UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

☐ **Quarterly Report Pursuant to Section 13 or 15 (d) of the Securities Exchange Act of 1934**

For the quarterly period ended September 30, 2023

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: 001-33093

LIGAND PHARMACEUTICALS INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware	**77-0160744**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*
3911 Sorrento Valley Boulevard, Suite 110 **San Diego** **CA**	**92121**
(Address of principal executive offices)	*(Zip Code)*

(858) 550-7500

(Registrant's Telephone Number, Including Area Code)

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

Title of each class:	Trading symbol:	Name of each exchange on which registered:
Common Stock, par value $0.001 per share	**LGND**	**The Nasdaq Global Market**

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company,"

and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one)

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 November 6, 2023, the registrant had 17,435,958 shares of common stock outstanding.

LIGAND PHARMACEUTICALS INCORPORATED
QUARTERLY REPORT

FORM 10-Q

TABLE OF CONTENTS

GLOSSARY OF TERMS AND ABBREVIATIONS

Abbreviation	Definition
2022 Annual Report	Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on February 28, 2023
2023 Notes	$750.0 million aggregate principal amount of convertible senior unsecured notes due 2023
APAC	Avista Public Acquisition Corp. II (prior to its domestication in Delaware and change of name to OmniAb, Inc.)
ASC	Accounting Standards Codification
ASU	Accounting Standards Update
Company	Ligand Pharmaceuticals Incorporated, including subsidiaries
CVR	Contingent value right
CyDex	CyDex Pharmaceuticals, Inc.
ESPP	Employee Stock Purchase Plan, as amended and restated
FASB	Financial Accounting Standards Board
GAAP	Generally accepted accounting principles in the United States
Ligand	Ligand Pharmaceuticals Incorporated, including subsidiaries
Merger Agreement	Agreement and Plan of Merger, dated as of March 23, 2022, among APAC, Ligand, OmniAb and Merger Sub
Merger Sub	Orwell Merger Sub, Inc., a wholly owned subsidiary of APAC
Metabasis	Metabasis Therapeutics, Inc.
NDA	New Drug Application
New OmniAb	OmniAb, Inc. (formerly known as Avista Public Acquisition Corp. II and after it domestication in Delaware)
OmniAb	OmniAb Operations, Inc. (formerly known as OmniAb, Inc. and prior to being spun off by the Company)
OmniAb Business	Ligand's antibody discovery business (prior to being spun off by the Company)
PDUFA	Prescription Drug User Fee Act
Pfenex	Pfenex Inc.
Q3 2022	The Company's fiscal quarter ended September 30, 2022
Q3 2023	The Company's fiscal quarter ended September 30, 2023
SBC	Share-based compensation expense
SEC	Securities and Exchange Commission
Separation Agreement	Separation and Distribution Agreement, dated as of March 23, 2022, among APAC, Ligand and OmniAb
Takeda	Takeda Pharmaceutical Company Limited
Travere	Travere Therapeutics, Inc.
Viking	Viking Therapeutics, Inc.
YTD	Year-to-date

PART I - FINANCIAL INFORMATION

ɛm 1. Condensed Consolidated Financial Statements

LIGAND PHARMACEUTICALS INCORPORATED
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited)
(in thousands, except par value)

	September 30, 2023	December 31, 2022
ASSETS		
Current assets:		
Cash and cash equivalents	$ 19,275	$ 45,006
Short-term investments	171,227	166,864
Accounts receivable, net	36,003	30,424
Inventory	25,392	13,294
Income taxes receivable	—	4,614
Other current assets	2,097	3,399
Total current assets	253,994	263,601
Deferred income taxes, net	8,530	8,530
Intangible assets, net	314,843	342,455
Goodwill	103,770	105,673
Commercial license rights, net	6,602	10,182
Property and equipment, net	16,178	12,482
Operating lease right-of-use assets	6,235	10,914
Financing lease right-of-use assets	3,566	4,095
Equity method investment in Primrose Bio	13,985	—
Equity securities in Primrose Bio	33,097	—
Other assets	8,426	4,736
Total assets	$ 769,226	$ 762,668
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 2,475	$ 5,307
Accrued liabilities	10,635	15,681
Income taxes payable	1,204	—
Current operating lease liabilities	497	670
2023 convertible senior notes, net	—	76,695
Other current liabilities	916	457
Total current liabilities	15,727	98,810
Long-term contingent liabilities	3,515	3,456
Deferred income taxes, net	32,586	30,615
Long-term operating lease liabilities	5,832	10,336
Other long-term liabilities	43,670	21,966
Total liabilities	101,330	165,183
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $ 0.001 par value; 5,000 shares authorized; zero issued and outstanding at September 30, 2023 and December 31, 2022	—	—
Common stock, $ 0.001 par value; 60,000 shares authorized; 17,421 and 16,951 shares issued and outstanding at September 30, 2023 and December 31, 2022, respectively	18	17
Additional paid-in capital	183,994	147,590
Accumulated other comprehensive loss	(944)	(984)
Retained earnings	484,828	450,862
Total stockholders' equity	667,896	597,485
Total liabilities and stockholders' equity	$ 769,226	$ 762,668

See accompanying notes to unaudited condensed consolidated financial statements.

LIGAND PHARMACEUTICALS INCORPORATED
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)
(in thousands, except per share amounts)

	Three months ended September 30,		Nine months ended September 30,	
	2023	**2022**	**2023**	**2022**
Revenues:				
Royalties	$ 23,863	$ 19,255	$ 61,447	$ 50,507
Captisol	8,608	35,949	24,450	77,616
Contract revenue	397	4,017	17,316	17,740
Total revenues	32,868	59,221	103,213	145,863
Operating costs and expenses:				
Cost of Captisol	3,485	14,153	8,871	31,213
Amortization of intangibles	8,238	8,568	25,316	25,698
Research and development	5,532	9,239	19,049	26,885
General and administrative	14,656	14,920	36,798	38,931
Total operating costs and expenses	31,911	46,880	90,034	122,727
Gain on sale of Pelican	(2,121)	—	(2,121)	—
Operating income from continuing operations	3,078	12,341	15,300	23,136
Other income (expense):				
Gain (loss) from short-term investments	(13,184)	(923)	30,340	(15,709)
Interest income	2,263	591	6,018	1,023
Interest expense	(1)	(332)	(525)	(1,559)
Other (loss) income, net	(4,300)	677	(4,570)	4,980
Total other income (expense), net	(15,222)	13	31,263	(11,265)
Income (loss) before income taxes from continuing operations	(12,144)	12,354	46,563	11,871
Income tax benefit (expense)	1,871	(2,709)	(10,932)	(2,556)
Net income (loss) from continuing operations	(10,273)	9,645	35,631	9,315
Net loss from discontinued operations	—	(9,241)	(1,665)	(25,191)
Net income (loss)	$ (10,273)	$ 404	$ 33,966	$ (15,876)
Basic net income from continuing operations per share	$ (0.59)	$ 0.57	$ 2.07	$ 0.55
Basic net loss from discontinued operations per share	$ —	$ (0.55)	$ (0.10)	$ (1.49)
Basic net income (loss) per share	$ (0.59)	$ 0.02	$ 1.97	$ (0.94)
Shares used in basic per share calculation	17,380	16,888	17,241	16,860
Diluted net income from continuing operations per share	$ (0.59)	$ 0.56	$ 2.00	$ 0.54
Diluted net loss from discontinued operations per share	$ —	$ (0.54)	(0.09)	$ (1.47)
Diluted net income (loss) per share	$ (0.59)	$ 0.02	1.91	$ (0.93)
Shares used in diluted per share calculation	17,380	17,132	17,784	17,128

See accompanying notes to unaudited condensed consolidated financial statements.

LIGAND PHARMACEUTICALS INCORPORATED
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Unaudited)
(in thousands)

	Three months ended September 30,		Nine months ended September 30,	
	2023	**2022**	**2023**	**2022**
Net income (loss)	$ (10,273)	$ 404	$ 33,966	$ (15,876)
Unrealized net gain (loss) on available-for-sale securities, net of tax	23	6	40	(143)
Comprehensive income (loss)	$ (10,250)	$ 410	$ 34,006	$ (16,019)

See accompanying notes to unaudited condensed consolidated financial statements.

LIGAND PHARMACEUTICALS INCORPORATED
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited)
(in thousands)

	Common Stock					
	Shares	Amount	Additional paid in capital	Accumulated other comprehensive income (loss)	Retained earnings	Total stockholders' equity
Balance at December 31, 2022	16,951	$ 17	$ 147,590	$ (984)	$ 450,862	$ 597,485
Issuance of common stock under employee stock compensation plans, net of shares withheld for payroll taxes	183	—	(762)	—	—	(762)
Share-based compensation	—	—	5,931	—	—	5,931
Unrealized net gain on available-for-sale securities, net of tax	—	—	—	49	—	49
Final distribution of OmniAb	—	—	1,665	—		1,665
Net income	—	—	—	—	41,949	41,949
Balance at March 31, 2023	17,134	$ 17	$ 154,424	$ (935)	$ 492,811	$ 646,317
Issuance of common stock under employee stock compensation plans, net of shares withheld for payroll taxes	218	—	9,110	—	—	9,110
Share-based compensation	—	—	7,207	—	—	7,207
Unrealized net loss on available-for-sale securities, net of tax	—	—	—	(32)	—	(32)
Net income	—	—	—	—	2,290	2,290
Balance at June 30, 2023	17,352	$ 17	$ 170,741	$ (967)	$ 495,101	$ 664,892
Issuance of common stock under employee stock compensation plans, net of shares withheld for payroll taxes	69	1	3,284	—	—	3,285
Share-based compensation	—	—	6,884	—	—	6,884
Unrealized net gain on available-for-sale securities, net of tax	—	—	—	23	—	23
Tax return to provision	—	—	3,085	—	—	3,085
Net loss	—	—	—	—	(10,273)	(10,273)
Balance at September 30, 2023	17,421	$ 18	$ 183,994	$ (944)	$ 484,828	$ 667,896

	Common Stock					
	Shares	Amount	Additional paid in capital	Accumulated other comprehensive loss	Retained earnings	Total stockholders' equity
Balance at December 31, 2021	16,767	$ 17	$ 372,969	$ (917)	$ 449,090	$ 821,159
ASU 2020-06 adoption, net of tax (Note 1)			(51,130)		35,133	(15,997)
Issuance of common stock under employee stock compensation plans, net of shares withheld for payroll taxes	94	—	(5,515)	—	—	(5,515)
Share-based compensation	—	—	9,044	—	—	9,044
Unrealized net loss on available-for-sale securities, net of tax	—	—	—	(114)	—	(114)
Net loss	—	—	—	—	(15,385)	(15,385)
Balance at March 31, 2022	16,861	$ 17	$ 325,368	$ (1,031)	$ 468,838	$ 793,192
Issuance of common stock under employee stock compensation plans, net of shares withheld for payroll taxes	21	—	604	—	—	604
Share-based compensation	—	—	9,499	—	—	9,499
Unrealized net loss on available-for-sale securities, net of tax	—	—	—	(35)	—	(35)
Net loss	—	—	—	—	(895)	(895)
Balance at June 30, 2022	16,882	$ 17	$ 335,471	$ (1,066)	$ 467,943	$ 802,365
Issuance of common stock under employee stock compensation plans, net of shares withheld for payroll taxes	12	—	724	—	—	724
Share-based compensation	—	—	12,597	—	—	12,597
Unrealized net loss on available-for-sale securities, net of tax	—	—	—	6	—	6
Warrant and bond hedge unwind transactions	—	—	202	—	—	202
Net income	—	—	—	—	404	404
Balance at September 30, 2022	16,894	$ 17	$ 348,994	$ (1,060)	$ 468,347	$ 816,298

See accompanying notes to unaudited condensed consolidated financial statements.

