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

FORM 10-Q

(Mark One)

☒ **Quarterly report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the quarterly period ended March 31, 2024

or

☐ **Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the transition period from to

Commission File Number: 001-33500

JAZZ PHARMACEUTICALS PUBLIC LIMITED COMPANY

(Exact name of registrant as specified in its charter)

Ireland	**98-1032470**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

Fifth Floor, Waterloo Exchange,
Waterloo Road, Dublin 4, Ireland D04 E5W7
011-353-1-634-7800
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Ordinary shares, nominal value $0.0001 per share	JAZZ	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 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 25, 2024, 63,039,618 ordinary shares of the registrant, nominal value $0.0001 per share, were outstanding.

JAZZ PHARMACEUTICALS PLC
QUARTERLY REPORT ON FORM 10-Q FOR THE QUARTER ENDED MARCH 31, 2024

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We own or have rights to various copyrights, trademarks, and trade names used in our business in the U.S. and/or other countries, including the following: Jazz Pharmaceuticals®, Xywav® (calcium, magnesium, potassium, and sodium oxybates) oral solution, Xyrem ® (sodium oxybate) oral solution, Epidiolex® (cannabidiol) oral solution, Epidyolex® (the trade name in Europe and other countries outside the U.S. for Epidiolex), Rylaze ® (asparaginase erwinia chrysanthemi (recombinant)-rywn), Enrylaze® (the trade name in Europe and other countries outside the U.S. and Canada for Rylaze), Zepzelca ® (lurbinectedin), Defitelio® (defibrotide sodium), Defitelio® (defibrotide), Vyxeos® (daunorubicin and cytarabine) liposome for injection, Vyxeos ® liposomal 44 mg/100 mg powder for concentrate for solution for infusion, CombiPlex® and Sativex® (nabiximols) oral solution. This Quarterly Report on Form 10-Q also includes trademarks, service marks and trade names of other companies. Trademarks, service marks and trade names appearing in this Quarterly Report on Form 10-Q are the property of their respective owners.

PART I – FINANCIAL INFORMATION

Item 1. Financial Statements

JAZZ PHARMACEUTICALS PLC
CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands)
(Unaudited)

	March 31, 2024	December 31, 2023
ASSETS		
Current assets:		
Cash and cash equivalents	$ 1,443,385	$ 1,506,310
Investments	375,000	120,000
Accounts receivable, net of allowances	707,095	705,794
Inventories	577,321	597,039
Prepaid expenses	122,562	185,476
Other current assets	314,535	320,809
Total current assets	3,539,898	3,435,428
Property, plant and equipment, net	166,236	169,646
Operating lease assets	61,637	65,340
Intangible assets, net	5,235,496	5,418,039
Goodwill	1,739,495	1,753,130
Deferred tax assets, net	507,749	477,834
Deferred financing costs	5,784	6,478
Other non-current assets	70,780	67,464
Total assets	$ 11,327,075	$ 11,393,359
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 80,976	$ 102,750
Accrued liabilities	826,530	793,914
Current portion of long-term debt	605,375	604,954
Income taxes payable	49,325	35,074
Total current liabilities	1,562,206	1,536,692
Long-term debt, less current portion	5,105,111	5,107,988
Operating lease liabilities, less current portion	56,158	59,225
Deferred tax liabilities, net	809,714	847,706
Other non-current liabilities	97,425	104,751
Commitments and contingencies (Note 9)		
Shareholders' equity:		
Ordinary shares	6	6
Non-voting euro deferred shares	55	55
Capital redemption reserve	473	473
Additional paid-in capital	3,714,283	3,699,954
Accumulated other comprehensive loss	(882,394)	(842,147)
Retained earnings	864,038	878,656
Total shareholders' equity	3,696,461	3,736,997
Total liabilities and shareholders' equity	$ 11,327,075	$ 11,393,359

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

JAZZ PHARMACEUTICALS PLC
CONDENSED CONSOLIDATED STATEMENTS OF INCOME (LOSS)
(In thousands, except per share amounts)
(Unaudited)

	Three Months Ended March 31,	
	2024	**2023**
Revenues:		
Product sales, net	$ 842,102	$ 884,219
Royalties and contract revenues	59,881	8,593
Total revenues	901,983	892,812
Operating expenses:		
Cost of product sales (excluding amortization of acquired developed technologies)	95,487	128,644
Selling, general and administrative	351,712	297,917
Research and development	222,847	189,410
Intangible asset amortization	155,730	149,786
Acquired in-process research and development	10,000	1,000
Total operating expenses	835,776	766,757
Income from operations	66,207	126,055
Interest expense, net	(66,116)	(74,147)
Foreign exchange gain (loss)	(1,693)	3,193
Income (loss) before income tax expense (benefit) and equity in loss of investees	(1,602)	55,101
Income tax expense (benefit)	11,669	(15,324)
Equity in loss of investees	1,347	1,005
Net income (loss)	$ (14,618)	$ 69,420
Net income (loss) per ordinary share:		
Basic	$ (0.23)	$ 1.09
Diluted	$ (0.23)	$ 1.04
Weighted-average ordinary shares used in per share calculations - basic	62,537	63,494
Weighted-average ordinary shares used in per share calculations - diluted	62,537	73,771

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

JAZZ PHARMACEUTICALS PLC
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(In thousands)
(Unaudited)

	Three Months Ended March 31,	
	2024	**2023**
Net income (loss)	$ (14,618)	$ 69,420
Other comprehensive income (loss):		
Foreign currency translation adjustments	(44,068)	145,279
Unrealized gain on cash flow hedging activities, net of income tax expense of $ 1,720 and $—, respectively	5,177	—
Gain on cash flow hedging activities reclassified from accumulated other comprehensive income (loss) to interest expense, net of income tax expense of $451 and $—, respectively	(1,356)	—
Other comprehensive income (loss)	(40,247)	145,279
Total comprehensive income (loss)	$ (54,865)	$ 214,699

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

JAZZ PHARMACEUTICALS PLC
CONDENSED CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(In thousands)
(Unaudited)

	Ordinary Shares		Non-voting Euro Deferred		Capital Redemption Reserve	Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Retained Earnings	Total Equity
	Shares	Amount	Shares	Amount					
Balance at December 31, 2023	62,255	$ 6	4,000	$ 55	$ 473	$ 3,699,954	$ (842,147)	$ 878,656	$ 3,736,997
Issuance of ordinary shares in conjunction with exercise of share options	7	—	—	—	—	494	—	—	494
Issuance of ordinary shares in conjunction with vesting of restricted stock units	686	—	—	—	—	—	—	—	—
Issuance of ordinary shares in conjunction with vesting of performance-based restricted stock units	80	—	—	—	—	—	—	—	—
Shares withheld for payment of employee's withholding tax liability	—	—	—	—	—	(49,296)	—	—	(49,296)
Share-based compensation	—	—	—	—	—	63,131	—	—	63,131
Other comprehensive loss	—	—	—	—	—	—	(40,247)	—	(40,247)
Net loss	—	—	—	—	—	—	—	(14,618)	(14,618)
Balance at March 31, 2024	63,028	$ 6	4,000	$ 55	$ 473	$ 3,714,283	$ (882,394)	$ 864,038	$ 3,696,461

	Ordinary Shares		Non-voting Euro Deferred		Capital Redemption Reserve	Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Retained Earnings	Total Equity
	Shares	Amount	Shares	Amount					
Balance at December 31, 2022	63,214	$ 6	4,000	$ 55	$ 472	$ 3,477,124	$ (1,125,509)	$ 733,586	$ 3,085,734
Issuance of ordinary shares in conjunction with exercise of share options	188	—	—	—	—	21,228	—	—	21,228
Issuance of ordinary shares in conjunction with vesting of restricted stock units	585	—	—	—	—	—	—	—	—
Shares withheld for payment of employee's withholding tax liability	—	—	—	—	—	(43,266)	—	—	(43,266)
Share-based compensation	—	—	—	—	—	56,646	—	—	56,646
Other comprehensive income	—	—	—	—	—	—	145,279	—	145,279
Net income	—	—	—	—	—	—	—	69,420	69,420
Balance at March 31, 2023	63,987	$ 6	4,000	$ 55	$ 472	$ 3,511,732	$ (980,230)	$ 803,006	$ 3,335,041

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

JAZZ PHARMACEUTICALS PLC
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)
(Unaudited)

	Three Months Ended March 31,	
	2024	**2023**
Operating activities		
Net income (loss)	$ (14,618)	$ 69,420
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Intangible asset amortization	155,730	149,786
Share-based compensation	61,441	56,352
Acquisition accounting inventory fair value step-up adjustment	28,943	60,458
Acquired in-process research and development	10,000	1,000
Depreciation	7,653	7,574
Provision for losses on accounts receivable and inventory	7,403	2,316
Non-cash interest expense	5,988	4,766
Deferred tax benefit	(66,385)	(66,061)
Other non-cash transactions	14,674	16,773
Changes in assets and liabilities:		
Accounts receivable	(8,443)	28,460
Inventories	(12,844)	(6,266)
Prepaid expenses and other current assets	54,947	42,032
Operating lease assets	3,703	4,508
Other non-current assets	(4,090)	(9,541)
Accounts payable	(19,597)	34,286
Accrued liabilities	34,677	(96,985)
Income taxes payable	14,858	25,413
Deferred revenue	—	(459)
Operating lease liabilities, less current portion	(2,980)	(4,959)
Other non-current liabilities	(3,831)	1,835
Net cash provided by operating activities	267,229	320,708
Investing activities		
Acquisition of investments	(375,000)	—
Acquired in-process research and development	(10,000)	(1,000)
Purchases of property, plant and equipment	(6,904)	(3,822)
Proceeds from maturity of investments	120,000	—
Net cash used in investing activities	(271,904)	(4,822)
Financing activities		
Payment of employee withholding taxes related to share-based awards	(49,296)	(43,266)
Repayments of long-term debt	(7,750)	(7,750)
Proceeds from employee equity incentive and purchase plans	494	21,228
Net cash used in financing activities	(56,552)	(29,788)
Effect of exchange rates on cash and cash equivalents	(1,698)	331
Net increase (decrease) in cash and cash equivalents	(62,925)	286,429
Cash and cash equivalents, at beginning of period	1,506,310	881,482
Cash and cash equivalents, at end of period	$ 1,443,385	$ 1,167,911

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

JAZZ PHARMACEUTICALS PLC
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. The Company and Summary of Significant Accounting Policies

Jazz Pharmaceuticals plc is a global biopharmaceutical company whose purpose is to innovate to transform the lives of patients and their families. We are dedicated to developing life-changing medicines for people with serious diseases - often with limited or no therapeutic options. We have a diverse portfolio of marketed medicines, including leading therapies for sleep disorders and epilepsy, and a growing portfolio of cancer treatments. Our patient-focused and science-driven approach powers pioneering research and development advancements across our robust pipeline of innovative therapeutics in oncology and neuroscience.

Our lead marketed products, listed below, are approved in countries around the world to improve patient care.

Neuroscience

- **Xywav® (calcium, magnesium, potassium, and sodium oxybates) oral solution** , a product approved by the U.S. Food and Drug Administration, or FDA, in July 2020, and launched in the U.S. in November 2020 for the treatment of cataplexy or excessive daytime sleepiness, or EDS, in patients seven years of age and older with narcolepsy, and also approved by FDA in August 2021 for the treatment of idiopathic hypersomnia, or IH, in adults and launched in the U.S. in November 2021. Xywav contains 92% less sodium than Xyrem®. Xywav is also approved in Canada for the treatment of cataplexy in patients with narcolepsy;
- **Xyrem (sodium oxybate) oral solution** , a product approved by FDA and distributed in the U.S. for the treatment of cataplexy or EDS in patients seven years of age or older with narcolepsy; Jazz also markets Xyrem in Canada for the treatment of cataplexy in patients with narcolepsy. Xyrem is also approved and distributed in the European Union, or EU (EU market authorizations include Northern Ireland), Great Britain and other markets through a licensing agreement; and
- **Epidiolex® (cannabidiol) oral solution** , a product approved by FDA and launched in the U.S. in 2018 by GW Pharmaceuticals plc, or GW, and currently indicated for the treatment of seizures associated with Lennox-Gastaut syndrome, or LGS, Dravet syndrome, or DS, or tuberous sclerosis complex, or TSC, in patients one year of age or older; in the EU and Great Britain (where it is marketed as Epidyolex®) and other markets, it is approved for adjunctive treatment of seizures associated with LGS or DS, in conjunction with clobazam (EU and Great Britain only), in patients 2 years of age and older and for adjunctive treatment of seizures associated with TSC in patients 2 years of age and older.

Oncology

- **Rylaze® (asparaginase erwinia chrysanthemi (recombinant)-rywn)** , a product approved by FDA in June 2021 and launched in the U.S. in July 2021 for use as a component of a multi-agent chemotherapeutic regimen for the treatment of acute lymphoblastic leukemia or lymphoblastic lymphoma in adults and pediatric patients aged one month or older who have developed hypersensitivity to *E. coli*-derived asparaginase. In September 2023, the European Commission granted marketing authorization for this therapy under the trade name Enrylaze; and
- **Zepzelca® (lurbinectedin)**, a product approved by FDA in June 2020 under FDA's accelerated approval pathway and launched in the U.S. in July 2020 for the treatment of adult patients with metastatic small cell lung cancer, or SCLC, with disease progression on or after platinum-based chemotherapy; in Canada, Zepzelca received conditional approval in September 2021 for the treatment of adults with Stage III or metastatic SCLC, who have progressed on or after platinum-containing therapy.

Throughout this Quarterly Report on Form 10-Q, unless otherwise indicated or the context otherwise requires, all references to “Jazz Pharmaceuticals,” “the registrant,” "the Company", “we,” “us,” and “our” refer to Jazz Pharmaceuticals plc and its consolidated subsidiaries. Throughout this Quarterly Report on Form 10-Q, all references to “ordinary shares” refer to Jazz Pharmaceuticals plc’s ordinary shares.

Basis of Presentation

These unaudited condensed consolidated financial statements have been prepared following the requirements of the U.S. Securities and Exchange Commission for interim reporting. As permitted under those rules, certain footnotes and other financial information that are normally required by U.S. generally accepted accounting principles, or U.S. GAAP, can be condensed or omitted. The information included in this Quarterly Report on Form 10-Q should be read in conjunction with our

annual audited consolidated financial statements and accompanying notes included in our Annual Report on Form 10-K for the year ended December 31, 2023.

In the opinion of management, these condensed consolidated financial statements have been prepared on the same basis as the annual audited consolidated financial statements and include all adjustments, consisting only of normal recurring adjustments, considered necessary for the fair presentation of our financial position and operating results. The results for the three months ended March 31, 2024, are not necessarily indicative of the results to be expected for the year ending December 31, 2024, for any other interim period or for any future period.

Our significant accounting policies have not changed substantially from those previously described in our Annual Report on Form 10-K for the year ended December 31, 2023.

These condensed consolidated financial statements include the accounts of Jazz Pharmaceuticals plc and our subsidiaries, and intercompany transactions and balances have been eliminated.

Our operating segment is reported in a manner consistent with the internal reporting provided to the chief operating decision maker, or CODM. Our CODM has been identified as our chief executive officer. We have determined that we operate in one business segment, which is the identification, development and commercialization of meaningful pharmaceutical products that address unmet medical needs.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosures in the condensed consolidated financial statements and accompanying notes. Management bases its estimates on historical experience and on assumptions believed to be reasonable under the circumstances. Actual results could differ materially from those estimates.

Adoption of New Accounting Standards

In November 2023, the Financial Accounting Standards Board, or FASB, issued ASU 2023-07, “Segment Reporting (Topic 280) - Improvements to Reportable Segment Disclosures”, which requires enhanced disclosures about significant segment expenses. The amendments are effective retrospectively to all prior periods presented in the financial statements, for fiscal years beginning after December 15, 2023. The new guidance is not expected to have a material impact on our financial statement disclosures.

Significant Risks and Uncertainties

Historically, our business was substantially dependent on Xyrem and while we expect that our business will continue to meaningfully depend on oxybate revenues from both Xywav and Xyrem, there is no guarantee that oxybate revenues will remain at current levels. In this regard, our ability to maintain oxybate revenues and realize the anticipated benefits from our investment in Xywav are subject to a number of risks and uncertainties including, without limitation, those related to the launch of Xywav for the treatment of IH in adults and adoption in that indication; competition from the introduction of two authorized generic, or AG, versions of high-sodium oxybate and a branded fixed-dose, high-sodium oxybate, Avadel’s Lumryz, for treatment of cataplexy and/or EDS in narcolepsy in the U.S. market, as well as potential future competition from additional AG versions of high-sodium oxybate and from generic versions of high-sodium oxybate and from other competitors; increased pricing pressure from, changes in policies by, or restrictions on reimbursement imposed by, third party payors, including our ability to maintain adequate coverage and reimbursement for Xywav and Xyrem; increased rebates required to maintain access to our products; challenges to our intellectual property around Xywav and/or Xyrem, including from pending antitrust and intellectual property litigation; and continued acceptance of Xywav and Xyrem by physicians and patients. A significant decline in oxybate revenues could cause us to reduce our operating expenses or seek to raise additional funds, which would have a material adverse effect on our business, financial condition, results of operations and growth prospects, including on our ability to acquire, in-license or develop new products to grow our business.

In addition to risks related specifically to Xywav and Xyrem, we are subject to other challenges and risks related to successfully commercializing a portfolio of oncology products and other neuroscience products, and other risks specific to our business and our ability to execute on our strategy, as well as risks and uncertainties common to companies in the pharmaceutical industry with development and commercial operations, including, without limitation, risks and uncertainties associated with: ongoing clinical research activity and related outcomes, obtaining regulatory approval of our late-stage product candidates; effectively commercializing our approved or acquired products such as Epidiolex, Rylaze and Zepzelca; obtaining and maintaining adequate coverage and reimbursement for our products; contracting and rebates to pharmacy benefit managers and similar organizations that reduce our net revenue; increasing scrutiny of pharmaceutical product pricing and resulting

changes in healthcare laws and policy; market acceptance; regulatory concerns with controlled substances generally and the potential for abuse; future legislation, action by the U.S. Federal Government authorizing the sale, distribution, use, and insurance reimbursement of non-FDA approved cannabinoid products; delays or problems in the supply of our products, loss of single source suppliers or failure to comply with manufacturing regulations; delays or problems with third parties that are part of our manufacturing and supply chain; identifying, acquiring or in-licensing additional products or product candidates; our ability to realize the anticipated benefits of acquired or in-licensed products or product candidates, such as Epidiolex and zanidatamab, at the expected levels, with the expected costs and within the expected timeframe; pharmaceutical product development and the inherent uncertainty of clinical success; the challenges of protecting and enhancing our intellectual property rights; complying with applicable regulatory requirements; and possible restrictions on our ability and flexibility to pursue certain future opportunities as a result of our substantial outstanding debt obligations.

Concentrations of Risk

Financial instruments that potentially subject us to concentrations of credit risk consist of cash, cash equivalents, investments and derivative contracts. Our investment policy permits investments in U.S. federal government and federal agency securities, corporate bonds or commercial paper issued by U.S. corporations, money market instruments, certain qualifying money market mutual funds, certain repurchase agreements, and tax-exempt obligations of U.S. states, agencies and municipalities and places restrictions on credit ratings, maturities, and concentration by type and issuer. We are exposed to credit risk in the event of a default by the financial institutions holding our cash, cash equivalents and investments to the extent recorded on the balance sheet.

We manage our foreign currency transaction risk and interest rate risk within specified guidelines through the use of derivatives. All of our derivative instruments are utilized for risk management purposes, and we do not use derivatives for speculative trading purposes. As of March 31, 2024, we had foreign exchange forward contracts with notional amounts totaling $537.1 million. As of March 31, 2024, the outstanding foreign exchange forward contracts had a net asset fair value of $0.4 million. As of March 31, 2024, we had interest rate swap contracts with notional amounts totaling $500.0 million. These outstanding interest rate swap contracts had an asset fair value of $5.5 million as of March 31, 2024. The counterparties to these contracts are large multinational commercial banks, and we believe the risk of nonperformance is not significant.

We are also subject to credit risk from our accounts receivable related to our product sales. We monitor our exposure within accounts receivable and record a reserve against uncollectible accounts receivable as necessary. We extend credit to pharmaceutical wholesale distributors and specialty pharmaceutical distribution companies, primarily in the U.S., and to other international distributors and hospitals. Customer creditworthiness is monitored and collateral is not required. We monitor economic conditions in certain European countries which may result in variability of the timing of cash receipts and an increase in the average length of time that it takes to collect accounts receivable outstanding. Historically, we have not experienced significant credit losses on our accounts receivable and, as of March 31, 2024 and December 31, 2023, allowances on receivables were not material. As of March 31, 2024, five customers accounted for 78% of gross accounts receivable, including Express Scripts Specialty Distribution Services, Inc. and its affiliates, or ESSDS, which accounted for 41% of gross accounts receivable, McKesson Corporation and affiliates, or McKesson, which accounted for 12% of gross accounts receivable and ASD Specialty Healthcare LLC, or ASD, which accounted for 12% of gross accounts receivable. As of December 31, 2023, five customers accounted for 79% of gross accounts receivable, including ESSDS, which accounted for 41% of gross accounts receivable, ASD, which accounted for 13% of gross accounts receivable and McKesson, which accounted for 11% of gross accounts receivable.

We depend on single source suppliers for most of our products, product candidates and their active pharmaceutical ingredients, or APIs. With respect to our oxybate products, the API is manufactured for us by a single source supplier and the finished products are manufactured both by us in our facility in Athlone, Ireland and by our U.S.-based supplier.

Recent Accounting Pronouncements

In December 2023, the FASB issued ASU 2023-09, “Income Taxes (Topic 740) - Improvements to Income Tax Disclosures”, which requires additional enhanced tax disclosures. The amendments are effective on a prospective basis, with the option to apply it retrospectively, for fiscal years beginning after December 15, 2024. We are currently evaluating the impact of adopting this new accounting guidance.

2. Cash and Available-for-Sale Securities

Cash, cash equivalents and investments consisted of the following (in thousands):

	March 31, 2024					
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Cash and Cash Equivalents	Investments
Cash	$ 444,140	$ —	$ —	$ 444,140	$ 444,140	$ —
Time deposits	585,000	—	—	585,000	210,000	375,000
Money market funds	789,245	—	—	789,245	789,245	—
Totals	$ 1,818,385	$ —	$ —	$ 1,818,385	$ 1,443,385	$ 375,000

	December 31, 2023					
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Cash and Cash Equivalents	Investments
Cash	$ 437,724	$ —	$ —	$ 437,724	$ 437,724	$ —
Time deposits	420,000	—	—	420,000	300,000	120,000
Money market funds	768,586	—	—	768,586	768,586	—
Totals	$ 1,626,310	$ —	$ —	$ 1,626,310	$ 1,506,310	$ 120,000

Cash equivalents and investments are considered available-for-sale securities. We use the specific-identification method for calculating realized gains and losses on securities sold and include them in interest expense, net in the condensed consolidated statements of income (loss). Our investment balances represent time deposits with original maturities of greater than three months and less than one year. Interest income from available-for-sale securities was $23.3 million and $10.6 million in the three months ended March 31, 2024 and 2023, respectively.

