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

FORM 10-Q

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE QUARTERLY PERIOD ENDED JUNE 30, 2023

or

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

Commission File Number 000-50549

Oncternal Therapeutics, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**62-1715807**
(State or other jurisdiction of incorporation or organization)	**(IRS Employer Identification No.)**

12230 El Camino Real, Suite 230
San Diego, CA 92130
(858) 434-1113
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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

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

Securities registered pursuant to Section 12(g) of the Act: None

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, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

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

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

As of August 3, 2023, the registrant had 58,968,902 shares of common stock outstanding.

Oncternal Therapeutics, Inc.

FORM 10-Q

TABLE OF CONTENTS

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements

Oncternal Therapeutics, Inc.
Condensed Consolidated Balance Sheets
(in thousands, except par value)

	June 30, 2023 (Unaudited)	December 31, 2022
Assets		
Current assets:		
Cash and cash equivalents	$ 15,832	$ 37,142
Short-term investments	29,671	26,582
Prepaid and other	4,572	3,566
Total current assets	50,075	67,290
Right-of-use asset	366	87
Other assets	332	1,274
Total assets	$ 50,773	$ 68,651
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 2,224	$ 2,917
Accrued liabilities	2,462	4,678
Lease liability	145	87
Total current liabilities	4,831	7,682
Deferred compensation	537	—
Lease liability, net of current	221	—
Total liabilities	5,589	7,682
Commitments and contingencies (Note 4)		
Preferred stock, $0.001 par value, authorized shares – 5,000 at June 30, 2023 and December 31, 2022; issued and outstanding shares – none	—	—
Common stock, $0.001 par value; authorized shares – 120,000; issued and outstanding shares – 58,728 and 57,464 at June 30, 2023 and December 31, 2022, respectively	59	57
Additional paid-in capital	223,884	219,203
Accumulated comprehensive income	(6)	9
Accumulated deficit	(178,753)	(158,300)
Total stockholders' equity	45,184	60,969
Total liabilities and stockholders' equity	$ 50,773	$ 68,651

See accompanying notes.

Oncternal Therapeutics, Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited; in thousands, except per share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Grant revenue	$ 106	$ 191	$ 309	$ 937
Operating expenses:				
Research and development	6,577	8,761	15,608	15,740
General and administrative	3,074	3,225	6,389	6,904
Total operating expenses	9,651	11,986	21,997	22,644
Loss from operations	(9,545)	(11,795)	(21,688)	(21,707)
Interest income	579	54	1,235	62
Net loss	$ (8,966)	$ (11,741)	$ (20,453)	$ (21,645)
Comprehensive Income:				
Unrealized loss on available-for-sale securities, net	(17)	—	(15)	—
Comprehensive loss	$ (8,983)	$ (11,741)	$ (20,468)	$ (21,645)
Net loss per share, basic and diluted	$ (0.15)	$ (0.23)	$ (0.35)	$ (0.44)
Weighted-average shares outstanding, basic and diluted	58,722	50,064	58,623	49,748

See accompanying notes.

Oncternal Therapeutics, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited; in thousands)

	Six Months Ended June 30,	
	2023	**2022**
Cash flows from operating activities		
Net loss	$ (20,453)	$ (21,645)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	3,565	3,655
Amortization of premiums (accretion of discounts) on short-term investments	(908)	—
Non-cash lease expense	74	109
Changes in operating assets and liabilities:		
Prepaid and other	(64)	276
Accounts payable	(693)	560
Accrued liabilities	(2,216)	1,207
Deferred grant revenue	—	211
Deferred compensation	537	—
Change in lease liability	(74)	(109)
Net cash used in operating activities	(20,232)	(15,736)
Cash flows from investing activities		
Purchases of available-for-sale securities	(37,196)	—
Maturities of available-for-sale securities	35,000	—
Net cash used in investing activities	(2,196)	—
Cash flows from financing activities		
Proceeds from issuance of common stock in public offerings, net	1,224	3,871
Repurchases of common stock for tax withholding obligations	(106)	—
Net cash provided by financing activities	1,118	3,871
Net decrease in cash and cash equivalents	(21,310)	(11,865)
Cash and cash equivalents at beginning of period	37,142	90,765
Cash and cash equivalents at end of period	$ 15,832	$ 78,900
Supplemental disclosure of non-cash financing activities:		
Right-of-use assets obtained in exchange for operating lease liabilities	$ 353	$ 191

See accompanying notes.

Oncternal Therapeutics, Inc.
Condensed Consolidated Statements of Stockholders' Equity
(Unaudited; in thousands)

	Three Months Ended June 30, 2023					
	Common Stock		Additional Paid-In	Accumulated Comprehensive Income	Accumulated	Total Stockholders'
	Shares	Amount	Capital		Deficit	Equity
Balance at March 31, 2023	58,711	$ 59	$ 222,205	$ 11	$ (169,787)	$ 52,488
Issuance of common stock upon vesting of restricted stock units	22	—	—	—	—	—
Shares repurchased for settlement of minimum statutory tax withholdings	(5)	—	(1)	—	—	(1)
Unrealized loss on available-for-sale securities	—	—	—	(17)	—	(17)
Stock-based compensation	—	—	1,680	—	—	1,680
Net loss	—	—	—	—	(8,966)	(8,966)
Balance at June 30, 2023	58,728	$ 59	$ 223,884	$ (6)	$ (178,753)	$ 45,184

	Three Months Ended June 30, 2022					
	Common Stock		Additional Paid-In	Accumulated Comprehensive Income	Accumulated	Total Stockholders'
	Shares	Amount	Capital		Deficit	Equity
Balance at March 31, 2022	49,429	$ 49	$ 204,179	$ —	$ (124,034)	$ 80,194
Issuance of common stock, net of issuance cost of $146	2,721	3	3,868		—	3,871
Stock-based compensation	—	—	1,677	—	—	1,677
Net loss	—	—	—	—	(11,741)	(11,741)
Balance at June 30, 2022	52,150	$ 52	$ 209,724	$ —	$ (135,775)	$ 74,001

See accompanying notes.

Oncternal Therapeutics, Inc.
Condensed Consolidated Statements of Stockholders' Equity
(Unaudited; in thousands)

	Six Months Ended June 30, 2023					
	Common Stock		Additional Paid-In	Accumulated Comprehensive Income	Accumulated	Total Stockholders'
	Shares	Amount	Capital		Deficit	Equity
Balance at December 31, 2022	57,464	$ 57	$ 219,203	$ 9	$ (158,300)	$ 60,969
Issuance of common stock upon vesting of restricted stock units	240	—	—	—	—	—
Shares repurchased for settlement of minimum statutory tax withholdings	(91)	—	(106)	—	—	(106)
Issuance of common stock, net of issuance cost of $38	1,115	2	1,222	—	—	1,224
Stock-based compensation	—	—	3,565	—	—	3,565
Unrealized loss on available-for-sale securities				(15)		(15)
Net loss	—	—	—	—	(20,453)	(20,453)
Balance at June 30, 2023	58,728	$ 59	$ 223,884	$ (6)	$ (178,753)	$ 45,184

	Six Months Ended June 30, 2022					
	Common Stock		Additional Paid-In	Accumulated Comprehensive Income	Accumulated	Total Stockholders'
	Shares	Amount	Capital		Deficit	Equity
Balance at December 31, 2021	49,429	$ 49	$ 202,201	$ —	$ (114,130)	$ 88,120
Issuance of common stock, net of issuance cost of $146	2,721	3	3,868	—	—	3,871
Stock-based compensation	—	—	3,655	—	—	3,655
Net loss	—	—	—	—	(21,645)	(21,645)
Balance at June 30, 2022	52,150	$ 52	$ 209,724	$ —	$ (135,775)	$ 74,001

See accompanying notes.

1. Description of Business, Basis of Presentation and Summary of Significant Accounting Policies

Description of Business

Oncternal Therapeutics, Inc. (the "Company" or "Oncternal"), formerly known as GTx, Inc., was incorporated in Tennessee in September 1997 and reincorporated in Delaware in 2003 and is based in San Diego, California. The Company is a clinical-stage biopharmaceutical company focused on the development of novel oncology therapies, for the treatment of cancers with critical unmet medical need. The Company's product candidate pipeline includes ONCT-808, an autologous ROR1 (Receptor-tyrosine kinase-like Orphan Receptor 1) targeting CAR T (chimeric antigen receptor T cells), ONCT-534, a dual-action androgen receptor inhibitor ("DAARI") for the treatment of castrate-resistant prostate and other androgen receptor-driven cancers, and zilovertamab, a humanized monoclonal antibody that binds to ROR1.

Principles of Consolidation

The condensed consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries, Oncternal Oncology, Inc. and Oncternal, Inc. All intercompany accounts and transactions have been eliminated in the preparation of the condensed consolidated financial statements.

Liquidity

From inception, the Company has devoted substantially all of its efforts to drug discovery and development and conducting preclinical studies and clinical trials. The Company has a limited operating history and the sales and income potential of the Company's business and market are unproven. Successful transition to attaining profitable operations is dependent upon achieving a level of revenues adequate to support the Company's cost structure.

As a result of the strategic reprioritization announced in April 2023, the Company expects research and development expenses will decrease in future quarters after the closure of the Phase 3 ZILO-301 Study for the treatment of patients with relapsed or refractory MCL and the Phase 1/2 CIRM-0001 Study for the treatment of mantle cell lymphoma ("MCL"), chronic lymphocytic leukemia ("CLL") and marginal zone lymphoma ("MZL"), and the implementation of other cost reductions. The Company will continue to invest in: (i) advancing existing product candidates into later stages of clinical development, and (ii) further investigation and the development of other preclinical programs. Based on the reprioritization and other cost reductions, the Company believes it has sufficient cash to fund its projected operating requirements for at least twelve months from the date of issuance of the condensed consolidated financial statements. As of June 30, 2023, the Company had $45.5 million in cash, cash equivalents and short-term investments and no debt. However, the Company has experienced net losses and negative cash flows from operating activities since its inception and has an accumulated deficit of $178.8 million as of June 30, 2023. The Company expects to continue to incur net losses for the foreseeable future and believes it will need to raise substantial additional capital to accomplish its business plan over the next several years. The Company plans to continue to fund its losses from operations and capital funding needs through a combination of public or private equity or debt offerings or other sources, including potential collaborations, strategic alliances and other similar licensing arrangements. If the Company is unable to secure adequate additional funding, the Company may be forced to make reductions in spending, including potentially delaying, scaling back or eliminating certain of its pipeline development programs, extend payment terms with suppliers, or liquidate assets where possible. Any of these actions could materially affect the Company's business, results of operations and future prospects.

The Company's ability to obtain additional financing (including through collaboration and/or licensing arrangements) will depend on a number of factors, including, among others, its ability to generate positive data from its clinical trials and preclinical studies, the condition of the capital markets and other risks, many of which are dependent on factors outside of its control. There can be no assurance as to the availability or terms upon which such financing and capital might be available in the future.

Notice of Delisting

On April 4, 2023, the Company received a letter from the Nasdaq staff indicating that, for the last thirty consecutive business days, the bid price for Oncternal's common stock had closed below the minimum $1.00 per share requirement for continued listing on The Nasdaq Capital Market. In accordance with Nasdaq listing rules, the Company has been provided an initial period of 180 calendar days, or until October 2, 2023, to regain compliance. The letter states that the Nasdaq staff will provide written notification that Oncternal has achieved compliance with its rules if at any time before October 2, 2023, the bid price of Oncternal's common stock

closes at $1.00 per share or more for a minimum of ten consecutive business days. The Nasdaq letter had no immediate effect on the listing or trading of Oncternal's common stock and the common stock has continued to trade on The Nasdaq Capital Market.

The Company has not regained compliance with Nasdaq listing rules as of the date these financial statements were issued. The Company intends to monitor the bid price of its common stock and consider available options if its common stock does not trade at a level likely to result in the Company regaining compliance with Nasdaq's minimum bid price rule by October 2, 2023, including potentially implementing a reverse stock split of our outstanding common stock to attempt to regain compliance. During the Company's annual meeting of shareholders held on June 28, 2023, the Company's board of directors received authority to effect a reverse stock split of outstanding common stock within one year of the date of the annual meeting and within a range of not less than one-for-five and not more than one-for-thirty common shares.

If the Company does not regain compliance with Nasdaq listing rules by October 2, 2023, the Company may be eligible for an additional 180 calendar day compliance period. To qualify, the Company would be required to meet the continued listing requirement for market value of publicly held shares and all other initial listing standards for The Nasdaq Capital Market, with the exception of the bid price requirement, and would need to provide written notice of its intention to cure the deficiency during the second compliance period, by effecting a reverse stock split, if necessary. However, if it appears to the Nasdaq staff that the Company will not be able to cure the deficiency, or if the Company is otherwise not eligible, the Nasdaq staff would notify the Company that its securities would be subject to delisting. In the event of such a notification, the Company may appeal the Nasdaq staff's determination to delist its securities, but there can be no assurance the Nasdaq staff would grant the Company's request for continued listing.

Basis of Presentation

The accompanying interim condensed financial statements are unaudited. The unaudited condensed consolidated financial statements have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission ("SEC") and with generally accepted accounting principles in the United States of America ("GAAP"). These unaudited condensed consolidated financial statements have been prepared on the same basis as the audited, consolidated financial statements and include all adjustments, consisting of only normal recurring accruals, which in the opinion of management are necessary to present fairly the Company's financial position as of the interim date and results of operations for the interim periods presented. The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. Actual results could differ materially from those estimates. These unaudited condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements for the year ended December 31, 2022, filed with the SEC on its Annual Report on Form 10-K on March 9, 2023. The results presented in these unaudited condensed consolidated financial statements are not necessarily indicative of the results expected for the full fiscal year or any other interim period or any future year or period.

