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 June 30, 2022

OR

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

For transition period from __________ to __________.

Commission File Number: 001-31918

IDERA PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	**04-3072298** (I.R.S. Employer Identification No.)
505 Eagleview Blvd., Suite 212 **Exton, Pennsylvania** (Address of principal executive offices)	**19341** (Zip code)

(484) 348-1600
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.001 per share	**IDRA**	**Nasdaq Capital Market**

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

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

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

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

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

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

Common Stock, par value $.001 per share	53,050,069
Class	Outstanding as of August 9, 2022

IDERA PHARMACEUTICALS, INC.
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Unless the context otherwise indicates, references in this Quarterly Report on Form 10-Q to "Idera," the "Company," "we," "us," and "our" refer to Idera Pharmaceuticals, Inc.

IMO® and Idera® are our trademarks. All other trademarks and service marks appearing in this Quarterly Report on Form 10-Q are the property of their respective owners.

NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q (this "Form 10-Q") contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements, other than statements of historical fact, included or incorporated in this report regarding our strategy, strategic alternatives, future operations, clinical trials, collaborations, intellectual property, cash resources, financial position, future revenues, projected costs, prospects, the ongoing impacts of the coronavirus ("COVID-19") pandemic, plans and objectives of management are forward-looking statements. The words "believes," "anticipates," "estimates," "plans," "expects," "intends," "may," "could," "should," "potential," "likely," "projects," "continue," "will," "schedule," "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We cannot guarantee that we will actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. These forward-looking statements involve known and unknown risks, uncertainties, and other factors, which may be beyond our control, and which may cause the actual results, performance, or achievements of the Company to be materially different from future results, performance, or achievements expressed or implied by such forward-looking statements.

There are a number of important factors that could cause our actual results to differ materially from those indicated or implied by forward-looking statements. These important factors include those set forth under Part I, Item 1A "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, which was filed with the Securities and Exchange Commission ("SEC") on March 31, 2022 (the "2021 Form 10-K"), in this Form 10-Q, and in our other disclosures and filings with the SEC. These factors and the other cautionary statements made in this Form 10-Q should be read as being applicable to all related forward-looking statements whenever they appear in this Form 10-Q.

In addition, any forward-looking statements represent our estimates only as of the date that this Form 10-Q is filed with the SEC and should not be relied upon as representing our estimates as of any subsequent date. All forward-looking statements included in this Form 10-Q are made as of the date hereof, and are expressly qualified in their entirety by this cautionary notice. We disclaim any intention or obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise, except as may be required by law.

PART I — FINANCIAL INFORMATION

Item 1. Financial Statements.

IDERA PHARMACEUTICALS, INC.

CONDENSED BALANCE SHEETS
(UNAUDITED)

(In thousands)	June 30, 2022	December 31, 2021*
ASSETS		
Current assets:		
Cash and cash equivalents	$ 24,480	$ 32,545
Prepaid expenses and other current assets	1,111	1,493
Total current assets	25,591	34,038
Property and equipment, net	14	22
Operating lease right-of-use assets	631	734
Other assets	70	70
Total assets	$ 26,306	$ 34,864
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 148	$ 565
Accrued expenses	4,370	4,088
Operating lease liability	218	209
Total current liabilities	4,736	4,862
Operating lease liability, net of current portion	438	549
Total liabilities	5,174	5,411
Commitments and contingencies (Note 12)		
Preferred stock, $0.01 par value, Authorized — 5,000 shares:		
Stockholders' equity:		
Preferred stock, $0.01 par value, Authorized — 5,000 shares:		
Series A convertible preferred stock; Designated — 1,500 shares, Issued and outstanding — 1 share	—	—
Common stock, $0.001 par value, Authorized — 140,000 shares; Issued and outstanding — 52,999 and 52,818 at June 30, 2022 and December 31, 2021, respectively	53	53
Additional paid-in capital	766,025	764,861
Accumulated deficit	(744,946)	(735,461)
Total stockholders' equity	21,132	29,453
Total liabilities and stockholders' equity	$ 26,306	$ 34,864

* The condensed balance sheet at December 31, 2021 has been derived from the audited financial statements at that date.

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

IDERA PHARMACEUTICALS, INC.

CONDENSED STATEMENTS OF OPERATIONS
(UNAUDITED)

(In thousands, except per share amounts)	Three Months Ended June 30, 2022	Three Months Ended June 30, 2021	Six Months Ended June 30, 2022	Six Months Ended June 30, 2021
Operating expenses:				
Research and development	$ 2,706	$ 3,893	$ 4,490	$ 10,764
General and administrative	2,659	2,472	5,057	5,628
Restructuring costs	—	1,192	—	1,192
Total operating expenses	5,365	7,557	9,547	17,584
Loss from operations	(5,365)	(7,557)	(9,547)	(17,584)
Other income (expense):				
Interest income	42	2	45	5
Interest expense	—	(4)	—	(7)
Warrant revaluation gain	—	—	—	6,983
Future tranche right revaluation gain	—	—	—	118,803
Foreign currency exchange gain (loss)	16	(4)	17	(25)
Net income (loss)	$ (5,307)	$ (7,563)	$ (9,485)	$ 108,175
Net income (loss) applicable to common stockholders (Note 11)				
— Basic	$ (5,307)	$ (7,563)	$ (9,485)	$ 105,450
— Diluted	$ (5,307)	$ (7,563)	$ (9,485)	$ (17,611)
Net income (loss) per share applicable to common stockholders (Note 11)				
— Basic	$ (0.10)	$ (0.15)	$ (0.18)	$ 2.31
— Diluted	$ (0.10)	$ (0.15)	$ (0.18)	$ (0.32)
Weighted-average number of common shares used in computing net income (loss) per share applicable to common stockholders				
— Basic	52,972	49,909	52,933	45,575
— Diluted	52,972	49,909	52,933	54,937

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

IDERA PHARMACEUTICALS, INC.

CONDENSED STATEMENTS OF CASH FLOWS
(UNAUDITED)

(In thousands)	Six Months Ended June 30, 2022	Six Months Ended June 30, 2021
Cash Flows from Operating Activities:		
Net income (loss)	$ (9,485)	$ 108,175
Adjustments to reconcile net income (loss) to net cash used in operating activities:		
Stock-based compensation	1,107	1,515
Warrant liability revaluation gain	—	(6,983)
Future tranche right liability revaluation gain	—	(118,803)
Issuance of common stock for services rendered	44	130
Accretion of discounts on short-term investments	—	(1)
Depreciation and amortization expense	8	11
Changes in operating assets and liabilities:		
Prepaid expenses and other assets	382	742
Accounts payable, accrued expenses, and other liabilities	(150)	(640)
Other	1	4
Net cash used in operating activities	(8,093)	(15,850)
Cash Flows from Investing Activities:		
Proceeds from maturity of available-for-sale securities	—	4,500
Net cash provided by investing activities	—	4,500
Cash Flows from Financing Activities:		
Proceeds from common stock financings, net	—	18,841
Proceeds from employee stock purchases	28	34
Proceeds from exercise of common stock options and warrants	—	271
Payments on seller-financed purchases	—	(435)
Net cash provided by financing activities	28	18,711
Net increase (decrease) in cash and cash equivalents	(8,065)	7,361
Cash and cash equivalent, beginning of period	32,545	33,229
Cash and cash equivalents, end of period	$ 24,480	$ 40,590
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ —	$ 5
Supplemental disclosure of non-cash financing and investing activities:		
Offering costs in accounts payable and accrued expenses	$ 15	$ 68

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

IDERA PHARMACEUTICALS, INC.

CONDENSED STATEMENTS OF REDEEMABLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)
(UNAUDITED)

	For the Six Months Ended June 30, 2021						
	Series B1 Preferred		Common Stock		Additional		Total
(In thousands)	Number of Shares	$0.01 Par Value	Number of Shares	$0.001 Par Value	Paid-In Capital	Accumulated Deficit	Stockholders' Equity (Deficit)
Balance, December 31, 2020	24	$ —	38,291	$ 38	$ 742,342	$ (833,552)	$ (91,172)
Sale of common stock, net of issuance costs	—	—	3,195	3	16,258	—	16,261
Conversion of Series B1 preferred stock	(14)	—	1,415	1	(1)	—	—
Issuance of common stock under employee stock purchase plan	—	—	8	—	28	—	28
Issuance of common stock under equity incentive plan (vesting of restricted stock units)	—	—	237	—	—	—	—
Issuance of common stock upon exercise of common stock options and warrants	—	—	3,375	4	267	—	271
Issuance of common stock for services rendered	—	—	16	—	67	—	67
Stock-based compensation	—	—	—	—	1,111	—	1,111
Net income	—	—	—	—	—	115,738	115,738
Balance, March 31, 2021	10	$ —	46,537	$ 46	$ 760,072	$ (717,814)	$ 42,304
Sale of common stock, net of issuance costs	—	—	2,076	2	2,510	—	2,512
Conversion of Series B1 preferred stock	(10)	—	953	1	(1)	—	—
Issuance of common stock under employee stock purchase plan	—	—	6	—	6	—	6
Issuance of common stock upon exercise of common stock options and warrants	—	—	2,496	3	(3)	—	—
Issuance of common stock for services rendered	—	—	47	—	63	—	63
Stock-based compensation	—	—	—	—	404	—	404
Net loss	—	—	—	—	—	(7,563)	(7,563)
Balance, June 30, 2021	—	$ —	52,115	$ 52	$ 763,051	$ (725,377)	$ 37,726

IDERA PHARMACEUTICALS, INC.

