Table of Contents

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

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

For the quarterly period ended September 30, 2023

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 001-38935

ATRECA, INC.

(Exact name of registrant as specified in its charter)

Delaware	**27-3723255**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

835 Industrial Road, Suite 400,
San Carlos, CA 94070
(Address of principal executive offices)
(Zip Code)

(650)-595-2595
(Registrant's telephone number, including area code)

Not Applicable
(Former name, former address and former fiscal year, if changed since last report)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A Common Stock	BCEL	The Nasdaq Global Select Market

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

Indicate by check mark whether the registrant has submitted electronically, every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T 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 November 14, 2023, the registrant had 32,908,634 shares of Class A common stock, $0.0001 par value per share and 6,715,441 shares of Class B common stock, $0.0001 par value per share, outstanding.

TABLE OF CONTENTS

PART I --- FINANCIAL INFORMATION

Item 1. Financial Statements

Atreca, Inc.
Balance Sheets
(in thousands, except share and per share data)

	September 30, 2023 (unaudited)	December 31, 2022
ASSETS		
Current Assets		
Cash and cash equivalents	$ 13,470	$ 30,819
Investments	7,918	39,676
Prepaid expenses and other current assets	3,305	7,531
Total current assets	24,693	78,026
Property and equipment, net	1,614	37,972
Operating lease right-of-use assets	—	36,056
Deposits and other	35	2,976
Total assets	$ 26,342	$ 155,030
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities		
Accounts payable	$ 4,062	$ 1,741
Accrued expenses	9,292	9,681
Operating lease liabilities, current portion	1,281	3,544
Other current liabilities	948	1,327
Total current liabilities	15,583	16,293
Operating lease liabilities, net of current portion	—	60,331
Total liabilities	15,583	76,624
Commitment and contingencies (Note 9)		
Stockholders' equity		
Class A common stock, $0.0001 par value, 650,000,000 shares authorized as of both September 30, 2023 and December 31, 2022; 32,908,634 and 32,351,950 shares issued and outstanding at September 30, 2023 and December 31, 2022, respectively	3	3
Class B common stock, $0.0001 par value, 50,000,000 shares authorized as of both September 30, 2023 and December 31, 2022; 6,715,441 shares issued and outstanding as of both September 30, 2023 and December 31, 2022	1	1
Additional paid-in capital	544,094	535,592
Accumulated other comprehensive loss	(4)	(266)
Accumulated deficit	(533,335)	(456,924)
Total stockholders' equity	10,759	78,406
Total liabilities and stockholders' equity	$ 26,342	$ 155,030

See accompanying notes to the unaudited financial statements.

Atreca, Inc.
Statements of Operations
(in thousands, except share and per share data)
(unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Expenses				
Research and development	$ 10,407	$ 16,045	$ 36,774	$ 53,062
General and administrative	5,386	7,247	20,300	23,930
Restructuring and impairment charges	20,856	—	20,856	—
Total expenses	36,649	23,292	77,930	76,992
Interest and other income (expense)				
Other income	80	—	243	750
Interest income	354	233	1,276	430
Net other income (expense)	$ 434	$ 233	$ 1,519	$ 1,180
Loss before income tax expense	(36,215)	(23,059)	(76,411)	(75,812)
Income tax expense	—	—	—	—
Net loss	$ (36,215)	$ (23,059)	$ (76,411)	$ (75,812)
Net loss per share, basic and diluted	$ (0.92)	$ (0.60)	$ (1.95)	$ (1.97)
Weighted-average shares used in computing net loss per share, basic and diluted	39,354,502	38,720,575	39,202,045	38,434,327

See accompanying notes to the unaudited financial statements.

Atreca, Inc.
Statements of Loss and Comprehensive Loss
(in thousands)
(unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net loss	$ (36,215)	$ (23,059)	$ (76,411)	$ (75,812)
Other comprehensive income (loss):				
Unrealized gain (loss) on available-for-sale debt securities	(6)	80	262	(479)
Comprehensive loss	$ (36,221)	$ (22,979)	$ (76,149)	$ (76,291)

See accompanying notes to the unaudited financial statements.

Atreca, Inc.
Statements of Stockholders' Equity
(in thousands, except share data)
(unaudited)

Three Months Ended September 30, 2022	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balances at June 30, 2022	38,591,436	$ 4	$ 528,380	$ (661)	$ (412,520)	$ 115,203
Issuance of common stock under the Employee Stock Purchase Plan	91,565	—	145	—	—	145
Vesting of restricted stock units	384,390	—	—	—	—	—
Stock-based compensation	—	—	3,884	—	—	3,884
Unrealized gain on available-for-sale debt securities	—	—	—	80	—	80
Net loss	—	—	—	—	(23,059)	(23,059)
Balances at September 30, 2022	39,067,391	$ 4	$ 532,409	$ (581)	$ (435,579)	$ 96,253

Three Months Ended September 30, 2023	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balances at June 30, 2023	39,156,584	$ 4	$ 541,787	$ 2	$ (497,120)	$ 44,673
Issuance of common stock under the Employee Stock Purchase Plan	31,924	—	10	—	—	10
Vesting of restricted stock units	435,567	—	—	—	—	—
Stock-based compensation	—	—	2,297	—	—	2,297
Unrealized loss on available-for-sale debt securities	—	—	—	(6)	—	(6)
Net loss	—	—	—	—	(36,215)	(36,215)
Balances at September 30, 2023	39,624,075	$ 4	$ 544,094	$ (4)	$ (533,335)	$ 10,759

See accompanying notes to the unaudited financial statements.

Atreca, Inc.
Statements of Stockholders' Equity
(in thousands, except share data)
(unaudited)

Nine Months Ended September 30, 2022	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balances at December 31, 2021	37,758,797	$ 4	$ 514,794	$ (102)	$ (359,767)	$ 154,929
Issuance of common stock through "at-the-market" offering, net of underwriter discount and issuance costs	700,000	—	3,509	—	—	3,509
Issuance of common stock upon exercise of options	16,666	—	76	—	—	76
Issuance of common stock under the Employee Stock Purchase Plan	207,538	—	322	—	—	322
Vesting of restricted stock units	384,390	—	—	—	—	—
Stock-based compensation	—	—	13,708	—	—	13,708
Unrealized loss on available-for-sale debt securities	—	—	—	(479)	—	(479)
Net loss	—	—	—	—	(75,812)	(75,812)
Balances at September 30, 2022	39,067,391	$ 4	$ 532,409	$ (581)	$ (435,579)	$ 96,253

Nine Months Ended September 30, 2023	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balances at December 31, 2022	39,067,391	$ 4	$ 535,592	$ (266)	$ (456,924)	$ 78,406
Issuance of Class A common stock under the Employee Stock Purchase Plan	121,117	—	119	—	—	119
Vesting of restricted stock units	435,567	—	—	—	—	—
Stock-based compensation	—	—	8,383	—	—	8,383
Unrealized gain on available-for-sale debt securities	—	—	—	262	—	262
Net loss	—	—	—	—	(76,411)	(76,411)
Balances at September 30, 2023	39,624,075	$ 4	$ 544,094	$ (4)	$ (533,335)	$ 10,759

See accompanying notes to the unaudited financial statements.

Atreca, Inc.
Statements of Cash Flows
(in thousands)
(unaudited)

	Nine Months Ended September 30,	
	2023	2022
Cash Flows from Operating Activities		
Net loss	$ (76,411)	$ (75,812)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	3,480	4,081
Amortization of operating right-of-use asset	1,359	1,197
Impairment charges	685	—
Stock-based compensation	8,383	13,708
Amortization of discount or premium on available-for-sale securities	(318)	90
Loss on lease termination	8,768	—
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	7,442	(2,133)
Accounts payable	834	(1,671)
Accrued expenses	(1,504)	(2,136)
Other current liabilities	(379)	(236)
Operating lease liabilities	(1,983)	(2,376)
Net cash used in operating activities	(49,644)	(65,288)
Cash Flows from Investing Activities		
Purchase of property and equipment	(162)	(739)
Purchase of investments	(16,647)	(60,504)
Proceeds from maturities of investments	48,985	48,442
Net cash provided by (used in) investing activities	32,176	(12,801)
Cash Flows from Financing Activities		
Proceeds from the issuance of Class A common stock under the Employee Stock Purchase Plan	119	322
Proceeds from exercise of stock options	—	76
Proceeds from issuance of common shares in "at-the-market" equity offering, net of issuance costs	—	3,509
Principal payments on capital lease obligations	—	(4)
Net cash provided by financing activities	119	3,903
Net change in cash, cash equivalents and restricted cash	(17,349)	(74,186)
Cash, cash equivalents and restricted cash, beginning of period	31,934	96,204
Cash, cash equivalents and restricted cash, end of period	$ 14,585	$ 22,018

See accompanying notes to the unaudited financial statements.

Atreca, Inc.
Statements of Cash Flows (continued)
(in thousands)
(unaudited)

	Nine Months Ended September 30,	
	2023	2022
Supplemental Schedule of Non-Cash Investing and Financing Activities		
Purchases of property and equipment included in accounts payable and accrued liabilities	$ —	$ 30
Reclassification of fixed assets held-for-sale	$ 275	$ —

See accompanying notes to the unaudited financial statements.

Notes to Unaudited Interim Financial Statements

1. Business

Nature of Business

Atreca, Inc. (the "Company") was incorporated in the State of Delaware on June 11, 2010 ("inception"), and is located in San Carlos, California. The Company is a biopharmaceutical company utilizing its differentiated platform to discover and develop novel antibody-based immunotherapeutics to treat a range of solid tumor types. APN-497444 is a Company-discovered antibody targeting a novel, tumor-specific glycan, which displays uniform and tumor-selective binding with high target prevalence in colorectal cancer and exhibits compelling preclinical anti-tumor activity and initial safety when weaponized as an antibody-drug conjugate ("ADC"). The Company operates in a single segment. Since inception, the Company has been primarily engaged in research and development, raising capital, building its management team and building its intellectual property portfolio.

In August 2023, the Company implemented a reorganization of its operations. As part of the reorganization, the Company undertook cost-saving initiatives, including a workforce reduction of approximately 40% of its employees and the suspension of the development of ATRC-101, its lead product candidate (collectively, the "August 2023 Reorganization"). The total cost related to the workforce reduction was approximately $1.3 million, all of which is cash-based expenditures related primarily to severance payments. The Company recognized substantially all the charges related to the workforce reduction in the quarter ended September 30, 2023.

In September 2023, the Company entered into an Agreement for Modification of Lease and Voluntary Surrender of Premises (the "Lease Modification Agreement") with ARE-San Francisco No. 63, LLC, a Delaware limited liability company (the "Landlord"), to terminate that certain Lease Agreement dated as of July 17, 2019, as amended by that certain Letter Agreement dated as of August 24, 2020 (the "Lease"), by and between the Company and Landlord, for certain premises located at 835 Industrial Road, San Carlos, California 94070 (the "Premises") that served as the Company's headquarters. The term of the Lease was scheduled to expire on April 30, 2033. The Lease Modification Agreement provides that the Lease will terminate on the earlier of (i) April 30, 2024, and (ii) such earlier date that the Landlord elects to terminate the Lease after November 30, 2023, pursuant to certain accelerated termination rights with respect to the Premises. The Company and the Landlord acknowledge and agree that the Company has elected to vacate the Premises as of November 30, 2023. As consideration for the Landlord's agreement to enter into the Lease Modification Agreement and accelerate the expiration date of the Lease, the Company has agreed to pay a lease modification payment to the Landlord in an amount of $5.1 million. As of September 30, 2023, the Company paid $4.0 million of the lease modification payment. The Company additionally conveyed the ownership of certain assets, including its lab equipment and leasehold improvement, to the Landlord. The net carrying value of the transferred assets was $32.1 million.

Further to the Company's ongoing reorganization efforts, the Company is devoting substantial time and resources to exploring potential strategic transactions and business alternatives focused on maximizing stockholder value, including, but not limited to, a merger, sale of part or all its clinical, preclinical and discovery platform assets, business combination, and/or similar transaction. In November 2023, the Company implemented a further reduction in its workforce while maintaining the necessary support to continue exploring potential strategic transactions and business alternatives (the "November 2023 Reorganization"). Refer to Note 16, Subsequent Events.

Despite devoting significant efforts to identifying and evaluating potential strategic alternatives, there can be no assurance that this strategic review process will result in the Company pursuing any transaction or that any transaction, if pursued, will be completed on attractive terms or at all. The Company's board of directors has not approved a definitive course of action. Additionally, there can be no assurances that any particular course of action, business arrangement or transaction, or series of transactions, will be pursued, successfully consummated or lead to increased stockholder value.

Nasdaq Delisting Notification

On September 8, 2023, the Company received a notice from The Nasdaq Stock Market LLC, or Nasdaq,

notifying us that on September 7, 2023, the average closing price of our Class A common stock, $0.0001 par value per share, over the prior 30 consecutive trading days had fallen below $1.00 per share, which is the minimum average closing price required to maintain listing on Nasdaq under Nasdaq Listing Rule 5450(a)(1), or the Minimum Bid Requirement.

In accordance with Nasdaq Listing Rule 5810(c)(3)(A), the Company have 180 calendar days to regain compliance with the Minimum Bid Requirement, or the Grace Period, subject to a potential 180 calendar day extension, as described below. To regain compliance, the closing bid price of the Class A common stock must be at least $1.00 per share for a minimum of ten consecutive business days within the Grace Period.

If the Company does not achieve compliance with the Minimum Bid Requirement by March 6, 2024, the end of the Grace Period, the Company may be eligible for an additional 180 calendar day period to regain compliance. To qualify, the Company will be required to meet the continued listing requirement for market value of our publicly held shares and all other Nasdaq initial listing standards, with the exception of the bid price requirement, and will need to provide written notice to Nasdaq of our intention to cure the deficiency during the second compliance period by effecting a reverse stock split if necessary. However, if it appears to Nasdaq staff that the Company will not be able to cure the deficiency, or if the Company do not meet the other Nasdaq listing standards, Nasdaq could provide notice that the Class A common stock will be subject to delisting. In the event the Company receive notice that the Class A common stock is being delisted, the Company would be entitled to appeal the determination to a Nasdaq Listing Qualifications Panel and request a hearing.

There can be no assurance that the Company will be able to regain compliance with the Minimum Bid Requirement or maintain compliance with the other listing requirements. The notice has no immediate effect on the listing or trading of the Class A common stock, which will continue to be listed and traded on Nasdaq, subject to our compliance with the other Nasdaq listing standards.

2. Summary of Significant Accounting Policies

Basis of Presentation

The financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”) and include the accounts of the Company. Certain information and note disclosures normally included in the financial statements prepared in accordance with U.S. GAAP have been or omitted pursuant to the applicable rules and regulations of the Securities and Exchange Commission (“SEC”). Therefore, these unaudited financial statements should be read in conjunction with the audited financial statements and related footnotes included in the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2022 filed with the SEC on March 29, 2023.

Going Concern

In accordance with Accounting Standards Codification (“ASC”) 205-40, Going Concern, the Company evaluated whether there are conditions and events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern within one year after the date that the financial statements are issued. This evaluation initially does not take into consideration the potential mitigating effect of our plans that have not been fully implemented as of the date the financial statements are issued. When substantial doubt exists under this methodology, we evaluate whether the mitigating effect of its plans sufficiently alleviates substantial doubt about our ability to continue as a going concern. The mitigating effect of our plans, however, is only considered if both (1) it is probable that the plans will be effectively implemented within one year after the date that the financial statements are issued, and (2) it is probable that the plans, when implemented, will mitigate the relevant conditions or events that raise substantial doubt about our ability to continue as a going concern within one year after the date that the financial statements are issued. In performing this analysis, we excluded certain elements of our operating plan that cannot be considered probable.

The Company expects to generate operating losses and negative operating cash flows in the future and the need for additional funding to support its planned operations raise substantial doubt regarding its ability to continue as a going concern for a period of one year after the date of the unaudited financial statements are issued. In August 2023, the Company commenced a reorganization plan to preserve capital and reduce operating costs. The Company has also begun the exploration of strategic alternatives, which may include a merger, sale of part or all its clinical, preclinical and discovery platform assets, business combination, and/or similar transaction. The Company has concluded the likelihood that its plan to successfully obtain sufficient funding from one or more of these sources or adequately reduce expenditures, while reasonably possible, is less than probable. As a result, the Company believes that its existing cash, cash equivalents and investments will only be sufficient to fund its planned operating and capital needs into the first quarter of 2024. Accordingly, the Company has concluded that substantial doubt exists about its ability to continue as a going concern for a period of at least twelve months from the date of issuance of these unaudited financial statements.