Use of Estimates

The Company's condensed consolidated financial statements are prepared in accordance with GAAP. The preparation of the condensed consolidated financial statements and accompanying notes requires it to make estimates and assumptions that impact the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities. Significant estimates consist of those used to determine grant revenue and accruals for research and development costs. Although these estimates are based on the Company's knowledge of current events and actions it may undertake in the future, actual results may ultimately materially differ from these estimates and assumptions.

Cash and Cash Equivalents

The Company considers all highly liquid investments with maturities of three months or less when purchased to be cash equivalents. Cash and cash equivalents include cash in readily available checking accounts and money market accounts.

Short-term Investments

The Company carries short-term investments classified as available-for-sale marketable securities at fair value as determined by prices for identical or similar securities at the balance sheet date. Short-term investments consist of Level 1 and Level 2 financial instruments in the fair value hierarchy (see Note 6). Realized gains or losses on available-for-sale securities are determined using the specific identification method and net realized gains and losses are included in interest income. The Company periodically reviews available-for-sale securities for other-than-temporary declines in fair value below the cost basis, and whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The Company records unrealized gains and losses on available-for-sale marketable securities as a component of other accumulated comprehensive income within the statements of operations and comprehensive loss and as a separate component of stockholders' equity on the balance sheets. In accordance with policy, the Company does not invest in or hold equity securities in its investment portfolio.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist primarily of cash, cash equivalents and short-term investments. The Company maintains deposits in federally insured financial institutions in excess of federally insured limits. The Company has not experienced any losses in such accounts and believes it is not exposed to significant risk on its cash balances due to the financial position of the depository institution in which those deposits are held. Additionally, the Company established guidelines regarding approved investments and maturities of investments, which are designed to maintain safety and liquidity.

Research and Development Expenses and Accruals

Research and development expenses consist of costs incurred for the Company's own and for sponsored and collaborative research and development activities. Research and development costs are expensed as incurred and include manufacturing process development costs, manufacturing costs, costs associated with preclinical studies and clinical trials, regulatory and medical affairs activities, quality assurance activities, salaries and benefits, including stock-based compensation, fees paid to third-party consultants, license fees and overhead.

The Company has entered into various research and development contracts with research institutions, clinical research organizations, clinical manufacturing organizations and other companies. Payments for these activities are based on the terms of the individual agreements, which may differ from the pattern of costs incurred, and payments made in advance of performance are reflected in the accompanying condensed consolidated balance sheets as prepaid expenses and other assets or accrued liabilities. The Company records accruals for estimated costs incurred for ongoing research and development activities and all clinical trial expenses are included in research and development expenses. When evaluating the adequacy of the accrued liabilities, the Company analyzes progress of the services, including the phase or completion of events, invoices received and contracted costs. Significant judgments and estimates may be made in determining the prepaid or accrued balances at the end of any reporting period. Actual results could differ from the Company's estimates.

Fair Value Measurements

The accounting guidance defines fair value, establishes a consistency framework for measuring fair value and expands disclosure for each major asset and liability category measured at fair value on either a recurring basis or nonrecurring basis. Fair value is defined as an exit price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants on the measurement date. Accounting guidance establishes a three-tier fair value hierarchy that requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. These tiers are based on the source of the inputs and are as follows:

Level 1: Observable inputs such as quoted prices in active markets for identical assets or liabilities.

Level 2: Inputs other than quoted prices in active markets that are observable either directly or indirectly.

Level 3: Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

The Company's financial instruments include cash, cash equivalents, short-term investments, prepaid expenses and other assets, accounts payable, accrued expenses, and accrued compensation. The carrying amounts of the Company's current financial assets and liabilities are considered to be representative of their respective fair values because of the short-term nature of those instruments. The Company has short-term investments that are measured at fair value on a recurring basis. No transfers between levels have occurred during the periods presented (see Note 6).

Net Loss Per Share

Basic net loss per share is computed by dividing the net loss by the weighted-average number of common shares outstanding for the period, without consideration for potentially dilutive securities and adjusted for the weighted-average number of common shares outstanding that are subject to repurchase. Diluted net loss per share is computed by dividing the net loss by the weighted-average number of shares of common stock and dilutive common stock equivalents outstanding for the period determined using the treasury-stock and if-converted methods. For all periods presented, there is no difference in the number of shares used to calculate basic and diluted shares outstanding as inclusion of the potentially dilutive securities would be antidilutive.

Potentially dilutive securities not included in the calculation of diluted net loss per share, because to do so would be anti-dilutive, are as follows (in common stock equivalent shares; in thousands):

	June 30,	
	2023	2022
Warrants to purchase common stock	3,411	4,235
Common stock options	10,642	8,204
Restricted stock unit awards	743	450
Total	14,796	12,889

Recently Adopted Accounting Pronouncements

In June 2016, the FASB issued ASU 2016-13, Financial Instruments – Credit Losses: Measurement of Credit Losses on Financial Statements (Topic 326), which intends to improve financial reporting by requiring earlier recognition of credit losses on certain financial assets, such as available-for-sale debt securities. Topic 326 amends guidance on reporting credit losses for assets held at amortized cost basis and available-for-sale debt securities. For assets held at amortized cost basis, Topic 326 eliminates the probable initial recognition threshold in current GAAP and, instead, requires an entity to reflect its current estimate of all expected credit losses. The allowance for credit losses is a valuation account that is deducted from the amortized cost basis of the financial assets to present the net amount expected to be collected. For available-for-sale debt securities, credit losses should be measured in a manner similar to current GAAP, however Topic 326 will require that credit losses be presented as an allowance rather than as a write-down. This ASU update affects entities holding financial assets and net investment in leases that are not accounted for at fair value through net loss. This update is effective for the Company and was adopted on January 1, 2023, which did not have a material impact on its condensed consolidated financial statements.

2. Balance Sheet Details

Prepaid and other consist of the following (in thousands):

	June 30, 2023	December 31, 2022
Research and development	$ 28	$ —
Clinical trials	3,084	2,616
Insurance	1,023	669
Other prepaid expenses	175	103
Other receivable	262	178
	$ 4,572	$ 3,566

Accrued liabilities consist of the following (in thousands):

	June 30, 2023	December 31, 2022
Research and development	$ 572	$ 972
Clinical trials	531	868
Legal fees	76	138
Compensation	1,230	2,691
Other	53	9
	$ 2,462	$ 4,678

3. Marketable Securities

The Company invests in available-for-sale marketable securities consisting of money market funds, commercial paper, certificates of deposit, U.S. Treasury securities and U.S. government sponsored enterprise securities. Available-for-sale marketable securities are classified as part of either cash, cash equivalents or short-term investments in the balance sheets. Available-for-sale marketable securities with original maturities of more than three months from the date of purchase as of June 30, 2023 and December 31, 2022, have been classified as short-term investments and are measured at a fair value on a recurring basis, and were as follows (in thousands):

		As of June 30, 2023			
	Maturity (in years)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Market Value
Cash and cash equivalents:					
Money market funds	1 or less	$ 15,330	$ —	$ —	$ 15,330
Total cash and cash equivalents		$ 15,330	$ —	$ —	$ 15,330
Short-term investments:					
U.S. Treasury debt securities	1 or less	$ 29,677	$ 2	$ (8)	$ 29,671
Total short-term investments		$ 29,677	$ 2	$ (8)	$ 29,671
Total marketable securities		**$ 45,007**	**$ 2**	**$ (8)**	**$ 45,001**

		As of December 31, 2022			
	Maturity (in years)	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Market Value
Cash and cash equivalents:					
Money market funds	1 or less	$ 25,108	$ —	$ —	$ 25,108
U.S. Treasury debt securities	1 or less	1,996	—	—	1,996
U.S. Government Agency	1 or less	1,991	—	—	1,991
Total cash and cash equivalents		$ 29,095	$ —	$ —	$ 29,095
Short-term investments:					
U.S. Treasury debt securities	1 or less	$ 21,681	$ 7	$ —	$ 21,688
Commercial Paper	1 or less	2,936	—	—	2,936
U.S. Government Agency	1 or less	1,956	2	—	1,958
Total short-term investments		$ 26,573	$ 9	$ —	$ 26,582
Total marketable securities		**$ 55,668**	**$ 9**	**$ —**	**$ 55,677**

Effective January 1, 2023, at each reporting date the Company assesses available-for-sale debt securities in an unrealized loss position to determine whether the unrealized loss or any potential credit losses should be recognized in net loss. For available-for-sale debt securities in an unrealized loss position, the Company first assesses whether it intends to sell, or it is more likely than not that it will be required to sell, the security before recovery of its amortized cost basis. If either of the criteria regarding intent or requirement to sell is met, the security's amortized cost basis is written down to fair value through net loss. For available-for-sale securities that do not meet the aforementioned criteria, the Company evaluates whether the decline in fair value has resulted from credit losses or other factors. In making this assessment, the Company considers the severity of the impairment, any changes in interest rates, underlying credit ratings, and forecasted recovery, among other factors. The credit-related portion of unrealized losses, and any subsequent improvements, are recorded as an allowance in interest income.

There have been no impairment or credit losses recognized during the periods presented in the accompanying condensed consolidated statements of operations and comprehensive loss.

The Company obtains the fair value of its available-for-sale marketable securities from a professional pricing service. The fair values of available-for-sale marketable securities are validated by comparing the fair values reported by the professional pricing service to quoted market prices or to fair values obtained from the custodian bank. The service provider values the securities using a hierarchical security pricing model that relies primarily on valuations provided by an industry-recognized valuation service or mathematical calculations. Such valuations may be based on trade prices in active markets for identical assets or liabilities (Level 1 inputs) or valuation models using inputs that are observable either directly or indirectly (Level 2 inputs), such as quoted prices for similar assets or liabilities, yield curves, credit spreads, current market and contractual prices for the underlying instruments or debt, as well as other relevant economic measures.

4. Commitments, Contingencies and Related Party Transactions

Lease and Sublease

Rent expense was $39,000 and $47,000 for the three months ended June 30, 2023 and 2022, respectively. Rent expense was $78,000 and $93,000 for the six months ended June 30, 2023 and 2022, respectively.

Since May 2019, the Company leased or subleased office space in San Diego, California. On April 18, 2022, the Company entered into a sublease agreement for office space which expires on July 31, 2023. Base rent under such sublease was approximately $157,000 annually and the monthly rent expense is being recognized on a straight-line basis over the term of the lease. On May 9, 2023, the Company entered into a lease agreement for the same office space which expires on September 30, 2025. Base rent under such lease is approximately $182,000 annually and the monthly rent expense will be recognized on a straight-line basis over the effective term of the lease.

The lease and sublease are included in the accompanying condensed consolidated balance sheet at the present value of the lease payments. As the lease and sublease agreements do not have an implicit interest rate, the present value reflects a 10.0% discount rate which is the estimated rate of interest that the Company would have to pay in order to borrow an amount equal to the lease payments on a collateralized basis over a similar term and in a similar economic environment. As of June 30, 2023, the Company has a net operating lease right-of-use asset and an aggregate lease liability of $366,000, which has a weighted average remaining lease term of 2.3 years.

Maturities of the lease liability due under the lease agreements as of June 30, 2023, are as follows (in thousands):

Maturity of lease liabilities	Operating Leases
2023	$ 61
2024	196
2025	150
Total lease payments	407
Less imputed interest	(41)
Total lease liability	366
Less current portion of lease liability	145
Lease liability, long-term	$ 221

Related Party Transactions

Effective in September 2019, the Company and Shanghai Pharmaceutical (USA) Inc. (“SPH USA”) entered into a Materials and Supply and Services Agreement (“SPH USA Services Agreement”), pursuant to which the Company and SPH USA will execute various statements of work for the transfer to SPH USA of key reagents and other materials, and for the supply of certain services by the Company to SPH USA, as contemplated under and in furtherance of the License and Development Agreement between the Company and SPH USA effective as of November 2018. As of June 30, 2023 and December 31, 2022, the Company had no amounts receivable from SPH USA related to statements of work. SPH USA is the Company’s largest stockholder and an affiliate of one of the Company’s directors. The Company has an agreement with SPH USA for certain rights to the greater China area (see Note 5).

5. License, Collaboration and Grant Award/Subaward Agreements

Georgetown University (“Georgetown”)

In March 2014, the Company entered into an Exclusive License Agreement (the “Georgetown License Agreement”) with Georgetown, pursuant to which the Company: (i) licensed the exclusive worldwide right to patents and technologies for the development and commercialization of certain product candidates targeting EWS-FLI1 as an anti-tumor therapy for therapeutic,

diagnostics, or research tool purposes, (ii) is solely responsible for all development and commercialization activities and costs, and (iii) is responsible for all costs related to the filing, prosecution and maintenance of the licensed patent rights.

Under the terms of the Georgetown License Agreement, commencing in 2015, the Company: (i) shall pay and has paid an annual license maintenance fee of $10,000 until the first commercial sale occurs, (ii) is required to make up to $0.2 million in aggregate milestone payments upon the achievement of certain regulatory milestones, and (iii) will be required to pay low single digit royalties based on annual net product sales. The Company accounted for the licensed technology as an asset acquisition because it did not meet the definition of a business. All milestone payments under the Georgetown License Agreement will be recognized as research and development expense upon completion of the required events, as the triggering events are not considered to be probable until they are achieved. As of June 30, 2023, the Company had not triggered or made any milestone payments under the Georgetown License Agreement.