CONDENSED STATEMENTS OF REDEEMABLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT) (CONTINUED)
(UNAUDITED)

	For the Six Months Ended June 30, 2022						
	Series B1 Preferred		Common Stock		Additional		Total
(In thousands)	Number of Shares	$0.01 Par Value	Number of Shares	$0.001 Par Value	Paid-In Capital	Accumulated Deficit	Stockholders' Equity (Deficit)
Balance, December 31, 2021	—	$ —	52,818	$ 53	$ 764,861	$ (735,461)	$ 29,453
Sale of common stock, net of issuance costs	—	—			(15)	—	(15)
Issuance of common stock under employee stock purchase plan	—	—	42	—	16	—	16
Issuance of common stock under equity incentive plan (vesting of restricted stock units)	—	—	27	—	—	—	—
Issuance of common stock for services rendered	—	—	37	—	22	—	22
Stock-based compensation	—	—	—	—	545	—	545
Net loss	—	—	—	—	—	(4,178)	(4,178)
Balance, March 31, 2022	—	$ —	52,924	$ 53	$ 765,429	$ (739,639)	$ 25,843
Issuance of common stock under employee stock purchase plan	—	—	34	—	12	—	12
Issuance of common stock for services rendered	—	—	41	—	22	—	22
Stock-based compensation	—	—	—	—	562	—	562
Net loss	—	—	—	—	—	(5,307)	(5,307)
Balance, June 30, 2022	—	$ —	52,999	$ 53	$ 766,025	$ (744,946)	$ 21,132

The accompanying notes are an integral part of these financial statements

IDERA PHARMACEUTICALS, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS (UNAUDITED)
June 30, 2022

Note 1. Business and Organization

Business Overview

Idera Pharmaceuticals, Inc. (“Idera” or the “Company”), a Delaware corporation, is a biopharmaceutical company with a business strategy focused on the clinical development, and ultimately the commercialization, of drug candidates for rare disease indications characterized by small, well-defined patient populations with serious unmet medical needs. The Company’s current focus is to identify and potentially acquire rights to novel development and commercial stage rare disease programs through new business development opportunities, including additional strategic alternatives. The Company has in the past and may in the future explore collaborative alliances to support development and commercialization of any of our drug candidates.

Until December 2021, the Company was developing tilsotolimod, via intratumoral injection, for the treatment of solid tumors in combination with nivolumab, an anti-PD1 antibody marketed as Opdivo® by Bristol Myers Squibb Company (“BMS”), and/or ipilimumab, an anti-CTLA4 antibody marketed as Yervoy® by BMS. Due to Phase 3 results in anti-PD-1 refractory advanced melanoma, reported in March 2021, which showed the study failed to meet its primary endpoint, as well as a decision in December 2021 to discontinue enrollment in ILLUMINATE-206, the Company’s Phase 2 study in solid tumors, Company-sponsored development of tilsotolimod has been discontinued.

Although clinical trials with tilsotolimod have not yet translated into a new treatment alternative for patients, the Company believes that data supporting tilsotolimod’s mechanism of action and encouraging safety profile from across the array of pre-clinical and clinical work to date, together with its intellectual property protection, are noteworthy. As a result, in December 2021, the Company announced it would consider, and continues to consider, an out-licensing arrangement so that tilsotolimod’s full potential might continue to be explored on behalf of patients who did not respond to traditional immunotherapy.

Reduction-in-Force

In the second quarter of 2021, following the announcement that the Company’s ILLUMINATE-301 trial did not meet its primary endpoint of objective response rate (“ORR”), the Company implemented a reduction in force which affected approximately 50% of its workforce. Sixteen positions were eliminated, primarily in the area of research and development. Reduction-in-force was undertaken in order to align the Company’s workforce with its needs in light of the outcome of ILLUMINATE-301’s ORR endpoint and other business development activities focused on identifying new portfolio opportunities.

In connection with these actions, the Company incurred and paid one-time termination costs for the reduction in workforce, which includes severance, benefits and related costs, of approximately $1.2 million during the second quarter of 2021.

Nasdaq Compliance

As previously disclosed in the Current Report on Form 8-K filed with the SEC on December 1, 2021, on November 26, 2021, Idera received a deficiency letter from the Nasdaq Listing Qualifications Department (the “Staff”) of The Nasdaq Stock Market, LLC (“Nasdaq”), notifying the Company that it is not in compliance with Nasdaq Listing Rule 5550(a)(2), which requires the Company to maintain a minimum bid price of at least $1 per share for continued listing on The Nasdaq Capital Market (the “Minimum Bid Requirement”).

Note 1. Business and Organization (Continued)

On May 26, 2022, the Company received notice (the "Nasdaq Notice") from the Staff indicating that, while the Company has not regained compliance with the Minimum Bid Requirement, the Staff has determined that the Company is eligible for an additional 180-day period, or until November 21, 2022, to regain compliance. If at any time during this second 180-day compliance period, the closing bid price of the Company's common stock is at least $1 per share for a minimum of ten consecutive business days, the Staff will provide the Company with written confirmation of compliance. If compliance cannot be demonstrated by November 21, 2022, the Staff will provide written notification that the Company's common stock will be subject to delisting. The Company would then be entitled to appeal the Staff's determination to a Nasdaq hearings panel. The Company intends to monitor the closing bid price of its common stock and consider implementing available options to regain compliance with the Minimum Bid Requirement.

Liquidity and Financial Condition

As of June 30, 2022, the Company had an accumulated deficit of $744.9 million and a cash and cash equivalents balance of $24.5 million. The Company expects to incur substantial operating losses in future periods and will require additional capital as it seeks to advance any future drug candidates through development to commercialization and/or continues to pursue strategic alternatives or additional collaborations. The Company does not expect to generate product revenue, sales-based milestones, or royalties until the Company successfully completes development of and obtains marketing approval for any future drug candidates, either alone or in collaboration with third parties. To commercialize any future drug candidates, the Company and/or a third-party partner must complete clinical development and comply with comprehensive regulatory requirements. The Company is subject to numerous risks and uncertainties similar to those of other companies of the same size within the biotechnology industry, such as uncertainty of clinical trial outcomes, uncertainty of additional funding and/or successful strategic partnerships or collaborations, and history of operating losses.

The Company follows the provisions of Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 205-40, *Presentation of Financial Statements—Going Concern*, which requires management to assess the Company's ability to continue as a going concern within one year after the date the financial statements are issued. Management currently anticipates that the Company's balance of cash and cash equivalents on hand as of June 30, 2022 is sufficient to enable the Company to continue as a going concern through the one-year period subsequent to the filing date of this Form 10-Q. The Company has and will continue to evaluate available alternatives to extend its operations beyond this date, which include the ATM Agreement (Note 7) or additional financing or strategic transactions. Additionally, management's plans may include the possible deferral of certain operating expenses unless additional capital is received. Management's operating plan, which underlies the analysis of the Company's ability to continue as a going concern, involves the estimation of the amount and timing of future cash inflows and outflows. Actual results could vary from the operating plan.

Note 2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited financial statements included herein have been prepared by the Company in accordance with U.S. generally accepted accounting principles ("GAAP") for interim financial information and pursuant to the rules and regulations of the SEC. Accordingly, certain information and footnote disclosures normally included in financial statements prepared in accordance with GAAP have been condensed or omitted pursuant to such rules and regulations. In the opinion of management, all adjustments, consisting of normal recurring adjustments, and disclosures considered necessary for a fair presentation of interim period results have been included. Interim results for the three and six months ended June 30, 2022 are not necessarily indicative of results that may be expected for the year ending December 31, 2022. For further information, refer to the financial statements and footnotes thereto included in the Company's 2021 Form 10-K.

Cash and Cash Equivalents

The Company considers all highly liquid investments with maturities of 90 days or less when purchased to be "cash equivalents." Cash and cash equivalents at June 30, 2022 and December 31, 2021 consisted of cash and money market funds.

Financial Instruments

The fair value of the Company's financial instruments is determined and disclosed in accordance with the three-tier fair value hierarchy specified in Note 3. The Company is required to disclose the estimated fair values of its financial instruments. As of June 30, 2022 and December 31, 2021, the Company's financial instruments consisted of cash and cash equivalents. The estimated fair values of these financial instruments approximate their carrying values. As of June 30, 2022, the Company did not have any derivatives, hedging instruments or other similar financial instruments.

Concentration of Credit Risk

Financial instruments that subject the Company to credit risk primarily consist of cash and cash equivalents. The Company's credit risk is managed by investing in highly rated money market instruments, U.S. treasury bills, corporate bonds, commercial paper and/or other debt securities. Due to these factors, no significant additional credit risk is believed by management to be inherent in the Company's assets. As of June 30, 2022, all the Company's cash and cash equivalents were held at two financial institutions.

Operating Lease Right-of-use Assets and Lease Liability

The Company accounts for leases under ASC 842, Leases. Operating leases are included in "Operating lease right-of-use assets" within the Company's balance sheets and represent the Company's right to use an underlying asset for the lease term. The Company's related obligation to make lease payments are included in "Operating lease liability" and "Operating lease liability, net of current portion" within the Company's balance sheets. Operating lease right-of-use ("ROU") assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. As most of the Company's leases do not provide an implicit rate, the Company uses its incremental borrowing rates, which are the rates incurred to borrow on a collateralized basis over a similar term, an amount equal to the lease payments in a similar economic environment. Lease expense for lease payments is recognized on a straight-line basis over the lease term. The ROU assets are tested for impairment according to ASC 360, *Property, Plant, and Equipmen*t. Leases with an initial term of 12 months or less are not recorded on the balance sheet and are recognized as lease expense on a straight-line basis over the lease term.

As of June 30, 2022 and December 31, 2021, the Company's operating lease ROU assets and corresponding short-term and long-term lease liabilities primarily relate to its existing Exton, PA facility operating lease which expires on May 31, 2025.

Note 2. Summary of Significant Accounting Policies (Continued)

Warrant Liability

The Company accounts for stock warrants as either equity instruments, liabilities or derivative liabilities in accordance with ASC 480, *Distinguishing Liabilities from Equity* (“ASC 480”) and/or ASC 815, *Derivatives and Hedging*, depending on the specific terms of the warrant agreement. Freestanding warrants for shares that are potentially redeemable, whereby the Company may be required to transfer assets (e.g. cash or other assets) outside of its control, are classified as liabilities. Liability-classified warrants are recorded at their estimated fair values at each reporting period until they are exercised, terminated, reclassified or otherwise settled. Changes in the estimated fair value of liability-classified warrants are recorded in Warrant Revaluation Gain (Loss) in the Company’s condensed statements of operations. Equity classified warrants are recorded within additional paid-in capital at the time of issuance and not subject to remeasurement. During the three months ended March 31, 2021, all of the Company’s liability-classified warrants terminated and, accordingly, the liability balance was derecognized.