3. Fair Value Measurement

The following table summarizes, by major security type, our available-for-sale securities and derivative contracts as of March 31, 2024 and December 31, 2023, that were measured at fair value on a recurring basis and were categorized using the fair value hierarchy (in thousands):

	March 31, 2024			December 31, 2023		
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Total Estimated Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Total Estimated Fair Value
Assets:						
Available-for-sale securities:						
Money market funds	$ 789,245	$ —	$ 789,245	$ 768,586	$ —	$ 768,586
Time deposits	—	585,000	585,000	—	420,000	420,000
Interest rate contracts	—	5,464	5,464	—	3,784	3,784
Foreign exchange forward contracts	—	708	708	—	18,035	18,035
Totals	$ 789,245	$ 591,172	$ 1,380,417	$ 768,586	$ 441,819	$ 1,210,405
Liabilities:						
Interest rate contracts	$ —	$ —	$ —	$ —	$ 3,410	$ 3,410
Foreign exchange forward contracts	—	357	357	—	681	681
Totals	$ —	$ 357	$ 357	$ —	$ 4,091	$ 4,091

As of March 31, 2024, our available-for-sale securities included money market funds and time deposits and their carrying values were approximately equal to their fair values. Money market funds were measured using quoted prices in active markets, which represent Level 1 inputs and time deposits were measured at fair value using Level 2 inputs. Level 2 inputs are obtained from various third party data providers and represent quoted prices for similar assets in active markets, or these inputs were derived from observable market data, or if not directly observable, were derived from or corroborated by other observable market data.

Our derivative assets and liabilities include interest rate and foreign exchange derivatives that are measured at fair value using observable market inputs such as forward rates, interest rates, our own credit risk as well as an evaluation of our counterparties' credit risks. Based on these inputs, the derivative assets and liabilities are classified within Level 2 of the fair value hierarchy.

There were no transfers between the different levels of the fair value hierarchy in 2024 or 2023.

As of March 31, 2024 and December 31, 2023, the carrying amount of investments measured using the measurement alternative for equity investments without a readily determinable fair value was $4.3 million. The carrying amount, which is recorded within other non-current assets, is based on the latest observable transaction price.

As of March 31, 2024, the estimated fair values of the 1.50% exchangeable senior notes due 2024, or 2024 Notes, the 2.00% exchangeable senior notes due 2026, or 2026 Notes, which we refer to collectively as the Exchangeable Senior Notes, the 4.375% senior secured notes, due 2029, or the Secured Notes, and the seven-year $3.1 billion term loan B facility, or the Dollar Term Loan were approximately $ 566 million, $1.0 billion, $1.4 billion and $2.7 billion respectively. The fair values of each of these debt facilities was estimated using quoted market prices obtained from brokers (Level 2).

4. Derivative Instruments and Hedging Activities

We are exposed to certain risks arising from operating internationally, including fluctuations in foreign exchange rates primarily related to the translation of sterling and euro-denominated net monetary liabilities, including intercompany balances, held by subsidiaries with a U.S. dollar functional currency and fluctuations in interest rates on our outstanding term loan borrowings. We manage these exposures within specified guidelines through the use of derivatives. All of our derivative instruments are utilized for risk management purposes, and we do not use derivatives for speculative trading purposes.

We enter into foreign exchange forward contracts, with durations of up to 12 months, designed to limit the exposure to fluctuations in foreign exchange rates related to the translation of certain non-U.S. dollar denominated liabilities, including intercompany balances. Hedge accounting is not applied to these derivative instruments as gains and losses on these hedge transactions are designed to offset gains and losses on underlying balance sheet exposures. As of March 31, 2024 and December 31, 2023, the notional amount of foreign exchange contracts where hedge accounting is not applied was $537.1 million and $511.7 million, respectively.

The foreign exchange gain (loss) in our condensed consolidated statements of income (loss) included the following gain (losses) associated with foreign exchange contracts not designated as hedging instruments (in thousands):

	Three Months Ended March 31,	
Foreign Exchange Forward Contracts:	**2024**	**2023**
Gain (loss) recognized in foreign exchange gain (loss)	$ (4,086)	$ 4,275

To achieve a desired mix of floating and fixed interest rates on our variable rate debt, we entered into interest rate swap agreements in April 2023, which are effective until April 2026. These agreements hedge contractual term loan interest rates. As of March 31, 2024, the interest rate swap agreements had a notional amount of $500.0 million. As a result of these agreements, the interest rate on a portion of our term loan borrowings is fixed at 3.9086%, plus the borrowing spread, until April 30, 2026.

The impact on accumulated other comprehensive income (loss) and earnings from derivative instruments that qualified as cash flow hedges for the three months ended March 31, 2024 was as follows (in thousands):

	Three Months Ended March 31, 2024
Interest Rate Contracts:	
Gain recognized in accumulated other comprehensive income (loss), net of tax	$ 5,177
Gain reclassified from accumulated other comprehensive income (loss) to interest expense, net of tax	(1,356)

Assuming no change in the U.S dollar Secured Overnight Financing Rate, or Term SOFR, based interest rates from market rates as of March 31, 2024, $3.7 million of gains, net of tax, recognized in accumulated other comprehensive income (loss) will be reclassified to earnings over the next 12 months.

The cash flow effects of our derivative contracts for the three months ended March 31, 2024 and 2023 are included within net cash provided by operating activities in the condensed consolidated statements of cash flows.

The following tables summarize the fair value of outstanding derivatives (in thousands):

	Classification	March 31, 2024	December 31, 2023
Assets			
Derivatives designated as hedging instruments:			
Interest rate contracts	Other current assets	$ 5,041	$ 3,784
	Other non-current assets	423	—
Derivatives not designated as hedging instruments:			
Foreign exchange forward contracts	Other current assets	708	18,035
Total fair value of derivative asset instruments		$ 6,172	$ 21,819
Liabilities			
Derivatives designated as hedging instruments:			
Interest rate contracts	Other non-current liabilities	$ —	$ 3,410
Derivatives not designated as hedging instruments:			
Foreign exchange forward contracts	Accrued liabilities	357	681
Total fair value of derivative liability instruments		$ 357	$ 4,091

Although we do not offset derivative assets and liabilities within our condensed consolidated balance sheets, our International Swap and Derivatives Association agreements provide for net settlement of transactions that are due to or from the same counterparty upon early termination of the agreement due to an event of default or other termination event. The following table summarizes the potential effect on our condensed consolidated balance sheets of offsetting our interest rate and foreign exchange forward contracts subject to such provisions (in thousands):

	March 31, 2024					
				Gross Amounts Not Offset in the Consolidated Balance Sheet		
Description	Gross Amounts of Recognized Assets/ Liabilities	Gross Amounts Offset in the Consolidated Balance Sheet	Net Amounts of Assets/ Liabilities Presented in the Consolidated Balance Sheet	Derivative Financial Instruments	Cash Collateral Received (Pledged)	Net Amount
Derivative assets	$ 6,172	$ —	$ 6,172	$ (250)	$ —	$ 5,922
Derivative liabilities	(357)	—	(357)	250	—	(107)

	December 31, 2023					
				Gross Amounts Not Offset in the Consolidated Balance Sheet		
Description	Gross Amounts of Recognized Assets/ Liabilities	Gross Amounts Offset in the Consolidated Balance Sheet	Net Amounts of Assets/ Liabilities Presented in the Consolidated Balance Sheet	Derivative Financial Instruments	Cash Collateral Received (Pledged)	Net Amount
Derivative assets	$ 21,819	$ —	$ 21,819	$ (4,091)	$ —	$ 17,728
Derivative liabilities	(4,091)	—	(4,091)	4,091	—	—

5. Inventories

Inventories consisted of the following (in thousands):

	March 31, 2024	December 31, 2023
Raw materials	$ 17,769	$ 25,595
Work in process	390,882	431,732
Finished goods	168,670	139,712
Total inventories	$ 577,321	$ 597,039

As of March 31, 2024 and December 31, 2023 inventories included $ 297.3 million and $328.0 million, respectively, related to the purchase accounting inventory fair value step-up on inventory acquired as part of our acquisition of GW, which we refer to as the GW Acquisition.

6. Goodwill and Intangible Assets

The gross carrying amount of goodwill was as follows (in thousands):

Balance at December 31, 2023	$ 1,753,130
Foreign exchange	(13,635)
Balance at March 31, 2024	$ 1,739,495

The gross carrying amounts and net book values of our intangible assets were as follows (in thousands):

		March 31, 2024			December 31, 2023		
	Remaining Weighted-Average Useful Life (In years)	Gross Carrying Amount	Accumulated Amortization	Net Book Value	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Acquired developed technologies	8.5	$ 7,743,422	$ (2,507,926)	$ 5,235,496	$ 7,785,495	$ (2,367,456)	$ 5,418,039
Manufacturing contracts	—	11,572	(11,572)	—	11,828	(11,828)	—
Trademarks	—	2,879	(2,879)	—	2,886	(2,886)	—
Total finite-lived intangible assets		$ 7,757,873	$ (2,522,377)	$ 5,235,496	$ 7,800,209	$ (2,382,170)	$ 5,418,039

The decrease in the gross carrying amount of intangible assets as of March 31, 2024 compared to December 31, 2023 relates to the negative impact of foreign currency translation adjustments primarily due to the weakening of sterling against the U.S. dollar.

The assumptions and estimates used to determine future cash flows and remaining useful lives of our intangible and other long-lived assets are complex and subjective. They can be affected by various factors, including external factors, such as industry and economic trends, and internal factors such as changes in our business strategy and our forecasts for specific product lines.

Based on finite-lived intangible assets recorded as of March 31, 2024, and assuming the underlying assets will not be impaired and that we will not change the expected lives of the assets, future amortization expenses were estimated as follows (in thousands):

Year Ending December 31,	Estimated Amortization Expense
2024 (remainder)	$ 466,008
2025	621,344
2026	621,344
2027	621,344
2028	620,012
Thereafter	2,285,444
Total	$ 5,235,496

7. Certain Balance Sheet Items

Property, plant and equipment consisted of the following (in thousands):

	March 31, 2024	December 31, 2023
Manufacturing equipment and machinery	$ 85,717	$ 82,897
Land and buildings	69,750	70,912
Leasehold improvements	69,600	67,722
Computer software	38,159	38,134
Construction-in-progress	17,274	18,661
Computer equipment	16,704	15,398
Furniture and fixtures	9,297	9,273
Subtotal	306,501	302,997
Less accumulated depreciation and amortization	(140,265)	(133,351)
Property, plant and equipment, net	$ 166,236	$ 169,646

Other current assets consisted of the following (in thousands):

	March 31, 2024	December 31, 2023
Deferred charge for income taxes on intercompany profit	$ 178,684	$ 171,507
Other	135,851	149,302
Total other current assets	$ 314,535	$ 320,809

Accrued liabilities consisted of the following (in thousands):

	March 31, 2024	December 31, 2023
Rebates and other sales deductions	$ 369,301	$ 325,711
Employee compensation and benefits	118,966	121,209
Consulting and professional services	39,539	19,538
Clinical trial accruals	38,406	44,757
Accrued royalties	29,236	30,706
Selling and marketing accruals	25,890	14,743
Accrued collaboration expenses	24,626	10,158
Accrued interest	23,392	36,443
Sales return reserve	22,137	20,435
Current portion of lease liabilities	18,357	19,447
Inventory-related accruals	15,902	13,977
Accrued construction-in-progress	7,055	5,141
Accrued facilities expenses	5,333	55,455
Derivative instrument liabilities	357	681
Other	88,033	75,513
Total accrued liabilities	$ 826,530	$ 793,914

8. Debt

The following table summarizes the carrying amount of our indebtedness (in thousands):

	March 31, 2024	December 31, 2023
2024 Notes	$ 575,000	$ 575,000
Unamortized - debt issuance costs	(624)	(1,046)
2024 Notes, net	574,376	573,954
2026 Notes	1,000,000	1,000,000
Unamortized - debt issuance costs	(5,782)	(6,400)
2026 Notes, net	994,218	993,600
Secured Notes	1,481,011	1,480,214
Term Loan	2,660,881	2,665,174
Total debt	5,710,486	5,712,942
Less current portion	605,375	604,954
Total long-term debt	$ 5,105,111	$ 5,107,988

Credit Agreement

On May 5, 2021, the Company, Jazz Financing Lux S.à.r.l., or Jazz Lux, and certain of our other subsidiaries, as borrowers, or, collectively with the Company and Jazz Lux, the “Borrowers”, entered into the Credit Agreement by and among the Borrowers, the lenders and issuing banks from time to time party thereto, Bank of America, N.A., as administrative agent and U.S. Bank Trust Company, National Association, as collateral trustee, or the Credit Agreement, that provided for (i) the Dollar Term Loan which was drawn by Jazz Lux on the Closing Date in U.S. dollars (ii) the Euro Term Loan which was drawn by Jazz Lux on the Closing Date in Euros and (iii) the Revolving Credit Facility.

In January 2024, Jazz Lux entered into an amendment, or Repricing Amendment, to the Credit Agreement. Upon entry into the Repricing Amendment, certain existing lenders converted outstanding Dollar Term Loans into a new tranche of U.S. dollar term loans, or the Tranche B-1 Dollar Term Loans, and Jazz Lux borrowed $201.9 million aggregate principal amount of additional Tranche B-1 Dollar Term Loans, the proceeds of which were used to repay the outstanding Dollar Term Loans that were not converted. The Tranche B-1 Dollar Term Loans are a separate class of term loans under the Credit Agreement with the same material terms (including with respect to maturity, prepayment, security, covenants and events of default) as the previously outstanding Dollar Term Loans, with the interest rate amended as described below. The principal amount of Dollar Term Loans outstanding immediately prior to the Repricing Amendment and the outstanding principal amount of Tranche B-1 Dollar Term Loans immediately following the Repricing Amendment, each totaled $2.723 billion. The Tranche B-1 Dollar Term Loans bear interest at a rate equal to either (a) Term SOFR, or (b) the prime lending rate, in each case, plus an applicable margin. The applicable margin for the Tranche B-1 Dollar Term Loans is 3.00% (in the case of Term SOFR borrowings) and 2.00% (in the case of borrowings at the prime lending rate), a decrease of 50 basis points from the applicable margin on the Initial Dollar Term Loans. The Tranche B-1 Dollar Term Loans are subject to a Term SOFR floor of 0.50%. The applicable margin for the Revolving Credit Facility ranges from 3.25% to 2.75% (in the case of Term SOFR borrowings) and 2.25% to 1.75% (in the case of borrowings at the prime lending rate), depending on our first lien secured net leverage ratio level. The Tranche B-1 Dollar Term Loan is subject to a Term SOFR floor of 0.50% and loans under the Revolving Credit Facility are not subject to a floor. The Revolving Credit Facility has a commitment fee payable on the undrawn amount ranging from 0.50% to 0.40% per annum based upon our first lien secured net leverage ratio. As of March 31, 2024, the interest rate and effective interest rate on the Tranche B-1 Dollar Term Loans were 8.44% and 9.04%, respectively. As of March 31, 2024, we had an undrawn Revolving Credit Facility totaling $500.0 million.

Exchangeable Senior Notes

The Exchangeable Senior Notes were issued by Jazz Investments I Limited, or the Issuer, a 100%-owned finance subsidiary of Jazz Pharmaceuticals plc. The Exchangeable Senior Notes are senior unsecured obligations of the Issuer and are fully and unconditionally guaranteed on a senior unsecured basis by Jazz Pharmaceuticals plc. No subsidiary of Jazz Pharmaceuticals plc guaranteed the Exchangeable Senior Notes. Subject to certain local law restrictions on payment of dividends, among other things, and potential negative tax consequences, we are not aware of any significant restrictions on the ability of Jazz Pharmaceuticals plc to obtain funds from the Issuer or Jazz Pharmaceuticals plc's other subsidiaries by dividend or loan, or any legal or economic restrictions on the ability of the Issuer or Jazz Pharmaceuticals plc's other subsidiaries to transfer funds to Jazz Pharmaceuticals plc in the form of cash dividends, loans or advances. There is no assurance that in the future such restrictions will not be adopted.

The total liability of the 2026 Notes is reflected net of issuance costs of $ 15.3 million which will be amortized over the term of the 2026 Notes. The effective interest rate of the 2026 Notes is 2.26%. During the three months ended March 31, 2024 and 2023, we recognized interest expense of $5.5 million, of which $5.0 million related to the contractual coupon rate and $ 0.5 million related to the amortization of debt issuance costs, respectively.

The total liability of the 2024 Notes is reflected net of issuance costs of $ 11.4 million which will be amortized over the term of the 2024 Notes. The effective interest rate of the 2024 Notes is 1.79%. During the three months ended March 31, 2024 and 2023, we recognized interest expense of $2.5 million, of which $2.1 million related to the contractual coupon rate and $ 0.4 million related to the amortization of debt issuance costs, respectively.

Maturities

Scheduled maturities with respect to our long-term debt principal balances outstanding as of March 31, 2024 were as follows (in thousands):

Year Ending December 31,	Scheduled Long-Term Debt Maturities
2024 (remainder)	$ 598,250
2025	31,000
2026	1,031,000
2027	31,000
2028	2,598,500
Thereafter	1,500,000
Total	$ 5,789,750

9. Commitments and Contingencies

Indemnification

In the normal course of business, we enter into agreements that contain a variety of representations and warranties and provide for general indemnification, including indemnification associated with product liability or infringement of intellectual property rights. Our exposure under these agreements is unknown because it involves future claims that may be made but have not yet been made against us. To date, we have not paid any claims or been required to defend any action related to these indemnification obligations.

We have agreed to indemnify our executive officers, directors and certain other employees for losses and costs incurred in connection with certain events or occurrences, including advancing money to cover certain costs, subject to certain limitations. The maximum potential amount of future payments we could be required to make under the indemnification obligations is unlimited; however, we maintain insurance policies that may limit our exposure and may enable us to recover a portion of any future amounts paid. Assuming the applicability of coverage, the willingness of the insurer to assume coverage, and subject to certain retention, loss limits and other policy provisions, we believe the fair value of these indemnification obligations is not significant. Accordingly, we did not recognize any liabilities relating to these obligations as of March 31, 2024 and December 31, 2023. No assurances can be given that the covering insurers will not attempt to dispute the validity, applicability, or amount of coverage without expensive litigation against these insurers, in which case we may incur substantial liabilities as a result of these indemnification obligations.

Legal Proceedings

We are involved in legal proceedings, including the following matters:

Xyrem Antitrust Litigation

From June 2020 to May 2022, a number of lawsuits were filed on behalf of purported direct and indirect Xyrem purchasers, alleging that the patent litigation settlement agreements we entered with generic drug manufacturers who had filed Abbreviated New Drug Applications, or ANDA, violate state and federal antitrust and consumer protection laws, as follows:

On June 17, 2020, a class action lawsuit was filed in the United States District Court for the Northern District of Illinois by Blue Cross and Blue Shield Association, or BCBS, against Jazz Pharmaceuticals plc, Jazz Pharmaceuticals, Inc., and Jazz Pharmaceuticals Ireland Limited, or, collectively, the Company Defendants (hereinafter referred to as the BCBS Lawsuit). The BCBS Lawsuit also names Roxane Laboratories, Inc., Hikma Pharmaceuticals USA Inc., Eurohealth (USA), Inc., Hikma Pharmaceuticals plc, Amneal Pharmaceuticals LLC, Par Pharmaceutical, Inc., Lupin Ltd., Lupin Pharmaceuticals Inc., and Lupin Inc., or, collectively, the BCBS Defendants.

On June 18 and June 23, 2020, respectively, two additional class action lawsuits were filed against the Company Defendants and the BCBS Defendants: one by the New York State Teamsters Council Health and Hospital Fund in the United States District Court for the Northern District of California, and another by the Government Employees Health Association Inc. in the United States District Court for the Northern District of Illinois (hereinafter referred to as the GEHA Lawsuit).

On June 18, 2020, a class action lawsuit was filed in the United States District Court for the Northern District of California by the City of Providence, Rhode Island, on behalf of itself and all others similarly situated, against Jazz Pharmaceuticals plc, and Roxane Laboratories, Inc., West-Ward Pharmaceuticals Corp., Hikma Labs Inc., Hikma Pharmaceuticals USA Inc., and Hikma Pharmaceuticals plc, or, collectively, the City of Providence Defendants.

On June 30, 2020, a class action lawsuit was filed in the United States District Court for the Northern District of Illinois by UFCW Local 1500 Welfare Fund on behalf of itself and all others similarly situated, against Jazz Pharmaceuticals Ireland Ltd., Jazz Pharmaceuticals, Inc., Roxane Laboratories, Inc., Hikma Pharmaceuticals plc, Eurohealth (USA), Inc. and West-Ward Pharmaceuticals Corp., or collectively the UFCW Defendants (hereinafter referred to as the UFCW Lawsuit).

On July 13, 2020, the plaintiffs in the BCBS Lawsuit and the GEHA Lawsuit dismissed their complaints in the United States District Court for the Northern District of Illinois and refiled their respective lawsuits in the United States District Court for the Northern District of California. On July 14, 2020, the plaintiffs in the UFCW Lawsuit dismissed their complaint in the United States District Court for the Northern District of Illinois and on July 15, 2020, refiled their lawsuit in the United States District Court for the Northern District of California.

On July 31, 2020, a class action lawsuit was filed in the United States District Court for the Southern District of New York by the A.F. of L.-A.G.C. Building Trades Welfare Plan on behalf of itself and all others similarly situated, against Jazz Pharmaceuticals plc (hereinafter referred to as the AFL Plan Lawsuit). The AFL Plan Lawsuit also names Roxane Laboratories Inc., West-Ward Pharmaceuticals Corp., Hikma Labs Inc., Hikma Pharmaceuticals plc, Amneal Pharmaceuticals LLC, Par Pharmaceutical, Inc., Lupin Ltd., Lupin Pharmaceuticals, Inc., and Lupin Inc.

