UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2025

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: 001-38942

ARCTURUS THERAPEUTICS HOLDINGS INC.
(Exact Name of Registrant as Specified in its Charter)

Delaware (State or other jurisdiction of incorporation or organization)	**32-0595345** (I.R.S. Employer Identification No.)
10628 Science Center Drive, Suite 250 **San Diego, California** (Address of principal executive offices)	**92121** (Zip Code)

(858) 900-2660
(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 $0.001 per share	ARCT	The NASDAQ Stock Market LLC

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

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

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

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

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

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

As of May 6, 2025, the registrant had 27,120,603 shares of voting common stock outstanding.

ARCTURUS THERAPEUTICS HOLDINGS INC. AND ITS SUBSIDIARIES

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Special Note Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q (this "Quarterly Report"), including the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations," and the documents incorporated by reference herein may contain express or implied "forward-looking statements" within the meaning of the federal securities laws, Section 27A of the Securities Act of 1933, as amended and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth below under Part II, Item 1A, "Risk Factors" in this Quarterly Report. Except as required by law, we assume no obligation to update these forward-looking statements, whether as a result of new information, future events or otherwise. These statements, which represent our current expectations or beliefs concerning various future events, may contain words such as "may," "will," "expect," "anticipate," "intend," "plan," "believe," "estimate" or other words indicating future results, though not all forward-looking statements necessarily contain these identifying words. Such statements may include, but are not limited to, statements concerning the following:

- our compliance, and ability to remain in compliance, with the requirements of our collaboration agreements, including our collaboration with Seqirus Inc. ("CSL Seqirus");
- the anticipated benefits and success of our collaboration agreement with CSL Seqirus related to the licensure of our STARR® mRNA technology and LUNAR® lipid-mediated delivery, including our timely receipt of upfront and potential royalty and other payments thereunder;
- the continued development activities of the LUNAR-COV19 and LUNAR-FLU programs under our collaboration with CSL Seqirus;
- the status, success and benefits of our arrangements with private and governmental entities, some of which are subject to termination for convenience by our counterparties;
- our compliance, and ability to remain in compliance, with the stringent requirements of our current and potential government contracts, including our arrangements with the Biomedical Advanced Research and Development Authority, a division of the Office of the Assistant Secretary for Preparedness and Response within the U.S. Department of Health and Human Services and the Department of Defense;
- our plans to conduct and advance any of our research and discovery programs;
- the initiation, design, cost, timing, progress, enrollment and results of, and our expected ability to undertake certain activities and accomplish certain goals with respect to, our research and development activities, preclinical studies and clinical trials, including those related to our therapeutics pipeline candidates ARCT-810 and ARCT-032;
- the potential safety, immunogenicity, efficacy or regulatory approval of any of our product candidates;
- the potential effects, efficacy and benefits of our technologies and product candidates on their own and in comparison to technologies, drugs or courses of treatment currently available or that may be developed by competitors;
- the likelihood that preclinical or clinical data will be predictive of future clinical results or efficacy or safety of a product candidate;
- the anticipated timing of enrollment, duration, milestones and announcements of results of clinical trials, and the submission of applications to conduct clinical trials;
- the likelihood that clinical data will be sufficient for regulatory approval or completed in time to submit an application for regulatory approval within a particular timeframe;
- the likelihood or timing of any regulatory approval, and the likelihood that the marketing approval of ARCT-154 in Japan will be predictive of any future marketing approvals in other countries or for other versions of our LUNAR-COV19 or other product candidates or of any commercial sales;
- the potential administration regimen or dosage, or ability to administer multiple doses of, any of our product candidates;
- our ability to obtain and maintain regulatory approval of our product candidates, and any related restrictions, limitations, and/or warnings in the label of an approved product candidate;
- our plans to develop and commercialize our product candidates;
- our ability, and the ability of our partners, to successfully commercialize, and our expectations regarding future therapeutic and commercial potential with respect to, our product candidates;
- the rate and degree of market acceptance of our product candidates;
- the success of competing therapies that are or may become available;

- the size and growth potential of the markets for our product candidates, and our ability to serve those markets and address unmet medical needs;
- our ability to obtain and maintain intellectual property protection for our product candidates;
- interactions with regulatory authorities in the United States and foreign countries;
- our ability to attract and retain experienced and seasoned scientific and management professionals;
- the performance of our third-party suppliers and manufacturers, including the ability to implement and scale-up manufacturing levels as necessary;
- the receipt of relevant approvals related to the manufacture and distribution of our product candidates;
- our strategic alliance partners' election to pursue development and commercialization of any programs or product candidates that are subject to our collaboration and license agreements with such partners;
- our ability to attract collaborators with relevant development, regulatory and commercialization expertise;
- future activities to be undertaken by our strategic alliance partners, collaborators and other third parties;
- our ability to develop sales and marketing capabilities, whether alone or with potential future collaborators;
- our ability to avoid, settle or be victorious at costly litigation with shareholders, former executives or others, should these situations arise;
- our ability to obtain and deploy funding for our operations and to efficiently use our financial and other resources;
- our ability to continue as a going concern; and
- the accuracy of our estimates regarding future expenses, future revenues, cash flows, capital requirements need for additional financing, and possible sources of revenue.

These and other forward-looking statements are only current predictions and are subject to known and unknown risks, uncertainties, and other factors that may cause our or our industry's actual results, levels of activity, performance or achievements to be materially different from those anticipated by the forward-looking statements. In addition, historic results of scientific research, preclinical and clinical trials do not guarantee that future research or trials will suggest the same conclusions, nor that historic results referred to herein will be interpreted in the same manner due to additional research, preclinical and clinical trial results or otherwise. The forward-looking statements contained in this Quarterly Report are subject to risks and uncertainties, including those discussed in our other filings with the United States Securities and Exchange Commission (the "Commission"). Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof unless specifically stated otherwise. Although we currently believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, or achievements.

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

ARCTURUS THERAPEUTICS HOLDINGS INC. AND ITS SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS

(in thousands, except par value information)	March 31, 2025 (unaudited)	December 31, 2024
Assets		
Current assets:		
Cash and cash equivalents	$ 216,948	$ 237,028
Restricted cash	38,500	55,000
Accounts receivable	14,572	3,974
Prepaid expenses and other current assets	8,774	9,977
Total current assets	278,794	305,979
Property and equipment, net	8,867	9,531
Operating lease right-of-use assets, net	25,739	26,674
Non-current restricted cash	18,385	1,885
Total assets	$ 331,785	$ 344,069
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 6,179	$ 7,194
Accrued liabilities	30,559	38,781
Deferred revenue	12,671	19,514
Total current liabilities	49,409	65,489
Deferred revenue, net of current portion	9,630	12,604
Operating lease liability, net of current portion	23,987	24,998
Long-term debt	15,000	-
Total liabilities	98,026	103,091
Stockholders' equity		
Common stock, $0.001 par value; 60,000 shares authorized; issued and outstanding shares were 27,121 at March 31, 2025 and 27,096 at December 31, 2024	27	27
Additional paid-in capital	696,615	689,758
Accumulated deficit	(462,883)	(448,807)
Total stockholders' equity	233,759	240,978
Total liabilities and stockholders' equity	$ 331,785	$ 344,069

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

ARCTURUS THERAPEUTICS HOLDINGS INC. AND ITS SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(unaudited)

(in thousands, except per share data)	Three Months Ended March 31, 2025	2024
Revenue:		
Collaboration revenue	$ 25,477	$ 32,598
Grant revenue	3,905	5,414
Total revenue	29,382	38,012
Operating expenses:		
Research and development, net	34,893	53,573
General and administrative	11,315	14,851
Total operating expenses	46,208	68,424
Loss from operations	(16,826)	(30,412)
Loss from foreign currency	(21)	(53)
Finance income, net	2,771	4,016
Net loss before income taxes	(14,076)	(26,449)
Provision for income taxes	—	368
Net loss	$ (14,076)	$ (26,817)
Net loss per share, basic and diluted	$ (0.52)	$ (1.00)
Weighted-average shares outstanding, basic and diluted	27,107	26,879
Comprehensive loss:		
Net loss	$ (14,076)	$ (26,817)
Comprehensive loss	$ (14,076)	$ (26,817)

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

ARCTURUS THERAPEUTICS HOLDINGS INC. AND ITS SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(unaudited)

(in thousands)	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Equity
Balance – December 31, 2024	27,096	$ 27	$ 689,758	$ (448,807)	$ 240,978
Net loss	—	—	—	(14,076)	(14,076)
Share-based compensation expense	—	—	6,662	—	6,662
Issuance of common stock upon exercise of stock options	25	—	195	—	195
Balance – March 31, 2025	27,121	$ 27	$ 696,615	$ (462,883)	$ 233,759

(in thousands)	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Equity
Balance – December 31, 2023	26,828	$ 27	$ 646,352	$ (367,866)	$ 278,513
Net loss	—	—	—	(26,817)	(26,817)
Share-based compensation expense	—	—	10,088	—	10,088
Issuance of common stock upon exercise of stock options	89	—	2,188	—	2,188
Balance – March 31, 2024	26,917	$ 27	$ 658,628	$ (394,683)	$ 263,972

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

ARCTURUS THERAPEUTICS HOLDINGS INC. AND ITS SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

(in thousands)	Three Months Ended March 31, 2025	2024
Operating activities		
Net loss	$ (14,076)	$ (26,817)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	801	904
Share-based compensation expense	6,662	10,088
Foreign currency transaction loss	21	53
Changes in assets and liabilities:		
Accounts receivable	(10,598)	5,007
Prepaid expense and other assets	1,203	2,186
Right-of-use assets	935	1,823
Accounts payable	(1,015)	3,865
Accrued liabilities	(8,243)	2,339
Deferred revenue	(9,817)	(4,014)
Lease liabilities	(1,011)	(991)
Net cash used in operating activities	(35,138)	(5,557)
Investing activities		
Acquisition of property and equipment	(137)	(240)
Net cash used in investing activities	(137)	(240)
Financing activities		
Proceeds from exercise of stock options	195	2,188
Proceeds from debt	15,000	—
Net cash provided by financing activities	15,195	2,188
Net decrease in cash, cash equivalents and restricted cash	(20,080)	(3,609)
Cash, cash equivalents and restricted cash at beginning of the period	293,913	348,890
Cash, cash equivalents and restricted cash at end of the period	$ 273,833	$ 345,281

	Three Months Ended March 31, 2025	2024
Non-cash investing activities		
Non-cash asset disposal	$ —	$ 473
Right-of-use assets acquired through operating leases	$ —	$ 2,736

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

ARCTURUS THERAPEUTICS HOLDINGS INC. AND ITS SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

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

Description of Business

Arcturus Therapeutics Holdings Inc. (the “Company” or "Arcturus") is a commercial messenger RNA medicines company focused on the development of infectious disease vaccines and opportunities within liver and respiratory rare diseases. Arcturus became a clinical stage company in 2020 when it announced that its Investigational New Drug (“IND”) application for ornithine transcarbamylase (“OTC”) deficiency and its Clinical Trial Application (“CTA”) for candidate LUNAR-COV19 were approved by applicable health authorities. In 2023, our COVID-19 vaccine, ARCT-154 (also referred to as KOSTAIVE®), received marketing authorization approval in Japan for adults 18 years and older, and in September 2024 KOSTAIVE became the world’s first approved and commercially available self-amplifying RNA (sa-mRNA) vaccine.

