealers.

As a result of stock repurchases and quarterly dividend payments, we have an accumulated deficit as of March 31, 2022 and December 31, 2021. Our accumulated deficit is not anticipated to affect our future ability to operate, repurchase stock, pay dividends or repay our debt given our continuing profitability and strong financial position.

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, our plans to 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, 2021, 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 includes 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 EBITDA) to (ii) Consolidated Interest Expense, each as defined and described in the credit agreement. We were in compliance with all applicable covenants under these arrangements as of March 31, 2022.

Cash flows

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

	Three months ended March 31,	
	2022	2021
Net cash provided by operating activities	$ 2,164	$ 2,104
Net cash used in investing activities	$ (111)	$ (319)
Net cash used in financing activities	$ (3,514)	$ (1,939)

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, 2022, increased primarily due to higher net income, after adjustments for noncash items, partially offset by the impact of working capital items.

Investing

Cash used in investing activities during the three months ended March 31, 2022, was primarily due to $190 million of capital expenditures, partially offset by proceeds from sales of property, plant and equipment. Cash used in investing activities during the three months ended March 31, 2021, was primarily due to cash outflows related to capital expenditures of $166 million and net activity related to marketable securities of $74 million. We currently estimate 2022 spending on capital projects to be approximately $950 million.

Financing

Cash used in financing activities during the three months ended March 31, 2022, was primarily due to payments to repurchase our common stock of $6.4 billion, including amounts paid under the ASR agreements discussed above, and the payment of dividends of $1.1 billion, partially offset by proceeds from the issuance of debt of $4.0 billion. Cash used in financing activities during the three months ended March 31, 2021, was primarily due to the payment of dividends of $1.0 billion and payments to repurchase our common stock of $871 million. 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, 2021.

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, 2021, and is incorporated herein by reference. There were no material changes during the three months ended March 31, 2022, 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, 2021.

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, 2022.

Management determined that as of March 31, 2022, 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 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, 2022, for discussions that are limited to certain recent developments concerning our legal proceedings. Those discussions should be read in conjunction with Note 19, Contingencies and commitments, to the consolidated financial statements in Part IV of our Annual Report on Form 10-K for the year ended December 31, 2021.

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, 2021, provide additional disclosure for these supplemental risks, as well as other risks to our Company, and are incorporated herein by reference.

RISKS RELATED TO ECONOMIC CONDITIONS AND OPERATING A GLOBAL BUSINESS, INCLUDING DURING THE COVID-19 PANDEMIC

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 licensing 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. Further, in the first quarter of 2022, the Asia Pacific region has also experienced a surge of COVID-19 infections, resulting in the activation of strict containment measures in certain countries in that region. 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 our Annual Report on Form 10-K for the year ended December 31, 2021, Part I, Item 1A. Risk Factors—*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. Our applications to the HGRAC seeking approval to conduct clinical trials in China are delayed pending further guidance from HGRAC. Additionally, on March 25, 2022, BeiGene disclosed in a SEC filing its engagement of a U.S.-based independent registered public accounting firm for the fiscal year ending December 31, 2022 in response to the requirement that foreign companies provide access to their audit information to U.S. authorities. 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.

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. This conflict may also precipitate or amplify the other risks described herein and in our Annual Report on Form 10-K for the year ended December 31, 2021, Part I, Item 1A. Risk Factors, 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. In addition, we have a number of financial instruments referencing the LIBOR. On July 27, 2017, the U.K. Financial Conduct Authority, which regulates LIBOR, announced that it will no longer require banks to submit rates for the calculation of LIBOR to the LIBOR administrator after 2021, and it is anticipated that LIBOR will be completely phased out and replaced by 2023. In March 2020 and in January 2021, the FASB issued a new accounting standard to ease the financial burdens of the expected market transition from LIBOR and other interbank offered rates to alternative reference rates. While it appears likely that Secured Overnight Financing Rate (SOFR) will be the replacement reference rate adopted in the market, the specific mechanisms to replace LIBOR in our existing LIBOR-linked financial instruments have not been finalized. As such, the replacement of LIBOR could have an adverse effect on the market for, or value of, our LIBOR-linked financial instruments. See Part IV —Note 1, Summary of significant accounting policies—Recent accounting pronouncements. We are also subject to the economic and political uncertainties stemming from the United Kingdom's exit from the EU, commonly referred to as "Brexit," which occurred on January 31, 2020. While our manufacturing and packaging activities take place largely outside the United Kingdom, minimizing the need to make costly and significant changes to those operations, we have nevertheless been working to put in place contingency plans to attempt to mitigate the effects of Brexit on us. 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.

RISKS RELATED TO GOVERNMENT REGULATIONS AND THIRD-PARTY POLICIES

The adoption and interpretation of new tax legislation or exposure to additional tax liabilities could affect our profitability.

We are subject to income and other taxes in the United States and other jurisdictions in which we do business. As a result, our provision for income taxes is derived from a combination of applicable tax rates in the various places we operate. Significant judgment is required for determining our provision for income tax.