Future Tranche Right Liability

On December 23, 2019, the Company entered into a Securities Purchase Agreement (the “December 2019 Securities Purchase Agreement”) with institutional investors affiliated with Baker Brothers, an existing stockholder (see Note 10). As more fully described in Note 6, the December 2019 Securities Purchase Agreement contained call options on redeemable preferred shares with warrants (conditionally exercisable for shares that are puttable). The Company determined that these call options represented freestanding financial instruments and accounted for the options as liabilities (“Future Tranche Right Liability”) under ASC 480, which requires the measurement and recognition of the fair value of the liability at the time of issuance and at each reporting period. Any change in fair value was recognized in Future Tranche Right Liability Revaluation Gain (Loss) in the Company’s condensed statements of operations. During the three months ended March 31, 2021, the liability-classified call options provided for under the December 2019 Securities Purchase Agreement terminated and, accordingly, the liability balance was derecognized.

Preferred Stock

The Company applies ASC 480 when determining the classification and measurement of its preferred stock. Preferred shares subject to mandatory redemption are classified as liability instruments and are measured at fair value. Conditionally redeemable preferred shares (including preferred shares that feature redemption rights that are either within the control of the holder or subject to redemption upon the occurrence of uncertain events not solely within the Company’s control) are classified as temporary equity. At all other times, preferred shares are classified as stockholders’ equity.

Accretion of redeemable convertible preferred stock includes the accretion of the Company's Series B redeemable convertible preferred stock to its stated value. The carrying value of the Series B redeemable convertible preferred stock is accreted to redemption value using the effective interest method, from the date of issuance to the earliest date the holders can demand redemption or until the redeemable convertible preferred stock cease to be outstanding.

Income Taxes

In accordance with ASC 270, *Interim Reporting*, and ASC 740, *Income Taxes*, the Company is required at the end of each interim period to determine the best estimate of its annual effective tax rate and then apply that rate in providing for income taxes on a current year-to-date (interim period) basis. For the three and six months ended June 30, 2022 and 2021, the Company recorded no tax expense or benefit due to the expected current year loss and its historical losses. The Company has not recorded its net deferred tax asset as of either June 30, 2022 or December 31, 2021 because it maintained a full valuation allowance against all deferred tax assets as of these dates as management has determined that it is not more likely than not that the Company will realize these future tax benefits. As of June 30, 2022 and December 31, 2021, the Company had no uncertain tax positions.

Note 2. Summary of Significant Accounting Policies (Continued)

New Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the FASB and rules are issued by the SEC that the Company has or will adopt as of a specified date. Unless otherwise noted, management does not believe that any other recently issued accounting pronouncements issued by the FASB or guidance issued by the SEC had, or is expected to have, a material impact on the Company's present or future financial statements.

Recently Adopted Accounting Pronouncements

In August 2020, the FASB issued Accounting Standard Update ("ASU") No. 2020-06, Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity ("ASU 2020-06"), which simplifies the guidance on an issuer's accounting for convertible instruments and contracts in its own equity. The Company adopted ASU 2020-06 in the first quarter of 2021. The adoption of ASU 2020-06 did not have a material effect on the Company's financial statements.

Note 3. Fair Value Measurements

Assets and Liabilities Measured at Fair Value on a Recurring Basis

The Company applies the guidance in ASC 820, *Fair Value Measurement*, to account for financial assets and liabilities measured on a recurring basis. Fair value is measured at the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. As such, fair value is a market-based measurement that is determined based on assumptions that market participants would use in pricing an asset or liability.

The Company uses a fair value hierarchy, which distinguishes between assumptions based on market data (observable inputs) and an entity's own assumptions (unobservable inputs). The guidance requires that fair value measurements be classified and disclosed in one of the following three categories:

- Level 1: Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;
- Level 2: Quoted prices in markets that are not active or inputs which are observable, either directly or indirectly, for substantially the full term of the asset or liability; or
- Level 3: Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable (i.e., supported by little or no market activity).

Determining which category an asset or liability falls within the hierarchy requires significant judgment. The Company evaluates its hierarchy disclosures each reporting period. There were no transfers between Level 1, 2, and 3 during the six months ended June 30, 2022.

Note 3. Fair Value Measurements (Continued)

The table below presents the assets and liabilities measured and recorded in the financial statements at fair value on a recurring basis at June 30, 2022 and December 31, 2021 categorized by the level of inputs used in the valuation of each asset and liability.

	June 30, 2022			
(In thousands)	**Total**	**Level 1**	**Level 2**	**Level 3**
Assets				
Cash	$ 250	$ 250	$ —	$ —
Cash equivalents – money market funds	24,230	24,230	—	—
Total assets	$ 24,480	$ 24,480	$ —	$ —

	December 31, 2021			
(In thousands)	**Total**	**Level 1**	**Level 2**	**Level 3**
Assets				
Cash	$ 250	$ 250	$ —	$ —
Cash equivalents – money market funds	32,295	32,295	—	—
Total assets	$ 32,545	$ 32,545	$ —	$ —

The Level 1 assets consist of money market funds, which are actively traded daily.

Changes in Level 3 Liabilities Measured at Fair Value on a Recurring Basis

Warrant Liability and Future Tranche Right Liability

The reconciliation of the Company's warrant and future tranche right liability measured at fair value on a recurring basis using unobservable inputs (Level 3) is as follows:

(In thousands)	**Warrant Liability**	**Future Tranche Right Liability**
Balance, December 31, 2020	$ 6,983	$ 118,803
Change in the fair value of liability (1)	(6,983)	(118,803)
Balance, June 30, 2021	$ —	$ —

(1) During the six months ended June 30, 2021, the Company’s liability-classified warrants and future tranche rights terminated, and accordingly, the liabilities were derecognized.

Note 4. Property and Equipment

At June 30, 2022 and December 31, 2021, property and equipment, net, consisted of the following:

(In thousands)	June 30, 2022	December 31, 2021
Leasehold improvements	$ 107	$ 107
Equipment and other	712	712
Total property and equipment, at cost	$ 819	$ 819
Less: Accumulated depreciation and amortization	805	797
Property and equipment, net	$ 14	$ 22

Depreciation and amortization expense on property and equipment was less than $0.1 million for each of the three and six months ended June 30, 2022 and 2021. Additionally, there were no non-cash property additions or impairment-related charges recognized during the three and six months ended June 30, 2022 and 2021.

Note 5. Accrued Expenses

At June 30, 2022 and December 31, 2021, accrued expenses consisted of the following:

(In thousands)	June 30, 2022	December 31, 2021
Payroll and related costs	$ 706	$ 477
Clinical and nonclinical trial expenses	2,984	2,909
Professional and consulting fees	587	591
Other	93	111
Total accrued expenses	$ 4,370	$ 4,088

Note 6. Redeemable Convertible Preferred Stock

December 2019 Private Placement

On December 23, 2019, the Company entered into the December 2019 Securities Purchase Agreement, under which the Company sold 23,684 shares of Series B1 convertible preferred stock (“Series B1 Preferred Stock”) and warrants to purchase 2,368,400 shares of the Company’s common stock at an exercise price of $1.52 per share (or, if the holder elected to exercise the warrants for shares of Series B1 Preferred Stock, 23,684 shares of Series B1 Preferred Stock at an exercise price of $152 per share) for aggregate gross proceeds of $3.9 million (the “Initial Closing”).

In addition, the Company agreed to sell to the purchasers, at their option and subject to certain conditions, (i) 98,685 shares of Series B2 convertible preferred stock (“Series B2 Preferred Stock”) and 9,868,500 warrants to purchase common stock at an exercise price of $1.52 per share (or, at the election of the holder, 98,685 shares of Series B2 Preferred Stock at an price of $152 per share), for aggregate gross proceeds of $15 million (the “Series B2 Tranche”), (ii) 82,418 shares of Series B3 convertible preferred stock (“Series B3 Preferred Stock”) and 6,593,440 warrants to purchase common stock at an exercise price of $1.82 per share (or, at the election of the holder, 65,934 shares of Series B3 Preferred Stock at a price of $182 per share), for aggregate gross proceeds of $15 million (the “Series B3 Tranche”), and (iii) 82,418 shares of Series B4 convertible preferred stock (“Series B4 Preferred Stock”) and 6,593,440 warrants to purchase common stock at an exercise price of $1.82 per share (or, at the election of the holder, 65,934 shares of Series B3 Preferred Stock at a price of $182 per share), for aggregate gross proceeds of $15 million (the “Series B4 Tranche”) over a period of up to 21 months following the Company’s 2020 Annual Meeting of Stockholders held on May 12, 2020, where stockholders of the Company voted to approve an amendment to the Company’s Restated Certificate of Incorporation to increase the authorized number of shares of the Company’s common stock to 140,000,000. As consideration for the future tranche rights, the Company received aggregate gross proceeds of $6.2 million in December 2019.

The purchase and sale of the securities issuable under the Series B2, B3, and B4 tranches described above were subject to three separate closings, each to be conducted at the purchasers’ discretion. The right of the purchasers to purchase Series B2, Series B3, and Series B4 Preferred Stock was set to expire on the 10th business day following the Company’s ORR Data Announcement (as defined in the December 2019 Securities Purchase Agreement) for its ILLUMINATE-301 study. As a result of the purchasers not exercising the Series B2 Tranche prior to expiration, all future tranche rights and outstanding warrants previously issued pursuant to the December 2019 Securities Purchase Agreement were terminated during the three months ended March 31, 2021. Accordingly, the Company is no longer eligible to receive additional proceeds pursuant to the December 2019 Securities Purchase Agreement and the related warrant liability and future tranche right liability were derecognized during the three months ended March 31, 2021.

Accounting Considerations

The Company determined that the Series B1 Preferred Stock, the accompanying Series B1 warrants, and each of the future tranche rights represent freestanding financial instruments. The Series B1 warrants and the future tranche rights were classified as liabilities until their termination in March 2021 as the underlying shares were potentially redeemable and such redemption was deemed to be outside of the Company’s control.

Due to the redeemable nature of the Series B1 Preferred Stock, the Series B1 Preferred Stock was classified as temporary equity and the carrying value was being accreted to its redemption value as of December 31, 2020 and while the Series B1 Preferred Stock was outstanding during 2021. During the six months ended June 30, 2021, all the Company’s 23,684 shares of Series B1 Preferred Stock outstanding were converted into shares of the Company’s common stock. See Note 10 for details. For the three and six months ended June 30, 2022 and 2021, accretion was de minimis.