Basis of Presentation

The accompanying condensed consolidated financial statements include the accounts of Arcturus and its subsidiaries and are unaudited. All intercompany accounts and transactions have been eliminated in consolidation. These condensed consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles (“GAAP”) for interim financial information. Accordingly, they do not include all of the information and footnotes required by GAAP for complete financial statements. In management’s opinion, the accompanying condensed consolidated financial statements reflect all adjustments, consisting of normal recurring adjustments, considered necessary for a fair presentation of the results for the interim periods presented.

Interim financial results are not necessarily indicative of results anticipated for the full year. These condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and footnotes included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2024.

These condensed consolidated financial statements are prepared in accordance with GAAP, which requires management to make estimates and assumptions regarding the valuation of certain debt and equity instruments, share-based compensation, accruals for liabilities, income taxes, revenue and deferred revenue, leases, and other matters that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Although these estimates are based on management’s knowledge of current events and actions the Company may undertake in the future, actual results may ultimately differ from these estimates and assumptions.

There were no significant changes to our significant accounting policies as disclosed in the Company’s Annual Report on Form 10-K for the year ended December 31, 2024.

Recently Issued Accounting Standards Not Yet Adopted

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board (“FASB”) or other standard setting bodies and adopted by the Company as of the specified effective date. The Company believes that the impact of recently issued standards that are not yet effective will not have a material impact on the condensed consolidated financial statements and disclosures.

In November 2024, the FASB issued ASU 2024-03, Income Statement–Reporting Comprehensive Income–Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses, which requires public entities to disclose specified information about certain costs and expenses on an interim and annual basis. ASU 2024-03 is effective for annual reporting periods beginning after December 15, 2026, and interim reporting periods beginning after December 15, 2027, with early adoption permitted. The Company is currently evaluating the impact that adoption of ASU 2024-03 will have on the financial statement disclosures.

Note 2. Revenue

The Company has entered into license agreements and collaborative research and development arrangements with pharmaceutical and biotechnology companies, as well as consulting, related technology transfer, product revenue and government grant agreements. Under these arrangements, the Company is entitled to receive license fees, consulting fees, product fees, technological transfer fees, upfront payments, milestone payments if and when certain research and development milestones, technology transfer milestones or success-based milestones are achieved, royalties on approved product sales and reimbursement for research and development activities. The Company's costs of performing these services are included within research and development expenses. The Company's milestone payments are typically defined by achievement of certain preclinical, clinical, and commercial success criteria. Preclinical milestones may include in vivo proof of concept in disease animal models, lead candidate identification, and completion of IND-enabling toxicology studies. Clinical milestones may, for example, include successful enrollment of the first patient in or completion of Phase 1, 2 and 3 clinical trials, and commercial milestones are often tiered based on net or aggregate sale amounts. The Company cannot guarantee the achievement of these milestones due to risks associated with preclinical and clinical activities required for development of nucleic acid medicine-based therapeutics and vaccines.

The following table presents changes during the three months ended March 31, 2025 in the balances of contract assets and liabilities as compared to what was disclosed in the Company's Annual Report on Form 10-K for the year ended December 31, 2024.

(in thousands)	December 31, 2024	Additions	Deductions	March 31, 2025
Contract Assets:				
Accounts receivable	$ 3,974	$ 19,565	$ (8,967)	$ 14,572
Contract Liabilities:				
Deferred revenue	$ 32,118	$ 19,565	$ (29,382)	$ 22,301

The following table summarizes the Company's revenues for the periods indicated.

	For the Three Months Ended March 31,	
(in thousands)	2025	2024
Collaboration Revenue:		
CSL Seqirus	$ 25,473	$ 32,381
Other collaboration revenue	4	217
Total collaboration revenue	$ 25,477	$ 32,598
Grant revenue:		
BARDA	$ 3,905	$ 5,414
Total grant revenue	$ 3,905	$ 5,414

The following paragraphs provide information regarding the nature and purpose of the Company's most significant collaboration and grant arrangements.

CSL Seqirus

On November 1, 2022, the Company entered into a Collaboration and License Agreement (as amended, the "CSL Collaboration Agreement") with Seqirus, Inc., a part of CSL Limited ("CSL Seqirus"), for the global exclusive rights to research, develop, manufacture, and commercialize vaccines. Under the terms of the CSL Collaboration Agreement, the Company provides CSL Seqirus with an exclusive global license to its mRNA technology (including STARR®) and LUNAR® lipid-mediated delivery, along with mRNA drug substance and drug product manufacturing process. CSL Seqirus will lead development and commercialization of vaccines under the collaboration. The collaboration plans to advance vaccines against SARS-CoV-2 (COVID-19), influenza, pandemic preparedness as well as three other respiratory infectious diseases. In September 2024, our COVID-19 vaccine KOSTAIVE® became the world's first approved and commercially available self-amplifying RNA (sa-mRNA) vaccine.

The Company received a $200.0 million upfront payment and is eligible to receive over $1.3 billion in development milestones if all products are registered in the licensed fields and entitled to potentially receive up to $3.0 billion in commercial milestones based on "net sale" of vaccines in the various fields. In addition, the Company is eligible to receive a 40% net profit share for COVID-19 vaccine products and up to low double-digit royalties for vaccines against flu, pandemic preparedness and three other respiratory pathogens. During the first quarter of 2025, upon the regulatory approval of KOSTAIVE in the European Union (the "EU"), the Company achieved an initial $8.0 million milestone related to the CSL Collaboration Agreement which was included in accounts receivable as of March 31, 2025. Additionally, during the first quarter of 2025, the Company achieved a $7.0 million development milestone related to the CSL Collaboration Agreement.

In evaluating the CSL Collaboration Agreement in accordance with ASC 606, the Company concluded that CSL Seqirus is a customer. The Company identified all promised goods/services within the CSL Collaboration Agreement, and when combining certain promised goods/services, the Company concluded that there are five distinct performance obligations. The nature of the performance obligations consists of delivery of the vaccine license, research and development services for COVID and non-COVID vaccines and regulatory activities for COVID vaccines. For each performance obligation, the Company estimated the standalone selling price based on 1) in the case of the license, the fair value using costs to recreate plus margin method and 2) in the case of research and development services and regulatory activities, cost plus margin for estimated full-time equivalent ("FTE") costs, direct costs including laboratory supplies, contractors, and other out-of-pocket expenses for research and development services and regulatory activities.

As of March 31, 2025, the transaction price consisted of upfront consideration received and milestones achieved. Additional variable consideration was not included in the transaction price as of March 31, 2025 because the Company could not conclude that it is probable that including the variable consideration will not result in a significant revenue reversal.

The Company allocated the transaction price to the performance obligations in proportion to their standalone selling price. The vaccine license was recognized at the point in time it was transferred in 2022. The research and development and regulatory activities performance obligations are recognized over a period of time based on the percentage of services rendered using the input method, meaning actual costs incurred divided by total costs budgeted to satisfy the performance obligation. Any consideration related to sales-based royalties will be recognized when the amounts are probable of non-reversal, provided that the reported sales are reliably measurable and the Company has no remaining promised goods/services, as they are constrained and therefore have also been excluded from the transaction price. The revenue recognized in the first quarter of 2025 relates to the license delivered, milestones achieved and services performed through March 31, 2025.

Total deferred revenue as of March 31, 2025 and December 31, 2024 for the CSL Collaboration Agreement was $20.8 million and $30.7 million, respectively.

During 2023, the Company entered into an amendment to the CSL Collaboration Agreement, pursuant to which the Company agreed to sponsor and conduct a Phase 1 clinical study in the influenza field. As part of the amendment, the Company received $17.5 million from CSL Seqirus. The amendment also provides for up to $1.5 million in additional payments which are achievable upon meeting certain clinical milestones relating to the Phase 1 clinical study in the influenza field. The Company previously concluded that the expansion of research and development support services under the CSL Collaboration Agreement represented an option that was not a material right. Therefore, the Company concluded the promise to sponsor and conduct the Phase 1 clinical study is a separate contract and the sole performance obligation under the new arrangement. During the quarter ended March 31, 2025, the Company recognized $0.7 million related to the performance obligation and the remaining amount of $2.4 million is included in deferred revenue.

During the fourth quarter of 2023, the Company received an advance payment of $5.3 million from CSL Seqirus for manufacturing activities related to COVID-19 vaccine product. During the first quarter of 2024, the Company received an additional advance payment of $5.1 million from CSL Seqirus for manufacturing activities related to COVID-19 vaccine product. The Company concluded that the promise to perform manufacturing activities is a customer option as part of the CSL Collaboration Agreement and is accounted for as a separate contract. The Company recognized $5.3 million in revenue related to this customer option during the third quarter of 2024 upon the transfer of vaccine product to CSL Seqirus. The remaining $5.1 million, along with an estimated

adjustment for costs in excess of previously invoiced amounts, was recognized as revenue during the quarter ended March 31, 2025 when the remaining vaccine product was transferred to CSL Seqirus.

In March 2024, the Company entered into an amendment to the CSL Collaboration Agreement, pursuant to which the parties agreed to, among other things, adjust (i) the development plans for certain product candidates, (ii) various development milestones related to such product candidates, (iii) provisions of the CSL Collaboration Agreement related to specific royalty payments, (iii) provisions of the CSL Collaboration Agreement related to distributors, and (iv) proprietary payment calculations related to the foregoing.

BARDA Grant

In August 2022, the Company entered into a cost reimbursement contract (the "BARDA Contract") with the Biomedical Advanced Research and Development Authority ("BARDA"), a division of the Office of the Assistant Secretary for Preparedness and Response (ASPR) within the U.S. Department of Health and Human Services (HHS) for an award of up to $63.2 million for the development of a pandemic influenza vaccine using the Company's STARR® self-amplifying mRNA vaccine platform technology. The Company earns grant revenue for performing tasks under the agreement.

The Company determined that the BARDA Contract is not in the scope of ASC 808 or ASC 606. Applying International Accounting Standards No. 20 ("IAS 20"), Accounting for Government Grants and Disclosure of Government Assistance, by analogy, the Company recognizes grant revenue from the reimbursement of direct out-of-pocket expenses, overhead allocations and fringe benefits for research costs associated with the grant. The costs associated with these reimbursements are reflected as a component of research and development expense in the Company's condensed consolidated statements of operations and comprehensive income (loss).

As of March 31, 2025, the remaining available funding net of revenue earned was $36.1 million.

Note 3. Fair Value Measurements

The Company establishes the fair value of its assets and liabilities using the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Company established a fair value hierarchy based on the inputs used to measure fair value.

The three levels of the fair value hierarchy are as follows:

Level 1: Quoted prices in active markets for identical assets or liabilities.

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

Level 3: Unobservable inputs in which little or no market data exists and are therefore determined using estimates and assumptions developed by the Company, which reflect those that a market participant would use.

The carrying value of cash, restricted cash, accounts receivable, accounts payable and accrued liabilities approximate their respective fair values due to their relatively short maturities.