The Georgetown License Agreement may be terminated by either party upon material breach or may be terminated by the Company as to one or more countries with 90 days written notice of termination. The term of the Georgetown License Agreement will continue until the expiration of the last valid claim within the patent rights covering the product. Georgetown may terminate the agreement in the event: (i) the Company fails to pay any amount and fails to cure such failure within 30 days after receipt of notice, (ii) the Company defaults in its obligation to obtain and maintain insurance and fails to remedy such breach within 60 days after receipt of notice, or (iii) the Company declares insolvency or bankruptcy. The Company may terminate the Georgetown License Agreement at any time upon at least 60 days' written notice.

The University of Texas MD Anderson Cancer Center ("MD Anderson")

In December 2014, the Company entered into a collaboration agreement (as amended, the "Collaboration") with MD Anderson, which provides for the conduct of preclinical and clinical research for ONCT-216 in exchange for certain program payments. If MD Anderson successfully completes all the requirements of the Collaboration in full and the program is successfully commercialized, the Company will be required to pay aggregate milestone payments of $1.0 million based on net product sales. In July 2020 and September 2021, the Company entered into two research agreements with MD Anderson for certain services up to an aggregate cost of $0.8 million. The Company recorded research and development expense of none and $0.1 million for each of the three months ended June 30, 2023 and 2022, and none and $0.2 million for the six months ended June 30, 2023 and 2022, respectively.

Agreements with the Regents of the University of California (the "Regents")

In March 2016, and as amended and restated in August 2018, and as amended thereafter, the Company and the Regents entered into a license agreement (as amended and restated, the "Regents License Agreement") for the development, manufacturing and distribution rights related to the development and commercialization of ROR1 related naked antibodies, antibody fragments or synthetic antibodies, and genetically engineered cellular therapy. The Regents License Agreement provides for the following: (i) in May 2016, an upfront license fee of $0.5 million was paid and 107,108 shares of common stock were issued, (ii) $25,000 in annual license maintenance fees commencing in 2017, (iii) reimbursement of certain annual patent costs, (iv) certain development and regulatory milestones aggregating from $20.1 million to $24.5 million, on a per product basis, (v) certain worldwide sales milestones based on achievement of tiered revenue levels aggregating $75.0 million, (vi) low single-digit royalties, including potential future minimum annual royalties, on net sales of each target, and (vii) minimum diligence to advance licensed assets consisting of at least $1.0 million in development spend annually through 2021. Under the Regents License Agreement, the Company recorded: (a) $30,000 and none in license maintenance fees as research and development expense for the three months ended June 30, 2023 and 2022, and $35,000 and none for each of the six months ended June 30, 2023 and 2022, respectively, and (b) none and $0.1 million amount in patent costs as general and administrative expense for the three months ended June 30, 2023 and 2022, respectively, a nominal amount and $0.1 million for the six months ended June 30, 2023 and 2022, respectively. As of June 30, 2023, the Company believes it has met its obligations under the Regents License Agreement.

The Regents License Agreement will expire upon the later of the expiration date of the longest-lived patent rights or the 15th anniversary of the first commercial sale of a licensed product. The Regents may terminate the Regents License Agreement if: (i) a material breach by the Company is not cured within a reasonable time, (ii) the Company files a claim asserting the Regents licensed patent rights are invalid or unenforceable, and (iii) the Company files for bankruptcy. The Company may terminate the agreement at any time upon at least 60 days' written notice.

Effective January 1, 2022, the Company entered into a Research Agreement (the "Research Agreement") with the Regents for further research on the ROR1 therapeutic development program. Under this four-year agreement that expires on December 31, 2025, the Regents will have an aggregate budget of $1.6 million, with quarterly payments of $125,000 in 2022, $131,250 in 2023, and $137,813 in 2024.The Company recorded $0.1 million in research and development expenses under these agreements for each of the

three months ended June 30, 2023 and 2022, and $0.3 million for each of the six months ended June 30, 2023 and 2022, respectively. Such costs are includable as part of the Company's annual diligence obligations under the Regents License Agreement.

The University of Tennessee Research Foundation ("UTRF")

In March 2015, and as amended and restated in March 2022 and August 2022, the Company and UTRF entered into a license agreement (the "DAARI License Agreement") pursuant to which the Company was granted exclusive worldwide rights in all existing selective androgen receptor degrader technologies owned or controlled by UTRF, including all improvements thereto, which is now known as the dual action androgen receptor inhibitor ("DAARI") program. Under the DAARI License Agreement, the Company is obligated to employ active, diligent efforts to conduct preclinical research and development activities for the DAARI program to advance one or more lead compounds into clinical development. The Company is also obligated to pay UTRF annual license maintenance fees, low single-digit royalties on net sales of products and additional royalties on sublicense revenues, depending on the state of development of a clinical product candidate at the time it is sublicensed. The Company recorded research and development expense under this agreement of a nominal amount for the three months ended June 30, 2023 and 2022, and $0.1 million and $0.2 million for each of the six months ended June 30, 2023 and 2022, respectively. As of June 30, 2023, the Company believes it has met its obligations under the DAARI License Agreement.

The California Institute for Regenerative Medicine ("CIRM") Award

In August 2017, and as amended and restated in December 2020, CIRM awarded an $18.3 million grant to researchers at UC San Diego to advance the Company's Phase 1/2 clinical trial evaluating zilovertamab in combination with ibrutinib for the treatment of patients with B-cell lymphoid malignancies, including MCL and CLL. This study is known as CIRM-0001, or Cirmtuzumab and Ibrutinib for Relapsed Lymphoma or Leukemia (the "CIRLL study"). The Company: (i) conducted this study in collaboration with UC San Diego, (ii) received $14.5 million in development milestones under research subaward agreements during the award project period from October 1, 2017 through March 31, 2022, (iii) was committed to and met certain co-funding requirements, and (iv) was required to provide UC San Diego progress and financial update reports throughout the award period. The subaward does not bear a royalty payment commitment, nor is the subaward otherwise refundable. As of June 30, 2023, the Company believes it has met its obligations under the CIRM award and UC San Diego subawards.

The National Institutes of Health ("NIH") Grant Awards

In August 2021, the NIH awarded the Company two research and development grants for up to $2.2 million to support pre-clinical activities for the Company's ONCT-216 and DAARI programs, including $0.7 million payable to subawardees. In March 2023, the NIH awarded the Company a research and development grant for up to $1.8 million to support pre-clinical activities for the Company's DAARI program, including $0.3 million payable to subawardees. Under the terms of the grants, the Company is entitled to receive reimbursement in arrears of incurring allowable expenditures. The earned NIH funds are non-refundable and the Company is required to provide periodic progress performance reports. During the six months ended June 30, 2023, the Company received $0.4 million in award payments, recorded $0.3 million in grant revenue and a nominal amount in unbilled grant receivable as of June 30, 2023. During the six months ended June 30, 2022, the Company received $0.9 million in award payments from the NIH and recorded $0.6 million in grant revenue and deferred revenue of $0.2 million.

Clinical Trial and Supply Agreements

In April 2018, and as amended in August 2019, the Company entered into a Clinical Trial and Supply Agreement with Pharmacyclics, LLC, an AbbVie Company, to supply ibrutinib for the Phase 1/2 study CIRM-0001. Effective in June 2022, the Company entered into a Clinical Trial and Supply Agreement with Pharmacyclics, LLC, to supply ibrutinib for the Company's Phase 3 study ZILO-301. Such agreement does not bear any upfront costs, inventory purchase costs, milestone or royalty payment commitments or other financial obligations. In April 2023, the Company reprioritized the development of zilovertamab and is closing the Phase 3 ZILO-301 and the Phase 1/2 CIRM-0001 studies.

License and Development Agreement ("LDA") with SPH USA, a Related Party

In November 2018, and as amended in August 2020, the Company entered into the LDA with SPH USA for: (i) the territory of the People's Republic of China, Hong Kong, Macau, and Taiwan ("Greater China"), and (ii) rights to manufacture, develop, market, distribute and sell all of the Company's product candidates under the Georgetown License Agreement and the Regents License Agreement (exclusive to Greater China only). Under the LDA, SPH USA is solely responsible for: (a) all preclinical and clinical development activities required in order to obtain regulatory approval in Greater China for such product candidates, (b) any third-party license milestone or royalty payments owed under the Georgetown License Agreement and the Regents License Agreement, and (c) paying the Company a low single digit royalty on net sales in the territory.

The LDA will expire upon the expiration of the last royalty term for the last licensed product. The LDA may be terminated by: (i) SPH USA on a country by country or product by product basis with 180 days written notice, (ii) either party upon material breach that is not cured within 90 days, and (iii) either party in the event the other party declares insolvency or bankruptcy. There has been no significant activity under this agreement for each of the three months ended June 30, 2023 and 2022 (see Note 4).

Contingent Value Rights Agreement ("CVR Agreement")

Pursuant to the GTx merger agreement entered into in June 2019 (the "Merger"), the Company, a representative of holders of the Contingent Value Rights ("CVRs"), and Computershare, Inc. as rights agent, entered into the CVR Agreement. Pursuant to the CVR Agreement, the Company's stockholders of record as of immediately prior to the Merger received one CVR for each share of the Company's common stock held immediately prior to the Merger.

As amended on November 1, 2021, the CVR Agreement entitles holders of CVRs to receive: (i) 50% of certain net proceeds received by the Company during the 15-year period after the closing of the Merger (the "CVR Term") from a transaction, if any, resulting in the grant, sale, or transfer of DAARI technology to a third party that occurs during the 10-year period after the closing of the Merger (or in the 11th year if based on a term sheet approved during the initial 10-year period); and (ii) 5% of net sales of products by the Company or its affiliates during the CVR Term incorporating the DAARI technology. As of June 30, 2023, no transactions or net sales relating to the DAARI technology had occurred.

6. Fair Value

As of June 30, 2023 and December 31, 2022, the following fair value hierarchy table presents the Company's financial assets measured at fair value on a recurring basis (in thousands):

	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
As of June 30, 2023				
Assets:				
Cash and cash equivalents:				
Money market funds	$ 15,330	$ 15,330	$ —	$ —
Total cash and cash equivalents	$ 15,330	$ 15,330	$ —	$ —
Short-term investments:				
U.S. Treasury debt securities	$ 29,671	$ 29,671	$ —	$ —
Total short-term investments	$ 29,671	$ 29,671	$ —	$ —
Total assets measured at fair value	$ 45,001	$ 45,001	$ -	$ —

	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
As of December 31, 2022				
Assets:				
Cash and cash equivalents:				
Money market funds	$ 25,108	$ 25,108	$ —	$ —
U.S. Treasury debt securities	1,996	1,996	—	—
U.S. Government Agency	1,991	—	1,991	—
Total cash and cash equivalents	$ 29,095	$ 27,104	$ 1,991	$ —
Short-term investments:				
U.S. Treasury debt securities	$ 21,688	$ 21,688	$ —	$ —
Commercial Paper	2,936	—	2,936	—
U.S. Government Agency	1,958	—	1,958	—
Total short-term investments	$ 26,582	$ 21,688	$ 4,894	$ —
Total assets measured at fair value	$ 55,677	$ 48,792	$ 6,885	$ —

The Company's policy is to recognize transfers between levels of the fair value hierarchy on the date of the event or change in circumstances that caused the transfer. There were no transfers into or out of Level 3 during the six months ended June 30, 2023 and 2022.

7. Stockholders' Equity

ATM Program

In December 2021, the Company entered into an Open Market Sale Agreement℠ (the "Sales Agreement") with Jefferies LLC, pursuant to which the Company is able to offer and sell, from time to time in its sole discretion, shares of its common stock having an aggregate offering price of up to $50.0 million. The Company has no obligation to sell any shares under the Sales Agreement and may at any time suspend solicitation and offers under the Sales Agreement. During the three and six months ended June 30, 2023, the Company sold none and 1,115,480 shares of common stock for net proceeds of none and $1.2 million, respectively.

Common Stock Warrants

A summary of warrant activity and changes in warrants outstanding is presented below:

	Number of Shares Underlying Warrants	Weighted-Average Exercise Price Per Share	Weighted-Average Remaining Contractual Term (in years)
Balance at December 31, 2022	3,410,642	$ 3.70	2.94
Issued	—	$ —	—
Forfeited	—	$ —	—
Exercised	—	$ —	—
Balance at June 30, 2023	3,410,642	$ 3.70	2.44

All warrants met the criteria for classification in stockholders' equity.

Equity Incentive Plans

Stock Option Awards

Contemporaneous with the Merger closing: (i) Oncternal's 2015 Equity Incentive Plan, as amended ("2015 Plan") was assumed by the Company, and (ii) the Company adopted the 2019 Incentive Award Plan ("2019 Plan") under which the sum of: (a) 1,954,150 shares of common stock, and (b) an annual increase on the first day of each calendar year beginning January 1, 2020, and ending on and including January 1, 2029, equal to the lesser of (A) 5% of the aggregate number of shares of common stock outstanding on the final day of the immediately preceding calendar year and (B) such smaller number of shares of common stock as is determined by the board of directors, are reserved for issuance.

In July 2015, Oncternal adopted the 2015 Plan which provided for the issuance of shares of common stock for incentive stock options, non-statutory stock options, restricted stock awards, restricted stock unit awards and other stock awards to its employees, members of its board of directors and consultants. In general, the options issued under the 2015 Plan expire ten years from the date of grant and vest over a four-year period. Certain grants vest based on the achievement of development or regulatory milestones. The 2015 Plan was terminated as to new grant awards in June 2019.

