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

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2023

or

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

Commission File Number: 001-36751

OCUGEN, INC.
(Exact name of registrant as specified in its charter)

Delaware	**04-3522315**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

11 Great Valley Parkway
Malvern, Pennsylvania 19355
(Address of principal executive offices, including zip code)
(484) 328-4701
(Registrant's telephone number, including area code)

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, par value $0.01 per share	**OCGN**	**The Nasdaq Stock Market LLC (The Nasdaq Capital Market)**

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

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

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

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

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

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

As of April 28, 2023, there were 226,430,141 outstanding shares of the registrant's common stock, $0.01 par value per share.

OCUGEN, INC.
QUARTERLY REPORT ON FORM 10-Q
FOR THE QUARTERLY PERIOD ENDED MARCH 31, 2023

Unless the context otherwise requires, references to the "Company," "we," "our," or "us" in this report refer to Ocugen, Inc. and its subsidiaries, and references to "OpCo" refer to Ocugen OpCo, Inc., the Company's wholly owned subsidiary.

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statements of historical facts contained in this Quarterly Report on Form 10-Q regarding our strategy, future operations, future financial position, future revenues, projected costs, prospects, plans, and objectives of management are forward-looking statements. These statements involve known and unknown risks, uncertainties, and other important factors that may cause our actual results, performance, or achievements to be materially different from any future results, performance, or achievements expressed or implied by the forward-looking statements. The words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "will," "would," or the negative of such terms and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Such statements are based on assumptions and expectations that may not be realized and are inherently subject to risks, uncertainties, and other factors, many of which cannot be predicted with accuracy and some of which might not even be anticipated.

The forward-looking statements in this Quarterly Report on Form 10-Q and those contained in our Annual Report on Form 10-K filed with the United States Securities and Exchange Commission ("SEC") on February 28, 2023 (the "2022 Annual Report") include, among other things, statements about:

- our estimates regarding expenses, future revenues, capital requirements, as well as the timing, availability of, and the need for, additional financing to continue to advance our product candidates;
- our activities with respect to OCU400, including the results from our ongoing Phase 1/2 trial and our ability to successfully enroll and initiate dosing in pediatric patients in our ongoing Phase 1/2 trial and subsequently complete a Phase 3 trial;
- our ability to successfully submit an amendment to the Investigational New Drug ("IND") application to the U.S. Food and Drug Administration ("FDA") for NeoCart and to subsequently initiate a Phase 3 trial;
- our ability to obtain funding from government agencies in the United States and other countries to continue the development of our inhaled mucosal vaccine platform;
- the uncertainties associated with the clinical development and regulatory approval of our product candidates, OCU400, OCU410, OCU410ST, NeoCart, and OCU200, including potential delays in the initiation, enrollment, and completion of current and future clinical trials, including our ability to resolve the FDA's clinical hold on our IND application for our Phase 1 trial of OCU200 for the treatment of diabetic macular edema;
- our ability to realize any value from our product candidates and preclinical programs being developed and anticipated to be developed in light of inherent risks and difficulties involved in successfully commercializing products and the risk that our products, if approved, will not achieve broad market acceptance;
- the uncertainties in obtaining successful trial results for product candidates and unexpected costs that may result therefrom;
- our ability to comply with regulatory schemes and other regulatory developments applicable to our business in the United States and other countries, including the extent to which developments with respect to the COVID-19 pandemic will affect the regulatory pathways available for COVID-19 vaccines in such countries;
- the performance of third-parties upon which we depend, including contract development and manufacturing organizations, suppliers, manufacturers, group purchasing organizations, distributors, and logistics providers;
- the pricing and reimbursement of our product candidates, if commercialized;
- our ability to obtain and maintain patent protection, or obtain licenses to intellectual property and defend our intellectual property rights against third-parties;
- our ability to maintain our relationships, profitability, and contracts with our key collaborators and commercial partners and our ability to establish additional collaborations and partnerships;
- our ability to recruit and retain key scientific, technical, commercial, and management personnel and to retain our executive officers;
- our ability to comply with stringent United States and applicable foreign government regulations with respect to the manufacturing of pharmaceutical products, including compliance with current Good Manufacturing Practice regulations, and other relevant regulatory authorities;
- the extent to which health epidemics and other outbreaks of communicable diseases, including the COVID-19 pandemic, geopolitical turmoil, macroeconomic conditions, social unrest, political instability, terrorism, or acts of war

could disrupt our business and operations, including impacts on our development programs, global supply chain, and collaborators and manufacturers; and

- other matters discussed under the heading "Risk Factors" contained in the 2022 Annual Report and in any other documents we have filed with the SEC.

We may not actually achieve the plans, intentions, or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions, and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in the 2022 Annual Report, particularly under the section titled "Risk Factors," that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures, collaborations, or investments we may make.

You should read this Quarterly Report on Form 10-Q and the documents we have filed as exhibits to this Quarterly Report on Form 10-Q completely and with the understanding that our actual future results may be materially different from what we expect. Except as required by law, we do not assume any obligation to update any forward-looking statements.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this Quarterly Report on Form 10-Q, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements. We qualify all of our forward-looking statements by these cautionary statements. In addition, with respect to all of our forward-looking statements, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995.

Solely for convenience, tradenames and trademarks referred to in this Quarterly Report on Form 10-Q appear without the ® or ™ symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or that the applicable owners will not assert their rights, to these tradenames or trademarks, as applicable. All tradenames, trademarks, and service marks included or incorporated by reference in this Quarterly Report on Form 10-Q are the property of their respective owners. The name NeoCart has not been evaluated or cleared by the FDA.

OCUGEN, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share amounts)
(Unaudited)

	March 31, 2023	December 31, 2022
Assets		
Current assets		
Cash and cash equivalents	$ 68,259	$ 77,563
Marketable securities	8,462	13,371
Prepaid expenses and other current assets	7,680	7,558
Total current assets	84,401	98,492
Property and equipment, net	7,952	6,053
Other assets	3,946	4,087
Total assets	$ 96,299	$ 108,632
Liabilities and stockholders' equity		
Current liabilities		
Accounts payable	$ 8,092	$ 8,062
Accrued expenses and other current liabilities	5,823	9,900
Operating lease obligations	512	498
Current portion of long term debt	1,256	—
Total current liabilities	15,683	18,460
Non-current liabilities		
Operating lease obligations, less current portion	3,449	3,587
Long term debt, net	1,058	2,289
Other non-current liabilities	309	244
Total non-current liabilities	4,816	6,120
Total liabilities	20,499	24,580
Commitments and contingencies (Note 13)		
Stockholders' equity		
Convertible preferred stock; $0.01 par value; 10,000,000 shares authorized at March 31, 2023 and December 31, 2022		
Series A; zero shares issued and outstanding at March 31, 2023 and December 31, 2022	—	—
Series B; 54,745 shares issued and outstanding at March 31, 2023 and December 31, 2022	1	1
Common stock; $0.01 par value; 295,000,000 shares authorized, 226,548,693 and 221,721,182 shares issued, and 226,427,193 and 221,599,682 shares outstanding at March 31, 2023 and December 31, 2022, respectively	2,265	2,217
Treasury stock, at cost, 121,500 shares at March 31, 2023 and December 31, 2022	(48)	(48)
Additional paid-in capital	303,073	294,874
Accumulated other comprehensive income	25	26
Accumulated deficit	(229,516)	(213,018)
Total stockholders' equity	75,800	84,052
Total liabilities and stockholders' equity	$ 96,299	$ 108,632

See accompanying notes to condensed consolidated financial statements.

OCUGEN, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(in thousands, except share and per share amounts)
(Unaudited)

	Three months ended March 31,	
	2023	2022
Operating expenses		
Research and development	$ 9,558	$ 7,915
General and administrative	8,193	10,119
Total operating expenses	17,751	18,034
Loss from operations	(17,751)	(18,034)
Other income (expense), net	1,253	15
Net loss	$ (16,498)	$ (18,019)
Other comprehensive income (loss)		
Foreign currency translation adjustment	(1)	—
Comprehensive loss	$ (16,499)	$ (18,019)
Shares used in calculating net loss per common share — basic and diluted	225,523,627	205,693,498
Net loss per share of common stock — basic and diluted	$ (0.07)	$ (0.09)

See accompanying notes to condensed consolidated financial statements.

OCUGEN, INC.

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in thousands, except share amounts)

(Unaudited)

	Series A Convertible Preferred Stock		Series B Convertible Preferred Stock		Common Stock		Treasury Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total
	Shares	Amount	Shares	Amount	Shares	Amount					
Balance at December 31, 2022	—	$ —	54,745	$ 1	221,721,182	$ 2,217	$ (48)	$ 294,874	$ 26	$ (213,018)	$ 84,052
Stock-based compensation expense	—	—	—	—	—	—	—	2,689	—	—	2,689
Issuance of common stock for stock option exercises and restricted stock unit vesting, net	—	—	—	—	348,555	3	—	(4)	—	—	(1)
Issuance of common stock for capital raises, net	—	—	—	—	4,478,956	45	—	5,514	—	—	5,559
Other comprehensive income (loss)	—	—	—	—	—	—	—	—	(1)	—	(1)
Net loss	—	—	—	—	—	—	—	—	—	(16,498)	(16,498)
Balance at March 31, 2023	**—**	**$ —**	**54,745**	**$ 1**	**226,548,693**	**$ 2,265**	**$ (48)**	**$ 303,073**	**$ 25**	**$ (229,516)**	**$ 75,800**

	Series A Convertible Preferred Stock		Series B Convertible Preferred Stock		Common Stock		Treasury Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total
	Shares	Amount	Shares	Amount	Shares	Amount					
Balance at December 31, 2021	7	$ —	54,745	$ 1	199,502,183	$ 1,995	$ (48)	$ 225,537	$ —	$ (131,667)	$ 95,818
Stock-based compensation expense	—	—	—	—	—	—	—	3,299	—	—	3,299
Issuance of common stock for stock option exercises and restricted stock unit vesting, net	—	—	—	—	277,323	3	—	177	—	—	180
Issuance of common stock for capital raises, net	—	—	—	—	15,973,420	160	—	49,691	—	—	49,851
Net loss	—	—	—	—	—	—	—	—	—	(18,019)	(18,019)
Balance at March 31, 2022	**7**	**$ —**	**54,745**	**$ 1**	**215,752,926**	**$ 2,158**	**$ (48)**	**$ 278,704**	**$ —**	**$ (149,686)**	**$ 131,129**

See accompanying notes to condensed consolidated financial statements.

OCUGEN, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(Unaudited)

	Three months ended March 31,	
	2023	**2022**
Cash flows from operating activities		
Net loss	$ (16,498)	$ (18,019)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization expense	174	76
Amortization (accretion) on marketable securities	(143)	—
Non-cash interest expense	24	19
Non-cash lease expense	131	179
Stock-based compensation expense	2,689	3,299
Other	352	—
Changes in assets and liabilities:		
Prepaid expenses and other current assets	(60)	(575)
Accounts payable and accrued expenses	(4,784)	131
Lease obligations	(125)	(176)
Net cash used in operating activities	(18,240)	(15,066)
Cash flows from investing activities		
Purchases of marketable securities	(3,947)	—
Proceeds from the maturities of marketable securities	9,000	—
Purchases of property and equipment	(1,612)	(223)
Net cash provided by (used in) investing activities	3,441	(223)
Cash flows from financing activities		
Proceeds from issuance of common stock, net	5,731	50,177
Payment of equity issuance costs	(173)	(75)
Payment of debt issuance costs	(62)	—
Net cash provided by financing activities	5,496	50,102
Effect of changes in exchange rate on cash, cash equivalents, and restricted cash	(1)	—
Net (decrease) increase in cash, cash equivalents, and restricted cash	(9,304)	34,813
Cash, cash equivalents, and restricted cash at beginning of period	77,563	95,109
Cash, cash equivalents, and restricted cash at end of period	$ 68,259	$ 129,922
Supplemental disclosure of non-cash investing and financing transactions:		
Purchases of property and equipment	$ 1,119	$ 611
Equity issuance costs	$ —	$ 71

See accompanying notes to condensed consolidated financial statements.

OCUGEN, INC.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Nature of Business

Ocugen, Inc., together with its wholly owned subsidiaries ("Ocugen" or the "Company"), is a biotechnology company focused on discovering, developing, and commercializing novel gene and cell therapies and vaccines that improve health and offer hope for patients across the globe. The Company is headquartered in Malvern, Pennsylvania, and manages its business as one operating segment.