LIGAND PHARMACEUTICALS INCORPORATED
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)
(in thousands)

	Nine months ended September 30,	
	2023	**2022**
Cash flows from operating activities:		
Net income (loss)	$ 33,966	$ (15,876)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Change in estimated fair value of contingent liabilities	132	(1,378)
Depreciation and amortization of intangible assets	27,605	40,399
Amortization of premium on investments, net	(938)	75
Amortization of debt discount and issuance fees	159	639
Amortization of commercial license rights	(883)	(163)
CECL adjustment to commercial license rights	3,190	—
Impairment loss of commercial license rights	924	—
Gain on sale of Pelican	(2,121)	—
Gain on debt extinguishment	—	(4,192)
Share-based compensation	20,022	31,140
Deferred income taxes	6,761	(25,570)
(Gain) loss from short-term investments	(30,340)	15,709
Lease amortization expense	1,231	4,535
Other	215	(45)
Changes in operating assets and liabilities, net of acquisition:		
Accounts receivable, net	(5,436)	20,550
Inventory	(11,577)	10,702
Accounts payable and accrued liabilities	(7,461)	(405)
Income tax receivable and payable	5,818	15,111
Deferred revenue	226	(5,182)
Other current assets	918	(17)
Other assets and liabilities	(899)	(1,654)
Net cash provided by operating activities	41,512	84,378
Cash flows from investing activities:		
Purchase of short-term investments	(107,262)	(39,052)
Proceeds from sale of short-term investments	96,318	202,552
Proceeds from maturity of short-term investments	37,941	24,830
Cash paid for equity method investment - Nucorion	—	(750)
Cash paid for investment in Primrose Bio	(15,235)	—
Cash paid for Novan acquisition, net of restricted cash received	(10,405)	—
Purchase of property and equipment	(3,104)	(15,792)
Payments to CVR Holders	—	(960)
Proceeds from commercial license rights	349	—
Other	—	80
Net cash (used in) provided by investing activities	(1,398)	170,908
Cash flows from financing activities:		
Repayment at maturity/repurchase of 2023 Notes	(76,854)	(260,949)
Proceeds from convertible bond hedge settlement	—	202
Net proceeds from stock option exercises and ESPP	15,922	1,831
Taxes paid related to net share settlement of equity awards	(4,290)	(6,018)
Payments to CVR Holders	—	(1,545)
Payments for OmniAb transaction costs	—	(4,171)
Other	(40)	(42)
Net cash used in financing activities	(65,262)	(270,692)
Net decrease in cash, cash equivalents and restricted cash	(25,148)	(15,406)
Cash, cash equivalents and restricted cash at beginning of period	45,006	19,522
Cash, cash equivalents and restricted cash at end of period	$ 19,858	$ 4,116

Supplemental disclosure of cash flow information:				
Interest paid	$	288	$	1,139
Taxes paid	$	10	$	6,630
Restricted cash in other assets	$	583	$	—
Acquisition:				
Fair value of tangible assets acquired, net of cash and restricted cash received	$	17,101		—
Goodwill		2,229		—
Intangible assets		17,600		—
Liabilities assumed		(26,525)		—
Net cash paid for Novan	$	10,405		—
Supplemental schedule of non-cash activity:				
Accrued Primrose transaction costs	$	1,013	$	—
Accrued fixed asset purchases	$	409	$	3,626
Accrued inventory purchases	$	521	$	7,676
Unrealized gain (loss) on AFS investments, net of tax	$	40	$	(143)

See accompanying notes to unaudited condensed consolidated financial statements.

Unless the context requires otherwise, references in this report to "Ligand," "we," "us," the "Company," and "our" refer to Ligand Pharmaceuticals Incorporated and its consolidated subsidiaries.

1. Basis of Presentation and Summary of Significant Accounting Policies

Business

On November 1, 2022, we completed the separation (the "Separation") of our antibody discovery business and certain related assets and liabilities (the "OmniAb Business") through a spin-off of OmniAb to Ligand's shareholders of record as of October 26, 2022 on a pro rata basis (the "Distribution") and merger (the "Merger") of OmniAb with a wholly owned subsidiary of a separate public company, OmniAb, Inc. (formerly known as Avista Public Acquisition Corp. II ("New OmniAb")), in a Reverse Morris Trust transaction pursuant to the Agreement and Plan of Merger, dated as of March 23, 2022 (the "Merger Agreement"), and the Separation and Distribution Agreement, dated as of March 23, 2022 (the "Separation Agreement") (the Merger Agreement and Separation Agreement, collectively with the other related transaction documents, the "Transaction Agreements"). Pursuant to the Transaction Agreements, Ligand contributed to OmniAb cash and certain assets and liabilities constituting the OmniAb Business, including but not limited to the equity interests of Ab Initio Biotherapeutics, Inc., Crystal Bioscience, Inc., Icagen, LLC, Taurus Biosciences, LLC and xCella Biosciences, Inc.

After the spin-off of our OmniAb antibody discovery business, Ligand is a revenue-generating biopharmaceutical company focused on developing or acquiring technologies that help pharmaceutical companies discover and develop medicines. We operate in one business segment: development and licensing of biopharmaceutical assets.

Basis of Presentation

Our condensed consolidated financial statements include the financial statements of Ligand and its wholly-owned subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation. We have included all adjustments, consisting only of normal recurring adjustments, which we considered necessary for a fair presentation of our financial results. These unaudited condensed consolidated financial statements and accompanying notes should be read together with the audited consolidated financial statements included in our 2022 Annual Report. Interim financial results are not necessarily indicative of the results that may be expected for the full year.

Discontinued Operations

The Company determined that the spin-off of the OmniAb Business in November 2022 met the criteria for classification as a discontinued operation in accordance with ASC Subtopic 205-20, *Discontinued Operations* ("ASC 205-20"). Accordingly, the accompanying condensed consolidated financial statements have been updated to present the results of all discontinued operations reported as a separate component of loss in the condensed consolidated statements of operations and comprehensive loss (see Note 4, *Spin-off of OmniAb*). All disclosures have been adjusted to reflect continuing operations.

Significant Accounting Policies

We have described our significant accounting policies in *Note 1, Basis of Presentation and Summary of Significant Accounting Policies* of the Notes to Consolidated Financial Statements in our 2022 Annual Report.

Use of Estimates

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

Revenue

Our revenue is generated primarily from royalties on sales of products commercialized by our partners, Captisol material sales, and contract revenue for services, license fees and development, regulatory and sales based milestone payments.

We apply the following five-step model in accordance with ASC 606, *Revenue from Contracts with Customers*, in order to determine the revenue: (i) identification of the promised goods or services in the contract; (ii) determination of whether the promised goods or services are performance obligations, including whether they are distinct in the context of the contract; (iii) measurement of the transaction price, including the constraint on variable consideration; (iv) allocation of the transaction price to the performance obligations; and (v) recognition of revenue when (or as) the Company satisfies each performance obligation.

Royalties

We receive royalty revenue on sales by our partners of products covered by patents that we or our partners own under contractual agreements. We do not have future performance obligations under these license arrangements. We generally satisfy our obligation to grant intellectual property rights on the effective date of the contract. However, we apply the royalty recognition constraint required under the guidance for sales-based royalties which requires a royalty to be recorded no sooner than the underlying sale occurs. Therefore, royalties on sales of products commercialized by our partners are recognized in the quarter the product is sold. Our partners generally report sales information to us on a one quarter lag. Thus, we estimate the expected royalty proceeds based on an analysis of historical experience and interim data provided by our partners including their publicly announced sales. Differences between actual and estimated royalty revenues, which have not been material, are adjusted in the period in which they become known, typically the following quarter.

Captisol Sales

Revenue from Captisol sales is recognized when control of Captisol material is transferred or intellectual property license rights are granted to our customers in an amount that reflects the consideration we expect to receive from our customers in exchange for those products or rights. A performance obligation is considered distinct from other obligations in a contract when it provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and is separately identified in the contract. For Captisol material or intellectual property license rights, we consider our performance obligation satisfied once we have transferred control of the product or granted the intellectual property rights, meaning the customer has the ability to use and obtain the benefit of the Captisol material or intellectual property license right. We recognize revenue for satisfied performance obligations only when we determine there are no uncertainties regarding payment terms or transfer of control. Sales tax and other taxes we collect concurrent with revenue-producing activities are excluded from revenue. We have elected to recognize the cost of freight and shipping when control over Captisol material has transferred to the customer as an expense in Cost of Captisol. We expense incremental costs of obtaining a contract when incurred if the expected amortization period of the asset that we would have recognized is one year or less or the amount is immaterial. We did not incur any incremental costs of obtaining a contract during the periods reported.

Contract Revenue

Our contracts with customers often include variable consideration in the form of contingent milestone payments. We include contingent milestone payments in the estimated transaction price when it is probable a significant reversal in the amount of cumulative revenue recognized will not occur. These estimates are based on historical experience, anticipated results and our best judgment at the time. If the contingent milestone payment is based on sales, we apply the royalty recognition constraint and record revenue when the underlying sale has taken place. Significant judgments must be made in determining the transaction price for our sales of intellectual property. Because of the risk that products in development with our partners will not reach development milestones or receive regulatory approval, we generally recognize any contingent payments that would be due to us upon the development milestone or regulatory approval.

Depending on the terms of the arrangement, we may also defer a portion of the consideration received if we have to satisfy a future obligation, which typically occurs with our contracts for R&D services. In general, for R&D services, which has not been significant, we recognize revenue over time and measure our progress using an input method. The input methods we use are based on the effort we expend or costs we incur toward the satisfaction of our performance obligation.

Some customer contracts are sublicenses which require that we make payments to an upstream licensor related to license fees, milestones and royalties which we receive from customers. In such cases, we evaluate the determination of gross revenue as a principal versus net revenue as an agent reporting based on each individual agreement.

Deferred Revenue

Depending on the terms of the arrangement, we may also defer a portion of the consideration received because we have to satisfy a future obligation. The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and customer advances and deposits (contract liabilities) on the consolidated balance sheet. Except for royalty revenue and certain service revenue, we generally receive payment at the point we satisfy our obligation or soon after. Therefore, we do not generally carry any contract asset balance. Any fees billed in advance of being earned are recorded as deferred revenue, which has not been significant.

Disaggregation of Revenue

The following table represents disaggregation of royalties, Captisol and contract revenue (in thousands):

	Three months ended September 30,		Nine months ended September 30,	
	2023	2022	2023	2022
Royalties				
Kyprolis	$ 10,537	$ 9,123	$ 24,862	$ 20,872
Evomela	2,497	3,123	7,404	8,218
Teriparatide injection	2,800	4,071	9,913	12,484
Rylaze	3,678	2,099	9,315	6,065
Other	4,351	839	9,953	2,868
	$ 23,863	$ 19,255	$ 61,447	$ 50,507
Captisol				
Captisol - Core	$ 8,608	$ 3,582	$ 24,450	$ 13,133
Captisol - COVID[(1)]	—	32,367	—	64,483
	$ 8,608	$ 35,949	$ 24,450	$ 77,616
Contract revenue				
Service revenue	263	90	534	1,047
Milestone	—	2,658	15,300	8,651
Other	134	1,269	1,482	8,042
	$ 397	$ 4,017	$ 17,316	$ 17,740
Total	$ 32,868	$ 59,221	$ 103,213	$ 145,863

(1) Captisol - COVID represents revenue on Captisol supplied for use in formulation with remdesivir, an antiviral treatment for COVID-19.

Short-term Investments

Our short-term investments consist of the following at September 30, 2023 and December 31, 2022 (in thousands):

September 30, 2023	Amortized cost	Gross unrealized gains	Gross unrealized losses	Estimated fair value
Bank deposits	$ 28,972	$ 11	$ (11)	$ 28,972
Bond fund	84,811	—	(808)	84,003
Commercial paper	18,935	—	(4)	18,931
Corporate bonds	8,077	1	(35)	8,043
Corporate equity securities	5,775	—	(4,903)	872
Municipal bonds	1,027	—	(6)	1,021
US government securities	4,702	—	(19)	4,683
Warrants	—	22	—	22
	$ 152,299	$ 34	$ (5,786)	$ 146,547
Viking common stock				24,680
Total short-term investments				$ 171,227
December 31, 2022				
Bank deposits	$ 5,012	$ 2	$ (34)	$ 4,980
Bond fund	81,815	—	(1050)	80,765
Commercial paper	7,211	3	—	7,214
Corporate bonds	6,701	13	(58)	6,656
Corporate equity securities	5,807	262	(4,239)	1,830
U.S. government securities	2,232	—	(70)	2,162
Warrants	—	135	—	135
	$ 108,778	$ 415	$ (5,451)	$ 103,742
Viking common stock				63,122
Total short-term investments				$ 166,864

During the nine months ended September 30, 2023, we sold4.5 million shares of Viking common stock and recognized a realized gain of $37.2 million in total. During the three months ended September 30, 2023, there were no sales of Viking common stock.

Gain (loss) from short-term investments in our condensed consolidated statements of operations includes both realized and unrealized gain (loss) from our short-term investments in public equity and warrant securities.

Allowances are recorded for available-for-sale debt securities with unrealized losses. This limits the amount of credit losses that can be recognized for available-for-sale debt securities to the amount by which carrying value exceeds fair value and requires the reversal of previously recognized credit losses if fair value increases. The provisions of the credit losses standard did not have a material impact on our available-for-sale debt securities during the three and nine months ended September 30, 2023.