On August 14, 2020, an additional class action lawsuit was filed in the United States District Court for the Southern District of New York by the Self-Insured Schools of California on behalf of itself and all others similarly situated, against the Company Defendants, as well as Hikma Pharmaceuticals plc, Eurohealth (USA) Inc., Hikma Pharmaceuticals USA, Inc., West-Ward Pharmaceuticals Corp., Roxane Laboratories, Inc., Amneal Pharmaceuticals LLC, Endo International, plc, Endo Pharmaceuticals LLC, Par Pharmaceutical, Inc., Lupin Ltd., Lupin Pharmaceuticals Inc., Lupin Inc., Sun Pharmaceutical Industries Ltd., Sun Pharmaceutical Holdings USA, Inc., Sun Pharmaceutical Industries, Inc., Ranbaxy Laboratories Ltd., Teva Pharmaceutical Industries Ltd., Watson Laboratories, Inc., Wockhardt Ltd., Morton Grove Pharmaceuticals, Inc., Wockhardt USA LLC, Mallinckrodt plc, and Mallinckrodt LLC (hereinafter referred to as the Self-Insured Schools Lawsuit).

On September 16, 2020, an additional class action lawsuit was filed in the United States District Court for the Northern District of California, by Ruth Hollman on behalf of herself and all others similarly situated, against the same defendants named in the Self-Insured Schools Lawsuit.

In December 2020, the above cases were centralized and transferred to the United States District Court for the Northern District of California, where the multidistrict litigation will proceed for the purpose of discovery and pre-trial proceedings.

On March 18, 2021, United Healthcare Services, Inc. filed a lawsuit in the United States District Court for the District of Minnesota against the Company Defendants, Hikma Pharmaceuticals plc, Roxane Laboratories, Inc., Hikma Pharmaceuticals USA Inc., Eurohealth (USA) Inc., Amneal Pharmaceuticals LLC, Par Pharmaceutical, Inc., Lupin Ltd., and Lupin Pharmaceuticals, Inc., raising similar allegations, or the UHS Lawsuit. On March 24, 2021, the U.S. Judicial Panel on Multidistrict Litigation conditionally transferred the UHS Lawsuit to the United States District Court for the Northern District of California, where it was consolidated for discovery and pre-trial proceedings with the other cases.

On August 13, 2021, the United States District Court for the Northern District of California granted in part and denied in part the Company Defendants' motion to dismiss the complaints in the cases referenced above.

On October 8, 2021, Humana Inc. filed a lawsuit in the United States District Court for the Northern District of California against the Company Defendants, Hikma Pharmaceuticals plc, Hikma Pharmaceuticals USA Inc., Hikma Labs, Inc., Eurohealth (USA), Inc., Amneal Pharmaceuticals LLC, Par Pharmaceutical, Inc., Lupin Ltd., Lupin Pharmaceuticals, Inc., and Lupin Inc, raising similar allegations.

On October 8, 2021, Molina Healthcare Inc. filed a lawsuit in the United States District Court for the Northern District of California against the Company Defendants, Hikma Pharmaceuticals plc, Hikma Pharmaceuticals USA Inc., Hikma Labs, Inc., Eurohealth (USA), Inc., Amneal Pharmaceuticals LLC, Par Pharmaceutical, Inc., Lupin Ltd., Lupin Pharmaceuticals, Inc., and Lupin Inc, raising similar allegations.

On February 17, 2022, Health Care Service Corporation filed a lawsuit in the United States District Court for the Northern District of California against the Company Defendants, Hikma Pharmaceuticals plc, Hikma Pharmaceuticals USA Inc., Hikma Labs, Inc., Eurohealth (USA), Inc., Amneal Pharmaceuticals LLC, Par Pharmaceutical, Inc., Lupin Ltd., Lupin Pharmaceuticals, Inc., and Lupin Inc, raising similar allegations.

On April 19, 2023, the Court held a hearing on class certification in the consolidated multi-district litigation referenced above. On May 12, 2023, the Court granted the plaintiffs' motion and preliminarily certified classes of Xyrem purchasers seeking monetary and injunctive relief. The Court excluded Xywav purchasers from the classes. On April 26, 2024, we, Hikma, and the plaintiffs filed motions for summary judgment. The Court scheduled a hearing for these motions on July 19, 2024. Trial in this matter is scheduled for October 28, 2024.

On January 13, 2023, Amneal Pharmaceuticals LLC, Lupin Ltd., Lupin Pharmaceuticals, Inc., and Lupin Inc, notified the Court that they had reached a settlement-in-principle with the class action plaintiffs. On April 19, 2023, the Court held a hearing on a motion for preliminary approval of this proposed settlement. On May 12, 2023, the Court granted the motion for preliminary approval of the proposed settlement. On January 11, 2024, the Court held a hearing on the motion for final approval of the proposed settlement. The Court deferred ruling and scheduled a further hearing for final approval of the proposed settlement on April 17, 2024. During February and March 2024, the parties notified the Court of settlements between certain non-class action plaintiffs and each of Amneal and Lupin, and the Court dismissed those plaintiffs' claims against the applicable parties. On April 17, 2024, the Court issued an order granting the motion for final approval of the settlement between the class action plaintiffs, Amneal, and Lupin.

On December 11, 2023, Blue Cross and Blue Shield of Florida, Inc. and Health Options, Inc. filed a lawsuit in the United States District Court for the Middle District of Florida against the Company Defendants, Hikma Pharmaceuticals plc, Hikma Pharmaceuticals USA Inc., Hikma Labs, Inc., and Eurohealth (USA), Inc., raising similar allegations. On January 23, 2024, the Blue Cross Florida case was transferred to the United States District Court for the Northern District of California and consolidated with the above referenced multidistrict litigation for pretrial purposes.

On May 9, 2022, Aetna Inc., or Aetna, filed a lawsuit in the Superior Court of California for the County of Alameda against the Company Defendants, Hikma Pharmaceuticals plc, Hikma Pharmaceuticals USA Inc., Hikma Labs, Inc., Eurohealth (USA), Inc., Amneal Pharmaceuticals LLC, Par Pharmaceutical, Inc., Lupin Ltd., Lupin Pharmaceuticals, Inc., and Lupin Inc, raising similar allegations. On December 27, 2022, the Court granted in part and denied in part our motion to dismiss Aetna's complaint. As a result of that ruling, the generic defendants have been dismissed from the case, and certain of Aetna's claims against Jazz have been dismissed. On January 27, 2023, Aetna filed an amended complaint against Jazz. On March 22, 2023, we filed motions to dismiss and to strike portions of the amended complaint. On June 26, 2023, the Court granted our motions, and granted Aetna leave to further amend its complaint. On November 17, 2023, Aetna filed its second amended complaint. On February 2, 2024, we filed our answer to the second amended complaint and Hikma filed a motion to quash service. That motion remains pending.

The plaintiffs in certain of these lawsuits are seeking to represent a class of direct purchasers of Xyrem, and the plaintiffs in the remaining lawsuits are seeking to represent a class of indirect purchasers of Xyrem. Each of the lawsuits generally alleges violations of U.S. federal and state antitrust, consumer protection, and unfair competition laws in connection with the Company Defendants' conduct related to Xyrem, including actions leading up to, and entering into, patent litigation settlement agreements with each of the other named defendants. Each of the lawsuits seeks monetary damages, exemplary damages, equitable relief against the alleged unlawful conduct, including disgorgement of profits and restitution, and injunctive relief. It is possible that additional lawsuits will be filed against the Company Defendants making similar or related allegations. If the plaintiffs were to be successful in their claims, they may be entitled to injunctive relief or we may be required to pay significant monetary damages, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

GW Acquisition Litigation

On March 15, 2021, GW filed a definitive proxy statement, or Proxy Statement, with the Securities and Exchange Commission in connection with the GW Acquisition.

Since the filing of the Proxy Statement, Jazz Pharmaceuticals plc has been named in two lawsuits filed in state and federal courts in New York on March 17, 2021 by purported GW shareholders in connection with the GW Acquisition. The first was filed in the United States District Court for the Southern District of New York by James Farrell (hereinafter referred to as the Farrell Lawsuit) and an additional suit was filed in New York state court by Brian Levy (hereinafter referred to as the Levy Lawsuit). In addition to Jazz Pharmaceuticals plc, Jazz Pharmaceuticals U.K. Holdings Ltd., GW Pharmaceuticals plc, and the GW board of directors are named as defendants in the Farrell Lawsuit. In the Levy Lawsuit, GW Pharmaceuticals plc, the GW board of directors, Centerview Partners LLC, and Goldman Sachs & Co. LLC are named as defendants. In addition to the Farrell Lawsuit and the Levy Lawsuit, ten additional suits have been filed in New York, California, and Pennsylvania federal courts by purported GW shareholders against GW Pharmaceuticals plc and its board of directors, but which do not name any Jazz Pharmaceuticals parties (hereinafter referred to as the GW Litigation, and collectively with the Farrell Lawsuit and the Levy Lawsuit, as the Transaction Litigation). In the Transaction Litigation, the plaintiffs allege that the Proxy Statement omitted material information and contained misrepresentations, and that the individual members of the GW board of directors breached their fiduciary duties, in violation of state and federal laws, including the Securities Exchange Act of 1934. The plaintiffs in the Transaction Litigation sought various remedies, including injunctive relief to prevent the consummation of the GW Acquisition unless certain allegedly material information was disclosed, or in the alternative, rescission or damages.

On April 14, 2021, GW filed a Form 8-K containing supplemental disclosures related to the GW Acquisition. Pursuant to a memorandum of understanding between the parties, the Levy Lawsuit was dismissed on April 14, 2021.

On May 27, 2021, a class action lawsuit was filed in the United States District Court for the Southern District of California by plaintiff Kurt Ziegler against GW and its former Directors asserting claims under Sections 14(a) and 20(a) of the Securities Exchange Act of 1934, referred to as the Ziegler Lawsuit. The allegations in the Ziegler Lawsuit are similar to those in the previously dismissed Transaction Litigation.

On June 3, 2022, we filed a motion to dismiss the Ziegler Lawsuit. While the motion to dismiss was pending, in December 2022, the parties participated in a mediation and reached a tentative settlement, which remains subject to court approval. On March 20, 2023, the plaintiffs in the Ziegler Lawsuit filed a motion for preliminary approval of the settlement. On July 28, 2023, the Court granted the motion for preliminary approval, which conditionally certified a class for settlement purposes. On December 11, 2023, the Court held a hearing regarding final approval of the proposed settlement and took the matter under advisement. On March 25, 2024, the Court issued an order finally approving the settlement and a judgment dismissing the case. On April 4, 2024, the Court issued amended versions of the order and judgment.

Patent Infringement Litigation

Avadel Litigation

On May 13, 2021, we filed a patent infringement suit against Avadel Pharmaceuticals plc, or Avadel, and several of its corporate affiliates in the United States District Court for the District of Delaware. The suit alleges that Avadel's Lumryz will infringe five of our patents related to controlled release formulations of oxybate and the safe and effective distribution of oxybate. The suit seeks an injunction to prevent Avadel from launching a product that would infringe these patents, and an award of monetary damages if Avadel does launch an infringing product. Avadel filed an answer to the complaint and counterclaims asserting that the patents are invalid or not enforceable, and that its product will not infringe our patents. Avadel filed a motion for partial judgment on the pleadings on its counterclaim that one of our patents should be delisted from the Orange Book. On November 18, 2022, the Court issued an order that we delist the patent from the Orange Book. On November 22, 2022, we filed a notice of appeal to the United States Court of Appeals for the Federal Circuit. The Federal Circuit temporarily stayed the District Court's delisting order. On February 24, 2023, the Federal Circuit affirmed the District Court's delisting order, lifted the temporary stay, and gave Jazz 14 days to request that FDA delist the patent from the Orange Book. Jazz complied with the Federal Circuit's order and requested delisting on February 28, 2023. On March 3, 2023, we and Avadel stipulated to the dismissal without prejudice of the claims and counterclaims related to infringement and validity of the delisted patent in both this suit and a later-filed suit described below related to the same patent.

On August 4, 2021, we filed an additional patent infringement suit against Avadel in the United States District Court for the District of Delaware. The second suit alleges that Avadel's Lumryz will infringe a newly-issued patent related to sustained-release formulations of oxybate. The suit seeks an injunction to prevent Avadel from launching a product that would infringe this patent, and an award of monetary damages if Avadel does launch an infringing product. Avadel filed an answer to the complaint and counterclaims asserting that the patents are invalid or not enforceable, and that its product will not infringe our patents.

On November 10, 2021, we filed an additional patent infringement suit against Avadel in the United States District Court for the District of Delaware. The third suit alleges that Avadel's Lumryz will infringe a newly-issued patent related to sustained-release formulations of oxybate. The suit seeks an injunction to prevent Avadel from launching a product that would infringe this patent, and an award of monetary damages if Avadel does launch an infringing product. Avadel filed an answer to the complaint and counterclaims asserting that the patents are invalid or not enforceable, and that its product will not infringe our patents.

On April 14, 2022, Avadel sued us in the United States District Court for the District of Delaware. Avadel's new suit alleges that we misappropriated trade secrets related to Avadel's once-nightly sodium oxybate development program and breached certain contracts between the parties. Avadel seeks monetary damages, an injunction preventing us from using Avadel's confidential information, and an order directing the United States Patent and Trademark Office to modify the inventorship of one of our oxybate patents. On July 8, 2022, we filed a motion for judgment on the pleadings, which the Court denied on July 18, 2023. The denial is not a ruling that Jazz misappropriated Avadel's trade secrets or breached any contract. The case will go forward in discovery and the Court instructed the parties to submit a proposed scheduling order.

On June 7, 2022, we received notice from Avadel that it had filed a "paragraph IV certification" regarding one patent listed in the Orange Book for Xyrem. A paragraph IV certification is a certification by a generic applicant that alleges that patents covering the branded product are invalid, unenforceable, and/or will not be infringed by the manufacture, use or sale of the generic product. On July 15, 2022, we filed an additional lawsuit against Avadel asserting infringement of that patent. The suit alleges that the filing of Avadel's application for approval of FT218 is an act of infringement, and that Avadel's product would infringe the patent if launched. The suit seeks an injunction to prevent Avadel from launching a product that would infringe the patent, and an award of damages if Avadel does launch an infringing product. Avadel filed an answer to the complaint and counterclaims asserting that the patent is invalid, that its product would not infringe, and that by listing the patent in the Orange Book, we engaged in unlawful monopolization in violation of the Sherman Act. On December 9, 2022, we filed a motion to dismiss Avadel's counterclaims. On June 29, 2023, we filed a motion seeking leave to supplement our motion to dismiss, as well as a motion to stay discovery pending resolution of the motion to dismiss. The Court has not yet ruled on these motions. As noted above, on March 3, 2023, we and Avadel stipulated to the dismissal without prejudice of the claims and counterclaims related to infringement and validity of the delisted patent.

On November 1, 2023, the Court held a claim construction hearing relating to disputed terms in the asserted patents. On December 15, 2023, the Court issued a written opinion and order resolving the parties' remaining claim construction disputes. On November 20, 2023, we and Avadel each filed motions for summary judgment. On February 14, 2024, the Court issued a written opinion and order denying both parties' motions for summary judgment.

Trial regarding our patent infringement claims against Avadel began on February 26, 2024 and concluded on March 4, 2024, with the jury finding both of our asserted patents valid, and awarding us damages for infringement for Avadel's

past sales of Lumryz. On April 12, 2024, we filed a motion for a permanent injunction and ongoing royalties. The Court scheduled a hearing on that motion for June 4, 2024.

The Court scheduled a trial regarding Avadel's counterclaims for unlawful monopolization for November 3, 2025 and a trial regarding Avadel's trade secret misappropriation claims for December 15, 2025. On March 13, 2024 and March 19, 2024, we filed motions to stay Avadel's unlawful monopolization counterclaim and trade secret claims, respectively, pending resolution of post-trial motions and potential appeals in the patent infringement suit. Both motions to stay remain pending.

On July 21, 2022, Avadel filed a lawsuit against FDA in the United States District Court for the District of Columbia, challenging FDA's determination that Avadel was required to file a paragraph IV certification regarding one of our Orange Book listed patents. Avadel filed a motion for preliminary injunction, or in the alternative, summary judgment, seeking relief including a declaration that FDA's decision requiring patent certification was unlawful, an order setting aside that decision, an injunction prohibiting FDA from requiring such certification as a precondition to approval of its application for FT218, and an order requiring FDA to take final action on Avadel's application for approval of FT218 within 14 days of the Court's ruling. On July 27, 2022, we filed a motion to intervene in that case, which the Court granted. The Court held a hearing on the parties' respective motions for summary judgment on October 7, 2022. On November 3, 2022, the Court granted our and FDA's motions for summary judgment and denied Avadel's motion.

Xywav Patent Litigation

In June 2021, we received notice from Lupin Inc., or Lupin, that it has filed with FDA an ANDA, for a generic version of Xywav. The notice from Lupin included a paragraph IV certification with respect to ten of our patents listed in FDA's Orange Book for Xywav on the date of our receipt of the notice. The asserted patents relate generally to the composition and method of use of Xywav, and methods of treatment when Xywav is administered concomitantly with certain other medications.

In July 2021, we filed a patent infringement suit against Lupin in the United States District Court for the District of New Jersey. The complaint alleges that by filing its ANDA, Lupin has infringed ten of our Orange Book listed patents. We are seeking a permanent injunction to prevent Lupin from introducing a generic version of Xywav that would infringe our patents. As a result of this lawsuit, we expect that a stay of approval of up to 30 months will be imposed by FDA on Lupin's ANDA. In June 2021, FDA recognized seven years of Orphan Drug Exclusivity for Xywav through July 21, 2027. On October 4, 2021, Lupin filed an answer to the complaint and counterclaims asserting that the patents are invalid or not enforceable, and that its product, if approved, will not infringe our patents.

In April 2022, we received notice from Lupin that it had filed a paragraph IV certification regarding a newly-issued patent listed in the Orange Book for Xywav. On May 11, 2022, we filed an additional lawsuit against Lupin in the United States District Court for the District of New Jersey alleging that by filing its ANDA, Lupin infringed the newly-issued patent related to a method of treatment when Xywav is administered concomitantly with certain other medications. The suit seeks a permanent injunction to prevent Lupin from introducing a generic version of Xywav that would infringe our patent. On June 22, 2022, the Court consolidated the two lawsuits we filed against Lupin.

In November 2022, we received notice from Lupin that it had filed a paragraph IV certification regarding a newly-issued patent listed in the Orange Book for Xywav. On January 19, 2023, we filed an additional lawsuit against Lupin in the United States District Court for the District of New Jersey alleging that by filing its ANDA, Lupin infringed the newly-issued patent referenced in its November 2022 paragraph IV certification, as well as another patent that issued in January 2023. The suit seeks a permanent injunction to prevent Lupin from introducing a generic version of Xywav that would infringe the two patents in suit. On February 15, 2023, the Court consolidated the new lawsuit with the two suits we previously filed against Lupin. No trial date has been set in the consolidated case against Lupin.

In February 2023, we received notice from Teva Pharmaceuticals, Inc., or Teva, that it had filed with FDA an ANDA for a generic version of Xywav. The notice from Teva included a paragraph IV certification with respect to thirteen of our patents listed in FDA's Orange Book for Xywav on the date of the receipt of the notice. The asserted patents relate generally to the composition and method of use of Xywav, and methods of treatment when Xywav is administered concomitantly with certain other medications.

In March 2023, we filed a patent infringement suit against Teva in the United States District Court for the District of New Jersey. The complaint alleges that by filing its ANDA, Teva has infringed thirteen of our Orange Book listed patents. We are seeking a permanent injunction to prevent Teva from introducing a generic version of Xywav that would infringe our patents. As a result of this lawsuit, we expect that a stay of approval of up to 30 months will be imposed by FDA on Teva's ANDA. On May 23, 2023, Teva filed an answer to the complaint and counterclaims asserting that the patents are invalid or not enforceable, and that its product, if approved, will not infringe our patents.

On December 15, 2023, based on a stipulation between all parties, the Court consolidated the Lupin lawsuits and the Teva lawsuit for all purposes. No trial date has been set in the consolidated case.

Alkem Patent Litigation

In April 2023, we received notice from Alkem Laboratories Ltd., or Alkem, that it has filed with FDA an ANDA, for a generic version of Xyrem. The notice from Alkem included a paragraph IV certification with respect to six of our patents listed in FDA's Orange Book for Xyrem on the date of our receipt of the notice. The asserted patents relate generally to methods of treatment when Xyrem is administered concomitantly with certain other medications.

In June 2023, we filed a patent infringement suit against Alkem in the United States District Court for the District of New Jersey. The complaint alleges that by filing its ANDA, Alkem has infringed six of our Orange Book listed patents. We are seeking a permanent injunction to prevent Alkem from introducing a generic version of Xyrem that would infringe our patents. As a result of this lawsuit, we expect that a stay of approval of up to 30 months will be imposed by FDA on Alkem's ANDA.

On October 4, 2023, we entered into a settlement agreement with Alkem that resolves our patent litigation. Under the settlement agreement, we granted Alkem a license to manufacture, market, and sell its generic version of Xyrem on or after December 31, 2025, or earlier under certain circumstances, including circumstances where Hikma launches its own generic sodium oxybate product.

Epidiolex Patent Litigation

In November and December 2022, we received notices from Teva Pharmaceuticals, Inc.; Padagis US LLC; Apotex Inc.; API Pharma Tech LLC and InvaGen Pharmaceuticals, Inc.; Lupin Limited; Taro Pharmaceutical Industries Ltd.; Zenara Pharma Private Limited and Biophore Pharma, Inc.; MSN Laboratories Pvt. Ltd. and MSN Pharmaceuticals, Inc.; Alkem Laboratories Ltd.; and Ascent Pharmaceuticals, Inc. (hereinafter referred to as the "Epidiolex ANDA Filers"), that they have each filed with FDA an ANDA for a generic version of Epidiolex (cannabidiol) oral solution. As of the date of this filing, we are not aware of other ANDA filers. The notices from the Epidiolex ANDA Filers each included a "paragraph IV certification" with respect to certain of our patents listed in FDA's Orange Book for Epidiolex on the date of the receipt of the notice. The listed patents relate generally to the composition and method of use of Epidiolex, and methods of treatment using Epidiolex. A paragraph IV certification is a certification by a generic applicant that alleges that patents covering the branded product are invalid, unenforceable, and/or will not be infringed by the manufacture, use or sale of the generic product.

On January 3, 2023, we filed a patent infringement suit against the Epidiolex ANDA Filers in the United States District Court for the District of New Jersey. The complaint alleges that by filing their ANDAs, the Epidiolex ANDA Filers have infringed certain of our Orange Book listed patents, and seeks an order that the effective date of FDA approval of the ANDAs shall be a date no earlier than the expiration of the last to expire of the asserted patents. As a result of this lawsuit, we expect that a stay of approval of up to 30 months will be imposed by FDA on the Epidiolex ANDA Filers' ANDAs.