The 2019 Plan provides for the issuance of shares of common stock for incentive stock options, non-statutory stock options, restricted stock awards, restricted stock unit awards and other stock awards to its employees, members of its board of directors and consultants. In general, the stock options issued under the 2019 Plan expire ten years from the date of grant and vest over a four-year period. Certain stock option grants vest based on the achievement of development or regulatory milestones. The 2019 Plan allows for the early exercise of all stock option grants if authorized by the board of directors at the time of grant.

In February 2021, the Company's board of directors adopted the 2021 Employment Inducement Incentive Award Plan (the "Inducement Plan"). The Inducement Plan is a non-shareholder approved stock plan adopted pursuant to the "inducement exception" provided under Nasdaq listing rules. The Inducement Plan is used exclusively for the issuance of non-statutory stock options to certain new hires who satisfied the requirements to be granted inducement grants under Nasdaq rules as an inducement material to the individual's entry into employment with the Company. The terms of the Inducement Plan are substantially similar to the terms of the 2019 Plan. As amended in May 2021 and December 2021, the Company has reserved 2,800,000 shares of common stock under the Inducement Plan.

As of June 30, 2023, 2,094,450 shares remain available for issuance under the 2019 Plan and Inducement Plan. A summary of the Company's stock option activity under the 2015 Plan, 2019 Plan and Inducement Plan is as follows:

	Number of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding at December 31, 2022	8,515,696	$ 4.16	8.1	$ 101,611
Granted	3,030,300	$ 0.90		
Forfeited	(903,609)	$ 3.52		
Outstanding at June 30, 2023	10,642,387	$ 3.29	7.7	$ 405
Options vested and expected to vest as of June 30, 2023	10,642,387	$ 3.29	7.7	$ 405
Options vested and exercisable as of June 30, 2023	4,471,089	$ 4.44	7.1	$ —

For the six months ended June 30, 2023 and 2022, the weighted average grant date fair value per share of option grants was $0.72 and $1.43, respectively. The intrinsic value is calculated as the difference between the fair value of the Company's common stock at the time of the option exercise and the exercise price of that stock option. For the six months ended June 30, 2023 and 2022, no stock options were exercised.

Restricted Stock Unit Awards

Restricted stock unit awards ("RSUs") are rights to receive shares of the Company's common stock upon satisfaction of specific vesting conditions. Issued RSUs generally vest over an eighteen month to two-year period. RSU activity under Equity Incentive Plans is summarized as follows:

	Number of Restricted Stock Units	Weighted-Average Remaining Contractual Term (in years)	Weighted-Average Grant Date Fair Value
Nonvested at December 31, 2022	1,009,083	0.6	$ 1.64
Granted	—		
Vested	(239,133)		$ 2.34
Forfeited/ Repurchased	(26,935)		$ 1.61
Nonvested at June 30, 2023	743,015	0.3	$ 1.42
Units expected to vest as of June 30, 2023	743,015	0.3	$ 1.42

The fair value of RSUs vested during the six months ended June 30, 2023 was $0.2 million.

Stock-Based Compensation Expense

The weighted-average assumptions used in the Black-Scholes option pricing model to determine the fair value of stock option grants, were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Risk-free interest rate	3.8%	3.2%	4.1%	2.0%
Expected volatility	104.0%	97.0%	100.3%	99.8%
Expected term (in years)	5.6	5.9	6.0	6.1
Expected dividend yield	—%	—%	—%	—%

Expected volatility. The expected volatility assumption is based on a blend of volatilities of the Company's share price and a peer group of similar companies whose share prices are publicly available. The volatility of the Company's shares price was measured using the closing share price beginning June 10, 2019, the date of the closing of the Merger, through the current period. The peer group was developed based on companies in the life sciences industry with comparable characteristics to the Company including enterprise value, risk profiles, position within the industry, and with historical share price information sufficient to meet the expected life of the stock-based awards. The Company will continue to apply this process until a sufficient amount of historical information regarding the volatility of its own stock price becomes available.

Expected term. The expected term represents the period of time that options are expected to be outstanding. Due to limited historical exercise behavior, it determined the expected life assumption using the simplified method for employees, which is an average of the contractual term of the option and its vesting period. The expected term for nonemployee options is generally the remaining contractual term.

Risk-free interest rate. The risk-free interest rate is based on the implied yield on the U.S. Treasury securities with a maturity date similar to the expected term of the associated stock option award.

Expected dividend yield. The Company bases the expected dividend yield assumption on the fact that it has never paid cash dividends and has no present intention to pay cash dividends and, therefore, used an expected dividend yield of zero.

RSU awards represent rights to receive shares of common stock contingent upon satisfaction of specific vesting conditions. The stock-based compensation expense for these awards was determined using the closing price on the grant date applied to the total number of shares that were anticipated to fully vest.

Stock-based compensation expense recognized for all equity awards has been reported in the condensed consolidated statements of operations as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Research and development	$ 889	$ 820	$ 2,006	$ 1,883
General and administrative	791	857	1,559	1,772
	$ 1,680	$ 1,677	$ 3,565	$ 3,655

As of June 30, 2023, the unrecognized compensation cost related to non-vested stock options was $10.4 million, which is expected to be recognized over a weighted-average period of 2.8 years.

As of June 30, 2023, the unrecognized compensation cost related to non-vested restricted stock units was $0.5 million, which is expected to be recognized over a weighted-average period of 0.5 year.

Common Stock Reserved for Future Issuance

Common stock reserved for future issuance is as follows (in thousands):

	June 30, 2023
Common stock warrants	3,411
Common stock options issued and outstanding	10,642
Restricted stock unit awards unvested and outstanding	743
Common stock available for issuance under the Inducement Plan and 2019 Plan	2,094
	16,890

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: (i) our unaudited condensed consolidated financial statements and related notes thereto included elsewhere in this Quarterly Report on Form 10-Q for the period ended June 30, 2023, and (ii) our audited financial statements and notes thereto for the year ended December 31, 2022 and the related Management's Discussion and Analysis of Financial Condition and Results of Operations, both of which are contained in our Annual Report on Form 10-K for the year ended December 31, 2022. Except as otherwise indicated herein or as the context otherwise requires, references in this Quarterly Report to "Oncternal" "the Company," "we," "us" and "our" refer to Oncternal Therapeutics, Inc., a Delaware corporation.

Cautionary Note Regarding Forward-Looking Statements

This Quarterly Report contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements other than statements of historical facts contained in this Quarterly Report, including statements regarding our future results of operations and financial position, business strategies and plans, prospective products, product approvals, research and development costs, timing and likelihood of success, plans and objectives of management for future operations and future results of anticipated products, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "could," "expects," "intends," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "continue," or the negative of these terms or other comparable terminology. These forward-looking statements are only predictions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements speak only as of the date of this Quarterly Report and are subject to a number of risks, uncertainties and assumptions, including those described in our Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on March 9, 2023, our Quarterly Report on Form 10-Q for the three months ended March 31, 2023 filed with the SEC on May 4, 2023, and in Part II, Item 1A, "Risk Factors" of this Quarterly Report. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

Overview

We are a clinical-stage biopharmaceutical company focused on the development of novel oncology therapies for patients with cancers with critical unmet medical need. Our drug development efforts are focused on promising, yet untapped, biological pathways implicated in cancer generation or progression, primarily in hematological malignancies and prostate cancer. Our pipeline includes:

- ONCT-808, our lead cell therapy product candidate, is an autologous Receptor tyrosine kinase-like Orphan Receptor 1 (ROR1) targeting chimeric antigen receptor T cell (CAR T) therapy using the binding domain from zilovertamab. ONCT-808 has demonstrated activity in preclinical models against multiple hematological malignancies and solid tumors and has been shown to be specific for cancer cells expressing ROR1. We believe our manufacturing process may reduce the time patients must wait for their individual CAR T product to be produced, compared with approved CAR T products. We recently initiated Study ONCT-808-101, a Phase 1/2 dose escalation trial for the treatment of patients with relapsed or refractory aggressive B-cell lymphoma, including patients who have failed previous CD19 CAR T treatment. The study entitled "A Clinical Study of ONCT-808 in Subjects With Relapsed or Refractory B-Cell Malignancies" (NCT05588440) will evaluate the evaluate the safety and tolerability, pharmacokinetics, and anti-tumor activity of ONCT-808 in two distinct phases designated as Phase 1 and Phase 2. After the safety and tolerability of ONCT-808 have been assessed in Phase 1 to select the recommended Phase 2 dose, Phase 2 will commence to further validate the dose and evaluate the safety and efficacy of ONCT-808. The study aims to enroll approximately 57 patients. We expect to present initial clinical data from this study in late 2023 and additional clinical data readouts in 2024. ONCT-808 is being developed utilizing manufacturing services from Lentigen Technology, Inc. (lentivirus manufacturing), Miltenyi Biotec B.V. & Co. KG. (cell processing) and the Dana-Farber Cancer Institute (cGMP cell preparation and manufacturing activities).
- ONCT-534, is a dual-action androgen receptor inhibitor (DAARI) with preclinical activity in prostate cancer models against both unmutated androgen receptor (AR), and against multiple forms of AR mutation. It is a potential treatment for patients with metastatic castrate-resistant prostate cancer (mCRPC). We believe ONCT-534 has the potential to address significant unmet medical needs related to resistance to androgen receptor inhibitors, including those with AR amplification, mutations in the AR ligand binding domain (LBD), or splice variants with loss of the AR LBD. We submitted our IND application and received a Study May Proceed letter from the U.S. Food and Drug Administration (FDA), for a Phase 1/2 dose escalation study of ONCT-534, a novel DAARI, in patients with mCRPC who have relapsed

or are refractory to approved androgen receptor signaling inhibitors (ARSIs). We expect to initiate such Phase 1/2 clinical trial in the third quarter of 2023, and anticipate initial clinical data in the first half of 2024.

- Zilovertamab is an investigational, humanized, potentially first-in-class, monoclonal antibody designed to: (i) bind to a specific functionally important epitope of ROR1, a growth factor receptor that is widely expressed on many tumor types and that activates pathways leading to increased tumor proliferation, invasiveness, and drug resistance in preclinical models, and (ii) inhibit ROR1 function. Zilovertamab was evaluated in a Phase 1/2 Study CIRM-0001 in combination with ibrutinib for the treatment of patients with mantle cell lymphoma (MCL), chronic lymphocytic leukemia (CLL) and marginal zone lymphoma (MZL). Zilovertamab is also being evaluated in two investigator-initiated studies, a Phase 2 clinical trial of zilovertamab in combination with venetoclax, a Bcl-2 inhibitor, in patients with relapsed/refractory R/R CLL, and a Phase 1b study of zilovertamab in combination with docetaxel in patients with mCRPC. In April 2023, we reprioritized the development of zilovertamab and are in the process of closing the Phase 3 ZILO-301 Study for the treatment of patients with relapsed or refractory MCL and the Phase 1/2 CIRM-0001 Study for the treatment of MCL, CLL and MZL.

Our pipeline previously included ONCT-216, an investigational small molecule designed to inhibit the ETS, or E26 Transformation Specific, family of oncoproteins, which had shown in preclinical studies to alter gene transcription and RNA processing that led to decreased cell proliferation and invasion. In April 2022, we deprioritized the development of ONCT-216 and stopped the enrollment of patients in a Phase 1/2 clinical trial in patients with relapsed or refractory Ewing sarcoma.

Since the inception of Oncternal Therapeutics, Inc. in 2013, we have devoted most of our resources to organizing and staffing, business planning, raising capital, acquiring product candidates and securing related intellectual property rights and advancing our pipeline of development programs, including ONCT-808, ONCT-534, zilovertamab and ONCT-216. Under research subaward agreements between us and UC San Diego, we received $14.5 million in development milestones during the award project period from October 1, 2017 to March 31, 2022. Through June 30, 2023, we have funded our operations primarily through: (i) gross proceeds of $136.3 million from the issuance of common stock, (ii) gross proceeds of $49.0 million from the issuance of convertible preferred stock, (iii) receipt of $14.5 million in subaward grant payments from UC San Diego, and (iv) cash proceeds of $18.3 million received in connection with the closing of the merger with GTx, Inc. in June 2019 (GTx Merger). As of June 30, 2023, we had cash, cash equivalents and short-term investments of $45.5 million and no debt.

We have incurred net losses in each year since inception. Our ability to generate product revenue sufficient to achieve profitability will depend heavily on the successful development and eventual commercialization of one or more of our current or future product candidates. Our net loss was $9.0 million for the three months ended June 30, 2023 and we had an accumulated deficit of $178.8 million as of June 30, 2023. Substantially all of our net losses have resulted from costs incurred in connection with: (i) advancing our research and development programs, (ii) general and administrative costs associated with our operations, including the costs associated with operating as a public company, and (iii) in-process research and development costs associated with the GTx Merger. We expect to continue to incur significant and increasing operating losses for at least the next several years. We expect that our expenses and capital funding requirements will increase substantially in connection with our ongoing activities, particularly if and as we:

- advance ONCT-808 through clinical development, initially in hematological malignancies;
- advance ONCT-534 through clinical development, initially in castrate resistant prostate cancer;
- explore zilovertamab with other BTK inhibitors, and in additional ROR1-positive hematologic malignancies and solid tumors preclinically;
- continue to develop additional product candidates; acquire or in-license other product candidates and technologies;
- maintain, expand and protect our intellectual property portfolio;
- establish a commercial manufacturing source and secure supply chain capacity sufficient to provide commercial quantities of any product candidates for which we may obtain regulatory approval;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain regulatory approval; and
- add operational, financial and management information systems and personnel, including personnel to support our planned product development and future commercialization efforts.