The accompanying unaudited financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The unaudited financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of the uncertainties described above.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities, and reported amounts of income and expenses in the financial statements and accompanying notes. Actual results could differ from those estimates. Key estimates in the financial statements include estimated useful lives of property and equipment, impairment of long-lived assets, accrued expenses, valuation of deferred income tax assets, fair value of available-for-sale debt securities and fair value of options granted under the Company's stock option plan.

Unaudited Interim Financial Statements

The accompanying financial statements are unaudited. The unaudited interim financial statements have been prepared on the same basis as the annual financial statements and reflect, in the opinion of management, all adjustments of a normal and recurring nature that are necessary for the fair statement of the Company’s financial position as of September 30, 2023 and its results of operations for the three and nine months ended September 30, 2023 and 2022, and statements of cash flows for the nine months ended September 30, 2023 and 2022. The financial data and the other financial information contained in these notes to the financial statements related to the three-month and nine-month periods ended September 30, 2023 and 2022 are also unaudited. The results of operations for the three and nine months ended September 30, 2023 are not necessarily indicative of the results to be expected for the year ending December 31, 2023 or for any other future annual or interim period. The balance sheet as of December 31, 2022 included herein was derived from the audited financial statements as of that date.

Other Income

Other income is comprised of amounts earned from services performed under service agreements. The Company follows the provisions of Accounting Standards Update 2014-09 ASC Topic 606, *Revenue from Contracts with Customers (*“Topic 606”*)*. The guidance provides a unified model to determine how income is recognized.

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

The Company generally allocates the transaction price to distinct performance obligations at their stand-alone selling prices, determined by their estimated costs plus some margin. Performance obligations are generally delivered over time and recognized based upon observable inputs as the related research services are performed, which are recorded as research and development expenses. Amounts due under service agreements are generally billed monthly as services are delivered and do not generally result in contract liabilities or assets.

In March 2022, the Company entered into an agreement with a third party for the assignment of certain non-core intellectual property. The initial consideration was classified as other income and recognized upon completion of the assignment. The agreement provides for additional consideration in the event of commercial exploitation of the intellectual property. The term of the agreement extends to the date of expiration of the last to expire of any of the assigned patents.

In October, 2022, the Company entered into the Grant Agreement with the Bill & Melinda Gates Foundation under which it was awarded a grant totaling up to $1.2 million for its malaria program. The parties amended the agreement in December 2022 to extend the grant term. During the three months and nine months ended September 30, 2023, the Company recognized $80,000 and $243,000 of income related to the Grant Agreement, respectively, and had $0.9 million of unused funds received recorded as deferred revenue within accrued and other current liabilities. The Company recorded no receivables under service and license agreements as of September 30, 2023 and December 31, 2022.

Collaborations

Historically, we have entered into a number of discovery collaborations as we developed our discovery platform. These collaborations have generally focused on identifying novel antibodies in areas of significant unmet medical need.

In July 2020, the Company entered into a Collaboration and License Agreement with Xencor, Inc. (the “Xencor Agreement”), to research, develop and commercialize novel CD3 bispecific antibodies as potential therapeutics in oncology. The Company evaluated the Xencor Agreement under the provisions of ASC 606 and ASU 2018-18, Collaborative Arrangements (Topic 808) Clarifying the Interaction between Topic 808 and Topic 606. The Company concluded that Xencor, Inc. is not a customer as there are no distinct units of account that are reflective of a vendor-customer relationship or exchange of consideration for the research activities. The Company’s share of any collaboration expense is recognized as a research and development expense on the Company’s statement of operations.

For the cost-sharing related to the research program, the Company will follow the presentation and disclosure guidance of ASC 808, *Collaboration Agreements*. The Company had a receivable of $180,000 and a payable of $12,000 under the research cost-sharing provision recorded in prepaid and other current assets and accrued expenses, respectively, on the accompanying balance sheets as of September 30, 2023 and December 31, 2022, respectively.

The Company and Xencor recently elected to terminate the joint program commenced in early 2023.

In-Licensing Arrangements – Development

In April 2022, the Company entered into an Option and License Agreement (the “Option and License Agreement”), by and between the Company and Zymeworks Inc (“Zymeworks”). The Company received a license under certain of Zymeworks’ proprietary drug conjugate patents and know-how to perform preclinical research and development of ADCs. The aggregate consideration for the research license is $5.0 million. The Company also received an option to obtain an exclusive license to research, develop, manufacture, and commercialize certain ADCs for additional license fees and royalties. Unless earlier terminated or extended, the term of the research license and the commercial option is two years from the effective date.

The Company will be required to use commercially reasonable efforts to develop and commercialize at least one licensed product and the Company will pay to Zymeworks an option exercise fee, and lump sum payments upon the achievement of certain development and regulatory milestones and commercial milestones. In addition, with respect to

each licensed product, the Company will pay tiered royalties on net sales of licensed products at single-digit royalty rates.

The research license fee of $5.0 million was expensed to research and development expense in April 2022 in accordance with the Company's research and development expense policy.

Cash, Cash Equivalents and Restricted Cash

Cash and cash equivalents include all cash balances and highly liquid investments purchased with an original maturity of three months or less.

The Company maintained restricted cash of $1.1 million as of both September 30, 2023 and December 31, 2022. These amounts as of September 30, 2023 and December 31, 2022 are included in prepaids and other current assets and deposits and other, respectively, in the accompanying balance sheets and is comprised solely of letter of credit required pursuant to the lease for Company facilities.

The Company’s reconciliation of cash and cash equivalents and restricted cash reported within the balance sheets that sum to the total of the same amounts shown in the statements of cash flows were as follows (in thousands):

	September 30, 2023	December 31, 2022
Cash and cash equivalents	$ 13,470	$ 30,819
Restricted cash	1,115	1,115
Cash, cash equivalents and restricted cash shown in the condensed statements of cash flows	$ 14,585	$ 31,934

Investments

The Company considers securities purchased with original maturities greater than three months to be investments. The Company’s policy is to protect the value of its investment portfolio and minimize principal risk by earning returns based on current interest rates. The Company’s intent is to convert all investments into cash to be used for operations and has classified them as available for sale. For purposes of determining realized gains and losses, the cost of debt securities sold is based on specific identification. Interest and dividends on securities classified as available-for-sale are included in interest income.

Leases

The Company determines if an arrangement is, or contains, a lease at inception. The Company measures lease liabilities based on the present value of lease payments over the lease term. As the Company’s leases generally do not provide an implicit discount rate, the net present value of future minimum lease payments is determined using the Company’s incremental borrowing rate. Options in the lease terms to extend or terminate the lease are not reflected in the lease liabilities unless it is reasonably certain that any such option will be exercised.

The Company measures right-of-use assets at the lease commencement date based on the corresponding lease liabilities adjusted for (i) prepayments made to the lessor at or before the commencement date, (ii) initial direct costs incurred and (iii) certain tenant incentives under the lease. The Company evaluates the recoverability of the right-of-use assets for possible impairment in accordance with the long-lived assets policy. The Company has elected not to recognize right-of-use assets or lease liabilities for leases with an initial lease term of twelve months or less.

The Company’s lease agreements do not contain residual value guarantees or covenants. Lease expense is recognized on a straight-line basis over the terms of the leases. Incentives granted under the Company’s facilities lease,

including rent holidays, are recognized as adjustments to lease expense on a straight-line basis over the terms of the leases.

Risks and Uncertainties

The Company is subject to a number of risks associated with companies at a similar stage, including dependence on key individuals, competition from similar services and larger companies, volatility of the industry, ability to obtain regulatory clearance, ability to obtain adequate financing to support growth, the ability to attract and retain additional qualified personnel to manage the anticipated growth of the Company and general economic conditions.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentration of credit risk consist of cash and cash equivalents, investments and other receivables included in prepaid and other current assets. Cash and cash equivalents are held at three financial institutions and were in excess of the Federal Deposit Insurance Corporation insurable limit at September 30, 2023 and December 31, 2022. Any loss incurred or a lack of access to such funds could have a significant adverse impact on the Company's financial condition, result of operations, and cash flows. Additionally, cash and cash equivalents and investments are maintained at brokerage firms for which amounts are insured by the Securities Investor Protection Corporation subject to legal limits. The Company does not require collateral or other security for other receivables.

Research and Development Costs

Research and development costs are expensed as incurred. Research and development costs consist primarily of salaries and benefits, consultant fees, stock-based compensation, certain facility costs, and other costs associated with preclinical and clinical development.

Stock-Based Compensation

The Company generally grants stock options to its employees for a fixed number of shares with an exercise price equal to the fair value of the underlying shares at the date of grant. The Company accounts for stock option grants using the fair value method. The fair value of options is calculated using the Black-Scholes option pricing model. For restricted stock units, fair value is based on the closing price of the Company's Class A common stock on the grant date. Stock-based compensation is recognized as the underlying options vest using the straight-line attribution approach, and forfeitures are recorded as they occur.

Emerging Growth Company Status

The Company is an "emerging growth company" ("EGC") as defined in the Jumpstart Our Business Startups Act, ("JOBS Act"), and may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not EGCs. The Company may take advantage of these exemptions until it is no longer an EGC under Section 107 of the JOBS Act, which provides that an EGC can take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards. The Company has elected to use the extended transition period for complying with new or revised accounting standards, and as a result of this election, the Company's financial statements may not be comparable to companies that comply with public company Financial Accounting Standards Board ("FASB") standards' effective dates. The Company may take advantage of these exemptions up until the last day of the fiscal year following the fifth anniversary of the IPO or such earlier time that the Company is no longer an EGC.

Restructuring and Impairment Charges

During the three months ended September 30, 2023, the Company undertook certain operational and organizational steps in connection with a strategic reorganization plan and related cost-saving measures. These measures

included discontinuing the ongoing clinical trial of ATRC-101, modifying the primary premises Lease and reducing overall workforce. Refer to Note 8, *Leases* and Note 10, *Reorganization and Other Charges*.

Recently Adopted Accounting Pronouncements

In June 2016, the FASB issued ASU 2016-13, Financial Instruments - Credit Losses, or Topic 326: Measurement of Credit Losses on Financial Instruments and subsequent amendments to the initial guidance under ASU 2018-19, ASU 2019-04, ASU 2019-05, ASU 2020-03, and ASU 2020-02 which amends the current approach to estimate credit losses on certain financial assets, including trade and other receivables. The amendment replaces the existing incurred loss impairment model with an expected loss methodology, which will result in more timely recognition of credit losses. For available-for-sale debt securities, credit losses should be recorded through an allowance for credit losses. The Company adopted this accounting standard as of January 1, 2023. The adoption of this standard did not have any impact to the Company's financial statements as credit losses at the transition date were not expected, based on the evaluation of the Company's available-for-sale debt securities.

3. Fair Value of Financial Instruments

The fair value of the Company's assets and liabilities, which qualify as financial instruments under FASB ASC 820, *Fair Value Measurements and Disclosures*, approximates their carrying value represented in the balance sheets. The Company's financial assets and liabilities subject to fair value measurements on a recurring basis and the level of inputs used for such measurements were as follows (in thousands):

	September 30, 2023			
	Level 1	Level 2	Level 3	Total
Assets				
Money market funds	$ 11,940	$ —	$ —	$ 11,940
U.S. Treasury securities	7,918	—	—	7,918
Total	$ 19,858	$ —	$ —	$ 19,858

	December 31, 2022			
	Level 1	Level 2	Level 3	Total
Assets				
Money market funds	$ 29,658	$ —	$ —	$ 29,658
Certificates of deposit	483	—	—	483
Corporate debt securities	—	1,996	—	1,996
U.S. Treasury securities	37,197	—	—	37,197
Total	$ 67,338	$ 1,996	$ —	$ 69,334

The Company utilized the market approach and Level 1 valuation inputs to value its money market funds, certificates of deposit, and U.S. government treasury securities because published fair market values were readily available. The Company measured the fair value of corporate debt securities using Level 2 valuation inputs, which are based on quoted prices and market observable data of similar instruments. As of both September 30, 2023 and December 31, 2022, the remaining contractual maturity of all marketable securities was less than one year.

4. Cash, Cash Equivalents and Investments

The fair value and the amortized cost of cash, cash equivalents and available-for-sale investments by major security type consist of the following (in thousands):

September 30, 2023	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Cash and Cash Equivalents	Investment
Cash, cash equivalents and money market funds	$ 13,470	$ —	$ —	$ 13,470	$ 13,470	$ —
Available-for-sale:						
U.S. Treasury securities	7,922	—	(4)	7,918	—	7,918
Total	$ 21,392	$ —	$ (4)	$ 21,388	$ 13,470	$ 7,918

December 31, 2022	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Cash and Cash Equivalents	Short-term Investment
Cash, cash equivalents and money market funds	$ 30,819	$ —	$ —	$ 30,819	$ 30,819	$ —
Available-for-sale:						
U.S. Treasury securities	37,458	—	(261)	37,197	—	37,197
Corporate debt securities	1,999	—	(3)	1,996	—	1,996
Certificates of deposit	485	—	(2)	483	—	483
Total	$ 70,761	$ —	$ (266)	$ 70,495	$ 30,819	$ 39,676

The Company evaluated the securities for other-than-temporary impairment and considered the decline in market value for the securities to be primarily attributable to current economic and market conditions. It is not more likely than not that the Company will be required to sell the securities, and the Company has no intention to do so prior to the recovery of the amortized cost basis. Based on this analysis, these marketable securities were not considered to be other-than-temporarily impaired as of September 30, 2023.

5. Prepaid Expenses and Other Current Assets

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

	September 30, 2023	December 31, 2022
Vendor prepayments and deposits	$ 1,064	$ 2,010
Restricted cash deposits	1,115	—
Prepaid insurance	614	1,026
Prepaid facility maintenance fee	—	336
Other receivables	180	3,985
Interest receivables and other current assets	332	174
Total prepaid expenses and other current assets	$ 3,305	$ 7,531

6. Property and Equipment, net

Property and equipment, net consists of the following (in thousands):

	September 30, 2023	December 31, 2022
Laboratory equipment	$ 6,762	$ 13,191
Furniture and fixtures	—	1,929
Computer hardware and software	864	1,518
Leasehold improvements	—	37,908
Construction in process	—	178
	7,626	54,724
Less accumulated depreciation and amortization	(6,012)	(16,752)
Total property and equipment, net	$ 1,614	$ 37,972

Depreciation and amortization expense was $0.9 million and $1.4 million for the three months ended September 30, 2023 and 2022, respectively, and $3.5 million and $4.1 million for the nine months ended September 30, 2023 and 2022, respectively.

In December 2022, the Company identified certain long-lived assets no longer utilized under current or expected future operations. Accordingly, the Company recognized impairment expense of $0.4 million in 2022. In January 2023, certain long-lived assets with carrying value of $0.1 million met the criteria to be classified as held for sale and classified as current assets included in prepaid and other current assets.

In September 2023, as a part of the Company's 2023 August 2023 Reorganization, the Company identified certain long-lived assets no longer utilized for current or expected future operations. Accordingly, the Company recognized impairment expense of $0.7 million during the nine months ended September 30, 2023. Certain long-lived assets with a carrying value of $0.3 million met the criteria to be classified as held for sale and classified as current assets included in prepaid and other current assets. Additionally, the Company transferred ownership of certain long-lived assets with a carrying value of $32.1 million to the Landlord as additional consideration for the Lease Modification Agreement.

7. Accrued Expenses

Accrued expenses consist of the following (in thousands):

	September 30, 2023	December 31, 2022
Compensation and related benefits	$ 154	$ 3,789
Accrued severance expense	4,679	—
License fees	—	3,000
Contract research fees	2,631	2,201
Lease termination fees	1,115	—
Costs to terminate contracts	500	—
Professional fees	153	128
Other	60	563
Total accrued expenses	$ 9,292	$ 9,681

8. Leases

The Company leases its office facilities under a non-cancellable operating lease agreement that expires in April 2033. Under the terms of the leases, the Company is responsible for certain insurance, property taxes and maintenance expenses. The office facilities lease agreements contain scheduled increases over the lease term. The Company was not party to any finance leases as of September 30, 2023.

In September 2023, the Company entered into the Lease Modification Agreement with the Landlord. The Lease Modification Agreement provides that the Lease will terminate on the earlier of (i) April 30, 2024, and (ii) such earlier date that the Landlord elects to terminate the Lease after November 30, 2023 (the “Effective Date”). As consideration for the Landlord’s agreement to enter into the Lease Modification Agreement and accelerate the expiration date of the Lease, the Company has agreed to pay a lease modification payment to the Landlord in the amount of $5.1 million. The Company additionally conveyed the ownership of certain assets, including its lab equipment and leasehold improvements to the Landlord. The net carrying value of the transferred assets was $32.1 million.

