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 June 30, 2024

OR

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

For the transition period from _____ to _____

Commission file number 000-30171

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

Delaware	**68-0359556**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

501 Canal Blvd., Richmond, California, 94804
(Address of principal executive offices) (Zip Code)

(510) 970-6000
(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	SGMO	Nasdaq Global Select Market

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

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

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

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

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

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

As of August 2, 2024, 208,220,670 shares of the issuer's common stock, par value $0.01 per share, were outstanding.

INDEX

SANGAMO THERAPEUTICS, INC.

Unless otherwise indicated or the context suggests otherwise, references in this Quarterly Report on Form 10-Q, or Quarterly Report, to "Sangamo," "the Company," "we," "us," and "our" refer to Sangamo Therapeutics, Inc. and our subsidiaries, including Sangamo Therapeutics France S.A.S. and Sangamo Therapeutics UK Ltd.

Any third-party trade names, trademarks and service marks appearing in this Quarterly Report are the property of their respective holders. Solely for convenience, trademarks and trade names referred to in this Quarterly Report may appear without the ® or ™ symbols, but such references are not intended to indicate in any way that the Company will not assert, to the fullest extent under applicable law, its rights or the rights of the applicable licensor to these trademarks and trade names. The Company does not intend its use or display of other entities' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of the Company by, any other entity.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some statements contained in this report are "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements relate to our future events, including our anticipated operations, research, development, manufacturing and commercialization activities, clinical trials, operating results and financial condition. These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Forward-looking statements may include, but are not limited to, statements about:

- our estimates regarding the sufficiency of our cash resources and our expenses, capital requirements and need for substantial additional financing, and our ability to obtain additional financing;
- our ability to continue to operate as a going concern, including our estimate that our available cash and cash equivalents as of June 30, 2024, in combination with potential future cost reductions, will not be sufficient to fund our planned operations for one year from the issuance date of the Condensed Consolidated Financial Statements included in Part I, Item 1, "Financial Statements and Supplementary Data" of this Quarterly Report on Form 10-Q;
- our projected operating and financial performance;
- our strategic pipeline prioritization, including plans for advancing our preclinical programs, and the expected charges and cost savings associated with our restructurings and any future cost reduction measures;
- anticipated research and development of product candidates and potential commercialization of any resulting approved products;
- the initiation, scope, rate of progress, enrollment, dosing, anticipated results and timing of our preclinical studies and clinical trials and those of our collaborators or strategic partners;
- the therapeutic and commercial potential of our product candidates, including the durability of therapeutic effects;
- the therapeutic and commercial potential of technologies used by us in our product candidates, including our gene therapy and cell therapy technologies, zinc finger, or ZF, technology platform, zinc finger nucleases, or ZFNs, and zinc finger transcriptional regulators, or ZF-transcriptional regulators, which include zinc finger repressors, or ZFRs, and zinc finger activators, or ZFAs;
- the potential of our adeno-associated virus, or AAV, capsid delivery platform;
- our ability to realize the expected benefits of the global epigenetic regulation and capsid delivery license agreement with Genentech, a member of the Roche group, including but not limited to the receipt and timing of the upfront license fee and our completion of the requisite technology transfer in order to receive an expected near-term milestone payment;
- our ability to establish and maintain collaborations and strategic partnerships and realize the expected benefits of such arrangements, including our ability to find a collaboration partner for our Fabry disease gene therapy program, and Pfizer's continued advancements of the giroctocogene fitelparvovec program, including the potential for Pfizer to complete clinical development, regulatory interactions, manufacturing and global commercialization of any resulting products;
- anticipated revenues from existing and new collaborations and the timing thereof;
- our estimates regarding the impact of the macroeconomic environment on our business and operations and the business and operations of our collaborators, including preclinical studies, clinical trials and manufacturing, and our ability to manage such impacts;
- our research and development and other expenses;
- our ability to obtain adequate preclinical and clinical supplies of our product candidates from current and potential new suppliers and manufacturers;
- the ability of Sangamo and our collaborators and strategic partners to obtain and maintain regulatory approvals for product candidates and the timing and costs associated with obtaining regulatory approvals;
- our ability to comply with, and the impact of, regulatory requirements, obligations and restrictions on our business and operations;

- our ability to protect our intellectual property and operate our business without infringing upon the intellectual property rights of others, including our ability to obtain and maintain rights to the technologies required to develop and commercialize our product candidates;
- competitive developments, including the impact on our competitive position of rival products and product candidates and our ability to meet such competition;
- our operational and legal risks; and
- our plans, objectives, expectations and intentions and any other statements that are not historical facts.

In some cases, you can identify forward-looking statements by use of future dates or by terms such as: “anticipates,” “believes,” “continues,” “could,” “estimates,” “expects,” “intends,” “may,” “plans,” “seeks,” “should,” “will” and similar expressions intended to identify forward-looking statements. These statements reflect our current views with respect to future events, are based on assumptions and involve known and unknown risks, uncertainties and other 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. These risks and uncertainties include, without limitation:

- There is substantial doubt about our ability to continue to operate as a going concern. We need substantial additional funding to execute our operating plan and to continue to operate as a going concern. If adequate funds are not available to us on a timely basis, or at all, we will be required to take additional actions to address our liquidity needs, including additional cost reduction measures such as further reducing operating expenses and delaying, reducing the scope of, discontinuing or altering our research and development activities, which would have a material adverse effect on our business and prospects, or we may be required to cease operations entirely, liquidate all or a portion of our assets, and/or seek protection under the U.S. Bankruptcy Code, and you may lose all or part of your investment. Future sales and issuances of equity securities would also result in substantial dilution to our stockholders.
- We are a biotechnology company with a reprioritized preclinical focus and no approved products or product revenues. Our success depends substantially on results of preclinical studies and clinical trials demonstrating safety and efficacy of our product candidates to the satisfaction of applicable regulatory authorities. Obtaining positive clinical trial results and regulatory approvals is expensive, lengthy, challenging and unpredictable and may never occur for any product candidates.
- We are early in our research and development efforts for our core preclinical neurology programs that are the current focus of our business. We may encounter difficulties in advancing product candidates from research programs to preclinical and clinical development.
- Success in research and preclinical studies or early clinical trial results may not be indicative of results obtained in later trials. Likewise, preliminary, initial or interim data from clinical trials may be materially different from final data.
- Many of our product candidates are based on novel ZF technologies that have yet to yield any approved commercially viable therapeutic products.
- We have incurred significant operating losses since inception and anticipate continued losses for the foreseeable future. We may never become profitable.
- Biotechnology and genomic medicine are highly competitive businesses. Our competitors may develop rival technologies and products that are superior to or are commercialized more quickly than our technologies and product candidates.
- Manufacturing genomic medicines is complex, expensive, highly regulated and risky. We are currently substantially reliant on third-party manufacturers. Manufacturing challenges may result in unexpected costs, supply interruptions and harm and delay to our product development efforts.
- Even if we obtain regulatory approvals for our product candidates, our approved products may not gain market acceptance among physicians and patients and adequate coverage and reimbursement from third-party payors and may not demonstrate commercial viability.
- We may not be able to obtain, maintain and enforce necessary and desirable intellectual property protections for our technologies and product candidates in all desired jurisdictions, which could adversely affect the value of our technologies and our product development efforts and could increase the risks of costly, lengthy and distracting litigation with unpredictable results.

- Third parties, who may or may not be competitors, may allege that we are infringing, misappropriating, or otherwise practicing in an unauthorized manner their patents or other proprietary rights. Such allegations may result in infringement actions, other misappropriation actions or threats of such actions, all of which could increase the risks of costly, lengthy and distracting litigation with unpredictable results.
- Our recent restructurings may not result in anticipated savings or operational efficiencies, could result in total costs and expenses that are greater than expected and could disrupt our business.
- Our success depends on hiring, integrating and retaining additional highly qualified skilled employees and retaining current key executives and employees, which may be challenging given the uncertainty regarding our ability to obtain sufficient additional funding and to continue to operate as a going concern as well as the competition among numerous biopharmaceutical companies and academic institutions for individuals with these skills.
- Unfavorable global economic conditions could have a negative impact on our operations, which could materially and adversely affect our ability to continue to operate as a going concern and otherwise have a material adverse effect on our business, financial condition, results of operations, prospects and market price of our common stock.
- We currently do not meet, and may not regain compliance with, the listing standards of the Nasdaq Stock Market LLC, and as a result our common stock may be delisted. Delisting could adversely affect the liquidity of our common stock and the market price of our common stock could decrease, and our ability to obtain sufficient additional capital to fund our operations and to continue to operate as a going concern would be substantially impaired.
- The market price of our common stock has been and will likely continue to be volatile, and you could lose all or part of any investment in our common stock.
- We have fully impaired our goodwill and indefinite-lived intangible assets, have recorded significant impairment of our right-of-use and other long-lived assets, and may be required to record significant additional charges if our long-lived assets become further impaired in the future.

Additional discussion of the risks, uncertainties and other factors described above, as well as other risks and uncertainties material to our business, can be found under “Risk Factors” in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2023 as filed with the Securities and Exchange Commission on March 13, 2024, as supplemented by the risks described under “Risk Factors” in Part II, Item 1A of this Quarterly Report on Form 10-Q, and we encourage you to refer to that additional discussion. Given these risks, uncertainties and other factors, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent our plans, objectives, estimates, expectations and intentions only as of the date of this filing. You should read this report completely and with the understanding that our actual future results and the timing of events may be materially different from what we expect, and we cannot otherwise guarantee that any forward-looking statement will be realized. We hereby qualify all of our forward-looking statements by these cautionary statements.

Except as required by law, we undertake no obligation to update or supplement any forward-looking statements publicly, or to update or supplement the reasons that actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future. You are advised, however, to consult any further disclosures we make on related subjects.

This report includes discussion of certain clinical studies and trials relating to various product candidates. These studies typically are part of a larger body of clinical data relating to such product candidates, and the discussion herein should be considered in the context of the larger body of data. In addition, clinical data are subject to differing interpretations, and even if we view data as sufficient to support the safety and/or effectiveness of a product candidate, regulatory authorities may not share our views and may require additional data or may deny approval altogether.

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

SANGAMO THERAPEUTICS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited; in thousands)

	June 30, 2024	December 31, 2023
ASSETS		
Current assets:		
Cash and cash equivalents	$ 27,786	$ 45,204
Marketable securities	—	35,798
Accounts receivable	581	923
Prepaid expenses and other current assets	11,708	12,403
Total current assets	40,075	94,328
Property and equipment, net	20,619	26,874
Operating lease right-of-use assets	18,672	25,991
Refundable research income tax credits and other non-current assets	13,648	16,627
Restricted cash	—	1,500
Total assets	$ 93,014	$ 165,320
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 17,590	$ 15,259
Accrued compensation and employee benefits	5,655	8,918
Other accrued liabilities	15,760	23,554
Total current liabilities	39,005	47,731
Long-term portion of lease liabilities	29,097	33,515
Other non-current liabilities	1,222	1,187
Total liabilities	69,324	82,433
Commitments and contingencies		
Stockholders' equity:		
Preferred stock	—	—
Common stock	2,082	1,781
Additional paid-in capital	1,519,084	1,492,077
Accumulated deficit	(1,491,593)	(1,406,376)
Accumulated other comprehensive loss	(5,883)	(4,595)
Total stockholders' equity	23,690	82,887
Total liabilities and stockholders' equity	$ 93,014	$ 165,320

See accompanying Notes to Condensed Consolidated Financial Statements.

SANGAMO THERAPEUTICS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited; in thousands, except per share amounts)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Revenues	$ 356	$ 6,835	$ 837	$ 164,792
Operating expenses:				
Research and development	24,223	63,046	60,114	126,262
General and administrative	12,045	16,014	23,812	34,150
Impairment of long-lived assets	1,172	—	5,521	20,433
Impairment of goodwill and indefinite-lived intangible assets	—	51,347	—	89,485
Total operating expenses	37,440	130,407	89,447	270,330
Loss from operations	(37,084)	(123,572)	(88,610)	(105,538)
Interest and other income, net	1,030	2,802	3,565	6,095
Loss before income taxes	(36,054)	(120,770)	(85,045)	(99,443)
Income tax expense (benefit)	74	(6,264)	172	(6,070)
Net loss	$ (36,128)	$ (114,506)	$ (85,217)	$ (93,373)
Basic and diluted net loss per share	$ (0.18)	$ (0.66)	$ (0.44)	$ (0.54)
Shares used in computing basic and diluted net loss per share	203,946	174,325	194,049	171,445

See accompanying Notes to Condensed Consolidated Financial Statements.

SANGAMO THERAPEUTICS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(Unaudited; in thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Net loss	$ (36,128)	$ (114,506)	$ (85,217)	$ (93,373)
Foreign currency translation adjustment	(313)	80	(1,293)	2,125
Net pension gain (loss)	231	—	238	(3)
Unrealized (loss) gain on marketable securities, net of tax	—	(258)	(233)	346
Comprehensive loss	$ (36,210)	$ (114,684)	$ (86,505)	$ (90,905)

See accompanying Notes to Condensed Consolidated Financial Statements.

SANGAMO THERAPEUTICS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited; in thousands, except share amounts)

	Three Months Ended June 30, 2024					
	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount				
Balances at March 31, 2024	203,686,086	$ 2,037	$ 1,515,926	$ (1,455,465)	$ (5,801)	$ 56,697
Issuance of common stock upon exercise of pre-funded warrants	3,809,523	38	33	—	—	71
Issuance of common stock upon exercise of stock options and vesting of restricted stock units, net of tax	326,045	3	(82)	—	—	(79)
Issuance of common stock under employee stock purchase plan	379,486	4	142	—	—	146
Stock-based compensation	—	—	3,065	—	—	3,065
Foreign currency translation adjustment	—	—	—	—	(313)	(313)
Net pension gain	—	—	—	—	231	231
Net loss	—	—	—	(36,128)	—	(36,128)
Balances at June 30, 2024	208,201,140	$ 2,082	$ 1,519,084	$ (1,491,593)	$ (5,883)	$ 23,690

	Six Months Ended June 30, 2024					
	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount				
Balances at December 31, 2023	178,133,548	$ 1,781	$ 1,492,077	$ (1,406,376)	$ (4,595)	$ 82,887
Issuance of common stock, net of offering expenses	24,761,905	248	21,540	—	—	21,788
Issuance of common stock upon exercise of pre-funded warrants	3,809,523	38	33	—	—	71
Issuance of common stock upon exercise of stock options and vesting of restricted stock units, net of tax	1,116,678	11	(492)	—	—	(481)
Issuance of common stock under employee stock purchase plan	379,486	4	142	—	—	146
Stock-based compensation	—	—	5,784	—	—	5,784
Foreign currency translation adjustment	—	—	—	—	(1,293)	(1,293)
Net pension gain	—	—	—	—	238	238
Net unrealized loss on marketable securities, net of tax	—	—	—	—	(233)	(233)
Net loss	—	—	—	(85,217)	—	(85,217)
Balances at June 30, 2024	208,201,140	$ 2,082	$ 1,519,084	$ (1,491,593)	$ (5,883)	$ 23,690

See accompanying Notes to Condensed Consolidated Financial Statements.

SANGAMO THERAPEUTICS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited; in thousands, except share amounts)

	Three Months Ended June 30, 2023					
	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount				
Balances at March 31, 2023	171,771,568	$ 1,718	$ 1,467,062	$ (1,127,412)	$ (5,758)	$ 335,610
Issuance of common stock in at-the-market offering, net of offering expenses	4,286,831	43	5,358	—	—	5,401
Issuance of common stock upon exercise of stock options and vesting of restricted stock units, net of tax	260,561	3	(197)	—	—	(194)
Issuance of common stock under employee stock purchase plan	755,586	7	712	—	—	719
Stock-based compensation	—	—	6,790	—	—	6,790
Foreign currency translation adjustment	—	—	—	—	80	80
Net unrealized loss on marketable securities, net of tax	—	—	—	—	(258)	(258)
Net loss	—	—	—	(114,506)	—	(114,506)
Balances at June 30, 2023	177,074,546	$ 1,771	$ 1,479,725	$ (1,241,918)	$ (5,936)	$ 233,642

	Six Months Ended June 30, 2023					
	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount				
Balances at December 31, 2022	166,793,320	$ 1,668	$ 1,450,239	$ (1,148,545)	$ (8,404)	$ 294,958
Issuance of common stock in at-the-market offering, net of offering expenses	8,249,261	83	15,023	—	—	15,106
Issuance of common stock upon exercise of stock options and vesting of restricted stock units, net of tax	1,276,379	13	(1,316)	—	—	(1,303)
Issuance of common stock under employee stock purchase plan	755,586	7	712	—	—	719
Stock-based compensation	—	—	15,067	—	—	15,067
Foreign currency translation adjustment	—	—	—	—	2,125	2,125
Net pension losses	—	—	—	—	(3)	(3)
Net unrealized gain on marketable securities, net of tax	—	—	—	—	346	346
Net loss	—	—	—	(93,373)	—	(93,373)
Balances at June 30, 2023	177,074,546	$ 1,771	$ 1,479,725	$ (1,241,918)	$ (5,936)	$ 233,642

See accompanying Notes to Condensed Consolidated Financial Statements.