As of March 31, 2025 and December 31, 2024, all assets measured at fair value on a recurring basis consisted of cash equivalents and money market funds, which were classified within Level 1 of the fair value hierarchy. The fair value of these financial instruments was measured based on quoted prices.

Note 4. Other Balance Sheet Details

Property and equipment, net balances consisted of the following:

(in thousands)	March 31, 2025	December 31, 2024
Research equipment	$ 17,001	$ 16,864
Computers and software	1,131	1,131
Office equipment and furniture	703	703
Leasehold improvements	2,644	2,644
Total	21,479	21,342
Less accumulated depreciation and amortization	(12,612)	(11,811)
Property and equipment, net	$ 8,867	$ 9,531

Depreciation and amortization expense was $0.8 million for the three months ended March 31, 2025 and $0.9 million for the three months ended March 31, 2024.

Accrued liabilities consisted of the following:

(in thousands)	March 31, 2025	December 31, 2024
Accrued compensation	$ 6,355	$ 13,305
Cystic Fibrosis Foundation liability	7,050	7,443
Current portion of operating lease liability	3,671	3,552
Clinical trial accruals	2,456	2,828
Vinbiocare contractual liabilities	2,421	2,421
Legal accrual	126	130
Other accrued research and development expenses	8,480	9,102
Total	$ 30,559	$ 38,781

The following table provides a reconciliation of cash and cash equivalents and restricted cash reported within the unaudited condensed consolidated balance sheets that sum to the total of the same such amounts shown in the unaudited condensed consolidated statement of cash flows as of March 31, 2025 and 2024:

(in thousands)	March 31, 2025	March 31, 2024
Cash and cash equivalents	$ 216,948	$ 288,396
Restricted cash	38,500	55,000
Non-current restricted cash	18,385	1,885
Total cash, cash equivalents and restricted cash	$ 273,833	$ 345,281

Restricted cash includes collateral pledged and held in the Company's securities accounts pursuant to a security agreement with Wells Fargo Bank, National Association ("Wells Fargo") (Note 5). As of March 31, 2025, such collateral amounted to $55.0 million.

Restricted cash also includes cash required to be set aside as security for lease payments and to maintain a letter of credit for the benefit of the landlord of the Company's offices. As of March 31, 2025 and 2024, the Company had restricted cash of $1.9 million in conjunction with property leases in San Diego, California, and such restriction is expected to be removed at the end of the lease term. As of March 31, 2025, non-current restricted cash also includes $16.5 million related to the Wells Fargo Loan (Note 5).

Note 5. Debt

Wells Fargo Credit Agreement

The Company's wholly-owned subsidiary, Arcturus Therapeutics, Inc. ("Arcturus Therapeutics") entered into a credit agreement with Wells Fargo Bank on April 21, 2023, and amended on June 26, 2024, whereby Wells Fargo will make a $50.0 million revolving credit line available to the Company (the "Loan") and each draw on the Loan evidenced by a revolving line of credit note (the "Note").

Borrowings under the agreement will bear interest at a rate of 1.00% above either the Daily Simple SOFR or Term SOFR (as such terms are defined in the Note), with "SOFR" being the rate per annum equal to the secured overnight financing rate as administered by the Federal Reserve Bank of New York. If an Event of Default (as defined in the agreement) occurs, then all Loans shall bear interest at a rate equal to 2.00% above the interest rate applicable immediately prior to the occurrence of the Event of Default.

The term of the agreement was originally two years, with an option for one-year renewals subject to Wells Fargo approval and Arcturus Therapeutics furnishing to Wells Fargo a non-refundable commitment fee equal to 0.25% of the Loan amount for each such renewal. There is no penalty for terminating the facility prior to the maturity date of the Note. As collateral, the Company has agreed to pledge $55.0 million in cash to be held in the Company's securities accounts with Wells Fargo Securities, LLC, an affiliate of Wells Fargo, pursuant to a security agreement. In June 2024, Arcturus Therapeutics and Wells Fargo entered into an amendment to the Note,

whereby the term of the Note was extended by one year to April 2026. In March 2025, the Company drew down $15.0 million from the Loan, which was subsequently repaid in April 2025.

Note 6. Stockholders' Equity

Net Loss per Share

Potentially dilutive securities that were not included in the calculation of diluted net loss per share as they were anti-dilutive for the three months ended March 31, 2025 and 2024 totaled 0.5 million and 1.4 million, respectively.

Sales Agreement

On December 23, 2022, the Company entered into a Controlled Equity Offering℠ Sales Agreement, which was amended on August 7, 2023 (as amended, the "Sales Agreement") with Cantor Fitzgerald & Co. ("Cantor"),Wells Fargo Securities, LLC ("Wells Fargo Securities"), and William Blair & Company, L.L.C. ("William Blair") relating to shares of the Company's common stock. In accordance with the terms of the Sales Agreement, the Company may offer and sell shares of its common stock having an aggregate offering price of up to $200,000,000 from time to time through Cantor, Wells Fargo Securities, or William Blair, each acting as the Company's sales agent. During the period ended March 31, 2025 the Company did not offer or sell any shares of common stock pursuant to the Sales Agreement.

Note 7. Share-Based Compensation Expense

In June 2024 at the Company's 2024 Annual Meeting of Stockholders (the "2024 Annual Meeting"), the stockholders of the Company approved an amendment to the Company's 2019 Omnibus Equity Incentive Plan (as amended, the "2019 Plan") which, among other things, increased the aggregate number of shares authorized for use in making awards to eligible persons under the 2019 Plan by 2,000,000 shares, for a total of up to 10,750,000 shares available for issuance. As of March 31, 2025, a total of 1,177,945 shares remain available for future issuance under the 2019 Plan, subject to the terms of the 2019 Plan.

In October 2021, the Company adopted the 2021 Inducement Equity Incentive Plan which covers the award of up to 1,000,000 shares of common stock (the "2021 Plan") effective as of October 15, 2021. Approval of the Company's stockholders is not required as a condition to the effectiveness of the 2021 Plan for so long as the plan is in compliance with applicable Nasdaq inducement plan rules. In April 2022, the compensation committee of the Company's board of directors approved a proposal to reduce the total number of shares available for future issuance under the 2021 Plan to 130,000. As of March 31, 2025, a total of 127,419 shares remain available for future issuance under the 2021 Plan, subject to the terms of the 2021 Plan.

Share-Based Compensation

Share-based compensation expense included in the Company's condensed consolidated statements of operations and comprehensive loss for the three months ended March 31, 2025 and 2024 was as follows:

	For the Three Months Ended March 31,	
(in thousands)	2025	2024
Research and development	$ 3,744	$ 4,803
General and administrative	2,918	5,285
Total	$ 6,662	$ 10,088

Note 8. Income Taxes

The Company is subject to taxation in the United States and various states. The Company computes its quarterly income tax provision by using a forecasted annual effective tax rate and adjusts for any discrete items arising during the quarter. The primary difference between the effective tax rate and the federal statutory rate is due to federal and state income tax expense offset by valuation allowance on the Company's deferred tax assets.

For the three months ended March 31, 2025 and 2024, the Company recorded no income tax expense and $0.4 million of income tax expense, respectively. No tax benefit was provided for losses incurred in the United States because those losses are offset by a full valuation allowance.

Note 9. Commitments and Contingencies

Cystic Fibrosis Foundation Agreement

On September 25, 2023, the Company amended its Development Program Letter Agreement, dated May 16, 2017 and as amended July 13, 2018 and August 1, 2019, with the Cystic Fibrosis Foundation ("CFF"). Pursuant to the amendment, (i) CFF increased the amount it will award to advance LUNAR-CF to $24.6 million from approximately $15.6 million, and (ii) the Company agreed to incur at least $15.0 million toward activities under the research plan. During the fourth quarter of 2023, the Company received the full payment from CFF related to the amendment. For the three months ended March 31, 2025 and 2024, the Company recognized a contra expense of $0.4 million and no contra expense, respectively, related to CFF. As of March 31, 2025 and December 31, 2024, $7.1 million and $7.4 million, respectively, remained in accrued liabilities.

Leases

In October 2017, the Company entered into a non-cancellable operating lease agreement for office space adjacent to its previously occupied headquarters. The commencement of the lease began in March 2018 and the lease extends for approximately 84 months from the commencement date with a remaining lease term through March 2025. Monthly rental payments are due under the lease and there are escalating rent payments during the term of the lease. The Company is also responsible for its proportional share of operating expenses of the building and common areas. In conjunction with the new lease, the Company received free rent for four months and received a tenant improvement allowance of $0.1 million. In March 2024, the Company negotiated with the lessor to extend the lease through March 2027.

The Company entered into an irrevocable standby letter of credit with the landlord for a security deposit of $0.1 million upon executing the lease which is included (along with additional funds required to secure the letter of credit) in the balance of non-current restricted cash.

In February 2020, the Company entered into a second non-cancellable operating lease agreement for office space near its current headquarters. The lease extended for 13 months from the commencement date and included a right to extend the lease for one twelve-month period. In February 2021, the Company opted to extend the lease through March 2025 to coincide with the lease term of the Company's headquarters. In January 2024, the Company vacated this office space with no intention of operating out of the location in the future. The Company was still engaged in the lease for the property and obligated to make the remaining lease payments through March 31, 2025, and therefore recorded an impairment loss in the amount of $1.3 million during the three months ended March 31, 2024, as there was no future economic benefit from the lease. In July 2024, the Company terminated the existing lease agreement, in accordance with its terms, thereby ending their contractual obligation to pay for the premises.

In September 2021, the Company entered into a third non-cancellable lease agreement for office, research and development, engineering and laboratory space near its current headquarters, and such lease term commenced during the second quarter of 2022. The initial term of this lease extends ten years and eight months from the date of possession, and the Company has the right to extend the term of the lease for an additional five-year period. When the lease term was determined for the operating lease right-of-use assets and lease liabilities, the extension option for the lease was not included. The lease has a monthly base rent ranging from $0.3 million to $0.4 million which escalates over the lease term. The Company received a free rent period of four months and also pays for various operating costs, including utilities and real property taxes. The Company entered into an irrevocable standby letter of credit with the landlord for a security deposit of $2.0 million upon executing the lease which is included (along with additional funds required to secure the letter of credit) in the balance of non-current restricted cash.

Operating lease right-of-use asset and liability on the consolidated balance sheets represent the present value of remaining lease payments over the remaining lease terms. The Company does not allocate lease payments to non-lease components; therefore, payments for common-area-maintenance and administrative services are not included in the operating lease right-of-use asset and liability. The Company uses its incremental borrowing rate to calculate the present value of the lease payments, as the implicit rate in the lease is not readily determinable.

As of March 31, 2025, the remaining payments of the operating lease liability were as follows:

(in thousands)	Remaining Lease Payments
2025 (remainder of year)	$ 3,589
2026	5,274
2027	4,132
2028	3,822
2029	3,937
Thereafter	11,812
Total remaining lease payments	32,566
Less: imputed interest	(4,908)
Total operating lease liabilities	$ 27,658
Weighted-average remaining lease term	7.0
Weighted-average discount rate	4.7%

Operating lease costs consist of the fixed lease payments included in operating lease liability and are recorded on a straight-line basis over the lease terms. Operating lease costs were $1.3 million for the three months ended March 31, 2025 and $1.4 million for the three months ended March 31, 2024, respectively.