As the Effective Date is subsequent to September 30, 2023, the Company accounted for the change as a lease modification that reduced the remaining lease term. Upon the modification, the Company decreased its operating lease liabilities by $60.0 million and right-of-use asset by $34.7 million and the remaining amount was recognized as a gain from lease termination. This gain was offset by the $5.1 million termination fee, $1.5 million other expenses and $32.1 million of the transferred assets paid as additional considerations for the lease termination. The Company recognized a net loss on the lease termination of $12.8 million.

The Company's future lease payments as of September 30, 2023, which are presented as current portion of operating lease liabilities, and operating lease liabilities, net of current portion on the Company's balance sheets (in thousands, except weighted-average data) are as follows:

Periods	Operating Leases
2023 - remainder	$ 1,281
Total lease payments	$ 1,281
Less: imputed interest	—
Present value of lease liabilities	$ 1,281
Lease liabilities, current	1,281
Lease liabilities, noncurrent	—
Total lease liabilities	$ 1,281
Weighted-average remaining lease term (in years)	0.2
Weighted-average discount rate	0.00%

Lease expenses under the Company’s operating leases were $1.5 million for each of the three months ended September 30, 2023 and 2022, and $4.4 million for each of the nine months ended September 30, 2023 and 2022. Variable lease expenses for operating leases were $1.0 million and $0.9 million for the three months ended September 30, 2023 and 2022, respectively, and $2.9 million and $2.6 million for the nine months ended September 30, 2023 and 2022, respectively.

Practical Expedients

Leases with an initial term of 12 months or less are not recorded on the balance sheets. The Company recognizes the lease expense for such leases on a straight-line basis over the lease term.

The Company has elected to account for lease (e.g., fixed payments including rent) and non-lease components (e.g., common-area maintenance costs) as a single combined lease component under ASC 842 as the lease components are the predominant elements of the combined components.

As part of the transition to ASC 842, the Company elected to use the modified retrospective transition method with the new standard being applied as of the January 1, 2022 adoption date. Additionally, the Company has elected, as of the adoption date, not to reassess whether expired or existing contracts contain leases under the new definition of a lease, not to reassess the lease classification for expired or existing leases, and not to reassess whether previously capitalized initial direct costs would qualify for capitalization under ASC 842.

9. Commitments and Contingencies

Litigation

The Company is not aware of any asserted or unasserted claims against it where it believes that an unfavorable resolution would have an adverse material impact on the operations or financial position of the Company.

Strategic Financial Advisor

In August 2023, the Company engaged with an advisor to act as the Company’s exclusive strategic financial advisor in connection with a potential strategic transaction including but not limited to an acquisition, merger, business combination or other transaction. Upon the consummation of any such transaction, the Company expects to pay the advisor a success fee. At this time, the Company and the strategic financial advisor have not executed a formal agreement for the advisory services. The Company is unable to estimate the fee associated with the advisory service. During the three and nine months ended September 30, 2023, the Company did not record any expense related to this engagement.

10. Reorganization and Other Charges

On June 1, 2022, the Company implemented and announced a corporate reorganization of its operations. In connection with the reorganization, the Company undertook a workforce reduction and recorded severance and employee benefits charges of $0.7 million to operating expenses in the quarter ended September 30, 2022. As of September 30, 2023, there was no outstanding liability related to severance and employee benefit charges and does not expect to incur any material additional costs related to the June 2022 reorganization.

The Company’s reorganization plans required management to evaluate matters related to involuntary termination benefits provided pursuant to a benefit arrangement, contract termination costs and the impairment of long-lived assets in accordance with generally accepted accounting principles. The recognition of the Company’s liability for termination benefits is based on contractual agreements and whether employees are required to render service until they are terminated in order to receive the termination benefits and, if so, whether the employee will be retained to render service beyond a minimum retention period. The Company’s contract termination costs represent costs to terminate a contract before the end of its term or costs that will continue to be incurred under a contract for its remaining term without economic benefit to the Company and is recognized at fair value when the contract is terminated or the Company ceases using the right conveyed by the contract. The impairment of long-lived assets is based on the fair value of the Company's long-lived asset group as determined by actual sale transactions.

As a result of the reorganization of its operations, the Company incurred the following restructuring and impairment charges, which are recorded in the statements of operations and comprehensive loss:

	Three and Nine Months Ended September 30, 2023 (in thousands)
Employee termination benefits	$ 5,956
Impairment of property, plant, and equipment	685
Loss on lease termination	12,768
Contract termination costs	1,447
Total reorganization and impairment charges	$ 20,856

Employee Termination Benefits

Employees affected by the reduction in workforce under the August 2023 Reorganization received involuntary termination benefits that are provided pursuant to a post-employment benefit arrangement. For employees who were notified of their termination and have no requirements to provide future service, the Company recognized the liability for the termination benefits in full at fair value in the period in which they were incurred. For employees who are required to render services beyond a minimum retention period to receive their one-time termination benefits, the Company is recognizing the termination benefits ratably over their future service periods. The Company expects to incur approximately $5.9 million of employee termination benefits expense to implement the reorganization of its operations of which $1.3 million has been paid in the nine months ended September 30, 2023.

The following table shows the liability related to employee termination benefits:

	Three and Nine Months Ended September 30, 2023 (in thousands)
Accrued employee termination benefits beginning balance	$ —
Employee termination benefit charges incurred during the period	1,277
Accrued termination benefit estimates	4,679
Amounts paid or otherwise settled during the period	(1,277)
Accrued employee termination benefits as of September 30, 2023	$ 4,679

Impairment of Property, Plant and Equipment

As a result of the August 2023 Reorganization, the Company determined that sufficient indicators existed to trigger the performance of an interim long-lived asset impairment analysis as of September 30, 2023. In the third quarter of 2023, the Company tested the recoverability of its asset group using entity-specific undiscounted cash flows. Based on these undiscounted cash flows, the Company concluded the undiscounted future cash flows expected to result from the use and eventual disposition of its long-lived assets were less than the carrying value of the asset group. Therefore, the Company measured the long-lived asset impairment as the amount by which the carrying value of the asset group exceeds its fair value and recorded an impairment of $0.7 million, which was recorded within restructuring and impairment charges on the statements of operations and comprehensive loss. Fair value was estimated based upon internal evaluation of each asset group that includes quantitative analyses of cash flows and available market data. Certain factors used for these types of nonrecurring fair value measurements are considered Level 3 inputs.

Additionally, in conjunction with the August 2023 Reorganization, the Company committed to a plan to actively sell specific assets within its asset group, primarily its laboratory equipment. The laboratory equipment met all of the prescribed criteria required to classify it as held for sale. On September 30, 2023, $0.3 million of laboratory equipment and furniture and fixtures was classified as held for sale as current assets on the balance sheet as the disposal was expected to be consummated within one year of the balance sheet date. The sale was completed in October 2023.

Loss on Lease Termination

In September 2023, as part of the August 2023 Reorganization, the Company entered into the Lease Modification Agreement with the Landlord. The Lease Modification Agreement provides that the Lease will terminate on the earlier of (i) April 30, 2024, and (ii) such earlier date that the Landlord elects to terminate the Lease after November 30, 2023 (the "Effective Date"). As consideration for the Landlord's agreement to enter into the Lease Modification Agreement and accelerate the expiration date of the Lease, the Company has agreed to pay a lease modification payment to the Landlord in the amount of $5.1 million. The Company additionally conveyed the ownership of certain assets, including its lab equipment and leasehold improvements to the Landlord. The net carrying value of the transferred assets was $32.1 million.

Contract Termination Costs

As part of the August 2023 Reorganization, the Company recognized expenses for the termination of vendor contracts before the end of their term and costs that continue to be incurred under certain contracts with no future economic benefit to the Company. The Company recognized these contract termination costs in full in the period in which they no longer held an economic benefit to the Company. During the nine months ended September 30, 2023, the Company incurred $1.4 million of contract termination costs, which it estimates to be the full amount of such costs to be incurred related to the August 2023 Reorganization.

The following table shows the liability related to contract termination costs:

	Three and Nine Months Ended September 30, 2023
	(in thousands)
Accrued contract termination costs beginning balance	$ —
Contract termination costs incurred during the period	1,448
Amounts paid or otherwise settled during the period	(1,448)
Accrued contract termination costs as of September 30, 2023	$ —

11. Capital Stock

Class A and Class B Common Stock

On June 2, 2019, the board of directors of the Company authorized the issuance of 650,000,000 shares of Class A common stock, $0.0001 par value per share, 50,000,000 shares of Class B common stock, $0.0001 par value per share and 300,000,000 shares of preferred stock, $0.0001 par value per share, upon the filing of the Company's Amended and Restated Certificate of Incorporation. Each holder of Class A common stock is entitled to one vote and each holder of Class B common stock is not entitled to vote except as may be required by law and shall not be entitled to vote on the election of directors at any time.

Sales Agreement

In August 2020, the Company entered into an at-the-market sales agreement with Cowen and Company, LLC ("Cowen"), to issue and sell through Cowen, acting as the Company's sales agent and/or principal, shares of the

Company's Class A common stock, having an aggregate offering price of up to $100.0 million (the "2020 ATM"). As of September 30, 2023, the Company issued and sold 1,493,361 shares of its Class A common stock. Cumulative net proceeds from the sales were $7.9 million after deducting underwriting fees of $0.3 million and issuance costs of $0.3 million. During the nine months ended September 30, 2023 and 2022, the Company sold zero and 700,000 shares of its Class A common stock, respectively.

On July 18, 2023, the Company filed with the SEC a shelf registration statement on Form S-3, which was declared effective on August 17, 2023. Pursuant to such registration statement, the Company may offer and sell securities having an aggregate public offering price of up to $300 million (the "2023 ATM"). In connection with the filing of such registration statement, the Company entered into a new at-the-market sales agreement with Cowen to issue and sell through Cowen, acting as the Company's sales agent and/or principal, shares of the Company's Class A common stock, having an aggregate offering price of up to $91.5 million. Pursuant to the sales agreement, the Company will pay Cowen a commission rate equal to 3.0% of the gross sales price of any shares of the Company's Class A common stock sold. To date, the Company has not sold any shares of its Class A common stock under the 2023 ATM.

12. Equity Incentive Plans

2019 Equity Incentive Plan and 2023 Inducement Plan

The Company's board of directors adopted and our stockholders approved our 2019 Equity Incentive Plan (the "2019 Plan") on June 2, 2019, and June 7, 2019, respectively. The 2019 Plan became effective on June 19, 2019, and no further grants will be made under the Company's 2010 Equity Incentive Plan (the "2010 Plan"). The purpose of the 2019 Plan, through the grant of stock awards including stock options and other stock-based awards, including restricted stock units ("RSUs"), is to help the Company secure and retain the services of eligible award recipients, provide incentives for such persons to exert maximum efforts for our success and that of the Company's affiliates, and provide a means by which the eligible recipients may benefit from increases in the value of the Company's Class A common stock.

On February 9, 2023, the 2023 Inducement Plan, or the Inducement Plan, became effective. Subject to adjustment from time to time as provided in the Inducement Plan, 1.0 million shares of Class A common stock are available for issuance under the Inducement Plan. The purpose of the Inducement Plan is to attract, retain and motivate certain new employees of the Company. The Inducement Plan is administered by the compensation committee of the Company's board of directors. Under the terms of the Inducement Plan, the compensation committee may grant equity awards, including nonqualified stock options, stock appreciation rights, restricted stock, restricted stock units, performance stock, and other stock awards to new employees of the Company.

Stock Option Repricing

Effective June 13, 2022, the Company's board of directors approved a one-time repricing of previously granted and outstanding vested and unvested stock options with exercise prices greater than or equal to $9.00 per share under the 2010 Plan and the 2019 Plan held by eligible employees. As a result, the exercise price for these awards was modified to $1.845 per share, which was the closing price of the Company's Class A common stock as reported on the Nasdaq Global Select Market on June 13, 2022. No other terms of the repriced stock options were modified, and the repriced stock options will continue to vest according to their original vesting schedules and will retain their original expiration dates. As a result of the repricing, 3,606,163 vested and unvested stock options outstanding as of June 13, 2022 with original exercise prices ranging from $9.87 to $22.10, were repriced.

The repricing resulted in incremental stock-based compensation expense of $2.5 million, of which $0.1 million and $0.2 million were expensed during the three months ended September 30, 2023 and 2022, respectively, and $0.3 million and $1.7 million were expensed during the nine months ended September 30, 2023 and 2022, respectively. Remaining $0.3 million related to unvested stock option awards will be amortized on a straight-line basis over the weighted-average vesting period of those awards of approximately 0.5 years.

Stock Options

Stock option activity under the 2019 Plan, the 2010 Plan and the Inducement Plan is as follow:

	Options Outstanding			
	Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life (years)	Aggregate Intrinsic Value (in thousands)
Balances, December 31, 2022	6,373,534	$ 3.56	7.3	$ 2
Granted	2,981,883	1.45		
Cancelled	(715,601)	2.94		
Balances, September 30, 2023	8,639,816	$ 2.88	7.4	$ —
Vested and expected to vest at September 30, 2023	8,639,816	$ 2.88	7.4	$ —
Exercisable at September 30, 2023	5,213,153	$ 3.58	6.4	$ —
Vested at September 30, 2023	5,213,153	$ 3.58	6.4	$ —

The weighted-average exercise price, weighted-average remaining contractual life and aggregate intrinsic value as of September 30, 2023 reflect the impact of the stock option repricing discussed above. The weighted-average grant date fair value of options granted in the nine months ended September 30, 2023 and 2022 was $1.08 and $1.28, respectively. The fair value of each option is estimated on the date of grant using the Black-Scholes option pricing model, assuming no expected dividends and the following weighted average assumptions:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Expected life (in years)	6.05	—	5.97	5.88
Volatility	99.1 %	— %	87.2 %	85.9 %
Risk-free interest rate	4.2 %	— %	3.8 %	3.2 %

Expected volatility is based on volatilities of public peer companies operating in the Company's industry. The expected life of the options is estimated using the simplified method detailed in SEC Staff Accounting Bulletin No. 107. The simplified method calculates the expected term as the mid-point between the weighted-average time to vesting and the contractual maturity. The risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant. The Company has elected to account for forfeitures as they occur, rather than estimate expected forfeitures.

Restricted Stock Units

The 2019 Plan provides for the issuance of RSUs to employees, directors and consultants. RSUs vest over either period of two years with 50% vesting on the one year anniversary of the award and the remainder vesting on the two year anniversary of the award or three years with 33% vesting in the first year, 33% vesting in the second year, and 33% vesting in the third year of the award vesting period.

The following table summarizes RSU activity for the nine months ended September 30, 2023:

	Number of Shares	Weighted-Average Grant Date Fair Value per RSU
Unvested Balances, December 31, 2022	330,440	$ 6.15
RSUs Granted	439,458	1.49
RSUs Vested	(435,567)	4.66
RSUs Cancelled	(86,080)	3.33
Unvested Balances, September 30, 2023	248,251	$ 1.49

2019 Employee Stock Purchase Plan

The Company's board of directors adopted the 2019 Employee Stock Purchase Plan ("ESPP") on June 2, 2019, and the Company's stockholders approved the ESPP on June 7, 2019. During the three months ended September 30, 2023 and 2022, the expense related to the ESPP was $0.1 million and $0.2 million, respectively. During the nine months ended September 30, 2023 and 2022, the expense related to the ESPP was $0.3 million and $0.7 million, respectively. The fair value of each ESPP is estimated on the date of grant using the Black-Scholes option pricing model, assuming no expected dividends and the following range of assumptions:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Expected life (in years)	0.5 - 2.0	0.5 - 2.0	0.5 - 2.0	0.5 - 2.0
Volatility	105.1 - 139.7 %	88.0 - 96.7 %	84.6 - 139.7 %	79.0 - 96.7 %
Risk-free interest rate	4.9 - 5.5 %	3.3 - 3.5 %	4.9 - 5.5 %	0.6 - 3.5 %

The Company recognized $2.3 million and $3.9 million of stock based compensation expense related to the 2019 Plan, 2010 Plan, and ESPP for the three months ended September 30, 2023 and 2022, respectively. The Company recognized $8.4 million and $13.7 million of stock-based compensation expense related to the 2019 Plan, 2010 Plan, and ESPP for the nine months ended September 30, 2023 and 2022, respectively. The compensation expense is allocated on a departmental basis, based on the classification of the option holder, as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Research and development	$ 968	$ 1,869	$ 3,570	$ 6,576
General and administrative	1,329	2,015	4,813	7,132
	$ 2,297	$ 3,884	$ 8,383	$ 13,708

No income tax benefits have been recognized in the statements of operations for stock-based compensation arrangements and no stock-based compensation costs have been capitalized as property and equipment as of September 30, 2023.

