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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 March 31, 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	**04-3072298**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
505 Eagleview Blvd., Suite 212 Exton, Pennsylvania	**19341**
(Address of principal executive offices)	(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	52,966,025
Class	Outstanding as of May 5, 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 ("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, future operations, clinical trials, collaborations, intellectual property, cash resources, financial position, future revenues, projected costs, prospects, 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 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 Quarterly Report on Form 10-Q, and in our other disclosures and filings with the SEC. These factors and the other cautionary statements made in this Quarterly Report on Form 10-Q should be read as being applicable to all related forward-looking statements whenever they appear in this Quarterly Report on Form 10-Q.

In addition, any forward-looking statements represent our estimates only as of the date that this Quarterly Report on 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 Quarterly Report on 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)	March 31, 2022	December 31, 2021*
ASSETS		
Current assets:		
Cash and cash equivalents	$ 27,993	$ 32,545
Prepaid expenses and other current assets	1,369	1,493
Total current assets	29,362	34,038
Property and equipment, net	18	22
Operating lease right-of-use assets	683	734
Other assets	70	70
Total assets	$ 30,133	$ 34,864
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable	$ 240	$ 565
Accrued expenses	3,342	4,088
Operating lease liability	214	209
Total current liabilities	3,796	4,862
Operating lease liability, net of current portion	494	549
Total liabilities	4,290	5,411
Commitments and contingencies (Note 12)		
Preferred stock, $0.01 par value, Authorized — 5,000 shares:		
Stockholders' equity (deficit):		
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 — 52,924 and 52,818 at March 31, 2022 and December 31, 2021, respectively	53	53
Additional paid-in capital	765,429	764,861
Accumulated deficit	(739,639)	(735,461)
Total stockholders' equity (deficit)	25,843	29,453
Total liabilities and stockholders' equity (deficit)	$ 30,133	$ 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 March 31, 2022	2021
Operating expenses:		
Research and development	$ 1,784	$ 6,871
General and administrative	2,398	3,156
Total operating expenses	4,182	10,027
Loss from operations	(4,182)	(10,027)
Other income (expense):		
Interest income	3	3
Interest expense	—	(3)
Warrant revaluation gain	—	6,983
Future tranche right revaluation gain	—	118,803
Foreign currency exchange gain (loss)	1	(21)
Net income (loss)	$ (4,178)	$ 115,738
Undistributed earnings to preferred stockholders	—	(6,132)
Net income (loss) applicable to common stockholders	$ (4,178)	$ 109,606
Net income (loss) applicable to common stockholders (Note 11)		
— Basic	$ (4,178)	$ 109,606
— Diluted	$ (4,178)	$ (10,048)
Net income (loss) per share applicable to common stockholders (Note 11)		
— Basic	$ (0.08)	$ 2.66
— Diluted	$ (0.08)	$ (0.14)
Weighted-average number of common shares used in computing net income (loss) per share applicable to common stockholders		
— Basic	52,893	41,193
— Diluted	52,893	70,980

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

IDERA PHARMACEUTICALS, INC.

CONDENSED STATEMENTS OF CASH FLOWS
(UNAUDITED)

(In thousands)	Three Months Ended March 31, 2022	2021
Cash Flows from Operating Activities:		
Net income / (loss)	$ (4,178)	$ 115,738
Adjustments to reconcile net income (loss) to net cash used in operating activities:		
Stock-based compensation	545	1,111
Warrant liability revaluation gain	—	(6,983)
Future tranche right liability revaluation gain	—	(118,803)
Issuance of common stock for services rendered	22	67
Accretion of discounts on short-term investments	—	(1)
Depreciation and amortization expense	4	6
Changes in operating assets and liabilities:		
Prepaid expenses and other assets	124	1,150
Accounts payable, accrued expenses, and other liabilities	(1,086)	(1,879)
Other	1	3
Net cash used in operating activities	(4,568)	(9,591)
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	—	16,322
Proceeds from employee stock purchases	16	28
Proceeds from exercise of common stock options and warrants	—	271
Payments on seller-financed purchases	—	(218)
Net cash provided by financing activities	16	16,403
Net increase (decrease) in cash and cash equivalents	(4,552)	11,312
Cash and cash equivalent, beginning of period	32,545	33,229
Cash and cash equivalents, end of period	$ 27,993	$ 44,541
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ —	$ 3
Supplemental disclosure of non-cash financing and investing activities:		
Offering costs in accounts payable and accrued expenses	$ 15	$ 61

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

IDERA PHARMACEUTICALS, INC.