From March 2023 through May 2023, we received the Epidiolex ANDA Filers' answers to the complaint. The answers include defenses and counterclaims asserting that the Epidiolex ANDA Filers' products, if launched, would not infringe our patents, that our patents are invalid and, in one instance, counterclaims related to allegations of inequitable conduct and improper listing of patents in the Orange Book. On May 25, 2023, we filed a motion to dismiss certain of the counterclaims. On January 11, 2024, the Court issued an order granting in part and denying in part our motion to dismiss.

The Court in the Epidiolex Patent Litigation scheduled trial for September 2025.

In June and July 2023, we received notice from certain of the Epidiolex ANDA Filers that they had each filed a paragraph IV certification regarding a newly-issued patent listed in the Orange Book for Epidiolex. On July 21, 2023, we filed an additional lawsuit against all of the Epidiolex ANDA Filers in the United States District Court for the District of New Jersey alleging that, by filing its ANDA, each Epidiolex ANDA Filer infringed the newly-issued patent related to a method of treatment using Epidiolex. The suit seeks an order that the effective date of FDA approval of each Epidiolex ANDA Filer's application shall be a date no earlier than the expiration of the newly-issued patent.

On October 24, 2023, we entered into a settlement agreement with Padagis US LLC, or Padagis, that resolved our patent litigation with Padagis related to Epidiolex. Under the settlement agreement, we granted Padagis a license to manufacture, market, and sell its generic version of Epidiolex on a date that depends on the occurrence of certain other events. The specific terms of the Padagis settlement agreement are confidential.

On November 20, 2023, we entered into a settlement agreement with Teva Pharmaceuticals, Inc., or Teva, that resolved our patent litigation with Teva related to Epidiolex. Under the settlement agreement, we granted Teva a license to manufacture, market and sell its generic version of Epidiolex on a date which remains confidential. The specific terms of the Teva settlement agreement are confidential.

On December 4, 2023, we entered into a settlement agreement with Alkem Laboratories Ltd., or Alkem, that resolved our patent litigation with Alkem related to Epidiolex. Under the settlement agreement, we granted Alkem a license to manufacture, market, and sell its generic version of Epidiolex on a date which remains confidential. The specific terms of the Alkem settlement are confidential.

The settlements with Padagis, Teva and Alkem do not resolve the litigation against the other seven Epidiolex ANDA Filers, which is ongoing. We cannot predict the specific timing or outcome of events in these matters with respect to the remaining defendants or the impact of developments involving any specific parties or patents on other ongoing proceedings with any specific Epidiolex ANDA Filer.

In September and October 2023, we received notice from certain of the Epidiolex ANDA filers that they had each filed a paragraph IV certification regarding one or more newly-issued patents listed in the Orange Book for Epidiolex. On December 15, 2023, we filed an additional lawsuit against seven of the original Epidiolex ANDA Filers with whom we have not previously settled. We filed this lawsuit in the United States District Court for the District of New Jersey alleging that, by filing its ANDA, each Epidiolex ANDA Filer infringed the newly-issued patents related to methods of treatment using Epidiolex. The suit seeks an order that the effective date of FDA approval of each Epidiolex ANDA Filer's application shall be a date no earlier than the expiration of the newly-issued patents.

Epidiolex also has orphan drug exclusivity, or ODE, for the treatment of seizures associated with LGS or DS in patients 2 years of age and older through September 28, 2025, and for the treatment of seizures associated with LGS or DS in patients between 1 and 2 years of age and for the treatment of seizures associated with TSC through July 31, 2027.

The Company vigorously enforces its intellectual property rights but cannot predict the outcome of these matters.

MSP Litigation

On April 3, 2023, MSP Recovery Claims, Series LLC, or MSP, filed a class action lawsuit on behalf itself and others similarly situated against Jazz Pharmaceuticals plc, Jazz Pharmaceuticals, Inc., and Jazz Pharmaceuticals Ireland Limited, (collectively, the Company Defendants), Express Scripts, Inc., Express Scripts Holding Company, Express Scripts Specialty Distribution Services, Inc., Curascript, Inc. d/b/a Curascript, S.D., Priority Healthcare Distribution, Inc. d/b/a Curascript SD and Curascript Specialty Distribution SD, Caring Voice Coalition, and Adira Foundation (collectively with the Company Defendants, referred to as the Defendants) in the United States District Court for the Northern District of California. The MSP complaint alleges that the Defendants conspired to increase the price and quantity dispensed of Xyrem and Prialt, in violation of the Racketeer Influenced and Corrupt Organizations Act and several state laws. The allegations relate generally to the conduct at issue in the investigation conducted by the United States Department of Justice from 2016-2019, involving the Company's contributions to certain charitable foundations. MSP seeks monetary damages, restitution, disgorgement, and a declaration that the conduct alleged is unlawful.

On July 25, 2023, we and certain other defendants filed motions to dismiss MSP's complaint, which the Court granted on December 12, 2023. On January 5, 2024, the MSP filed an amended complaint. On February 20, 2024, we filed a motion to dismiss MSP's amended complaint. The Court scheduled a hearing on the motion for June 13, 2024. No trial date has been set for this matter.

FDA Litigation

On June 22, 2023, we filed a complaint in the United States District Court for the District of Columbia seeking a declaration that FDA's approval on May 1, 2023 of the New Drug Application, or NDA, for Avadel's Lumryz was unlawful. In the complaint, we allege that FDA acted outside its authority under the Orphan Drug Act, when, despite ODE protecting Jazz's low-sodium oxybate product Xywav, FDA approved the Lumryz NDA and granted Lumryz ODE based on FDA's finding that Lumryz makes a major contribution to patient care and is therefore clinically superior to Xywav and Xyrem. Jazz further alleges that in doing so, FDA failed to follow its own regulations, failed to follow established agency policy without providing a reasoned explanation for the departure, reversed prior decisions by its own staff and experts without a reasoned explanation, and disregarded the relevant scientific literature and data. The complaint, filed pursuant to the Administrative Procedure Act, seeks to have the Court vacate and set aside FDA's approval of the Lumryz NDA and seeks a declaration that FDA's approval of the Lumryz NDA was arbitrary, capricious, an abuse of discretion and otherwise not in accordance with law; and that approval of the Lumryz NDA was in excess of FDA's statutory authority and was made without observance of procedure required by law.

On September 15, 2023, we filed a motion for summary judgment. On October 20, 2023, Avadel and FDA filed cross motions for summary judgment. Oral argument on these motions is currently scheduled for May 10, 2024.

From time to time we are involved in legal proceedings arising in the ordinary course of business. We believe there is no other litigation pending that could have, individually or in the aggregate, a material adverse effect on our results of operations or financial condition.

10. Shareholders' Equity

Share Repurchase Program

In November 2016, our board of directors authorized a share repurchase program and, as of March 31, 2024, had authorized the repurchase of ordinary shares having an aggregate purchase price of up to $1.5 billion, exclusive of any brokerage commissions. Under this program, which has no expiration date, we may repurchase ordinary shares from time to time on the open market. The timing and amount of repurchases will depend on a variety of factors, including the price of our ordinary shares, alternative investment opportunities, restrictions under the May 2021 credit agreement, corporate and regulatory requirements and market conditions. The share repurchase program may be modified, suspended or discontinued at any time without prior notice. During the three months ended March 31, 2024, no shares were repurchased. As of March 31, 2024, the remaining amount authorized under the share repurchase program was $161.4 million, exclusive of any brokerage commissions.

Accumulated Other Comprehensive Loss

The components of accumulated other comprehensive loss as of March 31, 2024 and December 31, 2023 were as follows (in thousands):

	Net Unrealized Gain From Hedging Activities	Foreign Currency Translation Adjustments	Total Accumulated Other Comprehensive Loss
Balance at December 31, 2023	$ 235	$ (842,382)	$ (842,147)
Other comprehensive income (loss) before reclassifications	5,177	(44,068)	(38,891)
Amounts reclassified from accumulated other comprehensive income (loss)	(1,356)	—	(1,356)
Other comprehensive income (loss), net	3,821	(44,068)	(40,247)
Balance at March 31, 2024	$ 4,056	$ (886,450)	$ (882,394)

During the three months ended March 31, 2024, other comprehensive income (loss) primarily reflects foreign currency translation adjustments, primarily due to the weakening of sterling and the euro against the U.S. dollar.

11. Net Income (Loss) per Ordinary Share

Basic net income (loss) per ordinary share is based on the weighted-average number of ordinary shares outstanding. Diluted net income (loss) per ordinary share is based on the weighted-average number of ordinary shares outstanding and potentially dilutive ordinary shares outstanding.

Basic and diluted net income (loss) per ordinary share were computed as follows (in thousands, except per share amounts):

	Three Months Ended March 31,	
	2024	2023
Numerator:		
Net income (loss)	$ (14,618)	$ 69,420
Effect of interest on assumed conversions of Exchangeable Senior Notes, net of tax	—	6,963
Net income (loss) for dilutive net income (loss) per ordinary share	$ (14,618)	$ 76,383
Denominator:		
Weighted-average ordinary shares used in per share calculations - basic	62,537	63,494
Dilutive effect of Exchangeable Senior Notes	—	9,044
Dilutive effect of employee equity incentive and purchase plans	—	1,233
Weighted-average ordinary shares used in per share calculations - diluted	62,537	73,771
Net income (loss) per ordinary share:		
Basic	$ (0.23)	$ 1.09
Diluted	$ (0.23)	$ 1.04

Potentially dilutive ordinary shares from our employee equity incentive and purchase plans are determined by applying the treasury stock method to the assumed vesting of outstanding restricted stock units, or RSUs, and performance-based restricted stock units, or PRSUs, the assumed exercise of share options and the assumed issuance of ordinary shares under our employee stock purchase plan, or ESPP. Potentially dilutive ordinary shares from the Exchangeable Senior Notes are determined by applying the if-converted method to the assumed issuance of ordinary shares upon exchange of the Exchangeable Senior Notes. In August 2023, we made an irrevocable election to fix the settlement method for exchanges of the 2024 Notes to a combination of cash and ordinary shares of the Company with a specified cash amount per $1,000 principal amount of the 2024 Notes of $1,000. As a result, the assumed issuance of ordinary shares upon exchange of the 2024 Notes has only been included in the calculation of diluted net income per ordinary share in the three months ended March 31, 2023. The potential issue of ordinary shares upon exchange of the 2026 Notes was anti-dilutive and had no impact on diluted net loss per ordinary share for the three months ended March 31, 2024.

The following table represents the weighted-average ordinary shares that were excluded from the calculation of diluted net income (loss) per ordinary share for the periods presented because including them would have an anti-dilutive effect (in thousands):

	Three Months Ended March 31,	
	2024	2023
Exchangeable Senior Notes	6,418	—
Employee equity incentive and purchase plans	3,500	1,072

12. Revenues

The following table presents a summary of total revenues (in thousands):

	Three Months Ended March 31,	
	2024	2023
Xywav	$ 315,300	$ 277,761
Xyrem	64,232	178,130
Epidiolex/Epidyolex	198,716	188,909
Sativex	2,735	7,098
Total Neuroscience	580,983	651,898
Rylaze/Enrylaze	102,750	85,927
Zepzelca	75,100	67,181
Defitelio/defibrotide	47,676	39,079
Vyxeos	32,023	36,700
Total Oncology	257,549	228,887
Other	3,570	3,434
Product sales, net	842,102	884,219
High-sodium oxybate AG royalty revenue	49,947	2,096
Other royalty and contract revenues	9,934	6,497
Total revenues	$ 901,983	$ 892,812

The following table presents a summary of total revenues attributed to geographic sources (in thousands):

	Three Months Ended March 31,	
	2024	2023
United States	$ 808,214	$ 810,116
Europe	71,355	65,900
All other	22,414	16,796
Total revenues	$ 901,983	$ 892,812

The following table presents a summary of the percentage of total revenues from customers that represented more than 10% of our total revenues:

	Three Months Ended March 31,	
	2024	2023
ESSDS	42 %	51 %
McKesson	12 %	12 %
Cardinal Health, Inc.	8 %	10 %

Financing and payment

Our payment terms vary by the type and location of our customer but payment is generally required in a term ranging from 30 to 65 days.

13. Share-Based Compensation

Share-based compensation expense related to RSUs, PRSUs, grants under our ESPP and share options was as follows (in thousands):

	Three Months Ended March 31,	
	2024	2023
Selling, general and administrative	$ 40,213	$ 37,402
Research and development	18,831	15,492
Cost of product sales	2,397	3,458
Total share-based compensation expense, pre-tax	61,441	56,352
Income tax benefit from share-based compensation expense	(3,399)	(8,619)
Total share-based compensation expense, net of tax	$ 58,042	$ 47,733

Restricted Stock Units

The table below shows the number of RSUs granted covering an equal number of our ordinary shares and the weighted-average grant date fair value of RSUs granted:

	Three Months Ended March 31,	
	2024	2023
RSUs granted (in thousands)	1,955	1,571
Grant date fair value	$ 118.89	$ 146.20

The fair value of RSUs is determined on the date of grant based on the market price of our ordinary shares on that date. The fair value of RSUs is expensed ratably over the vesting period, generally over four years.

Performance-Based Restricted Stock Units

The Compensation & Management Development Committee of our board of directors and, in the case of our Chief Executive Officer, the independent members of our board of directors, approved awards of PRSUs to certain employees of the Company, subject to vesting on the achievement of certain commercial and pipeline performance criteria to be assessed over a performance period from the date of the grant to December 31, 2024, December 31, 2025 and December 31, 2026, respectively. The number of shares that will be awarded is determined based on the Company's achievement with respect to the performance criteria. For PRSUs granted prior to 2024, the amount of shares awarded will be subject to adjustment based on the application of a relative total shareholder return, or TSR, modifier. For PRSUs granted in 2024, the relative TSR represents one of the performance metrics. In both cases, the number of shares that may be earned ranges between 0% and 200% of the target number of PRSUs granted.

The table below shows the number of PRSUs granted covering an equal number of our ordinary shares and the weighted-average grant date fair value of PRSUs granted:

	Three Months Ended March 31,	
	2024	2023
PRSUs granted (in thousands)	297	252
Grant date fair value	$ 136.19	$ 158.13

As the PRSUs granted in each year are subject to a market condition, the grant date fair value for such PRSUs was based on a Monte Carlo simulation model. The Company evaluated the performance targets in the context of its current long-range financial plan and its product candidate development pipeline and recognized expense based on the probable number of awards that will ultimately vest.

As of March 31, 2024, compensation cost not yet recognized related to unvested RSUs, PRSUs, ESPP and share options was $ 435.9 million, $51.5 million, $8.3 million and $0.3 million, respectively, which is expected to be recognized over a weighted-average period of 3.0 years, 1.8 years, 1.1 years and 0.5 years, respectively.

14. Income Taxes

Our income tax expense was $11.7 million for the three months ended March 31, 2024, resulting primarily from tax deficiencies from share based compensation. Our income tax benefit was $15.3 million for the same period in 2023, relating to tax arising on income or losses in Ireland, the U.K., the U.S. and certain other foreign jurisdictions, offset by deductions on subsidiary equity, foreign derived intangible income, or FDII, and patent box benefits.

Our net deferred tax liability is primarily related to acquired intangible assets, and is net of deferred tax assets related to U.S. federal and state tax credits, U.S. federal and state and foreign net operating loss carryforwards and other temporary differences. We maintain a valuation allowance against certain deferred tax assets. Each reporting period, we evaluate the need for a valuation allowance on our deferred tax assets by jurisdiction and adjust our estimates as more information becomes available.

We are required to recognize the financial statement effects of a tax position when it is more likely than not, based on the technical merits, that the position will be sustained upon examination. As a result, we have recorded an unrecognized tax benefit for certain tax benefits which we judge may not be sustained upon examination. We file income tax returns in multiple tax jurisdictions, the most significant of which are Ireland, the U.K. and the U.S. (both at the federal level and in various state jurisdictions). For Ireland, we are no longer subject to income tax examinations by taxing authorities for the years prior to 2019. For the U.K., we are no longer subject to income tax examinations by taxing authorities for the years prior to 2016. The U.S. jurisdictions generally have statute of limitations three to four years from the later of the return due date or the date when the return was filed. However, in the U.S. (at the federal level and in most states), carryforwards that were generated in 2019 and earlier may still be adjusted upon examination by the taxing authorities. One of our subsidiaries is currently under examination by the Luxembourg taxing authorities for the years ended December 31, 2017, 2018 and 2019. In October 2022 and in January 2023, we received tax assessment notices from the Luxembourg taxing authorities for all years under examination relating to certain transfer pricing and other adjustments. The notices propose additional Luxembourg income tax of approximately $24.2 million, translated at the foreign exchange rate as March 31, 2024. We disagree with the proposed assessments and are contesting them vigorously.

The Government of Ireland, the jurisdiction in which Jazz Pharmaceuticals Plc is incorporated, transposed the Global Minimum Tax Pillar Two rules into domestic legislation as part of the Finance (No. 2) Act 2023 (the "Finance Act"). The Finance Act closely follows the EU Minimum Tax Directive and OECD Guidance released to date. The Company is within the scope of these rules, which took effect from January 1, 2024. Under the new legislation, we are liable to pay a top-up tax for the difference between the Pillar Two effective tax rate per jurisdiction and the 15% minimum rate. The rules on how to calculate the 15% effective tax rate are detailed and highly complex and specific adjustments envisaged in the Pillar Two legislation can give rise to different effective tax rates compared to those calculated for accounting purposes. We will account for it as a current tax when it is incurred. We expect to be subject to the top-up tax in relation to our operations in Ireland, where the trading statutory tax rate is 12.5%, though the impact in 2024 is not significant. The proportion of our profit before tax which is subject to the top-up tax and our exposure to Pillar Two income taxes in future years will depend on factors such as future revenues, costs and foreign currency exchange rates. We will continue to monitor changes in law and guidance in relation to Pillar Two.

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

The following discussion of our financial condition and results of operations should be read in conjunction with the condensed consolidated financial statements and the notes to condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q. This discussion contains forward-looking statements that involve risks and uncertainties. When reviewing the discussion below, you should keep in mind the substantial risks and uncertainties that could impact our business. In particular, we encourage you to review the risks and uncertainties described in "Risk Factors" in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2023, as supplemented by the risks and uncertainties described in "Risk Factors" Item 1A. Risk Factors in Part II of this Quarterly Report on Form 10-Q. These risks and uncertainties could cause actual results to differ materially from those projected in forward-looking statements contained in this report or implied by past results and trends. Forward-looking statements are statements that attempt to forecast or anticipate future developments in our business, financial condition or results of operations. See the "Cautionary Note Regarding Forward-Looking Statements" that appears at the end of this discussion. These statements, like all statements in this report, speak only as of the date of this Quarterly Report on Form 10-Q (unless another date is indicated), and we undertake no obligation to update or revise these statements in light of future developments.

Overview

Jazz Pharmaceuticals plc is a global biopharmaceutical company whose purpose is to innovate to transform the lives of patients and their families. We are dedicated to developing life-changing medicines for people with serious diseases - often with limited or no therapeutic options. We have a diverse portfolio of marketed medicines, including leading therapies for sleep disorders and epilepsy, and a growing portfolio of cancer treatments. Our patient-focused and science-driven approach powers pioneering research and development advancements across our robust pipeline of innovative therapeutics in oncology and neuroscience.

Our strategy for growth is rooted in executing commercial launches and ongoing commercialization initiatives, advancing robust research and development, or R&D, programs and delivering impactful clinical results, effectively deploying capital to strengthen the prospects of achieving our short- and long-term goals through strategic corporate development, and delivering strong financial performance. We focus on patient populations with high unmet needs. We identify and develop differentiated therapies for these patients that we expect will be long-lived assets and that we can support with an efficient commercialization model. In addition, we leverage our efficient, scalable operating model and integrated capabilities across our global infrastructure to effectively reach patients around the world.

In January 2022, we announced our Vision 2025, which aims to deliver sustainable growth and enhanced value, driving our continued transformation to an innovative, high-growth global pharmaceutical leader. The three core components of our Vision 2025 focus on commercial execution, pipeline productivity and operational excellence.

Our strategy to deliver sustainable growth and enhanced value is focused on:

- Strong commercial execution to drive diversified revenue growth and address unmet medical needs of our patients across our product portfolio, which focuses on neuroscience and oncology medicines;
- Expanding and advancing our pipeline to achieve a valuable portfolio of durable, highly differentiated products;
- Continuing to build a flexible, efficient and productive development engine for targeted therapeutic areas to identify and progress early-, mid- and late-stage assets;
- Identifying and acquiring novel product candidates and approved therapies to complement our existing pipeline and commercial portfolio;
- Investing in an efficient, scalable operating model and differentiated capabilities to enable growth; and
- Unlocking further value through indication expansion and entry into global markets.

In 2024, consistent with our strategy, we are continuing to focus on research and development activities within our neuroscience and oncology therapeutic areas.

Our lead marketed products, listed below, are approved in countries around the world to improve patient care.