Unrecognized compensation expense as of September 30, 2023 totaled $7.7 million related to non-vested stock options with a remaining weighted-average requisite service period of 1.9 years and $0.3 million related to non-vested RSUs with a remaining weighted-average requisite service period of 1.8 years.

13. 401(k) Plan

The Company has a 401(k) plan that qualifies as a deferred compensation arrangement under Section 401 of the Code. Eligible employees may elect to defer a portion of their pretax earnings subject to certain statutory limits. Beginning January 1, 2021, the Company matches 100% up to the first $5,000 contributed by a participant. All matching contributions are immediately vested. Total matching contributions to the 401(k) Plan were zero or de minimus and $0.1 for the three months ended September 30, 2023 and 2022, respectively, and $0.4 million and $0.6 million for the nine months ended September 30, 2023 and 2022, respectively.

14. Net Loss Per Share

The following outstanding potentially dilutive common shares were excluded from the computation of diluted net loss per share for the periods presented because the impact of including them would have been antidilutive:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Common stock options	8,639,816	6,823,018	8,639,816	6,823,018
Unvested restricted stock units	248,251	352,620	248,251	352,620
Common stock warrants	—	49,997	—	49,997
	8,888,067	7,225,635	8,888,067	7,225,635

15. Related Party Transactions

The Company recorded other income of $80,000 and zero during the three months ended September 30, 2023 and 2022, respectively, and $243,000 and zero during the nine months ended September 30, 2023 and 2022, respectively, under the Grant Agreement and service contracts with a stockholder. The Company had no receivable from the stockholder as of both September 30, 2023 and December 31, 2022.

The Company recorded expense of $0.3 million during each of the three months ended September 30, 2023 and 2022, respectively, and the Company recorded expense of $0.7 million and $0.9 million during the nine months ended September 30, 2023 and 2022, respectively, related to intellectual property and other legal services performed by a related party. An immediate family member of Tito A. Serafini (“Dr. Serafini”), a member of our board of directors and our Chief Strategy Officer, is a partner of the legal service provider. The Company has a payable of $0.1 million and $0.2 million to the related party as of September 30, 2023 and December 31, 2022, respectively.

The Company recorded expense of $0.3 million and $0.1 million during the three months ended September 30, 2023 and 2022, respectively, and the Company recorded expense of $0.7 million and $1.0 million during the nine months ended September 30, 2023 and 2022, respectively, related to legal services performed by a related party. An immediate family member of Dr. Serafini is a partner of the legal service provider. The Company has a payable of $133,000 and $33,000 to the related party as of both September 30, 2023 and December 31, 2022.

The Company recorded research and development expense of $63,000 during each of the three months ended September 30, 2023 and 2022 and $0.2 million during each of the nine months ended September 30, 2023 and 2022, respectively, under consulting agreements with a member of the Company’s board of directors. In September, the Company terminated the consulting agreement between the Company and William Robinson. The Company has a payable of $74,000 to the member of the Company’s board of directors as of both September 30, 2023 and December 31, 2022.

16. Subsequent Events

November 2023 Reorganization

In connection with the Company’s ongoing reorganization efforts, on November 9, 2023, the Company implemented a further reduction in its workforce while maintaining the necessary support to continue exploring potential strategic transactions and business alternatives available to the Company. As part of the November 2023 Reorganization, the Company implemented a further reduction in its workforce of approximately 40% of its then-current employees. The total cost related to the workforce reduction is estimated to be approximately $0.9 million, all of which is cash-based expenditures related primarily to severance payments. The Company recognized substantially all the charges related to the workforce reduction in the quarter ended September 30, 2023. These estimates are subject to a number of assumptions and actual results may differ. The Company may also incur additional costs not currently contemplated due to events that may occur as a result of, or that are associated with, the workforce reduction.

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

You should read the following discussion and analysis of our financial condition and results of operations together with (1) our unaudited financial statements and related notes appearing in Part I, Item I of this Quarterly Report on Form 10-Q and (2) the audited financial statements and the related notes and the discussion in Part II, Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" for the fiscal year ended December 31, 2022 included in our Annual Report on Form 10-K for the year ended December 31, 2022, filed with the Securities and Exchange Commission, or the SEC, on March 29, 2023, or the 2022 Form 10-K.

Special Note Regarding Forward-Looking Statements

The following discussion and this Quarterly Report on Form 10-Q contains "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and within the meaning of the Private Securities Litigation Reform Act of 1995. You can identify forward-looking statements by the use of the words "believe," "expect," "anticipate," "intend," "estimate," "project," "will," "should," "may," "plan," "assume" and other expressions that predict or indicate future events and trends and which do not relate to historical matters. You should not rely on forward-looking statements because they involve known and unknown risks, uncertainties and other factors, some of which are beyond our control. These risks, uncertainties and other factors may cause our actual results, performance or achievements to be materially different from our anticipated future results, performance or achievements expressed or implied by the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the section titled "Risk Factors," set forth in Part II, Item 1A of this Quarterly Report on Form 10-Q. In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this Quarterly Report on Form 10-Q, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate we have conducted exhaustive inquiry into, or review of, all potentially available relevant information. We anticipate that subsequent events and developments will cause our views to change. New risks emerge from time to time, and it is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. While we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this Quarterly Report on Form 10-Q and are cautioned not to place undue reliance on such forward-looking statements.

Overview

We are a biopharmaceutical company utilizing our differentiated platform to discover and develop novel antibody-based immunotherapeutics to treat a range of solid tumor types. APN-497444 is an Atreca-discovered antibody targeting a novel, tumor-specific glycan, which displays uniform and tumor-selective binding with high target prevalence in colorectal cancer and exhibits compelling preclinical anti-tumor activity and initial safety when weaponized as an antibody-drug conjugate, or ADC.

Reorganization Activities

In August 2023, we implemented a reorganization of our operations. As part of the reorganization, we undertook cost-savings initiatives, including a workforce reduction of approximately 40% of our then-current employees and we suspended the development of ATRC-101, our lead product candidate (collectively, the August 2023 Reorganization). The total costs related to the workforce reduction were approximately $1.3 million, all of which was cash-based expenditures related primarily to severance payments. We recognized substantially all the charges related to the workforce reduction in the quarter ended September 30, 2023.

On November 9, 2023, we implemented a further reduction in our workforce of approximately 40% of our then-current employees while maintaining the necessary support to continue exploring potential strategic transactions and

business alternatives focused on maximizing stockholder value as discussed further below, or the November 2023 Reorganization. We estimate that the total costs related to the workforce reduction will be approximately $0.9 million, all of which are cash-based expenditures related primarily to severance payments. We recognized substantially all the charges related to our workforce reductions in connection with the August 2023 Reorganization and November 2023 Reorganization and our estimates for additional reductions pursuant to the ongoing reorganization of our operations in the quarter ended September 30, 2023. These estimates are subject to a number of assumptions and actual results may differ. We may also incur additional costs not currently contemplated due to events that may occur as a result of, or that are associated with, our workforce reductions.

Preclinical Development Programs

Since the suspension of the development of ATRC-101, we have focused on our preclinical development efforts for our lead-stage oncology programs, including APN-497444 and APN-346958, an Atreca-discovered antibody consisting of a CD3 bispecific T-cell engager against an RNA-binding protein target. As a result of the corporate reorganizations and reduction in research personnel in August and November 2023, we are focused on advancing APN-497444 through preclinical testing. In addition, we and Xencor, Inc. recently elected to terminate the joint program based on APN-346958 that commenced in early 2023.

MAM01/ATRC-501

In October 2021, we entered into a licensing agreement with the Bill & Melinda Gates Medical Research Institute, or Gates MRI, to allow Gates MRI to develop and commercialize MAM01/ATRC-501 for the prevention of malaria in GAVI, the Vaccine Alliance, eligible countries located in malaria-endemic regions of the world, to advance its charitable purposes, or the Grant Agreement. MAM01/ATRC-501 is an engineered version of an antibody that we discovered using our platform that targets the circumsporozoite protein of Plasmodium falciparum, the protozoan that causes the deadliest form of malaria. In the first half of 2023, Gates MRI filed an initial new drug application for MAM01/ATRC-501 with the U.S. Food and Drug Administration. Gates MRI plans to initiate its Phase 1 trial based in the United States in the second half of 2023 followed by a trial in Sub-Saharan Africa. We retain commercial rights in the United States, Europe and parts of Asia, and potential product development opportunities in those regions include prevention of malaria for those traveling to malaria endemic regions.

Strategic Review Process

We are devoting substantial time and resources to exploring potential strategic transactions and business alternatives focused on maximizing stockholder value including, but not limited to, a merger, sale of part or all our clinical, preclinical and discovery platform assets, business combination, and/or similar transaction. In November 2023, we implemented a further reduction in our workforce while maintaining the necessary support to continue exploring potential strategic transactions and business alternatives. We believe that our cash, cash equivalents and investments as of September 30, 2023 will only be sufficient to fund our planned operations and capital needs into the first quarter of 2024.

Despite devoting significant efforts to identifying and evaluating potential strategic alternatives, there can be no assurance that this strategic review process will result in any transaction or that any transaction will be completed on attractive terms or at all. Our board of directors has not approved any definitive course of action. Additionally, there can be no assurances that any particular course of action, business arrangement or transaction, or series of transactions, will be successfully consummated or lead to increased stockholder value.

Nasdaq Delisting Notification

On September 8, 2023, we received a notice from The Nasdaq Stock Market LLC, or Nasdaq, notifying us that on September 7, 2023, the average closing price of our Class A common stock, $0.0001 par value per share, over the prior 30 consecutive trading days had fallen below $1.00 per share, which is the minimum average closing price required to maintain listing on Nasdaq under Nasdaq Listing Rule 5450(a)(1), or the Minimum Bid Requirement.

In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we have 180 calendar days to regain compliance with the Minimum Bid Requirement, or the Grace Period, subject to a potential 180 calendar day extension, as described below. To regain compliance, the closing bid price of the Class A common stock must be at least $1.00 per share for a minimum of ten consecutive business days within the Grace Period.

If we do not achieve compliance with the Minimum Bid Requirement by March 6, 2024, the end of the Grace Period, we may be eligible for an additional 180 calendar day period to regain compliance. To qualify, we will be required to meet the continued listing requirement for market value of our publicly held shares and all other Nasdaq initial listing standards, with the exception of the bid price requirement, and will need to provide written notice to Nasdaq of our intention to cure the deficiency during the second compliance period by effecting a reverse stock split if necessary. However, if it appears to Nasdaq staff that we will not be able to cure the deficiency, or if we do not meet the other Nasdaq listing standards, Nasdaq could provide notice that the Class A common stock will be subject to delisting. In the event we receive notice that the Class A common stock is being delisted, we would be entitled to appeal the determination to a Nasdaq Listing Qualifications Panel and request a hearing.

There can be no assurance that we will be able to regain compliance with the Minimum Bid Requirement or maintain compliance with the other listing requirements. The notice has no immediate effect on the listing or trading of the Class A common stock, which will continue to be listed and traded on Nasdaq, subject to our compliance with the other Nasdaq listing standards.

Financial Operations Overview

Revenue

We have no products approved for marketing or commercial sale and have never generated any revenue from product sales.

Operating Expenses

Research and Development

Our research and development expenses represent costs incurred in performing research, development and manufacturing activities in support of our own product development efforts, salaries, employee benefits and stock-based compensation for personnel contributing to research and development activities, laboratory supplies, outsourced research and development expenses, professional services and allocated facilities-related costs. We expect our research and development expenses will decrease substantially following the August 2023 Reorganization and November 2023 Reorganization.

General and Administrative

Our general and administrative expenses consist primarily of personnel costs, allocated facilities costs and other expenses for outside professional services, including legal, human resource, audit and accounting services. We expect our general and administrative expenses will decrease substantially following the August 2023 Reorganization and November 2023 Reorganization.

Interest and Other Income (Expense)

Interest and other income (expense) includes amounts received from partners for research and discovery services and for assignment to other parties of non-core intellectual property, interest income earned on our cash, cash equivalents and investments, interest expense and gains or losses on the periodic disposals of property and equipment.

Results of Operations

Comparison of the Three Months ended September 30, 2023 and 2022

The following table summarizes our results of operations during the respective periods:

	Three Months Ended September 30,		Change	
	2023	2022	$	%
	(in thousands)			
Operating expenses:				
Research and development	$ 10,407	$ 16,045	$ (5,638)	(35)%
General and administrative	5,386	7,247	(1,861)	(26)%
Restructuring and impairment charges	20,856	—	20,856	100 %
Total operating expenses	36,649	23,292	13,357	57 %
Operating Loss	(36,649)	(23,292)	(13,357)	57 %
Other income (expense), net:				
Other income	80	—	80	*
Interest income	354	233	121	52 %
Total other income, net	434	233	201	*
Net Loss	$ (36,215)	$ (23,059)	$ (13,156)	57 %

* Not meaningful

Research and Development

The following table summarizes our research and development expenses incurred during the respective periods:

	Three Months Ended September 30,	
	2023	2022
	(in thousands)	
Personnel related (including stock-based compensation)	$ 2,997	$ 5,901
Product and other contract services	3,632	5,241
Laboratory supplies and equipment	889	1,604
Consulting, legal and other services	346	400
Facility related	1,826	1,853
Other	717	1,046
Total research and development expenses	$ 10,407	$ 16,045

Research and development expenses decreased by $5.6 million, or 35%, during the three months ended September 30, 2023 compared to the same period in 2022. The decrease was primarily attributable to a $3.0 million decrease in personnel related expenses due to restructuring and terminations, a $1.6 million decrease in product and preclinical contract services due to the discontinued development of EphA2 and other preclinical programs, and a $0.7 million decrease in laboratory supplies and equipment due to a lower headcount.

General and Administrative

The following table summarizes our general and administrative expenses incurred during the respective periods:

	Three Months Ended September 30,	
	2023	2022
	(in thousands)	
Personnel related (including stock-based compensation)	$ 2,269	$ 4,024
Consulting, legal and other services	1,150	952
Facility related	898	734
Other	1,069	1,537
Total general and administrative expenses	$ 5,386	$ 7,247

General and administrative expenses decreased by $1.9 million, or 26%, during the three months ended September 30, 2023 compared to the same period in 2022. The decrease is attributable to a $1.8 million decrease in personnel related expenses due to restructuring and terminations, and a $0.5 million decrease in other expenses attributable to a decrease in D&O insurance premium. This decrease was offset by $0.2 million increase in consulting, legal and other services due to increased corporate legal activities.

Restructuring and Impairment Charges

	Three Months Ended September 30, 2023
	(in thousands)
Employee termination benefits	$ 5,956
Impairment of property, plant, and equipment	685
Loss on lease termination	12,768
Contract termination costs	1,447
Total reorganization and impairment charges	$ 20,856

During the three months ended September 30, 2023, we recorded charges of $6.0 million, $0.7 million, $12.8 million and $1.4 million related to employee termination benefits, impairment of property, plant and equipment, loss on lease termination and contract termination costs, respectively, implemented in the August 2023 Reorganization and our plan to review strategic alternatives initiated in the fourth quarter of 2023.

In September 2023, we entered into an Agreement for Modification of Lease and Voluntary Surrender of Premises, or the Lease Modification Agreement, with ARE-San Francisco No. 63, LLC, a Delaware limited liability company, or the Landlord, to terminate that certain lease agreement, dated as of July 17, 2019, as amended by that certain letter agreement dated as of August 24, 2020, or the Lease, by and between us and Landlord, for our headquarters located at 835 Industrial Road, San Carlos, California 94070, or the Premises.

The Lease Modification Agreement provides that the Lease will terminate on the earlier of (i) April 30, 2024, and (ii) such earlier date that the Landlord elects to terminate the Lease after November 30, 2023, or the Effective Date. As consideration for the Landlord's agreement to enter into the Lease Modification Agreement and accelerate the expiration date of the Lease, we agreed to pay a lease modification payment of $5.1 million. We also conveyed the ownership of certain assets, including our lab equipment and leasehold improvements to the Landlord. The net carrying value of the transferred assets was $32.1 million. We have agreed to vacate the Premises as of November 30, 2023.

As the Effective Date of the Lease Modification Agreement was subsequent to September 30, 2023, we accounted for the change as a lease modification that reduced the remaining lease term. Upon the modification, we decreased our operating lease liabilities by $60.0 million and our right-of-use asset by $34.7 million, and the remaining amount was

recognized as a gain from lease termination. This gain was offset by the $5.1 million termination fee, $1.5 million other expenses, and $32.1 million of the transferred assets paid as additional considerations for the lease termination.