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

	For the Three Months Ended March 31, 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' 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

	For the Three Months Ended March 31, 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

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

IDERA PHARMACEUTICALS, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS (UNAUDITED)
March 31, 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 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.

Nasdaq Compliance

As previously disclosed, on November 26, 2021, Idera received a deficiency letter (the "Nasdaq Letter") from the Nasdaq Listing Qualifications Department, notifying it that the Company 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"). The Company's failure to comply with the Minimum Bid Requirement was based on the Company's common stock per share price being below the $1 threshold for a period of 30 consecutive business days. In accordance with Nasdaq Listing Rule 5810(c)(3)(A) (the "Compliance Period Rule"), the Company has been provided an initial period of 180 calendar days, or by May 25, 2022 (the "Compliance Date"), to regain compliance with the Minimum Bid Requirement. If, at any time before the Compliance Date, the bid price for the Company's common stock closes at $1.00 or more per share for a minimum of 10 consecutive business days, as required under Nasdaq requirements, the Staff will provide written notification to the Company that it complies with the Minimum Bid Requirement, unless the Staff exercises its discretion to extend this 10-day period pursuant to Nasdaq Listing Rule 5810(c)(3)(H).

If the Company does not regain compliance with the Minimum Bid Requirement by the Compliance Date, the Company may be eligible for an additional 180 calendar day compliance period (the "Second Compliance Period"). To qualify, the Company would need to meet the continued listing requirement for the market value of publicly held shares and all other initial listing standards of the Nasdaq Capital Market, with the exception of the Minimum Bid Requirement, and provide written notice to the Staff of its intention to cure the deficiency during the Second Compliance Period.

Neither the Nasdaq Letter nor the Company's noncompliance with the Minimum Bid Requirement have an immediate effect on the listing or trading of the Company's common stock, which continue to trade on The Nasdaq Capital Market under the symbol "IDRA."

Liquidity and Financial Condition

As of March 31, 2022 the Company had an accumulated deficit of $739.6 million and a cash and cash equivalents balance of $28.0 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. 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, which the Company expects will take a number of years, if at all. To commercialize any future drug candidates, the Company needs to complete clinical development and comply with comprehensive regulatory requirements. The Company is subject to a number of 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 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 March 31, 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 months ended March 31, 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 March 31, 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 March 31, 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 March 31, 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 March 31, 2022, all of the Company's cash and cash equivalents were held at two financial institutions.

Operating Lease Right-of-use Asset 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 ("ASC 360"). 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 March 31, 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* ("ASC 815"), 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.

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 months ended March 31, 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 March 31, 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 March 31, 2022 and December 31, 2021, the Company had no uncertain tax positions.

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.

Note 2. Summary of Significant Accounting Policies (Continued)

Recently Adopted Accounting Pronouncements

In August 2020, the FASB issued 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 this ASU did not have a material effect on the Company's financial statements.

COVID-19

While the Company is not aware of a material impact from the continuation of the coronavirus ("COVID-19") pandemic through March 31, 2022, the full extent to which COVID-19 pandemic will directly or indirectly impact the Company's business, results of operations and financial condition, depends on future developments.

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
- 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 three months ended March 31, 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 March 31, 2022 and December 31, 2021 categorized by the level of inputs used in the valuation of each asset and liability.

	March 31, 2022			
(In thousands)	Total	Level 1	Level 2	Level 3
Assets				
Cash	$ 250	$ 250	$ —	$ —
Cash equivalents – money market funds	27,743	27,743	—	—
Total assets	$ 27,993	$ 27,993	$ —	$ —

	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, March 31, 2021	$ —	$ —

(1) During the three months ended March 31, 2021, the Company's liability-classified warrants and future tranche rights terminated, and accordingly, the liabilities were derecognized.