Modifier Gene Therapy Platform

The Company is developing a modifier gene therapy platform designed to fulfill unmet medical needs related to retinal diseases, including inherited retinal diseases ("IRDs"), such as retinitis pigmentosa ("RP"), Leber congenital amaurosis ("LCA"), and Stargardt disease, as well as dry age-related macular degeneration ("AMD") with a single mutation-agnostic therapy. The Company's modifier gene therapy platform is based on the use of nuclear hormone receptors ("NHRs"), which have the potential to restore homeostasis — the basic biological processes in the retina. Unlike single-gene replacement therapies, which only target one genetic mutation, the Company believes that its modifier gene therapy platform, through its use of NHRs, represents a novel approach that has the potential both to address multiple retinal diseases caused by mutations in multiple genes with a single unique product and to address complex diseases that are potentially caused by imbalances in multiple gene networks.

The Company believes that OCU400 has the potential to be broadly effective in restoring retinal integrity and function across a range of genetically diverse IRDs, including RP and LCA. OCU400 has received Orphan Drug Designation ("ODD") from the United States Food and Drug Administration ("FDA") and Orphan Medicinal Product Designation ("OMPD") from the European Commission ("EC") for the treatment of RP and LCA.

The Company is conducting a Phase 1/2 trial to assess the safety and efficacy of unilateral subretinal administration of OCU400 in patients with nuclear receptor subfamily 2 group E member 3 ("*NR2E3")* and rhodopsin (*"RHO")*-related RP and centrosomal protein 290 ("*CEP290")*-related LCA in the United States. The Company has completed dosing patients with RP in the dose-escalation portion of the trial, which enrolled 10 patients to receive a low, medium, or high dose of OCU400 in the subretinal space. Additionally, the Company has completed dosing eight patients with RP in the dose-expansion portion of the trial and is continuing to enroll patients with LCA to receive the high dose, which was determined to be the maximum tolerable dose from the dose-escalation portion of the trial. In April 2023, the Company announced positive preliminary data among RP patients treated in the first two cohorts of the Phase 1/2 trial. In Cohorts 1 and 2 of the trial, seven participants with severe vision impairment due to RP associated with the *RHO* and *NR2E3* gene mutations received a unilateral subretinal injection of either a low dose or a medium dose of OCU400, respectively. The preliminary results showed a favorable safety profile and visual improvements after treatment with OCU400 as measured by multi-luminance mobility testing ("MLMT") and best corrected visual acuity assessment ("BCVA"). In March 2023, the FDA approved the enrollment of pediatric patients in the ongoing Phase 1/2 trial for the treatment of RP and LCA and the Company intends to dose pediatric patients in the second quarter of 2023. Additionally, the Company intends to initiate a Phase 3 trial for OCU400 for the treatment of RP and LCA near the end of 2023, subject to discussions with the FDA.

The Company is also developing OCU410 and OCU410ST, utilizing the nuclear receptor genes RAR-related orphan receptor A ("*RORA"),* for the treatment of dry AMD and Stargardt disease, respectively. OCU410 is a potential one-time, curative therapy with a single sub-retinal injection. OCU410ST has received ODD from the FDA for the treatment of *ABCA4*-associated retinopathies, including Stargardt disease. The Company intends to submit Investigational New Drug ("IND") applications in the second quarter of 2023 to initiate Phase 1/2 trials.

Regenerative Medicine Cell Therapy Platform

NeoCart is a Phase 3-ready, regenerative medicine cell therapy technology that combines breakthroughs in bioengineering and cell processing to enhance the autologous cartilage repair process. NeoCart is a three-dimensional tissue-engineered disc of new cartilage that is manufactured by growing chondrocytes, the cells responsible for maintaining cartilage health. The chondrocytes are derived from the patient on a unique scaffold. In this therapy, healthy cartilage tissue is grown and implanted in the patient. Cartilage defects often lead to osteoarthritis if left untreated. Current surgical and nonsurgical treatment options are limited in their efficacy and durability. NeoCart has the potential to accelerate healing, reduce pain, and provide regenerative native-like

cartilage strength with durable benefits post transplantation. The FDA granted a regenerative medicine advanced therapy ("RMAT") designation to NeoCart for the repair of full-thickness lesions of knee cartilage injuries in adults. Additionally, the Company received concurrence from the FDA on the confirmatory Phase 3 trial design. The Company is renovating an existing facility into a current Good Manufacturing Practice ("GMP") facility in accordance with the FDA's regulations in support of NeoCart manufacturing for personalized Phase 3 trial material. The Company intends to initiate the Phase 3 trial in 2024.

Vaccines

The Company's vaccines platform is driven by its conviction to serve a public health concern, which requires the endorsement and support of government funding, both domestically and in licensed territories abroad, in order to develop and ultimately commercialize its vaccine candidates. Therefore, the Company's anticipated expenses for vaccines development from the second quarter of 2023 onward will be limited as it devotes its current cash, cash equivalents, and investments to developing its modifier gene therapy platform. The Company is refocusing its efforts to develop an inhalation-based, next generation mucosal vaccine platform to overcome the limitations of current intramuscular COVID-19 treatments, namely sustained durability and transmissibility inhibition. While the Company continues to incur expenses for the development of its inhaled mucosal vaccine platform to achieve IND readiness, any additional development will be reliant on government funding.

Inhaled Mucosal Vaccines

The Company is developing a novel inhaled mucosal vaccine platform, which includes OCU500, a bivalent COVID-19 vaccine; OCU510, a seasonal quadrivalent flu vaccine; and OCU520, a combination quadrivalent seasonal flu and bivalent COVID-19 vaccine. As these vaccine candidates are being developed to be administered through inhalation, the Company believes they have the potential to generate rapid local immunity in the upper airways and lungs where viruses enter and infect the body, which the Company believes may help reduce or prevent infection and transmission as well as provide protection against new virus variants. The Company intends to submit an IND application near the end of 2023 or in early 2024 and is continuing to work closely with government agencies to obtain funding for the development of these inhaled mucosal vaccines.

Intramuscular COVID-19 Vaccine

In April 2023, the FDA announced the cancellation of emergency use authorizations ("EUA") issued to monovalent vaccines and the simplification of the vaccination schedule of bivalent vaccines that have EUAs in the United States. Accordingly, the Company has determined it is not commercially viable to continue the development of COVAXIN in its North American territory and consequently, will focus its efforts on the development of the inhaled mucosal bivalent vaccines.

Novel Biologic Therapy for Retinal Diseases

The Company is developing OCU200, which is a novel fusion protein containing parts of human transferrin and tumstatin. OCU200 is designed to treat diabetic macular edema ("DME"), diabetic retinopathy ("DR"), and wet AMD. The Company has completed the technology transfer of manufacturing processes to its contract development and manufacturing organization ("CDMO") and has produced trial materials to initiate a Phase 1 trial. The Company submitted an IND application to the FDA in February 2023 to initiate a Phase 1 trial targeting DME. In April 2023, the FDA placed the Company's IND application for the Phase 1 trial on clinical hold as part of the FDA's request for additional information related to chemistry, manufacturing, and controls ("CMC") prior to initiating the Phase 1 trial. The Company intends to work with the FDA and provide requested information as promptly as possible, and does not currently expect the clinical hold to impact the anticipated overall timing of the OCU200 clinical development program.

Going Concern

The Company has incurred recurring net losses since inception and has funded its operations to date through the sale of common stock, warrants to purchase common stock, the issuance of convertible notes and debt, and grant proceeds. The Company incurred net losses of approximately $16.5 million and $18.0 million for the three months ended March 31, 2023 and 2022, respectively. As of March 31, 2023, the Company had an accumulated deficit of $229.5 million and cash, cash equivalents, and investments totaling $76.7 million. This amount will not meet the Company's capital requirements over the next 12 months. The Company believes that its cash, cash equivalents, and investments will enable it to fund its operations into the first quarter of 2024. Due to the inherent uncertainty involved in making estimates and the risks associated with the research, development, and commercialization of biotechnology products, the Company may have based this estimate on assumptions that may prove to be wrong, and the Company's operating plan may change as a result of many factors currently unknown to the Company.

The Company is subject to risks, expenses, and uncertainties frequently encountered by companies in its industry. The Company intends to continue its research, development, and commercialization efforts for its product candidates, which will require significant additional funding. If the Company is unable to obtain additional funding in the future and/or its research, development, and commercialization efforts require higher than anticipated capital, there may be a negative impact on the financial viability of the Company. The Company plans to fund its operations through public and private placements of equity and/or debt, payments from potential strategic research and development arrangements, sales of assets, licensing and/or collaboration arrangements with pharmaceutical companies or other institutions, funding from the government, particularly for the development of the Company's novel inhaled mucosal vaccine platform, or funding from other third parties. Such financing and funding may not be available at all, or on terms that are favorable to the Company. While Company management believes that it has a plan to fund operations, its plan may not be successfully implemented. Failure to generate sufficient cash flows from operations, raise additional capital, or appropriately manage certain discretionary spending, could have a material adverse effect on the Company's ability to achieve its intended business objectives.

As a result of these factors, together with the anticipated increase in spending that will be necessary to continue to research, develop, and commercialize the Company's product candidates, there is substantial doubt about the Company's ability to continue as a going concern within one year after the date that these condensed consolidated financial statements are issued. The condensed consolidated financial statements do not contain any adjustments that might result from the resolution of any of the above uncertainties.

2. Summary of Significant Accounting Policies

Basis of Presentation and Consolidation

The accompanying unaudited condensed consolidated financial statements included herein have been prepared in conformity with generally accepted accounting principles ("GAAP") in the United States and under the rules and regulations of the United States Securities and Exchange Commission ("SEC") for interim reporting. The accompanying unaudited condensed consolidated financial statements include all adjustments, consisting of normal recurring adjustments, that are necessary to present fairly the Company's financial position, results of operations, and cash flows. The condensed consolidated results of operations are not necessarily indicative of the results that may occur for the full fiscal year. Certain information and footnote disclosures of the Company normally included in the financial statements prepared in accordance with GAAP have been condensed or omitted under the SEC's rules and regulations. These condensed consolidated financial statements should be read in conjunction with the audited financial statements and accompanying notes thereto for the year ended December 31, 2022, included in the Company's Annual Report on Form 10-K filed with the SEC on February 28, 2023 (the "2022 Annual Report"). The condensed consolidated financial statements include the accounts of Ocugen and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

In preparing the condensed consolidated financial statements in conformity with GAAP, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of expenses during the reporting period. Due to the inherent uncertainty involved in making estimates, actual results reported in future periods may be affected by changes in these estimates. On an ongoing basis, the Company evaluates its estimates and assumptions. These estimates and assumptions include those used in the accounting for research and development contracts, including clinical trial accruals, and the fair value measurement of equity instruments.

Cash, Cash Equivalents, and Restricted Cash

The Company considers all highly liquid investments that have maturities of three months or less when acquired to be cash equivalents. Cash equivalents may include bank demand deposits and money market funds that invest primarily in certificates of deposit, commercial paper, and U.S. government agency securities and treasuries. The Company records interest income received on its cash and cash equivalents to other income (expense), net in the condensed consolidated statements of operations and comprehensive loss. The Company recorded $0.7 million as interest income for the three months ended March 31, 2023. The Company's restricted cash balance as of March 31, 2022 consisted of cash held to collateralize a corporate credit card account.

The following table provides a reconciliation of cash, cash equivalents, and restricted cash from the condensed consolidated balance sheets to the total amount shown in the condensed consolidated statements of cash flows (in thousands):

	As of March 31,	
	2023	2022
Cash and cash equivalents	$ 68,259	$ 129,771
Restricted cash	—	151
Total cash, cash equivalents, and restricted cash	$ 68,259	$ 129,922

Fair Value Measurements

The Company follows the provisions of Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 820, *Fair Value Measurements* ("ASC 820"), which defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. ASC 820 also establishes a fair value hierarchy, which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. ASC 820 describes three levels of inputs that may be used to measure fair value:

Level 1 — quoted prices in active markets for identical assets or liabilities

Level 2 — quoted prices for similar assets and liabilities in active markets or inputs that are observable

Level 3 — inputs that are unobservable (for example, cash flow modeling inputs based on assumptions)

The carrying value of certain financial instruments, including cash and cash equivalents, accounts payable, and accrued expenses, approximates their fair value due to the short-term nature of these instruments.