The following table summarizes our available-for-sale debt securities by contractual maturity (in thousands):

	September 30, 2023	
	Amortized Cost	Fair Value
Within one year	$ 71,095	$ 71,070
After one year through five years	6,966	6,927
Total	$ 78,061	$ 77,997

Our investment policy is capital preservation and we only invest in U.S.-dollar denominated investments. We held a total of48 investments which were in an unrealized loss position with a total of $0.1 million unrealized losses as of September 30, 2023. We believe that we will collect the principal and interest due on our debt securities that have an amortized cost in excess of fair value. The unrealized losses are largely due to changes in interest rates and not to unfavorable changes in the credit quality associated with these securities that impacted our assessment on collectability of principal and interest. We do not intend to sell these securities and it is not more-likely-than-not that we will be required to sell these securities before the recovery of the amortized cost basis. Accordingly, no credit losses were recognized for the three and nine months ended September 30, 2023.

Accounts Receivable and Allowance for Credit Losses

Our accounts receivable arise primarily from sales on credit to customers. We establish an allowance for credit losses to present the net amount of accounts receivable expected to be collected. The allowance is determined by using the loss-rate method, which requires an estimation of loss rates based upon historical loss experience adjusted for factors that are relevant to determining the expected collectability of accounts receivable. Some of these factors include macroeconomic conditions that correlate with historical loss experience, delinquency trends, aging behavior of receivables and credit and liquidity quality indicators for industry groups, customer classes or individual customers. During the three and nine months ended September 30, 2023, we considered the current and expected future economic and market conditions and concluded an increase of $0.1 million and an increase of $0.1 million of allowance for credit losses, respectively.

Inventory

Inventory, which consists of finished goods, is stated at the lower of cost or net realizable value. We determine cost using the specific identification method.

We analyze our inventory levels periodically and write down inventory to net realizable value if it has become obsolete, has a cost basis in excess of its expected net realizable value or is in excess of expected requirements. There were no write-downs recorded against inventory for the three and nine months ended September 30, 2023 and 2022. In addition to finished goods, as of September 30, 2023 inventory consists of Captisol prepayments of $4.7 million, and as of December 31, 2022 inventory consists of Captisol prepayments of $5.9 million.

Goodwill and Other Identifiable Intangible Assets

Goodwill and other identifiable intangible assets consist of the following (in thousands):

	September 30, 2023	December 31, 2022
Indefinite-lived intangible assets		
Goodwill	$ 103,770	$ 105,673
Definite lived intangible assets		
Complete technology	49,810	55,211
Less: accumulated amortization	(20,176)	(22,560)
Trade name	2,642	2,642
Less: accumulated amortization	(1,677)	(1,577)
Customer relationships	29,600	29,600
Less: accumulated amortization	(18,788)	(17,670)
Contractual relationships	360,000	362,000
Less: accumulated amortization	(86,568)	(65,191)
Total goodwill and other identifiable intangible assets, net	$ 418,613	$ 448,128

Commercial License Rights

Commercial license rights consist of the following (in thousands):

	September 30, 2023			December 31, 2022		
	Gross	Adjustments[1]	Net	Gross	Adjustments[2]	Net
Elutia and CorMatrix	$ 17,696	$ (11,881)	$ 5,815	$ 17,696	$ (9,538)	$ 8,158
Selexis and Dianomi	10,602	(9,815)	787	10,602	(8,578)	2,024
Total	$ 28,298	$ (21,696)	$ 6,602	$ 28,298	$ (18,116)	$ 10,182

(1) Amounts represent accumulated amortization to principal of $ 11.1 million, credit loss adjustments of $ 9.7 million and impairment of $0.9 million as of September 30, 2023.
(2) Amounts represent accumulated amortization to principal of $ 11.6 million and credit loss adjustments of $ 6.5 million as of December 31, 2022.

Commercial license rights represent a portfolio of future milestone and royalty payment rights acquired from Selexis, S.A. (Selexis) in April 2013 and April 2015, CorMatrix Cardiovascular, Inc. (CorMatrix) in May 2016, which was later acquired by Aziyo (Aziyo changed its corporate name to Elutia Inc. ("Elutia") in September 2023) in 2017, and Dianomi Therapeutics, Inc. in January 2019. Commercial license rights acquired are accounted for as financial assets in accordance with ASC 310, *Receivables,* as further discussed in *Note 1, Basis of Presentation and Summary of Significant Accounting Policies* of the Notes to Consolidated Financial Statements in our 2022 Annual Report.

We estimated the credit losses at the individual asset level by considering the performance against the programs, the company operating performance and the macroeconomic forecast. In addition, we have judgmentally applied credit loss risk factors to the future expected payments with consideration given to the timing of the payment. Given the higher inherent credit risk associated with longer term receivables, we applied a lower risk factor to the earlier years and progressively higher risk factors to the later years. During the three and nine months ended September 30, 2023, we further considered the current and expected future economic and market conditions and recorded a $3.2 million credit loss adjustment to Elutia commercial license rights based on the assessment of current company performance and nonpayment by Elutia in recent quarters. Management is in process of modifying the payment terms with Elutia and has placed the loan on the non-accrual method during the three months ended September 30, 2023, instead of the effective interest method until we are able to reliably estimate future cash flows. During the three months ended September 30, 2023 we did not recognized revenue related to the Elutia commercial license right. During the nine months ended September 30, 2023 we recognized $0.8 million of revenue related to the Elutia commercial license right.

In addition, we recorded a $0.9 million impairment loss for Selexis commercial license rights during the three and nine months ended September 30, 2023 as a result of recently reduced programs.

Accrued Liabilities

Accrued liabilities consist of the following (in thousands):

	September 30, 2023	December 31, 2022
Compensation	$ 2,890	$ 6,201
Subcontractor	1,966	1,756
Professional fees	3,229	662
Customer deposit	621	621
Supplier	303	634
Royalties owed to third parties	—	12
Amounts owed to former licensees	45	3,989
Other	1,581	1,806
Total accrued liabilities	$ 10,635	$ 15,681

Share-Based Compensation

Share-based compensation expense for awards to employees and non-employee directors is a non-cash expense and is recognized on a straight-line basis over the vesting period. The following table summarizes share-based compensation expense recorded as components of research and development expenses and general and administrative expenses for the periods indicated (in thousands):

	Three months ended September 30,		Nine months ended September 30,	
	2023	2022[(a)]	2023	2022[(a)]
SBC - Research and development expenses	$ 1,639	$ 3,277	$ 5,362	$ 7,920
SBC - General and administrative expenses	5,245	5,830	14,660	15,297
	$ 6,884	$ 9,107	$ 20,022	$ 23,217

(a) Prior period amounts have been retrospectively adjusted to reflect the effects of the Separation.

The fair-value for options that were awarded to employees and directors was estimated at the date of grant using the Black-Scholes option valuation model with the following weighted-average assumptions:

	Three months ended September 30,		Nine months ended September 30,	
	2023	2022	2023	2022
Risk-free interest rate	4.3%	2.8%	4.1%	2.9%
Dividend yield	—	—	—	—
Expected volatility	44.7%	50.0%	51.5%	50.0%
Expected term (years)	5.2	4.9	5.3	4.8

A limited amount of performance-based restricted stock units (PSUs) contain a market condition based on our relative total shareholder return ranked on a percentile basis against the NASDAQ Biotechnology Index over a three year performance period, with a range of 0% to 200% of the target amount granted to be issued under the award. Share-based compensation cost for these PSUs is measured using the Monte-Carlo simulation valuation model and is not adjusted for the achievement, or lack thereof, of the performance conditions.

Net Income (Loss) Per Share

Basic net income (loss) per share is calculated by dividing net (loss) income by the weighted average number of common shares outstanding during the period. Diluted net income per share is computed based on the sum of the weighted average number of common shares and potentially dilutive common shares outstanding during the period. Diluted net loss per share is computed based on the sum of the weighted average number of common shares outstanding during the period.

Potentially dilutive common shares consist of shares issuable under the 2023 Notes, stock options and restricted stock. Although we paid off the 2023 Notes in May 2023, it would have a dilutive impact when the average market price of our common stock exceeds the maximum conversion price during the nine months ended September 30, 2023. It was our intent and policy to settle conversions through combination settlement, which involved payment in cash equal to the principal portion and delivery of shares of common stock for the excess of the conversion value over the principal portion. Potentially dilutive common shares from stock options and restricted stock are determined using the average share price for each period under the treasury stock method. In addition, the following amounts are assumed to be used to repurchase shares: proceeds from exercise of stock options and the average amount of unrecognized compensation expense for the awards. See *Note 6, Debt* and *Note 8, Stockholders' Equity*.

In accordance with ASC 260, *Earnings per Share*, if a company had a discontinuing operation, the company uses income from continuing operations, adjusted for preferred dividends and similar adjustments, as its control number to determine whether potential common shares are dilutive. The following table presents the calculation of weighted average shares used to calculate basic and diluted earnings per share (in thousands):

	Three months ended September 30,		Nine months ended September 30,	
	2023	**2022**	**2023**	**2022**
Weighted average shares outstanding:	17,380	16,888	17,241	16,860
Dilutive potential common shares:				
Restricted stock	—	65	82	54
Stock options	—	179	302	214
2023 convertible senior notes	—	—	159	—
Shares used to compute diluted income per share	17,380	17,132	17,784	17,128
Potentially dilutive shares excluded from calculation due to anti-dilutive effect	4,762	6,706	4,663	6,503

For the three months ended September 30, 2023, due to the net loss for the period, all of the 0.3 million weighted average equity awards were anti-dilutive.

2. Sale of Pelican Business and Investment in Primrose Bio

On September 18, 2023, we entered into a merger agreement, pursuant to which our subsidiary, Pelican Technology Holdings, Inc. ("Pelican") became a wholly owned subsidiary of Primrose Bio. Primrose Bio is a private company focused on synthetic biology. Pelican has developed technology related to PET (protein expression technology) and PelicCRM197 (vaccine material), and has property and equipment, as well as leased property in San Diego, CA. As part of the transaction, we received 2,146,957 common shares, 4,278,293 preferred shares and 474,746 restricted shares of Primrose Bio. Simultaneous with the merger, we entered into a Purchase and Sale Agreement with Primrose Bio and contributed $15.0 million in exchange for 50.0% of potential development milestones and certain commercial milestones fromtwo contracts previously entered into by Primordial Genetics. In addition, starting January 1, 2025, we will receive 25% of sales revenue of PeliCRM197 above $3.0 million and 35% of all PeliCRM197 licensing revenue in perpetuity.

We retained contractual relationships utilizing the Pelican Expression Technology, including the commercial royalty rights to Jazz's RYLAZE, Merck's VAXNEUVANCE and V116 vaccines, Alvogen's Teriparatide, Serum Institute of India's vaccine programs, including Pneumosil and MenFive vaccines, among others.

We determined that the sale of Pelican meets the definition of a deconsolidation of a business. Net assets sold together with allocated goodwill and cash consideration paid were as follows (in thousands):

Property and equipment, net	$	8,250
Intangible assets		19,895
Other assets		717
Operating lease right-of-use assets		8,693
Financing lease right-of-use assets		20
Accrued liabilities		(630)
Deferred revenue		(495)
Long-term operating lease liabilities		(8,445)
Other liabilities		(74)
Net assets sold		27,931
Allocated goodwill		4,132
Cash consideration paid		15,000
	$	**47,063**

Fair value of the consideration received includes the following (in thousands):

Equity method investment	$	13,706
Equity securities		32,278
Derivative assets		3,200
	$	49,184

Goodwill allocated to the selling business based on the relative fair value of the Pelican business and Ligand that was written off was $4.1 million, resulting in a $2.1 million gain on sale of Pelican recorded to income (loss) from operations for the three and nine months ended September 30, 2023.

Transaction costs of $1.2 million were allocated to the equity method investment and equity securities based on the relative fair value.

As described above, we will receive 25% of sales revenue of PeliCRM197 above $3.0 million and 35% of all PeliCRM197 licensing revenue in perpetuity. The considerations were recognized as contingent consideration under the loss recovery model and they will be measured based on the gain contingency model under ASC 450, *Contingencies*, and thus, will be recognized as the underlying contingencies are resolved.

In addition, we will receive 50.0% of potential development milestones and certain commercial milestones fromtwo contracts previously entered into by Primordial Genetics. The considerations were recognized as derivative assets with a fair value of $3.2 million, at the disposition date, which was included under other long-term asset in our condensed consolidated balance sheet. They are recognized as derivative assets under ASC 815, *Derivatives and Hedging*, as they have two underlyings

(development and commercial milestones) and (i) the commercial milestones are dependent on the development milestones and (ii) the commercial milestone underlying is not determined to be predominate. The derivative assets are recorded at fair value as of September 18, 2023, and will be marketed to fair value at each reporting period going forward.