Note 7. Stockholders' Equity

Equity Financings

Common Stock Purchase Agreement

On March 4, 2019, the Company entered into a Purchase Agreement with Lincoln Park Capital Fund, LLC ("Lincoln Park"), which was amended on September 2, 2020 (as amended to date, the "LPC Purchase Agreement"), pursuant to which, upon the terms and subject to the conditions and limitations set forth therein, Lincoln Park committed to purchase an aggregate of $35.0 million of shares of Company common stock from time to time at the Company's sole discretion over a 36-month period (the "Purchase Period"). As consideration for entering into the LPC Purchase Agreement, the Company issued 269,749 shares of its common stock to Lincoln Park as a commitment fee (the "Commitment Shares"). The closing price of the Company's common stock on March 4, 2019 was $2.84 and the Company did not receive any cash proceeds from the issuance of the Commitment Shares.

During the six months ended June 30, 2022, the Company did not sell any shares under the LPC Purchase Agreement. The Purchase Period expired on March 4, 2022. Accordingly, the Company no longer has access to additional capital under the LPC Purchase Agreement.

During the six months ended June 30, 2021, the Company sold 800,000 shares of common stock, pursuant to the LPC Purchase Agreement, resulting in net proceeds of $4.2 million.

"At-The-Market" Equity Program

In November 2018, the Company entered into an Equity Distribution Agreement (the "ATM Agreement") with JMP Securities LLC ("JMP") pursuant to which the Company may issue and sell shares of its common stock having an aggregate offering price of up to $50.0 million (the "Shares") through JMP as its agent. Subject to the terms and conditions of the ATM Agreement, JMP will use commercially reasonable efforts to sell the Shares from time to time, based upon the Company's instructions, by methods deemed to be an "at the market offering" as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended, or if specified by the Company, by any other method permitted by law, including but not limited to in negotiated transactions. The Company has no obligation to sell any of the Shares, and the Company or JMP may at any time suspend sales under the ATM Agreement or terminate the ATM Agreement. JMP is entitled to a fixed commission of 3.0% of the gross proceeds from Shares sold.

During the six months ended June 30, 2022, the Company sold no Shares pursuant to the ATM Agreement.

During the six months ended June 30, 2021, the Company sold 4,470,593 Shares pursuant to the ATM Agreement, resulting in net proceeds, after deduction of commissions and other offering expenses, of $14.6 million. As of June 30, 2022, the Company may sell up to an additional $19.5 million of Shares under the ATM Agreement, subject to applicable securities laws and related rules and regulations.

Note 7. Stockholders' Equity (Continued)

April 2020 Private Placement

On April 7, 2020, the Company entered into a Securities Purchase Agreement with Pillar Partners Foundation, L.P. ("Pillar Partners"), a related party as more fully described in Note 10, which was amended on December 11, 2020 (as amended to date, the "April 2020 Securities Purchase Agreement"), under which the Company sold 3,039,514 shares of common stock and accompanying warrants to purchase 3,039,514 shares of the Company's common stock with an exercise price of $2.28 per share, for aggregate gross proceeds of $5.0 million. Each share and the accompanying warrant had a combined purchase price of $1.645, which included $0.125 for each share of common stock underlying each warrant. The April 2020 Securities Purchase Agreement also provided for the option for Pillar Partners to purchase 2,747,252 shares of the Company's common stock (or pre-funded warrants to purchase shares of the Company's common stock at an exercise price of $0.01 in lieu of certain shares to the extent that purchasing such shares will cause Pillar Investment Entities (as defined below) to beneficially own in excess of 19.99% of the total number of shares of common stock outstanding post-transaction) and warrants to purchase up to 1,373,626 shares of the Company's common stock (with an exercise price of $2.71), for aggregate gross proceeds of $5.0 million (the "April 2020 Private Placement Second Closing"). Subsequently, in December 2020, the April 2020 Private Placement Second Closing was consummated. Total net proceeds received pursuant to the April 2020 Securities Purchase Agreement, after deduction of offering expenses, was $9.8 million.

July 2020 Private Placement

On July 13, 2020, the Company entered into a Securities Purchase Agreement (the "July 2020 Securities Purchase Agreement") with Pillar Partners Foundation, L.P. ("Pillar Partners"), Pillar Pharmaceuticals 6, L.P. ("Pillar 6"), and Pillar Pharmaceuticals 7 L.P. ("Pillar 7") (collectively, the "July 2020 Purchasers"), each a related party as more fully described in Note 10, pursuant to which, among other things, provided the July Purchasers the option to purchase, at their sole discretion, pre-funded warrants to purchase up to 784,615 shares of the Company's common stock, at an exercise price of $0.01 per share, and warrants to purchase up to 274,615 shares of the Company's common stock, at an exercise price of $9.75, for aggregate gross proceeds of $5.1 million (the "July 2020 Private Placement Second Closing"). During the three months ended March 31, 2021, the option to purchase securities in the July 2020 Private Placement Second Closing terminated. As a result, the Company is no longer eligible to receive additional proceeds from the sale of additional securities pursuant to the July 2020 Securities Purchase Agreement. However, the July 2020 Purchasers still hold outstanding warrants previously issued under the July 2020 Securities Purchase Agreement, as detailed below under the heading "Common Stock Warrants".

Common Stock Warrants

In connection with various financing transactions, the Company has issued warrants to purchase shares of the Company's common stock and preferred stock. The Company accounts for common and preferred stock warrants as equity instruments or liabilities, depending on the specific terms of the warrant agreement.

Note 7. Stockholders' Equity (Continued)

The following table summarizes outstanding warrants to purchase shares of the Company's common stock and/or preferred stock as of June 30, 2022 and December 31, 2021:

Description	Number of Shares June 30, 2022	Number of Shares December 31, 2021	Weighted-Average Exercise Price	Expiration Date
Equity-classified Warrants				
May 2013 warrants	15,437	15,437	$ 0.08	None
September 2013 warrants	4,096	4,096	$ 0.08	None
February 2014 warrants	2,171	2,171	$ 0.08	None
April 2020 Private Placement first closing warrants	3,039,514	3,039,514	$ 2.28	Apr 2023
April 2020 Private Placement second closing warrants	1,373,626	1,373,626	$ 2.71	Dec 2023
April 2020 Private Placement second closing warrants	1,143,428	1,143,428	$ 0.01	None
July 2020 Private Placement first closing warrants	389,731	389,731	$ 0.01	None
July 2020 Private Placement first closing warrants	2,764,227	2,764,227	$ 2.58	Jul 2023
	8,732,230	8,732,230		
Total outstanding	8,732,230	8,732,230		

Note 8. Collaboration and License Agreements

Scriptr Collaboration and Option Agreement

In February 2021, the Company entered into a collaboration and option agreement with Scriptr Global, Inc. ("Scriptr"), pursuant to which (i) the Company and Scriptr conduct a research collaboration utilizing Scriptr Platform Technology ("SPT") to identify, research and develop gene therapy candidates (each, a "Collaboration Candidate") for the treatment, palliation, diagnosis or prevention of (a) myotonic dystrophy type 1 ("DM1 Field") and (b) Friedreich's Ataxia ("FA Field") on a Research Program-by-Research Program (as defined below) basis, as applicable, and (ii) the Company was granted an exclusive option, in its sole discretion, to make effective the Scriptr License Agreement, as defined below, for a given Research Program, as defined below, to make use of Collaboration Candidates and related intellectual property (collectively, the "Scriptr Agreement").

Pursuant to the Scriptr Agreement, Scriptr will use commercially reasonable efforts to carry out research activities set forth in accordance with the applicable DM1 Field and FA Field research plans, including certain pre-clinical proof of concept studies, to identify research Collaboration Candidates utilizing SPT (each, a "Research Program"). Following the completion of activities under a given Research Program, Scriptr will prepare and submit to the Company a comprehensive data package (each, a "Data Package") that summarizes, on a Research Program-by-Research Program basis, any Collaboration Candidates researched under the Research Program, including any data and results. Upon receipt of a Data Package, the Company has, in its sole discretion, up to two-hundred seventy (270) calendar days to make effective the exclusive license agreement entered into by and between the Company and Scriptr, pursuant to which, among other things, Scriptr grants the Company exclusive rights and licenses with respect to the development, manufacture and commercialization of licensed candidates and products, subject to certain conditions and limitations (the "Scriptr License Agreement"), for a given Research Program (each licensed Research Program, a "Licensed Program"). The Scriptr License Agreement provides for customary development milestones on candidates developed under a Licensed Program and royalties on licensed products, if any.

In partial consideration of the rights granted by Scriptr to the Company under the Scriptr Agreement, the Company made a one-time, non-creditable and non-refundable payment to Scriptr during the first quarter of 2021. The Company reimburses Scriptr for costs incurred by or on behalf of Scriptr in connection with the conduct of each Research Program during the research term in accordance with the applicable Research Program budget and payment schedule. The Company incurred approximately $0.2 million and $0.4 million in research and development expenses under the Scriptr Agreement during the three and six months ended June 30, 2022, respectively. In comparison, the Company incurred approximately $0.6 million and $1.3 million in research and development expenses under the Scriptr Agreement during the three and six months ended June 30, 2021, respectively.

Note 9. Stock-Based Compensation

As of June 30, 2022, the only equity compensation plans under which the Company may currently issue new awards are the Company's 2013 Stock Incentive Plan (as amended to date, the "2013 Plan") and 2017 Employee Stock Purchase Plan (as amended to date, the "2017 ESPP"), each as more fully described below.

Equity Incentive and Employee Stock Purchase Plans

2013 Stock Incentive Plan

The 2013 Plan allows for the issuance of incentive stock options intended to qualify under the amended Section 422 of the Internal Revenue Code of 1986, non-statutory stock options, stock appreciation rights, restricted stock awards, restricted stock units ("RSUs"), other stock-based awards and performance awards.

At the 2022 Annual Meeting of stockholders of the Company held on June 23, 2022 (the "Annual Meeting"), the Company's stockholders approved an amendment (the "2022 Stock Plan Amendment") to the Company's 2013 Plan to increase the number of shares reserved for issuance under the 2013 Plan by 4,600,000 shares of the Company's common stock. Accordingly, the total authorized shares of common stock under the 2013 Plan is increased to 10,253,057 shares of the Company's common stock, plus such additional number of shares of common stock (up to 155,968 shares) as is equal to the number of shares of common stock subject to awards granted under the Company's 2005 Stock Incentive Plan or 2008 Stock Incentive Plan (the "2008 Plan"), to the extent such awards expire, terminate or are otherwise surrendered, canceled, forfeited or repurchased by the Company at their original issuance price pursuant to a contractual repurchase right.