Marketable Securities

The Company accounts for marketable securities in accordance with FASB ASC Topic 320, *Investments - Debt and Equity Securities* ("ASC 320"). The Company determines the appropriate classification of its investments in debt securities at the time of purchase. Debt securities are classified as trading securities if the security is bought and held primarily to be sold in the near term. Debt securities are classified as held-to-maturity if management has both the positive intent and ability to hold until the maturity of the security. All securities not classified as trading securities or held-to-maturity securities are classified as available-for-sale securities. The Company's current marketable securities are comprised of debt securities which are classified as available-for-sale securities in accordance with ASC 320. At the time of purchase, the Company classifies marketable securities with maturities of 90 days or less as cash equivalents on the condensed consolidated balance sheets.

Available-for-sale securities are recorded at fair value based on inputs that are observable, either directly or indirectly, such as quoted prices for identical securities in active markets (Level 1) or quoted prices for similar securities in active markets or inputs that are observable (Level 2). Unrealized gains and losses are included in other comprehensive income (loss) in the condensed consolidated statements of operations and comprehensive loss. Amortization of premium or accretion of discount on debt securities are included in other income (expense), net in the condensed consolidated statements of operations and comprehensive loss.

The Company reviews investments in debt securities for other-than-temporary impairment if the fair value of the investment is less than the amortized cost basis. The assessment for other-than-temporary impairment is performed at the individual security level. To date, the Company has not recognized any impairments with respect to its debt securities.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist of cash, cash equivalents, and investments. The Company's cash, cash equivalents, and investments are held in accounts at financial institutions that may exceed federally insured limits. The Company has not experienced any credit losses in such accounts and does not believe it is exposed to significant credit risk beyond the standard credit risk associated with commercial banking relationships.

Leases

The Company determines if an arrangement is a lease at inception. This determination generally depends on whether the arrangement conveys to the Company the right to control the use of an explicitly or implicitly identified fixed asset for a period of time in exchange for consideration. Control of an underlying asset is conveyed to the Company, if the Company obtains the rights to direct the use of and to obtain substantially all of the economic benefits from using the underlying asset. The Company's lease agreements include lease and non-lease components, which the Company has elected not to account for separately for all classes of underlying assets. Lease expense for variable lease components is recognized when the obligation is probable.

The Company currently leases real estate classified as operating leases. Operating leases are included in other assets and operating lease obligations in the Company's condensed consolidated balance sheets. At lease commencement, the Company records a lease liability based on the present value of the lease payments over the expected lease term, including any options to extend the lease that the Company is reasonably certain to exercise, and records a corresponding right-of-use lease asset based on the lease liability, adjusted for any lease incentives received and any initial direct costs paid to the lessor prior to the lease commencement date. Lease expense is recognized on a straight-line basis over the lease term and recognized as research and development expense or general and administrative expense based on the underlying nature of the expense. FASB ASC Topic 842, *Leases* ("ASC 842") requires a lessee to discount its unpaid lease payments using the interest rate implicit in the lease or, if that rate cannot be readily determined, its incremental borrowing rate. The implicit interest rates were not readily determinable in the Company's current operating leases. As such, the incremental borrowing rates were used based on the information available at the commencement dates in determining the present value of lease payments.

The lease term for the Company's leases includes the non-cancellable period of the lease plus any additional periods covered by either an option to extend (or not to terminate) the lease that the Company is reasonably certain to exercise, or an option to extend (or not to terminate) the lease controlled by the lessor.

Lease payments included in the measurement of the lease liability are comprised of fixed payments, variable payments that depend on an index or rate, and amounts probable to be payable under the exercise of an option to purchase the underlying asset, if reasonably certain.

Variable payments not dependent on an index or rate associated with the Company's leases are recognized when the event, activity, or circumstance is probable. Variable payments include the Company's proportionate share of certain utilities and other operating expenses and are presented as operating expenses in the Company's condensed consolidated statements of operations and comprehensive loss in the same line item as expense arising from fixed lease payments.

Stock-Based Compensation

The Company accounts for its stock-based compensation awards in accordance with FASB ASC Topic 718, *Compensation — Stock Compensation* ("ASC 718"). The Company has issued stock-based compensation awards including stock options and restricted stock units ("RSUs"), and has also accounted for certain issuances of preferred stock and warrants in accordance with ASC 718. ASC 718 requires all stock-based payments, including grants of stock options and RSUs, to be recognized in the condensed consolidated statements of operations and comprehensive loss based on their grant date fair values. The Company uses the Black-Scholes option-pricing model to determine the fair value of stock options granted. For RSUs, the fair value of the RSU is determined by the market price of a share of the Company's common stock on the grant date. The Company recognizes forfeitures as they occur.

Expense related to stock-based compensation awards granted with service-based vesting conditions is recognized on a straight-line basis based on the grant date fair value over the associated service period of the award, which is generally the vesting term. Stock-based compensation awards generally vest over a one to three year requisite service period. Stock options have a contractual term of 10 years. Expense related to stock-based compensation awards is recorded to research and development expense or general and administrative expense based on the underlying function of the individual that was granted the stock-based compensation award. Shares issued upon stock option exercise and RSU vesting are newly-issued common shares.

Estimating the fair value of stock options requires the input of subjective assumptions, including the expected life of the stock option, stock price volatility, the risk-free interest rate, and expected dividends. The assumptions used in the Company's Black-Scholes option-pricing model represent management's best estimates and involve a number of variables, uncertainties, assumptions, and the application of management's judgment, as they are inherently subjective. If any assumptions change, the Company's stock-based compensation expense could be materially different in the future.

Recently Adopted Accounting Standards

In June 2016, the FASB issued Accounting Standards Update ("ASU") No. 2016-13, *Financial Instruments — Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. The FASB subsequently issued amendments to ASU No. 2016-13, which had the same effective date and transition date of January 1, 2023. ASU No. 2016-13, as amended, requires that credit losses be reported using an expected losses model rather than the incurred losses model that was previously used, and establishes additional disclosures related to credit risks. For available-for-sale debt securities with unrealized losses, these standards now require allowances to be recorded instead of reducing the amortized cost of the investment. These standards limit the amount of credit losses to be recognized for available-for-sale debt securities to the amount by which carrying value exceeds fair value and requires the reversal of previously recognized credit losses if fair value increases. The standard was effective for the Company on January 1, 2023. The adoption of this standard did not have a material impact on the Company's condensed consolidated financial statements.

Recent Accounting Pronouncements

In August 2020, the FASB issued ASU No. 2020-06, *Debt — Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging — Contracts in Entity's Own Equity (Subtopic 815-40)*. This standard will have an effective and transition date of January 1, 2024. Early adoption is currently permitted. This standard simplifies an issuer's accounting for convertible instruments by eliminating two of the three models that require separate accounting for embedded conversion features as well as simplifies the settlement assessment that entities are required to perform to determine whether a contract qualifies for equity classification. This standard also requires entities to use the if-converted method for all convertible instruments in the diluted earnings per share calculation and includes the effect of potential share settlement (if the effect is more dilutive) for instruments that may be settled in cash or shares, except for certain liability-classified share-based payment awards. The standard requires new disclosures about events that occur during the reporting period that cause conversion contingencies to be met and about the fair value of a public business entity's convertible debt at the instrument level, among other things. The Company does not currently expect the adoption of this standard to have a material impact on the Company's condensed consolidated financial statements.

3. Fair Value Measurements

The following table summarizes the fair value and the classification by level of input within the fair value hierarchy of financial assets that are recurring fair value measurements (in thousands):

	As of March 31, 2023			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash and cash equivalents	$ 68,259	$ —	$ —	$ 68,259
Marketable securities				
U.S. government agency securities and treasuries	—	4,478	—	4,478
Commercial paper	—	3,984	—	3,984
Total assets	$ 68,259	$ 8,462	$ —	$ 76,721

	As of December 31, 2022			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash and cash equivalents	$ 76,564	$ 999	$ —	$ 77,563
Marketable securities				
U.S. government agency securities and treasuries	—	7,433	—	7,433
Commercial paper	—	5,938	—	5,938
Total assets	$ 76,564	$ 14,370	$ —	$ 90,934

As of March 31, 2023 and December 31, 2022, the valuation of the Company's marketable securities utilized Level 2 inputs in the fair value hierarchy. See Note 2 for additional information. Further, the Company believes the fair value using Level 2

inputs of the borrowings under the EB-5 Loan Agreement (as defined in Note 8) approximates its carrying value. See Note 8 for additional information.

4. Marketable Securities

The following table provides the amortized cost basis and fair value of the Company's available-for-sale investments by security type as reflected on the condensed consolidated balance sheets (in thousands):

	As of March 31, 2023			
	Amortized Cost Basis	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. government agency securities and treasuries	$ 4,477	$ 1	$ —	$ 4,478
Commercial paper	3,984	—	—	3,984
Total marketable securities	$ 8,461	$ 1	$ —	$ 8,462

	As of December 31, 2022			
	Amortized Cost Basis	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. government agency securities and treasuries	$ 7,432	$ 1	$ —	$ 7,433
Commercial paper	5,938	—	—	5,938
Total marketable securities	$ 13,370	$ 1	$ —	$ 13,371

As of March 31, 2023 as well as December 31, 2022, the Company's marketable securities comprised of investments that mature within one year.

5. Property and Equipment

The following table provides a summary of the major components of property and equipment as reflected on the condensed consolidated balance sheets (in thousands):

	March 31, 2023	December 31, 2022
Furniture and fixtures	$ 337	$ 337
Machinery and equipment	1,783	1,685
Leasehold improvements	1,907	1,603
Construction in progress	4,712	3,049
Total property and equipment	8,739	6,674
Less: accumulated depreciation	(787)	(621)
Total property and equipment, net	$ 7,952	$ 6,053

6. Operating Leases

The Company has commitments under operating leases for office, laboratory, and future manufacturing space located in Malvern, Pennsylvania. The Company's leases have initial terms of approximately seven years and include options to extend the leases for up to 10 years. The options for extension have been excluded from the lease terms (and lease liabilities) as it is not reasonably certain that the Company will exercise such options.

The Company's future minimum base rent payments are approximately as follows (in thousands):

For the years ending December 31,	Amount
Remainder of 2023	$ 574
2024	787
2025	810
2026	834
2027	834
Thereafter	978
Total	$ 4,817
Less: present value adjustment	(856)
Present value of minimum lease payments	$ 3,961

7. Accrued Expenses and Other Current Liabilities

The following table provides a summary of the major components of accrued expenses and other current liabilities as reflected on the condensed consolidated balance sheets (in thousands):

	March 31, 2023	December 31, 2022
Research and development	$ 1,286	$ 1,894
Clinical	117	3,310
Professional fees	615	437
Employee-related	1,592	2,752
Other	2,213	1,507
Total accrued expenses and other current liabilities	$ 5,823	$ 9,900

8. Debt

In September 2016, in connection with the U.S. government's foreign national investor program, commonly known as the EB-5 Program, the Company entered into a financing arrangement (the "EB-5 Loan Agreement") which provides for cumulative borrowings of up to $10.0 million from EB5 Life Sciences, L.P. ("EB-5 Life Sciences") as the lender. Borrowings are to be utilized in the clinical development, manufacturing, and commercialization of the Company's product candidates and for the general working capital needs of the Company. Borrowings associated with the EB-5 Loan Agreement are secured by substantially all of the Company's assets, with the exception of any patents, patent applications, pending patents, patent licenses, patent sublicenses, trademarks, and other intellectual property rights held by the Company.

As of March 31, 2023, borrowings associated with the EB-5 Loan Agreement were made in $0.5 million increments. Cumulative borrowing amounts associated with the EB-5 Loan Agreement may be limited by the amount of funds raised by EB-5 Life Sciences and are also subject to certain job creation requirements by the Company. Under the terms and conditions of the EB-5 Loan Agreement, the Company borrowed $1.0 million during 2016, $0.5 million during 2020, and an additional $0.5 million in September 2022. Issuance costs are recognized as a reduction to the loan balance and are amortized to interest expense over the term of each borrowing. Subsequent to March 31, 2023, the Company borrowed an additional $0.5 million under the EB-5 Loan Agreement.