Other Income

Other income is comprised of amounts earned from research and discovery services provided to partners under service agreements and assignment to third parties of non-core intellectual property. Other income increased by $0.1 million during the three months ended September 30, 2023 compared to the same period in 2022 due to the services provided pursuant to the Grant Agreement.

Interest Income

Interest income increased to $0.4 million during the three months ended September 30, 2023 as compared to $0.2 million during the three months ended September 30, 2022 due primarily to an increase in interest rates, partially offset by a decrease in investment balances.

Comparison of the Nine Months ended September 30, 2023 and 2022

The following table summarizes our results of operations during the respective periods:

	Nine Months Ended September 30,		Change	
	2023	2022	$	%
		(in thousands)		
Operating expenses:				
Research and development	$ 36,774	$ 53,062	$ (16,288)	(31)%
General and administrative	20,300	23,930	(3,630)	(15)%
Restructuring and impairment charges	20,856	—	20,856	100 %
Total operating expenses	77,930	76,992	938	1 %
Operating Loss	(77,930)	(76,992)	(938)	1 %
Other income (expense), net:				
Other income	243	750	(507)	(68)%
Interest income	1,276	430	846	197 %
Total other income, net	1,519	1,180	339	29 %
Income tax expense	—	—	—	*
Net Loss	$ (76,411)	$ (75,812)	$ (599)	1 %

* Not meaningful

Research and Development

The following table summarizes our research and development expenses incurred during the respective periods:

	Nine Months Ended September 30,	
	2023	2022
	(in thousands)	
Personnel related (including stock-based compensation)	$ 14,131	$ 20,266
Product and other contract services	9,685	11,832
Laboratory supplies and equipment	3,399	5,669
Consulting, legal and other services	1,106	1,429
Research license fees	—	5,000
Facility related	5,681	5,636
Other	2,772	3,230
Total research and development expenses	$ 36,774	$ 53,062

Research and development expenses decreased by $16.3 million, or 31%, during the nine months ended September 30, 2023 compared to the same period in 2022. The decrease was primarily attributable to a $6.1 million decrease in personnel related expenses due to restructuring and terminations, a $2.1 million decrease in product and preclinical contract services due to the discontinued development of ATRC-101 and other preclinical programs, a one-time $5.0 million research license fee recognized during the nine months ended September 30, 2022 to perform preclinical research and development of ADCs, and a $2.3 million decrease in laboratory supplies and equipment due to a lower headcount.

General and Administrative

The following table summarizes our general and administrative expenses incurred during the respective periods:

	Nine Months Ended September 30,	
	2023	2022
	(in thousands)	
Personnel related (including stock-based compensation)	$ 10,383	$ 13,077
Consulting, legal and other services	3,283	3,747
Facility related	2,325	2,006
Other	4,309	5,100
Total general and administrative expenses	$ 20,300	$ 23,930

General and administrative expenses decreased by $3.6 million, or 15%, during the nine months ended September 30, 2023, compared to the same period in 2022. The decrease is attributable to a $2.7 million decrease in personnel related expenses due to restructuring and terminations, a $0.8 million decrease in other expenses attributable to a decrease in D&O insurance premiums and $0.5 million decrease in consulting, legal and other services attributable to a decrease in legal activities related to licensing activities.

Restructuring and Impairment Charges

	Nine Months Ended September 30, 2023 (in thousands)
Employee termination benefits	$ 5,956
Impairment of property, plant, and equipment	685
Loss on lease termination	12,768
Contract termination costs	1,447
Total reorganization and impairment charges	$ 20,856

During the three months ended September 30, 2023, we recorded charges of $6.0 million, $0.7 million, $12.8 million and $1.4 million related to employee termination benefits, impairment of property, plant and equipment, loss on lease termination and contract termination costs, respectively, implemented in the August 2023 Reorganization and our plan to review strategic alternatives initiated in the fourth quarter of 2023.

In September 2023, we entered into an Agreement for Modification of Lease and Voluntary Surrender of Premises, or the Lease Modification Agreement, with ARE-San Francisco No. 63, LLC, a Delaware limited liability company, or the Landlord, to terminate that certain lease agreement, dated as of July 17, 2019, as amended by that certain letter agreement dated as of August 24, 2020, or the Lease, by and between us and Landlord, for our headquarters located at 835 Industrial Road, San Carlos, California 94070, or the Premises.

The Lease Modification Agreement provides that the Lease will terminate on the earlier of (i) April 30, 2024, and (ii) such earlier date that the Landlord elects to terminate the Lease after November 30, 2023, or the Effective Date. As consideration for the Landlord's agreement to enter into the Lease Modification Agreement and accelerate the expiration date of the Lease, we agreed to pay a lease modification payment of $5.1 million. We also conveyed the ownership of certain assets, including our lab equipment and leasehold improvements to the Landlord. The net carrying value of the transferred assets was $32.1 million. We have agreed to vacate the Premises as of November 30, 2023.

As the Effective Date of the Lease Modification Agreement was subsequent to September 30, 2023, we accounted for the change as a lease modification that reduced the remaining lease term. Upon the modification, we decreased our operating lease liabilities by $60.0 million and our right-of-use asset by $34.7 million, and the remaining amount was recognized as a gain from lease termination. This gain was offset by the $5.1 million termination fee, $1.5 million other expenses, and $32.1 million of the transferred assets paid as additional considerations for the lease termination.

Other Income

Other income is comprised of amounts earned from research and discovery services provided to partners under service agreements and assignment to third parties of non-core intellectual property. Other income decreased by $0.5 million during the nine months ended September 30, 2023 compared to the same period in 2022 due to the completion of the services provided to a third party partner.

Interest Income

Interest income increased to $1.3 million during the nine months ended September 30, 2023 as compared to $0.4 million during the nine months ended September 30, 2022 due primarily to an increase in interest rates, partially offset by a decrease in investment balances.

Liquidity and Capital Resources; Plan of Operations

Our Ability to Continue as a Going Concern

As of September 30, 2023, we had cash, cash equivalents and investments of $21.4 million. We have incurred losses since inception and to date have financed our operations primarily through the sale of shares of our capital stock. Our net losses were $36.2 million and $23.1 million for the three months ended September 30, 2023 and 2022, respectively, and $76.4 million and $75.8 million for the nine months ended September 30, 2023 and 2022, respectively. As of September 30, 2023, we had an accumulated deficit of $533.3f million. We expect to continue to generate operating losses and negative operating cash flows for the foreseeable future, as we continue to evaluate potential strategic transactions and business alternatives focusing on maximizing stockholder value, which may include, but not be limited to, a merger, sale of part or all our clinical, preclinical and discovery platform assets, business combination, and/or similar transaction.

In accordance with Accounting Standards Codification 205-40, *Going Concern*, we evaluated whether there are conditions and events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern within one year after the date that these unaudited financial statements are issued. We believe that our cash, cash equivalents and investments as of September 30, 2023 will only be sufficient to fund our planned operations and capital needs into the first quarter of 2024 and not for a period of at least twelve months from the date of these unaudited financial statements which raises substantial doubt regarding our ability to continue as a going concern.

Accordingly, the accompanying unaudited financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The unaudited financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of the uncertainties described above.

Sales Agreement

In August 2020, we entered into an at-the-market sales agreement with Cowen and Company, LLC, or Cowen, to issue and sell through Cowen, acting as our sales agent and/or principal, shares of our Class A common stock, having an aggregate offering price of up to $100.0 million, or the 2020 ATM. During the three and nine months ended September 30, 2023, we did not sell any shares of our Class A common stock under the 2020 ATM.

In July 2023, we filed with the SEC a shelf registration statement on Form S-3, which was declared effective on August 17, 2023. Pursuant to such registration statement, we may offer and sell securities having an aggregate public offering price of up to $300.0 million. In connection with such registration statement, we entered into a new at-the-market sales agreement with Cowen to issue and sell through Cowen, acting as our sales agent and/or principal, shares of our Class A common stock, having an aggregate offering price of up to $91.5 million, or the 2023 ATM. Pursuant to the sales agreement, we will pay Cowen a commission rate equal to 3.0% of the gross sales price of any shares of our Class A common stock sold. To date, we have not sold any shares of our Class A common stock under the 2023 ATM. Our ability to sell shares of our Class A common stock pursuant to the 2023 ATM and to otherwise issue and sell securities pursuant to our shelf registration statement is currently limited by the SEC's "baby shelf" rules which limit such sales to a value not to exceed more than one-third of our public float in any 12-month period so long as our public float remains below $75.0 million.

Material Cash Requirements

We expect to continue to incur operating and net losses as well as negative cash flows from operations, and we expect that our cash, cash equivalents and investments of $21.4 million as of September 30, 2023 will only enable us to fund our planned operations and capital needs into the first quarter of 2024. To meet longer operating requirements, including as we continue to explore and pursue strategic transactions and business alternatives, we will need additional capital resources. We have based these estimates on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect. Our principal operating focus is currently on pursuing a

range of strategic alternatives. We believe we have sufficient cash resources, net of estimated transaction costs to complete a strategic transaction. However, the achievement of a strategic transaction and the associated costs and timing thereof, is uncertain and the time, cost and reserves is uncertain so our estimates may prove incorrect.

Our future funding requirements, both near and long-term, will depend on many factors, including, but not limited to, the timing and outcome of our exploration of, and execution upon any, potential strategic transaction or business alternative, the cost of obtaining necessary intellectual property and defending potential intellectual property disputes, realization of the anticipated benefits of our August 2023 Reorganization and November 2023 Reorganization, and the costs of operating as a public company. We expect to primarily finance our cash needs using our existing cash, cash equivalents and investments.

Lease Modification Agreement

In September 2023, we entered into the Lease Modification Agreement with the Landlord. As consideration for the Landlord's agreement to enter into the Lease Modification Agreement and accelerate the expiration date of the Lease, we agreed to pay a lease modification payment to the Landlord in the amount of $5.1 million. We also conveyed the ownership of certain assets, including our lab equipment and leasehold improvements to the Landlord. The net carrying value of the transferred assets was $32.1 million.

As the Effective Date of the Lease Modification Agreement was subsequent to September 30, 2023, we accounted for the change as a lease modification that reduced the remaining lease term. Upon the modification, we decreased our operating lease liabilities by $60.0 million and right-of-use asset by $34.7 million and the remaining amount was recognized as a gain from lease termination. This gain was offset by the $5.1 million termination fee, $1.5 million other expenses and $32.1 million of the transferred assets paid as additional considerations for the lease termination.

Our future lease payments as of September 30, 2023, which are presented as current portion of operating lease liabilities, and operating lease liabilities, net of current portion on our balance sheet, consist of $1.3 million for the year ending December 31, 2023.

Cash Flows

The following table summarizes our cash flows for the periods indicated:

	Nine Months Ended September 30,	
	2023	2022
	(in thousands)	
Cash used in operating activities	$(49,644)	$(65,288)
Cash provided by (used in) investing activities	32,176	(12,801)
Cash provided by financing activities	119	3,903
Net increase (decrease) in cash and cash equivalents and restricted cash	$(17,349)	$(74,186)

Cash Flows from Operating Activities

For the nine months ended September 30, 2023, cash used in operating activities was $49.6 million, which consisted of a net loss of $76.4 million, offset by $22.4 million in non-cash charges and a net change of $4.4 million in our net operating assets and liabilities. The non-cash charges consisted of loss on lease termination of $8.8 million, depreciation and amortization of $3.5 million, amortization of right-of-use asset of $1.4 million, impairment charge of $0.7 million and stock-based compensation of $8.4 million. The change in operating assets and liabilities was primarily due to a $7.4 million decrease in prepaid expenses and other current assets attributable to cash receipt of employee retention credit and matured investments and a $0.8 million increase in account payables attributable to the restructuring activity billings, offset by a $1.5 million decrease in accrued expenses attributable to the payment of accrued bonus

expenses and the payment of accrued license fees, and a $2.0 million decrease in operating lease liabilities due to amortization.

For the nine months ended September 30, 2022, cash used in operating activities was $65.3 million, which consisted of a net loss of $75.8 million and a net change of $8.6 million in our net operating assets and liabilities, partially offset by $19.1 million in non-cash charges. The non-cash charges consisted of depreciation and amortization of $4.1 million, amortization of right-of-use asset of $1.2 million and stock-based compensation of $13.7 million. The change in operating assets and liabilities was primarily due to a $2.1 million decrease in accrued expenses attributable to settlement of cease use liabilities, a $2.1 million increase in prepaid expenses and other current assets attributable to employee retention credit receivables, a $2.4 million decrease in operating lease liabilities due to amortization and a $1.7 million decrease in account payables attributable to the payments made to contract manufacturers and preclinical service vendors.

Cash Flows from Investing Activities

For the nine months ended September 30, 2023, cash provided by investing activities of $32.2 million was primarily related to $32.3 million in net maturities of investments.

For the nine months ended September 30, 2022, cash used in investing activities of $12.8 million was primarily related to $12.1 million in net purchase of investments.

Cash Flows from Financing Activities

For the nine months ended September 30, 2023, cash provided by financing activities was $0.1 million, which primarily related to $0.1 million of proceeds from our 2019 Employee Stock Purchase Plan, or ESPP, and employee stock option exercises.

For the nine months ended September 30, 2022, cash provided by financing activities was $3.9 million, which primarily related to $3.5 million of proceeds from sales of our Class A common stock pursuant to the 2020 ATM with Cowen, and $0.4 million of proceeds from our 2019 ESPP and employee stock option exercises, respectively.

Critical Accounting Policies and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with generally accepted accounting principles, or GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenue generated, and reported expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

There have been no material changes in our critical accounting policies from those disclosed in our Part II, Item 7. *"Management's Discussion and Analysis of Financial Condition and Results of Operations"* of the 2022 Form 10-K.

Emerging Growth Company Status

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies.

We elected to use this extended transition period for complying with new or revised accounting standards, including but not limited to Topic 842, the new lease accounting standard, that have different effective dates for public

and private companies until the earlier of the date that we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with the new or revised accounting pronouncements as of public company effective dates. We early adopted Accounting Standards Update 2014-09, *Revenue from Contracts with Customers (Accounting Standards Codification Topic 606)*, and Accounting Standards Update 2018-07, *Improvements to Nonemployee Share-Based Payment Accounting (Accounting Standards Codification Topic 718)*, as the JOBS Act does not preclude an emerging growth company from early adopting a new or revised accounting standard earlier than the time that such standard applies to private companies. We expect to use the extended transition period for any other new or revised accounting standards during the period in which we remain an emerging growth company.

We will remain an emerging growth company until the earliest of (i) December 31, 2024, (ii) the last day of our first fiscal year in which we have total annual gross revenues of at least $1.235 billion, (iii) the date on which we are deemed to be a "large accelerated filer" as defined in Rule 12b-2 under the Exchange Act and (iv) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

Recent Accounting Pronouncements

See Note 2, *Summary of Significant Accounting Policies*, in our Notes to Financial Statements (Unaudited) included in Part I, Item 1 of this Quarterly Report on Form 10-Q for a discussion of recent accounting pronouncements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We have operations both within the United States and internationally, and we are exposed to market risk in the ordinary course of business.

Interest Rate Risk

The primary objectives of our investment activities are to ensure liquidity and to preserve capital. We are exposed to market risks in the ordinary course of our business. These risks include interest rate sensitivities. We held cash, cash equivalents and investments of $21.4 million and $70.5 million as of September 30, 2023 and December 31, 2022, respectively. We generally hold our cash in interest-bearing money market accounts. Historical fluctuations in interest rates have not been significant for us. Due to the short-term maturities of our cash equivalents and the low risk profile of our investments, an immediate 100 basis point change in interest rates would not have a material effect on the fair market value of our cash equivalents or investments.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e)) under the Exchange Act that are designed to provide reasonable assurance that information required to be disclosed in our reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer (who serves as our Principal Executive Officer and Principal Financial Officer) to allow for timely decisions regarding required disclosure. As required by Rule 13a-15(b) under the Exchange Act, our management, with the participation of our Chief Executive Officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Quarterly Report on Form 10-Q. Based upon that evaluation, our Chief Executive Officer concluded that, as of September 30, 2023, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There were no changes to our internal control over financial reporting that occurred during the quarter ended September 30, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations Over Internal Controls

Our management, including our Chief Executive Officer, believes that our disclosure controls and procedures and internal control over financial reporting are designed to provide reasonable assurance of achieving their objectives and are effective at the reasonable assurance level. However, any control system, no matter how well designed and operated, is based upon certain assumptions and can provide only reasonable, not absolute, assurance that its objectives will be met. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected. Accordingly, our management does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all error and fraud.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

From time to time, we may become involved in litigation relating to claims arising from the ordinary course of business. Our management believes that there are currently no claims or actions pending against us, the ultimate disposition of which would have a material adverse effect on our results of operations, financial condition or cash flows.