Note 4. Property and Equipment

At March 31, 2022 and December 31, 2021, property and equipment, at cost, consisted of the following:

(In thousands)	March 31, 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	801	797
Property and equipment, net	$ 18	$ 22

Depreciation and amortization expense on property and equipment was less than $0.1 million for the three months ended March 31, 2022 and 2021. Additionally, there were no non-cash property additions or impairment-related charges recognized during each of the three months ended March 31, 2022 and 2021.

Note 5. Accrued Expenses

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

(In thousands)	March 31, 2022	December 31, 2021
Payroll and related costs	$ 381	$ 477
Clinical and nonclinical trial expenses	2,436	2,909
Professional and consulting fees	430	591
Other	95	111
Total accrued expenses	$ 3,342	$ 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 elects 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 while the Series B1 Preferred Stock was outstanding during 2021. During 2021, all the Company's 23,684 shares of Series B1 Preferred Stock outstanding were converted into shares of the Company's common stock. For the three months ended March 31, 2021, accretion was de minimis.

Note 7. Stockholders' Equity

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. As consideration for entering into the LPC Purchase Agreement, the Company issued 269,749 shares of Company 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 three months ended March 31, 2022, the Company did not sell any shares under the LPC Purchase Agreement. The 36-month period noted above for the LPC Purchase Agreement expired on March 4, 2022; accordingly, the Company no longer has access to additional capital under the LPC Purchase Agreement subsequent to this date.

During the three months ended March 31, 2021, the Company sold 800,000 shares, 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 its 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 three months ended March 31, 2022, the Company sold no shares of common stock pursuant to the ATM Agreement.

During the three months ended March 31, 2021, the Company sold 2,394,956 shares of common stock, pursuant to the ATM Agreement resulting in net proceeds, after deduction of commissions and other offering expenses, of $12.1 million. As of March 31, 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)

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.

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

	Number of Shares			
Description	March 31, 2022	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 will 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 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 Idera a comprehensive data package (each, a "Data Package") that summarizes, on a Program-by-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 Idera 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 shall also reimburse 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 $0.3 million and $0.7 million in research and development expenses under the Scriptr Agreement during the three months ended March 31, 2022 and March 31, 2021, respectively.

Note 9. Stock-Based Compensation

As of March 31, 2022, the only equity compensation plans from 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 (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 Section 422 of the Internal Revenue Code, non-statutory stock options, stock appreciation rights, restricted stock awards, restricted stock units ("RSUs"), other stock-based awards and performance awards. The total number of shares of common stock authorized for issuance under the 2013 Plan is 5,653,057 shares of the Company's common stock, plus such additional number of shares of common stock (up to 868,372 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 March 31, 2022, options to purchase a total of 4,341,200 shares of common stock and 548,491 restricted stock units were outstanding and up to 542,649 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 March 31, 2022, options to purchase a total of 155,968 shares of common stock were outstanding under the 2008 Plan. In addition, as of March 31, 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 ours, to stimulate increased interest in our affairs and success, to afford employees the opportunity to share in our earnings and growth and to promote systematic savings by them. The total number of shares of common stock authorized for issuance under the 2017 ESPP is 412,500 shares of common stock, subject to adjustment as described in the 2017 ESPP. As of March 31, 2022, 154,025 shares remained available for issuance under the 2017 ESPP.

For the three months ended March 31, 2022 and 2021, the Company issued 42,200 and 7,648 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 months ended March 31, 2022 and 2021 were as follows:

	Three Months Ended March 31,	
(in thousands)	2022	2021
Stock-based compensation:		
Research and development		
Employee Stock Purchase Plan	$ 6	$ 12
Equity Incentive Plan	89	368
	$ 95	$ 380
General and administrative		
Employee Stock Purchase Plan	$ 2	$ 2
Equity Incentive Plan	448	729
	$ 450	$ 731
Total stock-based compensation expense	$ 545	$ 1,111

During the three months ended March 31, 2022 and 2021, the weighted average fair market value of stock options granted was $0.42 and $2.53, respectively.