As of June 30, 2022, options to purchase a total of 4,803,700 shares of common stock and 548,491 RSUs were outstanding and up to 4,648,994 shares of common stock remained available for grant under the 2013 Plan.

Other Awards and Inducement Grants

The Company has not made any awards pursuant to other equity incentive plans, including the 2008 Plan, since the Company's stockholders approved the 2013 Plan. As of June 30, 2022, options to purchase a total of 145,968 shares of common stock were outstanding under the 2008 Plan. In addition, as of June 30, 2022, non-statutory stock options to purchase an aggregate of 325,000 shares of common stock were outstanding that were issued outside of the 2013 Plan to certain employees in 2015 and 2014 pursuant to the Nasdaq inducement grant exception as a material component of new hires' employment compensation.

2017 *Employee Stock Purchase Plan*

The 2017 ESPP is intended to qualify as an "employee stock purchase plan" as defined in Section 423 of the Internal Revenue Code, and is intended to encourage our employees to become stockholders of the Company, to stimulate increased interest in the Company's affairs and success, to afford employees the opportunity to share in the Company's earnings and growth, and to promote systematic savings by participants.

At the Annual Meeting, the Company's stockholders approved an amendment (the "2022 ESPP Amendment") to the Company's 2017 ESPP to increase the number of shares authorized for issuance under the 2017 ESPP by 600,000 shares of common stock. Accordingly, the total authorized shares of common stock under the 2017 ESPP is increased to 1,012,500 shares of common stock, subject to adjustment as described in the 2017 ESPP. As of June 30, 2022, 720,067 shares remained available for issuance under the 2017 ESPP.

For the six months ended June 30, 2022 and 2021, the Company issued 76,158 and 13,998 shares of common stock, respectively, under the 2017 ESPP and received proceeds of less than $0.1 million during each period, as a result of employee stock purchases.

Note 9. Stock-Based Compensation (Continued)

Accounting for Stock-based Compensation

The Company recognizes non-cash compensation expense for stock-based awards under the Company's equity incentive plans and employee stock purchases under the Company's 2017 ESPP as follows:

- Stock Options: Compensation cost is recognized over an award's requisite service period, or vesting period, using the straight-line attribution method, based on the grant date fair value determined using the Black-Scholes option-pricing model.
- RSUs: Compensation cost for time-based RSUs, which vest over time based only on continued service, is recognized on a straight-line basis over the requisite service period based on the fair value of the Company's common stock on the date of grant. Compensation cost for awards that are subject to market considerations is recognized on a straight-line basis over the implied requisite service period, based on the grant date fair value estimated using a Monte Carlo simulation. Compensation cost for awards that are subject to performance conditions is recognized over the period of time commencing when the performance condition is deemed probable of achievement based on the fair value of the Company's common stock on the date of grant.
- Employee Stock Purchases: Compensation cost is recognized over each plan period based on the fair value of the look-back provision, calculated using the Black-Scholes option-pricing model, considering the 15% discount on shares purchased.

Total stock-based compensation expense attributable to stock-based awards made to employees and directors and employee stock purchases included in operating expenses in the Company's condensed statements of operations for the three and six months ended June 30, 2022 and 2021 were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2022**	**2021**	**2022**	**2021**
Stock-based compensation:				
Research and development				
Employee Stock Purchase Plan	$ 9	$ 3	$ 15	$ 15
Equity Incentive Plan	52	50	141	418
	$ 61	$ 53	$ 156	$ 433
General and administrative				
Employee Stock Purchase Plan	$ 1	$ 1	$ 3	$ 3
Equity Incentive Plan	500	350	948	1,079
	$ 501	$ 351	$ 951	$ 1,082
Total stock-based compensation expense	$ 562	$ 404	$ 1,107	$ 1,515

During the six months ended June 30, 2022 and 2021, the weighted average fair market value of stock options granted was $0.38 and $2.02, respectively.

The following weighted average assumptions apply to the options to purchase 660,700 and 833,500 shares of common stock granted to employees and directors during the six months ended June 30, 2022 and 2021, respectively:

	2022	**2021**
Average risk-free interest rate	2.3%	0.4%
Expected dividend yield	—	—
Expected lives (years)	4.0	3.6
Expected volatility	102%	87%
Weighted average exercise price (per share)	$ 0.53	$ 3.66

All options granted during the six months ended June 30, 2022 and 2021 were granted at exercise prices equal to the fair market value of the Company's common stock on the dates of grant**.** As further described below, the vesting of certain options granted to employees during the six months ended June 30, 2021 were accelerated during the period.

Note 9. Stock-Based Compensation (Continued)

Stock Option Activity

The following table summarizes stock option activity for the six months ended June 30, 2022:

($ in thousands, except per share data)	Stock Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value
Outstanding at December 31, 2021	5,202,006	$ 8.06	5.9	$ 2,949
Granted	660,700	0.53		
Exercised	—	—		
Forfeited	—	—		
Expired	(588,038)	2.87		
Outstanding at June 30, 2022 (1)	5,274,668	$ 7.70	6.6	$ —
Exercisable at June 30, 2022	3,818,724	$ 10.16	5.6	$ —

(1) Includes both vested stock options as well as unvested stock options for which the requisite service period has not been rendered but that are expected to vest based on achievement of a service condition.

As of June 30, 2022, there was $1.0 million of unrecognized compensation cost related to unvested options, which the Company expects to recognize over a weighted average period of 2.3 years.

During the three months ended March 31, 2021, the Company accelerated the vesting of 1,535,578 options, which were previously granted from 2019 through 2021. The modification resulted in an incremental stock-based compensation charge that was not significant. In January 2022, for members of the Company's Leadership team, the Compensation Committee of the Board of Directors implemented a post-exercise holding period prohibiting the sale of shares associated with the 2021 Acceleration on any schedule more favorable than the original vesting schedule (i.e., 6.25% of the total option grant every quarter and 25% of the total RSU grant every year). This post-exercise holding period has no financial statement impact.

Restricted Stock Activity

The following table summarizes restricted stock activity for the six months ended June 30, 2022:

	Time-based Awards		Market/Performance-based Awards	
($ in thousands, except per share data)	Number of Shares	Weighted-Average Grant Date Fair Value	Number of Shares	Weighted-Average Grant Date Fair Value
Nonvested shares at December 31, 2021	68,675	$ 2.30	507,028	$ 1.54
Granted	—	—	—	—
Cancelled	—	—	—	—
Vested	(27,212)	2.43	—	—
Nonvested shares at June 30, 2022	41,463	$ 2.21	507,028	$ 1.54

Time-based Restricted Stock Units

During the three months ended March 31, 2021, the Company accelerated the vesting of 137,872 unvested time-based RSUs which were previously granted in 2019 and 2020. The modification resulted in an incremental stock-based compensation charge that was not significant.

During the six months ended June 30, 2022, the Company recognized $0.1 million of compensation expense related to these awards. As of June 30, 2022, there was $0.1 million of unrecognized compensation expense related to the Company's time-based RSUs, which is expected to be recognized over a weighted-average period of 1.2 years.

Note 9. Stock-Based Compensation (Continued)

Market/Performance-based Restricted Stock Units

In July 2020, the Company granted RSUs to certain employees, including executive officers, under the 2013 Plan, with vesting that may occur upon a combination of specific performance and/or market conditions. Accordingly, the Company views these RSUs as two separate awards: (i) an award that vests if the market condition is achieved, and (ii) an award that vests whether or not the market condition is achieved, so long as the performance condition is achieved. The Company is currently recognizing compensation expense for these awards over the estimated requisite service period of 2.36 years based on the estimated fair value when considering the market condition of the award, which was determined using a Monte Carlo simulation.

During the six months ended June 30, 2022, the Company recognized $0.1 million of compensation expense related to these awards. As of June 30, 2022, the remaining unrecognized compensation cost for the market-based component of these awards, which is expected to be recognized over a weighted-average period of 0.4 years, is $0.1 million. In addition, should the performance condition be achieved, the Company would recognize an additional $0.3 million of compensation expense.

Note 10. Related Party Transactions

Baker Brothers

Julian C. Baker, a member of the Company’s Board of Directors until his resignation in September 2018, is a principal of Baker Bros. Advisors, LP. Additionally, Kelvin M. Neu, a member of Company’s Board of Directors until his resignation in June 2019, is an employee of Baker Bros. Advisors, LP. At December 31, 2020, Baker Bros. Advisors, LP and certain of its affiliated funds (collectively, “Baker Brothers”) held sole voting power with respect to an aggregate of 4,608,786 shares of the Company’s common stock, representing approximately 12% of the Company's then outstanding common stock.

During the six months ended June 30, 2021, Baker Brothers exercised warrants to purchase 2,708,812 shares of the Company’s common stock at an exercise price of $0.08 per share for a total exercise price of approximately $0.2 million. Additionally, Baker Brothers converted 23,684 shares Series B1 Preferred Stock into 2,368,400 shares of the Company’s common stock during the six months ended June 30, 2021.

At June 30, 2022, Baker Brothers held sole voting power with respect to an aggregate of 2,047,180 shares of the Company’s common stock, representing approximately 4% of the Company's outstanding common stock.

Pillar Investment Entities

Youssef El Zein, a member of the Company’s Board of Directors until his resignation in October 2017, is a director and controlling stockholder of Pillar Invest Corporation (“Pillar Invest”), which is the general partner of Pillar Pharmaceuticals I, L.P., Pillar Pharmaceuticals II, L.P., Pillar Pharmaceuticals III, L.P., Pillar Pharmaceuticals IV, L.P., Pillar Pharmaceuticals V, L.P., Pillar 6, Pillar 7, and Pillar Partners (collectively, the “Pillar Investment Entities”). As of June 30, 2022, the Pillar Investment Entities owned approximately 16% of the Company's common stock and beneficially owned approximately 19.99% of the Company's common stock.

As of June 30, 2022, the Pillar Investment Entities held (i) prefunded warrants to purchase up to 1,533,159 shares of the Company’s common stock at an exercise price of $0.01 per share, (ii) warrants to purchase up to 3,039,514 shares of the Company’s common stock at an exercise price of $2.28 per share, (iii) warrants to purchase up to 2,764,227 shares of the Company’s common stock at an exercise price of $2.58 per share, and (iv) warrants to purchase up to 1,373,626 shares of the Company’s common stock at an exercise price of $2.71 per share.