We will not generate product sales revenue unless and until we successfully complete clinical development and obtain regulatory approval for our product candidates. If we obtain regulatory approval for any of our product candidates and do not enter into a commercialization partnership, we expect to incur significant expenses related to developing our internal commercialization capability

to support product sales, marketing and distribution. In addition, we expect to incur additional costs associated with operating as a public company.

As a result, we believe we will need substantial additional funding to support our continuing operations and pursue our business strategy. Until such time as we can generate significant product sales revenue, if ever, we expect to finance our operations through a combination of public or private equity or debt offerings or other sources, including potential collaborations, strategic alliances and other similar arrangements. We may not be able to raise additional funds or enter into such other agreements or arrangements when needed on favorable terms, or at all. If we fail to raise capital or enter into such agreements as and when needed, we may have to significantly delay, reduce or eliminate the development and commercialization of one or more of our product candidates or delay our pursuit of potential in licenses or acquisitions.

Because of the numerous risks and uncertainties associated with product development, we are unable to predict the timing or amount of increased expenses or when or if we will be able to achieve or maintain profitability. Even if we are able to generate product sales, we may not become profitable. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be unable to continue our operations at planned levels and be forced to reduce or terminate our operations.

We expect that our existing cash, cash equivalents and short-term investments will be sufficient to fund our operating expenses and capital expenditure requirements into 2025. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect. Beyond that point, we will need to raise additional capital to finance our operations, which cannot be assured.

Components of Results of Operations

Grant Revenue

Our grant revenue has been derived from a California Institute for Regenerative Medicine (CIRM), grant subaward with UC San Diego and research and development grants from the National Institutes of Health (NIH).

In August 2017, CIRM awarded an $18.3 million grant to researchers at UC San Diego to advance the CIRLL study throughout the award project period from October 1, 2017 through March 31, 2022. We conducted this study in collaboration with UC San Diego and received $14.5 million during the project period related to development milestone payments under research subaward agreements. In addition, we were committed to certain co-funding requirements and we were required to provide UC San Diego progress and financial update reports throughout the award project period. As of June 30, 2023, we believe we have met our obligations under the CIRM award and UC San Diego subawards.

In August 2021, the NIH awarded us two research and development grants for up to $2.2 million to support pre-clinical and other research activities for our ONCT-216 and DAARI programs, including $0.7 million payable to subawardees. In March 2023, the NIH awarded us a research and development grant for up to $1.8 million to support pre-clinical and other research activities for our DAARI program, including $0.3 million payable to subawardees. During the six months ended June 30, 2023, we received $0.4 million in award payments, recorded $0.3 million in grant revenue and a nominal amount in unbilled grant receivable as of June 30, 2023. During the six months ended June 30, 2022, we received $0.9 million in award payments from the NIH and recorded $0.6 million in grant revenue and deferred revenue of $0.2 million.

Operating Expenses

Research and Development

Research and development expenses consist primarily of costs incurred for the development of zilovertamab, ONCT-808, ONCT-534 and ONCT-216, which include:

- expenses under agreements with consultants, third-party contract organizations, and investigative clinical trial sites that conduct research and development activities on our behalf;
- costs related to the development and manufacture of preclinical study and clinical trial material;
- salaries and employee-related costs, including stock-based compensation;
- costs incurred under our collaboration and third-party licensing agreements; and
- laboratory and vendor expenses related to the execution of preclinical and clinical trials.

We accrue all research and development costs in the period for which they are incurred. Costs for certain development activities are recognized based on an evaluation of the progress to completion of specific tasks using information and data provided to us by our

vendors, collaborators and third-party service providers. Advance payments for goods or services to be received in future periods for use in research and development activities are deferred and then expensed as the related goods are delivered and as services are performed. Any unearned advances would be refunded when known.

As a result of the strategic reprioritization announced in April 2023, we expect our research and development expenses will decrease in future quarters after we close the Phase 3 ZILO-301 Study for the treatment of patients with relapsed or refractory MCL and the Phase 1/2 CIRM-0001 Study for the treatment of MCL, CLL and MZL, and implement other cost reductions. We will continue to invest in: (i) advancing our product candidates into later stages of clinical development, and (ii) further investigation and the development of our other preclinical programs. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials.

Our direct research and development expenses are tracked by product candidate and consist primarily of external costs, such as fees paid under third-party license agreements and to outside consultants, contract research organizations (CROs), contract manufacturing organizations and research laboratories in connection with our preclinical development, process development, manufacturing and clinical development activities. We do not allocate employee costs and costs associated with our discovery efforts, laboratory supplies and facilities, including other indirect costs, to specific product candidates because these costs are deployed across multiple programs and, as such, are not separately classified. We use internal resources primarily to conduct our research as well as for managing our preclinical development, process development, manufacturing and clinical development activities. These employees work across multiple programs and, therefore, we do not track our costs by product candidate unless we can include them as subaward costs.

We cannot determine with certainty the timing of initiation, the duration or the completion costs of current or future preclinical studies and clinical trials of our product candidates due to the inherently unpredictable nature of preclinical and clinical development, including any potential expanded dosing beyond the original protocols based in part on ongoing clinical success. Clinical and preclinical development timelines, the probability of success and development costs can differ materially from expectations. We anticipate that we will make determinations as to which product candidates to pursue and how much funding to direct to each product candidate on an ongoing basis in response to the results of ongoing and future preclinical studies and clinical trials, regulatory developments and our ongoing assessments of each product candidate’s commercial potential. We will need to raise substantial additional capital in the future. In addition, we cannot forecast which product candidates may be subject to future collaborations, when such arrangements will be secured, if at all, and to what degree such arrangements would affect our development plans and capital requirements.

General and Administrative

General and administrative expenses consist primarily of personnel-related costs, insurance costs, facility costs and professional fees for legal, patent, consulting, investor and public relations, accounting and audit services. Personnel-related costs consist of salaries, benefits and stock-based compensation. We expect our general and administrative expenses will decrease modestly in future quarters as we implement other cost reductions and cost containment measures.

Interest Income

Interest income consists of interest earned on our cash, cash equivalents and short-term investments, which primarily consist of money market funds and U.S. Treasury securities. In a significantly rising interest rates environment, our interest income on our invested balances is expected to increase as rates increase. Historically our interest income has not been significant due to low interest yields earned on invested balances.

Results of Operations

Comparison of Three and Six Months Ended June 30, 2023 and 2022

The following table summarizes our condensed consolidated results of operations for the periods indicated:

	Three Months Ended June 30,			Six Months Ended June 30,		
(in thousands)	2023	2022	Change	2023	2022	Change
Grant revenue	$ 106	$ 191	$ (85)	$ 309	$ 937	$ (628)
Operating expenses:						
Research and development	6,577	8,761	(2,184)	15,608	15,740	(132)
General and administrative	3,074	3,225	(151)	6,389	6,904	(515)
Total operating expenses	9,651	11,986	(2,335)	21,997	22,644	(647)
Loss from operations	(9,545)	(11,795)	2,250	(21,688)	(21,707)	19
Interest income	579	54	525	1,235	62	1,173
Net loss	$ (8,966)	$ (11,741)	$ 2,775	$ (20,453)	$ (21,645)	$ 1,192

Comparison of Three Months Ended June 30, 2023 and 2022

Grant Revenue

Grant revenue was $0.1 million and $0.2 million for the three months ended June 30, 2023 and 2022, respectively. The decrease of $0.1 million was primarily due to the timing of NIH grant activities.

Research and Development Expenses

The following table summarizes our research and development expenses for the periods indicated:

	Three Months Ended June 30,		
(in thousands)	2023	2022	Increase/(Decrease)
Zilovertamab	$ 745	$ 3,311	$ (2,566)
ONCT-534	1,309	652	657
ONCT-808	1,154	1,336	(182)
ONCT-216	86	535	(449)
Unallocated research and development expenses	3,283	2,927	356
Total research and development expenses	$ 6,577	$ 8,761	$ (2,184)

Research and development expenses for the three months ended June 30, 2023 and 2022 were $6.6 million and $8.8 million, respectively, a decrease of $2.2 million. The decrease was primarily due to a $2.5 million decrease in direct product candidate expenses and a $0.3 million increase in unallocated expenses.

Direct expenses for zilovertamab decreased $2.6 million for the three months ended June 30, 2023, compared to the three months ended June 30, 2022, primarily due to lower clinical trial activity and manufacturing costs associated with the reprioritization of this program in April 2023.

Direct expenses for ONCT-534 increased $0.7 million for the three months ended June 30, 2023, compared to the three months ended June 30, 2022, primarily due to an increase in manufacturing activities.

Direct expenses for ONCT-808 for the three months ended June 30, 2023 decreased $0.2 million for the three months ended June 30, 2023, compared to the three months ended June 30, 2022, primarily due to a significant decrease in manufacturing and pre-clinical research activities substantially offset by an increase in clinical trial activities.

Direct expenses for ONCT-216 decreased $0.4 million for the three months ended June 30, 2023, compared to the three months ended June 30, 2022, due primarily to lower clinical trial activity and manufacturing costs since the program was deprioritized in 2022.

Unallocated expenses increased $0.3 million for the three months ended June 30, 2023, compared to the three months ended June 30, 2022, primarily due to higher personnel costs, including non-cash stock-based compensation costs.

General and Administrative Expenses

General and administrative expenses for the three months ended June 30, 2023 and 2022 were $3.1 million and $3.2 million, respectively, a decrease of $0.1 million primarily due to lower legal expenses which were partially offset by higher personnel expenses.

Interest Income

Interest income for the three months ended June 30, 2023 and 2022 were $0.6 million and $0.1 million, respectively, an increase of $0.5 million primarily due to interest income from short-term investments (including the amortization of discounts and premiums). We began investing in short-term investments in the fourth quarter of 2022.

Comparison of Six Months Ended June 30, 2023 and 2022

Grant Revenue

Grant revenue was $0.3 million and $0.9 million for the six months ended June 30, 2023 and 2022, respectively. The decrease of $0.6 million was primarily due to the timing of NIH grant activities and the completion of the CIRM subaward in the first quarter of 2022.

Research and Development Expenses

The following table summarizes our research and development expenses for the periods indicated:

	Six Months Ended June 30,		Increase/
(in thousands)	2023	2022	(Decrease)
Zilovertamab	$ 4,235	$ 5,211	$ (976)
ONCT-534	2,127	912	1,215
ONCT-808	2,041	2,200	(159)
ONCT-216	310	1,557	(1,247)
Unallocated research and development expenses	6,895	5,860	1,035
Total research and development expenses	$ 15,608	$ 15,740	$ (132)

Research and development expenses for the six months ended June 30, 2023 and 2022 were $15.6 million and $15.7 million, respectively, a decrease of $0.1 million. The decrease was primarily due to a $1.1 million decrease in direct product candidate expenses which was substantially offset by a $1.0 million increase in unallocated expenses.

Direct expenses for zilovertamab decreased $1.0 million for the six months ended June 30, 2023, compared to the six months ended June 30, 2022, primarily due to lower clinical trial activity and manufacturing costs associated with the reprioritization of this program in April 2023.

Direct expenses for ONCT-534 increased $1.2 million for the six months ended June 30, 2023, compared to the six months ended June 20, 2022, primarily due to an increase in manufacturing and pre-clinical development activities.

Direct expenses for ONCT-808 decreased $0.2 million for the six months ended June 30, 2023, compared to the six months ended June 20, 2022, primarily due to a significant decrease in manufacturing activities which was substantially offset by an increase in clinical trial activities.

Direct expenses for ONCT-216 decreased $1.2 million for the six months ended June 30, 2023, compared to the six months ended June 30, 2022, due primarily to lower clinical trial activity and manufacturing costs associated with the program being deprioritized in 2022.

Unallocated expenses increased $1.0 million for the six months ended June 30, 2023, compared to the six months ended June 30, 2022, primarily due to higher personnel costs, including non-cash stock-based compensation costs.

General and Administrative Expenses

General and administrative expenses for the six months ended June 30, 2023 and 2022 were $6.4 million and $6.9 million, respectively, a decrease of $0.5 million was primarily due to lower legal and corporate insurance expenses.

Interest Income

Interest income for the six months ended June 30, 2023 and 2022 were $1.2 million and $0.1 million, respectively, an increase of $1.1 million primarily due to interest income from short-term investments (including the amortization of discounts and premiums). We began investing in short-term investments in the fourth quarter of 2022.

Liquidity and Capital Resources

As a result of the strategic reprioritization announced in April 2023, we: (i) believe our existing cash, cash equivalents and short-term investments will be sufficient to fund our operations into 2025, and (ii) expect our research and development expenses will decrease in future quarters after we close two clinical studies and implement other cost reductions. As of June 30, 2023, we had $45.5 million in cash, cash equivalents and short-term investments and no debt. We have incurred losses and negative cash flows from operations since inception. As of June 30, 2023, we had an accumulated deficit of $178.8 million and anticipate that we will continue to incur net losses for the foreseeable future. We expect our operating expenses to continue to be substantial for the foreseeable future and, as a result, we will need additional capital to fund our operations, which we may obtain through a combination of public or private equity or debt offerings or other sources, including potential collaborations, strategic alliances and other similar arrangements.