As of March 31, 2023, outstanding borrowings carry a fixed interest rate of 4.0% per annum. Pursuant to the EB-5 Loan Agreement, each outstanding borrowing, including accrued interest, becomes due upon the seventh anniversary of the disbursement date, subject to certain extension provisions. Once repaid, amounts cannot be re-drawn.

The carrying values of the EB-5 Loan Agreement borrowings as of March 31, 2023 and December 31, 2022 are summarized below (in thousands):

	March 31, 2023	December 31, 2022
Principal outstanding	$ 2,000	$ 2,000
Plus: accrued interest	327	307
Less: unamortized debt issuance costs	(13)	(18)
Carrying value, net	2,314	2,289
Less: current portion of long term debt	(1,256)	—
Long term debt, net of current portion	$ 1,058	$ 2,289

9. Equity

Offerings of Common Stock

At-the-Market Offering

In June 2022, the Company entered into an At Market Issuance Sales Agreement ("Sales Agreement") with certain agents, pursuant to which the Company could, from time to time, offer and sell shares of its common stock having an aggregate gross sales price of up to $160.0 million. The offer and sale of the shares of common stock made pursuant to the Sales Agreement were made under the Company's Registration Statement on Form S-3ASR, which was previously filed with the SEC and became automatically effective on March 22, 2021, as supplemented by a prospectus supplement, dated June 10, 2022. During the three months ended March 31, 2023, the Company sold 4.5 million shares of its common stock and received net proceeds of $5.6 million after deducting issuance costs of $0.2 million. The Sales Agreement was terminated on February 27, 2023.

Public Offering

In February 2022, the Company entered into an underwriting agreement with an underwriter, pursuant to which the Company sold 16.0 million shares of its common stock at a public offering price of $3.13 per share (the "Public Offering"). Upon the closing of the Public Offering, the Company received net proceeds of $49.8 million, after deducting equity issuance costs payable by the Company.

COVAXIN Preferred Stock Purchase Agreement

On March 1, 2021, the Company entered into a preferred stock purchase agreement with Bharat Biotech, pursuant to which the Company agreed to issue and sell 0.1 million shares of the Company's Series B Convertible Preferred Stock, par value $0.01 per share (the "Series B Convertible Preferred Stock"), at a price per share equal to $109.60, to Bharat Biotech. On March 18, 2021, the Company issued the Series B Convertible Preferred Stock as an advance payment of $6.0 million for the supply of COVAXIN to be provided by Bharat Biotech pursuant to the Supply Agreement.

Each share of Series B Convertible Preferred Stock is convertible, at the option of Bharat Biotech, into 10 shares of the Company's common stock (the "Conversion Ratio") only after (i) the Company received stockholder approval to increase the number of authorized shares of common stock under its Sixth Amended and Restated Certificate of Incorporation, which the Company received in April 2021, and (ii) the Company's receipt of shipments by Bharat Biotech of the first 10.0 million doses of COVAXIN manufactured by Bharat Biotech pursuant to the Development and Commercial Supply Agreement, and further on the terms and subject to the conditions set forth in the Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock. As of March 31, 2023, the conversion condition relating to the delivery of the first 10.0 million doses of COVAXIN had not been met. The conversion rate of the Series B Convertible Preferred Stock is subject to adjustment in the event of a stock dividend, stock split, reclassification, or similar event with respect to the Company's common stock.

The Company accounted for the issuance of the Series B Convertible Preferred Stock in accordance with ASC 718 and recorded its grant date fair value of $5.0 million within stockholders' equity during the year ended December 31, 2021, with a corresponding short-term asset for the advanced payment for the supply of COVAXIN included in prepaid expenses and other current assets in the condensed consolidated balance sheet as of December 31, 2021. The Company utilized the traded common stock price, adjusted by the Conversion Ratio, to value the Series B Convertible Preferred Stock and the Finnerty model to estimate a 15% discount rate for the lack of marketability of the instrument. The valuation incorporated Level 3 inputs in the

fair value hierarchy, including the estimated time until the instrument's liquidity and the estimated volatility of the Company's common stock as of the grant date. As of March 31, 2023 and December 31, 2022, the remaining balance of the short-term asset for the advanced payment for the supply of COVAXIN was $4.1 million.

Subsequent to March 31, 2023 and as mentioned in Note 1, the FDA announced the cancellation of EUAs issued to monovalent vaccines. Accordingly, the Company has determined it is not commercially viable to continue the development of COVAXIN in its North American territory. The Company is currently evaluating the accounting implications of the FDA's decision with respect to the short-term asset for the advanced payment for the supply of COVAXIN recorded in the condensed consolidated balance sheet, as well as the issued Series B preferred stock within stockholders' equity.

10. Warrants

Canada Warrants

In July 2021, the Company entered into a consulting agreement with regard to the Company's Canadian operations (the "Canada Consulting Agreement"). Compensation under the Canada Consulting Agreement included the issuance of warrants to purchase up to 0.2 million shares of the Company's common stock (the "Canada Warrants") and cash payments of up to $3.0 million, both dependent upon the achievement of certain milestones related to COVAXIN. The Canada Warrants were issued on July 15, 2021, have an exercise price of $6.36 per share, and were accounted for in accordance with ASC 718. The Canada Consulting Agreement terminates on July 15, 2023 and the Canada Warrants terminate on July 15, 2031, unless earlier terminated in accordance with their terms. As of March 31, 2023 and December 31, 2022, all of the Canada Warrants were outstanding and unvested. Subsequent to March 31, 2023 and as mentioned in Note 1, the FDA announced the cancellation of EUAs issued to monovalent vaccines. Accordingly, the Company has determined it is not commercially viable to continue the development of COVAXIN in its North American territory. The Company is currently evaluating the implications of the FDA's decision with respect to the Canada Consulting Agreement and the Canada Warrants.

OpCo Warrants

Beginning in 2016, OpCo issued warrants to purchase the Company's common stock (the "OpCo Warrants"). As of March 31, 2023 and December 31, 2022, 0.6 million OpCo Warrants were outstanding. As of March 31, 2023, the outstanding OpCo Warrants had a weighted-average exercise price of $6.23 per share and expire between 2026 and 2027.

11. Stock-Based Compensation

Stock-based compensation expense for stock options and RSUs is reflected in the condensed consolidated statements of operations and comprehensive loss as follows (in thousands):

	Three months ended March 31,	
	2023	2022
General and administrative	$ 1,952	$ 2,216
Research and development	737	1,083
Total	$ 2,689	$ 3,299

As of March 31, 2023, the Company had $17.8 million of unrecognized stock-based compensation expense related to stock options and RSUs outstanding, which is expected to be recognized over a weighted-average period of 2.0 years.

Equity Plans

The Company maintains two equity compensation plans, the 2014 Ocugen OpCo, Inc. Stock Option Plan (the "2014 Plan") and the Ocugen, Inc. 2019 Equity Incentive Plan (the "2019 Plan", collectively with the 2014 Plan, the "Plans"). As of March 31, 2023, the 2014 Plan and the 2019 Plan authorize for the granting of up to 0.8 million and 28.4 million equity awards with respect to the Company's common stock, respectively. In addition to stock options and RSUs granted under the Plans, the Company has granted certain stock options and RSUs as material inducements to employment in accordance with Nasdaq Listing Rule 5635(c)(4), which were granted outside of the Plans.

Stock Options to Purchase Common Stock

The following table summarizes the stock option activity:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (years)	Aggregate Intrinsic Value (in thousands)
Stock options outstanding at December 31, 2022	10,851,287	$ 2.95	8.3	$ 1,385
Granted	3,700,996	$ 1.22		
Exercised	(200,000)	$ 0.42		
Forfeited	(628,119)	$ 2.88		
Stock options outstanding at March 31, 2023	13,724,164	$ 2.53	8.5	$ 599
Stock options exercisable at March 31, 2023	5,199,957	$ 2.92	7.7	$ 322

The weighted average grant date fair values of stock options granted during the three months ended March 31, 2023 and 2022 were $1.01 and $3.61, respectively. The total fair values of stock options vested during the three months ended March 31, 2023 and 2022 were $5.6 million and $2.8 million, respectively.

RSUs

The following table summarizes the RSU activity:

	Number of Shares	Weighted Average Grant-Date Fair Value
RSUs outstanding at December 31, 2022	924,810	$ 4.12
Granted	3,043,066	$ 1.23
Vested	(217,135)	$ 4.56
Forfeited	(263,690)	$ 2.01
RSUs outstanding at March 31, 2023	3,487,051	$ 1.73

12. Net Loss Per Share of Common Stock

The following table sets forth the computation of basic and diluted earnings per share for the three months ended March 31, 2023 and 2022 (in thousands, except share and per share amounts):

	Three months ended March 31,	
	2023	2022
Net loss — basic and diluted	$ (16,498)	$ (18,019)
Shares used in calculating net loss per common share — basic and diluted	225,523,627	205,693,498
Net loss per common share — basic and diluted	$ (0.07)	$ (0.09)

The following potentially dilutive securities have been excluded from the computation of diluted weighted average shares outstanding, as their inclusion would have been antidilutive:

	Three months ended March 31,	
	2023	2022
Stock options to purchase common stock	13,724,164	14,002,454
RSUs	3,487,051	1,301,269
Warrants	798,352	3,110,655
Series A Convertible Preferred Stock (as converted to common stock)	—	3,115
Series B Convertible Preferred Stock (as converted to common stock)	547,450	547,450
Total	18,557,017	18,964,943

13. Commitments and Contingencies

Commitments

The Company has commitments under certain license and development agreements, lease agreements, debt agreements, and consulting agreements. Commitments under certain license and development agreements include annual payments, payments upon the achievement of certain milestones, and royalty payments based on net sales of licensed products (commitments under the Company's licensing agreements are more fully described within the Company's 2022 Annual Report). Commitments under lease agreements are future minimum lease payments (see Note 6). Commitments under debt agreements are the future payments of principal and accrued interest under the EB-5 Loan Agreement (see Note 8). Commitments under consulting agreements include payments upon the achievement of certain milestones related to COVAXIN (see Note 10).

Contingencies

In June 2021, a securities class action lawsuit was filed against the Company and certain of its agents in the U.S. District Court for the Eastern District of Pennsylvania ("Court") (Case No. 2:21-cv-02725) that purported to state a claim for alleged violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 (the "Exchange Act") and Rule 10b-5 promulgated thereunder, based on statements made by the Company concerning the announcement of the Company's decision to pursue the submission of a BLA for COVAXIN for adults ages 18 years and older rather than pursuing an EUA for the vaccine candidate. In July 2021, a second securities class action lawsuit was filed against the Company and certain of its agents in the Court (Case No. 2:21-cv-03182) that also purported to state a claim for alleged violations of Sections 10(b) and 20(a) of the Exchange Act and Rule 10b-5 promulgated thereunder, based on the same statements as the first complaint. The complaints seek unspecified damages, interest, attorneys' fees, and other costs. In March 2022, the Court consolidated these two related securities class action lawsuits and appointed Andre Galan Bernd Benayon to serve as lead plaintiff. The lead plaintiff's amended complaint was filed in June 2022. The Company filed a motion to dismiss the amended complaint in August 2022. The lead plaintiff's opposition to the motion to dismiss was filed in October 2022. The Company filed its reply in support of the motion to dismiss in November 2022. Oral argument on the motion to dismiss took place in January 2023. In March 2023, the Court granted the Company's motion to dismiss with prejudice. The lead plaintiff has appealed to the United States Court of Appeals for the Third Circuit regarding the order that was entered in March 2023, which dismissed the action with prejudice.

In August 2021, a stockholder derivative lawsuit was filed derivatively on behalf of the Company against certain of its agents and the nominal defendant Ocugen in the Court (Case No. 2:21-cv-03876) that purported to state a claim for breach of fiduciary duty and contribution for violations of Sections 10(b) and 21(d) of the Exchange Act, based on facts and circumstances relating to the securities class action lawsuits and seeking contribution and indemnification in connection with claims asserted in the securities class action lawsuits. In September 2021, a second stockholder derivative lawsuit was filed derivatively on behalf of the Company against certain of its agents and the nominal defendant Ocugen in the Court (Case No. 2:21-cv-04169) that purported to state a claim for breach of fiduciary duties, unjust enrichment, abuse of control, waste of corporate assets, and contribution for violations of Sections 10(b) and 21(d) of the Exchange Act, based on the same allegations as the first complaint. The parties to both stockholder derivative lawsuits stipulated to the consolidation of the two stockholder derivative lawsuits and submitted to the Court in each action a proposed order requesting a stay of the litigation pending a decision on any motion to dismiss filed in the securities class action lawsuits, which the Court entered in April 2022. In March 2023, the Court in the securities class action lawsuits granted the Company's motion to dismiss with prejudice. In March 2023, the parties to the stockholder derivative lawsuits stipulated to extend the stay of litigation pending resolution of any appeal filed in the securities class action lawsuits, which the Court entered in March 2023. As aforementioned, an appeal was filed by the lead plaintiff in the securities class action lawsuits in March 2023.