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, and such tax authorities (including the IRS) are becoming more aggressive in their audits and are particularly focused on such matters. In 2017, we received an RAR and a modified RAR from the IRS for the years 2010, 2011 and 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 administrative 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 Notices for 2010, 2011 and 2012 that we received in May and July 2021 which seek to increase our U.S. taxable income for 2010-2012.

In 2020, we received an RAR and a modified RAR from the IRS for the years 2013, 2014 and 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, 2011 and 2012. We disagreed with the proposed adjustments and calculations and pursued resolution with the IRS appeals office but were unable to reach resolution. In April 2022, we received a Notice that seeks to increase our U.S. taxable income for 2013-2015 and asserts penalties.

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 Notices through the judicial process, and we expect to file a Petition in the U.S. Tax Court to contest the 2013-2015 Notice through the judicial process. We will seek consolidation of the two periods into one case in Tax Court.

We are also currently under examination by the IRS for the years 2016, 2017 and 2018 and 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 effect on the results of our operations.

See Part I, Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations, Income Taxes; Part I—Note 4, Income taxes, to the Condensed Consolidated Financial Statements.

Our provision for income taxes and results of operations in the future could be adversely affected by changes to our operating structure, changes in the mix of income and expenses in countries with differing tax rates, changes in the valuation of deferred tax assets and liabilities and changes in applicable tax laws, regulations or administrative interpretations thereof. The Tax Cuts and Jobs Act (the 2017 Tax Act) is complex and a large volume of regulations and guidance has been issued and could be subject to different interpretations. We could face audit challenges to our application of the 2017 Tax Act. The Administration proposed and Congress is considering significant changes to existing tax law. These changes, if enacted, could substantially increase taxes we pay to the U.S. government. Further, the OECD recently reached agreement to align countries on a minimum corporate tax rate and an expansion of the taxing rights of market countries. If enacted, this agreement could result in tax increases in both the United States and foreign jurisdictions.

The U.S. Treasury recently released final foreign tax credit regulations that eliminate U.S. creditability of the Puerto Rico Excise Tax beginning 2023, which will increase our U.S. tax liability. The U.S. territory of Puerto Rico is considering changes to its tax system that may minimize or eliminate this impact, but the outcome of such potential changes is uncertain. Changes to existing tax law in the United States, the U.S. territory of Puerto Rico, or other jurisdictions, including the potential changes discussed above, could result in tax increases where we do business and could have a material adverse effect on the results of our operations.

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

During the three months ended March 31, 2022, we had one outstanding stock repurchase program, under which the repurchase activity was as follows:

Period	Total number of shares purchased	Average price paid per share [1]	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	1,083,500	227.99	1,083,500	10,642,348,215
February 1 - 28				
Other repurchases	280,000	225.30	280,000	10,579,263,848
Accelerated stock repurchases[2]	23,258,997		23,258,997	4,579,263,848
March 1 - 31	—		—	4,579,263,848
Total	24,622,497		24,622,497	

[1] Average price paid per share includes related expenses.

[2] As part of the stock repurchase program, the Company entered into ASR agreements with three third-party financial institutions (Dealers) in February 2022. Under the ASR agreements, the Company made payments in an aggregate amount of $6.0 billion to the Dealers and received and retired an initial 23,258,997 shares of common stock. Approximately $0.9 billion of shares of the Company's common stock remains to be delivered by the Dealers pending final settlement. The final number of shares to be repurchased by the Company will be based on the daily volume-weighted average stock price of the Company's common stock during the terms of the ASR agreements, less a discount and subject to adjustments pursuant to the terms and conditions of the ASR agreements. At settlement, which is scheduled to occur in the third quarter of 2022, the Dealers may be required to deliver additional shares of common stock to the Company, or under certain circumstances, the Company may be required to deliver shares of common stock or to make a cash payment, at its election, to the Dealers.

Item 6. EXHIBITS

Reference is made to the Index to Exhibits included herein.

INDEX TO EXHIBITS

Exhibit No.	Description
2.1	Asset Purchase Agreement, dated August 25, 2019, by and between Amgen Inc. and Celgene Corporation. (Filed as an exhibit to Form 8-K on August 26, 2019 and incorporated herein by reference.)
2.2	Amendment No. 1 to the Asset Purchase Agreement, dated October 17, 2019, by and between Amgen Inc. and Celgene Corporation. (Filed as an exhibit to Form 8-K on October 17, 2019 and incorporated herein by reference.)
2.3	Amendment No. 2 to the Asset Purchase Agreement, dated October 17, 2019, by and between Amgen Inc. and Celgene Corporation. (Filed as an exhibit to Form 10-K for the year ended December 31, 2019 on February 12, 2020 and incorporated herein by reference.)
2.4	Letter Agreement, dated November 21, 2019, by and between Amgen Inc. and the parties named therein re: Treatment of Certain Product Inventory in connection with Amgen's acquisition of Otezla. (Filed as an exhibit to Form 10-K for the year ended December 31, 2019 on February 12, 2020 and incorporated herein by reference.)
2.5	Irrevocable Guarantee, dated August 25, 2019, by and between Amgen Inc. and Bristol-Myers Squibb Company. (Filed as an exhibit to Form 8-K on August 26, 2019 and incorporated herein by reference.)
2.6	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.)
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.)