During the six months ended June 30, 2021, certain of the Pillar Investment Entities exercised warrants to purchase 3,158,386 shares of the Company’s common stock at an exercise price of $0.01 per share for a total exercise price of less than $0.1 million. 19,052 shares were used to fund the exercise costs.

Note 10. Related Party Transactions (Continued)

Board Fees Paid in Stock

Pursuant to the Company's director compensation program, in lieu of director board and committee fees of $0.1 million during each of the six months ended June 30, 2022 and 2021, the Company issued 91,241 and 47,400 shares of common stock, respectively, to certain of its directors. Director board and committee fees are paid in arrears and the number of shares issued was calculated based on the market closing price of the Company's common stock on the issuance date.

Note 11. Net Income (Loss) per Common Share

During periods the Company realizes net income, it uses the two-class method to compute net income per common share and has securities outstanding (redeemable convertible preferred stock) that entitle the holder to participate in dividends and earnings of the Company. In addition, the Company analyzes the potential dilutive effect of outstanding redeemable convertible preferred stock under the "if-converted" method when calculating diluted earnings per share and reports the more dilutive of the approaches (two class or "if-converted"). The two-class method is not applicable during periods with a net loss, as the holders of the redeemable convertible preferred stock have no obligation to fund losses.

The Company also analyzes the potential dilutive effect of stock options, restricted stock units, warrants and shares underlying future tranche rights under the treasury stock method (as applicable), during periods of income, or during periods in which income is recognized related to changes in fair value of its liability-classified securities.

For the six months ended June 30, 2021, the Company used the two-class method to compute net income per common share. Under this method, net income is reduced by the amount of any dividends earned and the accretion of redeemable convertible preferred stock to its redemption value, if any, during the period. The remaining earnings (undistributed earnings) are allocated to common stock and each series of redeemable convertible preferred stock to the extent that each preferred security may share in earnings as if all the earnings for the period had been distributed. The total earnings allocated to common stock is then divided by the number of outstanding shares to which the earnings are allocated to determine the earnings per share.

However, during periods the Company realizes net loss, basic and diluted net loss per common share applicable to common stockholders is calculated by dividing net loss applicable to common stockholders by the weighted-average number of shares of common stock outstanding during the period, without consideration of common stock equivalents. The Company's potentially dilutive shares, which include outstanding stock option awards, common stock warrants and convertible preferred stock, are considered to be common stock equivalents and are only included in the calculation of diluted net loss per share when their effect is dilutive.

For the three and six months ended June 30, 2022, diluted net loss per common share applicable to common stockholders was the same as basic net loss per common share applicable to common stockholders as the effects of the Company's potential common stock equivalents were antidilutive.

Note 11. Net Income (Loss) per Common Share (Continued)

Details in the computation of basic and diluted net income (loss) per common share were as follows:

($ in thousands except per share data)	Three Months Ended June 30, 2022	Three Months Ended June 30, 2021	Six Months Ended June 30, 2022	Six Months Ended June 30, 2021
Net income (loss) per share — Basic:				
Net income (loss)	$ (5,307)	$ (7,563)	$ (9,485)	$ 108,175
Less: Undistributed earnings to preferred stockholders	—	—		(2,725)
Net income (loss) applicable to common stockholders - basic	$ (5,307)	$ (7,563)	$ (9,485)	$ 105,450
Numerator for basic net income (loss) applicable to common stockholders	$ (5,307)	$ (7,563)	$ (9,485)	$ 105,450
Denominator for basic net income (loss) applicable to common stockholders	52,972	49,909	52,933	45,575
Net income (loss) applicable to common stockholders - basic	$ (0.10)	$ (0.15)	$ (0.18)	$ 2.31
Net income (loss) per share — Diluted:				
Net income (loss)	$ (5,307)	$ (7,563)	$ (9,485)	$ 108,175
Less: Warrant revaluation gain applicable to dilutive liability-classified warrants	—	—	—	(6,983)
Less: Future tranche right revaluation gain applicable to dilutive liability-classified future tranche rights	—	—	—	(118,803)
Numerator for diluted net income (loss) applicable to common stockholders	$ (5,307)	$ (7,563)	$ (9,485)	$ (17,611)
Denominator for basic net income (loss) applicable to common stockholders	52,972	49,909	52,933	45,575
Plus: Incremental shares underlying “in the money” liability-classified warrants outstanding	—	—	—	496
Plus: Incremental shares underlying “in the money” liability-classified future tranche rights outstanding	—	—	—	8,866
Denominator for diluted net income (loss) applicable to common stockholders	52,972	49,909	52,933	54,937
Net income (loss) applicable to common stockholders - diluted	$ (0.10)	$ (0.15)	$ (0.18)	$ (0.32)

Note 11. Net Income (Loss) per Common Share (Continued)

Total antidilutive securities excluded from the calculation of diluted net loss per share for the three and six months ended June 30, 2022 and 2021 were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	**2022**	**2021**	**2022**	**2021**
Stock options	5,275	4,888	5,275	4,888
Restricted stock units	548	594	548	594
Common stock warrants	8,732	8,732	8,732	8,732
Total	14,555	14,214	14,555	14,214

Note 12. Subsequent Events

The Company considers events or transactions that occur after the balance sheet date but prior to the issuance of the financial statements to provide additional evidence relative to certain estimates or to identify matters that require additional disclosure.

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

This Management's Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with:

- *our unaudited condensed financial statements and accompanying notes included in Part I, Item 1 of this Form 10-Q; and*
- *our audited financial statements and accompanying notes included in the 2021 Form 10-K, as well as the information contained under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our 2021 Form 10-K.*

In addition to historical information, this discussion and analysis contains forward-looking statements. These forward-looking statements are subject to risks and uncertainties, including those discussed in the section titled "Risk Factors," set forth in Item 1A of our 2021 Form 10-K and this Form 10-Q, that could cause actual results to differ materially from historical results or anticipated results.

Overview

We are a biopharmaceutical company with a business strategy focused on the clinical development, and ultimately the commercialization, of drug candidates for rare disease indications characterized by small, well-defined patient populations with serious unmet medical needs. Our current focus is to identify and acquire rights to novel development and commercial stage rare disease programs through new business development opportunities, including additional strategic alternatives. We have in the past and may in the future explore collaborative alliances to support development and commercialization of any of our drug candidates.

Until December 2021, we were developing tilsotolimod, via intratumoral injection, for the treatment of solid tumors in combination with nivolumab, an anti-PD1 antibody marketed as Opdivo® by Bristol Myers Squibb Company ("BMS"), and/or ipilimumab, an anti-CTLA4 antibody marketed as Yervoy® by BMS. Due to Phase 3 results in anti-PD-1 refractory advanced melanoma (ILLUMINATE-301), reported in March 2021, which showed the study failed to meet its primary endpoint, as well as a decision in December 2021 to discontinue enrollment in ILLUMINATE-206, our Phase 2 study in solid tumors, Company-sponsored development of tilsotolimod has been discontinued.

Although clinical trials with tilsotolimod have not yet translated into a new treatment alternative for patients, we believe that data supporting tilsotolimod's mechanism of action and encouraging safety profile from across the array of pre-clinical and clinical work to date, together with its intellectual property protection, are noteworthy. As a result, in December 2021, we announced that we would consider an out-licensing arrangement so that tilsotolimod's full potential might continue to be explored on behalf of patients who did not respond to traditional immunotherapy, which we continue to explore, together with other strategic alternatives.

Nasdaq Compliance

As previously disclosed in the Current Report on Form 8-K filed with the SEC on December 1, 2021, on November 26, 2021, we received a deficiency letter from the Nasdaq Listing Qualifications Department (the "Staff") of The Nasdaq Stock Market, LLC ("Nasdaq"), notifying that we are not in compliance with Nasdaq Listing Rule 5550(a)(2), which requires the Company to maintain a minimum bid price of at least $1 per share for continued listing on The Nasdaq Capital Market (the "Minimum Bid Requirement").

On May 26, 2022, we received notice (the "Nasdaq Notice") from the Staff indicating that, while we have not regained compliance with the Minimum Bid Requirement, the Staff has determined that we are eligible for an additional 180-day period, or until November 21, 2022, to regain compliance. If at any time during this second 180-day compliance period, the closing bid price of our common stock is at least $1 per share for a minimum of ten consecutive business days, the Staff will provide us with written confirmation of compliance. If compliance cannot be demonstrated by November 21, 2022, the Staff will provide written notification that our common stock will be subject to delisting. We would then be entitled to appeal the Staff's determination to a Nasdaq hearings panel. We intend to monitor the closing bid price of its common stock and consider implementing available options to regain compliance with the Minimum Bid Requirement.

Tilsotolimod (IMO-2125)

Tilsotolimod is a synthetic phosphorothioate oligonucleotide that acts as a direct agonist of TLR9 to stimulate the innate and adaptive immune systems. It was developed for administration via intratumoral injection in combination with systemically administered checkpoint inhibitors and costimulation therapies for the treatment of various solid tumors. We referred to our tilsotolimod development program as the ILLUMINATE development program. As previously reported in our 2021 Form 10-K, as of December 31, 2021, all Company-sponsored development has been discontinued and study-related activities are in the process of being concluded.

See additional information under the heading “Collaborative Alliances” in our 2021 Form 10-K for information on the development of tilsotolimod in collaboration with AbbVie Inc. (“AbbVie”) for patients with head and neck squamous cell carcinoma (“HNSCC”).

Collaborative Alliances

Our current alliances include collaborations with Scriptr, AbbVie and BMS, each described under the caption “Item 1. Business — Collaborative Alliances” in our 2021 Form 10-K. In addition to our current alliances, we may seek to enter into additional collaborative alliances to support development and commercialization of additional drug candidates.

Critical Accounting Policies and Estimates

This management’s discussion and analysis of financial condition and results of operations is based on our condensed financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an ongoing basis, management evaluates its estimates and judgments which are affected by the application of our accounting policies.

Management bases its estimates and judgments on historical experience and on various other factors that are believed to be appropriate under the circumstances. Actual results may differ from these estimates under different assumptions or conditions.

We regard an accounting estimate or assumption underlying our financial statements as a “critical accounting estimate” where:

(i) the nature of the estimate or assumption is material due to the level of subjectivity and judgment necessary to account for highly uncertain matters or the susceptibility of such matters to change; and

(ii) the impact of the estimates and assumptions on financial condition or operating performance is material.