SANGAMO THERAPEUTICS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited; in thousands)

	Six Months Ended June 30,	
	2024	2023
Operating Activities:		
Net loss	$ (85,217)	$ (93,373)
Adjustments to reconcile net loss to net cash used in operating activities:		
Impairment of long-lived assets	5,521	20,433
Depreciation and amortization	2,648	7,745
Accretion of discount on marketable securities	(273)	(1,865)
Amortization in operating lease right-of-use assets	2,451	4,018
Stock-based compensation	5,784	15,067
Other non-cash adjustments	(103)	—
Impairment of goodwill and indefinite-lived intangible assets	—	89,485
Deferred income tax benefit	—	(6,377)
Net changes in operating assets and liabilities:		
Interest receivable	370	(425)
Accounts receivable	342	962
Prepaid expenses and other assets	3,565	5,548
Accounts payable and other accrued liabilities	(4,654)	(3,101)
Accrued compensation and employee benefits	(3,195)	(8,450)
Lease liabilities	(2,822)	(2,455)
Other non-current liabilities	36	61
Deferred revenues	—	(154,284)
Net cash used in operating activities	(75,547)	(127,011)
Investing Activities:		
Purchases of marketable securities	—	(52,112)
Maturities of marketable securities	1,110	146,048
Sales of marketable securities	34,730	—
Sales of assets classified as held for sale	127	—
Purchases of property and equipment	—	(15,740)
Net cash provided by investing activities	35,967	78,196
Financing Activities:		
Proceeds from issuance of common stock, net of offering expenses	21,924	—
Proceeds from at-the-market offering, net of offering expenses	—	15,105
Taxes paid related to net share settlement of equity awards	(481)	(1,303)
Proceeds from issuance of common stock under employee stock purchase plan	146	719
Net cash provided by financing activities	21,589	14,521
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	(927)	680
Net (decrease) increase in cash, cash equivalents, and restricted cash	(18,918)	(33,614)
Cash, cash equivalents, and restricted cash, beginning of period	46,704	101,944
Cash, cash equivalents, and restricted cash, end of period	$ 27,786	$ 68,330
Supplemental cash flow disclosures:		
Property and equipment included in unpaid liabilities	$ 433	$ 4,909

See accompanying Notes to Condensed Consolidated Financial Statements.

SANGAMO THERAPEUTICS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

NOTE 1—ORGANIZATION, BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization and Description of Business

Sangamo Therapeutics, Inc. ("Sangamo" or "the Company") was incorporated in the State of Delaware in June 1995 and changed its name from Sangamo Biosciences, Inc. in January 2017. Sangamo is a genomic medicine company committed to translating ground-breaking science into medicines that transform the lives of patients and families afflicted with serious neurological diseases. The Company believes its zinc finger ("ZF") epigenetic regulators are ideally suited to potentially address devastating neurology disorders and its capsid engineering platform has demonstrated the ability to expand delivery beyond currently available intrathecal delivery capsids, including in the central nervous system ("CNS") in preclinical studies.

In 2023, the Company announced its strategic transformation into a neurology-focused genomic medicine company focused on developing epigenetic regulation therapies designed to address serious neurological diseases and novel adeno-associated virus ("AAV") capsid delivery technology.

Basis of Presentation

The accompanying unaudited Condensed Consolidated Financial Statements have been prepared in conformity with generally accepted accounting principles in the United States of America ("U.S. GAAP") for interim financial information and pursuant to the rules and regulations of the United States Securities and Exchange Commission ("SEC"). Accordingly, they do not include all of the information and footnotes required by U.S. GAAP for complete financial statements. In the opinion of management, all adjustments (consisting only of normal recurring adjustments) considered necessary for a fair presentation of these financial statements for the periods presented have been included. Operating results for the three and six months ended June 30, 2024 are not necessarily indicative of the results that may be expected for the year ending December 31, 2024. The Condensed Consolidated Balance Sheet data at December 31, 2023 was derived from the audited Consolidated Financial Statements included in Sangamo's Annual Report on Form 10-K for the year ended December 31, 2023 (the "2023 Annual Report") as filed with the SEC on March 13, 2024.

The accompanying Condensed Consolidated Financial Statements include the accounts of the Company and its subsidiaries. All intercompany balances and transactions have been eliminated in the Condensed Consolidated Financial Statements.

The accompanying Condensed Consolidated Financial Statements and related financial information should be read together with the audited Consolidated Financial Statements and footnotes for the year ended December 31, 2023, included in the 2023 Annual Report.

Liquidity, Going Concern, and Capital Resources

Sangamo is currently working on a number of long-term development projects that involve experimental technologies. The projects will require several years and substantial expenditures to complete and ultimately may be unsuccessful. In recent years, the Company's operations have been funded primarily through collaborations and strategic partnerships, research grants and from the issuance of equity securities. As of June 30, 2024, the Company had capital resources of $27.8 million consisting of cash and cash equivalents. On August 2, 2024, the Company entered into a global epigenetic regulation and capsid delivery license agreement (the "Genentech Agreement") with Genentech, a member of the Roche Group ("Genentech"), under which the Company is entitled to receive a $40.0 million upfront license fee on or around the end of August 2024 and is eligible to earn a $10.0 million milestone payment after the completion of technology transfer activities.

Under Accounting Standard Codification ("ASC") Topic 205-40, Presentation of Financial Statements—Going Concern ("ASC Topic 205-40"), the Company has the responsibility to evaluate whether conditions and/or events raise substantial doubt about its ability to meet its future financial obligations as they become due within one year after the date that the Condensed Consolidated Financial Statements are issued. As required under ASC Topic 205-40, management's evaluation should initially not take into consideration the potential mitigating effects of management's plans that have not been fully implemented as of the date the Condensed Consolidated Financial Statements are issued. When substantial doubt exists, management evaluates whether the mitigating effects of its plans sufficiently alleviates the substantial doubt about the Company's ability to continue as a going concern. The mitigating effects of management's plans, however, are only considered if both (i) it is probable that the plans will be effectively implemented within one year after the date that the financial statements are issued, and (ii) it is probable that the

plans, when implemented, will mitigate the relevant conditions or events that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued. Generally, to be considered probable of being effectively implemented, the plans must have been approved by the Company's board of directors before the date that the financial statements are issued.

The Company's history of significant losses, its negative cash flows from operations, its limited liquidity resources currently on hand, and its dependence on additional financing to fund its operations after the current resources are exhausted raise substantial doubt about its ability to continue to operate as a going concern within one year after the date that the Condensed Consolidated Financial Statements are issued. Based on the Company's current operating plan, its cash and cash equivalents as of June 30, 2024, together with the aggregate of $50.0 million in upfront license fees and milestone payments that the Company expects to receive from Genentech in the near term (the "Genentech Payments"), are expected to allow the Company to meet its liquidity requirements only into the first quarter of 2025, which is less than one year following the date these Condensed Consolidated Financial Statements are issued.

Successful completion of the Company's development programs and, ultimately, the attainment of profitable operations are dependent upon future events, including obtaining adequate financing to support the Company's cost structure and operating plan. Management's plans include, among other things, pursuing one or more of the following steps to raise additional capital, none of which can be guaranteed or are entirely within the Company's control:

- raise funding through the sale of the Company's common stock;
- raise funding through debt or royalty financing; and
- establish collaborations with potential partners to advance the Company's product pipeline.

If the Company is unable to raise capital on acceptable terms, or at all, or if it is unable to procure collaboration arrangements or external direct investments to advance its programs, the Company would be required to discontinue some or all of its operations or develop and implement a plan to further extend payables, reduce overhead or scale back its current operating plan until sufficient additional capital is raised to support further operations. There can be no assurance that such a plan would be successful. Additional capital may not be available to the Company on a timely basis, on terms that are acceptable or at all. In particular, the perception of the Company's ability to continue to operate as a going concern may make it more difficult to obtain financing for the continuation of its operations, particularly in light of currently challenging macroeconomic and market conditions. Further, the Company may be unable to attract new investments as a result of the speculative nature of its newly reprioritized core neurology preclinical programs. If adequate funds are not available to the Company on a timely basis, or at all, the Company will be required to take additional actions to address its liquidity needs, including additional cost reduction measures such as further reducing operating expenses and delaying, reducing the scope of, discontinuing or altering its research and development activities, which would have a material adverse effect on its business and prospects, or the Company may be required to cease operations entirely, liquidate all or a portion of its assets, and/or seek protection under the U.S. Bankruptcy Code.

The accompanying Condensed Consolidated Financial Statements have been prepared assuming the Company will continue to operate as a going concern, which contemplates the realization of assets and the settlement of liabilities in the normal course of business. The Condensed Consolidated Financial Statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts of liabilities that may result from uncertainty related to the Company's ability to continue as a going concern.

Summary of Significant Accounting Policies

Use of Estimates

The preparation of Condensed Consolidated Financial Statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the Condensed Consolidated Financial Statements and the accompanying notes. On an ongoing basis, management evaluates its estimates including critical accounting policies or estimates related to revenue recognition, clinical trial accruals, income taxes, fair value of assets and liabilities, including from acquisitions, useful lives and impairment of long-lived assets, and stock-based compensation. Estimates are based on historical experience and on various other market specific and other relevant assumptions that the Company believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results could differ from those estimates.

In March 2023, the Company recorded additional revenue related to a change in estimate in connection with the collaboration agreement with Kite Pharma, Inc., a Gilead Sciences, Inc. subsidiary ("Kite"). This adjustment was driven by a reduction in the estimated future level of the Company's research and development services and as a result, future project costs. This resulted in an increase in proportional cumulative performance on this collaboration and an increase in revenue of

$8.9 million, an increase in net income of $8.9 million, and an increase in the Company's basic and diluted earnings per share of $0.06 for the six months ended June 30, 2023.

Revenue Recognition

The Company accounts for its revenues pursuant to the provisions of ASC Topic 606, *Revenue from Contracts with Customers* ("ASC Topic 606"). The Company's contract revenues are derived from collaboration agreements including licensing arrangements and research services. Research and license agreements typically include nonrefundable upfront signing or license fees, payments at negotiated rates for time incurred by Company researchers, third-party cost reimbursements, additional target selection fees, sublicense fees, milestone payments tied to ongoing development and product commercialization, and royalties on future licensees' product sales. All funds received from the Company's collaboration partners are generally not refundable. Non-refundable upfront fees are fixed at the commencement of the contract. All other fees represent variable consideration in contracts. For contracts that contain a provision where the Company reimburses its customer for certain costs they incur and where the Company does not acquire any distinct goods or services in exchange for such payments, the Company accounts for it as a reduction to the contract transaction price. Deferred revenue primarily represents the portion of nonrefundable upfront fees or milestone payments received but not earned.

In determining the appropriate amount of revenue to be recognized as the Company fulfills its obligations under its agreements, the Company performs the following steps: (i) identification of the promised goods or services in the contract; (ii) determination of whether the promised goods or services are performance obligations, including whether they are distinct in the context of the contract; (iii) measurement of the transaction price, including the constraint on variable consideration; (iv) allocation of the transaction price to the performance obligations based on estimated selling prices; and (v) recognition of revenue when (or as) the Company satisfies each performance obligation.

Most of the Company's performance obligations in its collaboration agreements represent distinct bundles of licenses of intellectual property and research and development services, with these components being individually non-distinct. Options to license the Company's intellectual property and/or acquire research and development services also represent performance obligations when they grant customers a material right, e.g. a right to a discount the customer would not have received if they did not purchase the Company's services under the existing contract.

Revenues from bundles of licenses of intellectual property and research and development services are recognized over time using a proportional performance method. Under this method, revenue is recognized by measuring progress towards satisfaction of the relevant performance obligation using a measure that best depicts the progress towards satisfaction of the relevant performance obligation. For most of the Company's agreements the measure of progress is an input measure based on a level of effort incurred, which includes the value of actual time by Company researchers plus third-party cost reimbursements.

Consideration allocated to options that include material rights is deferred until the options are exercised or expire. The exercise of such options is accounted for as contract continuation, with target selection fees and estimated variable consideration included in the transaction price at that time and allocated specifically to the respective target's performance obligation.

Significant management judgment is required to determine the level of effort required under an arrangement, and the period over which the Company expects to complete its performance obligations under the arrangement. Changes in these estimates can have a material effect on revenue recognized. If the Company cannot reasonably estimate when its performance obligations either are completed or become inconsequential, then revenue recognition is deferred until the Company can reasonably make such estimates. For variable consideration, the amount included in the transaction price is constrained to the amount for which it is probable that a significant reversal of cumulative revenue recognized will not occur. At the end of each subsequent reporting period, the Company re-evaluates the estimated variable consideration included in the transaction price and any related constraint and, if necessary, adjusts its estimate of the overall transaction price. A cumulative catch-up is then recorded in the current period to reflect the updated transaction price and the updated measure of progress. The estimated period of performance and level of effort, including the value of Company researchers' time and third-party costs, are reviewed quarterly and adjusted, as needed, to reflect the Company's current expectations.

As part of the accounting for these arrangements, the Company must develop assumptions that require judgment to determine the stand-alone selling price of each performance obligation identified in the contract. The Company uses key assumptions to determine the stand-alone selling price, which may include forecasted revenues, development timelines, discount rates and probabilities of exercise of technical and regulatory success, and the expected level of effort for research and development services.

Contract modifications occur when the price and/or scope of an arrangement changes. If the modification consists of adding new distinct goods or services in exchange for consideration that reflects standalone selling prices of these goods and services, the modification is accounted for as a separate contract with the customer. Otherwise, if the remaining goods and services are distinct from those previously provided, the existing contract is considered terminated, and the remaining

consideration is allocated to the remaining goods and services as if this was a newly signed contract. If the remaining goods and services are not distinct from those previously provided, the effects of the modification are accounted for in a manner similar to the effect of a change in the estimated measure of progress, with cumulative catch-up in revenue recorded at the time of the modification. If some of the remaining goods and services are distinct from those previously provided and others are not, to account for the effects of the modification the Company applies principles consistent with the objectives of the modification accounting.

Revenues from collaboration and license agreements for the three and six months ended June 30, 2024 were not material. Revenues from collaboration and license agreements as a percentage of total revenues for the three and six months ended June 30, 2023 were as follows:

	Three Months Ended June 30,	Six Months Ended June 30,
	2023	2023
Novartis Institutes for BioMedical Research, Inc.	35 %	7 %
Biogen MA, Inc.	32 %	82 %
Kite Pharma, Inc.	18 %	8 %
Other license agreements	15 %	3 %

Impairment

The Company evaluates the carrying value of long-lived assets, which include property and equipment, leasehold improvements and right-of-use assets, for impairment whenever events or changes in circumstances indicate that the carrying amounts of the asset may not be fully recoverable. If a change in circumstance occurs that indicates long-lived assets may be impaired, the Company performs a test of recoverability by comparing the carrying value of the asset or asset group to its undiscounted expected future cash flows. The long-lived asset evaluation is performed at the asset group level, i.e., the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. The Company reassesses the composition of its asset groups whenever there are changes in its operations that affect whether the cash flows associated with assets included in asset groups are largely independent. If the impairment review indicates that the carrying amount of an asset group is not recoverable, an impairment loss is measured as the amount by which the carrying amount of an asset group exceeds its fair value. Any impairment loss is allocated to the long-lived assets of the group on a pro rata basis using the relative carrying amounts of those assets, except that the carrying amount of an individual asset shall not be reduced below its fair value.

Factors that may indicate potential impairment and trigger an impairment test include, but are not limited to, general macroeconomic conditions, conditions specific to the industry and market, an adverse change in legal factors, business climate or operational performance of the business, and sustained decline in the stock price and market capitalization compared to the net book value.

Calculating the fair value of a reporting unit, an asset group and an individual asset involves significant estimates and assumptions. These estimates and assumptions include, among others, projected future cash flows, risk-adjusted discount rates, future economic and market conditions, and the determination of appropriate market comparables. Changes in these factors and assumptions used can materially affect the amount of impairment loss recognized in the period the asset was considered impaired.

During a portion of the six months ended June 30, 2023, the Company had goodwill and indefinite-lived intangible assets (IPR&D). These assets were written off in full as the Company recognized impairment losses during the six months ended June 30, 2023, see Note 6 – *Impairment and Write-Down of Assets Held For Sale*.

Cash, Cash Equivalents, and Restricted Cash

Sangamo considers all highly liquid investments purchased with original maturities of three months or less at the purchase date to be cash equivalents. Cash and cash equivalents consist of cash, deposits in money market accounts and U.S. government-sponsored entity debt securities. Restricted cash consisted of a letter of credit for $1.5 million, representing a deposit for the lease of office and research and development laboratory facilities in Brisbane, California.

A reconciliation of cash, cash equivalents, and restricted cash reported within the accompanying Condensed Consolidated Balance Sheets to the amounts reported within the accompanying Condensed Consolidated Statements of Cash Flows is as follows (in thousands):

	June 30, 2024	December 31, 2023	June 30, 2023	December 31, 2022
Cash and cash equivalents	$ 27,786	$ 45,204	$ 66,830	$ 100,444
Non-current restricted cash	—	1,500	1,500	1,500
Cash, cash equivalents, and restricted cash as reported within the Condensed Consolidated Statements of Cash Flows	$ 27,786	$ 46,704	$ 68,330	$ 101,944

Leases

The Company determines if an arrangement is or contains a lease at inception by assessing whether the arrangement contains an identified asset and whether it has the right to control the identified asset. Right-of-use assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. Lease liabilities are recognized at the lease commencement date based on the present value of future lease payments over the lease term. Right-of-use assets are based on the measurement of the lease liability and also include any lease payments made prior to or on lease commencement and exclude lease incentives and initial direct costs incurred, as applicable.

As the implicit rate in the Company's leases is generally unknown, the Company uses its incremental borrowing rate based on the information available at the lease commencement date in determining the present value of remaining lease payments. The incremental borrowing rate represents an estimate of the interest rate the Company would incur at lease commencement to borrow an amount equal to the lease payments on a collateralized basis over the term of a lease in a similar economic environment. The Company considers its credit risk, term of the lease, and total lease payments and adjusts for the impacts of collateral, as necessary, when calculating its incremental borrowing rates. The lease terms may include options to extend or terminate the lease when it is reasonably certain the Company will exercise any such options. Rent expense for the Company's operating leases, calculated as the sum of the amortization of the right of use asset and accretion of the lease liability, is recognized on a straight-line basis over the lease term, unless the right of use asset was previously written down due to impairment. The Company evaluates the lease arrangement for impairment whenever events or changes in circumstances indicate that the carrying amounts of the right-of-use asset may not be fully recoverable. To the extent an impairment of the right-of-use asset is identified, the Company will recognize the impairment expense and subsequently amortize the remaining right of use asset into rent expense on a straight-line basis (unless another systematic basis is more representative of the pattern in which the Company expects to consume the future economic benefits from the asset) from the date of impairment to the earlier of the end of the right-of-use asset's useful life or the end of the lease term.