Note 10. Segment Information

The Company operates in one business segment, which includes all activities related to the discovery, development and commercialization of messenger RNA medicines. The determination of a single business segment is consistent with the consolidated financial information regularly provided to the Company's chief operating decision maker ("CODM"). The Company's CODM is its Chief Executive Officer, who reviews and evaluates consolidated net (loss) income for purposes of assessing performance, making operating decisions, allocating resources, and planning and forecasting for future periods. The CODM does not evaluate the operating segment using asset or liability information.

The following table presents information about reported segment revenues, segment loss and income, and significant segment expenses:

	Three Months Ended March 31,	
(in thousands)	**2025**	**2024**
Revenues	$ 29,382	$ 38,012
Less:		
Research and development:		
LUNAR-COVID	5,809	20,730
LUNAR-OTC	1,576	1,383
BARDA	2,481	3,235
LUNAR-CF, net	7,148	1,195
Early-stage programs	—	6,168
Discovery technologies	2,187	1,190
Payroll and benefits	13,043	15,517
Facilities and equipment	2,649	4,155
Total research and development	34,893	53,573
General and administrative	11,315	14,851
Other [(1)]	(2,750)	(3,595)
Net loss	$ (14,076)	$ (26,817)

[(1)] Primarily includes interest income.

Note 11. Related Party Transactions

See "Note 1, Joint Ventures, Equity Method Investments and Variable Interest Entities" for specific details surrounding the Company's agreement with Axcelead to form the joint venture entity, ARCALIS, Inc.

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

The following is a discussion of the financial condition and results of operations of Arcturus Therapeutics Holdings Inc. for the three-month period ended March 31, 2025. Unless otherwise specified herein, references to the "Company," "Arcturus," "we," "our" and "us" mean Arcturus Therapeutics Holdings Inc. and its consolidated subsidiaries. You should read the following discussion and analysis together with the interim condensed consolidated financial statements and related notes included elsewhere herein. For additional information relating to our management's discussion and analysis of financial conditions and results of operations, please see our Annual Report on Form 10-K for the year ended December 31, 2024 (the "2024 Annual Report"), which was filed with the U.S. Securities and Exchange Commission (the "Commission") on March 6, 2025. Unless otherwise defined herein, capitalized words and expressions used herein shall have the same meanings ascribed to them in the 2024 Annual Report.

This report includes forward-looking statements which, although based on assumptions that we consider reasonable, are subject to risks and uncertainties which could cause actual events or conditions to differ materially from those currently anticipated and expressed or implied by such forward-looking statements. This report also includes certain statements based solely on information, reports and studies provided by or conducted by Seqirus, Inc. and Meiji Holdings Co., Ltd or their respective affiliates.

You should read this report and the documents that we reference in this report and have filed as exhibits to this report completely and with the understanding that our actual future results may be materially different from what we expect. You should also review the factors and risks we describe in the reports we will file or submit from time to time with the Commission after the date of this report.

Overview

We are a messenger RNA medicines company focused on the development of infectious disease vaccines and opportunities within liver and respiratory rare diseases. We developed the world's first approved self-amplifying messenger RNA (sa-mRNA) vaccine, KOSTAIVE®("KOSTAIVE"). KOSTAIVE achieved approval in Japan in 2023 as a vaccine against COVID-19. Sales of KOSTAIVE began in Japan in October 2024, marking our transition to a commercial stage company.

We have several key platform technologies that we leverage to develop and advance a pipeline of mRNA-based vaccines and therapeutics for infectious diseases and for rare genetic disorders with significant unmet medical needs. Current mRNA medicines have two critical components: the messenger RNA ("mRNA") constructs and the lipid nanoparticles ("LNP") which help deliver the mRNA to disease-relevant target tissues. We have extensive expertise in the design and optimization of mRNA constructs, including with respect to a type of mRNA technology known as self-amplifying mRNA (sa-mRNA). Our proprietary self-amplifying mRNA technology platform, or STARR® ("STARR"), has been demonstrated to induce a longer-lasting and broader humoral immune response at lower dose levels than conventional mRNA-based vaccines. Our proprietary LNP delivery system, LUNAR® ("LUNAR"), is intended to address the major hurdle in RNA drug development, namely the effective and safe delivery of RNA therapeutics to disease-relevant target tissues. LUNAR may enable multiple nucleic acid medicines. Finally, we have significant expertise and valuable know-how in the development and scalability of complex and robust manufacturing processes required to deliver the next generation of nucleic acid medicines.

Our internal pipeline includes RNA therapeutic candidates to potentially treat ornithine transcarbamylase (OTC) deficiency and cystic fibrosis (CF), both rare diseases. Given current market conditions, we have made a strategic decision to streamline resources to focus on our mRNA therapeutics pipeline. In our vaccine program, we have partnered with Seqirus, Inc. ("CSL Seqirus"), a part of CSL Limited and one of the world's leading influenza vaccine providers, on the development and commercialization of mRNA vaccines for COVID-19, influenza and certain other infectious diseases.

Business Updates

Vaccine Collaboration with CSL Seqirus

In November 2022, we entered into a Collaboration and License Agreement (as amended, the "CSL Collaboration Agreement") with Seqirus, Inc. ("CSL Seqirus"), a part of CSL Limited, and one of the world's leading influenza vaccine providers, for global exclusive rights to research, develop, manufacture and commercialize self-amplifying mRNA vaccines against COVID-19, influenza and three other infectious diseases and global non-exclusive rights to pandemic pathogens.

In November 2023, KOSTAIVE received marketing authorization approval from the Japanese Ministry of Health, Labour and Welfare for use as a primary immunization and booster in Japan for adults 18 years and older. Commercial sales of KOSTAIVE began in Japan in October 2024 by Meiji Seika Pharma ("Meiji"), CSL Seqirus' exclusive partner in Japan.

KOSTAIVE® is the brand name approved in Japan and Europe for ARCT-154, which is the version of the sa-mRNA COVID vaccine encoding the ancestral strain of SARS-CoV-2, and for updated variant-specific versions of this vaccine. We may use KOSTAIVE or the specific internally generated name, such as ARCT-154, to identify the vaccine.

In January 2025, CSL Seqirus' partner Meiji announced that it received approval for a partial amendment to the manufacturing and marketing approval of KOSTAIVE to include manufacturing sites in Japan. With this approval, Meiji and ARCALIS, Inc., Arcturus' manufacturing joint venture in Japan, have been added as manufacturing sites. As a result, KOSTAIVE, with active pharmaceutical ingredients manufactured at such sites, may be shipped for commercial use in Japan.

Approval of KOSTAIVE (ARCT-154) in Europe

In February 2025, the European Commission granted marketing authorization for KOSTAIVE (ARCT-154) for individuals 18 years of age and older. The European Commission approval follows a positive opinion adopted by the Committee for Medicinal Products for Human Use (CHMP) of the European Medicines Agency (EMA) on December 12, 2024. The centralized marketing authorization of KOSTAIVE provided by the EC is valid in all 27 European Union (EU) member states and 3 additional European Economic Area (EEA) countries summarized here: Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, The Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden. The approval of KOSTAIVE in Europe, as well as the approval in Japan, are significant milestones, which further validate our LUNAR and STARR platforms, as well as sa-mRNA more generally as a meaningful modality.

Clinical Studies of KOSTAIVE (COVID-19 vaccine)

In connection with our collaboration with CSL Seqirus, we continue to collect data from various ongoing studies. See the 2024 Annual Report for a description of studies.

Recent KOSTAIVE Publications

In April 2025, we published a comprehensive analysis of safety data for KOSTAIVE®, with a 12-month follow-up from the pivotal clinical study in Vietnam (NCT05012943), which had 17,582 participants who received at least one dose of the study vaccine (https://doi.org/10.1080/14760584.2025.2487542). The study confirmed the favorable reactogenicity profile. Acceptable tolerability of ARCT-154 was also observed in older participants and in those liable to severe consequences of COVID-19 due to underlying medical conditions. ARCT-154 is the version of KOSTAIVE encoding the ancestral strain of the COVID-19 virus. Long-term follow-up has not revealed any safety concerns, with no reports of myocarditis or pericarditis. No serious consequences occurred in several pregnancies reported after vaccination. Long-term data from this large trial suggest that the sa-mRNA COVID-19 vaccine (ARCT-154; KOSTAIVE) is safe and well-tolerated.

In April 2025, our Japanese partner, Meiji, published an analysis characterizing the distribution and clearance of ARCT-154 encoded spike protein and non-structural proteins nsP1, nsP2, nsP3 and nsP4 in the lymph nodes and injection-site muscle in mice following a single vaccination. The study showed the encoded spike protein reached its highest level approximately three days after vaccination and quickly disappeared from the injection site muscle. The spike protein levels also peaked at an early time point in the lymph nodes, it remained detectable 28 days after the vaccination and disappeared by 44 days after the vaccination. Expression of nsP1, nsP2 and nsP4 was observed in the injected muscle and/or the lymph nodes for up to 15 days post-vaccination. The data indicates that the extended expression of spike proteins in lymph nodes may be responsible for the induction of higher and prolonged levels of neutralizing antibodies. The study also confirmed that the self-replication is limited over time.

Seasonal Influenza Program Updates

A Phase 1 dose-finding safety and immunogenicity study was initiated in January 2024 in Australia and completed recruitment of 132 young and older participants. The immunological testing and assessment of the study results are ongoing.

Pandemic Avian Influenza Program (H5N1 Influenza) Updates

Our LUNAR-H5N1 program, which is part of the CSL Collaboration Agreement, continues to progress under the award from BARDA that we obtained in 2022 to advance through Phase 1 a vaccine to protect against disease caused by H5N1 highly-pathogenic avian influenza.

The Phase 1 study of ARCT-2304, an sa-mRNA vaccine candidate, also known as LUNAR-H5N1, initiated dosing in December 2024 and continues to advance. We recently completed the recruitment of 212 adults (132 participants 18-59 years old; 80 participants 60+ years old) for the randomized placebo-controlled Phase 1 trial (NCT06602531), which is being conducted at multiple sites in the U.S. The primary objective of this initial clinical trial is to evaluate the safety and immune responses of three different dose levels and two different vaccination schedules of the ARCT-2304 vaccine. Immune responses are measured by hemagglutination inhibition (HAI), virus microneutralization (MN) and neuraminidase enzyme-linked lectin assays (ELLA). The recruitment in this study was completed in April 2025.

In April 2025, the U.S. Food and Drug Administration ("FDA") granted Fast Track Designation for ARCT-2304. This designation recognizes the potential of ARCT-2304 as an innovative approach to address unmet medical needs for the prevention of disease caused by pandemic influenza A virus H5N1, a significant global health risk. Fast Track Designation from the FDA is granted to vaccines intended to prevent serious conditions caused by infectious diseases. The designation is designed to expedite the

development and review process, providing several benefits, including enhanced communication with the FDA, eligibility for priority review, and the possibility of a rolling review.