Investment in Primrose Bio

We received 2,146,957 common shares, 4,278,293 preferred shares and 474,746 restricted shares of Primrose Bio in consideration for the sale of Pelican. We apply the equity method to investments in common stock and to other investments in entities that have risk and reward characteristics that are substantially similar to an investment in the investee's common stock. Since the preferred stock and restricted share investment in Primrose Bio has a substantive liquidation preference, it is not substantially similar to the common stock investment and is therefore recorded as an equity security under ASC 321, *Investments - Equity Securities*.

We account for our common stock investment in Primrose Bio under the equity method as we have the ability to exercise significant influence over its operating and financial results. In applying the equity method, we record the investment at fair value. Ligand's proportionate share of net loss of Primrose Bio is recorded in our condensed consolidated statements of operations for the three and nine months ended September 30, 2023. Our equity method investments are reviewed for indicators of impairment at each reporting period and are written down to fair value if there is evidence of a loss in value that is other-than-temporary. Our share of the net losses of Primrose Bio since the divestiture date for the quarter ended September 30, 2023 was $0.07 million; which reduced Ligand's equity method investment accordingly.

We determined that the Series A preferred stock investment in Primrose Bio did not have a readily determinable fair value and therefore elected the measurement alternative in ASC 321 to subsequently record the investment at cost, less any impairments, plus or minus changes resulting from observable price changes in orderly transactions for identical or similar investments of the same issuer. When fair value becomes determinable, from observable price changes in orderly transactions, our investment will be marked to fair value. There have been no observable price changes or impairments identified since September 18, 2023.

3. Acquisition

Novan

On September 27, 2023, we closed the transaction to acquire certain assets of Novan, Inc. ("Novan") pursuant to the agreement we entered into with Novan on July 17, 2023 for $15.0 million in cash (which agreement contemplated Novan filing for bankruptcy relief) and provide up to $15.0 million in debtor-in-possession ("DIP") financing inclusive of a $3.0 million bridge loan funded on the same day. Novan filed for Chapter 11 reorganization on July 17, 2023. On September 27, 2023, the bankruptcy court approved our $12.2 million bid to purchase from Novan its lead product candidate berdazimer gel,10.3%, all other assets related to the NITRICIL technology platform and the rights to one commercial stage asset. The remaining commercial assets of Novan will be sold to other parties. The approved $12.2 million bid was credited to the $15.0 million DIP financing, with the balance of $2.8 million and accrued interest repaid to us.

The acquisition was accounted for as business combination. We recorded $3.3 million of acquisition-related costs for legal, due diligence and other costs in connection with the acquisition within operating expenses in our condensed consolidated statement of operations for the nine months ended September 30, 2023.

The following table sets forth an allocation of the preliminary purchase price to the identifiable tangible and intangible assets acquired and liabilities assumed, with the excess recorded to goodwill (in thousands):

Restricted Cash	$	583
Property and equipment, net		13,054
Right-of-use asset		3,683
Other assets		364
Intangible assets acquired		17,600
Goodwill		2,229
Deferred revenue		(2,342)
Lease liabilities		(3,683)
Other liabilities		(20,500)
Cash paid for Novan, including restricted cash received		10,988
DIP loan fees and interest		1,162
Total consideration	$	12,150

Acquired intangible assets of $17.6 million related to core technology. The fair value of the core technology was based on the discounted cash flow method that estimated the present value of the potential royalties, milestones, and collaboration revenue streams derived from the licensing of the related technologies. These projected cash flows were discounted to present value using a discount rate of 29%. The fair value of the core technology is being amortized on a straight-line basis over the estimated useful life of 15 years.

Acquired other liabilities of $20.5 million related to a royalty and milestone payments purchase agreement, entered by Novan in 2019 and assumed as part of the acquisition, which previously provided Novan $25.0 million of funding used primarily in the clinical development of berdazimer gel,10.3%. Pursuant to the purchase agreement, Novan will pay ongoing quarterly payments, calculated based on an applicable percentage per product of any upfront fees, milestone payments, royalty payments or equivalent payments received by Novan pursuant to any out-license agreement, net of any upfront fees, milestone payments, royalty payments or equivalent payments paid by Novan to third parties pursuant to any agreements under which Novan has in-licensed intellectual property with respect to such products. If Novan decides to commercialize any product on its own following regulatory approval, as opposed to commercializing through an out-license agreement or other third-party arrangement, Novan will be obligated to pay a low single digits royalty on net sales of such products. This contract liability was fair valued based on the discounted cash flow method that estimated the present value of the potential royalties, milestones, and collaboration revenue streams derived from the related programs mentioned above, by applying a discount rate of 9.6% (our estimated rate of borrowing).

The estimated fair values of assets acquired, liabilities assumed and purchased intangibles are provisional. Specifically, the provisional amounts include estimated projections on the completion of the clinical development process and projected revenue related to commercializing products based on the underlying technology. The accounting for these amounts falls within the measurement period and, therefore, we may adjust these provisional amounts to reflect new information obtained about facts and circumstances that existed as of the acquisition date.

4. Spin-off of OmniAb

On March 23, 2022, we entered into the Separation Agreement to separate our OmniAb Business and the Merger Agreement, pursuant to which APAC would combine with OmniAb, and acquire Ligand's OmniAb Business, in a Reverse Morris Trust transaction (collectively, the “Transactions”). In connection with the execution of the Merger Agreement, we made organizational changes to better align our organizational structure with our strategy and operations, and management reorganized the reportable segments to better reflect how the business is evaluated by the chief operating decision maker. Beginning in the first quarter of 2022, we operated the following two reportable segments: (1) OmniAb Business and (2) Ligand core business. The OmniAb Business segment was focused on enabling the discovery of therapeutic candidates for our partners by pairing antibody repertoires generated from our proprietary transgenic animals with our OmniAb Business platform screening tools. The Ligand core business segment is a biopharmaceutical business focused on developing or acquiring technologies that help pharmaceutical companies deliver and develop medicines.

After the closing date of the Transactions on November 1, 2022, the historical financial results of OmniAb have been reflected in our consolidated financial statements as discontinued operations under GAAP for all periods presented through the date of the Distribution. Pursuant to the Transaction Agreements, Ligand contributed to OmniAb cash and certain specific assets and liabilities constituting the OmniAb Business. Pursuant to the Distribution, Ligand distributed on a pro rata basis to its shareholders as of October 26, 2022 shares of the common stock of OmniAb representing 100% of Ligand’s interest in OmniAb. Immediately following the Distribution, Merger Sub merged with and into OmniAb, with OmniAb continuing as the

surviving company in the Merger and as a wholly owned subsidiary of New OmniAb. The entire transaction was completed on November 1, 2022, and following the Merger, New OmniAb is an independent, publicly traded company whose common stock trades on NASDAQ under the symbol "OABI." After the Distribution, we do not beneficially own any shares of common stock in OmniAb and no longer consolidate OmniAb into our financial results for periods ending after November 1, 2022.

Discontinued operations

In connection with the Merger, the Company determined its antibody discovery business qualified for discontinued operations accounting treatment in accordance with ASC 205-20. We recognized a $1.7 million tax provision adjustment related to deferred taxes during the nine months ended September 30, 2023 that was attributable to the discontinued operations. There was no revenue or expenses attributable to the discontinued operations during the three months ended September 30, 2023. The following table summarizes revenue and expenses of the discontinued operations for the three and nine months ended September 30, 2022 (in thousands):

	Three months ended September 30, 2022	Nine months ended September 30, 2022
Revenues:		
Royalties	$ 582	$ 984
Contract revenue	6,285	22,353
Total revenues	6,867	23,337
Operating costs and expenses:		
Amortization of intangibles	3,250	9,757
Research and development	12,797	34,576
General and administrative	2,525	11,279
Total operating costs and expenses	18,572	55,612
Loss from operations	(11,705)	(32,275)
Other income (expense):		
Other income (expense), net	208	485
Total other income (expense), net	208	485
Loss before income tax	(11,497)	(31,790)
Income tax (expense) benefit	2,256	6,599
Net loss	$ (9,241)	$ (25,191)

The following table summarizes the significant non-cash items, capital expenditures of the discontinued operations, and financing activities that are included in the consolidated statements of cash flows for the nine months ended September 30, 2022 (in thousands):

	Nine months ended September 30, 2022
Operating activities:	
Change in fair value of contingent consideration	$ (486)
Depreciation and amortization	12,070
Stock-based compensation expense	7,923
Investing activities:	
Purchase of property, plant and equipment	(12,415)
Payments to CVR Holders	(960)
Financing activities:	
Payments to CVR Holders	$ (1,545)
Supplemental cash flow disclosures:	
Purchases of property, plant and equipment included in accounts payable and accrued expenses	$ 3,458

5. Fair Value Measurements

Assets and Liabilities Measured on a Recurring Basis

The following table presents the hierarchy for our assets and liabilities measured at fair value (in thousands):

	September 30, 2023				December 31, 2022			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets:								
Short-term investments, excluding Viking[1]	$ 5,555	$ 140,970	$ 22	$ 146,547	$ 3,992	$ 99,615	$ 135	$ 103,742
Investment in Viking common stock	24,680	—	—	24,680	63,122	—	—	63,122
Derivative assets[3]	—	—	3,281	3,281	—	—	—	—
Total assets	$ 30,235	$ 140,970	$ 3,303	$ 174,508	$ 67,114	$ 99,615	$ 135	$ 166,864
Liabilities:								
CyDex contingent liabilities	$ —	$ —	$ 164	$ 164	$ —	$ —	$ 84	$ 84
Metabasis contingent liabilities[2]	—	3,431	—	3,431	—	3,429	—	3,429
Amounts owed to former licensor	—	—	—	—	44	—	—	44
Total liabilities	$ —	$ 3,431	$ 164	$ 3,595	$ 44	$ 3,429	$ 84	$ 3,557

1. Excluding our investment in Viking, our short-term investments in marketable debt and equity securities are classified as available-for-sale securities based on management's intentions and are at level 2 of the fair value hierarchy, as these investment securities are valued based upon quoted prices for identical or similar instruments in markets that are not active, and model-based valuation techniques for which all significant assumptions are observable in the market. Short-term investments in bond funds are valued at their net asset value (NAV) on the last day of the period. We have classified marketable securities with original maturities of greater than one year as short-term investments based upon our ability and intent to use any and all of those marketable securities to satisfy the liquidity needs of our current operations. In addition, we have investment in warrants resulting from Seelos Therapeutics Inc. milestone payments that were settled in shares during the first quarter of 2019 and are at level 3 of the fair value hierarchy, based on Black-Scholes value estimated by management on the last day of the period.

2. In connection with our acquisition of Metabasis in January 2010, we issued Metabasis stockholders four tradable CVRs, one CVR from each of four respective series of CVR, for each Metabasis share. The CVRs entitle Metabasis stockholders to cash payments as frequently as every six months as cash is received by us from proceeds from the sale or partnering of any of the Metabasis drug development programs, among other triggering events. The liability for the CVRs is determined using quoted prices in a market that is not active for the underlying CVR. The carrying amount of the liability may fluctuate significantly based upon quoted market prices and actual amounts paid under the agreements may be materially different than the carrying amount of the liability. Several of the Metabasis drug development programs have been outlicensed to Viking, including VK2809. VK2809 is a novel selective TR-β agonist with potential in multiple indications, including hypercholesterolemia, dyslipidemia, NASH, and X-ALD. Under the terms of the agreement with Viking, we may be entitled to up to $375.0 million of development, regulatory and commercial milestones and tiered royalties on potential future sales including a $10.0 million payment upon initiation of a Phase 3 clinical trial. During the three and nine months ended September 30, 2023, we adjusted the balance of the Metabasis CVR liability by decreasing $0.1 million and increasing $0.002 million to mark to market, respectively.

3. In connection with the Purchase and Sale Agreement with Primrose Bio, we will receive 50.0% of potential development milestones and certain commercial milestones from two contracts previously entered into by Primordial Genetics. The considerations were recognized as derivative assets included under other long-term asset in our condensed consolidated balance sheet. They are recognized as derivative assets under ASC 815, *Derivatives and Hedging,* as they have two underlyings (development and commercial milestones) and (i) the commercial milestones are dependent on the development milestones and (ii) the commercial milestone underlying is not determined to be predominate. The fair value of the derivative assets was determined using a discounted cash flow approach using a discount rate inline with the stages of the underlying contracts.

A reconciliation of the level 3 liabilities as of September 30, 2023 is as follows (in thousands):

Fair value of level 3 financial instruments as of December 31, 2022	$ 84
Payments to CVR holders and other contingent payments	(50)
Fair value adjustments to contingent liabilities	130
Fair value of level 3 financial instruments as of September 30, 2023	$ 164

Assets Measured on a Non-Recurring Basis

We apply fair value techniques on a non-recurring basis associated with valuing potential impairment losses related to our goodwill, indefinite-lived intangible assets and long-lived assets.