In December 2021, we entered into an Open Market Sales Agreement[SM] (Sales Agreement), with Jefferies LLC, providing for the sale of up $50.0 million of our common stock from time to time in "at-the-market" offerings under an existing shelf registration statement. During the three and six months ended June 30, 2023, we sold none and 1,115,480 shares of common stock for net proceeds of none and $1.2 million, respectively.

Cash Flows

The following table summarizes our sources and uses of cash for each of the periods presented:

	Six Months Ended June 30,	
(in thousands)	**2023**	**2022**
Net cash provided by (used in):		
Operating activities	$ (20,232)	$ (15,736)
Investing activities	(2,196)	—
Financing activities	1,118	3,871
Net decrease in cash and cash equivalents	$ (21,310)	$ (11,865)

Operating Activities

Net cash used in operating activities was $20.2 million and $15.7 million for the six months ended June 30, 2023 and 2022, respectively. The increase in cash used in operations was primarily due to the timing of payments related to clinical and manufacturing activities. The net cash used in operating activities during the six months ended June 30, 2023 was primarily due to our net loss of $20.5 million adjusted for $2.7 million of non-cash charges, primarily for stock-based compensation, and a $2.5 million change in operating assets and liabilities. Net cash used in operating activities during the six months ended June 30, 2022 was primarily due to our net loss of $21.6 million adjusted for $3.7 million of non-cash charges, primarily for stock-based compensation, and a $2.1 million change in operating assets and liabilities.

Investing Activities

During the six months ended June 30, 2023, net cash used in investing activities was $2.2 million consisting primarily of net purchases of available-for-sale securities. We did not engage in cash investing activities for the six months ended June 30, 2022.

Financing Activities

Net cash provided by financing activities was $1.1 million and $3.9 million for the six months ended June 30, 2023 and 2022, respectively. The net cash provided during 2023 and 2022 resulted primarily from the proceeds received from the sale of common stock under the "at-the-market" program.

Operating Capital Requirements

We anticipate that we will continue to incur losses for the foreseeable future, and we expect the losses to increase as we continue the research and development of, and seek regulatory approvals for, our product candidates and conduct additional research and development activities. Our product candidates have not yet achieved regulatory approval and we may not be successful in achieving commercialization of our product candidates.

We believe that our existing cash, cash equivalents and short-term investments will be sufficient to fund our operations into 2025. However, our forecast of the period of time through which our financial resources will be adequate to support our operations is a forward-looking statement that involves risks and uncertainties, and actual results could vary materially. For example, the FDA or other regulatory authorities may require us to generate additional data or conduct additional preclinical studies or clinical trials, or may impose other requirements beyond those that we currently anticipate. Additionally, it is possible for a product candidate to show promising results in preclinical studies or in clinical trials, but fail to establish the sufficient safety and efficacy data necessary to obtain regulatory approvals. As a result of these and other risks and uncertainties and the probability of success, the duration and the cost of our research and development activities required to advance a product candidate cannot be accurately estimated and are subject to considerable variation. We may encounter difficulties, complications, delays and other unknown factors and unforeseen expenses in the course of our research and development activities, any of which may significantly increase our capital requirements and could adversely affect our liquidity.

We will require additional capital for the research and development of our product candidates, and we may be forced to seek additional funds sooner than expected to pursue our research and development activities. We expect to finance our capital requirements in the foreseeable future through a combination of the sale of public or private equity or debt securities, government funding, or other sources, including potentially collaborations, licenses and other similar arrangements. There can be no assurance that we will be able to obtain any sources of financing on acceptable terms, or at all. To the extent that we can raise additional funds by issuing equity securities, our stockholders may experience significant dilution. Any debt financing, if available, may involve restrictive covenants that may impact our ability to conduct our business. Any of these events could significantly harm our business, operations, financial condition and prospects.

Our forecast of the period of time through which our existing cash, cash equivalents and short-term investments will be adequate to support our operations is a forward-looking statement and involves significant risks and uncertainties. We have based this forecast on assumptions that may prove to be wrong, and actual results could vary materially from our expectations, which may adversely affect our capital resources and liquidity. We could utilize our available capital resources sooner than we currently expect. The amount and timing of future funding requirements, both near- and long-term, will depend on many factors, including, but not limited to:

- the type, number, scope, progress, expansions, results, costs and timing of our preclinical studies and clinical trials of our ROR1, CAR T, and DAARI product candidates or additional indications of our other potential product candidates that we may choose to pursue in the future;
- the costs and timing of manufacturing for our product candidates, including commercial manufacturing if any product candidate is approved;
- the costs and capacity for third-party process development and manufacturing, including for CAR T and lentivirus;
- the costs, timing and outcome of seeking and obtaining worldwide regulatory approvals for our product candidates;
- the costs of obtaining, maintaining and enforcing our patents and other intellectual property rights;
- the costs associated with hiring additional personnel, CROs and consultants as our preclinical and clinical activities increase;
- our ability to achieve sufficient market acceptance, adequate coverage and reimbursement from third-party payors and adequate market share and revenue for any approved products;
- the cost and timing of establishing sales, marketing, manufacturing and distribution capabilities for, and the pricing and reimbursement of, any products for which we may receive regulatory approval;
- the terms and timing of establishing and maintaining potential collaborations, strategic alliances and other similar arrangements, including milestone or other payments under our existing in-license agreements and any in-license agreements that we may enter into in the future; and

- costs associated with any products or technologies that we may in-license or acquire.

If we cannot continue or expand our research and development operations, or otherwise capitalize on our business opportunities, because we lack sufficient capital, our business, operations, financial condition and prospects could be materially adversely affected.

In April 2021, our Form S-3 registration statement became effective. Future sales of our common stock, if any, will depend on a variety of factors including, but not limited to, the expected timing for achieving key milestones, including announcing the first-in-human dosing of ONCT-808, our lead cell therapy product candidate targeting ROR1, and advancing ONCT-534, our DAARI preclinical product candidate, prevailing market conditions, the trading price of our common stock and our capital needs. There can be no assurance that we will be successful in consummating future sales of our securities based on prevailing market conditions or in the quantities or at the prices that we deem appropriate.

In December 2021, we entered into the Sales Agreement, pursuant to which we are able to offer and sell, from time to time, shares of our common stock having an aggregate offering price of up to $50.0 million. We have no obligation to sell any shares under the Sales Agreement and may at any time suspend solicitation and offers under the Sales Agreement.

Contractual Obligations and Commitments

We are party to a number of license agreements, pursuant to which we have payment obligations that are contingent upon future events such as our achievement of specified development, regulatory and commercial milestones and are required to make royalty payments in connection with the sale of products developed under those agreements. As of June 30, 2023, we were unable to estimate the timing or likelihood of achieving the milestones or making future product sales. See Note 5 to our condensed consolidated financial statements included elsewhere in this Quarterly Report for a description of these agreements.

We enter into contracts in the normal course of business with clinical trial sites and clinical supply manufacturers and with vendors for preclinical studies, research supplies and other services and products for operating purposes. These contracts generally provide for termination after a notice period and, therefore, are cancelable contracts.

Critical Accounting Policies and Estimates

Management's discussion and analysis of our financial condition and results of operations are based on our condensed consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States. The preparation of the financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported expenses incurred during the reporting periods.

Our estimates are based on our historical experience, trends and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

We consider our critical accounting policies and estimates to be related to research and development expenses and accruals, and revenue recognition. There have been no material changes to our critical accounting policies and estimates during the three months ended June 30, 2023, from those disclosed in "Management's Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies & Estimates," included in our Annual Report on Form 10-K for the year ended December 31, 2022.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISKS

We are a smaller reporting company, as defined by Rule 12b-2 of the Exchange Act, and are not required to provide the information required under this item.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain "disclosure controls and procedures" as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act that are designed to ensure that information required to be disclosed in the reports we file and submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in the reports we file or submit under the Exchange Act is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure. 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 management necessarily applies judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, who serve as our principal executive officer and principal financial officer, respectively, has evaluated the effectiveness of our disclosure controls and procedures as of June 30, 2023. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of such date.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the three months ended June 30, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations of Disclosure Controls and Internal Control over Financial Reporting

Because of their inherent limitations, our disclosure controls and procedures and our internal control over financial reporting may not prevent material errors or fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. The effectiveness of our disclosure controls and procedures and our internal control over financial reporting is subject to risks, including that the controls may become inadequate because of changes in conditions or that the degree of compliance with our policies or procedures may deteriorate.

PART II — OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

From time to time, we may be involved in various claims and legal proceedings relating to claims arising out of our operations. We are not currently a party to any legal proceedings that, in the opinion of our management, are likely to have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

ITEM 1A. RISK FACTORS

An investment in our securities involves a high degree of risk. You should carefully consider the specific factors discussed below, as well as all other information included in this Quarterly Report on Form 10-Q, including our financial statements, the notes thereto and the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations." If any of the following risks actually occurs, our business, financial condition, operating results, prospects and ability to accomplish our strategic objectives could be materially harmed. As a result, the trading price of our common stock could decline and you could lose all or part of your investment. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations. The occurrence of any of these known or unknown risks might cause you to lose all or part of your investment in our securities.

There have been no material changes to the risk factors included in "Item 1A. Risk Factors" of our Annual Report on Form 10-K for the year ended December 31, 2022 or our Quarterly Report on Form 10-Q for the three months ended March 31, 2023.

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

None.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

Not applicable.

Item 6. Exhibits.

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Incorporation by Reference			
		Form	File no.	Exhibit No.	Filing Date
3.1	Restated Certificate of Incorporation of the Registrant dated February 6, 2004 ("Restated Certificate")	S-3	333-127175	4.1	4-Aug-05
3.1.1	Certificate of Amendment of Restated Certificate dated May 6, 2011	8-K	000-50549	3.2	6-May-11
3.1.2	Certificate of Amendment of Restated Certificate dated May 6, 2014	8-K	000-50549	3.3	9-May-14
3.1.3	Certificate of Amendment of Restated Certificate dated May 6, 2015	10-Q	000-50549	3.4	11-May-15
3.1.4	Certificate of Amendment of Restated Certificate dated December 5, 2016	8-K	000-50549	3.1	5-Dec-16
3.1.5	Certificate of Amendment of Restated Certificate dated June 7, 2019 related to the Reverse Stock Split of the Registrant	8-K	000-50549	3.1	10-Jun-19
3.1.6	Certificate of Amendment of Restated Certificate dated June 7, 2019 related to the Name Change of the Registrant	8-K	000-50549	3.2	10-Jun-19
3.1.7	Certificate of Amendment of Restated Certificate dated May 25, 2021	8-K	000-50549	3.1	28-May-21
3.2	Amended and Restated Bylaws of the Registrant	8-K	000-50549	3.3	10-Jun-19
4.1	Specimen of Common Stock Certificate	10-Q	000-50549	4.2	9-Aug-19
4.2	Form of Common Stock Warrant, issued by Registrant pursuant to the Purchase Agreement dated September 25, 2017, between Registrant and the purchasers identified in Exhibit A therein	S-3	333-221040	4.9	20-Oct-17
4.3	Form of Warrant to purchase shares of Series B-2 Preferred Stock of Registrant	S-4	333-230758	4.11	8-Apr-19
4.3.1	Form of Amendment to Warrant to Purchase shares of Series B-2 Preferred Stock of Private Oncternal	10-Q	000-50549	4.1	9-Aug-19
4.4	Form of Common Stock Warrant, issued by Registrant pursuant to the Securities Purchase Agreement dated May 19, 2020, between the Registrant and the purchasers signatory thereto ("May 2020 Purchase Agreement")	8-K	000-50549	4.1	21-May-20
4.5	Form of Placement Agent Warrant, issued by Registrant pursuant to the May 2020 Purchase Agreement	8-K	000-50549	4.2	21-May-20
4.6	Form of Common Stock Warrant, issued by Registrant pursuant to the Securities Purchase Agreement dated July 17, 2020, between the Registrant and the purchasers signatory thereto (the "July 2020 Purchase Agreement")	8-K	000-50549	4.1	21-Jul-20
4.7	Form of Placement Agent Warrant, issued by Registrant pursuant to the July 2020 Purchase Agreement.	8-K	000-50549	4.2	21-Jul-20
4.8	Form of Underwriter Warrant, issued by Registrant pursuant to the Amended and Restated Underwriting Agreement dated August 27, 2020, between the Registrant and H.C. Wainwright & Co., LLC ("H.C. Wainwright")	8-K	000-50549	4.1	31-Aug-20

4.9	Form of Underwriter Warrant, issued by Registrant pursuant to the Amended and Restated Underwriting Agreement dated November 17, 2020, between the Registrant and H.C. Wainwright	8-K	000-50549	4.1	19-Nov-20
4.10	Form of Underwriter Warrant, issued by Registrant pursuant to the Amended and Restated Underwriting Agreement dated December 9, 2020, between the Registrant and H.C. Wainwright	8-K	000-50549	4.1	11-Dec-20
10.1*# †	Advisory Services Agreement effective June 14, 2023 between the Registrant and Gunnar F. Kaufmann, Ph.D.				
31.2*	Certification of Chief Financial Officer of the Registrant, as required by Rule 13a-14(a) or Rule 15d-14(a) under the Securities Exchange Act of 1934, as amended.				
32.1‡	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
32.2‡	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
101.INS*	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document				
101.SCH*	Inline XBRL Taxonomy Extension Schema Document				
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document				
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document				
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document				
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document				
104*	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)				

* Filed herewith
# Management contract or compensatory plan
‡ Furnished herewith
† Pursuant to Item 601(b)(10) of Regulation S-K, certain confidential portions of this exhibit were omitted by means of marking such portions with an asterisk because the identified confidential portions (i) are not material and (ii) would be competitively harmful if publicly disclosed.