Key Updates on Arcturus-Owned mRNA Therapeutic Development Candidates

Franchise	Candidate	Funded By	Indication	Global Prevalence	Clinical Trial Phase
Hepatic	LUNAR-OTC (ARCT-810)	ARCTURUS therapeutics	Ornithine Transcarbamylase Deficiency (OTC)	> 10,000	Phase 2
Respiratory	LUNAR-CF (ARCT-032)	CYSTIC FIBROSIS FOUNDATION	Cystic Fibrosis	85,000-100,000	Phase 2

- **LUNAR-CF/ARCT-032**. Our program for cystic fibrosis is being supported in part by the Cystic Fibrosis Foundation ("CFF"). In 2023, we initiated and successfully completed a safety and tolerability Phase 1 single ascending dose study of ARCT-032 (LUNAR-CF), our mRNA therapeutic candidate for cystic fibrosis (CF). Thirty-two healthy participants (eight subjects in each of four dose cohorts) received a single inhaled dose of ARCT-032. A subsequent protocol amendment to transition to a safety and tolerability Phase 1b clinical study of ARCT-032 in adults with CF received regulatory approval in August 2023 and completed dosing and follow-up visits for seven CF participants in August 2024, with each CF participant having received two administrations of ARCT-032 separated by two days.
    - We are advancing enrollment in our ARCT-032 Phase 2 multiple ascending dose study to identify a safe and effective dose in Class I (null) and other CF participants who do not benefit from CFTR modulators. The U.S. IND including Phase 2 protocol was allowed to proceed in August 2024. We initiated dosing in the study in US in December 2024. This study is supported by safety and tolerability data collected in healthy volunteers (N = 32) and the two-administration Phase 1b study in CF adults. Each participant in the Phase 2 CF study (NCT06747858) is expected to receive daily treatments of ARCT-032 over a period of 28 days.
- **LUNAR-OTC/ARCT-810**. The LUNAR-OTC development program addresses ornithine transcarbamylase (OTC) deficiency, a rare, life-threatening, genetic disease caused by mutations in the OTC gene that lead to dysfunctional or deficient OTC.
    - In June 2024, we expanded the Phase 2 clinical program of ARCT-810 to the U.S. with an open-label, multiple-dose study to evaluate pharmacodynamics and safety in adult and adolescent patients requiring clinical management for OTC-deficiency. The first OTC deficient participant receiving 0.5mg/kg of ARCT-810 initiated dosing in December 2024. We continue to enroll participants in the study. Each participant is expected to receive five intravenous infusions administered over two months. We previously completed the dosing phase (N=8; 0.3 mg/kg) of a placebo-controlled European Phase 2 double-blind study enrolling OTC deficient individuals.

Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our condensed consolidated financial statements and related notes appearing elsewhere in this Report and our audited financial statements and related notes for the year ended December 31, 2024. Our historical results of operations and the year-to-year comparisons of our results of operations that follow are not necessarily indicative of future results.

Revenue

We enter into arrangements with pharmaceutical and biotechnology partners and government agencies that may contain upfront payments, license fees for research and development arrangements, research and development funding, milestone payments, option exercise and exclusivity fees and royalties on future sales. The following table summarizes our total revenues for the periods indicated:

	Three Months Ended March 31,		Change 2025 vs 2024	
(in thousands)	2025	2024	Change	%
Revenue	$ 29,382	$ 38,012	$ (8,630)	-23%

Revenue decreased by $8.6 million during the three months ended March 31, 2025, as compared to the three months ended March 31, 2024. The decrease during the three months ended March 31, 2025 primarily relates to a $6.9 million decrease in revenue related to the CSL Collaboration Agreement, primarily caused by smaller milestone achievements and less amortization as KOSTAIVE transitions from a development program to the commercial phase. The remaining decrease is due to a $1.7 million decrease in revenue related to the BARDA Contract as well other revenue agreements.

Operating Expense

Our operating expenses consist of research and development and general and administrative expenses.

(in thousands)	Three Months Ended March 31, 2025	2024	Change 2025 vs 2024 $ change	% change
Operating expenses:				
Research and development, net	$ 34,893	$ 53,573	$ (18,680)	-35%
General and administrative	11,315	14,851	(3,536)	-24%
Total	$ 46,208	$ 68,424	$ (22,216)	-32%

Research and Development Expenses, net

The following table presents our total research and development expenses by category:

(in thousands)	Three Months Ended March 31, 2025	2024	Change 2025 vs 2024 $ change	% change
LUNAR-COVID	$ 5,809	$ 20,730	$ (14,921)	-72%
LUNAR-OTC	1,576	1,383	193	14%
BARDA	2,481	3,235	(754)	-23%
LUNAR-CF, net	7,148	1,195	5,953	*
Early-stage programs	-	6,168	(6,168)	*
Discovery technologies	2,187	1,190	997	84%
Payroll and benefits	13,043	15,517	(2,474)	-16%
Facilities and equipment	2,649	4,155	(1,506)	-36%
Total research and development expenses, net	$ 34,893	$ 53,573	$ (18,680)	-35%

* *Greater than 100%*

Our research and development expenses consist primarily of external manufacturing costs, in-vivo research studies and clinical trials performed by contract research organizations, clinical and regulatory consultants, personnel related expenses, facility related expenses and laboratory supplies related to conducting research and development activities. Research and development expenses were $34.9 million for the three months ended March 31, 2025, compared with $53.6 million for the three months ended March 31, 2024, primarily reflecting a decrease in manufacturing costs related to the LUNAR-COVID and LUNAR-FLU programs, offset by an increase in clinical and manufacturing costs related to the LUNAR-CF and LUNAR-OTC programs as we have shifted our focus to our clinical stage programs. The remaining decrease is primarily attributable to a decrease in payroll and benefits costs and a decrease in facilities and equipment costs. We expect that our research and development efforts and associated costs will continue to be substantial over the next several years as our pipeline progresses.

Early-stage programs represent programs that are in the pre-clinical or Phase 1 clinical stage and may be partnered or unpartnered, and primarily includes the LUNAR-FLU program which is partnered with CSL Seqirus. Discovery technologies represent our efforts to expand our product pipeline and are primarily related to pre-partnered studies and new capabilities assessment. A few of our programs are part of our collaborative relationships. The related expenses may be partially offset with funds that have been reimbursed or awarded to the Company and consist of external manufacturing costs, lab supplies, equipment, and consulting and professional fees. Expenses for both early-stage programs and discovery technologies are expected to decrease as we shift our focus to later-stage programs.

Payroll and benefits primarily consists of employee salaries and benefits, share-based compensation and consultant costs. We expect that payroll and benefits costs will not increase over the next twelve months due to reduced share-based compensation expense.

Facilities and equipment expenses include rent, common area maintenance (“CAM”) costs, depreciation, shipping costs and various other costs related to the operation of our two office and laboratory locations. These costs decreased during the first quarter of 2025 as compared to the first quarter of 2024, as we downsized from three to two facilities. Facilities and equipment expenses are not expected to increase during the next twelve months.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related benefits for our executive, administrative and accounting functions and professional service fees for legal and accounting services as well as other general and administrative expenses.

General and administrative expenses were $11.3 million for the three months ended March 31, 2025, compared with $14.9 million for the three months ended March 31, 2024. The decrease in general and administrative expenses was primarily attributable to reduced share-based compensation costs.

Finance income (expense), net

	Three Months Ended March 31,		Change 2025 vs 2024	
(in thousands)	2025	2024	$ change	% change
Interest income	$ 2,771	$ 4,016	$ (1,245)	-31%

Interest income is generated on cash and cash equivalents. The decrease in interest income for the three months ended March 31, 2025 as compared to the comparable period last year was primarily the result of lower interest rates and a decrease in cash and cash equivalents during the three months ended March 31, 2025.

Off-balance sheet arrangements

Through March 31, 2025, we have not entered into and did not have any relationships with unconsolidated entities or financial collaborations, such as entities often referred to as structured finance or special purpose entities, established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Liquidity and Capital Resources

From the Company's inception through the quarter ended March 31, 2025, the Company has funded its operations principally with the proceeds from revenues earned through collaboration agreements and government contracts, the sale of capital stock and long-term debt. Through the first quarter of 2025, we have achieved a total of approximately $488.1 million in upfront payments and milestones from CSL Seqirus, including milestones of $15.0 million achieved in the current quarter. We expect to receive future payments from CSL Seqirus primarily by meeting future milestones related to the CSL Collaboration Agreement. As of March 31, 2025, the Company's balance of cash and cash equivalents, including restricted cash, was $273.8 million.

CSL Seqirus, Inc. Collaboration and License Agreement

In 2022, we entered into the CSL Collaboration Agreement with CSL Seqirus, a part of CSL Limited, one of the world's leading influenza vaccine providers, for the global exclusive rights to research, develop, manufacture and commercialize mRNA vaccines.

CSL Seqirus received exclusive global rights to our technology for vaccines against SARS-CoV-2 (COVID-19), influenza and three other infectious diseases with non-exclusive rights to pandemic pathogens. We received an up-front payment of $200.0 million during the fourth quarter of 2022. We will be eligible to receive development milestones totaling more than $1.3 billion if all products are registered in the licensed fields. We will also be entitled to receive up to $3.0 billion in commercial milestones based on "net sales" of vaccines in the various fields.

In addition, we are entitled to receive a 40% share of net profits from COVID-19 vaccine sales and up to low double-digit royalties of annual net sales for vaccines against influenza and the other three specified infectious disease pathogens, as well as royalties on revenues from vaccines that may be developed for pandemic preparedness.

The CSL Collaboration Agreement sets forth how CSL Seqirus and we shall collaborate to research and develop vaccine candidates. In the COVID-19 field, we will lead activities for certain regulatory filings for ARCT-154 in the US and Europe and for research and development activities of a next-generation COVID vaccine candidate. CSL Seqirus will lead and be responsible for all other research and development in COVID-19, influenza and the other fields.

Wells Fargo Credit Agreement

On April 21, 2023, the Company's wholly-owned subsidiary, Arcturus Therapeutics, Inc. entered into a credit agreement with Wells Fargo Bank, National Association ("Wells Fargo") whereby Wells Fargo agreed to make a $50.0 million revolving credit line available to the Company (as amended, the "Wells Fargo Loan") with each Wells Fargo Loan evidenced by a revolving line of credit note (each, a "Note"). On June 26, 2024, the parties entered into Amendment No. 1 to the Wells Fargo Loan, whereby the term was

extended by one year to April 2026. During the three months ended March 31, 2025, we drew down $15.0 million which was subsequently repaid in April 2025.

Borrowings under the agreement will bear interest at a rate of 1.00% above either the Daily Simple SOFR or Term SOFR (as such terms are defined in the Wells Fargo Loan), with "SOFR" being the rate per annum equal to the secured overnight financing rate as administered by the Federal Reserve Bank of New York. If an Event of Default (as defined in the credit agreement) occurs, then all Wells Fargo Loans shall bear interest at a rate equal to 2.00% above the interest rate applicable immediately prior to the occurrence of the Event of Default.

The original term of the agreement is two years, with an option for one-year renewals subject to Wells Fargo approval and the Company furnishing to Wells Fargo a non-refundable commitment fee equal to 0.25% of the Wells Fargo Loan amount for each such renewal. There is no penalty for terminating the agreement. There is no penalty for terminating the facility prior to the maturity date of the Wells Fargo Loan. As collateral, the Company has agreed to pledge $55.0 million in cash to be held at the Company's securities accounts with Wells Fargo Securities, LLC, an affiliate of Wells Fargo, pursuant to a security agreement.