We evaluate goodwill and indefinite-lived intangible assets annually for impairment and whenever circumstances occur indicating that goodwill might be impaired. We determine the fair value of our reporting unit based on a combination of inputs, including the market capitalization of Ligand, as well as Level 3 inputs such as discounted cash flows, which are not observable from the market, directly or indirectly. We determine the fair value of our indefinite-lived intangible assets using the income approach based on Level 3 inputs.

Other than a reduction in goodwill resulting from the sale of Pelican business disclosed in *Note 2, Sale of Pelican Business and Investment in Primrose Bio,* and a $0.9 million impairment loss for Selexis commercial license rights based on fair value of the program disclosed in *Note 1, Basis of Presentation and Summary of Significant Accounting Policies*, there was no impairment of our goodwill, indefinite-lived assets, or long-lived assets recorded during the three and nine months ended September 30, 2023 and September 30, 2022.

6. Debt

0.75% Convertible Senior Notes due 2023

In May 2018, we issued $750.0 million aggregate principal amount of 2023 Notes, bearing cash interest at a rate of 0.75% per year, payable semi-annually. The net proceeds from the offering, after deducting the initial purchasers' discount and offering expenses, were approximately $733.1 million.

In connection with the issuance of the 2023 Notes, we incurred $16.9 million of issuance costs, which primarily consisted of underwriting, legal and other professional fees, and is being amortized to interest expense using the effective interest method over the five year expected life of the 2023 Notes. The effective interest rate for the nine months ended September 30, 2023 is 0.5%. During the nine months ended September 30, 2023 we recognized a total of $0.6 million in interest expense which includes $0.4 million in contractual interest expense and $0.2 million in amortized issuance costs.

On May 15, 2023, the 2023 Notes maturity date, we paid the remaining $76.9 million principal amount and $0.3 million accrued interest in cash.

Convertible Bond Hedge and Warrant Transactions

In conjunction with the 2023 Notes, in May 2018, we entered into convertible bond hedges and sold warrants covering 3,018,327 shares of our common stock to minimize the impact of potential dilution to our common stock and/or offset the cash payments we were required to make in excess of the principal amount upon conversion of the 2023 Notes. The convertible bond hedges have an exercise price of $206.65 per share and were exercisable when and if the 2023 Notes were converted. We paid $140.3 million for these convertible bond hedges. If upon conversion of the 2023 Notes, the price of our common stock had been above the exercise price of the convertible bond hedges, the counterparties would have delivered shares of common stock and/or cash with an aggregate value approximately equal to the difference between the price of common stock at the conversion date and the exercise price, multiplied by the number of shares of common stock related to the convertible bond hedge transaction being exercised. The convertible bond hedges and warrants described below are separate transactions entered into by us and are not part of the terms of the 2023 Notes. Holders of the 2023 Notes and warrants did not have any rights with respect to the convertible bond hedges.

Concurrently with the convertible bond hedge transactions, we entered into warrant transactions whereby we sold warrants covering approximately 3,018,327 shares of common stock with an exercise price of approximately $315.38 per share, subject to certain adjustments. We received $90.0 million for these warrants. The warrants have various expiration dates ranging from August 15, 2023 to February 6, 2024. The warrants will have a dilutive effect to the extent the market price per share of common stock exceeds the applicable exercise price of the warrants, as measured under the terms of the warrant transactions. The common stock issuable upon exercise of the warrants will be in unregistered shares, and we do not have the obligation and do not intend to file any registration statement with the SEC registering the issuance of the shares under the warrants.

In January 2021, in connection with the repurchases of approximately $20.3 million in principal of the 2023 Notes for approximately $19.1 million in cash, including accrued interest of $0.1 million, during the quarter ended December 31, 2020, we entered into amendments with Barclays Bank PLC, Deutsche Bank AG, London Branch, and Goldman Sachs & Co. LLC to the convertible note hedges transactions we initially entered into in connection with the issuance of the 2023 Notes. The amendments provide that the options under the convertible note hedges corresponding to such repurchased 2023 Notes will remain outstanding notwithstanding such repurchase.

During the year ended December 31, 2021, in connection with the repurchases of $152.0 million in principal of the 2023 Notes for $156.0 million in cash, including accrued interest of $0.3 million, we entered into Warrant Early Unwind Agreements and Bond Hedge Unwind Agreements with Barclays Bank PLC, Deutsche Bank AG, and Goldman Sachs & Co. LLC to unwind a portion of the convertible note hedges transactions we initially entered into in connection with the issuance of the 2023 Notes. We paid $18.4 million as part of the Warrant Early Unwind Agreements reducing the number of shares covered by the warrants from 3,018,327 to 2,559,254.

In August 2022, in connection with the repurchases of $227.8 million in principal of the 2023 Notes for $223.7 million in cash, including accrued interest of $0.4 million made during the six months ended June 30, 2022, we entered into Bond Hedge Unwind Agreements with Barclays Bank PLC, Deutsche Bank AG, and Goldman Sachs & Co. LLC to unwind a portion of the convertible note hedges transactions we initially entered into in connection with the issuance of the 2023 Notes.

7. Income Tax

Our effective tax rate may vary from the U.S. federal statutory tax rate due to the change in the mix of earnings in various state jurisdictions with different statutory rates, benefits related to tax credits, and the tax impact of non-deductible expenses, stock award activities and other permanent differences between income before income taxes and taxable income. The effective tax rate for continuing operations for the three and nine months ended September 30, 2023 and 2022 was 15.4% and 21.9%, and 23.5% and 21.5%, respectively. The variance from the U.S. federal statutory tax rate of 21% for the three and nine months ended September 30, 2023 was primarily due to Internal Revenue Code Section 162(m) limitation on deduction for officer compensation, non-deductible incentive stock option (ISO) related stock compensation expense, which were partially offset by foreign derived intangible income tax benefit during the period. The variance from the U.S. federal statutory tax rate of 21% for the three and nine months ended September 30, 2022 was primarily due to the tax deductions related to foreign derived intangible income tax benefit as well as the research and development tax credits, which were partially offset by Section 162(m) limitation during the period.

8. Stockholders' Equity

We grant options and awards to employees and non-employee directors pursuant to a stockholder approved stock incentive plan, which is described in further detail in *Note 9, Stockholders' Equity*, of the Notes to Consolidated Financial Statements in our 2022 Annual Report.

The following is a summary of our stock option and restricted stock activity and related information:

	Stock Options		Restricted Stock Awards	
	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Grant Date Fair Value
Balance as of December 31, 2022	2,991,473	$ 61.31	348,453	$ 75.60
Granted	518,332	$ 73.21	203,752	$ 83.39
Options exercised/RSUs vested	(362,926)	$ 44.03	(169,854)	$ 75.26
Forfeited	(338,742)	$ 65.09	(15,980)	$ 63.69
Balance as of September 30, 2023	2,808,137	$ 65.29	366,371	$ 80.61

As of September 30, 2023, outstanding options to purchase 1.8 million shares were exercisable with a weighted average exercise price per share of $64.22.

Employee Stock Purchase Plan

The price at which common stock is purchased under the Amended Employee Stock Purchase Plan, or ESPP, is equal to 85% of the fair market value of the common stock on the first or last day of the offering period, whichever is lower. As of September 30, 2023, 32,363 shares were available for future purchases under the ESPP.

At-the Market Equity Offering Program

On September 30, 2022, we filed a registration statement on Form S-3 (the "Shelf Registration Statement"), which became automatically effective upon filing, covering the offering of common stock, preferred stock, debt securities, warrants and units.

On September 30, 2022, we also entered into an At-The-Market Equity Offering Sales Agreement (the "Sales Agreement") with Stifel, Nicolaus & Company, Incorporated (the "Agent"), under which we may, from time to time, sell shares of our common stock having an aggregate offering price of up to $100.0 million in "at the market" offerings through the Agent (the "ATM Offering"). The Shelf Registration Statement included a prospectus covering the offering, issuance and sale of up to

$100.0 million of our common stock from time to time through the ATM Offering. The shares to be sold under the Sales Agreement may be issued and sold pursuant to the Shelf Registration Statement. To date, we have not issued any shares of common stock in the ATM Offering.

Share Repurchases

Our Board of Directors has approved a stock repurchase program authorizing, but not requiring, the repurchase of up to $50.0 million of our common stock from time to time through April 2026. We expect to acquire shares, if at all, primarily through open-market transactions in accordance with all applicable requirements of Rule 10b-18 under the Securities Exchange Act of 1934, as amended. The timing and amount of repurchase transactions will be determined by management based on our evaluation of market conditions, share price, legal requirements and other factors. Authorization to repurchase $50.0 million of our common stock remained available as of September 30, 2023.

9. Commitment and Contingencies

Legal Proceedings

We record an estimate of a loss when the loss is considered probable and estimable. Where a liability is probable and there is a range of estimated loss and no amount in the range is more likely than any other number in the range, we record the minimum estimated liability related to the claim in accordance with ASC 450, *Contingencies*. As additional information becomes available, we assess the potential liability related to our pending litigation and revises our estimates. Revisions in our estimates of potential liability could materially impact our results of operations.

On October 31, 2019, we received three civil complaints filed in the U.S. District Court for the Northern District of Ohio on behalf of several Indian tribes. The Northern District of Ohio is the Court that the Judicial Panel on Multi-District Litigation ("JPML") has assigned more than one thousand civil cases which have been designated as a Multi-District Litigation ("MDL") and captioned In Re: National Prescription Opiate Litigation. The allegations in these complaints focus on the activities of defendants other than the Company and no individualized factual allegations have been advanced against us in any of the 3 complaints. We reject all claims raised in the complaints and intend to vigorously defend these matters.

From time to time, we may also become subject to other legal proceedings or claims arising in the ordinary course of our business. We currently believe that none of the claims or actions pending against us is likely to have, individually or in aggregate, a material adverse effect on our business, financial condition or results of operations. Given the unpredictability inherent in litigation, however, we cannot predict the outcome of these matters.

Operating Leases

During the nine months ended September 30, 2023, we entered into an amendment to the lease agreement for our headquarters office located in San Diego, California, which resulted in a $1.1 million increase in both operating lease assets and operating lease liabilities at lease commencement.

10. Subsequent Events

Revolving Credit Facility

On October 12, 2023, we entered into a $75.0 million revolving credit facility (the "Revolving Credit Facility") with Citibank, N.A. as the Administrative Agent. We, our material domestic subsidiaries, as Guarantors (as defined in the Credit Agreement), and the Lenders (as defined in the Credit Agreement) entered into a credit agreement (the "Credit Agreement") with the Administrative Agent, under which the Lenders, the Swingline Lender and the L/C Issuer (each as defined in the Credit Agreement) agreed to make loans and other financial accommodations to us in an aggregate amount of up to $75.0 million. At our option, borrowings under the Revolving Credit Facility accrue interest at a rate equal to either Term SOFR Rate or a specified base rate plus an applicable margin linked to our leverage ratio, ranging from 1.75% to 2.50% per annum for Term SOFR Rate loans and 0.75% to 1.50% per annum for base rate loans. The Revolving Credit Facility is subject to a commitment fee payable on the unused Revolving Credit Facility commitments ranging from 0.30% to 0.45%, depending on our leverage ratio. During the term of the Revolving Credit Facility, we may borrow, repay and re-borrow amounts available under the Revolving Credit Facility, subject to voluntary reductions of the swing line, letter of credit and revolving credit commitments.

Borrowings under the Credit Agreement are secured by certain of our collateral and that of the Guarantors. In specified circumstances, additional guarantors are required to be added. The Credit Agreement contains customary affirmative and negative covenants, including certain financial maintenance covenants, and events of default applicable to us. In the event of violation of the representations, warranties and covenants made in the Credit Agreement, we may not be able to utilize the Revolving Credit Facility or repayment of amounts owed thereunder could be accelerated.

As of the date of this filing, no amounts have been borrowed under the Revolving Credit Facility. The maturity date of the Revolving Credit Facility is October 12, 2026.

Ovid Therapeutics

On October 18, 2023, we entered into an agreement with Ovid Therapeutics Inc. ("Ovid") to acquire a 13% interest in all royalties and milestones owed to Ovid related to the potential approval and commercialization of soticlestat. We have paid Ovid $30.0 million, less certain reimbursable expenses, to acquire these royalty and milestone interests.

Tolerance

On October 31, 2023, we acquired Tolerance Therapeutics, Inc. ("Tolerance Therapeutics") for $20.0 million in cash. Tolerance Therapeutics is a holding company, owned by the inventors of TZIELD (teplizumab-mzwv), that is owed a royalty of less than 1% on worldwide net sales on TZIELD.