Our significant accounting policies are described in Note 2 of the notes to our financial statements included in our 2021 Form 10-K. However, please refer to Note 2 in the accompanying notes to the condensed financial statements contained in this Form 10-Q for updated policies and estimates, if applicable, that could impact our results of operations, financial position, and cash flows. Not all these significant policies, however, fit the definition of critical accounting policies and estimates. We believe that our accounting policies relating to (i) warrant and future tranche right liabilities and related revaluation gain (loss), (ii) research and development prepayments, accruals and related expenses, and (iii) stock-based compensation, as described under the caption “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Estimates” in our 2021 Form 10-K, fit the description of critical accounting estimates and judgments.

New Accounting Pronouncements

New accounting pronouncements are discussed in Note 2 in the notes to the condensed financial statements in this Form 10-Q.

Financial Condition, Liquidity and Capital Resources

Financial Condition

As of June 30, 2022, we had an accumulated deficit of $744.9 million. To date, substantially all of our revenues have been from collaboration and license agreements and we have received no revenues from the sale of commercial products. We generated no revenue for the quarter ended June 30, 2022.

We have devoted substantially all of our efforts to research and development, including clinical trials, and we have not completed development of any commercial products. Our research and development activities, together with our general and administrative expenses, are expected to continue to result in substantial operating losses for the foreseeable future. These losses, among other things, have had and will continue to have an adverse effect on our stockholders' equity, total assets and working capital. Due to the numerous risks and uncertainties associated with developing drug candidates, and if approved, commercial products, we are unable to predict the extent of any future losses, whether or when any of our drug candidates will become commercially available or when we will become profitable, if at all.

Liquidity and Capital Resources

Overview

We require cash to fund our operating expenses and to make capital expenditures. Historically, we have funded our cash requirements primarily through the following:

(i) sale of common stock, preferred stock, future tranche rights and warrants (including pre-funded warrants);

(ii) exercise of warrants;

(iii) debt financing, including capital leases;

(iv) license fees, research funding and milestone payments under collaborative and license agreements; and

(v) interest income.

LPC Purchase Agreement

On March 4, 2019, we entered into a Purchase Agreement with Lincoln Park Capital Fund, LLC ("Lincoln Park"), pursuant to which, upon the terms and subject to the conditions and limitations set forth therein, Lincoln Park committed to purchase an aggregate of $35.0 million of shares of Company common stock from time to time at our sole discretion (the "LPC Purchase Agreement").

During the six months ended June 30, 2022, we did not sell any shares under the LPC Purchase Agreement. The LPC Purchase Agreement had a 36-month term which expired on March 4, 2022. Accordingly, we no longer have access to capital under the LPC Purchase Agreement.

During the six months ended June 30, 2021, we sold 800,000 shares of common stock, pursuant to the LPC Purchase Agreement, resulting in net proceeds of $4.2 million.

ATM Agreement

In November 2018, we entered into an Equity Distribution Agreement (the "ATM Agreement") with JMP Securities LLC ("JMP") pursuant to which we may issue and sell shares of our common stock having an aggregate offering price of up to $50.0 million through JMP as our agent.

During the six months ended June 30, 2022, we did not sell any shares under the ATM Agreement.

During the six months ended June 30, 2021, we sold 4,470,593 shares of common stock pursuant to the ATM Agreement, resulting in net proceeds, after deduction of commissions and other offering expenses, of $14.6 million. In addition, from July 1, 2021 through July 7, 2021, the Company sold an additional 646,764 shares for $0.7 million in net proceeds under the ATM Agreement. As of June 30, 2022, we may sell up to an additional $19.5 million of shares under the ATM Agreement, subject to applicable securities law and related rules and regulations.

The LPC Purchase Agreement and ATM Agreement are more fully described in Note 7 of the notes to our financial statements included elsewhere in this Form 10-Q.

Funding Requirements

We had cash and cash equivalents of approximately $24.5 million at June 30, 2022. We believe, based on our current operating plan, our existing cash and cash equivalents on hand as of June 30, 2022 will enable us to fund our operations through the one-year period subsequent to the filing date of this Form 10-Q. Specifically, we believe our available funds will be sufficient to enable us to perform the following:

(i) fund business development related activities, such as identifying and potentially acquiring rights to novel development and commercial stage rare disease programs, including additional strategic alternatives;

(ii) conclude on our Company-sponsored development activities related to tilsotolimod;

(iii) fund certain research including investigator initiated clinical trials of tilsotolimod and the Scriptr Agreement; and

(iv) maintain a level of general and administrative expenses to support the business.

In addition, we are seeking and expect to continue to seek additional funding through collaborations, the sale or license of assets or financings of equity or debt securities. We believe the key factors which will affect our ability to obtain funding are:

(i) the receptivity of the capital markets to any in-licensing, product acquisition or other transaction we may enter into;

(ii) the receptivity of the capital markets to financings by biotechnology companies generally and companies with drug candidates and technologies similar to ours specifically;

(iii) the results of our clinical development activities in our drug candidates we develop on the timelines anticipated;

(iv) competitive and potentially competitive products and technologies and investors' receptivity to our drug candidates we develop and the technology underlying them in light of competitive products and technologies;

(v) the cost, timing, and outcome of regulatory reviews;

(vi) our ability to enter into additional collaborations with biotechnology and pharmaceutical companies and the success of such collaborations; and

(vii) the impact of the COVID-19 pandemic to global economy and capital markets, and to our business and our financial results.

In addition, increases in expenses may adversely impact our cash position and require additional funds or cost reductions.

Financing may not be available to us when we need it or may not be available to us on favorable or acceptable terms or at all. We could be required to seek funds through collaborative alliances or through other means that may require us to relinquish rights to some of our technologies, drug candidates or drugs that we would otherwise pursue on our own. In addition, if we raise additional funds by issuing equity securities, our then existing stockholders may experience dilution. The terms of any financing may adversely affect the holdings or the rights of existing stockholders. An equity financing that involves existing stockholders may cause a concentration of ownership. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends, and are likely to include rights that are senior to the holders of our common stock. Any additional debt or equity financing may contain terms which are not favorable to us or to our stockholders, such as liquidation and other preferences, or liens or other restrictions on our assets. As discussed in Note 13 to the financial statements included in our 2021 Form 10-K, additional equity financings may also result in cumulative changes in ownership over a three-year period in excess of 50% which would limit the amount of net operating loss and tax credit carryforwards that we may utilize in any one year.

If we are unable to obtain adequate funding on a timely basis or at all, we will be required to terminate, modify or delay our clinical trials of our drug candidates, or relinquish rights to portions of our technology, drug candidates and/or products.

Cash Flows

The following table presents a summary of the primary sources and uses of cash for the six months ended June 30, 2022 and 2021:

	Six Months Ended June 30,	
(in thousands)	2022	2021
Net cash provided by (used in):		
Operating activities	$ (8,093)	$ (15,850)
Investing activities	—	4,500
Financing activities	28	18,711
Increase (decrease) in cash and cash equivalents	**$ (8,065)**	**$ 7,361**

Operating Activities. The net cash used in operating activities for all periods presented consists primarily of our net income adjusted for non-cash charges and changes in components of working capital. The decrease in cash used in operating activities for the six months ended June 30, 2022, as compared to 2021, was primarily due to timing of cash outflows related to our IMO-2125 development program, including payments to contract research organizations for the conclusion of the program.

Investing Activities. Cash used in investing activities for the six months ended June 30, 2021 consisted of $4.5 million in proceeds received from the maturity of available for-sale securities.

Financing Activities. Net cash provided by financing activities primarily consisted of the following amounts received in connection with the following transactions:

- for the six months ended June 30, 2022, $0.1 million in proceeds received from employee stock purchases; and
- for the six months ended June 30, 2021, $18.7 million in aggregate net proceeds from financing arrangements consisting of $14.6 million received pursuant to the ATM Agreement and $4.2 million received under the LPC Purchase Agreement and $0.3 million received from the exercise of stock options and warrants, partially offset by $0.4 million in payments related to our short-term insurance premium financing arrangement.

Material Cash Requirements

During the six months ended June 30, 2022, there were no material changes outside the ordinary course of our business to our material cash requirements as disclosed in our 2021 Form 10-K.

Results of Operations

Three and Six Months Ended June 30, 2022 and 2021

Overview

During the three months ended June 30, 2022, our loss from operations totaled $5.4 million, a 29% decrease compared to a loss from operations of $7.6 million for the three months ended June 30, 2021. During the six months ended June 30, 2022, our loss from operations totaled $9.5 million, a 46% decrease compared to a loss from operations of $17.6 million for the six months ended June 30, 2021. Research and development expenses comprise the significant portion of our total operating expenses, as shown in the table below.

($ in thousands)	Three months ended June 30, 2022	Three months ended June 30, 2021	% Change	Six months ended June 30, 2022	Six months ended June 30, 2021	% Change
Operating expenses:						
Research and development	$ 2,706	$ 3,893	(30%)	$ 4,490	$ 10,764	(58%)
General and administrative	2,659	2,472	8%	5,057	5,628	(10%)
Restructuring costs	—	1,192	—	—	1,192	(100%)
Total operating expenses	$ 5,365	$ 7,557	(29%)	$ 9,547	$ 17,584	(46%)
Loss from operations	$ (5,365)	$ (7,557)	(29%)	$ (9,547)	$ (17,584)	(46%)

Research and Development Expenses

For each of our research and development programs, we incur both direct and indirect expenses. We track direct research and development expenses by program, which include third party costs such as contract research, consulting, and clinical trial and manufacturing costs. We do not allocate indirect research and development expenses, which may include regulatory, laboratory (equipment and supplies), personnel, facility and other overhead costs (including depreciation and amortization), to specific programs.

During the three and six months ended June 30, 2022, our overall research and development expenses declined by 30% and 58%, respectively, as compared to the same periods in 2021, primarily due to decreases in external development costs associated with tilsotolimod (IMO-2125) and other drug development costs. This decrease is primarily related to: (i) costs incurred with contract research organizations during the three and six months ended June 30, 2022 to support and conclude our ILLUMINATE-301 trial, which reported top-line results in March 2021 and was discontinued by the Company in the second quarter of 2021; (ii) lower costs incurred with drug manufacturing activities; (iii) less costs associated with ILLUMINATE-206, which discontinued its enrollment in December 2021; and (iv) lower expenses incurred in connection with the Scriptr Agreement.