Exhibit No.	Description
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 Notes due 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 2042. (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 due 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 due 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 2043. (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 Notes due 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 Trustee. (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 2024. (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 2025 and 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 Notes due 2026. (Filed as an exhibit on Form 8-K on February 26, 2016 and incorporated herein by reference.)
4.23	Form of Permanent Global Certificate for the Company's 0.410% bonds due 2023. (Filed as an exhibit on Form 8-K on March 8, 2016 and incorporated herein by reference.)
4.24	Terms of the Bonds for the Company's 0.410% bonds due 2023. (Filed as an exhibit on Form 8-K on March 8, 2016 and incorporated herein by reference.)
4.25	Officer's Certificate of Amgen Inc., dated as of June 14, 2016, including forms of the Company's 4.563% Senior Notes due 2048 and 4.663% Senior Notes due 2051. (Filed as an exhibit to Form 8-K on June 14, 2016 and incorporated herein by reference.)
4.26	Officer's Certificate of Amgen Inc., dated as of August 19, 2016, including forms of the Company's 2.250% Senior Notes due 2023 and 2.600% Senior Notes due 2026. (Filed as an exhibit to Form 8-K on August 19, 2016 and incorporated herein by reference.)
4.27	Officer's Certificate of Amgen Inc., dated as of November 2, 2017, including in the form of the Company's 3.200% Senior Notes due 2027. (Filed as an exhibit to Form 8-K on November 2, 2017 and incorporated herein by reference.)
4.28	Officer's Certificate of Amgen Inc., dated as of February 21, 2020, including forms of the Company's 1.900% Senior Notes due 2025, 2.200% Senior Notes due 2027, 2.450% Senior Notes due 2030, 3.150% Senior Notes due 2040 and 3.375% Senior Notes due 2050. (Filed as an exhibit to Form 8-K on February 21, 2020 and incorporated herein by reference.)
4.29	Officer's Certificate of Amgen Inc., dated as of May 6, 2020, including form of the Company's 2.300% Senior Notes due 2031. (Filed as an exhibit to Form 8-K on May 6, 2020 and incorporated herein by reference.)

Exhibit No.	Description
4.30	Officer's Certificate of Amgen Inc., dated as of August 17, 2020, including forms of the Company's 2.770% Senior Notes due 2053. (Filed as an exhibit to Form 8-K on August 18, 2020 and incorporated herein by reference.)
4.31	Registration Rights Agreement, dated as of August 17, 2020, by and among Amgen Inc., BofA Securities, Inc. and J.P. Morgan Securities LLC, as lead dealer managers, and BNP Paribas Securities Corp., Deutsche Bank Securities Inc., RBC Capital Markets, LLC, Blaylock Van, LLC and Siebert Williams Shank & Co., LLC, as co-dealer managers. (Filed as an exhibit to Form 8-K on August 18, 2020 and incorporated herein by reference.)
4.32	Officer's Certificate of Amgen Inc., dated as of August 9, 2021, including forms of the Company's 1.650% Senior Notes due 2028, 2.000% Senior Notes due 2032, 2.800% Senior Notes due 2041 and 3.000% Senior Notes due 2052. (Filed as an exhibit to Form 8-K on August 9, 2021 and incorporated herein by reference.)
4.33	Officer's Certificate of Amgen Inc., dated as of February 22, 2022, including forms of the Company's 3.000% Senior Notes due 2029, 3.350% Senior Notes due 2032, 4.200% Senior Notes due 2052 and 4.400% Senior Notes due 2062. (Filed as an exhibit to Form 8-K on February 22, 2022 and incorporated herein by reference.)
10.1+	Amgen Inc. Amended and Restated 2009 Equity Incentive Plan. (Filed as Appendix C to the Definitive Proxy Statement on Schedule 14A on April 8, 2013 and incorporated herein by reference.)
10.2+	First Amendment to Amgen Inc. Amended and Restated 2009 Equity Incentive Plan, effective March 4, 2015. (Filed as an exhibit to Form 10-Q for the quarter ended March 31, 2015 on April 27, 2015 and incorporated herein by reference.)
10.3+	Second Amendment to Amgen Inc. Amended and Restated 2009 Equity Incentive Plan, effective March 2, 2016. (Filed as an exhibit to Form 10-Q for the quarter ended March 31, 2016 on May 2, 2016 and incorporated herein by reference.)
10.4+	Form of Grant of Stock Option Agreement for the Amgen Inc. Amended and Restated 2009 Equity Incentive Plan. (As Amended and Restated on December 2, 2021.) (Filed as an exhibit to Form 10-K for the year ended December 31, 2021 on February 16, 2022 and incorporated herein by reference.)
10.5+	Form of Restricted Stock Unit Agreement for the Amgen Inc. Amended and Restated 2009 Equity Incentive Plan. (As Amended and Restated on December 2, 2021.) (Filed as an exhibit to Form 10-K for the year ended December 31, 2021 on February 16, 2022 and incorporated herein by reference.)
10.6+	Amgen Inc. 2009 Performance Award Program. (As Amended on December 12, 2017.) (Filed as an exhibit to Form 10-K for the year ended December 31, 2017 on February 13, 2018 and incorporated herein by reference.)
10.7+	Form of Performance Unit Agreement for the Amgen Inc. 2009 Performance Award Program. (As Amended and Restated on December 2, 2021.) (Filed as an exhibit to Form 10-K for the year ended December 31, 2021 on February 16, 2022 and incorporated herein by reference.)
10.8+	Amgen Inc. 2009 Director Equity Incentive Program. (As Amended and Restated on October 21, 2020.) (Filed as an exhibit to Form 10-K for the year ended December 31, 2020 on February 9, 2021 and incorporated herein by reference.)
10.9+	Form of Grant of Non-Qualified Stock Option Agreement for the Amgen Inc. 2009 Director Equity Incentive Program. (Filed as an exhibit to Form 8-K on May 8, 2009 and incorporated herein by reference.)
10.10+	Form of Restricted Stock Unit Agreement for the Amgen Inc. 2009 Director Equity Incentive Program. (As Amended on December 11, 2019.) (Filed as an exhibit to Form 10-K for the year ended December 31, 2019 on February 12, 2020 and incorporated herein by reference.)
10.11+	Form of Cash-Settled Restricted Stock Unit Agreement for the Amgen 2009 Director Equity Incentive Program. (As Amended on December 11, 2019.) (Filed as an exhibit to Form 10-K for the year ended December 31, 2019 on February 12, 2020 and incorporated herein by reference.)
10.12+	Amgen Inc. Supplemental Retirement Plan. (As Amended and Restated effective October 16, 2013.) (Filed as an exhibit to Form 10-K for the year ended December 31, 2013 on February 24, 2014 and incorporated herein by reference.)
10.13+	First Amendment to the Amgen Inc. Supplemental Retirement Plan, effective October 14, 2016. (Filed as an exhibit to Form 10-Q for the quarter ended September 30, 2016 on October 28, 2016 and incorporated herein by reference.)