SIGNATURES

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

Oncternal Therapeutics, Inc.

Date: August 10, 2023

By: /s/ James B. Breitmeyer

Name: James B. Breitmeyer
Title: President and Chief Executive Officer

Date: August 10, 2023

By: /s/ Richard G. Vincent

Name: Richard G. Vincent
Title: Chief Financial Officer

[***] Certain information in this document has been excluded pursuant to Regulation S-K, Item 601(b)(10). Such excluded information is not material and would likely cause competitive harm to the registrant if publicly disclosed.

ADVISORY SERVICES AGREEMENT

This Advisory Services Agreement (this "***Agreement***") is effective June 14, 2023 (the "***Effective Date***") by and between Oncternal Therapeutics, Inc., a Delaware corporation ("***Oncternal***") and Gunnar F. Kaufmann, Ph.D. ("***Advisor***"), to state the terms under which Advisor shall perform services for Oncternal.

1. ***Services and Compensation.***

1.1 ***Services.*** Advisor shall render the advice and other services agreed between the parties from time to time, including the services listed in Exhibit A (the "***Services***"), with the highest degree of professional skill and expertise. Advisor shall have sole discretion and control over the manner and means by which Advisor chooses to conduct the Services. In performing Services, Advisor shall use Advisor's own equipment, tools, and other materials at Advisor's own expense, unless Oncternal specifies otherwise. Advisor acknowledges that time is of the essence in performing Services. Advisor may not subcontract or otherwise delegate Advisor's obligations under this Agreement without Oncternal's prior written consent, and in the event Oncternal gives such consent, Advisor remains fully liable to Oncternal for the performance of all permitted assignees, including their respective employees, independent contractors, agents, or representatives of Advisor (the "***Authorized Representatives***"). Advisor shall perform Services, and provide the results thereof, with the highest degree of professional skill and expertise.

1.2 ***Compensation and Invoicing.*** In return for the Services, Oncternal shall provide the compensation stated in Exhibit A. Advisor shall submit invoices for completed Services within 30 days of completion of the Services covered by such invoice to ap@oncternal.com (or such other address or email address as Oncternal may specify in writing from time to time), in a form satisfactory to Oncternal. Oncternal shall pay undisputed invoices within 30 days after Oncternal's receipt of an acceptable invoice from Advisor.

1.3 ***Expenses.*** Oncternal shall reimburse Advisor for reasonable travel and other out-of-pocket expenses incurred in the performance of Services in accordance with Oncternal's policy to the extent such expenses have been approved in advance and in writing by Oncternal. Advisor shall provide copies of receipts for any single expense incurred greater than $50 within 30 days of incurring such expenses. Approved expenses shall be reimbursed within 30 days of Oncternal's receipt of invoices with supporting receipts.

1.4 ***Continued Vesting***. Advisor shall not experience a Termination of Services (as defined in Oncternal's 2019 Incentive Award Plan (the "***2019 Plan***")) as a result of Advisor's change of status from an employee to a consultant effective as of the Effective Date, and therefore Advisor's outstanding equity awards will continue to vest in accordance with their terms during the term of this Agreement; provided that any stock options that are "incentive stock options" under Section 422 of the Internal Revenue Code shall cease to be "incentive stock options" upon the 3-month anniversary of the Effective Date. Vesting of Advisor's equity awards will cease at the termination of the Consulting

Agreement, and Consultant's rights to exercise or otherwise acquire any vested shares shall be governed and controlled by the 2019 Plan and Advisor's applicable grant documents (the "***Equity Documents***"). All terms applicable to Advisor's equity awards will continue to be subject to the applicable Equity Documents. For the avoidance of doubt, if Advisor does not satisfy the Obligations (defined below) set forth in Section 1.5, Advisor shall automatically (and without any further action or notice from Oncternal) be deemed to experience a Termination of Service, and the vesting of Advisor's outstanding equity awards will cease.

1.5 ***Obligations***. Advisor shall comply with the continuing obligations owed to Oncternal, including pursuant to the Proprietary Information and Inventions Agreement dated March 18, 2021 (the "***Confidentiality Agreement***"), the Employment Agreement dated September 15, 2019 between Advisor and Oncternal (the "***Employment Agreement***"), and this Agreement (collectively, the "***Obligations***").

2. ***Confidential Information.***

2.1 ***Definition.*** Advisor may receive and otherwise be exposed directly or indirectly, to Oncternal's technical and non-technical confidential information, including information relating to Oncternal's business, strategies, designs, products, services and technologies and any derivatives, improvements and enhancements related to any of the foregoing, or to Oncternal's suppliers, customers, or business partners (collectively "***Confidential Information"***), whether in graphic, written, electronic or oral form. Confidential Information may be labeled or identified at the time of disclosure as confidential or proprietary, or equivalent, but Confidential Information also includes information which by its context would reasonably be deemed to be confidential and proprietary. "***Confidential Information***" may also include unpublished patent applications and other intellectual property filings, ideas, Work Product (as defined below), techniques, works of authorship, models, inventions, compounds, compositions, know-how, processes, algorithms, software programs, software source documents, formulae, information and trade secrets as well as financial information (including sales costs, profits, pricing methods), research data, clinical data, bills of material, customer, prospect and supplier lists, investors, employees, business and contractual relationships (including with third parties), business forecasts, sales and merchandising data, and business and marketing plans and any derivatives, improvements and enhancements related to any of the above. Information Oncternal provides regarding third parties as to which Oncternal has an obligation of confidentiality also constitutes "***Confidential Information***."

2.2 ***Restrictions on Use and Disclosure.*** Advisor acknowledges the confidential and secret character of the Confidential Information, and agrees that the Confidential Information is the sole, exclusive, and extremely valuable property of Oncternal. Advisor shall not use or reproduce the Confidential Information except as reasonably necessary in the performance of this Agreement and shall not disclose, lecture on, or publish all or any part of the Confidential Information in any form to any third party, either during or after the term of this Agreement, without the prior written consent of Oncternal. Without limiting the foregoing, Advisor shall permit access to the Confidential Information only to those Authorized Representatives having a need to know such information and who have signed, prior to the disclosure of Confidential Information to such Authorized Representatives, confidentiality agreements or are otherwise bound by confidentiality obligations at least as restrictive as those contained herein. Advisor is responsible for the breach of this Agreement by its Authorized Representatives as if such breach were by Advisor itself. Advisor shall take, at its own expense, all reasonable steps to keep the Confidential Information strictly confidential and to prevent its Authorized

Representatives from prohibited or unauthorized disclosure or use of the Confidential Information. Advisor shall institute measures to protect the Confidential Information in a manner consistent with the measures it uses to protect its own most sensitive proprietary and confidential information, which shall not be less than a reasonable standard of care. Advisor shall immediately notify Oncternal on discovery of any actual or suspected loss or unauthorized disclosure of the Confidential Information and shall take all reasonable steps requested by Oncternal to prevent, control, or remedy any such loss or disclosure. On expiration or any termination of this Agreement, Advisor agrees to cease using and to return to Oncternal, or at Oncternal's option, destroy, all whole and partial copies and derivatives of the Confidential Information, whether in Advisor's possession or under Advisor's direct or indirect control.

2.3 ***Third-Party Information.*** Advisor shall not disclose or otherwise make available to Oncternal in any manner any confidential information received by Advisor under obligations of confidentiality from a third party.

2.4 ***Exceptions; Compelled Disclosure.*** The obligations of confidentiality set forth in Section 2.2 will not apply to information Advisor can establish by competent proof: (i) was generally available to the public or otherwise part of the public domain at the time of disclosure; (ii) became generally available to the public or otherwise part of the public domain after its disclosure and other than through any act or omission of Advisor; (iii) was already known to Advisor, without confidentiality restrictions, at the time of disclosure, as shown by Advisor's files and records immediately prior to the time of disclosure; (iv) was disclosed to Advisor, without confidentiality restrictions, by a third party who had no obligation not to disclose such information to others; or (v) was developed independently by Advisor without any use of or reference to the Confidential Information, as shown by Advisor's files and records immediately prior to the time of disclosure. In the event a court or governmental agency legally compels Advisor to disclose Confidential Information, Advisor shall provide reasonable prior written notice of such required disclosure to Oncternal and take reasonable and lawful actions to avoid and/or minimize the extent of such disclosure. Advisor shall cooperate reasonably with Oncternal in any proceeding to obtain a protective order or other remedy. If such protective order or other remedy is not obtained, Advisor shall limit any compelled disclosure of Confidential Information to that legally required, in the opinion of Advisor's legal counsel. Advisor shall request that confidential treatment be accorded such Confidential Information, where available. Compulsory disclosures made pursuant to this section will not relieve Advisor of its obligations of confidentiality and non-use with respect to non-compulsory disclosures.

2.5 ***Publications.*** Advisor agrees to submit to Oncternal for review any proposed publication that contains any discussion relating to Oncternal, its Confidential Information, the Work Product, Services, or any results of Services. Advisor agrees that it may not publish any such information without the prior written consent of Oncternal on a case-by-case basis.

2.6 ***Clinical Committees.*** If Advisor is a member of a committee that sets formularies or develops clinical guidelines, Oncternal acknowledges that Advisor is required to disclose to such committee the existence and nature of Advisor's relationship with Oncternal. Advisor agrees that such disclosures will not include Confidential Information of Oncternal without the prior written consent of Oncternal. Oncternal and Advisor understand that Advisor is obligated to make disclosures to such committee for the term of this Agreement and for a period of two years thereafter.

2.7 ***Defend Trade Secrets Act Notice of Immunity Rights.*** Advisor acknowledges that Oncternal has provided Advisor notice of Advisor's immunity rights under the Defend Trade Secrets Act,

which states: "(1) An individual shall not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of a trade secret that (A) is made (i) in confidence to a Federal, State, or local government official, either directly or indirectly, or to an attorney; and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (B) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal; and (2) an individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose a trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual (A) files any document containing the trade secret under seal, and (B) does not disclose a trade secret, except pursuant to court order."

3. ***Restrictive Covenants.***

3.1 ***No Conflict of Interest.*** During the term of this Agreement, Advisor agrees that prior to performing any services for or otherwise participating in a company developing or commercializing new services, methods or products that may be competitive with Oncternal, Advisor shall first notify Oncternal in writing. It is understood that in such event, Oncternal shall review whether Advisor's activities are consistent with Advisor continuing to provide the Services. Advisor represents that nothing in this Agreement conflicts with Advisor's existing obligations or would otherwise prevent Advisor from performing its obligations under this Agreement.

3.2 ***Non-Solicitation.*** During the term of this Agreement, and for a period of one year following the termination of this Agreement, Advisor agrees not to, directly or indirectly, solicit or induce any employee, independent advisor, independent contractor, or customer of Oncternal to terminate or breach any employment, contractual or other relationship with Oncternal.

4. ***Ownership; Licenses.***

4.1 ***Work Product; Assignment.*** Oncternal will be the sole and exclusive owner of all right, title and interest in and to all ideas, inventions, works of authorship, work product, materials, and other deliverables conceived, made, developed, reduced to practice, or worked on by Advisor, alone or in conjunction with others: (i) in the course of providing services for Oncternal prior to the date of this Agreement; (ii) in the course of providing the Services following the execution of this Agreement; and (iii) after the term of the Agreement if resulting or directly derived from Confidential Information, and all patent, copyright, trademark, trade secret and other intellectual property rights therein, whether now known or hereafter recognized in any jurisdiction (collectively, "***Work Product"***). Advisor hereby assigns to Oncternal all of Advisor's right, title, and interest in and to the Work Product. Advisor hereby waives any applicable moral rights in the Work Product. Advisor shall promptly disclose to Oncternal all Work Product. Advisor shall keep and maintain adequate and current records (in the form of notes, sketches, drawings or in any other form that may be required by Oncternal) of all Work Product and results thereof and such records will be available to Oncternal and remain Oncternal's sole property.

4.2 ***Assistance.*** Advisor shall execute all papers, including patent applications, invention assignments and copyright assignments, and otherwise agrees to assist Oncternal as reasonably required at Oncternal's reasonable expense to perfect in Oncternal the right, title and other interest in Work Product expressly granted to Oncternal under this Agreement. If Oncternal is unable for any reason, after reasonable effort, to secure Advisor's signature (or the signature of Advisor's authorized representative(s), if applicable) on any document needed in connection with the actions specified above, Advisor hereby irrevocably designates and appoints Oncternal as Advisor's agent and

attorney-in-fact, which appointment is coupled with an interest, to act for and, on Advisor's behalf, to execute, verify and file any such documents and to do all other lawfully permitted acts to further the purposes of the preceding paragraph with the same legal force and effect as if executed by Advisor.

4.3 ***Background IP License.*** Advisor hereby grants to Oncternal a non-exclusive, royalty-free, fully paid perpetual, irrevocable, worldwide right and license, with right of sublicense, under and to Advisor's Background IP (as defined below) for the purpose of developing, marketing, selling and supporting products and services of Oncternal or its affiliates or subsidiaries, either directly or through multiple tiers of distribution, but not for the purpose of licensing Background IP separately from products and services of Oncternal or its affiliates or subsidiaries. For purposes of this Agreement, "***Background IP"*** means any and all technology and intellectual property rights that do not constitute Work Product and that are owned by Advisor or are licensed by a third party to Advisor with a right to sublicense, and which exist prior to the date of this Agreement or which are developed independently by Advisor outside of Services but are used in provision of Services or are applicable to the Work Product. To the extent practicable, Advisor agrees to specifically describe and identify any material Background IP that Advisor intends to use to perform the applicable Services.