If there is a change to the terms and conditions of a contract that results in a change in the scope of or the consideration for a lease, the Company determines if the lease modification results in a separate contract or a change in the accounting for the existing lease and not a separate contract. For lease modifications that result in a separate contract, the Company accounts for the new contract in the same manner as other new leases. For lease modifications that do not result in a separate contract, the Company reassesses the classification of the lease at the effective date of the modification, remeasures and reallocates the remaining consideration in the contract, and remeasures the lease liability using the discount rate determined at the effective date of the modification.

The Company has elected not to separate lease and non-lease components for its real estate and copier leases and, as a result, accounts for any lease and non-lease components as a single lease component. The Company has also elected not to apply the recognition requirement to any leases with a term of 12 months or less and does not include an option to purchase the underlying asset that the Company is reasonably certain to exercise.

Warrants to Purchase Shares of Company Stock

The Company determines the accounting classification of warrants to purchase shares of its stock as either liability or equity by first assessing whether the warrants meet liability classification criteria in accordance with ASC 480, *Distinguishing Liabilities from Equity* ("ASC 480"). Under ASC 480, a financial instrument other than an outstanding share that embodies an obligation to repurchase the entity's shares or is indexed to such an obligation, and that requires or may require the entity to settle it by transferring assets, is classified as a liability. In addition, a financial instrument that embodies an unconditional obligation, or a financial instrument other than an outstanding share that embodies a conditional obligation, that the issuer must or may settle by issuing a variable number of its equity shares must be classified as a liability (or an asset in some circumstances) if, at inception, the monetary value of the obligation is based solely or predominantly on any one of the following: (a) a fixed monetary amount known at inception, (b) variations in something other than the fair value of the issuer's equity shares, or (c) variations inversely related to changes in the fair value of the issuer's equity shares.

If financial instruments, such as warrants, are not required to be classified as liabilities under ASC 480, the Company assesses whether such instruments are indexed to the Company's own stock under ASC 815-40. In order for an instrument to be considered indexed to an entity's own stock, its settlement amount must always equal the difference between the following: (a) the fair value of a fixed number of the Company's equity shares, and (b) a fixed monetary amount or a fixed amount of a debt instrument issued by the Company. Certain adjustments to this amount are allowed, if they are based on non-levered inputs into the fair value of a fixed price/fixed consideration-option.

Warrants are also required to meet equity classification criteria to be classified in stockholders' equity. Under these criteria, warrants have to provide for settlement in shares, or cash or shares at the entity's option. With limited exceptions, a possibility of net cash settlement under any circumstances will result in the warrants being classified as liabilities.

Warrants classified as equity are generally measured using the Black-Scholes valuation model on the date of issuance. Warrants classified as liabilities are remeasured at any reporting date using valuation models consistent with their terms, with changes recognized in earnings.

Restructuring

The Company records employee severance costs based on whether the termination benefits are provided under an on-going benefit arrangement or under a one-time benefit arrangement. The Company accounts for on-going termination benefit arrangements, such as those arising from employment agreements, applicable regulations or past practices, in accordance with ASC Topic 712, *Compensation—Nonretirement Postemployment Benefits* ("ASC Topic 712"). Under ASC 712, liabilities for post-employment benefits related to past services and that vest or are accumulated over time are recorded at the time the obligations are probable of being incurred and can be reasonably estimated. The Company accounts for one-time employment benefit arrangements in accordance with ASC Topic 420, *Exit or Disposal Cost Obligations* ("ASC Topic 420"). One-time termination benefits are expensed at the date the entity notifies the employee, unless the employee must provide future service over a period extending past the minimum notification period, in which case the benefits are expensed ratably over the future service period. Other associated costs are recognized in the period in which the liability is incurred.

Costs incurred to terminate contracts are recognized upon their termination, e.g., when notice of termination is provided to the counterparty. Costs related to contracts without future benefit are recognized at the cease-use date. Other exit-related costs are recognized as incurred.

Recent Accounting Pronouncements Not Yet Adopted

In November 2023, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures* ("ASU 2023-07"), which requires public entities to disclose information about their reportable segments' significant expenses and other segment items on an interim and annual basis. Public entities with a single reportable segment are required to apply the disclosure requirements in ASU 2023-07, as well as all existing segment disclosures and reconciliation requirements in ASC Topic 280, *Segment Reporting* on an interim and annual basis. ASU 2023-07 is effective for fiscal years beginning after December 15, 2023, and for interim periods within fiscal years beginning after December 15, 2024, with early adoption permitted. The Company is currently evaluating the impact of adopting ASU 2023-07.

In December 2023, the FASB issued ASU 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures* ("ASU 2023-09"), which requires public entities, on an annual basis, to provide disclosure of specific categories in the rate reconciliation, as well as disclosure of income taxes paid disaggregated by jurisdiction. ASU 2023-09 is effective for fiscal years beginning after December 15, 2024, with early adoption permitted. The Company is currently evaluating the impact of adopting ASU 2023-09.

NOTE 2—FAIR VALUE MEASUREMENTS

The Company measures certain financial assets and liabilities at fair value on a recurring basis, including cash equivalents and marketable securities. Fair value is determined based on a three-tier hierarchy under the authoritative guidance for fair value measurements and disclosures that prioritizes the inputs used in measuring fair value as follows:

Level 1: Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;

Level 2: Quoted prices in markets that are not active or inputs which are observable, either directly or indirectly, for substantially the full term of the asset or liability; and

Level 3: Prices or valuation techniques that require inputs that are both significant to the fair value measurements and unobservable (i.e., supported by little or no market activity).

The Company had no cash equivalents or marketable securities as of June 30, 2024. The fair value measurements of the Company's cash equivalents and marketable securities as of December 31, 2023 are identified at the following levels within the fair value hierarchy (in thousands):

	December 31, 2023			
	Fair Value Measurements			
	Total	Level 1	Level 2	Level 3
Assets:				
Cash equivalents:				
Money market funds	$ 2,508	$ 2,508	$ —	$ —
Total	2,508	2,508	—	—
Marketable securities:				
U.S. government-sponsored entity debt securities	22,566	—	22,566	—
Commercial paper securities	2,826	—	2,826	—
Corporate debt securities	1,405	—	1,405	—
Asset-backed securities	2,377	—	2,377	—
U.S. treasury bills	5,593	—	5,593	—
Certificates of deposit	1,031	—	1,031	—
Total	35,798	—	35,798	—
Total cash equivalents and marketable securities	$ 38,306	$ 2,508	$ 35,798	$ —

Cash Equivalents and Marketable Securities

The Company generally classifies its marketable securities as Level 2. Instruments are classified as Level 2 when observable market prices for identical securities that are traded in less active markets are used. When observable market prices for identical securities are not available, such instruments are priced using benchmark curves, benchmarking of like securities, sector groupings, matrix pricing and valuation models. These valuation models are proprietary to the pricing providers or brokers and incorporate a number of inputs, including in approximate order of priority: benchmark yields, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers and reference data including market research publications. For certain security types, additional inputs may be used, or some of the standard inputs may not be applicable. Evaluators may prioritize inputs differently on any given day for any security based on market conditions, and not all inputs listed are available for use in the evaluation process for each security evaluation on any given day.

NOTE 3—CASH EQUIVALENTS AND MARKETABLE SECURITIES

The Company had no cash equivalents or marketable securities as of June 30, 2024. The table below summarizes the Company's cash equivalents and marketable securities as of December 31, 2023 (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
December 31, 2023				
Assets				
Cash equivalents:				
Money market funds	$ 2,508	$ —	$ —	$ 2,508
Total	2,508	—	—	2,508
Marketable securities:				
U.S. government-sponsored entity debt securities	22,347	219	—	22,566
Commercial paper securities	2,825	2	(1)	2,826
Corporate debt securities	1,399	6	—	1,405
Asset-backed securities	2,368	9	—	2,377
U.S. treasury bills	5,599	—	(6)	5,593
Certificates of deposit	1,026	5	—	1,031
Total	35,564	241	(7)	35,798
Total cash equivalents and marketable securities	$ 38,072	$ 241	$ (7)	$ 38,306

The fair value of marketable securities by contractual maturity were as follows (in thousands):

	December 31, 2023
Maturing in one year or less	$ 10,855
Maturing after one year through five years	24,943
Total	$ 35,798

Realized gains and losses on the sales of investments were not material during the three and six months ended June 30, 2024. There were no realized gains and losses on the sales of investments during the three and six months ended June 30, 2023. Total unrealized gains for securities with net gains in accumulated other comprehensive loss were not material during the three and six months ended June 30, 2024 and 2023.

The Company manages credit risk associated with its investment portfolio through its investment policy, which limits purchases to high-quality issuers and also limits the amount of its portfolio that can be invested in a single issuer. The Company did not record an allowance for credit losses related to its marketable securities for the three and six months ended June 30, 2024 and 2023.

The Company had no unrealized losses related to its marketable securities for the three and six months ended June 30, 2024. The Company had no material unrealized losses related to its marketable securities for the three and six months ended June 30, 2023. The Company had no material unrealized losses, individually and in the aggregate, for marketable securities that were in a continuous unrealized loss position for greater than 12 months as of June 30, 2024 and December 31, 2023. These unrealized losses were not attributed to credit risk and were associated with changes in market conditions. The Company periodically reviews its marketable securities for indications of credit losses. No significant facts or circumstances had arisen to indicate that there had been any significant deterioration in the creditworthiness of the issuers of the securities held by the Company. Based on the Company's review of these securities, the Company determined that no allowance for credit losses related to its marketable securities was required at either June 30, 2024 or December 31, 2023.

For the periods the Company had investment in debt securities, the Company also considered whether it was more likely than not that the Company will be required to sell the debt securities before recovery of their amortized cost basis. No impairment charges were recorded during the three months ended June 30, 2024 and 2023.

NOTE 4—BASIC AND DILUTED NET LOSS PER SHARE

Basic net loss per share has been computed by dividing net loss by the weighted-average number of shares of common stock outstanding during the period. Diluted net loss per share is calculated by dividing net loss by the weighted-average number

of shares of common stock plus potentially dilutive securities outstanding during the period. Potential shares of common stock exercisable for little or no consideration are included in both basic and diluted weighted-average number of shares of common stock outstanding. During the three and six months ended June 30, 2024, both basic and diluted weighted-average number of shares outstanding were 203.9 million and 194.0 million shares, respectively, and included pre-funded warrants to purchase 3,809,523 shares of common stock with an exercise price of $0.01 per share. These warrants were exercised during the three months ended June 30, 2024.

Warrants to purchase shares of common stock, with the exercise price of $1.00 per share, entitle holders to participate in dividends but are not required to absorb losses incurred and as a result were excluded from basic net loss per share calculations during the three and six ended June 30, 2024. The computation of diluted net loss per share for the three and six ended June 30, 2024 excluded 53.1 million shares subject to stock options, restricted stock units outstanding, warrants to purchase common stock, and the employee stock purchase plan shares reserved for issuance because their inclusion would have had an anti-dilutive effect on diluted net loss per share. The computation of diluted net loss per share for the three and six months ended June 30, 2023 excluded 24.3 million shares subject to stock options, restricted stock units outstanding, and the employee stock purchase plan shares reserved for issuance because their inclusion would have had an anti-dilutive effect on diluted net loss per share.

NOTE 5—MAJOR CUSTOMERS, PARTNERSHIPS AND STRATEGIC ALLIANCES

Pfizer Inc.

In May 2017, the Company entered into an exclusive global collaboration and license agreement with Pfizer Inc. (“Pfizer”), pursuant to which it established a collaboration for the research, development and commercialization of giroctocogene fitelparvovec, its gene therapy product candidate for hemophilia A, and closely related products.

Under this agreement, the Company was responsible for conducting the Phase 1/2 clinical trial and for certain manufacturing activities for giroctocogene fitelparvovec, while Pfizer is responsible for subsequent worldwide development, manufacturing, marketing and commercialization of giroctocogene fitelparvovec.

Subject to the terms of the agreement, the Company granted Pfizer an exclusive worldwide royalty-bearing license, with the right to grant sublicenses, to use certain technology controlled by the Company for the purpose of developing, manufacturing and commercializing giroctocogene fitelparvovec and related products. Pfizer granted the Company a non-exclusive, worldwide, royalty-free, fully paid license, with the right to grant sublicenses, to use certain manufacturing technology developed under the agreement and controlled by Pfizer to manufacture the Company’s products that utilize the AAV delivery system.

Unless earlier terminated, the agreement has a term that continues on a per product and per country basis until the later of (i) the expiration of patent claims that cover the product in a country, (ii) the expiration of regulatory exclusivity for a product in a country, and (iii) 15 years after the first commercial sale of a product in a country. Pfizer has the right to terminate the agreement without cause in its entirety or on a per product or per country basis. The agreement may also be terminated by either party based on an uncured material breach by the other party or the bankruptcy of the other party. Upon termination for any reason, the license granted by the Company to Pfizer to develop, manufacture and commercialize giroctocogene fitelparvovec and related products will automatically terminate. Upon termination by the Company for cause or by Pfizer in any country or countries, Pfizer will automatically grant the Company an exclusive, royalty-bearing license under certain technology controlled by Pfizer to develop, manufacture and commercialize giroctocogene fitelparvovec in the terminated country or countries.

Upon execution of the agreement, the Company received an upfront fee of $70.0 million and was eligible to receive up to $208.5 million in payments upon the achievement of specified clinical development, intellectual property and regulatory milestones and up to $266.5 million in payments upon first commercial sale milestones for giroctocogene fitelparvovec and potentially other products. To date, two milestones of $55.0 million in aggregate have been achieved and paid. The Company is eligible to earn from Pfizer up to $220.0 million in remaining milestone payments for giroctocogene fitelparvovec and up to $175.0 million for other products that may be developed under the agreement, subject to reduction on account of payments made under certain licenses for third-party intellectual property. In addition, Pfizer agreed to pay the Company royalties for each potential licensed product developed under the agreement that are 14% - 20% of the annual worldwide net sales of such product and are subject to reduction due to patent expiration, entry of biosimilar products to the market and payment made under certain licenses for third-party intellectual property.

The Company assessed the agreement with Pfizer in accordance with ASC Topic 606 and concluded that Pfizer was a customer. The Company completed its performance obligations and recognized the amounts included in the transaction price of $134.0 million during the periods through December 31, 2020. No revenue was recognized during the three and six months ended June 30, 2024 and 2023. The remaining development, intellectual property and regulatory milestone amounts have not been included in the transaction price and have not been recognized as their achievement is dependent on the progress and outcomes of Pfizer’s development activities and is therefore uncertain. If and when these milestones become probable of being achieved, they

will be recognized in full at that time. Sales milestones and royalties are not recognized until triggered based on the contractual terms.

Alexion Pharmaceuticals, Inc., AstraZeneca Rare Disease

In December 2017, the Company entered into an exclusive, global collaboration and license agreement with Pfizer, subsequently assigned to Alexion, AstraZeneca Rare Disease ("Alexion") in September 2023, for the development and commercialization of potential gene therapy products that use zinc finger transcriptional regulators ("ZF-transcriptional regulators") to treat amyotrophic lateral sclerosis and frontotemporal lobar degeneration linked to mutations of the *C9ORF72* gene. Pursuant to this agreement, the Company agreed to work with Pfizer on a research program to identify, characterize and preclinically develop ZF-transcriptional regulators that bind to and specifically reduce expression of the mutant form of the *C9ORF72* gene.

Subject to the terms of this agreement, the Company granted Pfizer (now Alexion) an exclusive, royalty-bearing, worldwide license under the Company's relevant patents and know-how to develop, manufacture and commercialize gene therapy products that use resulting ZF-transcriptional regulators that satisfy pre-agreed criteria. During a specified period, neither the Company nor Alexion are permitted to research, develop, manufacture or commercialize outside of the collaboration any zinc finger proteins ("ZFPs") that specifically bind to the *C9ORF72* gene.

Unless earlier terminated, the agreement has a term that continues on a per licensed product and per country basis until the later of (i) the expiration of patent claims that cover the licensed product in a country, (ii) the expiration of regulatory exclusivity for a licensed product in a country, and (iii) 15 years after the first commercial sale of a licensed product in a major market country. Alexion also has the right to terminate the agreement without cause in its entirety or on a per product or per country basis. The agreement may also be terminated by either party based on an uncured material breach by the other party or the bankruptcy of the other party. Upon termination for any reason, the license granted by the Company to Alexion to develop, manufacture and commercialize licensed products under the agreement would automatically terminate. Upon termination by the Company for cause or by Alexion without cause for any licensed product or licensed products in any country or countries, the Company would have the right to negotiate with Alexion to obtain a non-exclusive, royalty-bearing license under certain technology controlled by Alexion to develop, manufacture and commercialize the licensed product or licensed products in the terminated country or countries.

Following any termination by the Company for Alexion's material breach, Alexion would not be permitted to research, develop, manufacture or commercialize ZFPs that specifically bind to the *C9ORF72* gene for a period of time. Following any termination by Alexion for the Company's material breach, the Company would not be permitted to research, develop, manufacture or commercialize ZFPs that specifically bind to the *C9ORF72* gene for a period of time.

The Company received a $12.0 million upfront payment from Pfizer and is eligible to receive up to $60.0 million in development milestone payments from Alexion contingent on the achievement of specified preclinical development, clinical development and first commercial sale milestones, and up to $90.0 million in commercial milestone payments if annual worldwide net sales of the licensed products reach specified levels. In addition, Alexion will pay the Company royalties of 14% - 20% of the annual worldwide net sales of the licensed products. These royalty payments are subject to reduction due to patent expiration, entry of biosimilar products to the market and payments made under certain licenses for third-party intellectual property. Each party is responsible for the cost of its performance of the research program. Alexion is operationally and financially responsible for subsequent development, manufacturing and commercialization of the licensed products. To date, a milestone of $5.0 million has been achieved and paid, however no products have been approved and therefore no royalty fees have been earned under the *C9ORF72* agreement.