The Company believes that the lawsuits are without merit and intends to vigorously defend against them. At this time, no assessment can be made as to their likely outcome or whether the outcome will be material to the Company. No information is available to indicate that it is probable that a loss has been incurred and can be reasonably estimated as of the date of the condensed consolidated financial statements and, as such, no accrual for the loss has been recorded within the condensed consolidated financial statements.

14. **Subsequent Events**

Subsequent to March 31, 2023, the Company borrowed $0.5 million pursuant to the EB-5 Loan Agreement. Refer to Note 8 for the terms and conditions of the EB-5 borrowings.

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

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with the financial statements and the notes thereto included elsewhere in this Quarterly Report on Form 10-Q and with our audited financial statements for the year ended December 31, 2022, included in our 2022 Annual Report. Some of the information contained in this discussion and analysis, including information with respect to our plans and strategy for our business and related financing, include forward-looking statements that involve risks, uncertainties, and assumptions. These statements are based on our beliefs and expectations about future outcomes and are subject to risks and uncertainties that could cause our actual results to differ materially from anticipated results. Except as required by law, we undertake no obligation to publicly update these forward-looking statements, whether as a result of new information, future events, or otherwise. You should read the "Risk Factors" section included in our 2022 Annual Report and the "Risk Factors" and "Disclosure Regarding Forward-Looking Statements" sections of this Quarterly Report on Form 10-Q for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a biotechnology company focused on discovering, developing, and commercializing novel gene and cell therapies and vaccines that improve health and offer hope for patients across the globe.

Our cutting-edge technology pipeline includes:

- **Modifier Gene Therapy Platform** — Based on the use of NHRs, we believe our modifier gene therapy platform has the potential to address many retinal diseases, including RP, LCA, dry AMD, and Stargardt disease, with a single mutation-agnostic therapy.
- **Regenerative Medicine Cell Therapy Platform** — Our Phase 3-ready regenerative medicine cell therapy platform technology, NeoCart (autologous chondrocyte-derived neocartilage), is being developed for the repair of knee cartilage injuries in adults.
- **Vaccines** — Our vaccines platform is driven by our conviction to serve a public health concern, which requires the endorsement and support of government funding, both domestically and in licensed territories abroad, in order to develop and ultimately commercialize our vaccine candidates. Therefore, our anticipated expenses for vaccines development from the second quarter of 2023 onward will be limited until if and when we receive such government endorsement and funding, while we devote our current cash, cash equivalents, and investments to developing our modifier gene therapy platform. We are developing an inhalation-based, next generation mucosal vaccine platform to overcome the limitations of current intramuscular COVID-19 treatments, namely sustained durability and transmissibility inhibition. Our novel inhaled mucosal vaccine platform includes OCU500, a bivalent COVID-19 vaccine; OCU510, a seasonal quadrivalent flu vaccine; and OCU520, a combination quadrivalent seasonal flu and bivalent COVID-19 vaccine.
- **Novel Biologic Therapy for Retinal Diseases** — OCU200 is a novel fusion protein containing human transferrin and tumstatin. OCU200 is designed to treat DME, DR, and wet AMD.

Modifier Gene Therapy Platform

We are developing a modifier gene therapy platform designed to fulfill unmet medical needs related to retinal diseases, including IRDs, such as RP, LCA, and Stargardt disease, as well as dry AMD. Our modifier gene therapy platform is based on the use of NHRs, which have the potential to restore homeostasis — the basic biological processes in the retina. Unlike single-gene replacement therapies, which only target one genetic mutation, we believe that our modifier gene therapy platform, through its use of NHRs, represents a novel approach that has the potential both to address multiple retinal diseases caused by mutations in multiple genes with a single unique product and to address complex diseases that are potentially caused by imbalances in multiple gene networks.

IRDs, such as RP and LCA, can lead to visual impairment and blindness. RP and LCA are associated with over 125 mutated genes that affect approximately 1.6 million individuals worldwide. We believe that OCU400 has the potential to be broadly effective in restoring retinal integrity and function across a range of genetically diverse IRDs, including RP and LCA. OCU400 has received ODD from the FDA and OMPD from the EC for the treatment of RP and LCA. We believe these broad ODD and OMPD designations demonstrate that OCU400 has the potential to be a broad-spectrum therapeutic to treat multiple IRDs. These ODD and OMPD designations represent gene-agnostic broad coverage for RP and LCA and are not mutation-specific designations.

We are conducting a Phase 1/2 trial to assess the safety and efficacy of unilateral subretinal administration of OCU400 in patients with *NR2E3* and *RHO*-related *RP* and *CEP290*-related LCA in the United States. We have completed dosing patients with RP in the dose-escalation portion of the trial, which enrolled 10 patients to receive a low, medium, or high dose of OCU400 in the subretinal space. Additionally, we have completed dosing eight patients with RP in the dose-expansion portion of the trial and are continuing to enroll patients with LCA to receive the high dose, which was determined to be the maximum tolerable dose from the dose-escalation portion of the trial. In April 2023, we announced positive preliminary data among RP patients treated in the first two cohorts of the Phase 1/2 trial. In Cohorts 1 and 2 of the trial, seven participants with severe vision impairment due to RP associated with the *RHO* and *NR2E3* gene mutations received a unilateral subretinal injection of either a low dose (1.66×10^{10} vg/mL) or a medium dose (3.33×10^{10} vg/mL) of OCU400, respectively. In the preliminary data analysis, the nine-month follow-up data for three patients and six-month follow-up data for four patients were evaluated. The preliminary results showed a favorable safety profile and visual improvements after treatment with OCU400 as measured by MLMT and BCVA. Over 70% of OCU400 treated eyes in low and medium dose cohorts demonstrated at least one Lux luminance level improvement in MLMT score and 66.7% of OCU400 treated eyes in the low dose cohort at the nine-month follow-up demonstrated at least two Lux luminance level improvement in MLMT score. Over 40% of OCU400 treated eyes demonstrated 8-11 letters of improvement as measured in BCVA score. In March 2023, the FDA approved the enrollment of pediatric patients in the ongoing Phase 1/2 trial for the treatment of RP and LCA and we intend to dose pediatric patients in the second quarter of 2023. Additionally, we intend to initiate a Phase 3 trial for OCU400 for the treatment of RP and LCA near the end of 2023, subject to discussions with the FDA.

We are also developing OCU410 and OCU410ST utilizing the nuclear receptor genes *RORA* for the treatment of dry AMD and Stargardt disease, respectively. OCU410 is a potential one-time, curative therapy with a single sub-retinal injection. OCU410ST has received ODD from the FDA for the treatment of *ABCA4*-associated retinopathies, including Stargardt disease. We intend to submit IND applications in the second quarter of 2023 to initiate Phase 1/2 trials.

Regenerative Medicine Cell Therapy Platform

NeoCart is a Phase 3-ready, regenerative medicine cell therapy technology that combines breakthroughs in bioengineering and cell processing to enhance the autologous cartilage repair process. NeoCart is a three-dimensional tissue-engineered disc of new cartilage that is manufactured by growing chondrocytes, the cells responsible for maintaining cartilage health. The chondrocytes are derived from the patient on a unique scaffold. In this therapy, healthy cartilage tissue is grown and implanted in the patient. Cartilage defects often lead to osteoarthritis if left untreated. Current surgical and nonsurgical treatment options are limited in their efficacy and durability. NeoCart has the potential to accelerate healing, reduce pain, and provide regenerative native-like cartilage strength with durable benefits post transplantation. The FDA granted a RMAT designation to NeoCart for the repair of full-thickness lesions of knee cartilage injuries in adults. Additionally, we received concurrence from the FDA on the confirmatory Phase 3 trial design. We are renovating an existing facility into a current GMP facility in accordance with the FDA's regulations in support of NeoCart manufacturing for personalized Phase 3 trial material. We intend to initiate the Phase 3 trial in 2024.

Vaccines

Our vaccines platform is driven by our conviction to serve a public health concern, which requires the endorsement and support of government funding, both domestically and in licensed territories abroad, in order to develop and ultimately commercialize our vaccine candidates. Therefore, our anticipated expenses for vaccines development from the second quarter of 2023 onward will be limited as we devote our current cash, cash equivalents, and investments to developing our modifier gene therapy platform. We are refocusing our efforts to develop an inhalation-based, next generation platform to overcome the limitations of current intramuscular COVID-19 treatments, namely sustained durability and transmissibility inhibition. While we continue to incur expenses for the development of our inhaled mucosal vaccine platform to achieve IND readiness, any additional development will be reliant on government funding.

Inhaled Mucosal Vaccines

We are developing a novel inhaled mucosal vaccine platform, which includes OCU500, a bivalent COVID-19 vaccine; OCU510, a seasonal quadrivalent flu vaccine; and OCU520, a combination quadrivalent seasonal flu and bivalent COVID-19 vaccine. As these vaccine candidates are being developed to be administered through inhalation, we believe they have the potential to generate rapid local immunity in the upper airways and lungs where viruses enter and infect the body, which we believe may help reduce or prevent infection and transmission as well as provide protection against new virus variants. We intend to submit an IND application near the end of 2023 or in early 2024 and we are continuing to work closely with government agencies to obtain funding for the development of these inhaled mucosal vaccines.

Intramuscular COVID-19 Vaccine

In April 2023, the FDA announced the cancellation of EUAs issued to monovalent vaccines and the simplification of the vaccination schedule of bivalent vaccines that have EUAs in the United States. Accordingly, we have determined it is not commercially viable to continue the development of COVAXIN in our North American territory and consequently, will focus our efforts on the development of the inhaled mucosal bivalent vaccines.

Novel Biologic Therapy for Retinal Diseases

We are developing OCU200, which is a novel fusion protein containing parts of human transferrin and tumstatin. OCU200 is designed to treat DME, DR, and wet AMD. We have completed the technology transfer of manufacturing processes to our CDMO and have produced trial materials to initiate a Phase 1 trial. We submitted an IND application to the FDA in February 2023 to initiate a Phase 1 trial targeting DME. In April 2023, the FDA placed our IND application for the Phase 1 trial on clinical hold as part of the FDA's request for additional information related to CMC prior to initiating the Phase 1 trial. We intend to work with the FDA and provide requested information as promptly as possible, and do not currently expect the clinical hold to impact the anticipated overall timing of the OCU200 clinical development program.

Results of Operations

Comparison of the Three Months Ended March 31, 2023 and 2022

The following table summarizes the results of our operations for the three months ended March 31, 2023 and 2022 (in thousands):

	Three months ended March 31,		
	2023	2022	Change
Operating expenses			
Research and development	$ 9,558	$ 7,915	$ 1,643
General and administrative	8,193	10,119	(1,926)
Total operating expenses	17,751	18,034	(283)
Loss from operations	(17,751)	(18,034)	283
Other income (expense), net	1,253	15	1,238
Net loss	$ (16,498)	$ (18,019)	$ 1,521

Research and development expense

Research and development expense increased by $1.6 million for the three months ended March 31, 2023 compared to the three months ended March 31, 2022. The increase was primarily due to increases of $1.0 million in employee-related expenses excluding stock based compensation expense, $0.9 million in technical service costs related to the development of our modifier gene therapy platform, $0.5 million related to our novel inhaled mucosal vaccine platform, which is driven by preclinical activities, and $0.3 million related to COVAXIN, which is driven by an increase in clinical expenses and is offset by a decrease in costs related to CMC activities. These increases were partially offset by a decrease of $1.2 million in expenses related to OCU200, which is driven by preclinical activities.

General and administrative expense

General and administrative expense decreased by $1.9 million for the three months ended March 31, 2023 compared to the three months ended March 31, 2022. The decrease was primarily due to decreases of $1.5 million in professional services and $0.8 million in pre-commercialization activities. These decreases were partially offset by an increase of $0.4 million in employee-related expenses.