Exhibit No.	Description
10.14+	Second Amendment to the Amgen Inc. Supplemental Retirement Plan, effective October 23, 2019). (Filed as an exhibit to Form 10-K for the year ended December 31, 2019 on February 12, 2020 and incorporated herein by reference.)
10.15+	Third Amendment to the Amgen Inc. Supplemental Retirement Plan, effective October 20, 2021. (Filed as an exhibit to Form 10-K for the year ended December 31, 2021 on February 16, 2022 and incorporated herein by reference.)
10.16+	Amended and Restated Amgen Change of Control Severance Plan. (As Amended and Restated effective December 9, 2010 and subsequently amended effective March 2, 2011.) (Filed as an exhibit to Form 10-Q for the quarter ended March 31, 2011 on May 10, 2011 and incorporated herein by reference.)
10.17+*	Amgen Inc. Executive Incentive Plan. (As Amended and Restated effective January 1, 2022.)
10.18+	Amgen Nonqualified Deferred Compensation Plan. (As Amended and Restated effective October 16, 2013.) (Filed as an exhibit to Form 10-K for the year ended December 31, 2013 on February 24, 2014 and incorporated herein by reference.)
10.19+	First Amendment to the Amgen Nonqualified Deferred Compensation Plan, effective October 14, 2016. (Filed as an exhibit to Form 10-Q for the quarter ended September 30, 2016 on October 28, 2016 and incorporated herein by reference.)
10.20+	Second Amendment to the Amgen Nonqualified Deferred Compensation Plan, effective January 1, 2020. (Filed as an exhibit to Form 10-K for the year ended December 31, 2019 on February 12, 2020 and incorporated herein by reference.)
10.21+	Third Amendment to the Amgen Nonqualified Deferred Compensation Plan, effective January 1, 2022. (Filed as an exhibit to Form 10-K for the year ended December 31, 2021 on February 16, 2022 and incorporated herein by reference.)
10.22+	Agreement between Amgen Inc. and Peter Griffith, dated October 18, 2019. (Filed as an exhibit to Form 10-Q for the quarter ended March 31, 2020 on May 1, 2020 and incorporated herein by reference.)
10.23+	Aircraft Time Sharing Agreement, dated December 3, 2021, by and between Amgen Inc. and Robert A. Bradway. (Filed as an exhibit to Form 10-K for the year ended December 31, 2021 on February 16, 2022 and incorporated herein by reference.)
10.24	Second Amended and Restated Credit Agreement, dated December 12, 2019, among Amgen Inc., the Banks therein named, Citibank, N.A., as administrative agent, and JPMorgan Chase Bank, N.A., as syndication agent. (Filed as an exhibit to Form 8-K on December 12, 2019 and incorporated herein by reference.)
10.25	Collaboration and License Agreement between Amgen Inc. and Celltech R&D Limited dated May 10, 2002 (portions of the exhibit have been omitted pursuant to a request for confidential treatment) and Amendment No. 1, effective June 9, 2003, to Collaboration and License Agreement between Amgen Inc. and Celltech R&D Limited (portions of the exhibit have been omitted pursuant to a request for confidential treatment). (Filed as an exhibit to Form 10-K/A for the year ended December 31, 2012 on July 31, 2013 and incorporated herein by reference.)
10.26	Amendment No. 2 to Collaboration and License Agreement, effective November 14, 2016, between Amgen Inc. and Celltech R&D Limited (portions of the exhibit have been omitted pursuant to a request for confidential treatment). (Filed as an exhibit to Form 10-K for the year ended December 31, 2016 on February 14, 2017 and incorporated herein by reference.)
10.27	Letter Agreement, dated June 25, 2019, by and between Amgen Inc. and UCB Celltech (portions of the exhibit have been omitted because they are both (i) not material and (ii) would be competitively harmful if publicly disclosed). (Filed as an exhibit to Form 10-Q for the quarter ended June 30, 2019 on July 31, 2019 and incorporated herein by reference.)
10.28	Collaboration Agreement, dated April 22, 1994, by and between Bayer Corporation (formerly Miles, Inc.) and Onyx Pharmaceuticals, Inc. (Filed as an exhibit to Form 10-Q for the quarter ended March 31, 2011 by Onyx Pharmaceuticals, Inc. on May 10, 2011 and incorporated herein by reference.)
10.29	Amendment to Collaboration Agreement, dated April 24, 1996, by and between Bayer Corporation and Onyx Pharmaceuticals, Inc. (Filed as an exhibit to Form 10-Q for the quarter ended March 31, 2006 by Onyx Pharmaceuticals, Inc. on May 10, 2006 and incorporated herein by reference.)