Item 1A. Risk Factors

Our operations and financial results are subject to various risks and uncertainties including those described below. You should consider and read carefully all of the risks and uncertainties described below, in addition to other information contained in this Quarterly Report on Form 10-Q, including our unaudited financial statements and related notes, our "Management's Discussion and Analysis of Financial Condition and Results of Operations," as well as our other public filings. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that adversely affect our business. If any of the following risks or additional risks and uncertainties not presently known to us, that we currently believe to be immaterial, or others not specified below materialize, our business, financial condition, results of operations and prospects could be materially and adversely affected. In that case, the trading price of our Class A common stock could decline, and you may lose all or part of your original investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations and the market price of our Class A common stock. This Quarterly Report on Form 10-Q also contains forward-looking statements and estimates that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of specific factors, including the risks and uncertainties described below. The risks relating to our business set forth in our 2022 Form 10-K, are set forth below and are unchanged substantively as of September 30, 2023, except for those risks designated by an asterisk (*).

Risk Factor Summary

The success of our business will depend on a number of factors, many of which are beyond our control and involve risks, including but not limited to the following:

Risks Related to our Strategic Review Process

- We may not be successful in identifying and implementing any strategic transaction or business combination and any such transaction or business combination that we may consummate in the future could have negative consequences.
- If we are successful in completing a strategic transaction, we may be exposed to other operational and financial risks.
- If a strategic transaction is not consummated, our board of directors may decide to pursue a dissolution and liquidation. In such an event, the amount of cash available for distribution to our stockholders will depend heavily on the timing of such liquidation as well as the amount of cash that will need to be reserved for commitments and contingent liabilities.
- We may become involved in litigation, including securities class action litigation, that could divert management's attention and harm our business, and insurance coverage may not be sufficient to cover all costs and damages.

Risks Related to Our Business

- We are a biopharmaceutical company with a history of losses. We expect to continue to incur significant losses for the foreseeable future, which could result in a decline in the market value of our Class A common stock.
- Our ability to continue as a going concern requires that we obtain sufficient funding to finance our operations, which may not be available on acceptable terms, or at all. A failure to obtain this necessary capital when needed could force us to delay, limit, reduce or terminate our drug development efforts, which would materially and adversely affect our business, financial condition, results of operations and prospects.
- We cannot be certain that the outcome of our preclinical studies will support the future development of our preclinical programs**.**
- Developing and identifying antibodies using our discovery platform is novel and unproven and may not result in marketable products.
- We have obtained rights to use human samples in furtherance of research and development of potential future product candidates. However, if we failed to obtain appropriate consent or exceeded the scope of the permission to use these samples, we may become liable for monetary damages, obligated to pay continuing royalties or required to cease usage of the samples.
- If third parties on which we have and will continue to rely on to conduct certain preclinical studies do not perform as contractually required, fail to satisfy regulatory or legal requirements or miss expected deadlines, our development program could be delayed or fail, which would have material and adverse impacts on our business and financial condition.
- If the market opportunities for our any potential future product candidates are smaller than we believe they are, our ability to dispose of such future product candidates in a strategic transaction may be adversely affected and our business may suffer.
- We may not realize the expected benefits of our cost-saving initiatives.

Risks Related to Our Intellectual Property

- If we are unable to obtain or protect intellectual property rights related to our technology and future product candidates, or if our intellectual property rights are inadequate, we may not be able to compete effectively.
- If we fail to comply with our obligations under any license, collaboration or other intellectual property-related agreements, we may be required to pay damages and could lose intellectual property rights that may be necessary for protecting our current or future technologies or product candidates or we could lose certain rights to grant sublicenses.

- Patent terms may not be able to protect our competitive position for an adequate period of time with respect to our current or future technologies or product candidates.
- Other companies or organizations may challenge our or our licensors' patent rights or may assert patent rights that prevent us from protecting our current products.
- Third parties may initiate legal proceedings alleging that we are infringing, misappropriating or violating their intellectual property rights, the outcome of which would be uncertain and could have a material adverse impact on the success of our business.

Risks Related to Government Regulation

- We are subject to U.S. and foreign anti-corruption and anti-money laundering laws with respect to our operations and non-compliance with such laws can subject us to criminal or civil liability and harm our business.

Risks Related to Our Class A Common Stock

- If Nasdaq determines we are a "public shell" company, then Nasdaq could determine to delist our Class A common stock.
- The price of our Class A common stock currently does not meet the requirements for continued listing on Nasdaq. If we fail to maintain or regain compliance with the minimum listing requirements, our Class A common stock will be subject to delisting. Our ability to publicly or privately sell equity securities and the liquidity of our Class A common stock could be adversely affected if our Class A common stock is delisted.
- Unless our Class A common stock continues to be listed on a national securities exchange, it will become subject to the so-called "penny stock" rules that impose restrictive sales practice requirements.
- Our stock price may be volatile and purchasers of our Class A common stock could incur substantial losses.
- Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

Risks Related to our Strategic Review Process

We may not be successful in identifying and implementing any strategic transaction or business combination and any such transaction or business combination that we may consummate in the future could have negative consequences.*

In August 2023, we announced a reorganization of our operations, including suspension of the development of ATRC-101, our lead product candidate. We continue to evaluate potential strategic options, including a merger, sale of part or all our clinical, preclinical and discovery platform assets, business combination or other strategic transaction. However, there can be no assurance that we will be able to successfully consummate any particular strategic transaction. The process of continuing to evaluate these strategic options may be very costly, time-consuming and complex and we have incurred, and may in the future incur, significant costs related to this continued evaluation, such as legal and accounting fees and expenses and other related charges. We have also incurred, and may continue to incur, additional unanticipated expenses in connection with this process. A considerable portion of these costs will be incurred regardless of whether any such course of action is implemented or transaction is completed. Any such expenses will decrease the remaining cash available for use in our business and may diminish or delay any future distributions to our stockholders or make our company less attractive to potential strategic counterparties. Any delays in identifying a potential counterparty will cause our cash balance to continue to deplete, which could make us less attractive as a strategic counterparty. The continued review of our strategic options may also create continued uncertainty for our employees and this uncertainty has adversely affected, and may continue to adversely affect, our ability to retain key employees and to hire new talent necessary to maintain our ongoing operations or to execute additional potential strategic options, which could have a material adverse effect on our business. Potential counterparties in a strategic transaction involving the Company may place minimal or no value on our remaining assets or company attributes.

In addition, any strategic business combination or other transactions that we may consummate in the future could have a variety of negative consequences and we may implement a course of action or consummate a transaction

that yields unexpected results that adversely affect our business and decrease the remaining cash available for use in our business or the execution of our strategic plan. Our board of directors remains dedicated to diligently deliberating upon and making informed decisions that the directors believe are in the best interests of the Company and our stockholders. However, there can be no assurances that any particular course of action, business arrangement or transaction, or series of transactions, will be pursued, be successfully consummated, lead to increased stockholder value, or achieve the anticipated results. Any failure of such potential transaction to achieve the anticipated results could significantly impair our ability to enter into any future strategic transactions and may significantly diminish or delay any future distributions to our stockholders. In addition, given the recent restructuring of our operations, it may be difficult to evaluate our current business and future prospects on the basis of historical operating performance.

If we are successful in completing a strategic transaction, we may be exposed to other operational and financial risks.*

The negotiation and consummation of any strategic transaction may also require more time or greater cash resources than we anticipate and expose us to other operational and financial risks, including:

- increased near-term and long-term expenditures;
- exposure to unknown liabilities;
- higher than expected acquisition or integration costs;
- incurrence of substantial debt or dilutive issuances of equity securities to fund future operations;
- write-downs of assets or goodwill or incurrence of non-recurring, impairment or other charges;
- increased amortization expenses;
- difficulty and cost in combining the operations and personnel of any acquired business with our operations and personnel;
- impairment of relationships with key suppliers or customers of any acquired business due to changes in management and ownership;
- inability to retain key employees; and
- possibility of future litigation.

Any of the foregoing risks could harm our business, financial condition and prospects.

If a strategic transaction is not consummated, our board of directors may decide to pursue a dissolution and liquidation. In such an event, the amount of cash available for distribution to our stockholders will depend heavily on the timing of such liquidation as well as the amount of cash that will need to be reserved for commitments and contingent liabilities.*

There can be no assurance that a strategic transaction will be completed. If a strategic transaction is not completed, including if our board of directors determines that no potential transactions or counterparties would be in the best interests of our stockholders, our board of directors may decide to pursue a dissolution and liquidation. In such an event, the amount of cash available for distribution to our stockholders will depend heavily on the timing of such decision, as with the passage of time the amount of cash available for distribution will be reduced as we continue to fund our operations. Such timing is uncertain and depends on a variety of factors, some of which are not within our control. In addition, if our board of directors were to approve and recommend, and our stockholders were to approve, a dissolution and liquidation, we would be required under Delaware corporate law to pay our outstanding obligations, as well as to make reasonable provision for contingent and unknown obligations, prior to making any distributions in liquidation to our stockholders. As a result of this requirement, a portion of our assets may need to be reserved pending the resolution of such obligations and the timing of any such resolution is uncertain. In addition, we may be subject to litigation or other claims related to a dissolution and liquidation. If a dissolution and liquidation were pursued, our board of directors, in consultation with our advisors, would need to evaluate these matters and make a determination about a reasonable amount to reserve. Accordingly, holders of our common stock could lose all or a significant portion of their investment in the event of a liquidation, dissolution or winding up.

We may become involved in litigation, including securities class action litigation, that could divert management's attention and harm our business, and insurance coverage may not be sufficient to cover all costs and damages.*

In the past, litigation, including securities class action litigation, has often followed certain significant business transactions, such as the sale of a company or announcement of any other strategic transaction, or the announcement of negative events, such as negative results from clinical trials and discontinuations of clinical programs. These events may also result in investigations by the SEC. We may be exposed to such litigation even if no wrongdoing occurred. Litigation is usually expensive and diverts management's attention and resources, which could adversely affect our business and cash resources and our ability to consummate a potential strategic transaction or the ultimate value our stockholders receive in any such transaction.

Risks Related to Our Business

We are a biopharmaceutical company with a history of losses. We expect to continue to incur significant losses for the foreseeable future, which could result in a decline in the market value of our Class A common stock.*

We are a biopharmaceutical company with a history of losses. Since our inception, we have devoted substantially all of our resources to research and development, raising capital, building our management team and building our intellectual property portfolio, and we have incurred significant operating losses. As of September 30, 2023, and December 31, 2022, we had accumulated deficits of $533.3 million and $456.9 million, respectively. For the three months ended September 30, 2023 and September 30, 2022, our net losses were $36.2 million and $23.1 million, respectively. For the nine months ended September 30, 2023 and September 30, 2022, our net losses were $76.4 million and $75.8 million, respectively. Substantially all of our losses have resulted from expenses incurred in connection with our research and development programs and from general and administrative costs associated with our operations. To date, we have not generated any revenue from product sales, and we have not sought or obtained regulatory approval for any product candidate. Furthermore, we do not expect to generate any revenue from product sales for the foreseeable future, and we expect to continue to incur significant operating losses for the foreseeable future due to costs in connection with our strategic review process, including the cost of pursuing a potential strategic transaction or business alternative, obtaining necessary intellectual property and defending potential intellectual property disputes, previously announced and/or future potential workforce reductions, and operating as a public company.

Our ability to continue as a going concern requires that we obtain sufficient funding to finance our operations, which may not be available on acceptable terms, or at all. A failure to obtain this necessary capital when needed could force us to delay, limit, reduce or terminate our drug development efforts, which would materially and adversely affect our business, financial condition, results of operations and prospects.*

In accordance with the accounting guidance related to the presentation of unaudited financial statements, when preparing unaudited financial statements for each interim reporting period, our management evaluates whether there are conditions or events that, when considered in the aggregate, raise substantial doubt about our ability to continue as a going concern within one year after the date that the unaudited financial statements are issued. In making its assessment, our management considered our current financial condition and liquidity sources. We are also exploring strategic alternatives, which may include a merger, sale of part or all our clinical, preclinical and discovery platform assets, business combination, and/or similar transaction. We have concluded the likelihood that our plan to successfully obtain sufficient funding from one or more of these sources or adequately reduce expenditures, while reasonably possible, is less than probable. As a result, we believe that our existing cash, cash equivalents and investments will only be sufficient to fund our planned operating and capital needs into the first quarter of 2024. Accordingly, we have concluded that substantial doubt exists about our ability to continue as a going concern for a period of twelve months from the date of issuance of the unaudited financial statements in this Form 10-Q.

We cannot be certain that the outcome of our preclinical studies will support the future development of our preclinical programs.*

Our preclinical studies may not support further development of our preclinical programs. For example, we are focused on advancing APN-497444, an antibody-drug conjugate, against a novel tumor glycan target through preclinical testing. Negative or inconclusive results from our preclinical studies could lead to a decision or requirement to conduct additional preclinical studies or to abandon a program.

Developing and identifying antibodies using our discovery platform is novel and unproven and may not result in marketable products.*

We believe that our discovery platform may be able to overcome certain key limitations of the current oncology drug discovery paradigm by focusing on an active human anti-tumor immune response that develops over time. However, our scientific research that forms the basis of our efforts to discover product candidates based on our discovery platform is unproven. Further, the scientific evidence to support the feasibility of developing therapeutic antibodies based on our platform has not been established. We may not be correct in our beliefs about the differentiated nature of our platform to competing technologies, and our platform may not prove to be superior.

We have obtained rights to use human samples in furtherance of research and development of potential future product candidates. However, if we failed to obtain appropriate consent or exceeded the scope of the permission to use these samples, we may become liable for monetary damages, obligated to pay continuing royalties or required to cease usage of the samples.

We begin our discovery process by gathering samples from patients. While we attempt to ensure that we, our study site partners or other providers have obtained these samples with informed consent and all necessary permissions, there is a risk that one or more patients or their representatives may assert that we have either failed to obtain informed consent or exceeded the scope of permission to use the patient's sample. We cannot guarantee that we would succeed in establishing that we had informed consent or appropriate permission, if a patient or patient representative contested the matter. In such circumstances, we could be required to pay monetary damages, to pay a continuing royalty on any products created or invented by analyzing the patient's sample or even to cease using the sample and any and all materials derived from or created through analysis of the sample, any of which could result in a change to our business plan and materially harm our business, financial condition, results of operations and prospects.

If third parties on which we have relied, and will continue to rely, to conduct certain preclinical studies do not perform as contractually required, fail to satisfy regulatory or legal requirements or miss expected deadlines, our development program could be delayed or fail, which would have material and adverse impacts on our business and financial condition.

We have relied, and will continue to rely, on third-party clinical investigators, contract research organizations, or CROs, clinical data management organizations and consultants to conduct, supervise and monitor certain preclinical studies and any clinical trials. For example, ongoing work to advance APN-497444 through preclinical testing is being performed by CROs. Because we intend to rely on these third parties and will not have the ability to conduct certain preclinical studies or clinical trials independently, we will have less control over the timing, quality and other aspects of such preclinical studies and clinical trials than we would have had we conducted them on our own. These investigators, CROs and consultants will not be our employees and we will have limited control over the amount of time and resources that they dedicate to our programs. These third parties may have contractual relationships with other entities, some of which may be our competitors, which may draw time and resources from our programs. The third parties with which we may contract might not be diligent, careful or timely in conducting our preclinical studies, resulting in the preclinical studies being delayed or unsuccessful. If we cannot contract with acceptable third parties on commercially reasonable terms, or at all, or if these third parties do not carry out their contractual duties, satisfy legal and regulatory requirements for the conduct of preclinical studies or meet expected deadlines, our development programs could be delayed or fail, or could be otherwise adversely affected.

If the market opportunities for any potential future product candidates are smaller than we believe they are, our ability to dispose of such future product candidates in a strategic transaction may be adversely affected and our business may suffer.

Our understanding of the number of people who suffer from certain diseases that may be able to be treated with antibodies that have been and may in the future be identified by our discovery platform is based on estimates. These estimates may prove to be incorrect, and new studies may reduce the estimated incidence or prevalence of these diseases. The number of patients in the United States or elsewhere may turn out to be lower than expected, may not be otherwise

amenable to treatment with our potential future product candidates or patients may become increasingly difficult to identify and access, all of which would adversely affect our business and financial condition.

Further, there are several factors that could contribute to making the actual number of patients who receive such potential future product candidates less than the potentially addressable market. These include the lack of widespread availability of, and limited reimbursement for, new therapies in many underdeveloped markets.