Other income (expense), net

Other income (expense), net increased by $1.2 million for the three months ended March 31, 2023 compared to the three months ended March 31, 2022. The increase was primarily due to $0.7 million in interest earned on our cash, cash equivalents, and investments balance.

Liquidity and Capital Resources

As of March 31, 2023, we had $76.7 million in cash, cash equivalents, and investments. We have not generated revenue from our product candidates to date, and have primarily funded our operations to date through the sale of common stock, warrants to purchase common stock, the issuance of convertible notes and debt, and grant proceeds. Since our inception and through March 31, 2023, we have raised an aggregate of $285.5 million to fund our operations, of which $272.3 million was from gross proceeds from the sale of our common stock and warrants, $10.3 million was from the issuance of convertible notes, $2.7 million was from the issuance of debt, and $0.2 million was from grant proceeds.

During the three months ended March 31, 2023, we sold 4.5 million shares of our common stock pursuant to the Sales Agreement and received net proceeds of $5.6 million after deducting equity issuance costs of $0.2 million.

Since our inception, we have devoted substantial resources to research and development and have incurred significant net losses and may continue to incur net losses in the future. We incurred net losses of approximately $16.5 million and $18.0 million for the three months ended March 31, 2023 and 2022, respectively. As of March 31, 2023, we had an accumulated deficit of $229.5 million. In addition, we had accounts payable and accrued expenses and other current liabilities of $13.9 million and indebtedness of $2.3 million.

The following table shows a summary of our cash flows for the three months ended March 31, 2023 and 2022 (in thousands):

	Three months ended March 31,	
	2023	2022
Net cash used in operating activities	$ (18,240)	$ (15,066)
Net cash provided by (used in) investing activities	3,441	(223)
Net cash provided by financing activities	5,496	50,102
Effect of changes in exchange rate on cash, cash equivalents, and restricted cash	(1)	—
Net (decrease) increase in cash, cash equivalents, and restricted cash	$ (9,304)	$ 34,813

Operating activities

Cash used in operating activities was $18.2 million for the three months ended March 31, 2023 compared to $15.1 million for the three months ended March 31, 2022. The increase in cash used in operating activities was primarily driven by increases in our operating expenses related to the continued development of our product candidates and employee-related expenses. These increases were partially offset by decreases in professional services and pre-commercialization activities.

Investing activities

Cash provided by investing activities was $3.4 million for the three months ended March 31, 2023 compared to cash used in investing activities of $0.2 million for the three months ended March 31, 2022. The increase in cash provided by investing activities was primarily driven by gross proceeds of $9.0 million from the maturities of marketable securities, classified as available-for-sale, during the three months ended March 31, 2023. This increase was partially offset by purchases of $3.9 million of marketable securities, classified as available-for-sale, during the three months ended March 31, 2023 and an increase of $1.4 million in purchases of property and equipment during the three months ended March 31, 2023.

Financing activities

Cash provided by financing activities was $5.5 million for the three months ended March 31, 2023 compared to $50.1 million for the three months ended March 31, 2022. During the three months ended March 31, 2023, cash provided by financing activities primarily consisted of gross proceeds of $5.7 million received pursuant to the Sales Agreement, partially offset by payments of equity issuance costs of $0.2 million. During the three months ended March 31, 2022, cash provided by financing activities primarily consisted of gross proceeds of $50.0 million received from the underwritten offering that closed in February 2022.

Contractual Obligations

We have commitments under certain licensing and development agreements, lease obligations, debt agreements, and consulting agreements. There have been no material changes to our contractual obligations as reported in our 2022 Annual Report.

Funding requirements

We expect to continue to incur significant expenses in connection with our ongoing activities, particularly as we continue research and development, including preclinical and clinical development of our product candidates; prepare to manufacture our product candidates; prepare for the potential commercialization of our product candidates; add operational, financial, and information systems to execute our business plan; maintain, expand, and protect our patent portfolio; explore strategic licensing, acquisition, and collaboration opportunities to expand our product candidate pipeline to support our future growth; expand headcount to support our development, commercialization, and business efforts; and operate as a public company.

Factors impacting our future funding requirements include, without limitation, the following:

- the initiation, progress, timing, costs, and results of clinical trials for our product candidates;
- the outcome, timing, and cost of the regulatory approval process for our product candidates;
- the costs of manufacturing and commercialization;
- the costs related to doing business internationally with respect to the development and commercialization of our product candidates;
- the cost of filing, prosecuting, defending, and enforcing our patent claims and other intellectual property rights;
- the cost of defending intellectual property disputes, including patent infringement actions brought by third parties against us;
- the costs of expanding infrastructure to support our development, commercialization, and business efforts, including the costs related to the development of a laboratory and manufacturing facility;
- the costs involved in recruiting and retaining skilled personnel;
- the extent to which we in-license or acquire other products, product candidates, or technologies;
- the extent to which we out-license our product candidates; and
- the impact of geopolitical turmoil, macroeconomic conditions, social unrest, political instability, terrorism, or other acts of war.

As of March 31, 2023, we had cash, cash equivalents, and investments of approximately $76.7 million. This amount will not meet our capital requirements over the next 12 months. We believe that our cash, cash equivalents, and investments will enable us to fund our operations into the first quarter of 2024. Due to the inherent uncertainty involved in making estimates and the risks associated with the research, development, and commercialization of biotechnology products, we may have based this estimate on assumptions that may prove to be wrong, and our operating plan may change as a result of many factors currently unknown to us. We will need to raise significant additional capital in order to fund our operations until we recognize significant revenue from product sales. Our management is currently evaluating different strategies to obtain the funding required for our future operations. These strategies may include, but are not limited to: public and private placements of equity and/or debt, payments from potential strategic research and development arrangements, sales of assets, licensing and/or collaboration arrangements with pharmaceutical companies or other institutions, funding from the government, particularly for the development of our novel inhaled mucosal vaccine platform, or funding from other third parties. Our ability to secure funding is subject to numerous risks and uncertainties, including, but not limited to the impact of the COVID-19 pandemic, geopolitical turmoil, including the ongoing invasion of Ukraine by Russia, and the impact of inflation and as a result, there can be no assurance that these funding efforts will be successful. If we cannot obtain the necessary funding, we will need to delay, scale back, or eliminate some or all of our research and development programs and commercialization efforts; consider other various strategic alternatives, including a merger or sale; or cease operations. If we cannot expand our operations or otherwise capitalize on our business opportunities because we lack sufficient capital, our business, financial condition, and results of operations could be materially adversely affected.

As a result of these factors, together with the anticipated increase in spending that will be necessary to continue to research, develop, and commercialize our product candidates, there is substantial doubt about our ability to continue as a going concern within one year after the date that the condensed consolidated financial statements included in this Quarterly Report on Form 10-Q are issued.

Off-Balance Sheet Arrangements

We did not have any off-balance sheet arrangements during the periods presented, and we do not currently have any off-balance sheet arrangements as defined in the rules and regulations of the SEC.

Critical Accounting Policies and Significant Judgments and Estimates

The preparation of financial statements in conformity with GAAP requires us to make judgments, estimates, and assumptions in the preparation of our condensed consolidated financial statements. Actual results could differ from those estimates. There have been no material changes to our critical accounting policies and estimates as reported in our 2022 Annual Report.

Recently Adopted Accounting Pronouncements

For a discussion of recently adopted accounting pronouncements, see Note 2 in the notes to the condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Other Company Information

None.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

Not applicable.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

We have carried out an evaluation, under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act), as of March 31, 2023. Based upon this evaluation, our principal executive officer and principal financial officer concluded that, as of the end of the period covered by this report, our disclosure controls and procedures are effective in ensuring that (a) the information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms, and (b) such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosures. In designing and evaluating our disclosure controls and procedures, our management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and our management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the period covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings.

For a discussion of legal proceedings, see Note 13 in the notes to the condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Item 1A. Risk Factors.

Except as set forth below, there have been no material changes in our risk factors as previously disclosed in our 2022 Annual Report. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also materially adversely affect our business, financial condition, or future results.

Our failure to meet the continued listing requirements of The Nasdaq Capital Market ("Nasdaq") could result in a delisting of our common stock.

We must continue to satisfy Nasdaq continued listing requirements, including, among other things, certain corporate governance requirements and a minimum closing bid price requirement of $1.00 per share. If a company fails for 30 consecutive business days to meet the $1.00 minimum closing bid price requirement, Nasdaq will send a deficiency notice to the company, advising that it has been afforded a "compliance period" of 180 calendar days to regain compliance with the applicable requirements.

On May 1, 2023, we received a deficiency letter from Nasdaq notifying us that, for the last 30 consecutive business days, the closing bid price for our common stock was below the minimum $1.00 per share required for continued listing on Nasdaq pursuant to the minimum closing bid price requirement. The Nasdaq deficiency letter had no immediate effect on the listing of our common stock. In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we have been given 180 calendar days, or until October 30, 2023, to regain compliance with the minimum closing bid price requirement by causing our stock to close above $1.00 for a minimum of 10 consecutive trading days. If we do not regain compliance with the minimum closing bid price requirement by October 30, 2023, we may be afforded a second 180 calendar day period to regain compliance. To qualify, we would be required to meet the continued listing requirement for market value of publicly held shares and all other initial listing standards for Nasdaq, except for the minimum bid price requirement. In addition, we would be required to notify Nasdaq of our intent to cure the deficiency during the second compliance period.

We can provide no assurance that we will be able to regain compliance with the minimum closing bid price requirement by October 30, 2023, or by any date, or that we will be able to remain in compliance with other Nasdaq continued listing requirements. A delisting of our common stock from Nasdaq could materially reduce the liquidity of our common stock, impairing your ability to sell or purchase shares of our common stock when you wish to do so, and could result in a corresponding material reduction in the price of our common stock. In addition, delisting could harm our ability to raise capital through alternative financing sources on terms acceptable to us, or at all, and may result in the potential loss of confidence by investors and employees. In the event of a delisting, we can provide no assurance that any action taken by us to restore compliance with listing requirements would allow the common stock to become listed again, stabilize the market price or improve the liquidity of the common stock, prevent the common stock from dropping below the Nasdaq minimum bid price requirement, or prevent future non-compliance with Nasdaq's listing requirements.

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

During the period covered by this Quarterly Report on Form 10-Q, there were no sales by us of unregistered securities or purchases of equity securities by us that were not previously reported by us in a Current Report on Form 8-K.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

None.

Item 6. Exhibits.

The exhibits listed below are filed or incorporated by reference in this Quarterly Report on Form 10-Q:

Exhibit	Description
10.1#	First Amendment to the Exclusive License Agreement by and between the Registrant and The Washington University, dated as of January 31, 2023 (filed as Exhibit 10.23 to the Registrant's Annual Report on Form 10-K as filed on February 28, 2023, and incorporated herein by reference)
10.2*+	Executive Employment Agreement, dated as of January 13, 2023, by and between the Registrant and Quan Vu
31.1*	Certification of the Chief Executive Officer, as required by Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of the Chief Financial Officer, as required by Section 302 of the Sarbanes-Oxley Act of 2002
32.1**	Certifications of the Chief Executive Officer and Chief Financial Officer as required by 18 U.S.C. 1350
101.INS*	Inline XBRL Instance 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	The cover page from this Quarterly Report on Form 10-Q, formatted in Inline XBRL

* Filed herewith.

** Furnished herewith.

Portions of this exhibit have been omitted pursuant to Item 601(b)(10)(iv) of Regulations S-K.

+ Indicates a management contract or compensatory plan or arrangement.

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.

Ocugen, Inc.

Dated: May 5, 2023

/s/ Shankar Musunuri

Shankar Musunuri, Ph.D., MBA
Chairman, Chief Executive Officer, & Co-Founder
(Principal Executive Officer)

Dated: May 5, 2023

/s/ Quan Vu

Quan Vu
Chief Financial Officer / Chief Business Officer
(Principal Financial Officer)

Exhibit 10.2

EXECUTIVE EMPLOYMENT AGREEMENT

THIS EXECUTIVE EMPLOYMENT AGREEMENT (this "***Agreement***") is made as of January 13, 2023 (the "***Effective Date***") by and between Ocugen, Inc., a Delaware corporation (the "***Company***"), and Quan Vu, an individual ("***Employee***").

The Company wishes to employ Employee, and Employee wishes to be employed by the Company with an employment starting date of February 1, 2023. The parties have determined it is in their best interests to enter into this Agreement to set forth the terms and conditions of Employee's employment with the Company.