The Company assessed the agreement with Alexion in accordance with ASC Topic 606 and concluded that Alexion was a customer. The Company completed its performance obligations and recognized the amounts included in the transaction price of $17.0 million during the periods through December 31, 2020. No revenue was recognized during the three and six months ended June 30, 2024 and 2023. The remaining development milestone amounts have not been included in the transaction price and have not been recognized as their achievement is dependent on the progress and outcomes of Alexion's development activities and is therefore uncertain. If and when these milestones become probable of being achieved, they would be recognized in full at that time. Sales related milestones and royalties are not recognized until triggered based on the contractual terms.

In October 2023, Pfizer notified the Company of Pfizer's assignment of the collaboration and license agreement to Alexion, AstraZeneca Rare Disease, pursuant to a definitive purchase and license agreement for preclinical gene therapy assets and enabling technologies that closed on September 20, 2023.

Other Collaboration and License Agreements

During the three and six months ended June 30, 2024, the Company had a collaboration and license agreement with Kite and certain other license agreements. During the three and six months ended June 30, 2023, in addition to the agreement with

Kite, the Company had collaboration and license agreements with Novartis Institutes for BioMedical Research, Inc. ("Novartis"), and Biogen MA, Inc. ("Biogen"). These collaboration agreements were designed for the research, development, and commercialization of various potential therapy products, including potential engineered cell therapies for cancer and gene regulation therapies to treat neurodevelopmental disorders and diseases. The collaboration agreements with Novartis and Biogen were both terminated effective June 2023. The Company's services under the Kite collaboration agreement were completed during the year ended December 31, 2023, and the agreement expired pursuant to its terms in April 2024.

The Company assessed each of these collaboration agreements in accordance with ASC Topic 606, concluding Kite, Novartis and Biogen were customers.

Revenues recognized under these agreements were as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Revenue related to Kite agreement:				
Recognition of license fee fixed consideration	$ —	$ 1,110	$ —	$ 12,550
Research services variable consideration	—	121	—	989
Total	$ —	$ 1,231	$ —	$ 13,539
Revenue related to Novartis agreement:				
Recognition of upfront license fee	$ —	$ 1,872	$ —	$ 9,568
Research services	—	554	—	2,613
Total	$ —	$ 2,426	$ —	$ 12,181
Revenue related to Biogen agreement:				
Recognition of license and other fixed consideration	$ —	$ 1,535	$ —	$ 132,165
Cost-sharing payments for research services, net variable consideration	—	669	—	2,341
Total	$ —	$ 2,204	$ —	$ 134,506
Revenue from other license agreements	$ 356	$ 974	$ 837	$ 4,566
Total revenue	$ 356	$ 6,835	$ 837	$ 164,792

As of June 30, 2024 and December 31, 2023, the Company had no material receivables, no deferred revenue, and no amounts included in transaction price remaining to be recognized related to any license and collaboration agreements.

NOTE 6—IMPAIRMENT AND WRITE-DOWN OF ASSETS HELD FOR SALE

During the year ended December 31, 2023, the Company experienced a sustained decline in stock price and related market capitalization, the collaboration agreements with Biogen and Novartis were terminated, and actions were initiated including deferral and reprioritization of certain research and development programs, announcement and execution of restructuring of operations and reductions in force. As a result, throughout the year the Company tested various long-lived and indefinite-life intangible assets for impairment and recognized a pre-tax goodwill impairment charge of $38.1 million, a pre-tax indefinite-lived intangible asset impairment charge of $51.4 million along with the income tax benefit from the reduction of the associated deferred tax liability of $6.3 million, and a pre-tax long-lived assets impairment charge of $65.5 million during the year ended December 31, 2023.

Six months ended June 30, 2024

During the three months ended March 31, 2024, the Company's Board of Directors approved the wind-down of operations in France and corresponding reduction in workforce, including closure of the Company's cell therapy manufacturing facility and research labs in Valbonne, France (the "France Restructuring"), and also initiated several actions aimed at reducing costs, including actions to commence the closure of its facility in Brisbane, California. As such, the Company reassessed its long-lived assets for impairment as of March 31, 2024.

In connection with the France Restructuring, the Company concluded its equipment, furniture and fixtures located in France met the held for sale criteria as of March 31, 2024. The Company wrote down the carrying value of these assets to their estimated fair value of $1.0 million, net of the estimated costs to sell, recognizing a loss of $1.8 million. The fair value

measurement represents a level 3 nonrecurring fair value measurement. The loss is included in impairment of long-lived assets in the accompanying Condensed Consolidated Statements of Operations.

The Company also reassessed whether its remaining long-lived assets continued to represent a single asset group for purposes of impairment assessment. After considering changes in the manner in which the right-of-use assets and leasehold improvements related to the Company's Brisbane and Valbonne, France, facilities are used, costs incurred to cease use of these assets, the France Restructuring, and the Company's activities to market these facilities for sublease, the Company concluded the identifiable operations and cash flows of these assets are now largely independent of the operations and the cash flows of each other, as well as of the remainder of the Company. Accordingly, the Company assessed impairment of the resulting asset groups separately.

Based on the changes in the use of assets related to the Brisbane and Valbonne facility leases, the Company concluded there were indicators of impairment for these asset groups, and further established that the carrying values of these asset groups were not recoverable. The Company proceeded to determine their fair values using a discounted cash flow method, which represents a level 3 nonrecurring fair value measurement. As a result, the Company recognized pre-tax long-lived asset impairment charges of $2.0 million on the right-of-use assets and $0.5 million on the related leasehold improvements during the three months ended March 31, 2024. No impairment was recognized on the remaining long-lived assets, as their carrying values were not in excess of their fair values.

During the three months ended June 30, 2024, the Company faced a sustained decline in its stock price and related market capitalization, and continued the France Restructuring, and activities related to the closure of its facility in Brisbane, California. There was also a decline in the market rates for facility subleases in Brisbane, California, indicating the carrying values of right of use and leasehold improvement assets could be impaired. As such, the Company reassessed its long-lived assets for impairment as of June 30, 2024.

The Company concluded there were indicators of impairment for the Brisbane and Valbonne facility lease asset groups, and further established that the carrying values of these asset groups were not recoverable. The Company proceeded to determine their fair values using a discounted cash flow method, which represents a level 3 nonrecurring fair value measurement. As a result, the Company recognized pre-tax long-lived asset impairment charges of $0.9 million on the right-of-use assets and $0.1 million on the related leasehold improvements during the three months ended June 30, 2024.

The Company also reassessed the fair value of assets held for sale as of June 30, 2024 and recorded an additional charge to write-down the carrying value of these assets by $0.1 million. Assets held for sale are included within prepaid expenses and other current assets on the Company's Condensed Consolidated Balance Sheet as of June 30, 2024. The fair value measurement represents a level 3 nonrecurring fair value measurement. The loss is included in impairment of long-lived assets in the accompanying Condensed Consolidated Statements of Operations. The sale of these assets is expected to occur within one year, either collectively or separately.

The Company will continue to assess whether its long-lived assets are impaired in future periods. As the Company finalizes the wind-down of its France operations and corresponding reduction in force of all France employees, as well as the closure of its Brisbane facility, it is reasonably possible that additional impairment charges will be recognized, for example, if sublease rates of leased facilities or selling prices of the assets held for sale are less than those estimated.

Six months ended June 30, 2023

During the three months ended March 31, 2023, as a result of the sustained decline in the Company's stock price and related market capitalization, termination of the collaboration agreements with Biogen and Novartis, the Company performed an impairment assessment of goodwill, indefinite-lived intangible assets, and other long-lived assets.

The Company operated as a single reporting unit based on its business and reporting structure. For goodwill, a quantitative impairment assessment was performed using a market approach, whereby the Company's fair value of equity was compared to its carrying value. The fair value of equity was derived using both the market capitalization of the Company and an estimate of a reasonable range of values of a control premium applied to the Company's implied business enterprise value. The control premium was estimated based upon control premiums observed in comparable market transactions. This represented a level 2 nonrecurring fair value measurement. Based on this analysis, the Company recognized a pre-tax goodwill impairment charge of $38.1 million during the three months ended March 31, 2023. As a result, the goodwill was fully impaired as of March 31, 2023.

Before completing the goodwill impairment assessment, the Company also tested its indefinite-lived intangible assets and then its long-lived assets for impairment. Based on the qualitative assessment, the Company determined it was more likely than not that its indefinite-lived intangible assets were not impaired. The Company determined all of its long-lived assets represented one asset group for purposes of long-lived asset impairment assessment. The Company concluded that the carrying value of the asset group was not recoverable as it exceeded the future undiscounted cash flows the assets were expected to

generate from the use and eventual disposition. To allocate and recognize the impairment loss, the Company determined individual fair values of its long-lived assets. The Company applied a discounted cash flow method to estimate fair values of its leasehold improvements and right-of-use assets, including leasehold improvements in the process of construction and a cost replacement method to estimate the fair value of its furniture, fixtures and laboratory and manufacturing equipment. These represented level 3 nonrecurring fair value measurements. Based on this analysis, the Company recognized pre-tax long-lived asset impairment charges of $11.2 million on the right-of-use assets, $5.0 million on the related leasehold improvements, and $4.2 million on construction-in-progress, during the three months ended March 31, 2023. No impairment was recognized on the remaining long-lived assets as their carrying values were not in excess of their fair values.

During the three months ended June 30, 2023, the Company's stock price and the related market capitalization continued to decline. In April 2023, the Company announced a restructuring of operations and a corresponding reduction in force. The Company also initiated discussions around several actions aimed at reducing costs, preserving liquidity and improving operational performance metrics, including deferral and reprioritization of certain research and development programs, further reduction in force, and closing or downsizing its facilities.

The Company reassessed its indefinite-lived and long-lived assets for impairment as of June 30, 2023. Given the actions contemplated above, the Company determined that it was more likely than not that its indefinite-lived intangible assets were impaired. Accordingly, the Company developed an estimate of the fair value of its indefinite-lived intangible assets using the multi-period excess earnings model (income approach) and concluded the carrying value of its indefinite-lived intangible assets were fully impaired. This represents a level 3 nonrecurring fair value measurement. As a result, an indefinite-lived intangible assets impairment charge of $51.3 million, as well as the related income tax benefit of $6.3 million due to the reversal of a deferred tax liability associated with the indefinite-lived intangible assets was recognized during the three and six months ended June 30, 2023. The impairment charge was primarily driven by a higher discount rate applied to future cash flows based on market participants' view of increased risk related to the asset.

The Company determined that there were indicators of impairment in its long-lived asset group as of June 30, 2023, based on the same factors above as well as the impairment of its indefinite-lived intangible assets. As the estimated fair value of this asset group, based on a market approach, exceeded its carrying value, no impairment loss was recognized. This represents a level 3 nonrecurring fair value measurement.

NOTE 7—COMMITMENTS AND CONTINGENCIES

Leases

On February 5, 2024, the Company entered into an amendment to the operating lease of office and research and development laboratory facilities in Brisbane, California. The amendment established early termination rights for the landlord upon thirty days notice to the Company, with the earliest date the landlord may terminate the lease being September 30, 2024. Additionally, the amendment authorizes the landlord to draw on the existing letter of credit to satisfy the majority of the Company's February 2024 through April 2024 rent payments and obligates the Company to provide a cash security deposit or replenish the letter of credit back to $1.5 million by June 1, 2024.

The Company concluded that the amendment represented a lease modification to be accounted for as a single contract with the existing lease under ASC Topic 842, *Leases*, and remeasured its lease liability using the current incremental borrowing rate of 9.6%, and recorded an adjustment to reduce both the lease liability and the corresponding right-of-use asset by $1.9 million as of the lease modification date.

The Company and the landlord subsequently in May 2024 extended the deadline for replenishing the letter of credit to September 30, 2024, the effect of which had no material impact to the Company's financial statements.

NOTE 8—STOCK-BASED COMPENSATION

The following table shows total stock-based compensation expense recognized in the accompanying Condensed Consolidated Statements of Operations (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2024	2023	2024	2023
Research and development	$ 1,323	$ 3,887	$ 2,708	$ 8,760
General and administrative	1,742	2,903	3,076	6,307
Total stock-based compensation expense	$ 3,065	$ 6,790	$ 5,784	$ 15,067

NOTE 9—STOCKHOLDERS' EQUITY

Common Stock

The Company's common stock authorized for issuance was 960,000,000 shares and 640,000,000 shares as of June 30, 2024 and December 31, 2023, respectively.

At-the-Market Offering Agreement

In August 2020, the Company entered into an Open Market Sale Agreement℠ with Jefferies LLC ("Jefferies") with respect to an at-the-market offering program under which the Company may offer and sell, from time to time at its sole discretion, shares of the Company's common stock having an aggregate offering price of up to $150.0 million through Jefferies as the Company's sales agent or principal. In December 2022, the Company entered into Amendment No. 2 to the Open Market Sale Agreement℠ which increased the aggregate offering price under the at-the-market offering program by an additional $175.0 million. Approximately $194.5 million remained available under the sales agreement as of June 30, 2024. The Company is not obligated to sell any shares under the sales agreement. No shares were sold under the sales agreement during the three and six months ended June 30, 2024. During the three and six months ended June 30, 2023, the Company sold 4,286,831 and 8,249,261 shares of its common stock under the sales agreement for net proceeds of approximately $5.4 million and $15.1 million, respectively.

Issuance and Sale of Common Stock and Warrants

On March 21, 2024, the Company entered into a Securities Purchase Agreement (the "Purchase Agreement") with certain institutional investors (collectively, the "Investors"). On March 26, 2024 the Company issued and sold in a registered direct offering (the "Registered Direct Offering") an aggregate of 24,761,905 shares of common stock of the Company, par value $0.01 per share, and pre-funded warrants to purchase up to an aggregate of 3,809,523 shares of common stock, together with accompanying warrants ("Common Warrants") to purchase up to an aggregate of 28,571,428 shares of common stock. The combined offering price of a unit consisting of one share of common stock and the accompanying Common Warrant to purchase one share of common stock was $0.84. The combined offering price of a unit consisting of a pre-funded warrant to purchase one share of common stock and the accompanying Common Warrant to purchase one share of common stock was $0.83. The pre-funded warrants are immediately exercisable at any time, until exercised in full, at a price of $0.01 per share of common stock. The Common Warrants are exercisable six months from issuance, expire five and a half years from the issuance date and have an exercise price of $1.00 per share. Both pre-funded warrants and Common Warrants can be exercised net in limited circumstances and entitle holders to dividends if and when paid by the Company.

Barclays Capital Inc. and Cantor Fitzgerald & Co. (the "Placement Agents") acted as the placement agents for the offering, pursuant to a Placement Agency Agreement, dated March 21, 2024 (the "Placement Agreement"). Pursuant to the Placement Agreement, the Company paid the Placement Agents a cash placement fee equal to 6.0% of the aggregate gross proceeds raised in the Registered Direct Offering.

The Company received aggregate net proceeds from the Registered Direct Offering of $21.9 million, net of the Placement Agents' fees of $1.4 million and other offering costs of $0.7 million.

Common Warrants and pre-funded warrants were determined to be equity-classified and proceeds received from their issuance were recorded as a component of stockholders' equity within additional paid-in capital. The Company determined that the warrants should be equity classified because they are freestanding financial instruments, do not embody an obligation for the Company to repurchase its shares, do not contain exercise contingencies tied to observable markets or indices, permit the holders to receive a fixed number of shares of common stock upon exercise in exchange for a fixed amount of consideration, subject only to adjustments that are inputs to the fair value of a fixed price/fixed consideration-option, and meet the equity classification criteria. The Common Warrants had not been exercised and remained outstanding as of June 30, 2024. The pre-funded warrants were exercised in full on April 8, 2024 and the Company issued an aggregate of 3,809,523 shares of common stock at an exercise price of $0.01.

NOTE 10—RESTRUCTURING CHARGES

April 2023 Restructuring

On April 26, 2023, the Company executed a restructuring of operations and a corresponding reduction in workforce (the "April 2023 Restructuring"), designed to reduce costs and increase focus on certain strategic priorities. The April 2023 Restructuring resulted in the elimination of approximately 110 roles, including 55 full-time employees and 55 contracted employees and eliminated open positions, in the United States, or approximately 23% of the total United States workforce as of April 26, 2023, and included one-time severance payments and other employee-related costs, including additional vesting of service-based stock compensation awards. The Company had estimated that it will incur $5.0 million in expenses related to

employee severance and notice period payments, benefits and related restructuring charges for the April 2023 Restructuring. No expenses related to the April 2023 Restructuring were incurred during the three and six months ended June 30, 2024. The Company incurred approximately $5.0 million of expenses related to the April 2023 Restructuring in the three and six months ended June 30, 2023, of which $3.8 million is included in research and development expense and $1.2 million is included in general and administrative expense in the accompanying Condensed Consolidated Statements of Operations. The Company expects the April 2023 Restructuring and the cash payments related to the April 2023 Restructuring to be substantially complete by the third quarter of 2024.

November 2023 Restructuring

On November 1, 2023, the Company executed a restructuring of operations and a corresponding reduction in workforce (the "November 2023 Restructuring"), designed to reduce costs and advance its strategic transformation into a neurology-focused genomic medicine company. The November 2023 Restructuring resulted in the elimination of approximately 162 roles, including 108 full-time employees and 54 contracted employees and eliminated open positions, in the United States, or approximately 40% of the total United States workforce, and included one-time severance payments and other employee-related costs, including additional vesting of service-based stock compensation awards. The total restructuring expenses are estimated to be approximately $8.1 million to $9.1 million, related to employee severance and notice period payments, benefits, Brisbane facility close-out costs, and other related restructuring charges for the November 2023 Restructuring. The Company had recorded $6.7 million of expenses relating to the November 2023 Restructuring in the fourth quarter of 2023. The expense adjustments recorded during the three and six months ended June 30, 2024 were not material. The Company expects to incur additional estimated costs of $1.0 million to $2.0 million through the third quarter of 2024. The Company expects the November 2023 Restructuring and the cash payments related to the November 2023 Restructuring to be substantially complete by the third quarter of 2024.