Exhibit No.	Description
10.30	Amendment to Collaboration Agreement, dated February 1, 1999, by and between Bayer Corporation and Onyx Pharmaceuticals, Inc. (Filed as an exhibit to Form 10-Q for the quarter ended March 31, 2006 by Onyx Pharmaceuticals, Inc. on May 10, 2006 and incorporated herein by reference.)
10.31	Settlement Agreement and Release, dated October 11, 2011, by and between Bayer Corporation, Bayer AG, Bayer HealthCare LLC and Bayer Pharma AG and Onyx Pharmaceuticals, Inc. (Filed as an exhibit to Form 10-K for the year ended December 31, 2011 by Onyx Pharmaceuticals, Inc. on February 27, 2012 and incorporated herein by reference.)
10.32	Fourth Amendment to Collaboration Agreement, dated October 11, 2011, by and between Bayer Corporation and Onyx Pharmaceuticals, Inc. (Filed as an exhibit to Form 10-K for the year ended December 31, 2011 by Onyx Pharmaceuticals, Inc. on February 27, 2012 and incorporated herein by reference.)
10.33	Side Letter Regarding Collaboration Agreement, dated May 29, 2015, by and between Bayer HealthCare LLC and Onyx Pharmaceuticals, Inc. (Filed as an exhibit to Form 10-Q for the quarter ended June 30, 2015 on August 5, 2015 and incorporated herein by reference.)
10.34	Side Letter Regarding Collaboration Agreement and Stivarga Agreement, dated February 13, 2020, by and between Onyx Pharmaceuticals, Inc. and Bayer HealthCare LLC. (Filed as an exhibit to Form 10-Q for the quarter ended March 31, 2020 on May 1, 2020 and incorporated herein by reference.)
10.35	Sourcing and Supply Agreement, dated January 6, 2017, by and between Amgen USA Inc., a wholly owned subsidiary of Amgen Inc., and DaVita Inc. (portions of the exhibit have been omitted pursuant to a request for confidential treatment). (Filed as an exhibit to Form 10-Q for the quarter ended March 31, 2017 on April 27, 2017 and incorporated herein by reference.)
10.36	Exclusive License and Collaboration Agreement, dated August 28, 2015, by and between Amgen Inc. and Novartis Pharma AG (portions of the exhibit have been omitted pursuant to a request for confidential treatment). (Filed as an exhibit to Form 10-Q for the quarter ended June 30, 2017 on July 26, 2017 and incorporated herein by reference.)
10.37	Amendment No. 1 to the Exclusive License and Collaboration Agreement, dated April 21, 2017, by and between Amgen Inc. and Novartis Pharma AG (portions of the exhibit have been omitted pursuant to a request for confidential treatment). (Filed as an exhibit to Form 10-Q for the quarter ended June 30, 2017 on July 26, 2017 and incorporated herein by reference.)
10.38	Amendment No. 2 to the Exclusive License and Collaboration Agreement, dated April 21, 2017, by and between Amgen Inc. and Novartis Pharma AG (portions of the exhibit have been omitted pursuant to a request for confidential treatment). (Filed as an exhibit to Form 10-Q for the quarter ended June 30, 2017 on July 26, 2017 and incorporated herein by reference.)
10.39	Amendment No. 3 to the Exclusive License and Collaboration Agreement, dated January 31, 2022, by and between Amgen Inc. and Novartis Pharma AG (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 the Company's Current Report on Form 8-K on January 31, 2022 and incorporated herein by reference.)
10.40	Collaboration Agreement, dated October 31, 2019, by and between Amgen Inc. and BeiGene Switzerland GmbH, a wholly-owned subsidiary of BeiGene, Ltd. (portions of the exhibit have been omitted because they are both (i) not material and (ii) would be competitively harmful if publicly disclosed). (Filed as an exhibit to Form 10-K for the year ended December 31, 2019 on February 12, 2020 and incorporated herein by reference.)
10.41	Guarantee, dated as of October 31, 2019, made by and among BeiGene, Ltd. and Amgen Inc. (Filed as an exhibit to Form 10-K for the year ended December 31, 2019 on February 12, 2020 and incorporated herein by reference.)
10.42	Share Purchase Agreement, dated October 31, 2019, by and between Amgen Inc. and BeiGene, Ltd. (portions of the exhibit have been omitted because they are both (i) not material and (ii) would be competitively harmful if publicly disclosed). (Filed as an exhibit to Schedule 13D on January 8, 2020 and incorporated herein by reference.)
10.43	Amendment No. 1 to Share Purchase Agreement, dated December 6, 2019, by and among BeiGene, Ltd. and Amgen Inc. (Filed as an exhibit to Schedule 13D on January 8, 2020 and incorporated herein by reference.)
10.44	Restated Amendment No. 2 to Share Purchase Agreement, dated September 24, 2020, by and among BeiGene, Ltd. and Amgen Inc. (Filed as an exhibit to Form 10-Q for the quarter ended September 30, 2020 on October 29, 2020 and incorporated herein by reference.)