Product	Indications	Initial Approval Date	Markets
NEUROSCIENCE			
Xywav® (calcium, magnesium, potassium, and sodium oxybates)	Treatment of cataplexy or excessive daytime sleepiness, or EDS, in patients seven years of age and older with narcolepsy.	July 2020	U.S.
	Treatment of idiopathic hypersomnia, or IH, in adults.	August 2021	U.S.
	Treatment of cataplexy in patients with narcolepsy.	May 2023	Canada
Xyrem® (sodium oxybate)	Treatment of cataplexy or EDS in patients seven years of age and older with narcolepsy.	July 2002	U.S.
	Treatment of cataplexy in patients with narcolepsy.	August 2005	Canada
	Treatment of narcolepsy with cataplexy in adult patients, adolescents and children from age of 7 years.	October 2005	European Union, or EU, Great Britain, other markets (through licensing agreement)
Epidiolex® (cannabidiol)	Treatment of seizures associated with Lennox-Gastaut syndrome, or LGS, Dravet syndrome, or DS, or tuberous sclerosis complex, or TSC, in patients 1 year of age and older.	June 2018	U.S.
Epidyolex® (cannabidiol)	For adjunctive therapy of seizures associated with LGS or DS, in conjunction with clobazam, for patients 2 years of age and older.[1]	September 2019	EU, Great Britain, EEA[2], Israel, Switzerland, Australia and New Zealand
	For adjunctive therapy of seizures associated with TSC for patients 2 years of age and older.	April 2021	EU, Great Britain, Israel and Switzerland
Epidiolex® (cannabidiol)	For adjunctive therapy of seizures associated with LGS, DS or TSC for patients 2 years of age and older.	November 2023	Canada
ONCOLOGY			
Rylaze® (asparaginase erwinia chrysanthemi (recombinant)-rywn)	A component of a multi-agent chemotherapeutic regimen for the treatment of acute lymphoblastic leukemia, or ALL, and lymphoblastic lymphoma, or LBL, in adult and pediatric patients 1 month or older who have developed hypersensitivity to E. coli-derived asparaginase.	June 2021	U.S.
Rylaze® (crisantaspase recombinant)	A component of a multi-agent chemotherapeutic regimen for the treatment of ALL and LBL, in adults and pediatric patients 1 year or older who have developed hypersensitivity to E. coli-derived asparaginase.	September 2022	Canada

Product	Indications	Initial Approval Date	Markets
Enrylaze® (recombinant crisantaspase)	A component of a multi-agent chemotherapeutic regimen for the treatment of ALL and LBL in adult and pediatric patients (1 month and older) who have developed hypersensitivity or silent inactivation to E. coli-derived asparaginase.	September 2023	EU, Great Britain
Zepzelca® (lurbinectedin)	Treatment of adult patients with metastatic small cell lung cancer, or SCLC, with disease progression on or after platinum-based chemotherapy.	June 2020	U.S. (licensed from Pharma Mar S.A., or PharmaMar)[3]
	Treatment of adults with Stage III or metastatic SCLC who have progressed on or after platinum-containing therapy.	September 2021	Canada (licensed from PharmaMar)[4]
Defitelio® (defibrotide)	Treatment of severe hepatic veno-occlusive disease, or VOD, also known as sinusoidal obstruction syndrome, or SOS, following hematopoietic stem cell transplantation, or HSCT, therapy.	October 2013	EU, Great Britain, EEA[2], Switzerland, Israel, Australia, South Korea, Saudi Arabia
Defitelio® (defibrotide sodium)	Treatment of adult and pediatric patients with hepatic VOD, also known as SOS, with renal or pulmonary dysfunction following HSCT.	March 2016	U.S.
Defitelio® (defibrotide sodium)	Treatment of severe hepatic VOD, also known as SOS, following HSCT therapy.	July 2017	Canada, Brazil
Defitelio® (defibrotide)	Treatment of hepatic SOS (hepatic VOD).	June 2019	Japan
Vyxeos® (daunorubicin and cytarabine) liposome for injection	Treatment of newly-diagnosed therapy-related acute myeloid leukemia, or t-AML, or AML with myelodysplasia-related changes, or AML-MRC, in adults and pediatric patients one year and older.	August 2017	U.S.
Vyxeos® liposomal 44 mg/100 mg powder for concentrate for solution for infusion	Treatment of adults with newly-diagnosed t-AML or AML-MRC.	August 2018	EU, Great Britain, Switzerland, Israel, Australia, South Korea, Saudi Arabia
Vyxeos® Daunorubicin and cytarabine liposome for injection Powder, 44 mg daunorubicin and 100 mg cytarabine per vial, intravenous, or IV, infusion	Treatment of adults with newly diagnosed therapy-related t-AML or AML with AML-MRC.	April 2021	Canada
Vyxeos® Combination for I.V. Injection	High-risk AML	March 2024	Japan (through licensing agreement)[5]

[1] The clobazam restriction limited to EU and Great Britain

[2] European Economic Area

[3] Accelerated approval received from U.S. Food and Drug Administration, or FDA

[4] Conditional approval received from Health Canada

[5] Development and commercialization rights held by Nippon Shinyaku Co. Ltd. in Japan

Neuroscience

We are the global leader in the development and commercialization of oxybate therapy for patients with sleep disorders. Xyrem was approved by FDA in 2002 for treatment of cataplexy and in 2005 for treatment of EDS in narcolepsy. In 2020, we received FDA approval for Xywav for the treatment of cataplexy or EDS, in patients seven years of age and older with narcolepsy. In August 2021, Xywav became the first and only therapy approved by FDA for the treatment of IH in adults. Xywav is an oxybate therapy that contains 92% less sodium than Xyrem. Xywav has become a standard of care for patients with narcolepsy and IH.

Since there is no cure for narcolepsy and long-term disease management is needed, we believe that Xywav represents an important therapeutic option for patients with this sleep disorder. Our commercial efforts are focused on educating patients and physicians about the lifelong impact of high sodium intake, and how the use of Xywav enables them to address what is a modifiable risk factor. We view the adoption of Xywav in narcolepsy as a positive indication that physicians and patients appreciate the benefits of a low-sodium oxybate option.

In June 2021, FDA recognized seven years of Orphan Drug Exclusivity, or ODE, for Xywav in narcolepsy. ODE extends through July 2027. Nevertheless, Lumryz, a fixed-dose, high-sodium oxybate, was approved by FDA on May 1, 2023, for the treatment of cataplexy or EDS in adults with narcolepsy. FDA continues to recognize seven years of ODE for Xywav in narcolepsy. In connection with granting ODE, FDA stated that "Xywav is clinically superior to Xyrem by means of greater safety because Xywav provides a greatly reduced chronic sodium burden compared to Xyrem." FDA's summary also stated that "the differences in the sodium content of the two products at the recommended doses will be clinically meaningful in reducing cardiovascular morbidity in a substantial proportion of patients for whom the drug is indicated." FDA has also recognized that the difference in sodium content between Xywav and Lumryz is likely to be clinically meaningful in all patients with narcolepsy and that Xywav is safer than Lumryz in all such patients. Lumryz has the same sodium content as Xyrem. Xywav is the only approved oxybate therapy that does not carry a warning and precaution related to high sodium intake.

On August 12, 2021, FDA approved Xywav for the treatment of IH in adults. Xywav remains the first and only FDA-approved therapy to treat IH. We initiated the U.S. commercial launch of Xywav for the treatment of IH in adults in November 2021. In January 2022, FDA recognized seven years of ODE for Xywav in IH that extends through August 2028. IH is a debilitating neurologic sleep disorder characterized by chronic EDS (the inability to stay awake and alert during the day resulting in the irrepressible need to sleep or unplanned lapses into sleep or drowsiness), severe sleep inertia, and prolonged and non-restorative nighttime sleep. An estimated 37,000 people in the U.S. have been diagnosed with IH and are actively seeking healthcare.

We have agreements in place for Xywav with all three major pharmacy benefit managers, or PBMs, in the U.S. To date, we have entered into agreements with various entities and have achieved benefit coverage for Xywav in both narcolepsy and IH indications for approximately 90% of commercial lives.

We have seen strong adoption of Xywav in narcolepsy since its launch in November 2020, and increasing adoption in IH since its launch in November 2021. Exiting the first quarter of 2024, there were approximately 12,950 patients taking Xywav, including approximately 9,900 patients with narcolepsy and approximately 3,050 patients with IH.

We acquired Epidiolex (Epidyolex outside the U.S.) in May 2021 as part of the acquisition of GW Pharmaceuticals plc, or GW, which we refer to as the GW Acquisition, which expanded our growing neuroscience business with a global, high-growth childhood-onset epilepsy franchise. Epidiolex was approved in the U.S. in June 2018 for the treatment of seizures associated with two rare and severe forms of epilepsy, LGS and DS, in patients two years of age and older, and subsequently approved in July 2020 for the treatment of seizures associated with TSC in patients one year of age and older. FDA also approved the expansion of all existing indications, LGS and DS, to patients one year of age and older. The rolling European launch of Epidyolex is also underway following European Commission, or EC, approval in September 2019 for use as adjunctive therapy of seizures associated with LGS or DS, in conjunction with clobazam, for patients two years of age and older. Epidyolex is now launched in all five key European markets: United Kingdom, Germany, Italy, Spain and France. The clobazam restriction is limited to the EU and Great Britain. Epidyolex was also approved for adjunctive therapy of seizures associated with TSC for patients 2 years of age and older in the EU in April 2021 and Great Britain in August 2021, and is approved or under review for this indication in other markets. Outside the U.S. and Europe, Epidiolex/Epidyolex is approved in Israel, Canada, Australia, New Zealand and Taiwan.

Oncology

Rylaze was approved by FDA in June 2021 under the Real-Time Oncology Review program, and was launched in the U.S. in July 2021 for use as a component of a multi-agent chemotherapeutic regimen for the treatment of patients with ALL or LBL in pediatric and adult patients one month and older who have developed hypersensitivity to E. coli-derived asparaginase. Rylaze is the only recombinant erwinia asparaginase manufactured product approved in the U.S. that maintains a clinically meaningful level of asparaginase activity throughout the entire course of treatment. We developed Rylaze to address the needs

of patients and health care providers for an innovative, high-quality erwinia asparaginase with reliable supply. The initial approved recommended dosage of Rylaze was for an intramuscular, or IM, administration of 25 mg/m^2 every 48 hours. In November 2022, FDA approved a supplemental Biologics License Application, or sBLA, for a Monday/Wednesday/Friday 25/25/50 mg/m^2 IM dosing schedule. In April 2022, we submitted a separate sBLA for IV administration. In February 2023, we received a complete response letter from FDA requesting additional clinical data on the IV administration of Rylaze. There is no impact on the approved product labeling for Rylaze IM administration. In September 2023, the EC granted marketing authorization for JZP458 under the trade name Enrylaze and the rolling launch in Europe is ongoing. This product has also been approved in the United Kingdom and Canada.

We acquired U.S. development and commercialization rights to Zepzelca in early 2020, and launched six months thereafter, with an indication for treatment of patients with SCLC with disease progression on or after platinum-based chemotherapy. Our education and promotional efforts are focused on SCLC-treating physicians. We are continuing to raise awareness of Zepzelca across academic and community cancer centers. In collaboration with F. Hoffmann-La Roche Ltd, or Roche, we have an ongoing Phase 3 pivotal clinical trial in first-line extensive stage SCLC of Zepzelca in combination with Tecentriq® (atezolizumab).

Defitelio is the first and only approved treatment for patients with VOD, severe VOD, or sVOD, or VOD with renal or pulmonary dysfunction following HSCT by regulatory authorities in the U.S., Europe, Japan and other markets. There was a significant decline in the number of patients receiving HSCT due to the effects of the COVID-19 pandemic. Moving forward, while HSCT procedures are gradually returning to pre-pandemic numbers, we expect changes in chemotherapy regimens and the increasing use of cell therapies to potentially lower the incidence of sVOD; additionally, there has been a reduction of prophylactic use of Defitelio in Europe.

Vyxeos is a treatment for adults with newly-diagnosed t-AML, or AML-MRC. In March 2021, FDA approved a revised label to include a new indication to treat newly-diagnosed t-AML, or AML-MRC, in pediatric patients aged one year and older. We have a number of ongoing development activities and continue to expand into new markets internationally. With ongoing trends in the U.S. towards lower-intensity treatments and away from intensive chemotherapy regimens for AML, we have seen increasing competition from other therapeutic options.

Research and Development Progress

Our research and development activities encompass all stages of development and currently include clinical testing of new product candidates and activities related to clinical improvements of, or additional indications or new clinical data for, our existing marketed products. We also have active preclinical programs for novel therapies, including neuroscience and precision medicines in oncology. We are increasingly leveraging our growing internal research and development function, and we have also entered into collaborations with third parties for the research and development of innovative early-stage product candidates and have supported additional investigator-sponsored trials that are anticipated to generate additional data related to our products. We also seek out investment opportunities in support of the development of early- and mid-stage technologies in our therapeutic areas and adjacencies. We have a number of licensing and collaboration agreements with third parties, including biotechnology companies, academic institutions and research-based companies and institutions, related to preclinical and clinical research and development activities in hematology and in precision oncology, as well as in neuroscience.

Within our oncology R&D program, in October 2022, we announced an exclusive licensing and collaboration agreement with Zymeworks Inc., or Zymeworks, providing us the right to acquire development and commercialization rights to Zymeworks' zanidatamab across all indications in the United States, Europe, Japan and all other territories except for those Asia/Pacific territories previously licensed by Zymeworks. In December 2022, we exercised the option to continue with the exclusive development and commercialization rights to zanidatamab. Under the terms of the agreement, Zymeworks received an upfront payment of $50.0 million, and following the exercise of our option to continue the collaboration, a second, one-time payment of $325 million. Zymeworks is also eligible to receive regulatory and commercial milestone payments of up to $1.4 billion, for total potential payments of $1.76 billion. Pending approval, Zymeworks is eligible to receive tiered royalties between 10% and 20% on our net sales. Zanidatamab is a bispecific antibody that can simultaneously bind two non-overlapping epitopes of HER2, known as biparatopic binding. Zanidatamab is currently being evaluated in multiple clinical trials as a treatment for patients with HER2-expressing cancers. Following positive data from a pivotal Phase 2 clinical trial evaluating zanidatamab monotherapy in patients with previously treated advanced or metastatic HER2-amplified biliary tract cancer, or BTC, we initiated a rolling BLA submission for accelerated approval in second-line BTC which was completed in March 2024. In addition, we have an ongoing Phase 3 randomized clinical trial evaluating zanidatamab in combination with chemotherapy plus or minus tislelizumab as a first-line treatment for HER2-expressing gastroesophageal adenocarcinoma, or GEA, and an ongoing Phase 2 trial examining zanidatamab in combination with chemotherapy in first-line patients with HER2-expressing metastatic GEA. There are also multiple ongoing clinical trials exploring zanidatamab in breast cancer and other HER2-expressing tumor types.

Our development plan for Zepzelca continues to progress. We are collaborating with Roche on a pivotal Phase 3 clinical trial evaluating Zepzelca in combination with Tecentriq in first-line extensive stage SCLC. In December 2021, our licensor PharmaMar initiated a confirmatory trial in second-line SCLC. This ongoing three-arm trial is comparing Zepzelca as either monotherapy or in combination with irinotecan to investigator's choice of irinotecan or topotecan. Data from either the first-line trial of Zepzelca in combination with Tecentriq or the PharmaMar trial could serve to confirm clinical benefit of Zepzelca and secure full approval in the U.S.

In addition, we have an ongoing Phase 4 observational study to collect real world safety and outcome data in adult Zepzelca monotherapy patients with SCLC who progress on or after prior platinum-containing chemotherapy.

In June 2022, we announced the FDA had cleared our Investigational New Drug application for JZP815 and, in October 2022, we enrolled the first patient in a Phase 1 trial. JZP815 is an investigational stage pan-RAF kinase inhibitor that targets specific components of the mitogen-activated protein kinase pathway that, when activated by oncogenic mutations, can be a frequent driver of human cancer.

In April 2022, we announced that we had entered into a licensing and collaboration agreement with Werewolf Therapeutics, Inc., or Werewolf, to acquire exclusive global development and commercialization rights to Werewolf's investigational WTX-613, now referred to as JZP898. Under the terms of the agreement, we made an upfront payment of $15.0 million to Werewolf, and Werewolf is eligible to receive development, regulatory and commercial milestone payments of up to $1.26 billion. If approved, Werewolf is eligible to receive a tiered, mid-single-digit percentage royalty on net sales of JZP898. This transaction underscores our commitment to enhancing our pipeline to deliver novel oncology therapies to patients, and also provides us with an opportunity to expand into immuno-oncology. JZP898 is a differentiated, conditionally-activated interferon alpha, or IFNα, INDUKINE™ molecule. We initiated a Phase 1 clinical trial of JZP898 in late 2023.

Our neuroscience R&D efforts include an ongoing Phase 3 trial of Epidyolex for LGS, DS and TSC in Japan initiated in October 2022.

In December 2021, we initiated Phase 2 clinical trials for suvecaltamide (JZP385), for essential tremor, or ET. Additionally, in November 2022, we initiated a Phase 2 trial of suvecaltamide in patients with Parkinson's disease tremor. In December 2023, we announced that our Phase 2 clinical trial for JZP150 for treatment of post-traumatic stress disorder, or PTSD, did not meet the primary endpoint. We plan to fully evaluate these data; however, based on top-line results we do not anticipate moving forward with additional JZP150 development in PTSD. We are also pursuing early-stage activities related to the development of JZP324, an extended-release low sodium, oxybate formulation that we believe could provide a clinically meaningful option for narcolepsy patients.

In May 2022, we announced that we had entered into a licensing agreement with Sumitomo Pharma Co., Ltd, or Sumitomo, to acquire exclusive development and commercialization rights in the United States, Europe and other territories for JZP441, also known as DSP-0187, a potent, highly selective oral orexin-2 receptor agonist with potential application for the treatment of narcolepsy, IH and other sleep disorders. Under the terms of the agreement, we made an upfront payment of $50 million to Sumitomo, and Sumitomo is eligible to receive development, regulatory and commercial milestone payments of up to $1.09 billion. If approved, Sumitomo is eligible to receive a tiered, low double-digit royalty on our net sales of JZP441. In November 2023, we announced that we achieved initial proof-of-concept in our Phase 1 clinical trial program in healthy volunteers as demonstrated by the Maintenance of Wakefulness Test (MWT). At that time, we also noted the program was being paused as we analyze safety findings related to visual disturbances and cardiovascular effects; no liver toxicity signals were observed. We are committed to orexin-2 agonist development and have a backup orexin-2 receptor agonist program.

Below is a summary of our key ongoing and planned development projects related to our products and pipeline and their corresponding current stages of development:

Product Candidates	Description
ONCOLOGY	
Regulatory Review	
Zanidatamab	Previously treated, advanced HER2-expressing BTC (ongoing trial) (pivotal trial)
Phase 3	
Zanidatamab	First-line HER2-positive GEA (ongoing trial)
Zanidatamab	First-line HER2-positive BTC (ongoing trial)
Zepzelca	First-line extensive stage SCLC in combination with Tecentriq (collaboration with Roche) (ongoing trial) Confirmatory second-line trial (PharmaMar study) (ongoing trial)
Vyxeos	AML or high-risk Myelodysplastic Syndrome, or MDS (AML18) (cooperative group studies) (ongoing trial) Newly diagnosed adults with standard- and high-risk AML (AML Study Group cooperative group study) (ongoing trial) Newly diagnosed pediatric patients with AML (Children's Oncology Group cooperative group study) (ongoing trial)
Phase 2	
Zanidatamab	HER2-expressing GEA, BTC or colorectal cancer in combination with standard first-line chemotherapy (ongoing trial)
Vyxeos	High-risk MDS (European Myelodysplastic Syndromes) (cooperative group study) (ongoing trial) Newly diagnosed untreated patients with intermediate- and high-risk AML (cooperative group study) (ongoing trial)
Vyxeos + other approved therapies	Relapsed/refractory, or R/R AML or hypomethylating agent failure MDS (MD Anderson collaboration study) (ongoing trial) De novo or R/R AML (MD Anderson collaboration study) (ongoing trial)
Phase 2a	
Zanidatamab	Previously treated HER2+HR+ breast cancer in combination with palbociclib (ongoing trial)
Phase 1b/2	
Zanidatamab	First-line breast cancer and GEA (BeiGene trial) (ongoing trial)
Zanidatamab	HER2-expressing breast cancer in combination with ALX148 (ongoing trial)
Phase 1	
JZP815	Raf and Ras mutant tumors (acquired from Redx Pharma plc, or Redx) (ongoing trial)
Zanidatamab	Previously treated metastatic HER2-expressing cancers in combination with select antineoplastic therapies (ongoing trial)
JZP341 (long-acting *Erwinia* asparaginase)	Solid tumors (licensed from Ligand Pharmaceuticals Incorporated, or Ligand) (ongoing trial)
JZP898	Conditionally-activated IFNα INDUKINE™ molecule in solid tumors (ongoing trial)
Vyxeos	Low intensity dosing for higher risk MDS (MD Anderson collaboration study) (ongoing trial)
Preclinical	
KRAS inhibitor targets	G12D selective and pan-KRAS molecules (acquired from Redx)
Undisclosed target	Ras/Raf/MAP kinase pathway (collaboration with Redx)
Undisclosed targets	Oncology
CombiPlex®	Hematology/oncology exploratory activities
NEUROSCIENCE	
Phase 3	
Epidyolex	LGS, TSC and DS (ongoing trial in Japan)

Phase 2b	
Suvecaltamide (JZP385)	ET (ongoing trial)
Phase 2	
Suvecaltamide (JZP385)	Parkinson's disease tremor (ongoing trial)
Phase 1	
JZP324	Oxybate extended-release formulation (planned trial)
JZP441*	Potent, highly selective oral orexin-2 receptor agonist (paused)
Undisclosed cannabinoids	Other neuroscience (ongoing trials)
Preclinical	
Undisclosed targets	Sleep Epilepsy Other Neuroscience

*Also known as DSP-0187

Operational Excellence

We remain focused on continuing to build excellence in areas that we believe will give us a competitive advantage, including maintaining an increasingly agile and adaptable commercialization engine and strengthening our customer-focused market expertise across patients, providers and payors. We are continuously refining our approach to engage customers by strengthening alignment and integration across functions and across regions. This includes deploying a mix of in-person and digital initiatives at scientific congresses designed to provide promotional and non-promotional interactions as well as supporting our field-based teams with digital customer interaction tools, training and content. These initiatives are representative of our enterprise operating model evolution that is directly linked to our corporate strategy and are designed to better enable our teams to work collaboratively on an aligned and shared agenda through both in-person and digital interactions. In most geographies, medical congresses and healthcare practices have resumed pre-pandemic levels of in-person activities.

Other Challenges, Risks and Trends Related to Our Business

Historically, our business was substantially dependent on Xyrem and our financial results were significantly influenced by sales of Xyrem . Our operating plan assumes that Xywav, with 92% lower sodium compared to high-sodium oxybates, depending on the dose, absence of a sodium warning and dosing titration option, will remain the treatment of choice for patients who can benefit from oxybate treatment. In June 2021, FDA recognized seven years of ODE for Xywav in narcolepsy through July 21, 2027, stating that Xywav is clinically superior to Xyrem by means of greater safety due to reduced chronic sodium burden. While we expect that our business will continue to meaningfully depend on oxybate revenues, there is no guarantee that oxybate revenues will remain at current levels.

Our ability to successfully commercialize Xywav will depend on, among other things, our ability to maintain adequate payor coverage and reimbursement for Xywav and acceptance of Xywav by physicians and patients, including of Xywav for the treatment of IH in adults. In an effort to support strong adoption of Xywav, we are focused on providing robust patient copay and savings programs and facilitating payor coverage for Xywav.

Xywav and Xyrem face competition from a branded product for treatment of cataplexy and/or EDS in narcolepsy. Avadel's Lumryz was launched in the U.S. market in June 2023. On June 22, 2023, we filed a complaint in the United States District Court for the District of Columbia seeking a declaration that FDA's approval of the New Drug Application, or NDA, for Avadel's Lumryz was unlawful. In the complaint, we allege that FDA acted outside its authority under the Orphan Drug Act, when, despite ODE protecting Xywav, FDA approved the Lumryz NDA and granted Lumryz ODE based on FDA's finding that Lumryz makes a major contribution to patient care and is therefore clinically superior to Xywav and Xyrem. We cannot at this time predict the timing or ultimate outcome of this litigation or the impact of this litigation on our business.