France Restructuring

On March 1, 2024, the Company's Board of Directors approved the France Restructuring which will result in the elimination of all 93 roles in France, or approximately 24% of the total global workforce. As a result, the Company expects that it will suspend its research and development activities in France and is in the process of disposing of its France-based assets and settling the associated liabilities. The Company is also expected to make severance payments as required by French law and the terms of the applicable collective bargaining agreements, and other employee-related costs. The total restructuring expenses are estimated to be approximately $7.3 million to $7.6 million, related to employee severance and notice period payments, benefits, contract termination costs, and other related restructuring charges for the France Restructuring. The Company had recorded $4.7 million of expenses relating to the France restructuring in the fourth quarter of 2023. The expenses incurred during the three and six months ended June 30, 2024 related to employee severance and notice period payments, benefits, and other employee-related costs were not material. During the three months ended June 30, 2024, the Company recognized $2.4 million as expense relating to a terminated manufacturing-related supplier arrangement for costs that will be incurred without economic benefit to the Company, included in general and administrative expense in the accompanying Condensed Consolidated Statements of Operations. The Company expects to incur other additional estimated costs of $0.2 million to $0.5 million related to the France Restructuring through the fourth quarter of 2024. The Company expects the France Restructuring and its related cash payments to be substantially complete by the fourth quarter of 2024. See Note 6 – *Impairment and Write-Down of Assets Held For Sale* for impairment considerations related to the France Restructuring.

The following table is a summary of accrued April 2023 Restructuring, November 2023 Restructuring and France Restructuring charges included within other accrued liabilities on the Company's Condensed Consolidated Balance Sheet as of June 30, 2024 (in thousands):

	Six Months Ended June 30, 2024
Balance at December 31, 2023	$ 11,733
Restructuring charges	2,784
Cash payments	(9,472)
Balance at June 30, 2024	$ 5,045

Sangamo may also incur other cash expenses or charges not currently contemplated or estimable due to events that may occur as a result of, or associated with, the April 2023 Restructuring, November 2023 Restructuring and France Restructuring.

NOTE 11—SUBSEQUENT EVENTS

Epigenetic Regulation and Capsid Delivery License Agreement with Genentech

On August 2, 2024, the Company entered into the Genentech Agreement to develop intravenously administered genomic medicines to treat certain neurodegenerative diseases. Under the Genentech Agreement, the Company granted an exclusive license to Genentech for the Company's proprietary zinc finger repressors ("ZFRs") that are directed to tau and the Company's proprietary ZFRs that are directed to a second undisclosed neurology target. The Company also granted an exclusive license to Genentech to the Company's proprietary, neurotropic adeno-associated virus capsid, STAC-BBB for use with therapies directed to tau or to the second neurology target. The Company is prohibited from exploiting (itself or with or for a third party) products directed to tau or to the second neurology target during the applicable exclusivity periods set forth in the Genentech Agreement. Under the terms of the Genentech Agreement, the Company is responsible for completing a technology transfer and certain preclinical activities, and Genentech is solely responsible for all clinical development, regulatory interactions, manufacturing and global commercialization of resulting products. Under the Genentech Agreement, Genentech is obligated to pay the Company a $40.0 million upfront license fee on or around the end of August 2024 and will become obligated to pay the Company a $10.0 million milestone payment after the completion of technology transfer activities. In addition, the Company is eligible to earn up to $1.9 billion in development and commercial milestones spread across multiple potential products under the Genentech Agreement and tiered mid-single digit to sub-teen double digit royalties on the net sales of such products, subject to certain specified reductions.

The Genentech Agreement will continue, on a product-by-product and country-by-country basis, until the date when there is no remaining royalty payment obligation in such country with respect to such product, at which time the Genentech Agreement will expire with respect to such product in such country. Genentech has the right to terminate the Genentech Agreement for convenience. Each party has the right to terminate the Genentech Agreement on account of the other party's uncured material breach.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The discussion in "Management's Discussion and Analysis of Financial Condition and Results of Operations" contains trend analysis, estimates and other forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. These forward-looking statements include, without limitation, statements containing the words "anticipates," "believes," "continues," "could," "estimates," "expects," "intends," "may," "plans," "seeks," "should," "will," and other words of similar import or the negative of those terms or expressions. Such forward-looking statements are subject to known and unknown risks, uncertainties, estimates and other factors that may cause our actual results, performance or achievements, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Actual results could differ materially from those set forth in such forward-looking statements as a result of, but not limited to, the "Risk Factors" described in Part I, Item 1A our Annual Report on Form 10-K for the year ended December 31, 2023 as filed with the Securities and Exchange Commission on March 13, 2024, or the 2023 Annual Report, as supplemented by the risks described under "Risk Factors" in Part II, Item 1A of this Quarterly Report on Form 10-Q. You should also read the following discussion and analysis in conjunction with our Condensed Consolidated Financial Statements and accompanying notes included in this Quarterly Report and the Consolidated Financial Statements and accompanying notes thereto included in our 2023 Annual Report.

Overview

We are a genomic medicine company committed to translating ground-breaking science into medicines that transform the lives of patients and families afflicted with serious neurological diseases. We believe our zinc finger epigenetic regulators are ideally suited to potentially address devastating neurology disorders and our capsid engineering platform has demonstrated the ability to expand delivery beyond currently available intrathecal delivery capsids, including in the central nervous system, or CNS, in preclinical studies.

Corporate Updates

Epigenetic Regulation and Capsid Delivery License Agreement with Genentech

On August 2, 2024, we entered into a global epigenetic regulation and capsid delivery license agreement, or the Genentech Agreement, with Genentech, a member of the Roche Group, or Genentech, to develop intravenously administered genomic medicines to treat certain neurodegenerative diseases. We granted an exclusive license to Genentech for our proprietary zinc finger repressors, or ZFRs, that are directed to tau and our proprietary ZFRs that are directed to a second undisclosed neurology target. We also granted an exclusive license to Genentech to our proprietary, neurotropic adeno-associated virus capsid, STAC-BBB for use with therapies directed to tau or to the second neurology target. Under the terms of the Genentech Agreement, we are responsible for completing a technology transfer and certain preclinical activities, and Genentech is solely responsible for all clinical development, regulatory interactions, manufacturing and global commercialization of resulting products. Under the Genentech Agreement, Genentech is obligated to pay us a $40.0 million upfront license fee on or around the end of August 2024 and will become obligated to pay us a $10.0 million milestone payment after the completion of technology transfer activities, or the Genentech Payments. In addition, we are eligible to earn up to $1.9 billion in development and commercial milestones spread across multiple potential products under the Genentech Agreement and tiered mid-single digit to sub-teen double digit royalties on the net sales of such products subject to certain specified reductions.

Financial Position – Going Concern

Based on our current operating plan, our cash and cash equivalents as of June 30, 2024, taken together with the $50.0 million in upfront license fees and milestone payments that we expect to receive from the Genentech Payments, are expected to allow us to meet our liquidity requirements only into the first quarter of 2025. Our history of significant losses, negative cash flows from operations, limited liquidity resources currently on hand and dependence on our ability to obtain additional financing to fund our operations have resulted in management's assessment that there is substantial doubt about our ability to continue as a going concern for at least the next 12 months from the date the financial statements included in this Quarterly Report are issued. Our ability to continue to operate as a going concern is dependent upon our ability to raise substantial additional capital to fund our operations and support our research and development endeavors, including to progress our preclinical and clinical programs as described in our 2023 Annual Report and in this Quarterly Report. Although we raised capital via a registered direct offering to institutional investors of common stock and accompanying warrants in March 2024, and we expect to receive the Genentech Payments, we will still need substantial additional capital in order to continue to operate as a going concern and fund our operations. We have been actively seeking, and continue to actively seek, substantial additional capital, including through public or private equity or debt financing, royalty financing or other sources, such as strategic collaborations and other direct investments in our programs. We may be unable to attract new investments as a result of the speculative nature of our newly reprioritized core neurology preclinical programs and additional capital may not be available on

acceptable terms or at all. If adequate funds are not available to us on a timely basis, or at all, we will be required to take additional actions to address our liquidity needs, including additional cost reduction measures such as further reducing operating expenses and delaying, reducing the scope of, discontinuing or altering our research and development activities, which would have a material adverse effect on our business and prospects, or we may be required to cease operations entirely, liquidate all or a portion of our assets, and/or seek protection under the U.S. Bankruptcy Code, and you may lose all or part of your investment. If we are unable to secure additional funding in the near term, we may seek protection under the U.S. Bankruptcy Code. We have explored, and will continue to explore, whether filing for bankruptcy protection is in the best interest of our Company and our stakeholders.

Core Preclinical Neurology Programs and Technologies

Our neurology preclinical development is focused on two innovative areas aligned with our strategic transformation: (i) development of epigenetic regulation therapies treating serious neurological diseases and (ii) development of novel engineered adeno-associated virus, or AAV, capsids to deliver our therapies to the intended neurological targets. Indications for our wholly-owned preclinical programs include chronic neuropathic pain, prion disease and tauopathies.

Neurology Epigenetic Regulation Programs

- Investigational new drug, or IND, enabling studies continue to advance in the Nav1.7 program to treat chronic neuropathic pain.
- Clinical trial authorization, or CTA, enabling activities continue to advance for our epigenetic regulation program to treat prion disease, leveraging our novel AAV capsid known as STAC-BBB.
- In May 2024, we showcased 10 poster presentations at the 27th American Society for Cell and Gene Therapy, or ASGCT, Annual Meeting demonstrating advances in epigenetic regulation for the treatment of various neurological diseases, including prion disease, tauopathies, Charcot-Marie-Tooth disease type 1A and 2A, or CMT1A and CMT2A, Dravet Syndrome, SOD1-mediated amyotrophic lateral sclerosis, or ALS, Phelan-McDermid syndrome, Parkinson's disease, Angelman syndrome, and other neurology disorders.
- We are engaged in ongoing business development discussions with new potential collaborators for zinc finger neurology epigenetic regulation programs.

Novel AAV Capsid Delivery Technology

- We continued to advance work on STAC-BBB, our novel proprietary neurotropic AAV capsid variant, which demonstrated industry-leading blood-brain barrier, or BBB, penetration in non-human primates, or NHPs, following intravenous administration, with capsid-enabled delivery of zinc finger payloads targeting prion disease and tauopathies resulting in potent and widespread repression of target genes.
- We presented two platform and four poster presentations at the ASGCT Annual Meeting outlining developments in Sangamo's AAV capsid delivery capabilities, as developed through our SIFTER capsid engineering platform.
- We presented promising initial findings for a possible mechanism supporting how STAC-BBB may cross the blood-brain barrier at the ASGCT Annual Meeting and continue to advance STAC-BBB manufacturing activities.
- We are engaged in ongoing business development discussions with additional potential collaborators for STAC-BBB.

Next-Generation Genome Engineering

- We presented one platform and three poster presentations at the ASGCT Annual Meeting showcasing our next-generation engineering capabilities, including the discovery of next-generation integrase technology. Our Modular Integrase, or MINT, platform builds on the strength of Sangamo's structural in protein-DNA capabilities derived from its zinc finger platform that allows targeting of a serine recombinase engineered to enable large-scale genome editing to potentially treat – with a single medicine – patients who have unique mutations in the same gene.
- Our MINT platform, derived from compact Bxb1 variants, is intended to integrate entire genes into the genome, to avoid double-stranded DNA breaks and the need for assistance from ancillary genome editing or DNA-repair modulating cargo. The MINT platform could be deployed for neurology-focused indications, and also could provide potential partnering opportunities, both for human disease and in agricultural biotech settings.
- In May 2024, we published a manuscript in bioRxiv titled "Systematic Development of Reprogrammed Modular Integrases Enables Precise Genomic Integration of Large DNA Sequences," further detailing the discovery and potential of our MINT platform.

- In June 2024, we presented developments in the MINT platform at the Federation of American Societies for Experimental Biology, or FASEB, Genome Engineering: Research and Applications Conference.
- We are engaged in ongoing business development discussions with potential collaborators for Sangamo's modular integrase capabilities.

Clinical Programs

Fabry Disease

- Dosing is complete in the Phase 1/2 STAAR study of isaralgagene civaparvovec, our investigational gene therapy for the treatment of Fabry disease, resulting in a total of 33 patients dosed in the study.
- Since our last update in May 2024, three additional treated patients have been withdrawn from enzyme replacement therapy, or ERT, resulting in a total of 17 patients withdrawn from ERT to date. All 17 patients remain off ERT as of August 6, 2024. The one remaining patient dosed since February 2024 who began the study on ERT has plans in place to withdraw from ERT treatment at the appropriate time.
- With the longest-treated patient having achieved four years of follow-up, we continue to amass encouraging clinical data, including preliminary evidence of improvements in kidney function. In the 18 patients treated for more than one year, a statistically significant rise in both mean and median eGFR levels was observed in male and female treated patients, based on preliminary findings. We anticipate sharing updated clinical data in the coming months.
- In June 2024, we held a productive meeting with the European Medicines Agency on a proposed pathway to potential approval for isaralgagene civaparvovec in Europe, with members of the U.S. Food and Drug Administration, or FDA, in attendance.
- We are engaged in ongoing business development discussions with potential collaborators for our Fabry disease program. We continue to defer additional investments in planning for a potential registrational trial until a collaboration or financing for this program is secured.

Partnered Program

Hemophilia A

- In July 2024, we reported on Pfizer Inc.'s, or Pfizer's, announcement of positive topline results from the Phase 3 AFFINE trial evaluating giroctocogene fitelparvovec, an investigational gene therapy that we are co-developing with and licensing to Pfizer for the treatment of adults with moderately severe to severe hemophilia A.
- We are eligible to earn from Pfizer up to $220.0 million in potential milestone payments upon the achievement of certain regulatory and commercial milestones for giroctocogene fitelparvovec and product sales royalties of 14% - 20% if giroctocogene fitelparvovec is approved and commercialized, subject to reductions due to patent expiration, entry of biosimilar products to the market and payment made under certain licenses for third-party intellectual property.
- Pfizer reported that the AFFINE trial achieved its primary objective of non-inferiority, as well as superiority, of total annualized bleeding rate (ABR) from Week 12 through at least 15 months of follow up post-infusion compared with routine Factor VIII (FVIII) replacement prophylaxis treatment. Following a single 3e13 vg/kg dose, giroctocogene fitelparvovec demonstrated a statistically significant reduction in mean total ABR compared to the pre-infusion period (1.24 vs 4.73; one-sided p-value=0.0040).
- Key secondary endpoints as defined by the trial protocol were met and also demonstrated superiority compared to prophylaxis. 84% of participants maintained FVIII activity >5% at 15 months post-infusion (one-sided p-value = 0.0086) with the majority of participants having FVIII activity ≥15%, and the mean treated ABR showed a statistically significant 98.3% reduction from 4.08 in the pre-infusion period to 0.07 post-infusion (from Week 12 up to at least 15 months [15-44 months]; one-sided p-value < 0.0001). Throughout the trial, among all dosed participants, one participant (1.3%) returned to prophylaxis post-infusion.
- In the AFFINE trial, giroctocogene fitelparvovec was generally well tolerated. Transiently elevated FVIII levels ≥150% were observed in 49.3% of dosed participants, as measured via chromogenic assay, with no impact on efficacy and safety results. Serious adverse events were reported in 15 patients (20%), including 13 events reported by 10 patients (13.3%) assessed as related to treatment. Treatment-related adverse events generally resolved in response to clinical management.
- Pfizer reported that analyses of the full Phase 3 dataset from the AFFINE trial are ongoing and that additional data will be presented at upcoming medical meetings.
- Pfizer reported that it will discuss these data with regulatory authorities in the coming months.

Collaborations

Our collaborations with biopharmaceutical companies bring us important financial and strategic benefits and reinforce the potential of our research and development efforts and our zinc finger, or ZF, technology platform. They leverage our collaborators' therapeutic and clinical expertise and commercial resources with the goal of bringing our medicines more rapidly to patients. We believe these collaborations will potentially expand the addressable markets of our product candidates. To date, we have received approximately $817.0 million in upfront licensing fees, milestone payments and proceeds from sale of our common stock to collaborators and have the opportunity to earn up to $3.8 billion in potential future milestone payments from our ongoing collaborations, in addition to potential product royalties.

Manufacturing & Process Development

Following restructuring of our operations initiated in 2023, we expect to be substantially reliant on external partners to manufacture clinical supply for our neurology portfolio. We are retaining our in-house analytical and process development capabilities.

Macroeconomic Conditions

Our business and operations and those of our collaborators may be affected by financial instability and declining economic conditions in the United States and other countries caused by political instability and conflict, including the ongoing conflict between Russia and Ukraine and conflicts in the Middle East, or by general health crises, which have in the past led to market disruptions, including significant volatility in commodity prices, credit and capital markets instability, including disruptions in access to bank deposits and lending commitments, supply chain interruptions, rising interest rates and global inflationary pressures. These macroeconomic factors could materially and adversely affect our ability to continue to operate as a going concern and could otherwise have a material adverse effect on our business, operations, operating results and financial condition as well as the price of our common stock. In particular, our ability to raise the substantial additional capital we need in order to fund our business and to continue to operate as a going concern may be adversely impacted by these macroeconomic factors, and we cannot be certain that we will be able to obtain financing on terms acceptable to us, or at all.

Certain Components of Results of Operations

Our revenues in the past have consisted primarily of revenues from collaboration agreements, which included upfront licensing fees, reimbursements for research services, and milestone achievements, and research grant funding. In 2023, our collaboration agreements with Biogen MA, Inc. and Biogen International GmbH, which we refer to together as Biogen, and Novartis Institutes for BioMedical Research, Inc., or Novartis, were terminated, and the collaboration agreement with Kite Pharma, Inc., a Gilead Sciences, Inc. subsidiary, or Kite, expired pursuant to its terms in April 2024. We expect revenues to continue to fluctuate from period to period and there can be no assurance that new collaborations or partner reimbursements will continue beyond their initial terms or that we are able to meet the milestones specified in these agreements. For additional information concerning the terms of our ongoing collaboration agreements, see Note 5 – *Major Customers, Partnerships and Strategic Alliances* in the accompanying notes to the Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

We have incurred net losses since inception and expect to incur losses for at least the next several years as we continue our research and development activities. To date, we have funded our operations primarily through the issuance of equity securities and revenues from collaborations and research grants.