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

Caution: This discussion and analysis may contain predictions, estimates and other forward-looking statements that involve a number of risks and uncertainties, including those discussed in Part II, Item 1A. Risk Factors. This outlook represents our current judgment on the future direction of our business. These statements include those related to our future results of operations and financial position, Captisol-related revenues and Kyprolis and other product royalty revenues and milestones under license agreements, product development, and product regulatory filings and approvals, and the timing thereof. Actual events or results may differ materially from our expectations. For example, there can be no assurance that our revenues or expenses will meet any expectations or follow any trend(s), that we will be able to retain our key employees or that we will be able to enter into any strategic partnerships or other transactions. We cannot assure you that we will receive expected Kyprolis, Captisol and other product revenues to support our ongoing business or that our internal or partnered pipeline products will progress in their development, gain marketing approval or achieve success in the market. In addition, ongoing or future arbitration, litigation or disputes with third parties may have a material adverse effect on us. Such risks and uncertainties, and others, could cause actual results to differ materially from any future performance suggested. We undertake no obligation to make any revisions to these forward-looking statements to reflect events or circumstances arising after the date of this quarterly report. This caution is made under the safe harbor provisions of Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act).

We use our trademarks, trade names and services marks in this report as well as trademarks, trade names and service marks that are the property of other organizations. Solely for convenience, trademarks and trade names referred to in this report appear without the ® and ™ symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or that the applicable owner will not assert its rights, to these trade marks and trade names.

References to “Ligand Pharmaceuticals Incorporated,” “Ligand,” the “Company,” “we” or “our” include Ligand Pharmaceuticals Incorporated and our wholly-owned subsidiaries.

Overview

We are a biopharmaceutical company enabling scientific advancement through supporting the clinical development of therapeutic candidates. We do this by providing financing, licensing our technologies or both. Our business model generates value for stockholders by creating a diversified portfolio of biotech and pharmaceutical product revenue streams that are supported by an efficient and low corporate cost structure. Our goal is to offer investors an opportunity to participate in the promise of the biotech industry in a profitable and diversified manner. Our business model is based on funding programs in mid- to late-stage drug development in return for economic rights and licensing our technology to help partners discover and develop medicines. We partner with other pharmaceutical companies to leverage what they do best (late-stage development, regulatory management and commercialization) in order to generate our revenue. Our Captisol® platform technology is a chemically modified cyclodextrin with a structure designed to optimize the solubility and stability of drugs. We have established multiple alliances, licenses and other business relationships with the world’s leading pharmaceutical companies including Amgen, Merck, Pfizer, Jazz, Takeda, Gilead Sciences and Baxter International.

Our revenue consists of three primary elements: royalties from commercialized products, sales of Captisol material, and contract revenue from license, milestone and other service payments. We selectively pursue acquisitions and drug development funding opportunities that address high unmet clinical needs to bring in new assets, pipelines, and technologies to aid in generating additional potential new revenue streams.

OmniAb Separation and Spin-Off

On March 23, 2022, we entered into the Merger Agreement, by and among our company, APAC (which later became New OmniAb), OmniAb and Merger Sub, pursuant to which New OmniAb combined with OmniAb, our then-antibody discovery business, in a Reverse Morris Trust transaction. Pursuant to the Separation Agreement, we transferred the OmniAb Business, including certain of our related subsidiaries, to OmniAb and, in connection therewith, distributed (the Distribution) to Ligand stockholders 100% of the common stock of OmniAb. Immediately following the Distribution on November 1, 2022, in accordance with and subject to the terms and conditions of the Merger Agreement, Merger Sub merged with and into OmniAb (the Merger), with OmniAb continuing as the surviving company in the Merger and as a wholly-owned subsidiary of New OmniAb. After the Distribution, we do not beneficially own any shares of common stock in OmniAb and no longer consolidate OmniAb into our financial results for periods ending after October 31, 2022. As a result, OmniAb's historical financial results were reflected in our consolidated financial statements as discontinued operations.

Sale of Pelican Business

On September 18, 2023, we entered into a merger agreement pursuant to which our subsidiary, Pelican Technology Holdings, Inc. ("Pelican") became a wholly owned subsidiary of Primrose Bio, Inc. ("Primrose Bio", formerly known as Primordial Genetics, Inc.). As part of the transaction, we retained the existing commercial royalties related to the Pelican Expression Technology and own 49.9% of Primrose Bio. Simultaneous with the merger, we entered into a Purchase and Sale Agreement with Primrose Bio and acquired 50% of certain future development and commercial milestones from two contracts previously entered into by Primordial Genetics for $15.0 million. In addition, starting January 1, 2025, we will receive 25% of proceeds above $3.0 million derived from sales of PeliCRM197 and 35% of proceeds from PeliCRM197 licensing revenue in perpetuity.

Business Updates

As aforementioned, on September 18, 2023, we spun-out and merged our Pelican subsidiary with Primordial Genetics to form Primrose Bio. We retained existing license agreements and royalty rights from the Pelican Expression Technology, including economic rights to Jazz's Rylaze, Merck's Vaxneuvance and V116 vaccines, Alvogen's Teriparatide, Serum Institute of India's Pneumosil and MenFive vaccines, among others. Additionally, we maintain a 49.9% equity interest in Primrose Bio and economic rights to future programs including two contracts previously entered into by Primordial Genetics and an economic interest in future revenue generated from PeliCRM197. The Primrose Bio technologies create a novel way of enhancing biological productivity to enable the next generation of therapeutics. These technologies are designed to create and express some of the largest sets of genetic diversity available in the industry, to enable customers to discover new biological molecules and cells with levels of productivity that were previously unachievable, economically prohibitive, or otherwise inaccessible.

On September 27, 2023, we acquired certain assets of Novan Inc. for $12.2 million. As part of the transaction, we acquired the NDA-stage berdazimer gel 10.3% program, all the assets related to the NITRICIL delivery technology platform, and the rights to the Sitavig program. Berdazimer gel 10.3% remains on track for a PDUFA goal date of January 5, 2024, as the first potential at-home treatment for molluscum contagiosum. The Novan team is preparing to commercialize berdazimer gel 10.3% in the second half of 2024. We are incubating the business to prepare for a spin-out or strategic partnering.

On October 18, 2023, we invested $30 million to acquire 13% of Ovid Therapeutics' interest in the royalties and milestones owed to Ovid Therapeutics Inc. on soticlestat, a program Takeda Pharmaceutical Company is developing in two pivotal Phase 3 trials in Lennox-Gastaut and Dravet syndromes, respectively, both rare disease conditions. Under the terms of the 2021 agreement between Ovid and Takeda, Ovid is eligible to receive regulatory and commercial milestone payments of up to $660 million, as well as tiered royalties on global net sales of soticlestat at percentages ranging from the low double-digits up to 20%. If soticlestat is approved. Our 13% purchase entitles us to receive up to $86 million in regulatory and commercial milestones, and tiered royalties up to 2.6%.

On October 31, 2023, we acquired Tolerance Therapeutics, a private company which owns a less than 1% royalty on worldwide net sales of TZIELD (teplizumab-mzwv). We invested $20 million to acquire Tolerance Therapeutics and expect it to be immediately accretive to our royalty revenue. TZIELD is the first disease-modifying therapy in type 1 diabetes ("T1D"). It is a CD3-directed antibody indicated to delay the onset of Stage 3 T1D in adults and in children ages 8 years and older with Stage 2 T1D. TZIELD was granted Breakthrough Therapy Designation in 2019 and was approved by the U.S. Food and Drug Administration in November 2022. TZIELD is marketed by Sanofi S.A. following its acquisition of Provention Bio, Inc., in 2023 for $2.9 billion. Sanofi recently announced new data from TZIELD's PROTECT Phase 3 trial which showed TZIELD's potential to slow the progression of Stage 3 T1D in newly diagnosed children and adolescents. TZIELD met the study's primary endpoint, significantly slowing the decline of C-peptide levels, compared to placebo.

Portfolio Updates

On November 7, 2023, Travere Therapeutics (Nasdaq: TVTX) announced that 430 new patient start forms (PSFs) were received in the third quarter and a total of 990 PSFs have been received since the accelerated approval of FILSPARI was obtained in the first quarter of 2023. Additionally, Travere previously announced topline two-year confirmatory secondary endpoint results from the pivotal Phase 3 PROTECT Study of FILSPARI versus irbesartan in IgA nephropathy ("IgAN"). FILSPARI demonstrated long-term kidney function preservation and achieved a clinically meaningful difference in estimated glomerular filtration rate (eGFR) total and chronic slope versus irbesartan, narrowly missing statistical significance in eGFR total slope while achieving statistical significance in eGFR chronic slope for purposes of regulatory review in the EU. All topline efficacy endpoints favored FILSPARI and patients treated with FILSPARI over two years exhibited one of the slowest annual rates of kidney function decline seen in a clinical trial of IgAN patients. Travere will engage with regulators and expects to submit a supplemental New Drug Application ("sNDA") in the first half of 2024 for full approval in the U.S.

On October 26, 2023, Merck (NYSE: MRK) announced third quarter 2023 Vaxneuvance sales of $214 million. Merck previously reported Vaxneuvance sales of $168 million and $106 million in the second and first quarter of 2023, respectively. Additionally, Merck previously announced its Phase 3 clinical trial of V116, an investigational 21-valent pneumococcal

conjugate vaccine, met key immunogenicity and safety endpoints in two Phase 3 trials. If approved, V116 would be the first pneumococcal conjugate vaccine specifically designed for adults. Results from the STRIDE-3 trial demonstrated statistically significant immune responses compared to PCV20 (pneumococcal 20-valent conjugate vaccine) in vaccine-naïve adults for serotypes common to both vaccines. Positive immune responses were also observed for serotypes unique to V116. Additionally, results from STRIDE-6 demonstrated that V116 was immunogenic for all 21 pneumococcal serotypes in the vaccine among adults who previously received a pneumococcal vaccine at least one year prior to the study. In both studies, V116 had a safety profile comparable to the comparator in the studies.

Jazz Pharmaceuticals (Nasdaq: JAZZ) announced that the European Commission has granted marketing authorization for Enrylaze® for use as a component of a multi-agent chemotherapeutic regimen for the treatment of acute lymphoblastic leukemia and lymphoblastic lymphoma in adult and pediatric patients (1 month and older) who developed hypersensitivity or silent inactivation to E. coli-derived asparaginase. Enrylaze, approved as Rylaze in the US and Canada, is a new Erwinia-derived asparaginase developed using the Pfenex Expression Technology with a safety profile consistent with that of other asparaginase preparations. Enrylaze may be given by either intravenous infusion or intramuscular injection and is dosed on either alternate days (every 48 hours) or via a Monday/Wednesday/Friday dosing schedule. The use of the Pfenex Expression Technology to manufacture Enrylaze delivers a scalable supply, able to meet global demand, and a ready-to-use solution that avoids the need for reconstitution in the clinic.

Verona Pharma plc (Nasdaq: VRNA) announced that the FDA has accepted for review its NDA seeking approval of ensifentrine for the maintenance treatment of patients with COPD. The FDA has assigned a PDUFA date of June 26, 2024, and is not currently planning to hold an advisory committee meeting to discuss the application.

Anebulo Pharmaceuticals Inc. (Nasdaq: ANEB) announced positive feedback from the FDA following a Type B meeting in July. The FDA indicated that a single well-controlled study of ANEB-001 in Acute Cannabinoid Intoxication patients presenting to the emergency department combined with a larger THC challenge study in volunteers could potentially provide substantial evidence to support a NDA.

Results of Operations

Revenue

(Dollars in thousands)	Q3 2023	Q3 2022[(a)]	Change	% Change	YTD 2023	YTD 2022[(a)]	Change	% Change
Royalties	$ 23,863	$ 19,255	$ 4,608	24 %	$ 61,447	$ 50,507	$ 10,940	22 %
Captisol - Core	8,608	3,582	5,026	140 %	24,450	13,133	11,317	86 %
Captisol - COVID	—	32,367	(32,367)	(100) %	—	64,483	(64,483)	(100) %
Contract revenue	397	4,017	(3,620)	(90) %	17,316	17,740	(424)	(2) %
Total revenue	$ 32,868	$ 59,221	$ (26,353)	(44) %	$ 103,213	$ 145,863	$ (42,650)	(29) %

(a) Prior period amounts have been retrospectively adjusted to reflect the effects of the Separation.