In addition, in January 2023, our oxybate products began to face competition from an authorized generic, or AG, version of high-sodium oxybate pursuant to a settlement agreement we entered into with an abbreviated new drug application, or ANDA, filer. In July 2023, a volume-limited ANDA filer launched an AG version of high-sodium oxybate. These AG products have negatively impacted and are expected to continue to negatively impact Xyrem and Xywav sales for patients with narcolepsy. Specifically, a wholly owned subsidiary of Hikma Pharmaceuticals PLC, or Hikma, launched its AG version of sodium oxybate in January 2023 and Amneal Pharmaceuticals LLC, or Amneal, launched its AG version of sodium oxybate in July 2023. Hikma has elected to continue to sell the Hikma AG product, with royalties to be paid to us, for a total of up to four years beginning in January 2024, which election may be terminated by Hikma in accordance with the notice provisions in the agreements between the parties. We have the right to receive a meaningful royalty from Hikma on net sales of the Hikma AG

product; the royalty rate was fixed for the second half of 2023. There was a substantial increase in the royalty rate beginning in January 2024, which will remain fixed for the duration of the agreement's term. We are also paid for supply of the Hikma AG product and reimbursed by Hikma for a portion of the services costs associated with the operation of the Xywav and Xyrem risk evaluation and mitigation strategy, or REMS, and distribution of the Hikma AG product. We also granted Hikma a license to launch its own generic sodium oxybate product but, if it elects to launch its own generic product, Hikma will no longer have the right to sell the Hikma AG product. In addition, Hikma would need to set up its own REMS, which must be open to any other company seeking to commercialize a sodium oxybate product. In our settlements with Amneal, Lupin Inc., or Lupin, and Par Pharmaceutical, Inc., or Par, we granted each party the right to sell a limited volume of an AG product in the U.S. beginning on July 1, 2023 and ending on December 31, 2025, with royalties to be paid to us. Amneal launched its AG version of sodium oxybate in July 2023. At this time, Amneal has rights to sell a low-single-digit percentage of historical Xyrem sales over each 6-month sales period. At this time, Lupin and Par have elected not to launch an AG product. AG products will be distributed through the same REMS as Xywav and Xyrem. We also granted each of Amneal, Lupin and Par a license to launch its own generic sodium oxybate product under its ANDA on or after December 31, 2025, or earlier under certain circumstances, including the circumstance where Hikma elects to launch its own generic product. If Amneal, Lupin or Par elects to launch its own generic product under such circumstance, it will no longer have the right to sell an AG product. In addition, any company commercializing a generic version of high-sodium oxybate would need to establish its own REMS, or join an existing REMS operated by another company.

In the future, we expect our oxybate products to continue to face competition from generic versions of high-sodium oxybate pursuant to settlement agreements we entered into with multiple ANDA filers. In addition, we received notices in June 2021 and February 2023, that Lupin and Teva, respectively, filed ANDAs for generic versions of Xywav. On October 13, 2023, Lupin announced that it has received tentative approval for its application to market a generic version of Xywav. Generic competition can decrease the net prices at which branded products, such as Xywav and Xyrem are sold, as can competition from other branded products. In addition, we have increasingly experienced pressure from third party payors to agree to discounts, rebates or restrictive pricing terms, and we cannot guarantee we will be able to agree to commercially reasonable terms with PBMs, or similar organizations and other third party payors, or that we will be able to ensure patient access and acceptance on formularies. Entering into agreements with PBMs or similar organizations and payors to ensure patient access has and may continue to result in decreased net prices for some of our products. Moreover, generic or AG high-sodium oxybate products or branded high-sodium oxybate entrants in narcolepsy, such as Avadel's Lumryz, have had and may continue to have the effect of changing payor or formulary coverage of Xywav or Xyrem in favor of other products, and indirectly adversely affect sales of Xywav and Xyrem.

Our financial condition, results of operations and growth prospects are also dependent on our ability to maintain or increase sales of Epidiolex/Epidyolex in the U.S. and Europe, which is subject to many risks and there is no guarantee that we will be able to continue to successfully commercialize Epidiolex/Epidyolex for its approved indications. The commercial success of Epidiolex/Epidyolex depends on the extent to which patients and physicians accept and adopt Epidiolex/Epidyolex as a treatment for seizures associated with LGS, DS and TSC, and we do not know whether our or others' estimates in this regard will be accurate. Physicians may not prescribe Epidiolex and patients may be unwilling to use Epidiolex/Epidyolex if coverage is not provided or reimbursement is inadequate to cover a significant portion of the cost. Additionally, any negative development for Epidiolex/Epidyolex in the market, in clinical development for additional indications, or in regulatory processes in other jurisdictions, may adversely impact the commercial results and potential of Epidiolex/Epidyolex. Moreover, we expect that Epidiolex will face competition from generic products in the future. For example, in November and December 2022, we received notices from ten ANDA filers that they have each filed with FDA an ANDA for a generic version of Epidiolex. In addition, there are non-FDA approved cannabidiol preparations being made available from companies through the state-enabled medical marijuana industry, which might attempt to compete with Epidiolex. Thus, significant uncertainty remains regarding the commercial potential of Epidiolex/Epidyolex.

In addition to our neuroscience products and product candidates, we are commercializing a portfolio of oncology products, including Rylaze, Zepzelca, Defitelio and Vyxeos. An inability to effectively commercialize Rylaze, Zepzelca, Defitelio and Vyxeos and to maximize their potential where possible through successful research and development activities could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

A key aspect of our growth strategy is our continued investment in our evolving and expanding R&D activities. If we are not successful in the clinical development of our product candidates, if we are unable to obtain regulatory approval for our product candidates in a timely manner, or at all, or if sales of an approved product do not reach the levels we expect, our anticipated revenue from our product candidates would be negatively affected, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

In addition to continued investment in our R&D pipeline, we intend to continue to grow our business by acquiring or in-licensing, and developing, including with collaboration partners, additional products and product candidates that we believe are highly differentiated and have significant commercial potential. Failure to identify and acquire, in-license or develop additional

products or product candidates, successfully manage the risks associated with integrating any products or product candidates into our portfolio or the risks arising from anticipated and unanticipated problems in connection with an acquisition or in-licensing, such as the GW Acquisition, could have a material adverse effect on our business, results of operations and financial condition.

The success of the GW Acquisition will depend, in part, on our ability to realize the anticipated benefits from the combination of our and GW's historical businesses. Nonetheless, Epidiolex and the other products and technologies acquired may not be successful or continue to grow at the same rate as if our companies operated independently or they may require significantly greater resources and investments than originally anticipated. For example, in the third quarter of 2022, we recorded a $133.6 million asset impairment charge as a result of the decision to discontinue the nabiximols program. As a result, the anticipated benefits of the GW Acquisition may not be realized at the expected level, within the expected timeframe or at all or may take longer to realize or cost more than expected, which could materially and adversely affect our business, financial condition, results of operations and growth prospects.

Our industry has been, and is expected to continue to be, subject to healthcare cost containment and drug pricing scrutiny by regulatory agencies in the U.S. and internationally. If new healthcare policies or reforms intended to curb healthcare costs are adopted or if we experience negative publicity with respect to pricing of our products or the pricing of pharmaceutical drugs generally, the prices that we charge for our products may be affected, our commercial opportunity may be limited and/or our revenues from sales of our products may be negatively impacted. For example, the Inflation Reduction Act of 2022 among other things, requires the U.S. Department of Health and Human Services Secretary to negotiate, with respect to Medicare units and subject to a specified cap, the price of a set number of certain high Medicare spend drugs and biologicals per year starting in 2026, penalizes manufacturers of certain Medicare Parts B and D drugs for price increases above inflation, and makes several changes to the Medicare Part D benefit, including a limit on annual out-of-pocket costs, and a change in manufacturer liability under the program, that could negatively affect our business and financial condition. In addition, under the Medicaid Drug Rebate Program, rebates owed by manufacturers are no longer subject to a cap on the rebate amount, which could adversely affect our rebate liability. We are also subject to increasing pricing pressure and restrictions on reimbursement imposed by payors. If we fail to obtain and maintain adequate formulary positions and institutional access for our current products and future approved products, we will not be able to achieve a return on our investment and our business, financial condition, results of operations and growth prospects would be materially adversely affected.

While certain preparations of cannabis remain Schedule I controlled substances, if such products are approved by FDA for medical use in the U.S. they are rescheduled to Schedules II-V, since approval by FDA satisfies the "accepted medical use" requirement; or such products may be removed from control under the Controlled Substances Act entirely. If any of our product candidates receive FDA approval, the Department of Health and Human Services and the U.S. Drug Enforcement Administration will make a scheduling determination. U.S. or foreign regulatory agencies may request additional information regarding the abuse potential of our products which may require us to generate more clinical or other data than we currently anticipate to establish whether or to what extent the substance has an abuse potential, which could increase the cost, delay the approval and/or delay the launch of that product.

Finally, business practices by pharmaceutical companies, including product formulation improvements, patent litigation settlements, and REMS programs, have increasingly drawn public scrutiny from legislators and regulatory agencies, with allegations that such programs are used as a means of improperly blocking or delaying competition. Government investigations with respect to our business practices, including as they relate to the Xywav and Xyrem REMS, the launch of Xywav, our Xyrem patent litigation settlement agreements or otherwise, could cause us to incur significant monetary charges to resolve these matters and could distract us from the operation of our business and execution of our strategy. For example, in July 2022, we received a subpoena from the U.S. Attorney's Office for the District of Massachusetts requesting documents related to Xyrem and U.S. Patent No. 8,772,306 ("Method of Administration of Gamma Hydroxybutyrate with Monocarboxylate Transporters"), product labeling changes for Xyrem, communications with FDA and the U.S. Patent and Trademark Office, pricing of Xyrem, and other related documents. We may also become subject to similar investigations by other state or federal governmental agencies. The investigation by the U.S. Attorney's Office and any additional investigations or litigation related to the subject matter of this investigation may result in damages, fines, penalties, financial charges to resolve the matter or administrative sanctions against us, negative publicity or other negative actions that could harm our reputation, reduce demand for Xyrem and/or reduce coverage of Xyrem, including by federal health care programs and state health care programs. In addition, from June 2020 to May 2022, a number of lawsuits were filed on behalf of purported direct and indirect Xyrem purchasers, alleging that the patent litigation settlement agreements we entered with certain generic companies violate state and federal antitrust and consumer protection laws. For additional information on these lawsuits and other legal matters, see Note 9, Commitments and Contingencies—Legal Proceedings of the Notes to Condensed Consolidated Financial Statements, included in Part I, Item 1 of this Quarterly Report on Form 10-Q. It is possible that additional lawsuits will be filed against us making similar or related allegations. We cannot predict the outcome of these or potential additional lawsuits; however, if the plaintiffs were to be successful in their claims against us, they may be entitled to injunctive relief or we may be required to pay significant monetary damages. Moreover, we are, and expect to continue to be, the subject of various claims, legal proceedings,

and government investigations apart from those set forth above that have arisen in the ordinary course of business that have not yet been fully resolved and that could adversely affect our business and the execution of our strategy. Any of the foregoing risks and uncertainties could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

These risks and uncertainties are discussed in greater detail, along with other risks and uncertainties, in “Risk Factors” in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2023, as supplemented by the risks and uncertainties described in "Risk Factors" in Part II, Item 1A of this Quarterly Report on Form 10-Q.

Results of Operations

The following table presents our revenues and expenses (in thousands, except percentages):

	Three Months Ended March 31,		Increase/
	2024	2023	(Decrease)
Product sales, net	$ 842,102	$ 884,219	(5) %
Royalties and contract revenues	59,881	8,593	N/A(1)
Cost of product sales (excluding amortization of acquired developed technologies)	95,487	128,644	(26) %
Selling, general and administrative	351,712	297,917	18 %
Research and development	222,847	189,410	18 %
Intangible asset amortization	155,730	149,786	4 %
Acquired in-process research and development	10,000	1,000	N/A(1)
Interest expense, net	66,116	74,147	(11) %
Foreign exchange (gain) loss	1,693	(3,193)	(153) %
Income tax expense (benefit)	11,669	(15,324)	(176) %
Equity in loss of investees	1,347	1,005	34 %

(1) Comparison to prior period not meaningful.

Revenues

The following table presents our net product sales, royalties and contract revenues, and total revenues (in thousands, except percentages):

	Three Months Ended March 31,		Increase/
	2024	2023	(Decrease)
Xywav	$ 315,300	$ 277,761	14 %
Xyrem	64,232	178,130	(64) %
Epidiolex/Epidyolex	198,716	188,909	5 %
Sativex	2,735	7,098	(61) %
Total Neuroscience	580,983	651,898	(11) %
Rylaze/Enrylaze	102,750	85,927	20 %
Zepzelca	75,100	67,181	12 %
Defitelio/defibrotide	47,676	39,079	22 %
Vyxeos	32,023	36,700	(13) %
Total Oncology	257,549	228,887	13 %
Other	3,570	3,434	4 %
Product sales, net	842,102	884,219	(5) %
High-sodium oxybate AG royalty revenue	49,947	2,096	N/A(1)
Other royalty and contract revenues	9,934	6,497	53 %
Total revenues	$ 901,983	$ 892,812	1 %

(1) Comparison to prior period not meaningful.

Product Sales, Net

Xywav product sales increased in the three months ended March 31, 2024, compared to the same period in 2023, primarily due to increased sales volumes of 16% and, to a lesser extent, a higher selling price, offset by higher gross to net deductions. We continue to see Xywav adoption in patients with narcolepsy driven by educational initiatives around efficacy and the benefit of lowering sodium intake. In addition, Xywav product sales were positively impacted by adoption in IH; Xywav is the only oxybate therapy approved to treat IH and we see continued growth of new prescribers. Exiting the quarter, there were 9,900 patients taking Xywav for narcolepsy and 3,050 taking Xywav for IH, an increase of approximately 9% and 53%, respectively, compared to the same period in 2023. Xyrem product sales decreased in the three months ended March 31, 2024, compared to the same period in 2023, primarily due to decreased sales volumes of 63%, due to the adoption of Xywav by existing Xyrem patients, the availability of high-sodium oxybate competition, changes to formulary coverage impacting narcolepsy patients, and higher gross to net deductions, offset by a higher selling price. Epidiolex/Epidyolex product sales increased in the three months ended March 31, 2024, compared to the same period in 2023, primarily due to increased sales volumes of 5%, due to increased demand and geographic expansion, and a higher average selling price, partially offset by higher gross to net deductions.

Rylaze/Enrylaze product sales increased in the three months ended March 31, 2024, compared to the same period in 2023, primarily due to increased sales volumes of 19% and, to a lesser extent, a higher selling price, offset by higher gross to net deductions. The increased volumes reflect the strong demand for Rylaze driven by robust adoption in pediatric asparaginase-based oncology protocols in the U.S, adoption of the Monday/Wednesday/Friday dosing regimen, along with use of Rylaze in the first line setting and in the treatment of adolescents and young adults. Zepzelca product sales increased in the three months ended March 31, 2024, compared to the same period in 2023, primarily due to increased sales volumes and a higher selling price. Defitelio/defibrotide product sales increased in the three months ended March 31, 2024, compared to the same period in 2023, primarily due to increased sales volumes and a higher average selling price. Vyxeos product sales decreased in the three months ended March 31, 2024, primarily due to a decrease in sales volumes and higher gross to net deductions, partially offset by a higher average selling price.

We expect total product sales will increase in 2024 over 2023, primarily due to our key growth drivers; Xywav, through continued growth in the IH market, Epidiolex through growth in current markets and expansion into new markets and Rylaze through demand, offset by a decrease in sales of Xyrem due to the impact of high-sodium oxybate competition.

Royalties and Contract Revenues

Royalties and contract revenues increased in the three months ended March 31, 2024, compared to the same period in 2023, primarily due to royalty revenue received from Hikma Pharmaceuticals plc on net sales of their high sodium oxybate AG. We expect royalties and contract revenues to increase in 2024 compared to 2023, primarily due to increased royalty revenues arising from net sales of high-sodium oxybate AG, primarily due to higher royalty rates in 2024.

Cost of Product Sales

Cost of product sales decreased in the three months ended March 31, 2024, compared to the same period in 2023, primarily due to a reduction in the acquisition accounting inventory fair value step-up expense, or fair value step-up expense. Gross margin as a percentage of net product sales was 88.7% for the three months ended March 31, 2024 compared to 85.5% for the same period in 2023, due to a reduction in fair value step-up expense. We expect our cost of product sales to increase in 2024 compared to 2023, primarily driven by a change in product mix.

Selling, General and Administrative Expenses

Selling, general and administrative expenses increased in the three months ended March 31, 2024, compared to the same period in 2023, primarily due to an increase in compensation-related expenses of $18.3 million primarily driven by higher headcount in support of our key growth drivers, increased marketing investment in our priority programs of $9.6 million and litigation costs of $8.2 million.

We expect selling, general and administrative expenses in 2024 to increase compared to 2023, primarily due to continued investment in our key growth drivers, such as Xywav in IH, Epidiolex and Rylaze along with increased employee expenses.

Research and Development Expenses

Research and development expenses consist primarily of costs related to clinical studies and outside services, personnel expenses and other research and development costs. Clinical study and outside services costs relate primarily to services performed by clinical research organizations, materials and supplies, and other third party fees. Personnel expenses relate primarily to salaries, benefits and share-based compensation. Other research and development expenses primarily include

overhead allocations consisting of various support and facilities-related costs. We do not track fully-burdened research and development expenses on a project-by-project basis. We manage our research and development expenses by identifying the research and development activities that we anticipate will be performed during a given period and then prioritizing efforts based on our assessment of which development activities are important to our business and have a reasonable probability of success, and by dynamically allocating resources accordingly. We also continually review our development pipeline projects and the status of their development and, as necessary, reallocate resources among our development pipeline projects that we believe will best support the future growth of our business.

The following table provides a breakout of our research and development expenses by major categories of expense (in thousands):

	Three Months Ended March 31,	
	2024	2023
Clinical studies and outside services	$ 131,466	$ 106,345
Personnel expenses	72,996	60,391
Other	18,385	22,674
Total	$ 222,847	$ 189,410

Research and development expenses increased by $33.4 million in the three months ended March 31, 2024, compared to the same period in 2023. Clinical studies and outside services costs increased in the three months ended March 31, 2024, compared to the same period in 2023, primarily due to higher costs related to zanidatamab programs, and, to a lesser extent, JZP385. Personnel expenses increased in the three months ended March 31, 2024, compared to the same period in 2023, primarily driven by increased compensation costs and higher headcount in support of our development programs.

For 2024, we expect that our research and development expenses will continue to increase compared to 2023 as we prepare for anticipated data read-outs from clinical trials, initiate and undertake additional clinical trials and related development work primarily relating to zanidatamab.

Intangible Asset Amortization

Intangible asset amortization increased in the three months ended March 31, 2024, compared to the same period in 2023, primarily due to the impact of foreign currency translation adjustments. Intangible asset amortization for 2024 is expected to be in line with 2023.

Acquired In-Process Research and Development

Acquired in-process research and development, or IPR&D, expense in the three months ended March 31, 2024, related to the upfront payment of $10.0 million made in connection with our asset purchase and collaboration agreement with Redx to acquire global rights to the Kirsten rat sarcoma virus, or KRAS, Inhibitor Program.

Interest Expense, Net

Interest expense, net decreased by $8.0 million in the three months ended March 31, 2024, compared to the same period in 2023, primarily driven by higher interest income on investments. We expect interest expense, net to decrease in 2024 compared to 2023, primarily due to lower interest expense following the repricing of the seven-year $3.1 billion term loan B facility, or the Dollar Term Loan, for further information on this please refer to Liquidity and Capital Resources.

Foreign Exchange (Gain) Loss

The foreign exchange (gain) loss is primarily related to the translation of sterling and euro-denominated net monetary liabilities, primarily intercompany balances, held by subsidiaries with a U.S. dollar functional currency and related foreign exchange forward contracts not designated as hedging instruments.

Income Tax Expense (Benefit)

Our income tax expense was $11.7 million for the three months ended March 31, 2024, resulting primarily from tax d eficiencies from share-based compensation. Our income tax benefit was $15.3 million for the same period in 2023, relating to tax arising on income or losses in Ireland, the U.K., the U.S. and certain other foreign jurisdictions, offset by deductions on subsidiary equity, foreign derived intangible income, or FDII, and patent box benefits.

Liquidity and Capital Resources

As of March 31, 2024, we had cash, cash equivalents and investments of $1.8 billion, borrowing availability under our five-year $500.0 million revolving credit facility, or the Revolving Credit Facility, of $500.0 million and long-term debt principal balance of $5.8 billion. Our long-term debt included $2.7 billion aggregate principal amount of the Dollar Term Loan, $1.5 billion in aggregate principal amount of 4.375% senior secured notes, due 2029, or the Secured Notes, $1.0 billion principal amount on our 2.00% exchangeable senior notes due 2026 and $575.0 million principal amount on our 1.50% exchangeable senior notes due 2024, or 2024 Notes. We generated cash flows from operations of $267.2 million during the three months ended March 31, 2024, and we expect to continue to generate positive cash flows from operations which will enable us to operate our business and de-lever our balance sheet over time.

Since the closing of the acquisition of GW in May 2021, we have fully repaid our Euro Term Loan €625.0 million, or $753.0 million and made voluntary and mandatory repayments of $300.0 million and $85.3 million, respectively, relating to the Dollar Term Loan.

We have a significant amount of debt outstanding on a consolidated basis. For a more detailed description of our debt arrangements, including information relating to our scheduled maturities with respect to our long-term debt, see Note 8, Debt, of the notes to the condensed consolidated financial statements, included in Part I, Item 1 of this Quarterly Report on Form 10-Q. This substantial level of debt could have important consequences to our business, including, but not limited to the factors set forth in “Risk Factors” of our Annual Report on Form 10-K for the year ended December 31, 2023, under the heading “We have incurred substantial debt, which could impair our flexibility and access to capital and adversely affect our financial position, and our business would be adversely affected if we are unable to service our debt obligations.”

We believe that our existing cash, cash equivalents and investments balances, cash we expect to generate from operations and funds available under our Revolving Credit Facility will be sufficient to fund our operations and to meet our existing obligations for the foreseeable future. The adequacy of our cash resources depends on many assumptions, including primarily our assumptions with respect to product sales and expenses, as well as the other factors set forth in "Risk Factors" under the heading "Risks Related to our Lead Products and Product Candidates” in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2023, as supplemented by the risks described in “Risk Factors" under the heading “Delays or problems in the supply of our products for sale or for use in clinical trials, loss of our single source suppliers or failure to comply with manufacturing regulations could materially and adversely affect our business, financial condition, results of operations and growth prospects” in Part II, Item 1A of this Quarterly Report on Form 10-Q, as well as those factors set forth in “Risk Factors" under the heading and “To continue to grow our business, we will need to commit substantial resources, which could result in future losses or otherwise limit our opportunities or affect our ability to operate and grow our business”in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2023.