Grant from the Biomedical Advanced Research and Development Authority

On August 31, 2022, we entered into a cost reimbursement contract (the "BARDA Contract") with the Biomedical Advanced Research and Development Authority ("BARDA"), a division of the Office of the Assistant Secretary for Preparedness and Response ("ASPR") within the U.S. Department of Health and Human Services ("HHS") to support the development of a low-dose pandemic influenza candidate based on our proprietary self-amplifying messenger RNA-based vaccine platform. The BARDA Contract is to support our non-clinical and pre-clinical development, early-stage clinical development through Phase 1, and associated drug product manufacturing, regulatory and quality-assurance activities over a period of three years. It provides for reimbursement by BARDA of our permitted costs up to $63.2 million. As of March 31, 2025, the remaining available funding net of revenue earned was $36.1 million.

Vinbiocare Agreement

During 2021, we entered into a technology license and technical support agreement and the framework drug substance supply agreement with Vinbiocare, a member of Vingroup Joint Stock Company (collectively, the "Vinbiocare License & Supply Agreements"), whereby we would provide technical expertise and support services to Vinbiocare to assist in the build out of an mRNA drug product manufacturing facility in Vietnam. We received an upfront payment in aggregate of $40.0 million as part of the Vinbiocare License and Supply Agreements. In October 2022, in association with the termination of the Vinbiocare License and Supply Agreements, we signed the Vinbiocare Support Agreement with Vinbiocare which continues Vinbiocare's clinical obligations and reserved a portion of the original $40.0 million upfront payment received from the License and Supply Agreements to be paid over the future periods.

The Vinbiocare Support Agreement requires us to pay to Vinbiocare certain limited payments, including upon the occurrence of specified events through the first quarter of 2025. Vinbiocare is also eligible to receive a single digit percentage of amounts received by Arcturus on net sales, if any, of ARCT-154 (or next-generation COVID vaccine) up to a capped amount.

General Financial Resources

A portion of our current cash balance is expected to be utilized during fiscal year 2025 to fund (i) the continued Phase 2 trial of ARCT-810, our LUNAR-OTC candidate, (ii) advances to our LUNAR-CF program in clinical trials, (iii) expenses incurred prior to customer payments under the CSL Collaboration Agreement and BARDA Contract and (iv) continued exploratory activities related to our platform and other general administrative activities.

Our future capital requirements are difficult to forecast and will depend on many factors that are out of our control. If we are unable to maintain sufficient financial resources, our business, financial condition and results of operations will be materially and adversely affected. There can be no assurance that we will be able to obtain additional needed financing on acceptable terms or at all. Additionally, equity or debt financings may have a dilutive effect on the holdings of our existing shareholders.

We expect to continue to incur additional losses in the long term, and we will need to execute on milestones within the CSL Collaboration Agreement, raise additional debt or equity financing or enter into additional partnerships to fund development. Our ability to transition to profitability is dependent on regulatory approvals and subsequent sales of KOSTAIVE, executing on milestones within the CSL Collaboration Agreement and identifying and developing other successful mRNA drug and vaccine candidates. If we are not able to achieve planned milestones or incur costs in excess of our forecasts, we will need to reduce discretionary spending, discontinue the development of some or all of our programs, which will delay part of our development programs, all of which will have a material adverse effect on our ability to achieve our intended business objectives.

Overview

The following table shows a summary of our cash flows for the three months ended March 31, 2025 and 2024:

	Three Months Ended March 31,	
(in thousands)	**2025**	**2024**
Cash provided by (used in):		
Operating activities	$ (35,138)	$ (5,557)
Investing activities	(137)	(240)
Financing activities	15,195	2,188
Net decrease in cash and restricted cash	$ (20,080)	$ (3,609)

Operating Activities

Net cash used in operating activities was $35.1 million for the three months ended March 31, 2025, compared to a $5.6 million for the three months ended March 31, 2024. The increase was primarily driven by a $15.6 million use of cash in accounts receivable due to the timing of invoicing and collections. It was also impacted by a $15.5 million unfavorable change in both accrued liabilities and accounts payable related to payment timing, and a $5.8 million use of cash in deferred revenue, reflecting the recognition of amounts received under CSL supply agreements. Additionally, a $3.4 million reduction in non-cash share-based compensation contributed to the higher cash usage. These factors were partially offset by an $12.7 million improvement in net loss.

Investing Activities

Net cash used in investing activities of $0.1 million for the three months ended March 31, 2025, and $0.2 million for the three months ended March 31, 2024, reflected the acquisition of property and equipment.

Financing Activities

Net cash provided by financing activities was $15.2 million for the three months ended March 31, 2025, compared to a $2.2 million for the three months ended March 31, 2024. The increase was primarily due to the receipt of $15.0 million in debt proceeds during the current quarter.

Funding Requirements

We anticipate that we will continue to generate losses for the foreseeable future, and we expect the losses to increase as we continue the development of, and seek regulatory approvals for, our product candidates, and begin commercialization of our products. As a result, we will require additional capital to fund our operations in order to support our long-term plans. We believe that our current cash position will be sufficient to meet our anticipated cash requirements through at least the next twelve months, assuming, among other things, no significant unforeseen expenses and continued funding from partners at anticipated levels. We intend to seek additional capital through equity and/or debt financings, collaborative or other funding arrangements with partners or through other sources of financing when and as needed. Should we seek additional financing from outside sources, we may not be able to raise such financing on terms acceptable to us or at all. If we are unable to raise additional capital when required or on acceptable terms, we may be required to scale back or discontinue the advancement of product candidates, reduce headcount, liquidate our assets, file for bankruptcy, reorganize, merge with another entity, or cease operations.

Our future funding requirements are difficult to forecast and will depend on many factors, including the following:

- the development of our LUNAR-COV19 and LUNAR-FLU vaccine candidates;
- the achievement of milestones under our strategic alliance agreements;
- maintaining and/or expanding our manufacturing network and capabilities;
- the terms and timing of any other strategic alliance, licensing and other arrangements that we may establish, including those with CSL Seqirus and CSL Seqirus' arrangement with Meiji, and any related payments thereunder;
- the initiation, progress, timing and completion of preclinical studies and clinical trials for our product candidates;
- the number and characteristics of product candidates that we pursue;
- the outcome, timing and cost of regulatory approvals;
- delays that may be caused by changing regulatory requirements;
- the cost and timing of hiring new employees to support our continued growth;
- the costs involved in filing and prosecuting patent applications and enforcing and defending patent claims;

- the costs and timing of procuring clinical and commercial supplies of our product candidates;
- the costs and timing of establishing sales, marketing and distribution capabilities;
- the costs associated with legal proceedings;
- the costs associated with potential litigation related to collaboration agreements; and
- the extent to which we acquire or invest in businesses, products or technologies.

Critical Accounting Policies and Estimates

We prepare our condensed consolidated financial statements in conformity with GAAP. As such, we make certain estimates, judgments and assumptions that we believe are reasonable, based upon information available to us. These judgments involve making estimates about the effect of matters that are inherently uncertain and may significantly impact our reported results of operations and financial condition. We describe our significant accounting policies more fully in Note 2 to our consolidated financial statements for the year ended December 31, 2024.

There have been no material changes to our critical accounting policies and estimates from the information provided in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, included in the 2024 Annual Report.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of interest rates in the United States. Due to the nature of our cash and cash equivalents, we believe that we are not subject to any material market risk exposure. We maintain an immaterial amount of foreign currency, which we do not consider to pose a material risk. We do not use derivative financial instruments.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

As required by Rule 13a-15(b) and Rule 15d-15(b) of the Exchange Act, our management, including our principal executive officer, and our principal financial and accounting officer, conducted an evaluation as of the end of the period covered by this Quarterly Report on Form 10-Q of the effectiveness of the design and operation of our disclosure controls and procedures. Based on that evaluation, management has concluded that as of March 31, 2025, our disclosure controls and procedures were not effective due to the material weakness in internal control over financial reporting described below.

The Company's disclosure controls and procedures have been designed to ensure that: (i) information required to be disclosed by us in reports that we file or submit to the SEC under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in applicable rules and forms and (ii) material information required to be disclosed in our reports filed under the Exchange Act is accumulated and communicated to management, including the CEO and the CFO, as appropriate, to allow for accurate and timely decisions regarding required disclosure.

Management does not expect that our disclosure controls and procedures will prevent all error and all fraud. The effectiveness of our or any system of disclosure controls and procedures, however well designed and operated, can provide only reasonable assurance that the objectives of the system will be met and is subject to certain limitations, including the exercise of judgment in designing, implementing, and evaluating controls and procedures and the assumptions used in identifying the likelihood of future events.

Material Weakness in Internal Control over Financing Reporting Existing as of March 31, 2025

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim consolidated financial statements will not be prevented or detected on a timely basis.

Management concluded that the material weakness disclosed in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2024 continued to exist as of March 31, 2025. Specifically, management concluded that the following material weakness existed as of March 31, 2025:

- A material weakness related to information technology general controls ("ITGCs") that support our financial reporting processes; Management determined that we did not maintain effective controls over (i) user access to ensure appropriate segregation of duties and adequate restriction of user and privileged access to financial applications, programs and data to the appropriate personnel; (ii) program change management for financial applications to ensure that information technology ("IT") program and data changes affecting financial IT applications and underlying accounting records are identified, tested, authorized and implemented appropriately; and (iii) IT operations controls to ensure that critical interface jobs are monitored.

Notwithstanding the identified material weakness, management does not believe that the deficiencies had an adverse effect on our reported operating results or financial condition, and management has determined that the financial statements and other information included in this report and other periodic filings present fairly in all material respects our financial condition and results of operations at and for the periods presented.

Plan for Remediation of Material Weakness

Our remediation efforts are ongoing, and we will continue our initiatives to implement measures designed to ensure that control deficiencies contributing to the material weakness are remediated, such that these controls are designed, implemented, and operating effectively. We are committed to making the necessary changes and improvements to our system of controls to address the material weakness in internal control over financial reporting described above.

Management has implemented or is in the process of implementing new or enhanced internal control procedures intended to both address the material weakness identified and strengthen our overall financial control environment, including:

- updated and enhanced the IT policies and relevant internal controls to consider and address ITGCs including access security and change management;
- limited elevated access profiles in financially relevant IT systems and software to appropriate personnel;

- developed, enhanced and consistently applied access administration controls over provisioning, deprovisioning, and authentication;
- developed and enhanced user access reviews for financially relevant IT systems;
- designed and refined controls over change management and IT operations controls to monitor critical interface jobs;
- implemented an additional detective control over change management to strengthen management's control framework;
- hired an internal audit manager with an appropriate level of knowledge and experience;
- engaged an accounting advisory firm to assist with the documentation, evaluation, remediation, and testing of our internal control over financial reporting; and
- provided training to control owners and relevant personnel to improve documentation that supports effective control activities, including evidence over the completeness and accuracy of information used in controls.

We are in the process of implementing the remediation activities as of the date of this report and believe that upon completion, we will have strengthened our ITGCs, and controls related to accounting for collaboration arrangements to address and successfully remediate the identified material weakness. However, control weaknesses are not considered remediated until new internal controls have been operational for a period of time, are tested, and management concludes that these controls are operating effectively. We expect to complete the remediation activities in the fiscal year 2025. We will continue to monitor the effectiveness of these remediation measures, and we will make any changes to the design of this plan and take such other actions that we deem appropriate given the circumstances.