Note 9. Stock-Based Compensation (Continued)

The following weighted average assumptions apply to the options to purchase 198,200 and 643,629 shares of common stock granted to employees during the three months ended March 31, 2022 and 2021, respectively:

	2022	2021
Average risk-free interest rate	1.3%	0.3%
Expected dividend yield	—	—
Expected lives (years)	3.8	3.9
Expected volatility	105%	85%
Weighted average exercise price (per share)	$ 0.60	$ 4.20

All options granted during the three months ended March 31, 2022 and 2021 were granted at exercise prices equal to the fair market value of the Company's common stock on the date of grant. As further described below, the vesting of certain options granted to employees during the three months ended March 31, 2021 were accelerated during the period.

Stock Option Activity

The following table summarizes stock option activity for the three months ended March 31, 2022:

($ in thousands, except per share data)	Stock Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life (in years)
Outstanding at December 31, 2021	5,202,006	$ 8.06	5.9
Granted	198,200	0.60	
Exercised	—	—	
Forfeited	—	—	
Expired	(578,038)	2.79	
Outstanding at March 31, 2022 (1)	4,822,168	$ 8.39	6.5
Exercisable at March 31, 2022	3,610,716	$ 10.63	5.7

(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 March 31, 2022, there was $1.1 million of unrecognized compensation cost related to unvested options, which the Company expects to recognize over a weighted average period of 2.2 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 implemented a post-exercise holding period prohibiting the sale of shares associated with the 2021 Acceleration on any schedule more favourable 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 three months ended March 31, 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 March 31, 2022	41,463	$ 2.21	507,028	$ 1.54

Note 9. Stock-Based Compensation (Continued)

Time-based Restricted Stock Units

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

During the three months ended March 31, 2022, the Company recognized $0.1 million of compensation expense related to these awards. As of March 31, 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 1.4 years.

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 three months ended March 31, 2022, the Company recognized $0.1 million of compensation expense related to these awards. As of March 31, 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 0.7 years, is $0.2 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 until his resignation in September 2018, is a principal of Baker Bros. Advisors, LP. Additionally, Kelvin M. Neu, a member of Company's Board 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 three months ended March 31, 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, during the three months ended March 31, 2021, Baker Brothers converted 14,150 shares Series B1 Preferred Stock into 1,415,000 shares of the Company's common stock. As of March 31, 2022, Baker Brokers held approximately 4% of the Company's outstanding stock.

As of March 31, 2021, Baker Brothers held 9,534 shares of the Company's Series B1 Preferred Stock, which were subsequently converted into 953,400 shares of the Company's common stock in April 2021.

At March 31, 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.

Note 10. Related Party Transactions (Continued)

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 March 31, 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 March 31, 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 three months ended March 31, 2021, Pillar 6 exercised warrants to purchase 643,525 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.

Board Fees Paid in Stock

Pursuant to the Company's director compensation program, in lieu of director board and committee fees of less than $0.1 million during each of the three months ended March 31, 2022 and 2021, the Company issued 41,155 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 three months ended March 31, 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 of 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.

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

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 months ended March 31, 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.

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

	Three Months Ended March 31,	
($ in thousands except per share data)	**2022**	**2021**
Net income (loss) per share — Basic:		
Net income (loss)	$ (4,178)	$ 115,738
Less: Undistributed earnings to preferred stockholders	—	(6,132)
Net income (loss) applicable to common stockholders - basic	$ (4,178)	$ 109,606
Numerator for basic net income (loss) applicable to common stockholders	$ (4,178)	$ 109,606
Denominator for basic net income (loss) applicable to common stockholders	52,893	41,193
Net income (loss) applicable to common stockholders - basic	$ (0.08)	$ 2.66
Net income (loss) per share — Diluted:		
Net income (loss)	$ (4,178)	$ 115,738
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	$ (4,178)	$ (10,048)
Denominator for basic net income (loss) applicable to common stockholders	52,893	41,193
Plus: Incremental shares underlying "in the money" liability-classified warrants outstanding	—	1,449
Plus: Incremental shares underlying "in the money" liability-classified future tranche rights outstanding	—	28,338
Denominator for diluted net income (loss) applicable to common stockholders	52,893	70,980
Net income (loss) applicable to common stockholders - diluted	$ (0.08)	$ (0.14)

Total antidilutive securities excluded from the calculation of diluted net loss per share for the three months ended March 31, 2022 and 2021 were as follows:

(in thousands)	**2022**	**2021**
Stock options	4,822	5,008
Restricted stock units	548	618
Common stock warrants	8,732	11,247
Convertible preferred stock	—	954
Total	14,102	17,827

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.