AGREEMENT

NOW, THEREFORE, in consideration of the facts, mutual promises and covenants contained herein and intending to be legally bound hereby, the Company and Employee agree as follows:

1. Definitions. As used herein, the following terms shall have the meanings set forth below unless the context otherwise requires:

"***Affiliates***" means, with respect to a person, all other persons controlling, controlled by or under common control with the first person; the term "control," and correlative terms, means the power, whether by contract, equity ownership or otherwise, to direct the policies or management of a person; and "person" means an individual, partnership, corporation, limited liability company, trust or unincorporated organization, or a government or agency or political subdivision thereof.

"***Base Compensation***" shall mean the annual rate of compensation set forth in Section 4.1, as such amount may be adjusted from time to time.

"***Board***" shall mean the Company's Board of Directors.

"***Cause***" shall mean the occurrence of any one or more of the events set forth below in clauses (a) through (d), which, in the case of the event or events set forth below in clause (a) is not cured by Employee within the time periods set forth therein:

(a) failure or refusal by Employee to substantially perform a material portion of the duties of Employee's employment or to comply with the written rules and policies of the Company (of which Employee has been made aware) which failure continues uncured thirty (30) days after receiving written notice of such failure or refusal (or such longer period as is necessary to cure such event so long as Employee is diligently pursuing such cure and provided such additional period is approved by the Board) is provided to Employee setting forth in reasonable detail the nature of such failure or refusal. For clarity, failure to close any deal(s) through no fault of Employee shall not be deemed a failure to substantially perform;

(b) Employee's repeatedly engaging in willful and serious misconduct in connection with Employee's employment;

(c) engagement by Employee in fraudulent conduct; or

(d) Employee's conviction of, or plea of no contest to, a felony or other crime the circumstances of which are substantially related to the Employee's position.

"***Change of Control***" shall mean (i) the closing of the sale, transfer or other disposition of all or substantially all of the Company's assets, (ii) the acquisition by any person or group of persons in any transaction or series of related transactions of direct or indirect beneficial ownership (within the meaning of Section 13(d) of the Securities Exchange Act of 1934), other than the Current Holders of Securities of the Company, of the power, directly or indirectly, to vote or direct the voting of securities having more than 50% of the ordinary voting power for the election of directors of the Company, (iii) the consummation of the merger or consolidation of the Company with or into another entity (except a merger or consolidation in which the holders of capital stock of the Company immediately prior to such merger or consolidation continue to hold not less than fifty percent (50%) of the voting power of the capital stock of the Company or the surviving or acquiring entity immediately following such merger or consolidation), or (iv) a liquidation, dissolution or winding up of the Company; provided, however, that a transaction shall not constitute a Change of Control if the Change of Control is the result of an equity or debt financing, or if its sole purpose is to change the state of the Company's incorporation or to create a holding company that will be owned in substantially the same proportions by the persons who held the Company's securities immediately prior to such transaction.

"***Current Holders of Securities of the Company***" shall mean the current holders of issued and outstanding "Securities" of the Company, their "Affiliates" (as such terms are defined herein), and their respective employees, officers, directors, blood or legal relatives, guardians, legal representatives, and trusts for the primary benefit of any of such persons.

"***Disability***" shall mean Employee's inability, for a period of six (6) consecutive months, or a cumulative period of one hundred eighty (180) business days out of a period of twelve (12) consecutive months, to perform the essential duties of Employee's position, even after taking into account any reasonable accommodation required by law, due to a mental or physical impairment. The determination of whether Employee is suffering from a Disability shall be made either (a) by an independent physician, mutually chosen by Employee and the Company; or (b) because Employee qualifies as disabled for purposes of the Company's long term insurance disability plan, if applicable.

"***Good Reason***" shall mean the occurrence of one or more of the events set forth in clauses (a) through (e) below without the prior written consent of Employee, provided that (i) Employee delivers written notice to the Company of Employee's intention to resign from employment due to one or more of such events, which notice specifies in reasonable detail the circumstances claimed to provide the basis for such resignation, (ii) such event or events are not cured by the Company within thirty (30) days following the initial occurrence of such event and specifies in reasonable detail the circumstances claimed to provide the basis for such resignation and (iii) if not cured by the Company, Employee resigns their employment within fifteen (15) days following the Company's cure period:

(a) a reduction in Employee's annual rate of Base Compensation unless such reduction is made across all executives or employees of the Company;

(b) a termination or material reduction of a material benefit under any Company benefit plans, programs or arrangements, in which the Employee participates unless such termination or reduction is made across all executives or employees of the Company;

(c) a material reduction in Employee's job title, powers or authority;

(d) a change in reporting structure to anyone other than the current CEO;

(e) the Company's material failure to comply with the terms of this Agreement or any stock option or similar agreement with Employee then in effect;

(f) the requirement by the Company that Employee relocate or transfer Employee's principal office to a location more than 30 miles, which is the Company's headquarters in Malvern, Pennsylvania (except that the requirement to travel in Section 2.3 shall not trigger this subsection (e)).

"***Proceeding***" shall have the meaning set forth in Section 8 hereof.

"***Severance Period***" shall mean a period of twelve (12) months immediately following the effective date of termination of Employee's employment hereunder if such termination is by the Company without Cause or by Employee for Good Reason.

"***Securities***" means any and all securities as such term is defined in Section 2 of the Securities Act of 1933, as amended, including, without limitation, all common stock, preferred stock, convertible promissory notes, subordinated debt instruments, and other securities issued by the Company.

"***Term***" shall have the meaning set forth in Section 3 hereof.

2. Contingent Employment; Employment and Duties.

2.1 Company hereby employs Employee and Employee hereby accepts employment as the Company's Chief Business Officer, reporting to the Chief Executive Officer, ("***CEO***") of the Company.

2.2 Employee shall render such services as are necessary and desirable to protect and advance the best interests of the Company, acting, in all instances, under the supervision of the CEO and in accordance with the policies set by the Company, of which Employee has been made aware.

2.3 So long as Employee shall remain an employee of the Company, except as provided below, Employee's entire working time, energy, skill and efforts shall be devoted to the performance of Employee's duties hereunder in a manner that will faithfully and diligently further the business and interests of the Company; provided, however, that Employee may (i) serve on corporate, civic or charitable boards or committees; (ii) deliver lectures, fulfill speaking engagements or teach at educational institutions; (iii) manage personal passive investments; or (iv) undertake such other endeavors as may be consented to by the CEO. Employee may be required to travel for up to 40% of Employee's working time.

3. Term. Employee's employment under this Agreement shall commence on February 1, 2023 and shall continue until such employment is terminated pursuant to Section 6 (the "***Term***").

4. Compensation and Benefits.

4.1. Employee shall receive base compensation at the gross annual rate (without regard to authorized tax or other legally required deductions and withholdings) of $425,000, payable in installments in accordance with the Company's regular payroll practices in effect.

Employee shall also receive a relocation bonus at the gross annual rate (without regard to authorized tax or other legally required deductions and withholdings) of $45,000.00. The relocation bonus is payable to the Company in full should the Employee leave within the first six months of his start date, and 50% should the Employee leave after six months but before the Employee's one-year anniversary date. The Company reserves the right to make any appropriate deduction from outstanding salary which may be due to Employee, and to have a right of action against Employee for the balance.

For each calendar year ending during the Term, Employee will have the opportunity to earn an annual bonus with a target amount not less than 45% of the Employee's Base Compensation for the applicable year (the "Target Bonus"). The actual bonus payable to Employee, if any, may be more or less than the Target Bonus and will be determined by the Compensation Committee, based on the achievement of corporate and/or personal objectives, recommendation by the CEO and such other factors as the Compensation Committee may deem relevant. Any annual bonus so awarded shall be paid by February 28th of each year for the Employee's performance in the previous year (the "Measuring Year"). To be eligible for an annual bonus, the Employee must be employed on February 28th of the year following the Measuring Year. Employee will receive no less than a pro rata bonus for his services in calendar year 2023, assuming the Company and Employee's bonus criteria are met.
As soon as practicable following the employment start date, and subject to the approval of the Compensation Committee of the Board of Directors, Employee will be granted the following awards:

4.1.1. A restricted stock unit award (the "RSU Award") for 163,934 shares of common stock. Subject to Employee's continued employment with the Company, the RSU Award will vest in three equal annual installments on each anniversary of the Grant Date over the three (3) year period.

4.1.2. An option to purchase 196,850 shares of the Company's common stock (the "Option Award"). Subject to Employee's continued employment with the Company, the Option Award will vest in three equal annual installments on each anniversary of the Grant Date over the three (3) year period

Both the RSU Awards and the Option Award may be in the form of an "inducement" material to Employee's entry into employment with the Company within the meaning of Rule 5635(c)(4) of the NASDAQ Marketplace Rules, and may be granted outside of the Company's 2019 Equity Incentive Plan (the "Plan") pursuant to award agreements, but will be governed in all respects as if issued under the Plan.

5. Fringe Benefits. Employee shall be entitled to the benefits set forth below for so long as Employee's employment with the Company continues:

5.1. The Company will reimburse Employee for all reasonable and necessary expenses incurred by Employee on behalf or for the benefit of the Company upon receipt of documentation therefor in accordance with the Company's regular reimbursement procedures and practices in effect from time to time. The Company from time to time may require prior approval for individual expense items in excess of pre-established aggregate amounts – made known to Employee – for a fixed period or in excess of pre-established amounts – made known to Employee – for any type of expenditure during any fixed period.

5.2. Upon Employee's achieving the eligibility requirements therefor, if any, Employee will be eligible to participate in all applicable and established Company benefit plans, programs and arrangements that may exist from time to time (including, without limitation, pension, profit sharing, 401(k) plans, and medical and life insurance programs) on the same terms as apply generally to other similarly situated employees of the Company from time to time. Employee shall be entitled to vacation, sick and other personal time off (PTO) in accordance with the Company's applicable employee handbook or policies.

6. Termination; Payments to Employee.

6.1. If Employee dies or suffers a Disability during the Term, the Employee's employment with the Company shall terminate as of the date of death or Disability.

6.2. Subject to Sections 6.4 and 6.5 below, either Employee or the Company may terminate this Agreement and Employee's employment hereunder immediately upon written notice to the other party.

6.3. If Employee's employment terminates for any reason, Employee (or their estate in the event of Employee's death) shall be entitled to receive a lump sum cash payment equal to the sum of the following: (i) payment of accrued but unpaid Base Compensation up to the date of termination, and any earned but unused paid vacation through the date of termination, if any, (ii) any annual bonus, earned but unpaid for the previous calendar year, if applicable, and (iii) unreimbursed business expenses covered by Section 5.1 hereof.

6.4. In addition to the amounts to be paid to Employee in accordance with the provisions of Section 6.3 above, and except as otherwise provided in Section 6.5, if Employee's employment is terminated (i) by the Company without Cause or (ii) by Employee for Good Reason, then subject to Section 6.6, Employee shall be entitled to receive the following (collectively, (A) and (B) the "***Severance Payment***"): (A) for the duration of the Severance Period, Employee's then current Base Compensation minus any applicable taxes, and other withholdings, payable in accordance with the Company's standard payroll practices; and (B) from the commencement of the Severance Period until the earlier of the expiration of the Severance Period or such date as Employee may be eligible for health insurance coverage under another employer's or a spouse's employer's health plan, the Company will pay the full employer portion of Employee's COBRA premium for any applicable health or dental insurance, if Employee is eligible to elect COBRA continuation coverage.

6.5. If Employee's employment is terminated (i) by the Company without Cause or (ii) by Employee for Good Reason, in either case within twelve (12) months after or three (3) months before a Change of Control, Employee shall be entitled to receive the following (collectively, (A), (B), (C) and (D) the "***Change of Control Severance Payment***"), in lieu of the Severance Payment described in Section 6.4 and in addition to the amounts to be paid to Employee in accordance with the provisions of Section 6.3 above: (A) for the duration of the Severance Period, Employee's then current Base Compensation minus any applicable taxes, and other withholdings, payable in accordance with the Company's standard payroll practices; (B) from the commencement of the Severance Period until the earlier of the expiration of the Severance Period or such date as Employee may be eligible for health insurance coverage under another employer's or a spouse's employer's health plan, the Company will pay the full employer's portion of COBRA premium for any applicable health or dental insurance, if Employee is eligible to elect COBRA continuation coverage; (C) 75% of Employee's then-current Target Bonus payable in a lump sum; and (D) all unvested restricted stock, stock options and other equity incentives awarded to the Employee by the Company will become immediately and automatically fully vested and exercisable (as applicable).