Changes in Internal Control over Financial Reporting

As required by Rule 13a-15(d) and Rule 15d-15(d) of the Exchange Act, our management, including our principal executive officer and our principal financial and accounting officer, conducted an evaluation of the internal control over financial reporting to determine whether any other changes occurred during the period covered by this Quarterly Report on Form 10-Q that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. Based on that evaluation, our principal executive officer and our principal financial and accounting officer concluded that there were no changes in our internal controls over financial reporting during the periods covered by this Quarterly Report on Form 10-Q that materially affected, or were reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

From time to time, we may be involved in various legal proceedings and subject to claims that arise in the ordinary course of business, including those related to governmental inquiries, intellectual property and commercial relationships. The subject matter of any such legal proceedings or claims are or will be highly complex and subject to substantial uncertainties. The outcome of any such proceedings or claims, regardless of the merits, are and will be inherently uncertain; therefore, assessing the likelihood of loss and any estimated damages is difficult and subject to considerable judgment.

Item 1A. Risk Factors.

Our business is subject to various risks, including those described in Item 1A of our Annual Report on Form 10-K for the fiscal year ended December 31, 2024, which we strongly encourage you to review. There have been no material changes from the risk factors described in our Annual Report on Form 10-K for the year ended December 31, 2024 filed with the Commission on March 6, 2025.

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

None.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

Rule 10b5-1 Trading Arrangements

During the three months ended March 31, 2025, none of our directors or officers, as defined in Rule 16a-1(f) of the Exchange Act, adopted or terminated a "Rule 10b5-1 trading arrangement" (as defined in Item 408 of Regulation S-K of the Exchange Act) intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) under the Exchange Act.

Item 6. Exhibits.

Exhibit Index

Exhibit Number	Description
1.1	Controlled Equity Offering℠ Sales Agreement, dated as of December 23, 2022 by and between Cantor Fitzgerald & Co, Wells Fargo Securities, LLC and Arcturus Therapeutics Holdings Inc. Incorporated by reference to Exhibit 1.2 to Registration Statement on Form S-3 filed on December 23, 2022 (File No. 333269003).
1.2	Amendment No. 1 to Controlled Equity Offering℠ Sales Agreement by and between Cantor Fitzgerald & Co, Wells Fargo Securities, LLC, William Blair & Company, L.L.C., and Arcturus Therapeutics Holdings Inc. Incorporated by reference to Exhibit 1.1 to Form 8-K filed on August 7, 2023.
3.1	Certificate of Incorporation. Incorporated by reference to Annex B to the proxy statement/prospectus which forms part of the Registration Statement on Form S-4 filed on March 18, 2019 (File No. 333-230353).
3.2	Certificate of Amendment, dated November 25, 2020. Incorporated by reference to Exhibit 3.1 to Form 8-K filed on November 25, 2020 (File No. 001-38942).
3.3	Bylaws of Arcturus Therapeutics Holdings Inc. Incorporated by reference to Exhibit 3.2 to the Company's Registration Statement on Form S-3, filed with the SEC on May 8, 2020 (File No. 333-238139).
4.1	Description of Registrant's Securities. Incorporated by reference to Exhibit 4.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 2021 filed on February 28, 2022 (File No. 001-38942).
10.1†	Form of Indemnification Agreement. Incorporated by reference to Exhibit 10.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 filed on March 16, 2020 (File No. 001-38942).
10.2†	Amended and Restated 2019 Omnibus Equity Incentive Plan. Incorporated by reference Exhibit 4.3 to the Registration Statement on Form S-8 filed on August 5, 2020 (File No. 333-240397).
10.3***	Amended and Restated Amendment to Development and Option Agreement, dated as of September 28, 2018, by and between CureVac AG and Arcturus Therapeutics Inc. Incorporated by reference to Exhibit 99.2 to the Company's Report of Foreign Private Issuer on Form 6-K filed on October 1, 2018 (File No. 001-35932).
10.4***	Research and Exclusive License Agreement, by and between Arcturus Therapeutics, Inc. and Synthetic Genomics, Inc., effective October 24, 2017. Incorporated by reference to Exhibit 4.8 to Form 20-F filed on May 14, 2018 (File No. 001-35932).
10.5***	Research Collaboration and License Agreement, by and between Arcturus Therapeutics, Inc. and Ultragenyx Pharmaceutical Inc., entered into as of October 26, 2015, as amended October 17, 2017 and April 20, 2018. Incorporated by reference to Exhibit 4.10 to Form 20-F filed on May 14, 2018 (File No. 001-35932).
10.6***	Third Amendment to Research Collaboration and License Agreement, by and between Arcturus Therapeutics, Inc. and Ultragenyx Pharmaceutical Inc., effective June 18, 2019. Incorporated by reference to Exhibit 10.2 to Form 8-K filed on June 20, 2019 (File No. 001-38942).
10.7***	Letter Agreement, by and between Arcturus Therapeutics, Inc. and the Cystic Fibrosis Foundation, dated May 16, 2017. Incorporated by reference to Exhibit 4.11 to Form 20-F filed on May 14, 2018 (File No. 001-35932).
10.8***	Amendment No. 2 to Letter Agreement, by and between Arcturus Therapeutics, Inc. and the Cystic Fibrosis Foundation, dated August 1, 2019. Incorporated by reference to Exhibit 10.16 to Form 10-Q filed on August 14, 2019.
10.9***	Development and Option Agreement, by and between Arcturus Therapeutics, Inc. and CureVac AG, dated January 1, 2018, as amended May 3, 2018. Incorporated by reference to Exhibit 4.12 to Form 20-F filed on May 14, 2018 (File No. 001-35932).
10.10***	Third Amendment to Development and Option Agreement, by and between Arcturus Therapeutics, Inc. and CureVac AG, dated July 26, 2019. Incorporated by reference to Exhibit 10.20 to Form 10-Q filed on August 14, 2019 (File No. 001-38942).
10.11***	License Agreement, by and between Arcturus Therapeutics, Inc., as successor-in-interest to Marina Biotech, Inc., and Protiva Biotherapeutics Inc., dated as of November 28, 2012. Incorporated by reference to Exhibit 4.14 to Form 20-F/A filed on July 10, 2018 (File No. 001-35932).

10.12***	Patent Assignment and License Agreement, by and between Arcturus Therapeutics, Inc. and Marina Biotech, Inc., dated as of August 9, 2013. Incorporated by reference to Exhibit 4.15 to Form 20-F filed on May 14, 2018 (File No. 001-35932).
10.13	Share Exchange Agreement, dated as of February 11, 2019, by and between Arcturus Therapeutics Ltd. and Arcturus Therapeutics Holdings Inc. Incorporated by reference to Exhibit 10.13 to the Company's Annual Report on Form 10-K for the year ended December 31, 2018 filed on March 18, 2019 (File No. 001-35932).
10.14	Lease Agreement, by and between Arcturus Therapeutics, Inc. and ARE-SD Region No. 44, LLC, dated October 4, 2017. Incorporated by reference to Exhibit 4.6 to Form 20-F filed on May 14, 2018 (File No. 001-35932).
10.15	First Amendment to Lease Agreement, by and between Arcturus Therapeutics Holdings Inc. and ARE-SD Region No. 44, LLC dated February 1, 2020. Incorporated by reference to Exhibit 10.23 to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 filed on March 16, 2020 (File No. 001-38942).
10.16***	Acceptance Letter, dated March 4, 2020, by and between Arcturus Therapeutics Holdings Inc. and the Economic Development Board of Singapore. Incorporated by reference to Exhibit 10.24 to the Company's Annual Report on Form 10-K for the year ended December 31, 2019 filed on March 16, 2020 (File No. 001-38942).
10.17†	2020 Employee Stock Purchase Plan. Incorporated by reference to Exhibit 4.3 to Form S-8 filed on August 5, 2020 (File No. 333-240392).
10.18	Second Amendment to Lease, by and between Arcturus Therapeutics, Inc. and ARE-SD Region No. 44, LLC, dated November 13, 2020. Incorporated by reference to Exhibit 10.29 to the Company's Annual Report on Form 10-K for the year ended December 31, 2020 filed on March 1, 2020 (File No. 001-38942).
10.19	Third Amendment to Lease, by and between Arcturus Therapeutics, Inc. and ARE-SD Region No. 44, LLC, dated February 25, 2021. Incorporated by reference to Exhibit 10.30 to the Company's Annual Report on Form 10-K for the year ended December 31, 2020 filed on March 1, 2020 (File No. 001-38942).
10.20	Arcturus Therapeutics Holdings Inc. Severance Policy for Executives. Incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed on April 26, 2021 (File No. 001-38942).
10.21	Lease, by and between Arcturus Therapeutics, Inc. and TPSC IX, LLC, dated September 29, 2021. Incorporated by reference to Exhibit 10.35 to Form 10-Q filed on November 9, 2021 (File No. 001-38942).
10.22†	Arcturus Therapeutics Holdings Inc. 2021 Inducement Equity Incentive Plan. Incorporated by reference to Exhibit 4.1 to the Registration Statement on Form S-8 filed on October 20, 2021 (File No. 333-260391).
10.23†	Amended and Restated 2019 Omnibus Equity Incentive Plan, as amended. Incorporated by reference to Exhibit 4.3 to the Registration Statement on Form S-8 filed on June 30, 2022.
10.24***	Cost Reimbursement Contract dated August 31, 2022, by and between Arcturus Therapeutics Holdings Inc. and Biomedical Advanced Research and Development Authority of the U.S. Department of Health and Human Services. Incorporated by reference to Exhibit 10.36 to Quarterly Report on Form 10-Q filed on November 9, 2022 (File No. 001-38942).
10.25***	Study Support Agreement, dated October 31, 2022, by and between Arcturus Therapeutics, Inc. and Vinbiocare Research and Manufacture Joint Stock Company. Incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed on November 4, 2022 (File No. 001-38942).
10.26***	Collaboration and License Agreement, dated November 1, 2022, by and between Arcturus Therapeutics Holdings Inc. and CSL Limited. Incorporated by reference to Exhibit 10.38 to Quarterly Report on Form 10-Q filed on November 9, 2022 (File No. 001-38942).
10.27***	Manufacturing Support Agreement Termination Letter, dated March 23, 2023, by and between Arcturus Therapeutics, Inc. and the Economic Development of Singapore. Incorporated by reference to Exhibit 10.41 to Annual Report on Form 10-K filed on March 29, 2023 (File No. 001-38942).
10.28***	Credit Agreement dated April 21, 2023, by and between Arcturus Therapeutics, Inc. and Wells Fargo Bank, National Association. Incorporated by reference to Exhibit 10.28 to Quarterly Report on Form 10-Q filed on May 9, 2023 (File No. 001-38942).