The following discussion and analysis of our 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 Quarterly Report on 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 Quarterly Report on 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, 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 (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, 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 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.

Nasdaq Compliance

As previously disclosed, on November 26, 2021, we received a deficiency letter (the "Nasdaq Letter") from the Nasdaq Listing Qualifications Department, notifying us that we are not in compliance with Nasdaq Listing Rule 5550(a)(2), which requires us to maintain a minimum bid price of at least $1 per share for continued listing on The Nasdaq Capital Market (the "Minimum Bid Requirement"). Our failure to comply with the Minimum Bid Requirement was based on our common stock per share price being below the $1 threshold for a period of 30 consecutive business days. In accordance with Nasdaq Listing Rule 5810(c)(3)(A) (the "Compliance Period Rule"), we have been provided an initial period of 180 calendar days (the "Compliance Date"), to regain compliance with the Minimum Bid Requirement. If, at any time before the Compliance Date, the bid price for our common stock closes at $1.00 or more per share for a minimum of 10 consecutive business days, as required under Nasdaq requirements, the Staff will provide written notification to us that it complies with the Minimum Bid Requirement, unless the Staff exercises its discretion to extend this 10-day period pursuant to Nasdaq Listing Rule 5810(c)(3)(H).

If we do not regain compliance with the Minimum Bid Requirement by the Compliance Date, we may be eligible for an additional 180 calendar day compliance period (the "Second Compliance Period"). To qualify, we would need to meet the continued listing requirement for the market value of publicly held shares and all other initial listing standards of the Nasdaq Capital Market, with the exception of the Minimum Bid Requirement, and provide written notice to the Staff of its intention to cure the deficiency during the Second Compliance Period.

Neither the Nasdaq Letter nor our noncompliance with the Minimum Bid Requirement have an immediate effect on the listing or trading of our common stock, which continues to trade on The Nasdaq Capital Market under the symbol "IDRA."

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 10-K filing, as of December 2021, all Company-sponsored development has been discontinued and study-related activities are in 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 Quarterly Report on Form 10-Q for updated policies and estimates, if applicable, that could impact our results of operations, financial position, and cash flows. Not all of 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 Quarterly Report on Form 10-Q.

Financial Condition, Liquidity and Capital Resources

Financial Condition

As of March 31, 2022, we had an accumulated deficit of $739.6 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 March 31, 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 and 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 has 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 three months ended March 31, 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 three months ended March 31, 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 its common stock having an aggregate offering price of up to $50.0 million through JMP as its agent.

During the three months ended March 31, 2022, we did not sell any shares under the ATM Agreement.

During the three months ended March 31, 2021, we sold 2,394,956 shares of common stock pursuant to the ATM Agreement, resulting in net proceeds, after deduction of commissions and other offering expenses, of $12.1 million. As of March 31, 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 $28.0 million at March 31, 2022. We believe based on our current operating plan, our existing cash and cash equivalents on hand as of March 31, 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 three months ended March 31, 2022 and 2021:

(in thousands)	Three Months Ended March 31, 2022	2021
Net cash provided by (used in):		
Operating activities	$ (4,568)	$ (9,591)
Investing activities	—	4,500
Financing activities	16	16,403
Increase (decrease) in cash and cash equivalents	**$ (4,552)**	**$ 11,312**

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 three months ended March 31, 2022, as compared to 2021, was primarily due to timing of cash outflows related to our current IMO-2125 development program, including payments to contract research organizations.

Investing Activities. Cash provided by investing activities primarily consisted of the following amount relating to our investments in available-for-sale securities:

- for the three months ended March 31, 2021, $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 three months ended March 31, 2022, $0.1 million in proceeds received from employee stock purchases; and
- for the three months ended March 31, 2021, $16.3 million in aggregate net proceeds from financing arrangements consisting of $12.1 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 $0.2 million in payments related to our short-term insurance premium financing arrangement.