Exhibit No.	Description
10.45	Collaboration Agreement dated March 30, 2012 by and between Amgen Inc. and AstraZeneca Collaboration Ventures, LLC, a wholly owned subsidiary of AstraZeneca Pharmaceuticals LP (portions of the exhibit have been omitted pursuant to a request for confidential treatment). (Filed as an exhibit to Form 10-Q for the quarter ended March 31, 2012 on May 8, 2012 and incorporated herein by reference.)
10.46	Amendment No. 1 to the Collaboration Agreement, dated October 1, 2014, by and among Amgen Inc., AstraZeneca Collaboration Ventures, LLC and AstraZeneca Pharmaceuticals LP (portions of the exhibit have been omitted pursuant to a request for confidential treatment). (Filed as an exhibit to Form 10-K for the year ended December 31, 2014 on February 19, 2015 and incorporated herein by reference.)
10.47	Amendment Nos. 2 through 6 to the March 30, 2012 Collaboration Agreement between Amgen Inc. and AstraZeneca Collaboration Ventures, LLC, dated May 2 and 27 and October 2, 2016, January 31, 2018, and May 15, 2020, respectively (portions of the exhibit have been omitted because they are both (i) not material and (ii) would be competitively harmful if publicly disclosed.) (Filed as an exhibit to Form 10-Q for the quarter ended June 30, 2020 on July 29, 2020 and incorporated herein by reference.)
10.48	Amendment No. 7 to the Collaboration Agreement, dated December 17, 2020, by and between Amgen Inc. and AstraZeneca Collaboration Ventures, LLC (portions of the exhibit have been omitted because they are both (i) not material and (ii) would be competitively harmful if publicly disclosed.) (Filed as an exhibit to Form 10-K for the year ended December 31, 2020 on February 9, 2021 and incorporated herein by reference.)
10.49	Amendment No. 8 to the Collaboration Agreement, dated November 19, 2021, by and between Amgen Inc. and AstraZeneca Collaboration Ventures, 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-K for the year ended December 31, 2021 on February 16, 2022 and incorporated herein by reference.)
10.50	License and Collaboration Agreement, dated June 1, 2021, by and between Amgen Inc. and Kyowa Kirin Co., Ltd. (portions of the exhibit have been omitted because they are both (i) not material and (ii) would be competitively harmful if publicly disclosed). (Filed as an exhibit to Form 10-Q for the quarter ended June 30, 2021 on August 4, 2021 and incorporated herein by reference.)
10.51	Form of ASR Agreement. (Filed as an exhibit to Form 8-K on February 24, 2022 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 XBRL 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: April 27, 2022

By: /s/ PETER H. GRIFFITH

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

AMGEN INC. EXECUTIVE INCENTIVE PLAN

I. PURPOSE

The purpose of the Amgen Inc. Executive Incentive Plan (the "Plan") is to attract and retain highly qualified individuals to Amgen Inc., and its subsidiary companies (collectively, “Amgen” or the “Company”); to obtain from each the best possible performance; to establish a performance goal based on objective criteria; to further underscore the importance of achieving business objectives for the short and long term; and to include in such individual's compensation package an annual incentive component which is tied directly to the achievement of those objectives.

II. EFFECTIVE DATE; TERM

The Plan was approved by the affirmative vote of a majority of shares of Amgen Inc.'s common stock, $.0001 par value, voting at Amgen Inc.'s 2002 annual meeting of stockholders effective as of January 1, 2003, shall remain in effect until such time as it shall be terminated by the Compensation and Management Development Committee of the Company’s board of directors or any successor thereto (the "Compensation Committee"), was previously amended and restated effective as of January 1, 2009, and is hereby amended and restated, effective as of January 1, 2022.