Although we expect research and development expenses to decrease in the near-term in connection with the restructuring of operations and reduction in workforce and significant reduction in our internal manufacturing and allogeneic research footprints in California announced in April 2023, or the April 2023 Restructuring, the further restructuring of operations and corresponding reduction in workforce announced in November 2023, or the November 2023 Restructuring, and the wind-down of operations in France and corresponding reduction in workforce, including closure of our cell therapy manufacturing facility and research labs in Valbonne, France, or the France Restructuring, we expect to continue to devote substantial resources to research and development in the future and expect research and development expenses to increase in the next several years if we are successful in advancing our product candidates from research stage through clinical trials.

General and administrative expenses consist primarily of salaries and personnel related expenses for executive, finance and administrative personnel, stock-based compensation expense, professional fees, allocated facilities and information technology expenses, patent prosecution expenses and other general corporate expenses. Although we expect general and administrative expenses to decrease in the near-term in connection with the April 2023 Restructuring, November 2023 Restructuring and France Restructuring, we expect the growth of our business to require increased general and administrative expenses as we continue to advance our product candidates into and through the clinic.

Critical Accounting Policies and Estimates

Our Condensed Consolidated Financial Statements and the related disclosures have been prepared in accordance with generally accepted accounting principles in the United States. The preparation of these Condensed Consolidated Financial Statements requires us to make estimates, assumptions and judgments that affect the reported amounts in our Condensed Consolidated Financial Statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe the following policies to be the most critical to an understanding of our financial condition and results of operations because they require us to make estimates, assumptions and judgments about matters that are inherently uncertain.

We believe our critical accounting policies and estimates relating to valuation of long-lived assets are the most significant estimates and assumptions used in the preparation of our Condensed Consolidated Financial Statements. See Note 1 – *Organization, Basis of Presentation and Summary of Significant Accounting Policies* in the accompanying notes to the Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

There have been no significant changes in our critical accounting policies and estimates during the three and six months ended June 30, 2024, as compared to the critical accounting policies and estimates disclosed in "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in Part II, Item 7 of the 2023 Annual Report.

Results of Operations for the Three and Six Months Ended June 30, 2024 and 2023

Revenues

	Three Months Ended June 30, (in thousands, except percentage values)				Six Months Ended June 30, (in thousands, except percentage values)			
	2024	2023	Change	%	2024	2023	Change	%
Revenues	$ 356	$ 6,835	$ (6,479)	(94.8%)	$ 837	$ 164,792	$ (163,955)	(99%)

Revenues during the three and six months ended June 30, 2024 primarily consisted of royalties from our license agreements with Sigma-Aldrich Corporation, or Sigma, and Open Monoclonal Technology, Inc. (now Ligand Pharmaceuticals Inc.), or Ligand. We anticipate revenues in the future will be derived primarily from our license agreements. The terminations of our collaboration agreements with Biogen and Novartis became effective in June 2023, following which we are not entitled to any further milestone payments or royalties from either Biogen or Novartis, nor does either Biogen or Novartis have any further obligations to develop or to reimburse us the costs of any of the programs previously subject to the Biogen and Novartis collaborations. Further, our collaboration agreement with Kite expired pursuant to its terms in April 2024.

The decrease of $6.5 million in revenues for the three months ended June 30, 2024, compared to the same period in 2023, was primarily attributed to decreases of $2.4 million and $2.2 million in revenues relating to our prior collaboration agreements with Biogen and Novartis, respectively, due to the termination of those collaboration agreements in June 2023, a decrease of $1.2 million in revenue relating to our collaboration agreement with Kite, and a decrease of $0.5 million in revenue relating to our license agreements with Sigma and Ligand.

The decrease of $164.0 million in revenues for the six months ended June 30, 2024, compared to the same period in 2023, was primarily attributed to decreases of $134.5 million and $12.2 million in revenues relating to our collaboration agreements with Biogen and Novartis, respectively, due to the termination of collaboration agreements in June 2023, a decrease of $13.5 million in revenue relating to our collaboration agreement with Kite, and a decrease of $3.6 million in revenue relating to our license agreements with Sigma and Ligand.

Operating expenses

	Three Months Ended June 30, (in thousands, except percentage values)				Six Months Ended June 30, (in thousands, except percentage values)			
	2024	2023	Change	%	2024	2023	Change	%
Operating expenses:								
Research and development	$ 24,223	$ 63,046	$ (38,823)	(62%)	$ 60,114	$ 126,262	$ (66,148)	(52%)
General and administrative	12,045	16,014	(3,969)	(25%)	23,812	34,150	(10,338)	(30%)
Impairment of long-lived assets	1,172	—	1,172	100%	5,521	20,433	(14,912)	(73%)
Impairment of goodwill and indefinite-lived intangible assets	—	51,347	(51,347)	(100%)	—	89,485	(89,485)	(100%)
Total operating expenses	$ 37,440	$ 130,407	$ (92,967)	(71%)	$ 89,447	$ 270,330	$ (180,883)	(67%)

Research and Development Expenses

Research and development expenses consisted primarily of compensation related expenses, including restructuring charges and stock-based compensation, laboratory supplies, preclinical and clinical studies, manufacturing clinical supply, contracted research and development, and allocated facilities and information technology expenses.

The decrease of $38.8 million in research and development expenses for the three months ended June 30, 2024, compared to the same period in 2023, was primarily attributable to lower compensation and other personnel costs of $15.0 million due to lower headcount as a result of restructurings of operations and corresponding reductions in workforce announced during 2023 and restructuring expenses recorded during the three months ended June 30, 2023 relating to April restructuring, lower preclinical and clinical expenses of $15.1 million primarily related to the termination of collaboration agreements with Biogen and Novartis and deferral and reprioritization of certain programs, lower facilities and infrastructure related expenses of $3.9 million, and lower allocated overheads of $3.6 million. Stock-based compensation expense included in research and development expenses was $1.3 million and $3.9 million for the three months ended June 30, 2024 and 2023, respectively.

The decrease of $66.1 million in research and development expenses for the six months ended June 30, 2024, compared to the same period in 2023, was primarily attributable to lower compensation and other personnel costs of $27.3 million due to lower headcount as a result of restructurings of operations and corresponding reductions in workforce announced during 2023, a reduction in the bonus expense, and restructuring expenses recorded during the six months ended June 30, 2023 relating to April restructuring, lower preclinical and clinical expenses of $24.9 million primarily related to the termination of collaboration agreements with Biogen and Novartis and deferral and reprioritization of certain programs, lower facilities and infrastructure related expenses of $5.7 million mainly due to lower depreciation, and lower allocated overheads of $6.5 million. Stock-based compensation expense included in research and development expenses was $2.7 million and $8.8 million for the six months ended June 30, 2024 and 2023, respectively.

We expect to continue to devote substantial resources to research and development in the future. While we anticipate that our research and development expenses will decrease in the near-term in connection with the April 2023 Restructuring, November 2023 Restructuring and France Restructuring and the related reprioritization of certain programs and deferral of certain new investments, we ultimately expect research and development expenses to increase in the next several years if we are successful in advancing our clinical programs and if we are able to progress our preclinical product candidates into clinical trials and/or if we are successful in securing new collaborations or other capital necessary to advance our clinical programs.

The length of time required to complete our development programs and our development costs for those programs may be impacted by the results of preclinical testing, scope and timing of enrollment in clinical trials for our product candidates, our decisions to pursue development programs in other therapeutic areas, whether we pursue development of our product candidates with a partner or collaborator or independently and our ability to secure the necessary funding to progress the development of our programs. For example, our current focus is on our core neurology preclinical program, and we do not yet know whether and to what extent we will progress any resulting product candidates from our preclinical program into the clinic and in what therapeutic areas. In this regard, we are deferring new investments in registrational trial planning activities for our Fabry disease gene therapy program until we secure a collaboration partner or external investment in this program. We are actively seeking collaboration partners or a direct external investment, as applicable, to progress our Fabry disease, STAC-BBB and modular integrase programs. Furthermore, the scope and number of clinical trials required to obtain regulatory approval for each pursued therapeutic area is subject to the input of the applicable regulatory authorities, and we have not yet sought such input for all potential therapeutic areas that we may elect to pursue, and even after having given such input, applicable regulatory authorities may subsequently require additional clinical studies prior to granting regulatory approval based on new data generated by us or other

companies, or for other reasons outside of our control. As a condition to any regulatory approval, we may also be subject to post-marketing development commitments, including additional clinical trial requirements. As a result of the uncertainties discussed above, we are unable to determine the duration of or complete costs associated with our development programs.

Our potential therapeutic products are subject to a lengthy and uncertain regulatory process that may not result in our receipt of any necessary regulatory approvals. Failure to receive the necessary regulatory approvals would prevent us from commercializing the product candidates affected. In addition, clinical trials of our product candidates may fail to demonstrate safety and efficacy, which could prevent or significantly delay regulatory approval. A discussion of the risks and uncertainties with respect to our research and development activities, including completing the development of our product candidates, and the consequences to our business, financial position and growth prospects can be found in "Risk Factors" in Part I, Item 1A of the 2023 Annual Report, as supplemented by the risks described under "Risk Factors" in Part II, Item 1A of this Quarterly Report on Form 10-Q.

General and Administrative Expenses

General and administrative expenses consist primarily of compensation related expenses including restructuring charges and stock-based compensation for executive, legal, finance and administrative personnel, professional fees, allocated facilities and information technology expenses, and other general corporate expenses.

The decrease of $4.0 million in general and administrative expenses for the three months ended June 30, 2024, compared to the same period in 2023, was primarily attributable to lower compensation and other personnel costs of $5.0 million due to lower headcount as a result of restructurings of operations and corresponding reductions in workforce announced during 2023 and restructuring expenses recorded during the three months ended June 30, 2023 relating to April restructuring, Biogen contract cost asset amortization of $2.8 million recorded during the three months ended June 30, 2023 due to the termination of the collaboration agreement, lower external professional services of $0.8 million, and lower facilities and infrastructure related costs of $1.5 million. These decreases were partially offset by higher allocated overheads of $3.6 million, and a $2.4 million expense relating to a terminated manufacturing-related supplier arrangement for costs that will be incurred without economic benefit to Sangamo. Stock-based compensation expense included in general and administrative expenses was $1.7 million and $2.9 million for the three months ended June 30, 2024 and 2023, respectively.

The decrease of $10.3 million in general and administrative expenses for the six months ended June 30, 2024, compared to the same period in 2023, was primarily attributable to lower compensation and other personnel costs of $9.4 million due to lower headcount as a result of restructurings of operations and corresponding reductions in workforce announced during 2023, a reduction in bonus expense, and restructuring expenses recorded during the three months ended June 30, 2023 relating to April restructuring, Biogen contract cost asset amortization of $2.8 million recorded during the three months ended June 30, 2023 due to the termination of the collaboration agreement, lower external professional services of $3.9 million, and lower facilities and infrastructure related costs of $3.2 million. These decreases were partially offset by higher allocated overheads of $6.6 million, and a $2.4 million expense relating to a terminated manufacturing-related supplier arrangement for costs that will be incurred without economic benefit to Sangamo. Stock-based compensation expense included in general and administrative expenses was $3.1 million and $6.3 million for the six months ended June 30, 2024 and 2023, respectively.

While we anticipate that our general and administrative expenses will decrease modestly in the near-term in connection with the April 2023 Restructuring, November 2023 Restructuring and France Restructuring, we expect higher general and administrative expenses in the next several years if we are successful in advancing our clinical programs and if we are able to progress our preclinical product candidates into clinical trials and/or if we are successful in securing new collaborations or other capital.

Restructuring Charges

In 2023, we executed a series of restructurings of operations and corresponding reductions in workforce announced in April 2023 and November 2023. In 2024, we are executing a wind-down of our French operations and a corresponding workforce reduction announced in March 2024. These restructurings were designed to reduce overall costs and advance our strategic transformation into a neurology focused genomic medicine company focused on epigenetic regulation programs addressing serious neurological diseases and novel AAV capsid delivery technology. In connection with the November 2023 Restructuring and France Restructuring, the expenses incurred during the three and six months ended June 30, 2024 related to employee severance and notice period payments, benefits, and other employee-related costs were not material. During the three months ended June 30, 2024, we recognized $2.4 million as expense relating to a terminated manufacturing-related supplier arrangement for costs that will be incurred without economic benefit to Sangamo.

For more information see Note 10 – *Restructuring Charges* in the accompanying notes to the Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Impairment of Goodwill and Long-lived Assets

During the three and six months ended June 30, 2024, we recognized impairment charges of $1.2 million and $5.5 million, respectively. During the six months ended June 30, 2024, our Board of Directors approved the France Restructuring, we initiated several actions aimed at reducing costs, including activities related to the closure of our facility in Brisbane, California, and we faced a sustained decline in our stock price and related market capitalization. There was also a decline in the market rates for facility subleases, indicating the carrying values of right of use and leasehold improvement assets could be impaired. As a result of these factors, we concluded certain long-lived assets, primarily comprising right-of-use assets, related leasehold improvements, and certain manufacturing and laboratory equipment, were impaired.

During the three and six months ended June 30, 2023, we recognized impairment charges of $51.3 million and $109.9 million, respectively. During the six months ended June 30, 2023, we experienced a sustained decline in our stock price and related market capitalization, deferral and reprioritization of certain research and development programs, and our collaboration agreements with Biogen and Novartis terminated. As a result of these factors, we concluded our goodwill, indefinite-lived intangible assets and certain long-lived assets were impaired.

For more information see Note 6 – *Impairment and Write-Down of Assets Held For Sale* in the accompanying notes to the Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

Interest and other income, net

Interest and other income, net was $1.0 million and $2.8 million for the three months ended June 30, 2024 and 2023, respectively. The decrease of $1.8 million was primarily driven by a decrease of $1.6 million in interest income due to a decrease in marketable securities, and a decrease of $0.8 million in research tax credits, partially offset by $0.6 million related to fluctuations in foreign currency exchange rates.

Interest and other income, net was $3.6 million and $6.1 million for the six months ended June 30, 2024 and 2023, respectively. The decrease of $2.5 million was primarily driven by a decrease of $3.5 million in interest income due to decrease in marketable securities, and a decrease of $0.4 million in research tax credits, partially offset by $1.2 million related to fluctuations in foreign currency exchange rates.

Liquidity and Capital Resources

Liquidity

Since inception, we have incurred significant net losses, and we have funded our operations primarily through the issuance of equity securities, payments from corporate collaborators and strategic partners and research grants.

As of June 30, 2024, we had cash and cash equivalents totaling $27.8 million, compared to cash, cash equivalents, and marketable securities of $81.0 million as of December 31, 2023. Our most significant use of capital during the year was for employee compensation and external research and development expenses, such as manufacturing, clinical trials and preclinical activity related to our therapeutic programs. Cash in excess of immediate requirements is invested in accordance with our investment policy with a view toward capital preservation and liquidity.

In August 2020, we entered into an Open Market Sale Agreement℠, or the sales agreement, with Jefferies LLC, providing for the sale of up to $150.0 million of our common stock from time to time in "at-the-market" offerings under an existing shelf registration statement. In December 2022, we entered into Amendment No. 2 to the Open Market Sale Agreement℠, which increased the aggregate offering price under the sales agreement by an additional $175.0 million. Approximately $194.5 million remained available under the sales agreement as of June 30, 2024. No shares were sold during the three and six months ended June 30, 2024. During the three and six months ended June 30, 2023, we sold 4,286,831 and 8,249,261 shares of its common stock for net proceeds under the sales agreement of approximately $5.4 million and $15.1 million, respectively.

Under Accounting Standard Codification Topic 205-40, Presentation of Financial Statements—Going Concern, or ASC Topic 205-40, we have the responsibility to evaluate whether conditions and/or events raise substantial doubt about our ability to meet our future financial obligations as they become due within one year after the date that the Condensed Consolidated Financial Statements included in this Quarterly Report on Form 10-Q are issued. As required under ASC Topic 205-40, management's evaluation should initially not take into consideration the potential mitigating effects of management's plans that have not been fully implemented as of the date the Condensed Consolidated Financial Statements are issued. When substantial doubt exists, management evaluates whether the mitigating effects of its plans sufficiently alleviate the substantial doubt about the company's ability to continue as a going concern. The mitigating effects of management's plans, however, are only considered if both (i) it is probable that the plans will be effectively implemented within one year after the date that the financial statements are issued, and (ii) it is probable that the plans, when implemented, will mitigate the relevant conditions or events that raise substantial doubt

about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued. Generally, to be considered probable of being effectively implemented, the plans must have been approved by the company's board of directors before the date that the financial statements are issued.

Based on our current operating plan, our cash and cash equivalents as of June 30, 2024, taken together with the Genentech Payments, are expected to allow us to meet our liquidity requirements only into the first quarter of 2025. Our history of significant losses, negative cash flows from operations, limited liquidity resources currently on hand and dependence on our ability to obtain additional financing to fund our operations have resulted in management's assessment that there is substantial doubt about our ability to continue as a going concern for at least the next 12 months from the date the financial statements included in this Quarterly Report are issued. Our ability to continue to operate as a going concern is dependent upon our ability to raise substantial additional capital to fund our operations and support our research and development endeavors, including to progress our preclinical and clinical programs as described in our 2023 Annual Report and in this Quarterly Report. Although we raised capital via a registered direct offering to institutional investors of common stock and accompanying warrants in March 2024, and although we expect to receive the Genentech Payments, we will still need substantial additional capital in order to continue to operate as a going concern and fund our operations. We have been actively seeking, and continue to actively seek, substantial additional capital, including through public or private equity or debt financing, royalty financing or other sources, such as strategic collaborations and other direct investments in our programs. We may be unable to attract new investments as a result of the speculative nature of our newly reprioritized core neurology preclinical programs. Additional capital may not be available on acceptable terms or at all. If adequate funds are not available to us on a timely basis, or at all, we will be required to take additional actions to address our liquidity needs, including additional cost reduction measures such as further reducing operating expenses and delaying, reducing the scope of, discontinuing or altering our research and development activities, which would have a material adverse effect on our business and prospects, or we may be required to cease operations entirely, liquidate all or a portion of our assets, and/or seek protection under the U.S. Bankruptcy Code, and you may lose all or part of your investment. If we are unable to secure additional funding in the near term, we may seek protection under the U.S. Bankruptcy Code. We have explored, and will continue to explore, whether filing for bankruptcy protection is in the best interest of our Company and our stakeholders.