6.6. Employee shall not be entitled to receive the Severance Payment or Change of Control Severance Payment unless and until Employee executes, and does not revoke as permitted by law, a release in a form reasonably acceptable to the Company that unconditionally releases, waives, and fully and forever discharges the Company and its past and current shareholders, directors, officers, employees, and agents from and against any and all claims, liabilities, obligations, covenants, rights, demands and damages of any nature whatsoever, whether known or unknown, anticipated or unanticipated, including without limitation, any claims relating to or arising out of Employee's employment with the Company, claims arising under the Age Discrimination in Employment Act of 1967, as amended, Title VII of the Civil Rights Act of 1964, as amended, or the Civil Rights Act of 1991, or claims arising under the applicable state fair employment laws, but excluding any rights of Employee under any remaining stock option agreements (if any) or other agreements relating to equity in the Company and Employee's right to indemnification from the Company in respect of Employee's services as a director, officer or employee of the Company or any of its Affiliates. The release shall also contain customary non- disparagement covenants by Employee. Employee's right to receive the Severance Payment or Change of Control Severance Payment is conditioned upon Employee's performance of the obligations and covenants contained in this Employment Agreement, the Covenants Agreements (as defined below) and any other agreement between Employee and the Company. In the event of any material breach of any such obligations during or after payment of the Severance Payment or Change of Control Severance Payment, the Company may cease to make any remaining payments.

6.7. Notwithstanding anything in this Agreement to the contrary, all payments to be made upon a termination of employment under this Agreement will only be made upon a "separation from service" within the meaning of Section 409A of the Internal Revenue Code of 1986 (the "***Code***"). To the maximum extent permitted under Section 409A of the Code and its corresponding regulations, the cash severance benefits payable under this Agreement are intended to meet the requirements of the short-term deferral exemption under Section 409A of the Code and the "separation pay exception" under Treas. Reg. §1.409A-1(b)(9)(iii). For purposes of the application of Treas. Reg. § 1.409A-1(b)(4) (or any successor provision), each payment in a series of payments to Employee will be deemed a separate payment. In addition, to the extent compliance with the requirements of Treas. Reg. § 1.409A-3(i)(2) (or any successor provision) is necessary to avoid the application of an additional tax under Section 409A of the Code to payments due to Employee upon or following Employee's "separation from service", then notwithstanding any other provision of this Agreement (or any otherwise applicable plan, policy, agreement or arrangement), any such payments that are otherwise due within six months following the Employee's "separation from service" will be deferred without interest and paid to Employee in a lump sum immediately following such six month period. This paragraph should not be construed to prevent the application of Treas. Reg. § 1.409A-1(b)(9)(iii) (or any successor provision) to amounts payable hereunder. For purposes of the application of Section 409A of the Code, each payment in a series of payments will be deemed a separate payment.

7. Nonsolicitation; Confidential Information, etc.

7.1. Employee acknowledges and agrees that Employee is bound by the Employee Nondisclosure and Business Ideas Agreement dated as of Employee's commencement of employment (the "***Covenants Agreements***"), which shall continue in full force and effect.

8. Indemnification. Subject to the Company's Articles of Incorporation and By-laws, the Company shall indemnify Employee to the fullest extent permitted by law against all costs, expenses, liabilities and losses (including, without limitation, attorneys' fees, judgments, fines, penalties, and amounts paid in settlement) reasonably incurred by Employee in connection with any "Proceeding" (as defined herein). For the purposes of this Section 8, a "***Proceeding***" shall mean any action, suit or proceeding, whether civil, criminal, administrative or investigative, in which Employee is made, or is threatened to be made, a party to, or a witness in, such action, suit or proceeding by reason of the fact that Employee is or was an officer, director or employee of the Company or is or was serving as an officer, director, member, employee, trustee or agent of any other entity at the request of the Company.

9. Golden Parachute Tax Provisions.

9.1. In the event that the Company or any of their Affiliates undergoes a Change of Control prior to the time that it (or any Affiliate that would be treated, together with the Company, as a single corporation under Section 280G of the Code and the regulations thereunder) has stock that is readily tradeable on an established securities market (within the meaning of the Section 280G of the Code and the regulations thereunder), if the payments or benefits provided under this Agreement, either alone or together with other payments or benefits which Employee receives or is entitled to receive from the Company or any of its Affiliates, would constitute an "excess parachute payment" within the meaning of Section 280G of the Code, the following provisions shall apply:

9.1.1 The Company or any of applicable Affiliates will cooperate in good faith with Employee such that any such payments or benefits will not be deemed an "excess parachute payment" within the meaning of Section 280G of the Code.

9.1.2 In the event that any payments or benefits (whether payable pursuant to this Agreement or otherwise) to Employee could be exempt from Section 280G of the Code if the shareholder approval requirements under Section 280G(b)(5) of the Code and the regulations thereunder were met, such payments will be conditioned on shareholder approval in accordance with Section 280G(b)(5)(B) of the Code and regulations thereunder and the Company or any of its applicable Affiliates agrees to use best efforts to seek to obtain such shareholder approval. The actions of the Company or any of its applicable Affiliates pursuant to this provision are not intended to bind, nor shall be construed as binding, the shareholders of the Company or any of its applicable Affiliates.

9.2. In the event that the Company or any of its applicable Affiliates undergoes a Change of Control at such time that it (or any Affiliate that would be treated, together with the Company, as a single corporation under Section 280G of the Code and the regulations thereunder) has stock that is readily tradeable on an established securities market (within the meaning of the Section 280G of the Code and the regulations thereunder), if the payments or benefits provided under this Agreement, either alone or together with other payments or benefits which Employee receives or is entitled to receive from the Company or any of its applicable Affiliates, would constitute an "excess parachute payment" within the meaning of Section 280G of the Code, Employee shall be entitled to receive (i) an amount limited so that no portion thereof shall fail to be tax deductible under Section 280G of the Code or subject to an excise tax under Section 4999 of the Code (the "***Limited Amount***"), or (ii) if the amount otherwise payable hereunder together with other payments or benefits which Employee receives or is entitled to receive from the Company or any of its applicable Affiliates (without regard to clause (i)) reduced by all taxes applicable thereto (including, for the avoidance of doubt, the excise tax imposed by Section 4999 of the Code) would be greater than the Limited Amount reduced by all taxes applicable thereto, the amount otherwise payable hereunder together with other payments or benefits which Employee receives or is entitled to receive from the Company or any of its applicable Affiliates.

9.3. In the event that any payments under this Agreement or otherwise are required to be reduced as described in this Section 9, the adjustment will be made, first, by reducing the cash severance, if any, due to Employee pursuant to Section 6; second, if additional reductions are necessary, by reducing the payments due to Employee under Section 6.5(C) (Target Bonus) and third, if additional reductions are still necessary, by eliminating the accelerated vesting of equity-based awards, starting with those awards for which the amount required to be taken into account under the Section 280G of the Code rules is the greatest; provided, that in all events, such reductions shall be done in a manner consistent with the requirements of Section 409A of the Code, to the extent applicable.

10. Miscellaneous.

10.1. Binding Nature of Agreement. This Agreement shall be binding upon the Company and shall inure to the benefit of the Company, its Affiliates, successors and assigns, including any transferee of the business operation, as a going concern, in which Employee is employed and shall be binding upon Employee, Employee's heirs and personal representatives. None of the rights or obligations of Employee hereunder may be assigned or delegated, except that in the event of Employee's death or Disability, any rights of Employee hereunder shall be transferred to Employee's estate or personal representative, as the case may be. The Company may assign its rights and obligations under this Agreement in whole or in part to any one or more Affiliates or successors. Any entity into which the Company is merged or with which the Company is consolidated or which acquires the business of the Company or the business unit in which Employee is to be principally employed shall be deemed to be a successor of the Company for purposes hereof.

10.2. Entire Agreement. This Agreement, including the Covenants Agreements and any agreements relating to the equity to be granted to Employee, contains the entire understanding among the parties hereto with respect to the subject matter hereof, and supersedes all prior and contemporaneous agreements and understandings, inducements or conditions, express or implied, oral or written. The express terms hereof control and supersede any course of performance and/or usage of the trade inconsistent with any of the terms hereof. Notwithstanding the foregoing, nothing herein shall limit the application of any generally applicable Company policy, practice, plan or the terms of any manual or handbook applicable to the Company's employees generally.

10.3. Notices. All notices, requests, consents, and other communications required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been duly given if delivered personally, or mailed first-class, postage prepaid, by registered or certified mail (notices sent by mail shall be deemed to have been given on the third day after the date sent), or by nationally recognized overnight carrier(notices sent by overnight shall be deemed to have been given on the day after the date sent) or by confirmed facsimile or electronic mail transmission with a hard copy deposited in first class mail the same day or the following day, as follows (or to such other address as either party shall designate by notice in writing to the other):

If to Company:

Ocugen, Inc.
11 Great Valley Parkway
Malvern, PA 19355 USA
Attention: Zara Gaudioso

If to Employee, to the address on file with the Company.

10.4. Governing Law; Attorneys' Fees and Forum . This Agreement shall be governed by the laws of Pennsylvania, without regard to its conflict of law provisions. Furthermore, in the event that any proceeding is instituted to interpret or enforce any term hereof, such proceeding shall take place exclusively in the state or federal courts within the vicinage of Chester County, Pennsylvania. Each party irrevocably consents and submits to the jurisdiction and venue of such court and irrevocably waives any objection which it may now or hereafter have to the laying of the venue of any suit, action, or proceeding brought in such court; and/or any claim that any such suit, action or proceeding brought in such court has been brought in an inconvenient forum; and/or that such court lacks jurisdiction and/or venue. In any action arising out of this Agreement, the prevailing party shall be awarded his/its reasonable attorneys' fees and costs.

10.5. Headings. The article and section headings contained in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation of this Agreement.

10.6. Amendment. This Agreement may be amended, modified, superseded, canceled, renewed, or extended and the terms or covenants of this Agreement may be waived, only by a written instrument executed by both of the parties, or in the case of a waiver, by the party waiving compliance.

10.7. Waiver. The failure of either party at any time or times to require performance of any provision of this Agreement shall in no manner affect the right at a later time to enforce the same. No waiver by either party of the breach of any term or covenant contained in this Agreement, whether by conduct or otherwise, in any one or more instances, shall be deemed to be, or construed as, a further or continuing waiver of any such breach, or a waiver of the breach of any other term or covenant contained in this Agreement.

10.8. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[signature page follows]

IN WITNESS WHEREOF, the parties have executed this Agreement on the date first above written.

COMPANY:

OCUGEN, INC.

By: /s/ Shankar Musunuri

Name: Shankar Musunuri, Ph.D., MBA

Title: Chairman and CEO

EMPLOYEE:

/s/ Quan Vu

Name: Quan Vu

Exhibit 31.1

CERTIFICATION

I, Shankar Musunuri, certify that:

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

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

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

4. The registrant's other certifying officer(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, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

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

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

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

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

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

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

Date: May 5, 2023 /s/ Shankar Musunuri

Shankar Musunuri, Ph.D., MBA
Chairman, Chief Executive Officer, & Co-Founder
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, Quan Vu, certify that:

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

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

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

4. The registrant's other certifying officer(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, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

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

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

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

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

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

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

Date: May 5, 2023 /s/ Quan Vu

Quan Vu
Chief Financial Officer / Chief Business Officer
(Principal Financial Officer and Principal Accounting Officer)

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)

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), each of the undersigned officers of Ocugen, Inc. (the Company), does hereby certify, to the best of such officer's knowledge, that:

The Quarterly Report on Form 10-Q for the quarter ended March 31, 2023 (the Form 10-Q) of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 5, 2023 /s/ Shankar Musunuri

Shankar Musunuri, Ph.D., MBA
Chairman, Chief Executive Officer, & Co-Founder
(Principal Executive Officer)

Date: May 5, 2023 /s/ Quan Vu

Quan Vu
Chief Financial Officer / Chief Business Officer
(Principal Financial Officer and Principal Accounting Officer)

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. This certification "accompanies" the Form 10-Q to which it relates, is not deemed filed with the SEC and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.