Q3 2023 vs. Q3 2022

Total revenue decreased by $26.4 million, or 44%, to $32.9 million in Q3 2023 compared to $59.2 million in Q3 2022. Captisol sales related to COVID-19 in Q3 2022 were $32.4 million. We did not have any COVID-19 related Captisol sales in Q3 2023. Royalty revenue increased by $4.6 million, or 24%, to $23.9 million in Q3 2023 compared to $19.3 million in Q3 2022 primarily due to the increase of Kyprolis sales and sales of drugs using the Pelican platform. Core Captisol sales increased by $5.0 million, or 140%, to $8.6 million in Q3 2023 primarily due to the timing of customer orders. Contract revenue decreased by $3.6 million, or 90%, to $0.4 million in Q3 2023 compared to $4.0 million in Q3 2022 primarily due to the decreased service revenue and timing of CRM197 sales from the Pelican business.

YTD 2023 vs. YTD 2022

Total revenue decreased by $42.7 million, or 29%, to $103.2 million in YTD 2023 compared to $145.9 million in YTD 2022 primarily due to no Captisol sales related to COVID-19 in YTD 2023, compared to $64.5 million for the same period in 2022. Royalty revenue increased by $10.9 million, or 22%, to $61.4 million in YTD 2023 compared to $50.5 million in YTD 2023 primarily due to the increase of Kyprolis and sales of drugs using the Pelican platform. Core Captisol sales increased by $11.3 million, or 86%, to $24.5 million in YTD 2023 primarily due to the timing of customer orders.

Royalty revenue is a function of our partners' product sales and the applicable royalty rate. Kyprolis royalty rates are under a tiered royalty rate structure with the highest tier being 3%. Evomela has a fixed royalty rate of 20%. Teriparatide injection has a tiered royalty between 25% and 40% on sales that have been adjusted for certain deductible items as defined in

the respective license agreement. The Rylaze royalty rate is in the low single digits. Contract revenue includes service revenue, license fees and development, regulatory and sales based milestone payments.

The following table represents royalty revenue by program (in millions):

(in millions)	Q3 2023 Estimated Partner Product Sales	Effective Royalty Rate	Q3 2023 Royalty Revenue	Q3 2022 Estimated Partner Product Sales[a]	Effective Royalty Rate[a]	Q3 2022 Royalty Revenue[a]
Kyprolis	**$ 375.9**	**2.8 %**	**$ 10.5**	$ 328.1	2.8 %	$ 9.1
Evomela	**12.5**	**20.0 %**	**2.5**	15.5	20.0 %	3.1
Teriparatide injection[b]	**11.0**	**25.5 %**	**2.8**	12.8	32.0 %	4.1
Rylaze	**104.9**	**3.5 %**	**3.7**	73.5	2.9 %	2.1
Other	**301.4**	**1.5 %**	**4.4**	50.7	1.8 %	0.9
Total	**$ 805.7**		**$ 23.9**	$ 480.6		$ 19.3

(in millions)	YTD 2023 Estimated Partner Product Sales	Effective Royalty Rate	YTD 2023 Royalty Revenue	YTD 2022 Estimated Partner Product Sales[a]	Effective Royalty Rate[a]	YTD 2022 Royalty Revenue[a]
Kyprolis	**$ 1,123.3**	**2.2 %**	**$ 24.9**	$ 956.7	2.2 %	$ 20.9
Evomela	**37.0**	**20.0 %**	**7.4**	41.0	20.0 %	8.2
Teriparatide injection[1]	**34.2**	**28.9 %**	**9.9**	37.6	33.2 %	12.5
Rylaze	**292.5**	**3.2 %**	**9.3**	200.7	3.0 %	6.1
Other	**711.4**	**1.4 %**	**9.9**	177.4	1.6 %	2.8
Total	**$ 2,198.4**		**$ 61.4**	$ 1,413.4		$ 50.5

(a) Prior period amounts have been retrospectively adjusted to reflect the effects of the Separation.
(b) Teriparatide injection sales have been adjusted for certain deductible items as defined in the respective license agreement.

Operating Costs and Expenses

(Dollars in thousands)	Q3 2023	% of Revenue	Q3 2022[a]	% of Revenue	YTD 2023	% of Revenue	YTD 2022[a]	% of Revenue
Cost of Captisol	**$ 3,485**		$ 14,153		**$ 8,871**		$ 31,213	
Amortization of intangibles	**8,238**		8,568		**25,316**		25,698	
Research and development	**5,532**		9,239		**19,049**		26,885	
General and administrative	**14,656**		14,920		**36,798**		38,931	
Total operating costs and expenses	**$ 31,911**	97%	$ 46,880	79%	**$ 90,034**	87%	$ 122,727	84%

(a) Prior period amounts have been retrospectively adjusted to reflect the effects of the Separation.

Q3 2023 vs. Q3 2022

Total operating costs and expenses decreased by $15.0 million, or 32%, to $31.9 million in Q3 2023 compared to $46.9 million in Q3 2022.

Cost of Captisol decreased by $10.7 million, or 75%, to $3.5 million in Q3 2023 compared to $14.2 million in Q3 2022, with the decrease primarily due to the lower Captisol sales this quarter.

Amortization of intangibles decreased by $0.3 million, or 4%, to $8.2 million in Q3 2023 compared to $8.6 million in Q3 2022 with the decrease primarily due to the cessation of amortization of certain Pelican intangibles resulting from the sale of the Pelican business.

At any one time, we are working on multiple R&D programs. As such, we generally do not track our R&D expenses on a specific program basis. Research and development expense was $5.5 million for Q3 2023, compared with $9.2 million for the same period of 2022, with the decrease primarily due to lower share-based compensation, employee-related expenses and depreciation expense related to Pelican assets.

General and administrative expense was $14.7 million for Q3 2023, compared to $14.9 million for the same period in 2022.

YTD 2023 vs. YTD 2022

Total operating costs and expenses decreased by $32.7 million, or 27%, to $90.0 million in YTD 2023 compared to $122.7 million in YTD 2022.

Cost of Captisol decreased by $22.3 million, or 72%, to $8.9 million in YTD 2023 compared to $31.2 million in YTD 2022, with the decrease primarily due to the lower Captisol sales in YTD 2023.

Amortization of intangibles decreased by $0.4 million, or 1%, to $25.3 million in YTD 2023 compared to $25.7 million in YTD 2022 with the decrease primarily due to the cessation of amortization of certain Pelican intangibles resulting from the sale of the Pelican business.

At any one time, we are working on multiple R&D programs. As such, we generally do not track our R&D expenses on a specific program basis. Research and development expense was $19.0 million for YTD 2023, compared with $26.9 million for the same period of 2022, with the decrease primarily due to lower share-based compensation, employee-related expenses and lab supply expenses.

General and administrative expense was $36.8 million for YTD 2023, compared to $38.9 million for the same period in 2022, which remained steady period over period.

Gain on Sale of Pelican

The gain on sale of Pelican in amount of $2.1 million for the three and nine months ended September 30, 2023 represents the excess of the fair value of 1) our investment in Primrose Bio and other economic rights; and 2) the carrying amount of Pelican business assets and liabilities together with allocated goodwill as of September 18, 2023, the date of sale; and $15 million cash consideration paid.

Other Income (Expense)

(Dollars in thousands)	Q3 2023	Q3 2022[a]	Change	YTD 2023	YTD 2022[a]	Change
Gain (loss) from short-term investments	**$ (13,184)**	$ (923)	$ (12,261)	**$ 30,340**	$ (15,709)	$ 46,049
Interest income	**2,263**	591	1,672	**6,018**	1,023	4,995
Interest expense	**(1)**	(332)	331	**(525)**	(1,559)	1,034
Other income (expense), net	**(4,300)**	677	(4,977)	**(4,570)**	4,980	(9,550)
Total other income (expense), net	**$ (15,222)**	$ 13	$ (15,235)	**$ 31,263**	$ (11,265)	$ 42,528

(a) Prior period amounts have been retrospectively adjusted to reflect the effects of the Separation.

Q3 2023 vs. Q3 2022

The fluctuation in the gain (loss) from short-term investments is primarily driven by the changes in the fair value of our ownership in Viking common stock and other equity security investments, which contributed an unrealized loss of $13.2 million in Q3 2023 as compared to an unrealized loss of $0.9 million in Q3 2022.

Interest income consists primarily of interest earned on our short-term investments. The increase over the prior year was due to the increase in interest rates.

Interest expense consists primarily of the 0.75% coupon cash interest expense and the non-cash accretion of discount (including the amortization of debt issuance cost) on our 2023 Notes. In May 2023, the 2023 Notes matured, and we paid the remaining $76.9 million principal amount and $0.3 million accrued interest in cash. The decrease in interest expense was primarily due to the zero debt outstanding balance in Q3 2023 as compared to Q3 2022. See *Note 6, Debt.*

Other income (expense), net, in Q3 2023 decreased by $5.0 million as compared to Q3 2022, primarily due to the Elutia commercial license right current expected credit loss (CECL) adjustment of $3.2 million and a Selexis commercial license right impairment loss of $0.9 million in Q3 2023 compared to a $0.9 million gain on extinguishment of debt during Q3 2022. See *Note 6, Debt.*

YTD 2023 vs. YTD 2022

The fluctuation in the gain (loss) from short-term investments is primarily driven by the changes in the fair value of our ownership in Viking common stock and other equity security investments, which contributed an unrealized loss of $6.9 million in YTD 2023 as compared to an unrealized loss of $15.4 million in YTD 2022. In addition, during YTD 2023 we sold 4.5 million shares of Viking contributing to realized gains of $37.2 million, compared to no Viking shares sold in YTD 2022.

Interest income consists primarily of interest earned on our short-term investments. The increase over the prior year was due to the increase in interest rates.

Interest expense consists primarily of the 0.75% coupon cash interest expense and the non-cash accretion of discount (including the amortization of debt issuance cost) on our 2023 Notes in both YTD 2023 and YTD 2022. The decrease in interest expense was primarily due to the lower average debt outstanding balance in YTD 2023 as compared to YTD 2022. See *Note 6, Debt.*

Other income (expense), net, in YTD 2023 decreased by $9.6 million as compared to YTD 2022, primarily due to the Elutia commercial license right CECL adjustment of $3.2 million and a Selexis commercial license right impairment loss of $0.9 million in YTD 2023 compared to a $4.2 million gain on extinguishment of debt during YTD 2022. See *Note 6, Debt.*

Income Tax Benefit (Expense)

(Dollars in thousands)	Q3 2023	Q3 2022[a]	Change	YTD 2023	YTD 2022[a]	Change
Income (loss) before income taxes	**$ (12,144)**	$ 12,354	$ (24,498)	**$ 46,563**	$ 11,871	$ 34,692
Income tax benefit	**1,871**	(2,709)	4,580	**(10,932)**	(2,556)	(8,376)
Income (loss) from operations	**$ (10,273)**	$ 9,645	$ (19,918)	**$ 35,631**	$ 9,315	$ 26,316
Effective tax rate	**15.4 %**	21.9 %		**23.5 %**	21.5 %	

(a) Prior period amounts have been retrospectively adjusted to reflect the effects of the Separation.

We compute our income tax provision by applying the estimated annual effective tax rate to income from operations and adding the effects of any discrete income tax items specific to the period. The effective tax rate for the three and nine months ended September 30, 2023 and 2022 was 15.4% and 21.9%, and 23.5% and 21.5%, respectively. The variance from the U.S. federal statutory tax rate of 21% for the three and nine months ended September 30, 2023 was primarily due to the Internal Revenue Code Section 162(m) limitation on deduction for officer compensation, non-deductible incentive stock option (ISO) related stock compensation expense, which were partially offset by foreign derived intangible income tax benefit during the period. The variance from the U.S. federal tax rate of 21% for the three and nine months ended September 30, 2022 was primarily due to the tax deductions related to foreign derived intangible income tax benefit as well as the research and development tax credits, which were partially offset by Section 162(m) limitation during the period.

Net Loss from Discontinued Operations

Net loss from discontinued operations for Q3 2023 and Q3 2022 was zero and $9.2 million, respectively. Net loss from discontinued operations for YTD 2023 and YTD 2022 was $1.7 million and $25.2 million, respectively. See additional information in "*Item 1. Condensed Consolidated Financial Statements —Notes to Condensed Consolidated Financial Statements—Note (4), Spin-off of OmniAb*."

Liquidity and Capital Resources

As of September 30, 2023, our cash, cash equivalents, and short-term investments totaled $190.5 million, which decreased by $21.4 million from the end of last year due to factors described in the *Cash Flow Summary* below. Our primary source of liquidity, other than our holdings of cash, cash equivalents, and short-term investments, has been cash flows from operations. Our ability to generate cash from operations provides us with the financial flexibility we need to meet operating, investing, and financing needs.