While we expect the April 2023 Restructuring, November 2023 Restructuring and France Restructuring to be substantially complete by the end of 2024, we may also incur other charges or cash expenditures not currently contemplated due to events that may occur as a result of, or associated with, each of the restructurings. In addition, we may not achieve the expected benefits of these cost reduction measures and other cost reduction plans on the anticipated timeline, or at all, or we may use our available capital more quickly than we expect, which could otherwise accelerate our liquidity needs and could force us to further curtail or suspend, or entirely cease, our operations. Moreover, we rely in part on our collaboration partners to provide funding for and otherwise advance our preclinical and clinical programs. However, in June 2023 our collaboration agreements with Biogen and Novartis terminated, and in April 2024, our collaboration agreement with Kite expired. While we may identify new collaboration partners who can progress some of the programs that were the subject of these collaborations as well as our Fabry disease, STAC-BBB and modular integrase programs, we have not yet been, and may never be, successful in doing so in a timely manner, on acceptable terms or at all, and we may otherwise fail to raise sufficient additional capital in order to progress these programs ourselves, in which case, we will not receive any return on our investments in these programs. In any event, we need substantial additional funding in order to progress the programs that were the subject of these collaborations as well as our Fabry disease, STAC-BBB and modular integrase programs, and to otherwise execute on our current operating plan. If we raise additional capital through public or private equity offerings, including sales pursuant to our at-the-market offering program with Jefferies LLC, the ownership interest of our existing stockholders will be diluted, and such dilution may be substantial given our current stock price decline, and the terms of any new equity securities may have a preference over, and include rights superior to, our common stock. If we raise additional capital through royalty financings or other collaborations, strategic alliances or licensing arrangements with third parties, we may need to relinquish certain valuable rights to our product candidates, technologies, future revenue streams or research programs or grant licenses on terms that may not be favorable. If we raise additional capital through debt financing, we may be subject to specified financial covenants or covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or pursuing certain transactions, any of which could restrict our ability to commercialize our product candidates or operate as a business.

In addition, as we focus our efforts on proprietary human therapeutics, we will need to seek regulatory approvals of our product candidates from the FDA or other comparable foreign regulatory authorities, a process that could cost in excess of hundreds of millions of dollars per product. We may experience difficulties in accessing the capital markets due to external factors beyond our control, such as volatility in the equity markets for emerging biotechnology companies and general economic and market conditions both in the United States and abroad. In particular, our ability to raise the substantial additional capital we need in order to fund our business may be adversely impacted by global economic conditions and disruptions to and volatility in the credit and financial markets in the United States and worldwide, such as has been experienced recently due in part to, among other things, the ongoing conflict between Russia and Ukraine and conflicts in the Middle East. We cannot be certain that we will be able to obtain financing on terms acceptable to us, or at all.

Cash Flows

Operating activities

Net cash used in operating activities was $75.5 million for the six months ended June 30, 2024, primarily due to:

- a net loss of $85.2 million, adjusted for non-cash long-lived asset impairment charges of $5.5 million, other non-cash expenses related to stock-based compensation of $5.8 million, depreciation and amortization of $2.6 million, and amortization of operating lease right-of-use assets of $2.5 million, offset by accretion of discounts and impairment of marketable securities of $0.3 million, and other non-cash adjustments of $0.1 million; and
- a decrease in accounts payable and other accrued liabilities by $4.7 million, a decrease in accrued compensation and employee benefits by $3.2 million, and a decrease in lease liabilities by $2.8 million. These were partially offset by a decrease in prepaid expenses and other assets by $3.6 million, a decrease in interest receivable by $0.4 million, and a decrease in accounts receivable by $0.3 million.

Net cash used in operating activities was $127.0 million for the six months ended June 30, 2023, primarily due to:

- net loss of $93.4 million, adjusted for non-cash goodwill, indefinite-lived intangible assets, and long-lived asset impairment charges of $109.9 million, other non-cash expenses related to stock-based compensation of $15.1 million, depreciation and amortization of $7.7 million, and amortization of operating lease right-of-use assets of $4.0 million, offset by income tax benefit of $6.4 million related to reversal of the deferred tax liability as a result of impairment on the associated indefinite-lived intangible assets and accretion of discount on marketable securities of $1.9 million; and
- decrease in deferred revenues of $154.3 million, mainly attributed to the impact of the termination related contract modification for our collaboration agreement with Biogen and a change in estimate for our collaboration agreement with Kite, a decrease in accrued compensation and employee benefits by $8.5 million, mainly attributed to bonus pay-outs, a decrease in accounts payable and other accrued liabilities by $3.1 million, and a decrease in lease liabilities by $2.5 million. These were partially offset by decrease in prepaid expenses and other assets by $5.5 million, and a decrease in accounts receivable by $1.0 million.

Investing activities

Net cash provided by investing activities was $36.0 million for the six months ended June 30, 2024, related to sales of marketable securities of $34.7 million, maturities of marketable securities of $1.1 million, and sales of assets classified as held for sale of $0.1 million.

Net cash provided by investing activities was $78.2 million for the six months ended June 30, 2023, related to maturities of marketable securities of $146.0 million, partially offset by purchases of marketable securities of $52.1 million, and purchases of property and equipment of $15.7 million.

Financing activities

Net cash provided by financing activities was $21.6 million for the six months ended June 30, 2024, related to $21.9 million of proceeds from issuance of common stock, net of offering expenses of $2.1 million, and Proceeds from issuance of common stock under employee stock purchase plan of $0.1 million, partially offset by taxes paid related to net share settlement of equity awards of $0.5 million.

Net cash provided by financing activities was $14.5 million for the six months ended June 30, 2023, mostly related to $15.1 million of proceeds from the at-the-market offering, net of offering expenses of $0.4 million, and proceeds from purchases of common stock under the employee stock purchase plan of $0.7 million, partially offset by taxes paid related to net share settlement of equity awards of $1.3 million.

Operating Capital and Capital Expenditure Requirements

We anticipate continuing to incur operating losses for at least the next several years and need to raise substantial additional capital. The effects of the current macroeconomic environment, including the effects of war in Ukraine and conflicts in the Middle East, inflation, climate change, rising interest rates and other economic uncertainty and volatility, has resulted and may continue to result in significant disruption of global financial markets, which could impair our ability to access capital on terms that are acceptable or at all, and in turn could negatively affect our liquidity and our ability to continue to operate as a going concern. Future capital requirements beyond the first quarter of 2025, the period into which we expect our existing cash and cash equivalents, in combination with the Genentech Payments, will be sufficient to fund our planned operations, will be substantial, and we need to raise substantial additional capital to continue to operate as a going concern and to fund the development,

manufacturing and potential commercialization of our product candidates (see "*–Financial Position–Going Concern*" and "*–Liquidity and Capital Resources–Liquidity*" above).

As we focus our efforts on proprietary human therapeutics, we will need to seek FDA approvals of our product candidates, a process that could cost in excess of hundreds of millions of dollars per product. Our future capital requirements will depend on many forward-looking factors, including the following:

- the results of preclinical testing of our early-stage core neurology program product candidates;
- the initiation, progress, timing and completion of clinical trials for our product candidates and potential product candidates;
- the outcome, timing and cost of regulatory approvals;
- the success of our collaboration agreements;
- delays that may be caused by changing regulatory requirements;
- the number of product candidates that we pursue;
- the costs involved in filing and prosecuting patent applications and enforcing and defending patent claims;
- the timing and terms of future in-licensing and out-licensing transactions;
- the cost and timing of establishing sales, marketing, manufacturing and distribution capabilities;
- the cost of procuring clinical and commercial supplies of our product candidates;
- the extent to which we acquire or invest in businesses, products or technologies, including the costs associated with such acquisitions and investments; and
- the costs of potential disputes and litigation.

Contractual Obligations

Our future minimum contractual obligations as of December 31, 2023 were reported in the 2023 Annual Report. During the six months ended June 30, 2024, there have been no material changes outside the ordinary course of our business from the contractual obligations previously disclosed in our 2023 Annual Report.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to provide reasonable assurance that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Under the supervision of our principal executive officer and principal financial officer, we evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act) as of June 30, 2024. Based on that evaluation, as of June 30, 2024, our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures were effective at the reasonable assurance level.

Inherent Limitations on Controls and Procedures

Our management, including the principal executive officer and principal financial officer, does not expect that our disclosure controls and procedures and our internal control over financial reporting will prevent all error and all fraud. A control system, no matter how well designed and operated, can only provide reasonable assurances that the objectives of the control system are met. The design of a control system reflects resource constraints; the benefits of controls must be considered relative to their costs. Because there are inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, for our company have been or will be detected. As these inherent limitations are known features of the disclosure and financial reporting processes, it is possible to design into the processes safeguards to reduce, though not eliminate, these risks. These inherent limitations include the realities that judgments in decision-making can be

faulty and that breakdowns occur because of simple error or mistake. Controls can also be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls is based in part upon certain assumptions about the likelihood of future events. While our disclosure controls and procedures and our internal control over financial reporting are designed to provide reasonable assurance of achieving their objectives, there can be no assurance that any design will succeed in achieving its stated goals under all future conditions. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with the policies or procedures. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting that occurred during the quarter ended June 30, 2024 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

We are not party to any material pending legal proceedings. From time to time, we may be involved in legal proceedings arising in the ordinary course of business.

ITEM 1A. RISK FACTORS

Below we are providing, in supplemental form, changes to our risk factors from those previously disclosed in Part I, Item 1A of the 2023 Annual Report. Our risk factors disclosed in Part I, Item 1A of the 2023 Annual Report provide additional discussion about these supplemental risks and we encourage you to read and carefully consider the risk factors disclosed in Part I, Item 1A of the 2023 Annual Report for a more complete understanding of the risks and uncertainties material to our business.

We have incurred significant operating losses since inception and anticipate that we will incur continued losses for the foreseeable future.

We have a history of recurring net losses, including $85.2 million for the six months ended June 30, 2024 and $257.8 million and $192.3 million for the years ended December 31, 2023 and 2022, respectively, and we have otherwise generated operating losses since we began operations in 1995. The extent of our future losses and the timing of profitability are uncertain, and we expect to incur losses for the foreseeable future. We have been engaged in developing our zinc finger, or ZF, technology since inception, which has and will continue to require significant research and development expenditures. To date, we have generated our funding from issuance of equity securities, revenues derived from collaboration agreements, other strategic partnerships in non-therapeutic applications of our technology, federal government research grants and grants awarded by research foundations. We expect to continue to incur additional operating losses for the next several years as we continue to develop our preclinical core neurology therapeutic programs and capsid engineering platform. If the time required to generate significant product revenues and achieve profitability is longer than we currently anticipate or if we are unable to generate liquidity through equity financing or other sources of funding, we may be forced to further curtail or suspend, or entirely cease, our operations.

There is substantial doubt about our ability to continue to operate as a going concern. We need substantial additional funding to execute our operating plan and to continue to operate as a going concern. If adequate funds are not available to us on a timely basis, or at all, we will be required to take additional actions to address our liquidity needs, including additional cost reduction measures such as further reducing operating expenses and delaying, reducing the scope of, discontinuing or altering our research and development activities, which would have a material adverse effect on our business and prospects, or we may be required to cease operations entirely, liquidate all or a portion of our assets, and/or seek protection under the U.S. Bankruptcy Code, and you may lose all or part of your investment. Future sales and issuances of equity securities would also result in substantial dilution to our stockholders.

We have incurred significant operating losses and negative operating cash flows since inception and have not achieved profitability. Based on our current operating plan, we estimate that our available cash, cash equivalents and marketable securities as of June 30, 2024, taken together with the $50.0 million in upfront license fees and milestone payments that we expect to receive from Genentech in the near term (the "Genentech Payments"), will be sufficient to fund our planned operations only into the first quarter of 2025. Our financial position raises substantial doubt about our ability to continue to operate as a going concern. Our ability to continue to operate as a going concern is dependent upon our ability to raise substantial additional capital to fund our operations and support our research and development endeavors, including to progress our preclinical and clinical programs as described in our 2023 Annual Report and in this Quarterly Report. In this regard, we have been seeking, and continue to actively seek substantial additional capital, including through public or private equity or debt financing, royalty financing or other sources, such as strategic collaborations and other direct investments in our programs. Although we raised capital via a registered direct offering to institutional investors of common stock and accompanying warrants in March 2024, or the 2024 Registered Direct Offering, for net proceeds of approximately $21.8 million after deducting placement agents' fees and estimated offering expenses payable by us, and although we expect to receive the Genentech Payments, we will still need substantial additional capital in order to continue to operate as a going concern and fund our operations. Additional capital may not be available on acceptable terms or at all. In particular, the perception of our ability to continue to operate as a going concern may make it more difficult to obtain financing for the continuation of our operations, particularly in light of currently challenging macroeconomic and market conditions. Further, we may be unable to attract new investments as a result of the speculative nature of our newly reprioritized core neurology preclinical programs. If adequate funds are not available to us on a timely basis, or at all, we will be required to take additional actions to address our liquidity needs, including additional cost reduction measures such as further reducing operating expenses and delaying, reducing the scope of, discontinuing or altering our research and development activities, which would have a material adverse effect on our business and prospects, or we may be required to cease operations entirely, liquidate all or a portion of our assets, and/or seek protection under the U.S. Bankruptcy Code, and you may lose all or

part of your investment. If we are unable to secure additional funding in the near term, we may seek protection under the U.S. Bankruptcy Code. We have explored, and will continue to explore, whether filing for bankruptcy protection is in the best interest of our Company and our stakeholders.

In April 2023, we announced a restructuring of operations and a reduction in force and a significant reduction in our internal manufacturing and allogeneic research footprints in California, or the April 2023 Restructuring, and in November 2023, we announced a further restructuring of operations and reduction in force, or the November 2023 Restructuring, including a strategic transformation to focus resources on our proprietary neurology-focused epigenetic regulation programs and AAV capsid delivery technology and move all U.S. operations, including our headquarters, to our Richmond, California facility. On March 1, 2024, our board of directors approved the wind-down of our operations in France and closure of our facility in Valbonne, France by the end of 2024, or the France Restructuring. While we expect the April 2023 Restructuring, November 2023 Restructuring and France Restructuring to be complete by the third quarter of 2024, the third quarter of 2024 and the fourth quarter of 2024, respectively, we may also incur other charges or cash expenditures not currently contemplated due to events that may occur as a result of, or associated with, each of the restructurings. In addition, we may not achieve the expected benefits of these cost reduction measures and other cost reduction plans on the anticipated timeline, or at all, or we may use our available capital more quickly than we expect, which could otherwise accelerate our liquidity needs and could force us to further curtail or suspend, or entirely cease, our operations. Moreover, we have historically relied in part on collaboration partners to provide funding for and otherwise advance our preclinical and clinical programs. However, in June 2023, our collaboration agreements with Biogen and Novartis terminated, and our collaboration agreement with Kite expired pursuant to its terms in April 2024. Although we have entered into the Genentech Agreement pursuant to which we are eligible to earn a $10.0 million milestone payment upon completion of technology transfer activities as well as additional development and commercial milestone payments, we may be unable to complete the requisite actions to earn the technology transfer milestone payment, in which case our financial position would be adversely affected, and we may never receive any future development or commercial milestone payments. Further, while we may identify new collaboration partners who can progress some of the programs that were the subject of these collaborations as well as our Fabry disease and modular integrase programs, we have not yet been, and may never be, successful in doing so in a timely manner, on acceptable terms or at all, and we may otherwise fail to raise sufficient additional capital in order to progress these and our other programs ourselves, in which case, we will not receive any return on our investments in these programs. In any event, we need substantial additional funding in order to advance our core neurology programs as well as our Fabry disease, STAC-BBB and modular integrase programs, and to otherwise execute on our current operating plan.

If we raise additional capital through public or private equity offerings, including sales pursuant to our at-the-market offering program with Jefferies LLC, the ownership interest of our existing stockholders will be diluted, and such dilution may be substantial given our current stock price decline. For example, in the 2024 Registered Direct Offering, we issued 24,761,905 shares of common stock, pre-funded warrants to purchase 3,809,523 shares of common stock and accompanying warrants to purchase an aggregate of 28,571,428 shares of common stock at a price per share of common stock (or pre-funded warrant in lieu thereof) and accompanying warrant of $0.84 per share. In addition, the terms of any new equity securities we may issue may have a preference over, and include rights superior to, our common stock. If we raise additional capital through royalty financings or other collaborations, strategic alliances or licensing arrangements with third parties, we may need to relinquish certain valuable rights to our product candidates, technologies, future revenue streams or research programs or grant licenses on terms that may not be favorable. If we raise additional capital through debt financing, we may be subject to specified financial covenants or covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or pursuing certain transactions, any of which could restrict our ability to commercialize our product candidates or operate as a business.

In addition, as we focus our efforts on proprietary human therapeutics, we will need to seek regulatory approvals of our product candidates from the FDA or other comparable foreign regulatory authorities, a process that could cost in excess of hundreds of millions of dollars per product. We may experience difficulties in accessing the capital markets due to external factors beyond our control, such as volatility in the equity markets for emerging biotechnology companies and general economic and market conditions both in the United States and abroad. In particular, our ability to raise the substantial additional capital we need in order to fund our business may be adversely impacted by global economic conditions and disruptions to and volatility in the credit and financial markets in the United States and worldwide, such as has been experienced recently. We cannot be certain that we will be able to obtain financing on terms acceptable to us, or at all. Our failure to obtain adequate and timely funding will adversely affect our ability to continue to operate as a going concern and our ability to develop our technology and products candidates.