Our assumptions may prove to be wrong or other factors may adversely affect our business, and as a result we could exhaust or significantly decrease our available cash resources, and we may not be able to generate sufficient cash to service our debt obligations which could, among other things, force us to raise additional funds and/or force us to reduce our expenses, either of which could have a material adverse effect on our business.

To continue to grow our business over the longer term, we plan to commit substantial resources to product acquisition and in-licensing, product development, clinical trials of product candidates and expansion of our commercial, development, manufacturing and other operations. In this regard, we have evaluated and expect to continue to evaluate a wide array of strategic transactions as part of our strategy to acquire or in-license and develop additional products and product candidates. Acquisition opportunities that we pursue could materially affect our liquidity and capital resources and may require us to incur additional indebtedness, seek equity capital or both. We regularly evaluate the performance of our products and product candidates to ensure fit within our portfolio and support efficient allocation of capital. In addition, we may pursue new operations or continue the expansion of our existing operations. Accordingly, we expect to continue to opportunistically seek access to additional capital to license or acquire additional products, product candidates or companies to expand our operations or for general corporate purposes. Raising additional capital could be accomplished through one or more public or private debt or equity financings, collaborations or partnering arrangements. However, our ability to raise additional capital may be adversely impacted by worsening global economic conditions and the recent disruptions to, and volatility in, the credit and financial markets in the U.S. and worldwide resulting from the effects of inflationary pressures, potential future bank failures, or otherwise. Accordingly, we could experience an inability to access additional capital or our liquidity could otherwise be impacted, which could in the future negatively affect our capacity for certain corporate development transactions or our ability to make other important, opportunistic investments. In addition, under Irish law we must have authority from our shareholders to issue any ordinary shares, including ordinary shares that are part of our authorized but unissued share capital, and we currently have such authorization. Moreover, as a matter of Irish law, when an Irish public limited company issues ordinary shares to new shareholders for cash, the company must first offer those shares on the same or more favorable terms to existing shareholders on a pro rata basis, unless this statutory pre-emption obligation is dis-applied, or opted-out of, by approval of its shareholders. At our annual general meeting of shareholders in August 2023, our shareholders voted to approve our proposal to

dis-apply the statutory pre-emption obligation on terms that are substantially more limited than our general pre-emption opt-out authority that had been in effect prior to August 4, 2021. This current pre-emption opt-out authority is due to expire in February 2025. If we are unable to obtain further pre-emption authorities from our shareholders in the future, or otherwise continue to be limited by the terms of new pre-emption authorities approved by our shareholders in the future, our ability to use our unissued share capital to fund in-licensing, acquisition or other business opportunities, or to otherwise raise capital could be adversely affected. In any event, an inability to borrow or raise additional capital in a timely manner and on attractive terms could prevent us from expanding our business or taking advantage of acquisition opportunities, and could otherwise have a material adverse effect on our business and growth prospects. In addition, if we use a substantial amount of our funds to acquire or in-license products or product candidates, we may not have sufficient additional funds to conduct all of our operations in the manner we would otherwise choose. Furthermore, any equity financing would be dilutive to our shareholders, and could require the consent of the lenders under our credit agreement, or the Credit Agreement, that provides for (i) the Dollar Term Loan, (ii) the Euro Term Loan and, together with the Dollar Term Loan, collectively known as the Term Loan and (iii) the Revolving Credit Facility, and the indenture for the Secured Notes for certain financings.

In November 2016, our board of directors authorized a share repurchase program and as of March 31, 2024 had authorized the repurchase of ordinary shares having an aggregate purchase price of up to $1.5 billion, exclusive of any brokerage commissions. Under this program, which has no expiration date, we may repurchase ordinary shares from time to time on the open market. The timing and amount of repurchases will depend on a variety of factors, including the price of our ordinary shares, alternative investment opportunities, restrictions under the May 2021 credit agreement, corporate and regulatory requirements and market conditions. The share repurchase program may be modified, suspended or discontinued at any time without prior notice. During the three months ended March 31, 2024, no shares were repurchased. As of March 31, 2024, the remaining amount authorized under the share repurchase program was $161.4 million, exclusive of any brokerage commissions.

The following table presents a summary of our cash flows for the periods indicated (in thousands):

	Three Months Ended March 31,	
	2024	2023
Net cash provided by operating activities	$ 267,229	$ 320,708
Net cash used in investing activities	(271,904)	(4,822)
Net cash used in financing activities	(56,552)	(29,788)
Effect of exchange rates on cash and cash equivalents	(1,698)	331
Net increase (decrease) in cash and cash equivalents	$ (62,925)	$ 286,429

Operating activities

Net cash provided by operating activities decreased by $53.5 million in the three months ended March 31, 2024, compared to the same period in 2023, primarily due to the payment of accrued facility expenses of $52.2 million in the three months ended March 31, 2024.

Investing activities

Net cash used in investing activities increased by $267.1 million in the three months ended March 31, 2024, compared to the same period in 2023, primarily due to the following:

- $255.0 million net increase in the acquisition of investments, driven by time deposits; and
- $10.0 million upfront payment to Redx related to our asset purchase and collaboration agreement in the three months ended March 31, 2024.

Financing activities

Net cash used in financing activities increased by $26.8 million in the three months ended March 31, 2024, compared to the same period in 2023, primarily due to:

- A decrease of $20.7 million in proceeds from employee equity incentive and purchase plans; and
- An increase of $6.0 million in payment of employee withholding taxes related to share-based awards.

Debt

The summary of our outstanding indebtedness and scheduled maturities with respect to our long-term debt principal balances is included in Note 8, Debt, of the notes to condensed consolidated financial statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q. In January 2024, we entered into an amendment to the Credit Agreement, as described below. During the three months ended March 31, 2024, there were no other changes to our financing arrangements, as set forth in Note 12, Debt, of the Notes to Consolidated Financial Statements included in our Annual Report on Form 10-K for the year ended December 31, 2023.

Credit Agreement

On May 5, 2021, the Company, Jazz Financing Lux S.à.r.l., or Jazz Lux, and certain of our other subsidiaries, as borrowers, or, collectively with the Company and Jazz Lux, the "Borrowers", entered into the Credit Agreement by and among the Borrowers, the lenders and issuing banks from time to time party thereto, Bank of America, N.A., as administrative agent and U.S. Bank Trust Company, National Association, as collateral trustee, or the Credit Agreement, that provided for (i) the Dollar Term Loan which was drawn by Jazz Lux on the Closing Date in U.S. dollars (ii) the Euro Term Loan which was drawn by Jazz Lux on the Closing Date in Euros and (iii) the Revolving Credit Facility.

In January 2024, Jazz Lux entered into an amendment, or Repricing Amendment, to the Credit Agreement. Upon entry into the Repricing Amendment, certain existing lenders converted outstanding Dollar Term Loans into a new tranche of U.S. dollar term loans, or the Tranche B-1 Dollar Term Loans, and Jazz Lux borrowed $201.9 million aggregate principal amount of additional Tranche B-1 Dollar Term Loans, the proceeds of which were used to repay the outstanding Dollar Term Loans that were not converted. The Tranche B-1 Dollar Term Loans are a separate class of term loans under the Credit Agreement with the same material terms (including with respect to maturity, prepayment, security, covenants and events of default) as the previously outstanding Dollar Term Loans, with the interest rate amended as described below. The principal amount of Dollar Term Loans outstanding immediately prior to the Repricing Amendment and the outstanding principal amount of Tranche B-1 Dollar Term Loans immediately following the Repricing Amendment, each totaled $2.723 billion. The Tranche B-1 Dollar Term Loans bear interest at a rate equal to either (a) U.S dollar Secured Overnight Financing Rate, or Term SOFR, or (b) the prime lending rate, in each case, plus an applicable margin. The applicable margin for the Tranche B-1 Dollar Term Loans is 3.00% (in the case of Term SOFR borrowings) and 2.00% (in the case of borrowings at the prime lending rate), a decrease of 50 basis points from the applicable margin on the Initial Dollar Term Loans. The Tranche B-1 Dollar Term Loans are subject to a Term SOFR floor of 0.50%. The applicable margin for the Revolving Credit Facility ranges from 3.25% to 2.75% (in the case of Term SOFR borrowings) and 2.25% to 1.75% (in the case of borrowings at the prime lending rate), depending on our first lien secured net leverage ratio level. The Tranche B-1 Dollar Term Loan is subject to a Term SOFR floor of 0.50% and loans under the Revolving Credit Facility are not subject to a floor. The Revolving Credit Facility has a commitment fee payable on the undrawn amount ranging from 0.50% to 0.40% per annum based upon our first lien secured net leverage ratio. As of March 31, 2024, the interest rate and effective interest rate on the Tranche B-1 Dollar Term Loans were 8.44% and 9.04%, respectively. As of March 31, 2024, we had an undrawn Revolving Credit Facility totaling $500.0 million.

Contractual Obligations

During the three months ended March 31, 2024, there were no material changes to our contractual obligations as set forth in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended December 31, 2023.

Critical Accounting Estimates

To understand our financial statements, it is important to understand our critical accounting estimates. The preparation of our financial statements in conformity with U.S. generally accepted accounting principles requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates and assumptions are required in determining the amounts to be deducted from gross revenues and also with respect to the acquisition and valuation of intangibles and income taxes. Some of these judgments can be subjective and complex, and, consequently, actual results may differ from these estimates. For any given individual estimate or assumption we make, there may also be other estimates or assumptions that are reasonable. Although we believe our estimates and assumptions are reasonable, they are based upon information available at the time the estimates and assumptions were made.

Our critical accounting policies and significant estimates are detailed in our Annual Report on Form 10-K for the year ended December 31, 2023. Our critical accounting policies and significant estimates have not changed substantially from those previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2023.

Cautionary Note Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, which are subject to the "safe harbor" created by those sections. Forward-looking statements are based on our management's current plans, objectives, estimates, expectations and intentions and on information currently available to our management. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "could," "would," "expect," "plan," "anticipate," "believe," "estimate," "project," "predict," "propose," "intend," "continue," "potential," "possible," "foreseeable," "likely," "unforeseen" and similar expressions intended to identify forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance, time frames or achievements to be materially different from any future results, performance, time frames or achievements expressed or implied by the forward-looking statements. These known and unknown risks, uncertainties and other factors include, without limitation:

- Our inability to maintain or increase sales from our oxybate franchise would have a material adverse effect on our business, financial condition, results of operations and growth prospects.
- The introduction of new products in the U.S. market that compete with, or otherwise disrupt the market for, our oxybate products and product candidates has adversely affected and may continue to adversely affect sales of our oxybate products and product candidates.
- The distribution and sale of our oxybate products are subject to significant regulatory restrictions, including the requirements of a risk evaluation and mitigation strategy and safety reporting requirements, and these regulatory and safety requirements subject us to risks and uncertainties, any of which could negatively impact sales of Xywav and Xyrem.
- While we expect our oxybate products and Epidiolex/Epidyolex to remain our largest products, our success also depends on our ability to effectively commercialize our other existing products and potential future products.
- We face substantial competition from other companies, including companies with larger sales organizations and more experience working with large and diverse product portfolios, and competition from generic drugs.
- Adequate coverage and reimbursement from third party payors may not be available for our products and we may be unable to successfully contract for coverage from pharmacy benefit managers and other organizations; conversely, to secure coverage from these organizations, we may be required to pay rebates or other discounts or other restrictions to reimbursement, either of which could diminish our sales or adversely affect our ability to sell our products profitably.
- The pricing of pharmaceutical products has come under increasing scrutiny as part of a global trend toward healthcare cost containment and resulting changes in healthcare law and policy, including changes to Medicare, may impact our business in ways that we cannot currently predict, which could have a material adverse effect on our business and financial condition.
- In addition to access, coverage and reimbursement, the commercial success of our products depends upon their market acceptance by physicians, patients, third party payors and the medical community.
- Delays or problems in the supply of our products for sale or for use in clinical trials, loss of our single source suppliers or failure to comply with manufacturing regulations could materially and adversely affect our business, financial condition, results of operations and growth prospects.
- Our future success depends on our ability to successfully develop and obtain and maintain regulatory approvals for our late-stage product candidates and, if approved, to successfully launch and commercialize those product candidates.
- We may not be able to successfully identify and acquire or in-license additional products or product candidates to grow our business, and, even if we are able to do so, we may otherwise fail to realize the anticipated benefits of these transactions.
- Conducting clinical trials is costly and time-consuming, and the outcomes are uncertain. A failure to prove that our product candidates are safe and effective in clinical trials, or to generate data in clinical trials to support expansion of the therapeutic uses for our existing products, could materially and adversely affect our business, financial condition, results of operations and growth prospects.
- It is difficult and costly to protect our proprietary rights, and we may not be able to ensure their protection.

- We have incurred and may in the future incur substantial costs as a result of litigation or other proceedings relating to patents, other intellectual property rights and related matters, and we may be unable to protect our rights to, or commercialize, our products.
- Significant disruptions of information technology systems or data security breaches could adversely affect our business.
- We are subject to significant ongoing regulatory obligations and oversight, which may subject us to civil or criminal proceedings, investigations, or penalties and may result in significant additional expense and limit our ability to commercialize our products.
- If we fail to comply with our reporting and payment obligations under the Medicaid Drug Rebate program or other governmental pricing programs, we could be subject to additional reimbursement requirements, penalties, sanctions and fines, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.
- We have incurred substantial debt, which could impair our flexibility and access to capital and adversely affect our financial position, and our business would be adversely affected if we are unable to service our debt obligations.
- To continue to grow our business, we will need to commit substantial resources, which could result in future losses or otherwise limit our opportunities or affect our ability to operate and grow our business.

Additional discussion of the risks, uncertainties and other factors described above, as well as other risks material to our business, can be found under “Risk Factors” in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2023, as supplemented by the risks and uncertainties described in "Risk Factors" Part II, Item 1A.in this Quarterly Report on Form 10-Q.

Given these risks, uncertainties and other factors, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent our plans, objectives, estimates, expectations and intentions only as of the date of this filing. You should read this Quarterly Report on Form 10-Q completely and with the understanding that our actual future results and the timing of events may be materially different from what we expect. We hereby qualify our forward-looking statements by our cautionary statements. Except as required by law, we undertake no obligation to update or supplement any forward-looking statements publicly, or to update or supplement the reasons that actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

During the three months ended March 31, 2024, there were no material changes to our market risk disclosures as set forth in Part II, Item 7A“Quantitative and Qualitative Disclosures About Market Risk” in our Annual Report on Form 10-K for the year ended December 31, 2023.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures . We have carried out an evaluation under the supervision and with the participation of management, including our principal executive officer and principal financial officer, of our disclosure controls and procedures (as defined in Rule 13a-15(e) and 15d-15(e) of the Exchange Act) as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on their evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of March 31, 2024.

Limitations on the Effectiveness of Controls. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues, if any, within an organization have been detected. Accordingly, our disclosure controls and procedures are designed to provide reasonable, not absolute, assurance that the objectives of our disclosure control system are met and, as set forth above, our principal executive officer and principal financial officer have concluded, based on their evaluation as of the end of the period covered by this report, that our disclosure controls and procedures were effective to provide reasonable assurance that the objectives of our disclosure control system were met.

Changes in Internal Control over Financial Reporting. During the quarter ended March 31, 2024, there were no changes to our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

The information required to be set forth under this Item 1 is incorporated by reference to Note 9, Commitments and Contingencies—Legal Proceedings of the notes to condensed consolidated financial statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Item 1A. Risk Factors

Below we are providing, in supplemental form, changes to our risk factors from those previously disclosed in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2023. Our risk factors disclosed in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2023 provide additional discussion regarding these supplemental risks and we encourage you to read and carefully consider all of the risk factors disclosed in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2023, together with the below, for a more complete understanding of the risks and uncertainties material to our business.

Delays or problems in the supply of our products for sale or for use in clinical trials, loss of our single source suppliers or failure to comply with manufacturing regulations could materially and adversely affect our business, financial condition, results of operations and growth prospects.

The manufacture of pharmaceutical products requires significant expertise and capital investment, including the development of process controls required to consistently produce the API and the finished product in sufficient quantities while meeting detailed product specifications on a repeated basis. We and our suppliers may encounter difficulties in production, including difficulties with the supply of manufacturing materials, production costs and yields, process controls, quality control and quality assurance, including testing of stability, impurities and impurity levels and other product specifications by validated test methods, and compliance with strictly enforced U.S., state and non-U.S. regulations. In addition, we and our suppliers are subject to FDA's current Good Manufacturing Practices, or cGMP, requirements, federal and state controlled substances obligations and equivalent rules and regulations prescribed by non-U.S. regulatory authorities. If we or any of our suppliers encounter manufacturing, quality or compliance difficulties with respect to any of our products, whether due to the ongoing military conflict in Ukraine and related sanctions imposed against Russia (including as a result of disruptions of global shipping, the transport of products, energy supply, cybersecurity incidents and banking systems as well as of our ability to control input costs) or otherwise, we may be unable to obtain or maintain regulatory approval or meet commercial demand for such products, which could adversely affect our business, financial condition, results of operations and growth prospects. In addition, we could be subject to enforcement action by regulatory authorities for our failure to comply with cGMP with respect to the products we manufacture in our facilities as well as for our failure to adequately oversee compliance with cGMP by any of our third party suppliers operating under contract. Moreover, failure to comply with applicable legal and regulatory requirements subjects us and our suppliers to possible regulatory action, including restrictions on supply or shutdown, which may adversely affect our or a supplier's ability to supply the ingredients or finished products we need.

We have a manufacturing and development facility in Athlone, Ireland where we manufacture Xywav and Xyrem, a manufacturing plant in Villa Guardia, Italy where we produce the defibrotide drug substance and a manufacturing and development facility in the U.K. at Kent Science Park, where we produce Epidiolex/Epidyolex and have capability to develop product candidates. We currently do not have our own commercial manufacturing or packaging capability for our other products, their APIs or product candidates outside of those developed at Kent Science Park. As a result, our ability to develop and supply products in a timely and competitive manner depends primarily on third party suppliers being able to meet our ongoing commercial and clinical trial needs for API, other raw materials, packaging materials and finished products.

In part due to the limited market size for our products and product candidates, we have a single source of supply for most of our marketed products, product candidates and their APIs. Single sourcing puts us at risk of interruption in supply in the event of manufacturing, quality or compliance difficulties. If one of our suppliers fails or refuses to supply us for any reason, it would take a significant amount of time and expense to implement and execute the necessary technology transfer to, and to qualify, a new supplier. FDA and similar international or national regulatory bodies must approve manufacturers of the active and inactive pharmaceutical ingredients and certain packaging materials used in our products. If there are delays in qualifying new suppliers or facilities or a new supplier is unable to meet FDA's or similar international regulatory body's requirements for approval, there could be a shortage of the affected products for the marketplace or for use in clinical studies, or both, which could negatively impact our anticipated revenues and could potentially cause us to breach contractual obligations with customers or to violate local laws requiring us to deliver the product to those in need.

We are responsible for the manufacture and supply of Epidiolex/Epidyolex and other cannabinoid product candidates for commercial use and for use in clinical trials. The manufacturing of Epidiolex/Epidyolex and our product candidates

necessitates compliance with Good Manufacturing Practice, or GMP, and other regulatory requirements in jurisdictions internationally. Our ability to successfully manufacture Epidiolex/Epidyolex and other cannabinoid product candidates involves cultivation of botanical raw material from specific cannabinoid plants, extraction and purification processes, manufacture of finished products and labeling and packaging, which includes product information, tamper evidence and anti-counterfeit features, under tightly controlled processes and procedures. In addition, we must ensure chemical consistency among our batches, including clinical batches and, if approved, marketing batches. Demonstrating such consistency may require typical manufacturing controls as well as clinical data. We must also ensure that our batches conform to complex release specifications. We have a second site at which we can grow the specific cannabinoid plants that produce the CBD used in Epidiolex/Epidyolex and a second site at which we can crystallize the purified CBD from the liquid plant extract. A number of our product candidates (excluding Epidiolex/Epidyolex) consist of a complex mixture manufactured from plant materials, and because the release specifications may not be identical in all countries, certain batches may fail release testing and not be able to be commercialized. If we are unable to manufacture Epidiolex/Epidyolex or other product candidates in accordance with regulatory specifications, including GMP or if there are disruptions in our manufacturing process due to damage, loss or otherwise, or failure to pass regulatory inspections of our manufacturing facilities, we may not be able to meet current demand or supply sufficient product for use in clinical trials, and this may also harm our ability to commercialize Epidiolex/Epidyolex and our product candidates on a timely or cost-competitive basis, if at all. Our manufacturing program requires significant time and resources and may not be successful, may lead to delays, interruptions to supply or may prove to be more costly than anticipated.

Vyxeos is manufactured by Simtra Biopharma Solutions, which is a sole source supplier from a single site location. Moreover, the proprietary technology that supports the manufacture of Vyxeos is not easily transferable. Consequently, engaging an alternate manufacturer may be difficult, costly and time-consuming. If we fail to obtain a sufficient supply of Vyxeos in accordance with applicable specifications on a timely basis, our sales of Vyxeos, our future maintenance and potential growth of the market for this product, our ability to conduct ongoing and future clinical trials of Vyxeos, and our business, financial condition, results of operations and growth prospects could be materially adversely affected.

Rylaze drug substance is manufactured by AGC Biologics A/S at its facility in Copenhagen, Denmark and the drug product is manufactured and packaged by Patheon at its facility in Greenville, North Carolina. Both sites have ample capacity to support forecast demand and we have secured supply for more than one year's forecast demand. To successfully manufacture Rylaze, the manufacturer must have an adequate master and working cell bank. If we fail to obtain a sufficient supply of Rylaze in accordance with applicable specifications on a timely basis, our sales of Rylaze, our future maintenance and potential growth of the market for this product, our competitive advantage over competing products that have supply constraints, and our business, financial condition, results of operations and growth prospects could be materially adversely affected.

In addition, in order to conduct our ongoing and any future clinical trials of, complete marketing authorization submissions for, and potentially launch our other product candidates, we also need to have sufficient quantities of product manufactured. We currently rely on WuXi Biologics Co., Ltd., or WuXi, a company based in the People's Republic of China, or PRC, as the sole supplier of our product candidate, zanidatamab. Accordingly, there is a risk that supplies of our product candidate may be significantly delayed by, or may become unavailable as a result of, manufacturing, equipment, process, regulatory or business-related issues affecting that company. We may also face additional manufacturing and supply-chain risks due to the regulatory and political structure of the PRC, or as a result of the international relationship between the PRC and the U.S., including but not limited to potential sanctions imposed by the U.S. government on WuXi. Although to date there has been no impact on our ability to obtain supply of zanidatamab, there can be no assurance that operations would not be impacted in the future with a negative impact on supply of our product candidate.