10.29***	Security Agreement dated April 21, 2023, by and between Arcturus Therapeutics, Inc. and Wells Fargo Bank, National Association. Incorporated by reference to Exhibit 10.29 to Quarterly Report on Form 10-Q filed on May 9, 2023 (File No. 001-38942).
10.30***	Revolving Line of Credit Note dated April 21, 2023, by and between Arcturus Therapeutics, Inc. and Wells Fargo Bank, National Association. Incorporated by reference to Exhibit 10.30 to Quarterly Report on Form 10-Q filed on May 9, 2023 (File No. 001-38942).
10.31***	Amendment Number One to Collaboration and License Agreement, dated August 3, 2023, by and between Arcturus Therapeutics, Inc. and Seqirus Inc. Incorporated by reference to Exhibit 10.31 to Quarterly Report on Form 10-Q filed on November 14, 2023 (File No. 001-38942).
10.32***	Amendment No. 4 to Letter Agreement, dated September 25, 2023, by and between Arcturus Therapeutics, Inc. and the Cystic Fibrosis Foundation. Incorporated by reference to Exhibit 10.32 to Quarterly Report on Form 10-Q filed on November 14, 2023 (File No. 001-38942).
10.33***	Amendment Number Two to Collaboration and License Agreement, dated March 29, 2024, by and between Arcturus Therapeutics, Inc. and Seqirus Inc. Incorporated by reference to Exhibit 10.33 to Quarterly Report on Form 10-Q filed on May 8, 2024 (File No. 001-38942).
10.34†	Amended and Restated 2019 Omnibus Equity Incentive Plan, as amended. Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on June 14, 2024 (File No. 001-38942).
10.35***	First Amendment to Credit Agreement and First Amendment to Revolving Line of Credit, dated June 26, 2024, by and between Arcturus Therapeutics, Inc. and Wells Fargo Bank, National Association. Incorporated by reference to Exhibit 10.35 to Quarterly Report on Form 10-Q filed on August 5, 2024 (File No. 001-38942).
10.36*	Fifth Amendment to Lease, by and between Arcturus Therapeutics, Inc. and ARE-SD Region No. 44, LLC, dated July 12, 2024.
31.1*	Certification of Principal Executive Officer Pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as amended.
31.2*	Certification by Principal Financial Officer pursuant to Rule 13a-14(a) or 15d-14(a) under the Securities Exchange Act of 1934, as amended.
32.1**	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2**	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101*	The following financial statements and footnotes from the Registrant's Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2025 formatted in Inline Extensible Business Reporting Language (Inline XBRL): 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 101.CAL Inline XBRL Taxonomy Extension Calculation Linkbase 101.DEF Inline XBRL Taxonomy Extension Definition Linkbase 101.LAB Inline XBRL Taxonomy Extension Label Linkbase 101.PRE Inline XBRL Taxonomy Extension Presentation Linkbase
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

* Filed herewith.

** The certifications attached as Exhibits 32.1 and 32.2 that accompany this Quarterly Report are not deemed filed with the SEC and are not to be incorporated by reference into any filing of Arcturus Therapeutics Holdings Inc. under the Securities Act of 1933 or the Securities Exchange Act of 1934, whether made before or after the date of this Quarterly Report, irrespective of any general incorporation language contained in such filing

*** Certain confidential portions of this exhibit have been redacted from the publicly filed document because such portions are (i) not material and (ii) would be competitively harmful if publicly disclosed.

† Management compensatory plan, contract or arrangement.

SIGNATURE

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.

ARCTURUS THERAPEUTICS HOLDINGS INC.

Date: May 12, 2025

By: /s/ Andy Sassine
Andy Sassine
Chief Financial Officer
Principal Financial and Accounting Officer

FIFTH AMENDMENT TO LEASE

THIS FIFTH AMENDMENT TO LEASE (this "**Fifth Amendment**") is made as of July ___, 2024, by

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and between **ARE-SD REGION NO. 44, LLC**, a Delaware limited liability company ("**Landlord**"), and **ARCTURUS THERAPEUTICS, INC.**, a Delaware corporation ("**Tenant**").

RECITALS

A.Landlord and Tenant are parties to that certain Lease Agreement dated as of October 4, 2017, as amended by that certain First Amendment to Lease dated as of January 31, 2020, as further amended by that certain Second Amendment to Lease dated as of November 13, 2020, as further amended by that certain Third Amendment to Lease dated as of February 25, 2021, and as further amended by that certain Fourth Amendment to Lease dated as of March 25, 2024 (as amended, the "**Lease**"), wherein Landlord leases to Tenant certain premises containing approximately 24,705 rentable square feet, commonly known as Suite 250, located at 10628 Science Center Drive, San Diego, California (the "**Premises**"), and certain temporary premises containing approximately 11,749 rentable square feet, commonly known as Suite 150, located at 10578 Science Center Drive, San Diego, California (the "**Temporary Premises**"), as more particularly described in the Lease. Capitalized terms used herein without definition shall have the meanings defined for such terms in the Lease.

B.The Term of the Lease, with respect to the Temporary Premises only, is scheduled to expire on March 31, 2025.

C.Landlord and Tenant desire, subject to the terms and conditions set forth below, to amend the Lease to, among other things, reflect the early termination of the Lease with respect to the Temporary Premises only as of the date this Fifth Amendment is executed (the "**Temporary Premises Termination Date**").

NOW, THEREFORE, in consideration of the foregoing Recitals, which are incorporated herein by this reference, the mutual promises and conditions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby agree as follows:

1. **Temporary Premises Termination**. The Term of the Lease with respect to the Temporary Premises shall terminate on the Temporary Premises Termination Date. Tenant shall voluntarily surrender the Temporary Premises on the Temporary Premises Termination Date in accordance with the surrender requirements contained in the Lease and in the condition in which Tenant is required to surrender the Temporary Premises pursuant to the Lease. From and after the Temporary Premises Termination Date, Tenant shall have no further rights of any kind with respect to the Temporary Premises. Notwithstanding the foregoing, those provisions of the Lease which, by their terms, survive the termination of the Lease shall survive the surrender of the Temporary Premises and termination of the Lease with respect to the Temporary Premises as provided for herein. Nothing herein shall excuse Tenant from its obligations under the Lease with respect to the Temporary Premises prior to the Temporary Premises Termination Date. If Tenant fails to surrender the Temporary Premises by the Temporary Premises Termination Date pursuant to this Section 1, such failure shall constitute a hold over without Landlord's consent under Section 8 of the original Lease. For the avoidance of doubt, the Term of the Lease shall otherwise continue in full force and effect with respect to the Premises.

2. **Rent**. Tenant shall continue paying Base Rent, Operating Expenses, the Amenities Fee and all other amounts due under the Lease with respect to the Temporary Premises through the Temporary Premises Termination Date.

3. **Brokers**. Landlord and Tenant each represents and warrants that it has not dealt with any broker, agent or other person (collectively, "**Broker**") in connection with the transaction reflected in this

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Fifth Amendment and that no Broker brought about this transaction, other than Savills, Cushman & Wakefield and CBRE. Landlord and Tenant each hereby agree to indemnify and hold the other harmless from and against any claims by any Broker, other than Savills, Cushman & Wakefield and CBRE, claiming a commission or other form of compensation by virtue of having dealt with Tenant or Landlord, as applicable, with regard to this Fifth Amendment.

4. **California Accessibility Disclosure**. The provisions of Section 44(r) of the original Lease are hereby incorporated into this Fifth Amendment by reference.

5. **OFAC**. Tenant and all beneficial owners of Tenant are currently (a) in compliance with and shall at all times during the Term of the Lease remain in compliance with the regulations of the Office of Foreign Assets Control ("**OFAC**") of the U.S. Department of Treasury and any statute, executive order, or regulation relating thereto (collectively, the "**OFAC Rules**"), (b) not listed on, and shall not during the term of the Lease be listed on, the Specially Designated Nationals and Blocked Persons List maintained by OFAC and/or on any other similar list maintained by OFAC or other governmental authority pursuant to any authorizing statute, executive order, or regulation, and (c) not a person or entity with whom a U.S. person is prohibited from conducting business under the OFAC Rules.

6. **Miscellaneous**.

a. This Fifth Amendment is the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior and contemporaneous oral and written agreements and discussions. Reference to the Lease in this Fifth Amendment shall mean the Lease as amended by this Fifth Amendment. This Fifth Amendment may be amended only by an agreement in writing, signed by the parties hereto.

b. Once executed by both parties, this Fifth Amendment is binding upon and shall inure to the benefit of the parties hereto and their respective successors and assigns.

c. This Fifth Amendment may be executed in 2 or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via electronic mail (including pdf or any electronic signature process complying with the U.S. federal ESIGN Act of 2000) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. Electronic signatures shall be deemed original signatures for purposes of this Fifth Amendment and all matters related thereto, with such electronic signatures having the same legal effect as original signatures.

d. Except as amended and/or modified by this Fifth Amendment, the Lease is hereby ratified and confirmed and all other terms of the Lease shall remain in full force and effect, unaltered and unchanged by this Fifth Amendment. In the event of any conflict between the provisions of this Fifth Amendment and the provisions of the Lease, the provisions of this Fifth Amendment shall prevail. Whether or not specifically amended by this Fifth Amendment, all of the terms and provisions of the Lease are hereby amended to the extent necessary to give effect to the purpose and intent of this Fifth Amendment.

[Signatures are on the next page]

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IN WITNESS WHEREOF, the parties hereto have executed this Fifth Amendment as of the day and year first above written.

TENANT:

ARCTURUS THERAPEUTICS, INC.,

a Delaware corporation

By:
Name: Joe Payne
Its: .President & CEO

X□ I hereby certify that the signature, name, and title above are my signature, name and title

LANDLORD:

ARE-SD REGION NO. 44, LLC,
a Delaware limited liability company

By: ALEXANDRIA REAL ESTATE EQUITIES, L.P.,
a Delaware limited partnership,
managing member

By: ARE-QRS CORP.,
a Maryland corporation,

general partner

By:
Name: Gary Dean
Its: Executive Vice President – Real Estate Leg

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Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER

I, Joseph E. Payne, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Arcturus Therapeutics Holdings 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: May 12, 2025

By: /s/ Joseph E. Payne

Joseph E. Payne
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER

I, Andy Sassine, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Arcturus Therapeutics Holdings 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: May 12, 2025

By: /s/ Andy Sassine

Andy Sassine
Chief Financial Officer

Exhibit 32.1

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

The undersigned, the President and Chief Executive Officer of Arcturus Therapeutics Holdings Inc. (the "Company"), hereby certifies on the date hereof, pursuant to 18 U.S.C. 1350(a), as adopted pursuant to Section 906 of The Sarbanes-Oxley Act of 2002, that the Quarterly Report on Form 10-Q for the period ended March 31, 2025 (the "Form 10-Q"), filed concurrently herewith by the Company, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 12, 2025

By: /s/ Joseph E. Payne
Joseph E. Payne
President and Chief Executive Officer

Exhibit 32.2

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

The undersigned, the Chief Financial Officer of Arcturus Therapeutics Holdings Inc. (the "Company"), hereby certifies on the date hereof, pursuant to 18 U.S.C. 1350(a), as adopted pursuant to Section 906 of The Sarbanes-Oxley Act of 2002, that the Quarterly Report on Form 10-Q for the period ended March 31, 2025 (the "Form 10-Q"), filed concurrently herewith by the Company, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 12, 2025

By: /s/ Andy Sassine
Andy Sassine
Chief Financial Officer