We may not realize the expected benefits of our cost-saving initiatives.*

In June 2022, we implemented and announced a corporate reorganization to reduce our expenses and extend our cash runway, including a workforce reduction of over 25%. More recently, in August 2023, we implemented and announced another corporate reorganization of our operations to reduce expenses and extend our cash runway, including a workforce reduction of approximately 40%, suspension of the development of ATRC-101, our lead product candidate, and wind down of clinical trial activities. In connection with our ongoing reorganization efforts, in November 2023, we implemented and announced a further reduction in our workforce while maintaining the necessary support to continue exploring potential strategic transactions and business alternatives available to us. As part of the November 2023 Reorganization, we implemented a further reduction in our workforce of approximately 40% of our then-current employees. We are also evaluating further cost-saving initiatives. If we experience excessive unanticipated inefficiencies or incremental costs in connection with our restructuring activities, such as unanticipated inefficiencies caused by our reduced headcount and excessive charges in connection with the wind down of our clinical trial activities, we may be unable to realize meaningful cost savings or capitalize on future opportunities. Any of these outcomes could prevent us from meeting our strategic objectives and could have a material adverse impact our business, results of operations and financial condition.

Our employees, principal investigators, consultants and commercial partners may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

We are exposed to the risk of fraud or other misconduct by our employees, principal investigators, consultants and commercial partners. Misconduct by employees could include intentional failures to comply with FDA regulations, provide accurate information to the FDA, comply with manufacturing standards, comply with federal and state healthcare fraud and abuse laws and regulations, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. Such misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in significant regulatory sanctions and serious harm to our reputation. For example, individuals conducting the non-interventional clinical studies that we have sponsored through which we obtain antibodies for development into potential antibody-based therapeutics may violate applicable laws and regulations regarding patients' personal data. It is not always possible to identify and deter misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a material and adverse effect on our business and financial condition, including the imposition of significant criminal, civil, and administrative fines or other sanctions, such as monetary penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in government-funded healthcare programs, such as Medicare and Medicaid, integrity obligations, reputational harm and the curtailment or restructuring of our operations.

Failure to comply with health and data protection laws and regulations could lead to government enforcement actions (which could include civil or criminal penalties), private litigation or adverse publicity and could negatively affect our operating results and business.

We and our current and potential collaborators may be subject to federal, state and foreign data protection laws and regulations (*i.e.*, laws and regulations that address privacy and data security). In the United States, numerous federal and state laws and regulations, including federal health information privacy laws (*e.g.*, the Health Insurance Portability and Accountability Act, or HIPAA, as amended by the Health Information Technology for Economic and Clinical

Health Act, or HITECH), state data breach notification laws, state health information privacy laws and federal and state consumer protection laws (*e.g.*, Section 5 of the Federal Trade Commission Act), that govern the collection, use, disclosure and protection of health-related and other personal information could apply to our operations or the operations of our collaborators. In addition, we may obtain health information from third parties (including research institutions from which we obtain clinical trial data) that are subject to privacy and security requirements under HIPAA, as amended by HITECH, or other privacy and data security laws. Depending on the facts and circumstances, we could be subject to significant penalties if we obtain, use, or disclose individually identifiable health information maintained by a HIPAA-covered entity or business associate in a manner that is not authorized or permitted by HIPAA.

International data protection laws, including Regulation 2016/679, known as the General Data Protection Regulation, or GDPR, may also apply to health-related and other personal information obtained outside of the United States. The GDPR went into effect on May 25, 2018. The GDPR introduced new data protection requirements in the European Union, as well as potential fines for noncompliant companies of up to the greater of e20 million or 4% of annual global revenue. The regulation imposes numerous new requirements for the collection, use and disclosure of personal information, including more stringent requirements relating to consent and the information that must be shared with data subjects about how their personal information is used, the obligation to notify regulators and affected individuals of personal data breaches, extensive new internal privacy governance obligations and obligations to honor expanded rights of individuals in relation to their personal information (*e.g.*, the right to access, correct and delete their data). In addition, the GDPR includes restrictions on cross-border data transfers. The GDPR will increase our responsibility and liability in relation to personal data that we process where such processing is subject to the GDPR, and we may be required to put in place additional mechanisms to ensure compliance with the GDPR, including as implemented by individual countries. A recent decision of the European Court of Justice, or CJEU, may increase the risk of GDPR litigation. Under the CJEU decision, a consumer protection association may bring representative actions alleging breaches of the GDPR even though a specific individual does not mandate the consumer protection association to act and a specific breach of any individual's data protection rights is not demonstrated. Further, the United Kingdom's vote in favor of exiting the EU, often referred to as Brexit, has created uncertainty with regard to data protection regulation in the United Kingdom. In particular, it is unclear how data transfers to and from the United Kingdom will be regulated.

In addition, California enacted the California Consumer Privacy Act, or CCPA, which creates individual privacy rights for California consumers (as defined in the law) and places increased privacy and security obligations on entities handling personal data of consumers or households. The CCPA requires covered companies to provide new disclosure to consumers about such companies' data collection, use and sharing practices, provide such consumers new ways to opt-out of certain sales or transfers of personal information, and provide consumers with additional causes of action. The CCPA went into effect on January 1, 2020, and the California Attorney General may bring enforcement actions for violations beginning July 1, 2020. The CCPA was amended on September 23, 2018, and it remains unclear what, if any, further modifications will be made to this legislation or how it will be interpreted. As currently written, the CCPA may impact our business activities and exemplifies the vulnerability of our business to the evolving regulatory environment related to personal data and protected health information.

Compliance with U.S. and international data protection laws and regulations could require us to take on more onerous obligations in our contracts, restrict our ability to collect, use and disclose data, or in some cases, impact our ability to operate in certain jurisdictions. Failure to comply with U.S. and international data protection laws and regulations could result in government enforcement actions (which could include civil or criminal penalties), private litigation or adverse publicity and could negatively affect our operating results and business. Moreover, clinical trial subjects about whom we or our potential collaborators obtain information, as well as the providers who share this information with us, may contractually limit our ability to use and disclose the information. Claims that we have violated individuals' privacy rights, failed to comply with data protection laws, or breached our contractual obligations, even if we are not found liable, could be expensive and time consuming to defend and could result in adverse publicity that could harm our business.

If we experience security or data privacy breaches or other unauthorized or improper access to, use of, or destruction of our proprietary or confidential data, employee data or personal data, we may face costs, significant liabilities, harm to our brand and business disruption.

In connection with our discovery platform and efforts, we may collect and use a variety of personal data, such as name, mailing address, email addresses, phone number and clinical trial information. Although we have extensive measures in place to prevent the sharing and loss of patient data in our sample collection process associated with our discovery platform, any failure to prevent or mitigate security breaches or improper access to, use of, or disclosure of our clinical data or patients' personal data could result in significant liability under state (*e.g.*, state breach notification laws), federal (*e.g.*, HIPAA, as amended by HITECH), and international law (*e.g.*, the GDPR). Any failure to prevent or mitigate security breaches or improper access to, use of, or disclosure of our clinical data or patients' personal data may cause a material adverse impact to our reputation and potentially disrupt our business. We may also rely on third-party service providers to host or otherwise process some of our data and that of users, and any failure by such third party to prevent or mitigate security breaches or improper access to or disclosure of such information could have similarly adverse consequences for us. If we are unable to prevent or mitigate the impact of such security or data privacy breaches, we could be exposed to litigation and governmental investigations, which could lead to a potential disruption to our business.

We depend on sophisticated information technology systems to operate our business and a cyber-attack or other breach of these systems could have a material adverse effect on our business.

We rely on information technology systems that we or our third-party vendors operate to process, transmit and store electronic information in our day-to-day operations. The size and complexity of our information technology systems makes them vulnerable to a cyber-attack, malicious intrusion, breakdown, destruction, loss of data privacy or other significant disruption. A successful attack could result in the theft or destruction of intellectual property, data, or other misappropriation of assets, or otherwise compromise our confidential or proprietary information and disrupt our operations. Cyber-attacks are becoming more sophisticated and frequent. We have invested in our systems and the protection and recoverability of our data to reduce the risk of an intrusion or interruption, and we monitor and test our systems on an ongoing basis for any current or potential threats. There can be no assurance that these measures and efforts will prevent future interruptions or breakdowns. If we or our third-party vendors fail to maintain or protect our information technology systems and data integrity effectively or fail to anticipate, plan for or manage significant disruptions to these systems, we or our third-party vendors could have difficulty preventing, detecting and controlling such cyber-attacks and any such attacks could result in losses described above as well as disputes with physicians, patients and our partners, regulatory sanctions or penalties, increases in operating expenses, expenses or lost revenues or other adverse consequences, any of which could have a material adverse effect on our business, results of operations, financial condition and prospects.

Our information technology systems could face serious disruptions that could adversely affect our business.

Our information technology and other internal infrastructure systems, including corporate firewalls, servers, leased lines and connection to the internet, face the risk of systemic failure that could disrupt our operations. A significant disruption in the availability of our information technology and other internal infrastructure systems could cause interruptions and delays in our research and development work.

If we do not comply with laws regulating the protection of the environment and health and human safety, our business could be adversely affected.

Our research, development and manufacturing involves the use of hazardous materials and various chemicals. We maintain quantities of various flammable and toxic chemicals in our facilities that are required for our research, development and manufacturing activities. We are subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of these hazardous materials. We believe our procedures for storing, handling and disposing of these materials in our facilities comply with the relevant guidelines of the state of California and the Occupational Safety and Health Administration of the U.S. Department of Labor. Although we believe that our safety procedures for handling and disposing of these materials comply with the standards mandated by applicable

regulations, the risk of accidental contamination or injury from these materials cannot be eliminated. If an accident occurs, we could be held liable for resulting damages, which could be substantial. We are also subject to numerous environmental, health and workplace safety laws and regulations, including those governing laboratory procedures, exposure to blood-borne pathogens and the handling of animals and biohazardous materials. Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of these materials, this insurance may not provide adequate coverage against potential liabilities. Although we have some environmental liability insurance covering certain of our facilities, we may not maintain adequate insurance for all environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological or hazardous materials. Additional federal, state and local laws and regulations affecting our operations may be adopted in the future. We may incur substantial costs to comply with, and substantial fines or penalties if we violate, any of these laws or regulations.

Our current operations are concentrated in one location, and we or the third parties upon whom we depend may be adversely affected by natural or other disasters and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Our current operations are concentrated in the San Francisco Bay Area. Any unplanned event, such as flood, fire, explosion, extreme weather condition, medical epidemics, power shortage, telecommunication failure or other natural or manmade accidents or incidents that result in us being unable to fully utilize our facilities or the manufacturing facilities of our third-party contract manufacturers, or lose our repository of blood-based and other valuable laboratory samples, may have a material and adverse effect on our ability to operate our business, particularly on a daily basis, and have significant negative consequences on our financial and operating conditions. Loss of access to these facilities may result in increased costs, delays in the development of our product candidates or interruption of our business operations. Natural disasters such as earthquakes or wildfires, both of which are prevalent in Northern California, floods or tsunamis could further disrupt our operations, and have a material negative impact on our business, financial condition, results of operations and prospects. If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters, that damaged critical infrastructure, such as our research facilities or the manufacturing facilities of our third-party contract manufacturers, or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible, for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have in place may prove inadequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which could have a material adverse effect on our business. As part of our risk management policy, we maintain insurance coverage at levels that we believe are appropriate for our business. However, in the event of an accident or incident at these facilities, we cannot assure you that the amounts of insurance will be sufficient to satisfy any damages and losses. If our facilities, or the manufacturing facilities of our third-party contract manufacturers, are unable to operate because of an accident or incident or for any other reason, even for a short period of time, any or all of our research and development programs may be harmed. Any business interruption may have a material and adverse effect on our business and financial condition.

Risks Related to Our Intellectual Property

If we are unable to obtain or protect intellectual property rights related to our technology and future product candidates, or if our intellectual property rights are inadequate, we may not be able to compete effectively.*

Our success depends in part on our ability to obtain and maintain protection for our owned and in-licensed intellectual property rights and proprietary technology. We rely on patents and other forms of intellectual property rights, including in-licenses of intellectual property rights and biologic materials of others, to protect our current or future discovery platform, product candidates, methods used to manufacture our future product candidates, and methods for treating patients using our future product candidates.

We in-license exclusive rights, including patents and patent applications relating to our discovery platform, from the Board of Trustees of the Leland Stanford Junior University, or Stanford University. Patent applications for this in-licensed technology are still pending before the U.S. Patent and Trademark Office and other national patent offices.

There is no guarantee that such patent applications will issue as patents, nor any guarantee that any issued patents that we have or may obtain will provide adequate protection for the in-licensed technology or any meaningful competitive advantage.

We also own several patents and applications on our own technology relating to our discovery platform. There is no guarantee that any patents covering this technology will issue from the patent applications we own. Nor is there any guarantee that issued patents that we have or may obtain will provide adequate protection for our discovery platform or any meaningful competitive advantage.

We own a U.S. patent and patent applications pending before the U.S. Patent and Trademark Office and other national patent offices in connection with ATRC-101 and related antibody variants. We own a pending Patent Cooperation Treaty application and U.S. provisional application relating to APN-497444 and related antibody variants. We also have filed non-provisional patent applications related to other product candidates. However, there is no guarantee that such patent applications will issue as patents, nor any guarantee that issued patents that we have or may obtain will effectively protect ATRC-101, ATRC-497444, or other product candidates or will effectively prevent others from commercializing competitive products.

We have filed and may also file additional provisional patent applications in the United Stated related to our potential future product candidates. A provisional patent application is not eligible to become an issued patent until, among other things, we file a non-provisional patent application within 12 months of the filing date of the provisional patent application. If we do not timely file non-provisional patent applications for our potential future provisional patent applications, we may lose our priority date with respect to our provisional patent applications and any patent protection on the inventions disclosed in our provisional patent applications.

The patent prosecution process is expensive, complex and time-consuming. Patent license negotiations also can be complex and protracted, with uncertain results. We may not be able to file, prosecute, maintain, enforce or license all necessary or desirable patents and patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. The patent applications that we own or in-license may fail to result in issued patents, and, even if they do issue as patents, such patents may not cover our current or future technologies or product candidates in the United States or in other countries or provide sufficient protection from competitors. In addition, the coverage claimed in a patent application can be significantly reduced before the patent is issued and its scope can be reinterpreted after issuance. Accordingly, we also rely on our ability to preserve our trade secrets, to prevent third parties from infringing, misappropriating or violating our proprietary rights and to operate without infringing, misappropriating, or violating the proprietary rights of others.

Further, although we make reasonable efforts to ensure patentability of our inventions, we cannot guarantee that all of the potentially relevant prior art relating to our owned or in-licensed patents and patent applications has been found. For example, publications of discoveries in scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, and in some cases not at all. Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our discovery platform, our potential future product candidates, or the use of our technologies. We thus cannot know with certainty whether we or our licensors were the first to make the inventions claimed in our owned or in-licensed patents or pending applications, or that we or our licensors were the first to file for patent protection of such inventions. There is no assurance that all potentially relevant prior art relating to our owned or in-licensed patents and patent applications has been found. For this reason, and because there is no guarantee that any prior art search is absolutely correct and comprehensive, we may be unaware of prior art that could be used to invalidate an issued patent or to prevent our owned or in-licensed pending patent applications from issuing as patents. Invalidation of any of our patent rights, including in-licensed patent rights, could materially harm our business.

Moreover, the patent positions of biopharmaceutical companies are generally uncertain because they may involve complex legal and factual considerations that have, in recent years, been the subject of legal development and change. As a result, the issuance, scope, validity, enforceability and commercial value of our pending patent rights is uncertain. The standards applied by the United States Patent and Trademark Office, or USPTO, and foreign patent

offices in granting patents are not always certain and moreover, are not always applied uniformly or predictably. For example, there is no uniform worldwide policy regarding patentable subject matter or the scope of claims allowable in patents. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our owned or in-licensed patents or narrow the scope of our patent protection.

Even if patents do successfully issue and even if such patents cover our current or any future technologies or product candidates, third parties may challenge their validity, enforceability or scope, which may result in such patents being narrowed, invalidated, or held unenforceable. Any successful challenge to these patents or any other patents owned by or licensed to us could deprive us of rights necessary for the successful commercialization of any current or future technologies or product candidates that we may develop. Likewise, if patent applications we own or have in-licensed with respect to our development programs and current or future technologies or product candidates fail to issue, if their breadth or strength is threatened, or if they fail to provide meaningful exclusivity, other companies could be dissuaded from collaborating with us to develop current or future technologies or product candidates. Lack of valid and enforceable patent protection could threaten our ability to commercialize current or future products and could prevent us from maintaining exclusivity with respect to the invention or feature claimed in the patent applications. Any failure to obtain or any loss of patent protection could have a material adverse impact on our business and ability to achieve profitability. We may be unable to prevent competitors from entering the market with a product that is similar to or the same as ATRC 101, APN-49744, or any potential future product candidates.