III. ELIGIBILITY AND PARTICIPATION

Eligibility to participate in the Plan is limited to senior executives of the Company. Participants in the Plan ("Participants") shall be elected annually by the Compensation Committee from those eligible to participate in the Plan.

IV. BUSINESS CRITERIA

The Plan's performance goal shall be based upon Amgen’s consolidated net income for the performance period computed in accordance with accounting principles generally accepted in the U.S. adjusted by certain items ("Non-GAAP Adjustments") net of tax (collectively, “Non-GAAP Net Income”). Non-GAAP Adjustments are approved by the Compensation Committee, as specified in writing at the time the goal is established for the performance period:

No award shall be paid unless there is positive Non-GAAP Net Income for the performance period.

V. PERFORMANCE GOAL

By no later than the 90th day after the commencement of a performance period (provided the performance period is at least one year), the Compensation Committee shall specify the adjustments which shall be included in determining Non-GAAP Net Income for such performance period pursuant to Section IV, shall establish the Plan's performance goal for such performance period based upon Non-GAAP Net Income, and shall adopt targeted awards for Participants for such performance period.

Subject to the foregoing and to the limitations set forth in Section VI, no awards shall be paid to Participants unless and until the Compensation Committee makes a certification in writing with respect to the attainment of the performance goal.

VI. DETERMINATION OF AMOUNTS OF AWARDS

(A) The Compensation Committee may grant an award to a Participant which shall be payable if there is positive Non-GAAP Net Income. The maximum award payable to each of the Chief Executive Officer and President, if each is a Participant for such performance period, shall be 0.25% (twenty-five hundredths of one percent) of Non-GAAP Net Income for such period, the maximum award payable to an Executive Vice President, if each is a Participant for such performance period, shall be 0.15% (fifteen hundredths of one percent) of Non-GAAP Net Income for such period, and the maximum award payable to any other individual Participants shall be 0.10% (one tenth of one percent) of Non-GAAP Net Income for such period. The maximum total awards payable to all Participants shall be 2.0% (two percent) of Non-GAAP Net Income for such period.

(B) The Compensation Committee shall have authority to exercise discretion in determining the amount of the targeted award granted to each Participant at the beginning of a performance period, provided that no such targeted award shall exceed the foregoing maximum award limits, and to exercise discretion to reduce the amount of a targeted award which shall be payable to each Participant at the end of each performance period, subject to the terms, conditions and limits of the Plan and of any other written commitment authorized by the Compensation Committee. The Compensation Committee may at any time establish (and once established, rescind, waive or amend) additional conditions and terms of payment of awards (including but not limited to the achievement of other financial, strategic or individual goals, which may be objective or subjective) as it deems desirable in carrying out the purposes of the Plan and may take into account such other factors as it deems appropriate in administering any aspect of the Plan. However, the Compensation Committee shall have no authority to increase the amount of a targeted award granted to any Participant or to pay an award under the Plan if the performance goal has not been satisfied. In determining the amount of any award to be granted or to be paid to any Participant, the Compensation Committee shall give consideration to the contribution which may be or has been made by the Participant to achievement of Amgen's established objectives and such other matters as it shall deem relevant.

(C) The payment of an award to a Participant with respect to a performance period shall be conditioned upon the Participant's employment by Amgen on the last day of the performance period; provided, however, that in the discretion of the Compensation Committee, awards may be paid to Participants who have retired or whose employment has terminated after the beginning and before the last day of the period for which an award is made, subject to the Participant’s timely execution and non-revocation of a general release and waiver in favor of the Company, its affiliates and related parties in a form provided by the Company. Notwithstanding the foregoing, in the discretion of the Compensation Committee, awards may also be paid to Participants to the designee or estate of a Participant who died after the beginning and before the last day of the period for which an award is made.

(D) If a Participant engaged in misconduct that caused serious financial or reputational damage to Amgen during any performance period, including a previous performance period, the Compensation Committee may determine that an award has not been earned or may consider such conduct when determining the amount of any award. This provision is in no way intended to limit any other action that the Company could take against a Participant (including other disciplinary actions (up to termination), ordinary course performance considerations, disclosure of wrongdoing to the government and pursuit of any other legal claims against such Participant).

VII. FORM OF AWARDS

All awards shall be determined by the Compensation Committee and shall be paid in cash. Before the beginning of each performance period, each Participant may elect that part of the Participant's award for that period will be deferred and distributed at a later date under the Amgen Inc. Nonqualified Deferred Compensation Plan subject to the terms of the Amgen Inc. Nonqualified Deferred Compensation Plan.