Moreover, to obtain approval from FDA or a similar international or national regulatory body of any product candidate, including zanidatamab, we or our suppliers for that product must obtain approval by the applicable regulatory body to manufacture and supply product, in some cases based on qualification data provided to the applicable body as part of our regulatory submission. Any delay in generating, or failure to generate, data required in connection with submission of the chemistry, manufacturing and controls portions of any regulatory submission could negatively impact our ability to meet our anticipated submission dates, and therefore our anticipated timing for obtaining FDA or similar international or national regulatory body approval, or our ability to obtain regulatory approval at all. In addition, any failure of us or a supplier to obtain approval by the applicable regulatory body to manufacture and supply product or any delay in receiving, or failure to receive, adequate supplies of a product on a timely basis or in accordance with applicable specifications could negatively impact our ability to successfully launch and commercialize products and generate sales of products at the levels we expect.

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

None

Item 5. Other Information

Insider Trading Arrangements

The following is a summary of the material terms of the contracts, instructions or written plans for the purchase or sale of the Company's securities adopted or terminated by our officers (as defined in Rule 16a-1(f) under the Securities Exchange Act of 1934, as amended) and directors during the quarter ended March 31, 2024:

Type of Trading Arrangement

Name and Position	Date	Action	Rule 10b5-1*	Expiration Date	Total Ordinary Shares to be Sold
Robert Iannone Executive Vice President, Global Head of Research and Development	March 7, 2024	Modification	X	March 7, 2025	10,681

* Contract, instruction or written plan intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) under the Securities Exchange Act of 1934, as amended.

Item 6. Exhibits

Exhibit Number	Description of Document
2.1‡	Transaction Agreement, dated as of February 3, 2021, by and among Jazz Pharmaceuticals UK Holdings Limited, Jazz Pharmaceuticals Public Limited Company and GW Pharmaceuticals PLC (incorporated herein by reference to Exhibit 2.1 in Jazz Pharmaceuticals plc's Current Report on Form 8-K (File No. 001-33500), as filed with the SEC on February 4, 2021).
3.1	Amended and Restated Memorandum and Articles of Association of Jazz Pharmaceuticals plc, as amended on August 4, 2016 (incorporated herein by reference to Exhibit 3.1 in Jazz Pharmaceuticals plc's Quarterly Report on Form 10-Q (File No. 001-33500) for the period ended June 30, 2016, as filed with the SEC on August 9, 2016).
4.1	Reference is made to Exhibit 3.1.
4.2	Indenture, dated as of April 29, 2021, among Jazz Securities Designated Activity Company, the guarantors party thereto, U.S. Bank National Association, as trustee and acknowledged by U.S. Bank National Association, as collateral trustee. (incorporated herein by reference to Exhibit 4.1 in Jazz Pharmaceuticals plc's Current Report on Form 8-K (File No. 001-033500), as filed with the SEC on April 29, 2021).
10.1+	Offer Letter from Jazz Pharmaceuticals, Inc. to Philip Johnson dated as of January 30, 2024.
10.2+	Amended and Restated Non-Employee Director Compensation Policy (approved April 25, 2024).
31.1	Certification of Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
31.2	Certification of Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
32.1*	Certifications of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	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 Labels 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)

‡ Certain portions of this exhibit have been omitted pursuant to Item 601(b)(2) of Regulation S-K.

* The certification attached as Exhibit 32.1 accompanies this Quarterly Report on Form 10-Q pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed "filed" by the Registrant for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

SIGNATURES

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

Date: May 2, 2024

JAZZ PHARMACEUTICALS PUBLIC LIMITED COMPANY
(Registrant)

/s/ Bruce C. Cozadd

Bruce C. Cozadd

Chairman and Chief Executive Officer and Director
(Principal Executive Officer)

/s/ Philip L. Johnson

Philip L. Johnson

Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

/s/ Patricia Carr

Patricia Carr

Senior Vice President, Chief Accounting Officer
(Principal Accounting Officer)

Exhibit 10.1

[Jazz Pharmaceuticals Letterhead]

January 30, 2024

Philip Johnson
[address on file]

Re: Offer of employment with Jazz Pharmaceuticals

Dear Philip,

As discussed, I am very pleased to invite you to join the Jazz Pharmaceuticals group. This letter sets out the terms of your employment with Jazz Pharmaceuticals, Inc. ("**Jazz Pharmaceuticals**" or the "**Company**").

1. Position, Location and Responsibilities. Your initial assignment will be as Executive Vice President and Chief Financial Officer, reporting to me. This offer is for a full time position, and is a home-based role located in the United States. In this position, you will perform all duties and responsibilities of your position, and you will be a member of the Executive Committee. This position will require periodic domestic and international business travel as necessary to fulfill your responsibilities. As part of your employment relationship, you agree to comply with Jazz Pharmaceuticals' policies and procedures in effect during your employment.

2. Base Salary, Sign-On Bonus and Annual Bonus. Your initial annual base salary rate will be $700,000.00, less all applicable deductions and withholdings and payable in accordance with Jazz Pharmaceuticals' customary payroll practices. As an exempt employee, you will be paid on a salaried basis and you will be expected to work the number of hours required to do your job well and you are not eligible for overtime compensation. Salary is subject to periodic review and adjustment by Jazz Pharmaceuticals, in accordance with its normal practices; we have a Company-wide performance review process that takes place early in each calendar year.

You will be eligible to receive a cash sign-on bonus in the amount of USD $150,000.00 subject to applicable tax withholdings and paid within 30 days of your date of hire. Receipt of your sign-on bonus will be contingent upon you signing a Sign-On Bonus Repayment Agreement under which you will be required to repay the full sign-on bonus if your employment terminates prior to your 24-month anniversary of your start date under the terms and conditions set forth in the Sign-On Bonus Repayment Agreement. The Sign-On Bonus Repayment Agreement will be reviewed and signed in the Onboarding Portal.

You will be eligible for consideration of an annual bonus, and in this position, your annual target bonus will be sixty percent (60%) of your annual base salary rate, pursuant to the Jazz Pharmaceuticals Global Cash Bonus Plan. The amount of your bonus will be based on the Company's level of achievement of its annual objectives, and on your level of achievement of your objectives. Bonuses are not guaranteed, and whether there will be a bonus in any year, and the amount of any bonus, is within the discretion of the Board of Directors of Jazz Pharmaceuticals plc. The Global Cash Bonus Plan year runs January through December, and annual bonus awards are typically paid in the first quarter of the following year. Your bonus for 2024 will be prorated due to your partial year of employment and in accordance with your start date.

3. Employee Benefits. You generally will be eligible to participate in all employee benefits which are extended to other similarly-situated employees at Jazz Pharmaceuticals, including medical and dental benefits, life insurance and other benefits offered to regular employees, subject to the terms and conditions of the benefit plans. You will be eligible for paid time off and holidays in accordance with Jazz Pharmaceuticals' policies, and you will be deemed a participant in the Jazz Pharmaceuticals Amended and Restated Executive Change in Control and Severance Benefit Plan.

4. New Hire Equity Awards. Your offer includes eligibility to receive a new hire equity award with a grant date value of $4,000,000.00, of which $2,000,000.00 will be in the form of Restricted Stock Units ("**RSUs"**) and $2,000,000.00 will be in the form of Performance Stock Units ("**PSUs**"), giving you a right to receive Jazz Pharmaceuticals plc ordinary shares at a future date, subject to approval by the Compensation and Management Development Committee ("**CMDC**"), the terms and conditions of the Jazz Pharmaceuticals plc 2011 Equity Incentive Plan, and the terms and conditions of the applicable award agreements. Your new hire RSUs will vest in four equal annual installments, subject to your continued employment through each vesting date. Your new hire PSUs will vest based on the achievement of certain pre-established financial and/or strategic performance goals as determined at the end of the applicable performance period (typically, three years) by the Jazz Board of Directors.

The RSUs and PSUs will be granted on the second trading day following the filing date of the Company's next quarterly or annual report filed with the U.S. Securities and Exchange Commission following your start date in accordance with the Company's Equity Incentive Grant Policy. Each of your new hire RSUs and PSUs will be converted from the dollar value shown above to a number of units based on the average closing price of Jazz plc common shares for the 30-day period ending the day prior to the grant date.

In addition, as part of the annual compensation review, you may receive annual equity awards subject to approval by the CMDC.

5. Confidential Information and Inventions Agreement, Outside Employment. To enable Jazz Pharmaceuticals to safeguard its proprietary and confidential information, it is a condition of employment that you sign and comply with Jazz Pharmaceuticals' standard form of "Employee Confidential Information and Inventions Agreement." We understand that you are likely to have signed similar agreements with prior employers, and wish to impress upon you that Jazz Pharmaceuticals does not want to receive the confidential or proprietary information of others, and does not want you to use such information in the course of your employment with us, and Jazz Pharmaceuticals will support you in respecting your lawful obligations to prior employers. By accepting this offer, you are representing to Jazz Pharmaceuticals that your employment with Jazz Pharmaceuticals and the performance of your duties will not violate any agreements you may have with, or trade secrets of, any third parties. You agree that, during your employment with Jazz Pharmaceuticals and in accordance with our Outside Employment policy, you will not engage in any business activity that competes with Jazz Pharmaceuticals, and you will notify me (for review and approval) if you are considering accepting or continuing outside work, including self-employment, consulting arrangements, or any roles on any Boards of Directors.

6. Code of Conduct. Jazz Pharmaceuticals is committed to integrity and the pursuit of excellence in all we do. We fulfill these commitments while upholding a high level of ethical conduct. The Code of Conduct is one element of Jazz Pharmaceuticals' efforts to ensure lawful and ethical conduct by the Company and its subsidiaries and their employees, officers and directors. It is a condition of employment that you read, agree to and sign Jazz Pharmaceuticals' Code of Conduct in the first week of employment. If you have questions about the Code of Conduct, please let Human Resources know and we will ensure that you receive answers to your inquiries as quickly as possible.

7. At-Will Employment Status. Should you decide to accept our offer, you will be an "at-will" employee of Jazz Pharmaceuticals. This means that either you or Jazz Pharmaceuticals may terminate the employment relationship at any time, with or without cause, and with or without advance notice. Due to your at-will employment status, Jazz Pharmaceuticals also retains the discretion to modify the terms and conditions of your employment (with exception of your at-will status), including but not limited to your salary, incentive compensation and benefits, as well as your job title, location, duties, responsibilities, assignments and reporting relationships. Participation in any benefit, compensation or bonus program does not change the nature of the employment relationship, which remains "at-will".

8. Authorization To Work. Federal government regulations require that all employees present documentation verifying their identity and demonstrating that they are authorized to work in the United States. Your employment is contingent on your ability to prove your identity and authorization to work in the United States, and your compliance with the government's employment verification requirements.

9. Offer Contingencies. This offer is contingent upon satisfactory completion (as determined by the Company) of your background and reference checks, including but not limited to verification of previous employment record, academic achievement and criminal background.

10. Complete Offer and Agreement. This letter, including the Employee Confidential Information and Inventions Agreement referenced herein, contains our complete understanding and agreement regarding the terms of your employment with Jazz Pharmaceuticals, and it is entered into without reliance on any promise or representation, written or oral, other than those expressly contained herein, and it supersedes any other such promises, warranties or representations. There are no other, different or prior agreements or understandings on this or related subjects.

11. Start Date, Acceptance of Offer. Let's continue to discuss your start date with the aim to finalize your start date by end of this week. To accept our offer of employment, please sign the enclosed copy of this letter in the space provided below by the close of business on Friday February 2, 2024.

Philip, we are impressed by your accomplishments and potential, and we are enthusiastic at the prospect of you joining us. I look forward to your early acceptance of this offer, and to your contributions to the growth and success of Jazz Pharmaceuticals.

If you have any questions about this letter, please let me know or feel free to contact Heidi Manna, our Chief People Officer.

Sincerely,

/s/ Bruce C. Cozadd
Bruce Cozadd
Chairman & CEO

ACCEPTANCE OF EMPLOYMENT OFFER:

I hereby accept the offer of employment by Jazz Pharmaceuticals on the terms set forth in this letter.

Signature: /s/ Philip L. Johnson

Date: 06 February 2024

Exhibit 10.2

JAZZ PHARMACEUTICALS PLC

NON-EMPLOYEE DIRECTOR COMPENSATION POLICY

Non-employee members of the board of directors (the "***Board***") of Jazz Pharmaceuticals plc (the "***Company***") shall be eligible to receive cash and equity compensation as set forth in this Non-Employee Director Compensation Policy (this "***Policy***"). The cash compensation and equity grants described in this Policy shall be paid or be made, as applicable, automatically and without further action of the Board, to each member of the Board who is not an employee of the Company or any parent or subsidiary of the Company (each, a "***Non-Employee Director***") who may be eligible to receive such cash compensation or equity grants, unless such Non-Employee Director declines the receipt of such cash compensation or equity grants by written notice to the Company. This Policy shall remain in effect until it is revised or rescinded by further action of the Board.

1. Cash Compensation.

(a) Subject to Section 1(b) and Section 3 below, each Non-Employee Director shall be eligible to receive cash compensation of $75,000 for service on the Board. In addition, a Non-Employee Director serving as:

(i) lead independent director of the Board shall be eligible to receive additional cash compensation of $50,000 per year for such service;

(ii) chairperson of the Audit Committee shall be eligible to receive additional cash compensation of $25,000 per year for such service;

(iii) members (other than the chairperson) of the Audit Committee shall be eligible to receive additional cash compensation of $15,000 per year for such service;

(iv) chairperson of the Compensation & Management Development Committee (the "***Compensation Committee***") shall be eligible to receive additional cash compensation of $25,000 per year for such service;

(v) members (other than the chairperson) of the Compensation Committee shall be eligible to receive additional cash compensation of $12,500 per year for such service;

(vi) chairperson of the Nominating and Corporate Governance Committee shall be eligible to receive additional cash compensation of $20,000 per year for such service;

(vii) members (other than the chairperson) of the Nominating and Corporate Governance Committee shall be eligible to receive additional cash compensation of $10,000 per year for such service;

(viii) chairperson of the Science & Medicine Committee shall be eligible to receive additional cash compensation of $25,000 per year for such service;

(ix) members (other than the chairperson of the Science & Medicine Committee) shall be eligible to receive additional cash compensation of $12,500 per year for such service;

(x) chairperson of the Transaction Committee shall be eligible to receive additional cash compensation of $5,000 per meeting up to $20,000 per year for such service; and

(xi) members (other than the chairperson) of the Transaction Committee shall be eligible to receive additional cash compensation of $2,500 per meeting up to $10,000 per year for such service.

The additional cash compensation for the Non-Employee Director's service on the Committees other than the Transaction Committee shall be paid in four equal quarterly installments, earned upon the completion of service in each calendar quarter. The additional cash compensation for the Non-Employee Director's service on the Transaction Committee shall be paid in four quarterly installments, earned upon the completion of services in each calendar quarter.

(b) Each person who is elected or appointed to be a Non-Employee Director or who is appointed to serve as lead independent director or a member or chairperson of one of the Committees described above, in each case other than on the first calendar day of a calendar quarter, shall be eligible to receive a pro rata amount of the annual retainers described above with respect to the calendar quarter in which such person becomes a Non-Employee Director, lead independent director or a member or chairperson of one of the Committees, as applicable, which pro rata amount reflects a reduction for each calendar day during the calendar quarter prior to the date of such election or appointment.

(c) Each Non-Employee Director will be entitled to reimbursement from the Company for his or her reasonable travel (including airfare and ground transportation), lodging and meal expenses incidental to meetings of the Board or committees thereof. If any reimbursement payment is subject to tax imposed by the Irish Revenue Commissioners ("***Revenue***"), each Non-Employee Director will be entitled to a payment, up to an amount ("***Tax Reimbursement Payment***") such that after the deduction of all taxes (including, without limitation, any income taxes calculated at the rate applicable to each Non-Employee Director for the year in which the expenses were incurred) on the Tax Reimbursement Payment, the Non-Employee Director will retain an amount equal to the full reimbursement payment. All taxes due will be paid by the Company to Revenue.

2. Equity Compensation. The restricted stock unit ("***RSU***") awards described below shall be granted under and shall be subject to the terms and provisions of the Company's Amended and Restated 2007 Non-Employee Directors Stock Award Plan (the "***NEDSAP***").

(a) Eligibility. Subject to Section 3 below, beginning with the annual general meeting of the Company's shareholders (an "***AGM***") held in 2021, each person who is a Non-Employee Director at an AGM and who continues as a Non-Employee Director following such meeting automatically shall be granted an RSU award (an "***Annual Grant***") on the grant date set forth in Section 2(b) below. In addition, subject to Section 3 below, each person who is elected or appointed to be a Non-Employee Director for the first time other than at an AGM and after the AGM held in 2021, automatically shall be granted a prorated RSU award (a "***Prorated Annual Grant***") on the grant date set forth in Section 2(b) below, provided that such person is a Non-Employee Director on such grant date.

(b) Grant Date. The grant date of each Annual Grant shall be the day of the applicable AGM, and the grant date of each Prorated Annual Grant shall be the second trading day following the filing date of the Company's next quarterly or annual report filed under the Securities Exchange Act of 1934, as amended, that occurs after the date of the Non-Employee Director's initial election or appointment.

(c) Grant Date Value. The grant date value of each Annual Grant shall be equal to approximately $400,000. The grant date value of each Prorated Annual Grant shall be prorated to reflect the shortened

period of service (by multiplying $400,000 by the quotient (rounded to the nearest hundredth) obtained by dividing the number of calendar days from and including the date of the Non-Employee Director's initial election or appointment to and including the date that is the first anniversary of the prior AGM by 365).

(d) Number of Ordinary Shares. The number of ordinary shares of the Company ("***Ordinary Shares***") subject to each Annual Grant and Prorated Annual Grant shall be determined by dividing the grant date value, in each case as set forth in Section 2(c) above, by the average of the daily closing prices per share of the Ordinary Shares during the 30 calendar day period ending on and including the grant date, rounded to the nearest share by application of regular rounding.

(e) Vesting. Each Annual Grant granted to a Non-Employee Director shall vest in full on the first anniversary of the AGM in the year of grant and each Prorated Annual Grant granted to a Non-Employee Director shall vest in full on the first anniversary of the AGM held prior to the Non-Employee Director's initial election or appointment, in each case subject to the Non-Employee Director's Continuous Service (as defined in the NEDSAP) through such vesting date. Notwithstanding the foregoing, if a Non-Employee Director does not stand for reelection at an AGM in the year in which his or her term expires or otherwise resigns effective at an AGM and, in either case, the Non-Employee Director's Continuous Service terminates at such AGM, then effective as of the date of such AGM, the unvested portion, if any, of such Non-Employee Director's Annual Grant or Prorated Annual Grant shall become vested in full.

(f) Terms and Conditions. The terms and conditions applicable to each Annual Grant and Prorated Annual Grant granted to Non-Employee Directors pursuant to this Policy shall be subject to the terms and conditions in the forms of RSU notice of grant and RSU award agreement previously approved by the Board or the Compensation Committee, as applicable, and the NEDSAP.

3. Non-Employee Director Compensation Limit. The aggregate value of all compensation granted or paid, as applicable, by the Company to any individual for service as a Non-Employee Director with respect to any period commencing on the date of the AGM for a particular year and ending on the calendar day immediately prior to the date of the AGM for the subsequent year (the "***Annual Period***"), including equity awards granted and cash fees paid by the Company to such Non-Employee Director, will not exceed (i) $750,000 in total value or (ii) in the event such Non-Employee Director is first appointed or elected to the Board during such Annual Period, $1,350,000 in total value, in each case calculating the value of any equity awards based on the grant date fair value of such equity awards for financial reporting purposes.

*****

Adopted by the Board of Directors of Jazz Pharmaceuticals plc on 2 May 2013.

Amended and restated by the Board of Directors of Jazz Pharmaceuticals plc on 1 August 2013.

Amended and restated by the Board of Directors of Jazz Pharmaceuticals plc on 1 May 2014.

Amended and restated by the Board of Directors of Jazz Pharmaceuticals plc on 30 October 2014.

Amended and restated by the Board of Directors of Jazz Pharmaceuticals plc on 30 April 2015.

Amended and restated by the Board of Directors of Jazz Pharmaceuticals plc on 4 May 2016.

Amended and restated by the Board of Directors of Jazz Pharmaceuticals plc on 3 May 2018.

Amended and restated by the Board of Directors of Jazz Pharmaceuticals plc on 21 July 2020.

Amended and restated by the Board of Directors of Jazz Pharmaceuticals plc on 28 April 2021.

Amended and restated by the Board of Directors of Jazz Pharmaceuticals plc on 29 July 2021.

Amended and restated by the Board of Directors of Jazz Pharmaceuticals plc on 28 April 2022.

Amended and restated by the Board of Directors of Jazz Pharmaceuticals plc on 4 May 2023.

Amended and restated by the Board of Directors of Jazz Pharmaceuticals plc on 25 April 2024.

Exhibit 31.1

CERTIFICATION

I, Bruce C. Cozadd, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Jazz Pharmaceuticals public limited company;

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

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

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

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

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

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

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

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

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

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

Date: May 2, 2024

By: /s/ Bruce C. Cozadd

Bruce C. Cozadd

Chairman and Chief Executive Officer and Director

Exhibit 31.2

CERTIFICATION

I, Philip L. Johnson, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Jazz Pharmaceuticals public limited company;

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

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

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

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

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

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

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

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

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

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

Date: May 2, 2024

By: /s/ Philip L. Johnson

Philip L. Johnson

Executive Vice President and Chief Financial Officer

Exhibit 32.1

CERTIFICATION[1]

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. Section 1350), Bruce C. Cozadd, Chief Executive Officer of Jazz Pharmaceuticals public limited company (the "Company"), and Philip L. Johnson, Executive Vice President and Chief Financial Officer of the Company, each hereby certifies that, to the best of his knowledge:

1. The Company's Quarterly Report on Form 10-Q for the period ended March 31, 2024, to which this Certification is attached as Exhibit 32.1 (the "Periodic Report"), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

2. The information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 2, 2024

/s/ Bruce C. Cozadd

Bruce C. Cozadd

Chairman and Chief Executive Officer and Director (Principal Executive Officer)

/s/ Philip L. Johnson

Philip L. Johnson

Executive Vice President and Chief Financial Officer

(Principal Accounting Officer)

(1) This certification accompanies the Quarterly Report on Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Jazz Pharmaceuticals public limited company under the Securities Act of 1933, as amended, or the Exchange Act (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing. A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to Jazz Pharmaceuticals public limited company and will be retained by Jazz Pharmaceuticals public limited company and furnished to the Securities and Exchange Commission or its staff upon request.