We expect that Tilsotolimod (IMO-2125) external development expenses, as well as expenses related to the Scriptr Agreement, will continue to be a significant portion of our total research and development spending in 2022.

In the table below, research and development expenses are set forth in the following categories: Tilsotolimod (IMO-2125) external development expenses and other drug development expenses.

($ in thousands)	Three months ended June 30, 2022	Three months ended June 30, 2021	% Change	Six months ended June 30, 2022	Six months ended June 30, 2021	% Change
Tilsotolimod (IMO-2125) external development expense	$ 1,822	$ 2,045	(11%)	$ 2,546	$ 5,941	(57%)
Other drug development expense	884	1,848	(52%)	1,944	4,823	(60%)
Total research and development expenses	$ 2,706	$ 3,893	(30%)	$ 4,490	$ 10,764	(58%)

Tilsotolimod (IMO-2125) External Development Expenses

These expenses include external expenses that we have incurred in connection with the development of tilsotolimod as part of our immuno-oncology program. These external expenses include payments to independent contractors and vendors for drug development activities conducted after the initiation of tilsotolimod clinical development in immuno-oncology, but exclude internal costs such as payroll and overhead expenses.

We commenced clinical development of tilsotolimod as part of our immuno-oncology program in July 2015, and from July 2015 through June 30, 2022, we incurred approximately $93.6 million in tilsotolimod external development expenses, including costs associated with the preparation for and conduct of ILLUMINATE-204, ILLUMINATE-101, ILLUMINATE-301, ILLUMINATE-206, and the manufacture of additional drug substance for use in our clinical trials and additional nonclinical studies.

Other Drug Development Expenses

These expenses include internal costs, such as payroll and overhead expenses, associated with all of our clinical development programs. In addition, these expenses include external expenses, such as payments to contract vendors, associated with compounds that were previously being developed but are not currently being developed. For the three and six months ended June 30, 2022, we incurred $0.2 million and $0.4 million, respectively, within other drug development expenses related to our research collaboration with Scriptr. Since the inception of the Scriptr collaboration in the first quarter of 2021 through June 30, 2022, we have incurred $2.5 million of expenses within other drug development expenses.

General and Administrative Expenses

General and administrative expenses consist primarily of payroll, stock-based compensation expense, consulting fees and professional legal fees associated with our patent applications and maintenance, our corporate regulatory filing requirements, our corporate legal matters, and our business development initiatives. For the three months ended June 30, 2022 and 2021, general and administrative expenses totaled $2.7 million and $2.5 million, respectively. For the six months ended June 30, 2022 and 2021, general and administrative expenses totaled $5.1 million and $5.6 million, respectively.

The slightly increase in general and administrative expenses during the three months ended June 30, 2022, as compared to the same period in 2021, was primarily due to an increase in general consulting and legal expenses for our business development initiatives. The decrease in general and administrative expenses during the six months ended June 30, 2022, as compared to the same period in 2021, was due to lower stock-based compensation expense and expense related to terminated employees due to the Reduction-In-Force that occurred in the 2021 period, partially offset by increased consulting expenses.

Restructuring Costs

Restructuring costs totaled approximately $1.2 million for the three and six months ended June 30, 2021 and were comprised primarily of the one-time termination costs, including severance, benefits, and related costs associated with our reduction in workforce. No such costs were incurred during the three and six months ended June 30, 2022.

Interest Income

We recognized nominal interest income for the three and six months ended June 30, 2022. Interest income was also nominal for the three and six months ended June 30, 2021. The increase in interest income during the three and six months ended June 30, 2022 was primarily due to higher interest rates. Amounts may fluctuate from period to period due to changes in interest rate and average investment balances, including commercial paper and money market funds classified as cash equivalents, and composition of investments.

Warrant Revaluation Gain or Loss

During the three and six months ended June 30, 2022, we recorded no non-cash warrant revaluation gain or loss. During the six months ended June 30, 2021, we recorded a non-cash warrant revaluation gain of approximately $7.0 million. The non-cash gain for the six months ended June 30, 2021 related to the derecognition of the warrant liability during the first quarter of 2021 associated with our liability-classified warrants issued in connection with the December 2019 Private Placement, as more fully described in Note 6 of the Notes to

Condensed Financial Statements appearing elsewhere in this Form 10-Q, due to the termination of such liability-classified warrants during the quarter.

Future Tranche Right Revaluation Gain or Loss

During the three and six months ended June 30, 2022, we recorded no non-cash future tranche right revaluation gain or loss. There was no non-cash future tranche right revaluation gain or loss recorded during the three months ended June 30, 2021. In comparison, we recorded a non-cash future tranche right revaluation gain of approximately $118.8 million during the six months ended June 30, 2021.

The non-cash gain for the six months ended June 30, 2021 related to the derecognition of the future tranche right liability during the first quarter of 2021 associated with the future tranche rights issued in connection with the December 2019 Private Placement, as more fully described in Note 6 of the Notes to Condensed Financial Statements appearing elsewhere in this Form 10-Q, due to the termination of the future tranche rights during the quarter.

Net Income or Loss Applicable to Common Stockholders

As a result of the factors discussed above, our net loss for the three and six months ended June 30, 2022 was $5.3 million and $9.5 million, respectively. In comparison, net loss for the three months ended June 30, 2021 was $7.6 million and net income for the six months ended June 30, 2021 was $108.2 million.

Basic net loss applicable to common stockholders for the three and six months ended June 30, 2022 was $5.3 million, and $9.5 million, respectively. In comparison, basic net loss applicable to common stockholders for the three months ended June 30, 2021 was $7.6 million. For the six months ended June 30, 2021, the net income applicable to common stockholders was $105.5 million. Excluding the non-cash warrant revaluation gain of $7.0 million and future tranche right revaluation gain of $118.8 million, for the six months ended June 30, 2021, basic net loss applicable to common stockholders was $20.3 million.

For the three and six months ended June 30, 2022, diluted net loss applicable to common stockholders was $5.3 million and $9.5 million, respectively. In comparison, diluted net loss for the three and six months ended June 30, 2021 was $7.6 million and $17.6 million, respectively.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

There were no material changes in our exposure to market risk from December 31, 2021. Our market risk profile as of December 31, 2021 is disclosed in Item 7A, *Quantitative and Qualitative Disclosures About Market Risk*, of our 2021 Form 10-K.

Item 4. Controls and Procedures.

(a) *Evaluation of Disclosure Controls and Procedures.* Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of June 30, 2022. In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and our management necessarily applied its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on this evaluation, our principal executive officer and principal financial officer concluded that as of June 30, 2022, our disclosure controls and procedures were (1) designed to ensure that material information relating to us is made known to our principal executive officer and principal financial officer by others, particularly during the period in which this report was prepared, and (2) effective, in that they provide reasonable assurance that information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms.

(b) *Changes in Internal Controls*. There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the fiscal quarter ended June 30, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1A. Risk Factors.

Risk factors that may affect our business and financial results are discussed within Item 1A "Risk Factors" of our annual report on Form 10-K filed with the SEC on March 31, 2022 ("2021 Form 10-K"). There have been no material changes to the disclosures relating to this item from those set forth in our 2021 Form 10-K.

Item 6. Exhibits.

Exhibit No.	Description
10.1†	Amendment to the Idera Pharmaceuticals, Inc. 2013 Stock Incentive Plan (Incorporated herein by reference to Exhibit 10.1 to the Current Report on Form 8-K, filed on June 24, 2022).
10.2†	Amendment to the Idera Pharmaceuticals, Inc. 2017 Employee Stock Purchase Plan (Incorporated herein by reference to Exhibit 10.2 to the Current Report on Form 8-K, filed on June 24, 2022).
31.1*	Certification of Chief Executive Officer pursuant to Exchange Act Rules 13a-14 and 15d-14, as adopted pursuant to Section 302 of Sarbanes-Oxley Act of 2002
31.2*	Certification of Chief Financial Officer pursuant to Exchange Act Rules 13a-14 and 15d-14, as adopted pursuant to Section 302 of Sarbanes-Oxley Act of 2002
32.1**	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2**	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	Inline XBRL Instance Document
101.SCH	Inline XBRL Taxonomy Extension Schema
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Labels Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover page Interactive Data File (formatted as inline XBRL with applicable taxonomy extension information contained in Exhibits 101)

† Indicates management contract or compensatory plan or arrangement.

* Filed herewith.

** Furnished herewith.

SIGNATURES

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

	IDERA PHARMACEUTICALS, INC.
Date: August 9, 2022	/s/ Vincent J. Milano
	Vincent J. Milano President and Chief Executive Officer (Principal Executive Officer)
Date: August 9, 2022	/s/ John J. Kirby
	John J. Kirby Chief Financial Officer (Principal Financial and Accounting Officer)

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO EXCHANGE ACT RULES 13a-14 AND 15d-14, AS ADOPTED PURSUANT TO SECTION 302 OF SARBANES-OXLEY ACT OF 2002

I, Vincent J. Milano, certify that:

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

Dated: August 9, 2022

/s/ VINCENT J. MILANO
Vincent J. Milano
Chief Executive Officer

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO EXCHANGE ACT RULES 13a-14 AND 15d-14, AS ADOPTED PURSUANT TO SECTION 302 OF SARBANES-OXLEY ACT OF 2002

I, John J. Kirby, certify that:

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

Dated: August 9, 2022

/s/ JOHN J. KIRBY
John J. Kirby
Chief Financial Officer

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Idera Pharmaceuticals, Inc. (the "Company") for the period ended June 30, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Vincent J. Milano, Chief Executive Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that to his knowledge:

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

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

A signed original of this written statement has been provided to Idera Pharmaceuticals, Inc. and will be retained by Idera Pharmaceuticals, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

Dated: August 9, 2022	/s/ VINCENT J. MILANO
	Vincent J. Milano
	Chief Executive Officer

Exhibit 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Idera Pharmaceuticals, Inc. (the “Company”) for the period ended June 30, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), the undersigned, John J. Kirby, Chief Financial Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that to his knowledge:

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

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

A signed original of this written statement has been provided to Idera Pharmaceuticals, Inc. and will be retained by Idera Pharmaceuticals, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

Dated: August 9, 2022

/s/ JOHN J. KIRBY
John J. Kirby
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)