VIII. PAYMENT OF AWARDS

Awards shall be paid promptly following the end of the performance period; provided, however, that no awards shall be paid unless and until the Compensation Committee certifies, in writing, that the amounts payable with respect to each award, and all awards in the aggregate, do not exceed the limitations set forth in Section VI and that the amount payable to each Participant does not exceed the amount of the targeted award granted to the Participant at the beginning of the performance period. If the Compensation Committee deems it appropriate or advisable, it may request a report from a nationally recognized public accounting firm stating the amount of Non-GAAP Net Income for such performance period. Notwithstanding the foregoing, awards under this Plan shall in any event be paid no later than the fifteenth day of the third month following the later to occur of (i) the close of the Participant's tax year, or (ii) the close of the Company's tax year, in either case, in which the applicable performance period ends (it being understood that such payment date is intended to comply with the "short-term deferral" exemption from the application of Section 409A of the Internal Revenue Code of 1986, as amended (together with the regulations and other official guidance promulgated thereunder, the "Code")). If, for any reason, any amounts payable under this Plan are nevertheless deemed to constitute "nonqualified deferred compensation" under Code Section 409A for any reason, then, notwithstanding the foregoing, with respect to any such amounts, the specified payment date applicable to such amounts shall be the year immediately following the applicable Plan Year.

IX. SPECIAL AWARDS AND OTHER PLANS

Nothing contained in the Plan shall prohibit Amgen from granting awards or authorizing other compensation to any person under any other plan or authority or limit the authority of Amgen to establish other special awards or incentive compensation plans providing for the payment of incentive compensation to employees (including those employees who are eligible to participate in the Plan).

X. ADMINISTRATION, AMENDMENT AND INTERPRETATION OF THE PLAN

The Compensation Committee shall administer the Plan. The Compensation Committee shall have full power to construe and interpret the Plan, establish and amend rules and regulations for its administration, and perform all other acts relating to the Plan, including the delegation of administrative responsibilities, that it believes reasonable and proper and in conformity with the purposes of the Plan.

The Compensation Committee shall have the right to amend the Plan from time to time or to repeal it entirely or to direct the discontinuance of awards either temporarily or permanently.

Any decision made, or action taken, by the Compensation Committee arising out of or in connection with the interpretation and/or administration of the Plan shall be final, conclusive and binding on all persons affected thereby.

XI. RIGHTS OF PLAN PARTICIPANTS

Neither the Plan, nor the adoption or operation of the Plan, nor any documents describing or referring to the Plan (or any part hereof) shall confer upon any Participant any right to continue in the employ of Amgen or shall interfere with or restrict in any way the rights of Amgen, which are hereby expressly reserved, to discharge any Participant at any time for any reason whatsoever, with or without cause.

No individual to whom an award has been made or any other party shall have any interest in the cash or any other asset of Amgen prior to such amount being paid.

No right or interest of any Participant shall be assignable or transferable, or subject to any claims of any creditor or subject to any lien.

XII. MISCELLANEOUS

Amgen shall deduct all federal, state and local taxes required by law or Amgen policy from any award paid hereunder.

In no event shall Amgen be obligated to pay to any Participant an award for any period by reason of Amgen's payment of an award to such Participant in any other period, or by reason of Amgen's payment of an award to any other Participant or Participants in such period or in any other period. Nothing contained in this Plan shall confer upon any person any claim or right to any payments hereunder. Such payments shall be made at the sole discretion of the Compensation Committee.

The Plan shall be unfunded. Amounts payable under the Plan are not and will not be transferred into a trust or otherwise set aside. Amgen shall not be required to establish any special or separate fund or to make any other segregation of assets to assure the payment of any award under the Plan. Any accounts under the Plan are for bookkeeping purposes only and do not represent a claim against the specific assets of Amgen.

Any provision of the Plan that is prohibited or unenforceable shall be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions of the Plan.

The Plan and the rights and obligations of the parties to the Plan shall be governed by, and construed and interpreted in accordance with, the law of the State of Delaware (without regard to principles of conflicts of law).

Although the Company intends and expects that the Plan and its payments and benefits will not give rise to taxes imposed under Section 409A of the Code, neither the Company, nor its employees, directors, or agents, shall have any obligation to mitigate or to hold any Participant harmless from any or all of such taxes. The Plan is intended to be exempt from Section 409A of the Code, and the Compensation Committee shall have complete discretion to interpret and construe this Plan and any associated documents in any manner that establishes an exemption from or otherwise conforms them to the requirements of Section 409A. If, for any reason including imprecision in drafting, any Plan provision does not accurately reflect its intended establishment of an exemption from or compliance with Section 409A of the Code, as demonstrated by consistent interpretations or other evidence of intent, the provision shall be considered ambiguous and shall be interpreted by the Compensation Committee in a fashion consistent herewith, as determined in the sole and absolute discretion of the Compensation Committee. The Compensation Committee reserves the right to unilaterally amend this Plan without the consent of any Participant in order to accurately reflect its correct interpretation and

operation, as well as to maintain an exemption from or compliance with Section 409A of the Code.

To record the amendment and restatement of the Plan as set forth herein, effective as of the date set forth above, the Company has caused its authorized officer to execute the same this 9th day of March, 2022.

Amgen Inc.

By /s/ Lori A. Johnston

Lori A. Johnston
Executive Vice President,
Human Resources

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.

Date: April 27, 2022

/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.

Date: April 27, 2022

/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, 2022 (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.

Date: April 27, 2022

/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, 2022 (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.

Date: April 27, 2022

/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.