Material Cash Requirements

During the three months ended March 31, 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 Months Ended March 31, 2022 and 2021

Overview

During the three months ended March 31, 2022, our loss from operations totaled $4.2 million, a 58% decrease compared to a loss from operations of $10.0 million for the three months ended March 31, 2021. Research and development expenses comprise the majority of our total operating expenses, as shown in the table below.

	Three months ended March 31,		%
($ in thousands)	**2022**	**2021**	**Change**
Operating expenses:			
Research and development	$ 1,784	$ 6,871	(74%)
General and administrative	2,398	3,156	(24%)
Total operating expenses	$ 4,182	$ 10,027	(58%)
Loss from operations	$ (4,182)	$ (10,027)	(58%)

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 months ended March 31, 2022, our overall research and development expenses declined by 74% as compared to the same period in 2021, primarily due to decreases in external development costs associated with tilsotolimod (IMO-2125). This decrease is primarily related to: (i) costs incurred with contract research organizations during the three months ended March 31, 2022 to support our ILLUMINATE-301 trial, which reported top-line results in March of 2021 and was discontinued by the Company in the second quarter of 2021; and (ii) lower costs incurred with drug manufacturing activities; (iii) costs associated with ILLUMINATE-206 and the Scriptr Agreement.

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) and other drug development expenses.

	Three months ended March 31,		%
($ in thousands)	**2022**	**2021**	**Change**
Tilsotolimod (IMO-2125) external development expense	$ 724	$ 3,896	(81%)
Other drug development expense	1,060	2,975	(64%)
Total research and development expenses	$ 1,784	$ 6,871	(74%)

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 March 31, 2022, we incurred approximately $91.8 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 months ended March 31, 2022 and 2021, we incurred $0.3 million and $0.7 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 March 31, 2022, we have incurred $2.3 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 March 31, 2022 and 2021, general and administrative expenses totaled $2.4 million and $3.2 million, respectively. The decrease in general and administrative expenses during the three months ended March 31, 2022, as compared to the 2021 period, was primarily due to lower personnel related costs due to reduced headcount in 2022 as compared to 2021. In the second quarter of 2021, the Company reduced its headcount by approximately 50%. These reductions in cost were partially offset by increased consulting expenses.

Interest Income

We recognized nominal interest income for the three months ended March 31, 2022. Interest income was nominal for the three months ended March 31, 2021. The period-over-period decrease was primarily due to lower interest rates.

Warrant Revaluation Gain

During the three months ended March 31, 2022, we did not record any non-cash warrant revaluation gain or loss. In comparison, during the three months ended March 31, 2021, we recorded a non-cash warrant revaluation gain of approximately $7.0 million. The non-cash gain for the three months ended March 31, 2021 related to the derecognition of the warrant liability (as stated at the beginning of the period) 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

During the three months ended March 31, 2022, we did not record any non-cash future tranche right revaluation gain or loss. In comparison, during the three months ended March 31, 2021, we recorded a non-cash future tranche right revaluation gain of approximately $118.8 million. The non-cash gain for the three months ended March 31, 2021 related to the derecognition of the future tranche right liability (as stated at the beginning of the period) 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 (loss) Applicable to Common Stockholders

As a result of the factors discussed above, our net loss for the three months ended March 31, 2022 was $4.2 million, as compared to net income of $115.7 million for the three months ended March 31, 2021.

Basic net loss applicable to common stockholders for the three months ended March 31, 2022 was $4.2 million, as compared to basic net income applicable to common stockholders of $109.6 million for the three months ended March 31, 2021. Excluding the non-cash warrant revaluation gain of $7.0 million and future tranche right revaluation gain of $118.8 million, for the three months ended March 31, 2021, basic net loss applicable to common stockholders was $16.2 million.

For the three months ended March 31, 2022 and 2021, diluted net loss applicable to common stockholders was $4.2 million and $10.0 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 March 31, 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 March 31, 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 March 31, 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
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)

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: May 5, 2022

/s/ Vincent J. Milano

Vincent J. Milano
President and Chief Executive Officer
(Principal Executive Officer)

Date: May 5, 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: May 5, 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: May 5, 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 March 31, 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: May 5, 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 March 31, 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: May 5, 2022

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