If we seek to reorganize under the U.S. Bankruptcy Code, our future operations are uncertain, and such reorganization could be unsuccessful and/or result in no recovery for holders of our common stock. If we are unable to successfully reorganize, we may be forced to pursue a liquidation of some or all of our assets.

Based on our current operating plan, our cash, cash equivalents and marketable securities as of June 30, 2024 together with the Genentech Payments are expected to allow us to meet our liquidity requirements only into the first quarter of 2025. We

continue to actively seek, substantial additional capital, including through public or private equity or debt financing, royalty financing or other sources, such as strategic collaborations and other direct investments in our programs, and we have been unsuccessful in securing any such additional capital to date. As a result, we have explored, and will continue to explore, whether filing for bankruptcy protection is in the best interest of our Company and our stakeholders. In the event we file for relief under the U.S. Bankruptcy Code, our operations, our ability to develop our product candidates and execute on our operating plan, and our ability to continue as a going concern will be subject to the risks and uncertainties associated with bankruptcy proceedings, including, among others: our ability to execute, confirm and consummate a plan of reorganization; the additional, significant costs of bankruptcy proceedings and related fees; our ability to obtain sufficient financing to allow us to emerge from bankruptcy and execute our business plan thereafter, and our ability to comply with terms and conditions of any such financing; our ability to continue our operations in the ordinary course; our ability to maintain our relationships with our collaborators, counterparties, employees and other third parties; our ability to obtain, maintain or renew contracts that are critical to our operations on reasonably acceptable terms and conditions or at all; our ability to attract, motivate and retain key employees; the ability of third parties to use certain provisions of the U.S. Bankruptcy Code to terminate contracts without first seeking Bankruptcy Court approval; the ability of third parties to seek and obtain court approval to terminate or shorten the exclusivity period for us to propose and confirm a plan of reorganization, to appoint a trustee, or to convert a proceeding under Chapter 11 of the U.S. Bankruptcy Code to a proceeding under Chapter 7 of the U.S. Bankruptcy Code; and the actions and decisions of our stakeholders and other third parties who have interests in our bankruptcy proceedings that may be inconsistent with our operational and strategic plans. Any delays in our bankruptcy proceedings would increase the risks that we may not be able to reorganize our business and emerge from bankruptcy proceedings and may increase our costs associated with the bankruptcy process or result in prolonged operational disruption. In addition, we would need the prior approval of the Bankruptcy Court for transactions outside the ordinary course of business during the course of any bankruptcy proceedings, which may limit our ability to respond timely to certain events or take advantage of certain opportunities. Because of the risks and uncertainties associated with any bankruptcy proceedings, we cannot accurately predict or quantify the ultimate impact of events that could occur during any such proceedings. There can be no guarantees that if we seek protection under the U.S. Bankruptcy Code, we will emerge from any such proceedings as a going concern or that holders of our common stock will receive any recovery from any bankruptcy proceedings.

In the event we are unable to pursue protection under Chapter 11 of the U.S. Bankruptcy Code, or, if pursued, successfully emerge from such proceedings, it may be necessary for us to pursue protection under Chapter 7 of the U.S. Bankruptcy Code for all or a part of our businesses. In such event, a Chapter 7 trustee would be appointed or elected to liquidate our assets for distribution in accordance with the priorities established by the U.S. Bankruptcy Code. We believe that liquidation under Chapter 7 would result in significantly smaller distributions being made to our stakeholders than those we might obtain under Chapter 11, or no distribution at all, primarily because of the likelihood that the assets would have to be sold or otherwise disposed of in a distressed fashion over a short period of time rather than in a controlled manner and as a going concern. In such event, you may lose part or all of your investment.

Commercialization of our technologies will depend, in part, on collaborations with other companies. If we are not able to find collaborators in the future or if our collaborators do not diligently pursue product development efforts, we may not be able to develop our technologies or product candidates, which could slow our growth and decrease the market value of our common stock.

We do not have financial resources ourselves to fully develop, obtain regulatory approval for and commercialize our product candidates. We have relied, and expect to continue to rely, on collaborations with other biopharmaceutical companies to provide funding for our research and development efforts, including preclinical studies and clinical tests, and expect to rely significantly on such collaborations to provide funding for the lengthy regulatory approval processes required to commercialize our product candidates.

For example, on August 2, 2024, we entered into the Genentech Agreement with Genentech to develop intravenously administered genomic medicines to treat certain neurodegenerative diseases. Under the terms of Genentech Agreement, we are responsible for completing a technology transfer and certain preclinical activities, and Genentech is solely responsible for all clinical development, regulatory interactions, manufacturing and global commercialization of resulting products.

We were party to collaboration agreements with Novartis to develop product candidates to treat certain neurodevelopment disorders, including autism and intellectual disability and with Biogen to develop product candidates to treat tauopathies including Alzheimer’s disease, alpha-synuclein related diseases including Parkinson’s disease and other neurological diseases. In June 2023, our collaboration agreements with Novartis and Biogen terminated. We were also party to a collaboration agreement with Kite to develop engineered cell therapies for cancer, which expired by its terms in April 2024. As a result of these terminations and expirations, we are no longer entitled to any milestone payments or royalties from Novartis, Biogen or Kite, and such counterparties have no further obligations to develop or to reimburse the costs of any of the programs under the applicable agreement. In connection with the Restructurings, we made the strategic decision to pause further development of the programs that were the subject of these collaborations. In the future, we may identify alternative options to advance some of the programs that were subject to such agreements, including potential development internally or with a collaboration partner. However, we

cannot guarantee that we will be able to successfully secure any such options, including identifying an alternative suitable collaboration partner or negotiate a favorable alternative collaboration agreement. In such case, we may be unable or unwilling to continue developing the programs subject to these collaboration agreements due to the lack of adequate capital resources or otherwise.

If we are unable to secure additional collaborations or if our collaborators are unable or unwilling to diligently advance the development, regulatory approval and commercialization of our product candidates, our growth may slow and adversely affect our ability to generate funding for development of our technologies and product candidates as well as our ability to continue to operate as a going concern, and we may be required to cease operations. For example, although we have decided to defer new investments in our Fabry disease gene therapy program unless and until we are able to successfully secure a collaboration partner or external investment in this program, there can be no assurance that such efforts will be successful in a timely manner, or at all, in which case, we will not receive any return on our investments in these programs and our ability to continue to operate as a going concern may be materially and adversely affected. In addition, our ongoing collaborators may sublicense or abandon development programs with little advance notice, or we may have disagreements or disputes with our collaborators, which would cause associated product development to slow or cease. In addition, the business or operations of our collaborators may change significantly through restructurings, acquisitions, other strategic transactions that may negatively impact their ability to advance our programs.

Under typical collaborations, we expect to receive revenue for the research and development of our product candidates based on achievement of specific milestones, as well as royalties based on a percentage of sales of any commercialized products. Achieving these milestones will depend, in part, on the efforts of our collaborators, which we have no control over, as well as our own efforts. In addition, business combinations, changes in a collaborator's business strategy and financial difficulties or other factors could result in that collaborator abandoning or delaying development of any product candidates covered by our collaboration agreement with that collaborator. For example, Novartis's and Biogen's decisions to terminate their respective collaboration agreements with us each related to a recent strategic review. Further, if we fail or any collaboration partner fails to meet specific milestones, then the collaboration agreement may be terminated, which would preclude our ability to earn any additional milestone payments under that collaboration agreement and would reduce our revenues. In addition, even if a collaboration product candidate is successfully developed and approved for marketing by relevant regulatory authorities, if sales of the commercialized product fails to meet expectations, we could receive lower royalties than expected. In any event, the milestone and royalty payment opportunities associated with our collaborations involve a substantial degree of risk to achieve and may never be received. Accordingly, investors should not assume that we will receive all of the potential milestone payments provided for under our ongoing collaborations, and it is possible that we may never receive any further significant milestone payments or any royalty payments under our collaborations.

We have fully impaired our goodwill and indefinite-lived intangible assets, have recorded significant impairment of our long-lived assets, and may be required to record significant additional charges if our long-lived assets become further impaired in the future.

We evaluate the carrying value of long-lived assets, which include property and equipment, leasehold improvements and right-of-use assets, for impairment whenever events or changes in circumstances indicate that the carrying amounts of the asset may not be fully recoverable. Factors that may indicate potential impairment and trigger an impairment test include, but are not limited to, general macroeconomic conditions, conditions specific to the industry and market, an adverse change in legal factors, business climate or operational performance of the business, and sustained decline in the stock price and market capitalization compared to the net book value. During the year ended December 31, 2023 and the six months ended June 30, 2024, we recognized impairment charges of $155.0 million and $5.5 million, respectively. We have fully impaired our goodwill and indefinite-lived intangible assets in 2023 and have significantly impaired our long-lived assets in both 2023 and 2024. We will continue to assess whether its long-lived assets are impaired in future periods. We are finalizing the wind-down of our France operations and corresponding reduction in force of all France employees, as well as the closure of our Brisbane facility, and we have recognized related impairments in the past twelve months. It is reasonably possible that additional impairment charges will be recognized, for example, if sublease rates of leased facilities or selling prices of the assets held for sale are less than those estimated. For additional information regarding these impairment charges, see Note 6 – *Impairment and Write-Down of Assets Held For Sale* in the accompanying notes to the Condensed Consolidated Financial Statements included in Part I, Item 1 of this Quarterly Report on Form 10-Q.

It is possible that changes in circumstances, many of which are outside of our control, or in the numerous variables associated with the assumptions and estimates used in assessing the appropriate valuation of our long-lived assets, could in the future result in significant additional impairment charges to our long-lived assets, which could adversely affect our results of operations.

We currently do not meet, and may not regain compliance with, the listing standards of the Nasdaq Stock Market LLC, or Nasdaq, and as a result our common stock may be delisted. Delisting could adversely affect the liquidity of our common stock and the market price of our common stock could decrease, and our ability to obtain sufficient additional capital to fund our operations and to continue to operate as a going concern would be substantially impaired.

Our common stock is currently listed on the Nasdaq Global Select Market, which has minimum requirements that a company must meet in order to remain listed. These requirements include maintaining a minimum closing bid price of $1.00 per share, which closing bid price cannot fall below $1.00 per share for a period of more than 30 consecutive trading days, or the Bid Price Requirement. On April 24, 2024, we received a deficiency notice, or the Notice, from the Listing Qualifications Staff, or the Staff of Nasdaq notifying us that, for the last 30 consecutive business days, the bid price of our common stock had closed below $1.00 per share, thereby failing to satisfy the Bid Price Requirement set forth in the continued listing requirements of Nasdaq Listing Rule 5450(a)(1). The Notice has no immediate effect on the listing of our common stock on the Nasdaq Global Select Market. In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we have 180 calendar days, or until October 21, 2024, to regain compliance with the Bid Price Requirement by having shares of our common stock maintain a minimum closing bid price of at least $1.00 per share for a minimum of 10 consecutive trading days. In the event we do not regain compliance with the Bid Price Requirement prior to the expiration of the compliance period, unless Nasdaq exercises its discretion to extend this period, our common stock may be subject to a delisting action by Nasdaq.

A reverse stock split may allow us to meet the Bid Price Requirement, but we cannot assure you that a reverse stock split will be approved by our stockholders or that any reverse stock split, if implemented, will be sufficient to enable us to maintain our Nasdaq listing. Additionally, if a reverse stock split is implemented, there can be no assurance that the market price per new share of our common stock following the reverse stock split will remain unchanged or will increase in proportion to the reduction in the number of old shares of our common stock outstanding before the reverse stock split. The liquidity of the shares of our common stock may be affected adversely by any reverse stock split given the reduced number of shares of our common stock that will be outstanding following such reverse stock split. Furthermore, following any reverse stock split, the resulting market price of our common stock may not attract new investors and may not satisfy the investing requirements of those investors.

In the event that our common stock is delisted from Nasdaq as a result of our failure to regain compliance with the Bid Price Requirement, as a result of Nasdaq not granting us an extension or the panel not granting us a favorable decision or due to our failure to continue to comply with any other requirement for continued listing on Nasdaq, trading of our common stock could be conducted in the over-the-counter market or on an electronic bulletin board established for unlisted securities such as the Pink Sheets or the OTC Bulletin Board, but there can be no assurance that our common stock will be eligible for trading on such alternative exchange or market.

Additionally, if our common stock is delisted from Nasdaq, the liquidity of our common stock would be adversely affected, the market price of our common stock could decrease, our ability to obtain sufficient additional capital to fund our operations and to continue to operate as a going concern would be substantially impaired and transactions in our common stock could lose federal preemption of state securities laws. Furthermore, there could also be a further reduction in our coverage by securities analysts and the news media and broker-dealers may be deterred from making a market in or otherwise seeking or generating interest in our common stock, which could cause the price of our common stock to decline further. Moreover, delisting may also negatively affect our collaborators', vendors', suppliers' and employees' confidence in us and employee morale.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES, USE OF PROCEEDS, AND ISSUER PURCHASES OF EQUITY SECURITIES

None.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

Epigenetic Regulation and Capsid Delivery License Agreement with Genentech

On August 2, 2024, the Company entered into a global epigenetic regulation and capsid delivery license agreement, or the Genentech Agreement, with Genentech, a member of the Roche Group, or Genentech, to develop intravenously administered genomic medicines to treat certain neurodegenerative diseases. Under the Genentech Agreement, the Company granted an exclusive license to Genentech for the Company's proprietary zinc finger repressors, or ZFRs, that are directed to tau and the Company's proprietary ZFRs that are directed to a second undisclosed neurology target. The Company also granted an exclusive license to Genentech to the Company's proprietary, neurotropic adeno-associated virus capsid, STAC-BBB for use with therapies directed to tau or to the second neurology target. The Company is prohibited from exploiting (itself or with or for a third party) products directed to tau or to the second neurology target during the applicable exclusivity periods set forth in the Genentech Agreement. Under the terms of the Genentech Agreement, the Company is responsible for completing a technology transfer and certain preclinical activities, and Genentech is solely responsible for all clinical development, regulatory interactions, manufacturing and global commercialization of resulting products. Under the Genentech Agreement, Genentech is obligated to pay the Company a $40.0 million upfront license fee on or around the end of August 2024 and will become obligated to pay the Company a $10.0 million milestone payment after the completion of technology transfer activities. In addition, the Company is eligible to earn up to $1.9 billion in development and commercial milestones spread across multiple potential products under the Genentech Agreement and tiered mid-single digit to sub-teen double digit royalties on the net sales of such products, subject to certain specified reductions.

The Genentech Agreement will continue, on a product-by-product and country-by-country basis, until the date when there is no remaining royalty payment obligation in such country with respect to such product, at which time the Genentech Agreement will expire with respect to such product in such country. Genentech has the right to terminate the Genentech Agreement for convenience. Each party has the right to terminate the Genentech Agreement on account of the other party's uncured material breach.

The foregoing is only a brief description of the material terms of the Genentech Agreement, does not purport to be a complete statement of the rights and obligations of the parties under the Genentech Agreement and the transactions contemplated thereby, and is qualified in its entirety by the full text of the Genentech Agreement, a copy of which will be filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2024.

ITEM 6. EXHIBITS

Exhibit number		Description of Document
3.1		Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.3 to the Company's Current Report on Form 8-K filed June 2, 2023).
3.2		Certificate of Amendment of the Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed June 5, 2024).
3.3		Fifth Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed December 19, 2022).
31.1+		Rule 13a — 14(a) Certification of Principal Executive Officer.
31.2+		Rule 13a — 14(a) Certification of Principal Financial Officer.
32.1+	*	Certifications Pursuant to 18 U.S.C. Section 1350.
101.INS	**	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	**	Inline XBRL Taxonomy Extension Schema With Embedded Linkbase Documents.
104		The cover page from Sangamo's Quarterly Report on Form 10-Q for the three months ended June 30, 2024 is formatted in Inline XBRL Taxonomy Extension and it is contained in Exhibit 101.

* The certifications attached as Exhibit 32.1 accompany this Quarterly Report on Form 10-Q pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed "filed" by the Registrant for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

** Pursuant to Rule 406T of Regulation S-T, these interactive data files are deemed not filed or part of a registration statement or prospectus for purposes of Section 11 or 12 of the Securities Act of 1933 or Section 18 of the Securities Exchange Act of 1934 and otherwise are not subject to liability.

# Indicates management contract or compensatory plan or arrangement.

\+ Filed herewith.

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.

Dated: August 6, 2024

SANGAMO THERAPEUTICS, INC.

/s/ ALEXANDER D. MACRAE

Alexander D. Macrae
President and Chief Executive Officer
(Principal Executive Officer)

/s/ PRATHYUSHA DURAIBABU

Prathyusha Duraibabu
Senior Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 31.1

CERTIFICATION

I, Alexander D. Macrae, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Sangamo Therapeutics, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: August 6, 2024

/s/ ALEXANDER D. MACRAE

Alexander D. Macrae
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, Prathyusha Duraibabu, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Sangamo Therapeutics, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: August 6, 2024

/s/ PRATHYUSHA DURAIBABU

Prathyusha Duraibabu
Senior Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

Certifications Pursuant to 18 U.S.C. §1350, as Adopted

Pursuant to §906 of the Sarbanes-Oxley Act of 2002

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. §1350), each of the undersigned hereby certifies in his or her capacity as an officer of Sangamo Therapeutics, Inc. (the "Company"), that, to the best of his or her knowledge:

(1) the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2024, to which this Certification is attached as Exhibit 32.1 (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

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

/s/ ALEXANDER D. MACRAE

Alexander D. Macrae
President and Chief Executive Officer
(Principal Executive Officer)

Date: August 6, 2024

/s/ PRATHYUSHA DURAIBABU

Prathyusha Duraibabu
Senior Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)

Date: August 6, 2024

This certification accompanies the Quarterly Report on Form 10-Q to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of Sangamo Therapeutics, Inc. under the Securities Act of 1933, as amended, or the Exchange Act (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing. A signed original of this written statement required by Section 906 of the Sarbanes-Oxley Act of 2002 has been provided to Sangamo Therapeutics, Inc. and will be retained by Sangamo Therapeutics, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.