5. ***Representations and Warranties.***

5.1 Advisor represents and warrants that:

(a) The Work Product will be free and clear of all liens, claims, encumbrances or demands of third parties, including any claims by any such third parties of any right, title or interest in or to the Work Product. Advisor further represents and warrants that, if applicable, each Authorized Representative performing Services under this Agreement on behalf of Advisor has executed an agreement with Advisor whereby all right, title and interest in and to Advisor's Background IP and Work Product created by such individual has been effectively assigned to Advisor, and which include further assurance provisions equivalent to those set forth in Section 4.2.

(b) (i) Services, the Work Product, and the Background IP licensed under this Agreement comply with all applicable United States and foreign laws and regulations, and that all Work Product will conform to the specifications agreed by the Parties for such Work Product; and (ii) Advisor will not to export, reexport or retransfer, directly or indirectly, any information acquired from Oncternal or any products or software using or containing such information to any countries, individuals, or entities outside the United States if such export would be in violation of United States laws or regulations.

(c) Advisor: (i) is not under investigation by the U.S. Food and Drug Administration for debarment action or is presently debarred under the Federal Food, Drug, and Cosmetic Act, as amended or pursuant to the Generic Drug Enforcement Act of 1992 (21 USC 301 et seq.) or listed on the HHS/OIG List of Excluded Individuals/Entities or the System for Awards Management; and (ii) has not violated, and is not under investigation for violating, any state or federal health care programs and has not violated any such state or federal health care programs or any federal or state anti-kickback laws or regulations.

(d) (i) The Work Product and the use of Work Product in the products and services of Oncternal do not and will not infringe or misappropriate the intellectual property rights of any third party; (ii) Advisor has all necessary rights to license the Background IP, and to assign all Work Product to

Oncternal; and (iii) Advisor's engagement by Oncternal pursuant to this Agreement does not and will not breach any agreement with any third party (including any former employer or client), and that Advisor has not entered into and will not enter into any agreement, either written or oral, in conflict with Advisor's obligations under this Agreement.

5.2 ***Breach of Warranty.*** In the event of a breach or threatened breach of the warranty set forth in Section 5.1(d), and in addition to any other remedies to which Oncternal may be entitled under this Agreement or by operation of law, Advisor shall, at no additional cost to Oncternal, replace or modify the Work Product including any Background IP incorporated therein with a functionally equivalent and conforming Work Product, obtain for Oncternal the right to continue to use the Work Product including any Background IP incorporated therein and, in all other respects, use Advisor's best efforts to remedy the breach.

5.3 ***Foreign Corrupt Practices Act.*** Advisor represents and warrants that Advisor is familiar with and shall comply with all applicable anti-corruption and anti-bribery laws as amended from time to time, including the U.S. Foreign Corrupt Practices Act, and all applicable anti-corruption and anti-bribery laws in effect in the countries in which Advisor conducts or shall conduct business. Advisor agrees that in the course of its performance under this Agreement, it shall not, either directly or through an intermediary, offer or pay, or authorize such offer or payment, of any money, gift, contribution, thing of value, or any other advantage to any person including government officials (or candidate for government office), an employee of a public body or a company, a political party or party official, for purposes of influencing the person's decisions, inducing the person to do or omit doing some act, or securing any improper advantage. Any breach of the foregoing obligation will constitute a material breach of this Agreement and will entitle Oncternal to exercise all available remedies hereunder at law or equity.

5.4 ***Notification.*** Advisor shall notify Oncternal immediately on gaining knowledge: (i) that it has violated or may violate any of the representations or warranties set forth herein; or (ii) that any regulatory authority has made inquiries or commenced proceedings concerning Advisor or any Authorized Representative.

6. ***Term and Termination.*** The initial term of this Agreement is one year beginning on the Effective Date and will automatically renew for additional terms of one year until terminated in accordance with this Section 6. Oncternal may, without prejudice to any right or remedy it may have due to any failure of Advisor to perform Advisor's obligations under this Agreement, terminate this Agreement at any time effective immediately on written notice to Advisor. Advisor may terminate this Agreement for convenience on 30 days' prior written notice to Oncternal, but only when there are no outstanding Services to be performed or Work Product to be delivered. In the event of such termination by Oncternal, Advisor shall cease work immediately after receiving notice of such termination from Oncternal unless otherwise advised by Oncternal and shall notify Oncternal of all costs incurred up to the effective date of termination. Oncternal agrees to pay Advisor for all Services performed for work in progress and reimburse all reasonable, non-cancellable pre-approved costs and expenses incurred by Advisor in performing such Services in compliance with this Agreement, up to the date of Advisor's receipt of notice of Oncternal's intention to terminate this Agreement. Such payments will constitute full settlement of all claims of Advisor of every description against Oncternal. Sections 2-10 will survive expiration or any termination of this Agreement.

7. ***Independent Contractor.*** Advisor's relationship with Oncternal will be that of an independent contractor and nothing in this Agreement should be construed to create a partnership, joint venture, or employer-employee relationship. Advisor is not the agent of Oncternal and is not authorized to make any representation, warranty, contract, or commitment on behalf of Oncternal. Neither Advisor nor any of its Authorized Representatives, if applicable, will be entitled to any of the benefits which Oncternal may make available to its employees, such as group insurance, profit-sharing or retirement benefits. Advisor will be solely responsible for all tax returns and payments required to be filed with or made to any federal, state, or local tax authority with respect to Advisor's performance of Services (and those of its Authorized Representatives, if applicable) and receipt of fees under this Agreement. Oncternal will regularly report amounts paid to Advisor by filing Form 1099-MISC with the Internal Revenue Service as required by law. Because Advisor is an independent contractor, Oncternal will not withhold or make payments for social security, make unemployment insurance or disability insurance contributions, or obtain worker's compensation insurance on Advisor's behalf (or for any individual performing Services on behalf of Advisor, if applicable). Advisor agrees to accept exclusive liability for complying with all applicable state and federal laws governing self-employed individuals, including obligations such as payment of taxes, social security, disability, and other contributions based on fees paid to Advisor under this Agreement. In the event that, notwithstanding this Section 7, Advisor (or any of its Authorized Representatives, if applicable) is found by a court of competent jurisdiction to be an employee of Oncternal, the Parties acknowledge and agree that works of authorship and other intellectual property that would qualify fully for exemption from assignment under the provisions of Section 2870 of the California Labor Code will not constitute Work Product for the purposes of assignment under Section 4.1 of this Agreement.

8. ***LIMITATION OF LIABILITY.*** TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT WILL ONCTERNAL BE LIABLE TO ADVISOR FOR ANY LOST PROFITS OR LOST BUSINESS OR FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL OR INDIRECT DAMAGES OF ANY KIND, WHETHER ARISING IN CONTRACT, TORT OR OTHERWISE, AND REGARDLESS OF WHETHER ONCTERNAL HAS BEEN NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES.

9. ***Indemnity.*** Advisor hereby agrees to indemnify and hold Oncternal and its affiliates and its and their directors, officers, employees, and agents harmless from and against any and all liabilities, losses, damages, costs and expenses (including reasonable attorneys' fees) related to any third-party claim, suit, action or proceeding arising out of: (i) the negligence, willful misconduct or material breach of any obligation, representation or warranty by Advisor in performing Services for Oncternal under this Agreement; (ii) a breach by Advisor of Sections 4.1 or 4.3; or (iii) an allegation that any of the Background IP, Work Product, or Services of Advisor infringe on or misappropriate any third-party patent, copyright, trademark, trade secret or other intellectual property right of such party.

10.***General.***

10.1 ***Assignment.*** The parties' rights and obligations under this Agreement will bind and inure to the benefit of their respective successors, heirs, executors, administrators and permitted assigns. Oncternal may freely assign this Agreement, and Advisor expressly agrees that any intellectual property rights licensed to Oncternal, including any rights to Background IP, are transferable to Oncternal's assignee without Advisor's consent. Advisor will not assign this Agreement or Advisor's rights or obligations hereunder without the prior written consent of Oncternal. Any such purported assignment not in accordance with this Section 10.1 will be null and void and a material breach of this Agreement.

10.2 ***Legal and Equitable Remedies.*** Because Advisor's Services are personal and unique and because Advisor may have access to and become acquainted with the Confidential Information of Oncternal, Oncternal will have the right to enforce this Agreement and any of its provisions by injunction, specific performance, or other equitable relief without prejudice to any other rights and remedies that Oncternal may have for a breach of this Agreement.

10.3 ***No Warranty.*** All Confidential Information is provided "AS IS," without any warranty of any kind.

10.4 ***Governing Law.*** The rights and obligations of the Parties under this Agreement will be governed in all respects by the laws of the State of Delaware without regard to conflict of law principles that would result in the application of the law of any other jurisdiction.

10.5 ***Notices.*** Any notices required or permitted hereunder will be given to the appropriate party in writing and will be delivered by personal delivery, electronic mail, facsimile transmission or by certified or registered mail, return receipt requested, and will be deemed given on personal delivery, three days after deposit in the mail, or on acknowledgment of receipt of electronic transmission (with an automatic "read receipt" not constituting receipt). Notices will be sent to the addresses, electronic mail or facsimile information set forth at the end of this Agreement or such other address, electronic mail or facsimile information as either party may specify in writing.

10.6 ***Entire Agreement.*** This Agreement, the Confidentiality Agreement, and the Employment Agreement constitute the parties' final, exclusive, and complete understanding and agreement with respect to the subject matter hereof and supersedes all prior and contemporaneous understandings and agreements relating to its subject matter.

10.7 ***Waiver and Modification.*** This Agreement may not be waived, modified, or amended unless mutually agreed on in writing by both Parties.

10.8 ***Severability.*** In the event any provision of this Agreement is found to be legally unenforceable, such unenforceability will not prevent enforcement of any other provision of this Agreement.

10.9 ***Counterparts.*** This Agreement may be executed in two or more counterparts by facsimile or other reliable electronic reproduction (including transmission by pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, e.g., www.docusign.com), each of which will be considered an original, but all of which together will constitute one and the same instrument.

10.10 **ADVISOR ACKNOWLEDGES THAT ADVISOR HAS THE RIGHT TO CONSULT WITH INDEPENDENT LEGAL COUNSEL PRIOR TO SIGNING THIS AGREEMENT AND HAVE HAD A REASONABLE OPPORTUNITY TO DO SO, AND THAT ADVISOR EITHER HAS CONSULTED, OR ON ADVISOR'S OWN VOLITION CHOSEN NOT TO CONSULT, WITH SUCH COUNSEL. ADVISOR FURTHER ACKNOWLEDGES THAT ADVISOR HAS READ THIS AGREEMENT CAREFULLY AND UNDERSTANDS AND ACCEPTS THE OBLIGATIONS WHICH IT IMPOSES ON ADVISOR WITHOUT RESERVATION. NO PROMISES OR REPRESENTATIONS HAVE BEEN MADE TO ADVISOR TO INDUCE ADVISOR TO SIGN THIS AGREEMENT. ADVISOR SIGNS THIS AGREEMENT VOLUNTARILY AND FREELY, IN DUPLICATE, WITH THE**

UNDERSTANDING THAT ONCTERNAL WILL RETAIN ONE COUNTERPART AND THE OTHER COUNTERPART WILL BE RETAINED BY ADVISOR.

[Signature Page Follows]

The parties have executed this Agreement as of the date below.

Oncternal Therapeutics, Inc.

By:/s/James B. Breitmeyer, M.D. Ph.D.
Name: James B. Breitmeyer, M.D., Ph.D.
Title: Chief Executive Officer

Date: June 14, 2023

Address: 12230 El Camino Real, Suite 230
San Diego, CA 92130

Email: [***]

Advisor

By:/s/Gunnar F. Kaufmann

Name: Gunnar F. Kaufmann

Address: [***]

Email: [***]

Exhibit A

Services

Advisor shall [***]. In connection with such service, Advisor shall:

- [***]
- [***]
- [***]; and
- advise management on an ad-hoc basis, as requested by Oncternal.

Compensation

- ***Fees.*** Oncternal shall pay Advisor at a rate of $[***] per hour. Unless otherwise agreed upon in writing by Oncternal, Oncternal's maximum liability for all Services performed during the term of this Agreement shall not exceed $[***].

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, James B. Breitmeyer, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Oncternal Therapeutics, 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 consolidated financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

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

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

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

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

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

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

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

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

/s/ James B. Breitmeyer

President and Chief Executive Officer
(Principal Executive Officer)

Dated: August 10, 2023

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Richard G. Vincent, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Oncternal Therapeutics, 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 consolidated financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

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

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

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

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

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

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

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

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

/s/ Richard G. Vincent
Chief Financial Officer
(Principal Financial Officer)

Dated: August 10, 2023

Exhibit 32.1

CERTIFICATION
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

In connection with the Quarterly Report on Form 10-Q of Oncternal Therapeutics, Inc. (the "Company") for the period ended June 30, 2023, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, James B. Breitmeyer, as Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 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.

/s/ James B. Breitmeyer
President and Chief Executive Officer
(Principal Executive Officer)

Dated: August 10, 2023

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

Exhibit 32.2

CERTIFICATION
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)

In connection with the Quarterly Report on Form 10-Q of Oncternal Therapeutics, Inc. (the "Company") for the period ended June 30, 2023, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Richard G. Vincent, as Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 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.

/s/ Richard G. Vincent
Chief Financial Officer
(Principal Financial Officer)

Dated: August 10, 2023

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