Historically, we have liquidated our short-term investments and/or issued debt and equity securities to finance our business needs as a supplement to cash provided by operating activities. Our short-term investments include U.S. government debt securities, investment-grade corporate debt securities, bond funds and certificates of deposit. We have established guidelines relative to diversification and maturities of our investments in order to provide both safety and liquidity. These guidelines are periodically reviewed and modified to take advantage of trends in yields and interest rates. Additionally, we own certain securities which are classified as short-term investments that we received as a result of a milestone and an upfront license payment as well as 2.2 million shares of common stock in Viking.

On September 30, 2022, we entered into an At-The-Market Equity Offering Sales Agreement (the Sales Agreement) with Stifel, Nicolaus & Company, Incorporated (the Agent), under which we may, from time to time, sell shares of our common stock having an aggregate offering price of up to $100.0 million in "at the market" offerings through the Agent. Sales of the shares of common stock, if any, will be made at prevailing market prices at the time of sale, or as otherwise agreed with the Agent. The Agent will receive a commission from the Company of up to 3.0% of the gross proceeds of any shares of common stock sold under the Sales Agreement. The shares will be issued pursuant to our shelf registration statement on Form S-3 (File No. 333-267678), including the Sales Agreement prospectus contained therein, which automatically became effective upon filing with the SEC on September 30, 2022.

Our Board of Directors has approved a stock repurchase program authorizing, but not requiring, the repurchase of up to $50.0 million of our common stock from time to time through April 2026. We expect to acquire shares, if at all, primarily

through open-market transactions in accordance with all applicable requirements of Rule 10b-18 of the Exchange Act. The timing and amount of repurchase transactions will be determined by management based on our evaluation of market conditions, share price, legal requirements and other factors. Authorization to repurchase $50.0 million of our common stock remained available as of September 30, 2023.

On October 12, 2023, we entered into a $75.0 million revolving credit facility (the Revolving Credit Facility) with Citibank, N.A. as the Administrative Agent. We, our material domestic subsidiaries, as Guarantors (as defined in the Credit Agreement), and the Lenders (as defined in the Credit Agreement) entered into a credit agreement (the Credit Agreement) with the Administrative Agent, under which the Lenders, the Swingline Lender and the L/C Issuer (each as defined in the Credit Agreement) agreed to make loans and other financial accommodations to us in an aggregate amount of up to $75.0 million. At our option, borrowings under the Revolving Credit Facility accrue interest at a rate equal to either Term SOFR Rate or a specified base rate plus an applicable margin linked to our leverage ratio, ranging from 1.75% to 2.50% per annum for Term SOFR Rate loans and 0.75% to 1.50% per annum for base rate loans. The Revolving Credit Facility is subject to a commitment fee payable on the unused Revolving Credit Facility commitments ranging from 0.300% to 0.450%, depending on our leverage ratio. During the term of the Revolving Credit Facility, we may borrow, repay and re-borrow amounts available under the Revolving Credit Facility, subject to voluntary reductions of the swing line, letter of credit and revolving credit commitments.

Borrowings under the Credit Agreement are secured by certain of our collateral and that of the Guarantors. In specified circumstances, additional guarantors are required to be added. The Credit Agreement contains customary affirmative and negative covenants, including certain financial maintenance covenants, and events of default applicable to us. In the event of violation of the representations, warranties and covenants made in the Credit Agreement, we may not be able to utilize the Revolving Credit Facility or repayment of amounts owed thereunder could be accelerated.

As of the date of this report, no amounts have been borrowed under the Revolving Credit Facility. The maturity date of the Revolving Credit Facility is October 12, 2026.

We believe that our existing funds, cash generated from operations and existing sources of and access to financing are adequate to fund our need for working capital, capital expenditures, debt service requirements, continued advancement of research and development efforts, potential stock repurchases and other business initiatives we plan to strategically pursue, including acquisitions and strategic investments.

As of September 30, 2023, we had $3.6 million in fair value of contingent consideration liabilities associated with prior acquisitions to be settled in future periods.

Cash Flow Summary

(Dollars in thousands)	YTD 2023	YTD 2022
Net cash provided by (used in):		
Operating activities	$ 41,512	$ 84,378
Investing activities	$ (1,398)	$ 170,908
Financing activities	$ (65,262)	$ (270,692)

During the nine months ended September 30, 2023, we generated cash from operations primarily due to net income. During the nine months ended September 30, 2023, we used cash in investing activities for Novan acquisition and investment in Primrose Bio, partially offset by cash from sale and maturity of short-term investments including Viking shares. During the nine months ended September 30, 2023, we repaid the remaining $76.9 million principal amount upon maturity of the 2023 Notes and $0.3 million accrued interest in cash.

During the nine months ended September 30, 2022, we repurchased $266.4 million in principal of the 2023 Notes for $261.4 million in cash, including accrued interest of $0.5 million.

Critical Accounting Policies and Estimates

Certain of our policies require the application of management judgment in making estimates and assumptions that affect the amounts reported in our consolidated financial statements and the disclosures made in the accompanying notes. Those estimates and assumptions are based on historical experience and various other factors deemed applicable and reasonable under the circumstances. The use of judgment in determining such estimates and assumptions is by nature, subject to a degree of uncertainty. Accordingly, actual results could differ materially from the estimates made. There have been no material changes in our critical accounting policies and estimates as compared to the critical accounting policies and estimates described in our 2022 Annual Report.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

There were no material changes to our market risks in the nine months ended September 30, 2023, when compared to the disclosures in Item 7A of our 2022 Annual Report.

Item 4. Controls and Procedures

We carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures as of September 30, 2023 were effective to ensure that information required to be disclosed by us in reports that we file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

There were no changes in our internal control over financial reporting that occurred during the quarter ended September 30, 2023 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

For information that updates the disclosures set forth under Part I. Item 3. Legal Proceedings in our 2022 Annual Report, refer to*Note 9, Commitment and Contingencies: Legal Proceedings*, to the Condensed Consolidated Financial Statements contained in Part I. Item 1. of this report.

Item 1A. Risk Factors

Other than as set forth below, we do not believe that there have been any material changes to the risk factors disclosed in Part I, Item 1A of our 2022 Annual Report. The risk factors described in our 2022 Annual Report are not the only risks we face. Factors we currently do not know, factors that we currently consider immaterial or factors that are not specific to us, such as general economic conditions, may also materially adversely affect our business or our consolidated operating results, financial condition or cash flows.

The terms of our Credit Agreement may limit our flexibility in operating our business and adversely affect our financial health and competitive position, and all of our obligations under our Credit Agreement are secured by certain of our collateral and the collateral of certain of our subsidiaries, as Guarantors. If we default on these obligations, our lenders could foreclose on such assets.

In October 2023, we entered into a $75.0 million Revolving Credit Facility with Citibank, N.A. as the Administrative Agent. We, our material domestic subsidiaries, as Guarantors, and the Lenders entered into the Credit Agreement with the Administrative Agent, under which the Lenders, the Swingline Lender and the L/C Issuer agreed to make loans and other financial accommodations to us in an aggregate amount of up to $75.0 million. Borrowings under the Credit Agreement are secured by certain of our collateral and that of the Guarantors. In specified circumstances, additional guarantors are required to be added. As a result, if we default on any of our obligations under the Credit Agreement, the Lenders could foreclose on their security interest and liquidate some or all of the collateral, which would harm our business, financial condition and results of operations and could require us to reduce or cease operations.

As of the date of this report, no amounts have been borrowed under the Revolving Credit Facility. In order to service any indebtedness we may incur in the future, we would need to generate cash from our operating activities or other financings. Our ability to generate cash is subject, in part, to our ability to successfully execute our business strategy, as well as general economic, financial, competitive, regulatory and other factors beyond our control. Our business may not be able to generate sufficient cash flow from operations, and future borrowings or other financings may not be available to us in an amount sufficient to enable us to service our indebtedness and fund our other liquidity needs. To the extent we are required to use cash from operations or the proceeds of any future financing to service our indebtedness instead of funding working capital or other general corporate purposes, we will be less able to plan for, or react to, changes in our business, industry and in the economy generally. This could place us at a competitive disadvantage compared to our competitors that have less indebtedness.

The Credit Agreement contains customary affirmative and negative covenants that limit our ability to engage in certain transactions that may be in our long-term best interest. The affirmative covenants include, among others, covenants requiring us to maintain a leverage ratio of no greater than 2.50 to 1.00 (increasing to 3.00 to 1.00 with respect to the fiscal quarter in which a material permitted acquisition is consummated and the immediately subsequent three fiscal quarters thereafter) and maintain minimum consolidated EBITDA (as defined in the Credit Agreement) for any trailing four-quarter period of not less than $45 million. The negative covenants include, among others, limitations on our ability to incur indebtedness and certain liens, make certain investments, become liable under contingent obligations in certain circumstances, make certain restricted payments, make certain dispositions within guidelines and limits, engage in certain affiliate transactions, alter our fundamental business and make certain fundamental changes.

While we believe we are currently in compliance with the covenants contained in the Credit Agreement, we may breach these covenants in the future. Our ability to comply with these covenants may be affected by events and factors beyond our control. In the event that we breach one or more covenants, the Lenders may choose to declare an event of default and require that we immediately repay all amounts outstanding under the agreement, terminate any commitment to extend further credit and foreclose on the collateral. The occurrence of any of these events could have a material adverse effect on our business, financial condition and results of operations.

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

None.

Item 3. Defaults Upon Senior Securities

None.

em 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

Rule 10b5-1 Trading Arrangements

From time to time, our officers (as defined in Rule 16a–1(f) of the Exchange Act) and directors may enter into Rule 10b5-1 or non-Rule 10b5-1 trading arrangements (as each such term is defined in Item 408 of Regulation S-K). During the three months ended September 30, 2023, none of our officers or directors adopted, modified or terminated any such trading arrangements.

Item 6. Exhibits

Exhibit Number	Description of Exhibit	Incorporated by Reference				Filed Herewith
		Form	File Number	Date of Filing	Exhibit Number	
10.1	Credit Agreement, dated as of October 12, 2023, among Ligand Pharmaceuticals Incorporated, certain of its subsidiaries, as Guarantors (as defined therein), the Lenders (as defined therein), and Citibank, N.A., as Administrative Agent, Swingline Lender and L/C Issuer.	8-K	001-33093	10/18/2023	10.1	
31.1	Certification by Principal Executive Officer, Pursuant to Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
31.2	Certification by Principal Financial Officer, Pursuant to Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
32.1*	Certifications by Principal Executive Officer and Principal Financial Officer, Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X
101	The following financial information from our Quarterly Report on Form 10-Q for the quarter ended September 30, 2023, formatted in iXBRL (inline eXtensible Business Reporting Language): (i) Consolidated Condensed Balance Sheets, (ii) Consolidated Condensed Statements of Operations, (iii) Consolidated Condensed Statement of Comprehensive Income, (iv) Consolidated Condensed Statements of Stockholders' Equity, (v) Consolidated Condensed Statements of Cash Flows, and (vi) the Notes to Consolidated Condensed Financial Statements.					X
104	The cover page from the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2023, formatted in Inline XBRL and contained in Exhibit 101.					X

* These certifications are deemed not filed for purposes of Section 18 of the Exchange Act or otherwise subject to the liability of that section, nor shall they be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act.

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: November 9, 2023

By: /s/ Octavio Espinoza

Octavio Espinoza
Chief Financial Officer
Duly Authorized Officer and Principal Financial Officer

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO EXCHANGE ACT RULE 13a-14(a)/15d-14(a)
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Todd C. Davis, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Ligand Pharmaceuticals Incorporated;

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

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

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

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

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

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

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

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

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

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

Date: November 9, 2023

/s/ Todd C. Davis

Todd C. Davis
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO EXCHANGE ACT RULE 13a-14(a)/15d-14(a)
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Octavio Espinoza, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Ligand Pharmaceuticals Incorporated;

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

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

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

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

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

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

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

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

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

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

Date: November 9, 2023

/s/ Octavio Espinoza

Octavio Espinoza
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER

In connection with the Quarterly Report of Ligand Pharmaceuticals Incorporated (the "Company") on Form 10-Q for the quarter ended September 30, 2023, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Todd C. Davis, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Compa

Date: November 9, 2023

/s/ Todd C. Davis

Todd C. Davis
Chief Executive Officer
(Principal Executive Officer)

The foregoing certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. Section 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing. A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER

In connection with the Quarterly Report of Ligand Pharmaceuticals Incorporated (the "Company") on Form 10-Q for the quarter ended September 30, 2023, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Octavio Espinoza, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Compa

Date: November 9, 2023

/s/ Octavio Espinoza

Octavio Espinoza
Chief Financial Officer
(Principal Financial Officer)

The foregoing certification is being furnished solely to accompany the Report pursuant to 18 U.S.C. Section 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language in such filing. A signed original of this written statement required

by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.