The filing of a patent application or the issuance of a patent is not conclusive as to its ownership, inventorship, scope, patentability, validity or enforceability. Issued patents and patent applications may be challenged in the courts and in the patent office in the United States and abroad. For example, our applications or applications filed by our licensors may be challenged through third-party submissions, opposition or derivation proceedings. By further example, our issued patents or the issued patents we in-license may be challenged through reexamination, *inter partes* review or post-grant review proceedings before the patent office, or in declaratory judgment actions or counterclaims. An adverse determination in any such submission, proceeding or litigation could prevent the issuance of, reduce the scope of, invalidate or render unenforceable our owned or in-licensed patent rights; limit our ability to stop others from using or commercializing similar or identical platforms and products; allow third parties to compete directly with us without payment to us; or result in our inability to manufacture or commercialize products without infringing third-party patent rights. In addition, if the breadth or strength of protection provided by our owned or in-licensed patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future platforms or product candidates. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

Moreover, some of our owned and in-licensed patents and patent applications are or may in the future be co-owned with third parties. If we are unable to obtain an exclusive license to any such third party co-owners' interest in such patents or patent application, such co-owners may be able to license their rights to other third-parties, including our competitors, and our competitors could market competing products and technology. We may need the cooperation of any such co-owners of our patents to enforce such patents against third parties, and such cooperation may not be provided to us. Any of the foregoing could have a material adverse effect on our competitive position, business prospects and financial conditions.

Our in-licensed patent rights may be subject to a reservation of rights by one or more third parties. For example, we in-license certain patent rights from Stanford University, which co-owns rights with a governmental entity. As a result, the U.S. government may have certain rights, including so-called march-in rights, to such patent rights and any products or technology developed from such patent rights. When new technologies are developed with U.S. government funding, the U.S. government generally obtains certain rights in any resulting patents, including a nonexclusive license authorizing the U.S. government to use the invention for non-commercial purposes. These rights may permit the U.S. government to disclose our confidential information to third parties and to exercise march-in rights to use or to allow third parties to use our licensed technology. The U.S. government can exercise its march-in rights if it determines that action is necessary because we fail to achieve the practical application of government-funded technology, because action is necessary to alleviate health or safety needs, to meet requirements of federal regulations, or to give preference to U.S. industry. In addition, our rights in such inventions may be subject to certain requirements to manufacture products

embodying such inventions in the United States. Any exercise by the U.S. government of such rights could harm our competitive position, business, financial condition, results of operations and prospects.

If we fail to comply with our obligations under any license, collaboration or other intellectual property-related agreements, we may be required to pay damages and could lose intellectual property rights that may be necessary for protecting our current technologies or product candidates or we could lose certain rights to grant sublicenses.

We are heavily reliant upon in-licenses to certain patent rights and proprietary technology from third parties that are important or necessary to our discovery platform and development of product candidates. For example, we rely on an intellectual property license from Stanford University for our discovery platform.

Our current license agreements impose, and any future license agreements we enter into are likely to impose, various development, commercialization, funding, milestone, royalty, diligence, sublicensing, insurance, patent prosecution and enforcement or other obligations on us. If we breach any of these obligations, or use the intellectual property licensed to us in an unauthorized manner, we may be required to pay damages and the licensor may have the right to terminate the license. License termination could result in our inability to develop, manufacture and sell products that are covered by the licensed technology or could enable a competitor to gain access to the licensed technology. In certain circumstances, our licensed patent rights are subject to our reimbursing our licensors for their patent prosecution and maintenance costs. For example, our license agreement with Stanford University requires us to bear the costs of filing and maintaining patent applications.

Furthermore, we may not have the right to control the preparation, filing, prosecution, maintenance, enforcement and defense of patents and patent applications that we license from third parties. For example, pursuant to our license agreement with Stanford University, while we direct and are responsible for the preparation, filing, prosecution and maintenance, and, in certain circumstances, enforcement and defense of the patents and patent applications, all of these actions are subject to Stanford University's final approval. Given Stanford University's right of final approval, we therefore cannot be certain that these patents and patent applications will be prepared, filed, prosecuted, maintained, enforced and defended in a manner consistent with the best interests of our business. If our licensors and future licensors fail to prosecute, maintain, enforce and defend patents we may license, or lose rights to licensed patents or patent applications, our license rights may be reduced or eliminated. In such circumstances, our right to develop and commercialize any of our potential future products or product candidates that is the subject of such licensed rights could be materially adversely affected.

Moreover, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing, misappropriating or otherwise violating the licensor's intellectual property rights. In addition, while we cannot currently determine the amount of the royalty obligations we would be required to pay on sales of future products if infringement or misappropriation were found, those amounts could be significant. The amount of our future royalty obligations will depend on the technology and intellectual property we use in products that we successfully develop and commercialize, if any. Therefore, even if we successfully develop and commercialize products, we may be unable to achieve or maintain profitability.

In addition, the agreements under which we currently license intellectual property or technology from third parties are complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant intellectual property or technology, or increase what we believe to be our financial or other obligations under the relevant agreement, either of which could have a material adverse impact on our business and ability to achieve profitability. Moreover, if disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on commercially acceptable terms, we may be unable to successfully develop and commercialize any affected product candidates, which could have a material adverse effect on our business and financial conditions.

Patent terms may not be able to protect our competitive position for an adequate period of time with respect to our current or future technologies or product candidates.

Patents have a limited lifespan. In the United States, the standard patent term is typically 20 years after filing. Various extensions may be available. Even so, the life of a patent and the protection it affords are limited. As a result, our owned and in-licensed patent portfolio provides us with limited rights that may not last for a sufficient period of time to exclude others from commercializing products similar or identical to ours. For example, given the large amount of time required for the research, development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized.

Extensions of patent term are available, but there is no guarantee that we would succeed in obtaining any particular extension—and no guarantee any such extension would confer patent term for a sufficient period of time to exclude others from commercializing products similar or identical to ours. In the United States, the Drug Price Competition and Patent Term Restoration Act of 1984 permits a patent term extension of up to five years beyond the normal expiration of the patent, which is limited to the approved indication (or any additional indications approved during the period of extension). A patent term extension cannot extend the remaining term of a patent beyond 14 years from the date of product approval; only one patent may be extended; and extension is available for only those claims covering the approved drug, a method for using it, or a method for manufacturing it. The applicable authorities, including the FDA and the USPTO in the United States, and any equivalent regulatory authority in other countries, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to our patents, or may grant more limited extensions than we request. An extension may not be granted or may be limited where there is, for example, a failure to exercise due diligence during the testing phase or regulatory review process, failure to apply within applicable deadlines, failure to apply before expiration of relevant patents, or some other failure to satisfy applicable requirements. If this occurs, our competitors may be able to launch their products earlier by taking advantage of our investment in development and clinical trials along with our clinical and preclinical data. This could have a material adverse effect on our business and ability to achieve profitability.

Changes in U.S. patent law or the patent law of other countries or jurisdictions could diminish the value of patents in general, thereby impairing our ability to protect our current or any future technologies or product candidates.

Changes in either the patent laws or interpretation of the patent laws in the United States or elsewhere could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. The United States has enacted and implemented wide-ranging patent reform legislation. On September 16, 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law, which could increase the uncertainties and costs surrounding the prosecution of our owned or in-licensed patent applications and the enforcement or defense of our owned or in-licensed issued patents. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted, redefine prior art, may affect patent litigation and switch the U.S. patent system from a ‘‘first-to-invent’’ system to a ‘‘first-to-file’’ system. Under a first-to-file system, assuming the other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to the patent on an invention regardless of whether another inventor had made the invention earlier. These provisions also allow third-party submission of prior art to the USPTO during patent prosecution and set forth additional procedures to challenge the validity of a patent by the USPTO administered post grant proceedings, including derivation, reexamination, *inter partes* review, post-grant review and interference proceedings. The USPTO developed additional regulations and procedures to govern administration of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, and, in particular, the first-to-file provisions, became effective on March 16, 2013. Accordingly, it is not clear what, if any, impact the Leahy-Smith Act will have on the operation of our business. The Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our owned or in-licensed patent applications and the enforcement or defense of our issued owned or in-licensed patents, all of which could have a material adverse impact on our business prospects and financial condition.

As referenced above, for example, courts in the U.S. continue to refine the heavily fact-and-circumstance-dependent jurisprudence defining the scope of patent protection available for therapeutic antibodies, narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations.

This creates uncertainty about our ability to obtain patents in the future and the value of such patents. We cannot provide assurance that future developments in U.S. Congress, the federal courts and the USPTO will not adversely impact our owned or in-licensed patents or patent applications. The laws and regulations governing patents could change in unpredictable ways that could weaken our and our licensors' ability to obtain new patents or to enforce our existing owned or in-licensed patents and patents that we might obtain or in-license in the future. Similarly, changes in patent law and regulations in other countries or jurisdictions or changes in the governmental bodies that enforce them or changes in how the relevant governmental authority enforces patent laws or regulations may have a material adverse effect on our and our licensors' ability to obtain new patents or to protect and enforce our owned or in-licensed patents or patents that we may obtain or in-license in the future.

Other companies or organizations may challenge our or our licensors' patent rights or may assert patent rights that prevent us from protecting our current products.

As the field of antibody-based immunotherapeutics matures, patent applications are being processed by national patent offices around the world. There is uncertainty about which patents will issue, and, if they do, there is uncertainty as to when, to whom, and with what claims. In addition, third parties may attempt to invalidate our or our licensors' intellectual property rights. Even if such rights are not directly challenged, disputes could lead to the weakening of our or our licensors' intellectual property rights. Our defense against any attempt by third parties to circumvent or invalidate our intellectual property rights could be costly to us, could require significant time and attention of our management, and could have a material and adverse impact on our business, financial condition and prospects.

There are many issued and pending patents that claim aspects of our current or potential future product candidates and modifications that we may need to apply to our current or potential future product candidates. There are also many issued patents that claim antibodies or portions of antibodies that may be relevant for products we wish to develop.

Further, we cannot guarantee that we are aware of all of patents and patent applications potentially relevant to our technology or products. We may not be aware of potentially relevant third-party patents or applications for several reasons. For example, U.S. applications filed before November 29, 2000, and certain U.S. applications filed after that date that will not be filed outside the U.S. remain confidential until patents issue. Patent applications in the United States and elsewhere are published approximately 18 months after the earliest filing for which priority is claimed, with such earliest filing date being commonly referred to as the priority date. Therefore, patent applications covering our potential future product candidates or platform technologies could have been filed by others without our knowledge. Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our platform, our potential future product candidates or the use of our technologies.

Thus, it is possible that one or more third parties will hold patent rights to which we will need a license, which may not be available on reasonable terms or at all. If such third parties refuse to grant us a license to such patent rights on reasonable terms or at all, we may be required to expend significant time and resources to redesign our technology, potential future product candidates or the methods for manufacturing our potential future product candidates, or to develop or license replacement technology, all of which may not be commercially or technically feasible. In such case, we may not be able to market such technology or potential future product candidates and may not be able to perform research and development or other activities covered by these patents. This could have a material adverse effect on our ability to commercialize our potential future product candidates and our business and financial condition.

We may not be able to protect our intellectual property rights throughout the world, which could negatively impact our business.

Filing, prosecuting and defending patents on current or future technologies or product candidates in all countries throughout the world would be prohibitively expensive. Competitors or other third parties may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export infringing products to territories where we have patent protection or licenses but enforcement is not as strong as that in the United States. These products may compete with our products, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Additionally, the laws of some foreign jurisdictions do not protect intellectual property rights to the same extent as the laws in the United States. Many companies have encountered significant difficulties in protecting and defending such rights in such jurisdictions. The legal systems of certain countries, including certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biotechnology, which could make it difficult for us to stop the infringement of our owned and in-licensed patents or the marketing of competing products in violation of our intellectual property and proprietary rights generally. Proceedings to enforce our owned or in-licensed intellectual property and proprietary rights in foreign jurisdictions could result in substantial costs and could divert our efforts and attention from other aspects of our business. Such proceedings could also put our owned or in-licensed patents at risk of being invalidated or interpreted narrowly, could put our owned or in-licensed patent applications at risk of not issuing, and could provoke third parties to assert claims against us or our licensors. We or our licensors may not prevail in any lawsuits or other adversarial proceedings that we or our licensors initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our and our licensors' efforts to enforce such intellectual property and proprietary rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or in-license.

Further, many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of its patents. If we or any of our licensors are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position in the relevant jurisdiction may be impaired and our business prospects may be materially adversely affected.

Third parties may initiate legal proceedings alleging that we are infringing, misappropriating or violating their intellectual property rights, the outcome of which would be uncertain and could have a material adverse impact on the success of our business.

Our business success depends, in part, upon the ability of potential future strategic partners to develop, manufacture, market and sell our future product candidates and to use our proprietary technologies without infringing, misappropriating or violating the proprietary and intellectual property rights of third parties. The biotechnology and pharmaceutical industries are characterized by extensive and complex litigation regarding patents and other intellectual property rights.

We or our licensors, or any future strategic partners, may be party to, or be threatened with, adversarial proceedings or litigation regarding intellectual property rights with respect to our potential future product candidates and technologies, including derivation, reexamination, inter partes review, post-grant review or interference proceedings before the USPTO and similar proceedings in jurisdictions outside of the United States such as opposition proceedings. In some instances, we may be required to indemnify our licensors for the costs associated with any such adversarial proceedings or litigation. For example, we are obligated under our license agreement with Stanford University to indemnify, hold harmless and defend Stanford University for damages from any claim of any kind arising out of or related to the license agreement with Stanford University. Third parties may assert infringement claims against us, our licensors or our strategic partners based on existing patents or patents that may be granted in the future, regardless of their merit. There is a risk that third parties may choose to engage in litigation or other adversarial proceedings with us, our licensors or our strategic partners to enforce or otherwise assert their patent rights. Even if we believe such claims are without merit, a court of competent jurisdiction could hold that these third-party patents are valid, enforceable and infringed, which could have a material adverse impact on our ability to utilize our discovery platform or to commercialize our future product candidates. In order to successfully challenge the validity of any such U.S. patent in federal court, we would need to overcome a presumption of validity by presenting clear and convincing evidence of invalidity. There is no assurance that a court of competent jurisdiction, even if presented with evidence we believe to be clear and convincing, would invalidate the claims of any such U.S. patent.

Further, we cannot guarantee that we will be able to successfully settle or otherwise resolve such adversarial proceedings or litigation. If we are unable to successfully settle future claims on terms acceptable to us, we may be required to engage in or to continue costly, unpredictable and time-consuming litigation and may be prevented from or experience substantial delays in marketing our potential future product candidates. If we, or our licensors, or any future

strategic partners are found to infringe, misappropriate or violate a third-party patent or other intellectual property rights, we could be required to pay damages, including treble damages and attorney's fees, if we are found to have willfully infringed. In addition, we, or our licensors, or any future strategic partners may choose to seek, or be required to seek, a license from a third party, which may not be available on commercially reasonable terms, if at all. Even if a license can be obtained on commercially reasonable terms, the rights may be non-exclusive, which could give our competitors access to the same technology or intellectual property rights licensed to us, and we could be required to make substantial licensing and royalty payments. We also could be forced, including by court order, to cease utilizing, developing, manufacturing and commercializing our discovery platform or potential future product candidates deemed to be infringing. We may be forced to redesign current or future technologies or products. Any of the foregoing could have a material adverse effect on our ability to generate revenue or achieve profitability and possibly prevent us from generating revenue sufficient to sustain our operations.

In addition, we or our licensors may find it necessary to pursue claims or to initiate lawsuits to protect or enforce our owned or in-licensed patent or other intellectual property rights. The cost to us in defending or initiating any litigation or other proceeding relating to our owned or in-licensed patent or other intellectual property rights, even if resolved in our favor, could be substantial, and any litigation or other proceeding would divert our management's attention. Such litigation or proceedings could materially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. Some of our competitors may be able to more effectively to sustain the costs of complex patent litigation because they have substantially greater resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could delay our research and development efforts and materially limit our ability to continue our operations. Furthermore, because of the substantial amount of discovery required in connection with certain such proceedings, there is a risk that some of our confidential information could be compromised by disclosure. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, such announcements could have a material adverse effect on our business.

If we or our licensors were to initiate legal proceedings against a third party to enforce a patent covering one of our potential future product candidates or our technology, the defendant could counterclaim that such patent is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, for example, claiming patent-ineligible subject matter, lack of novelty, indefiniteness, lack of written description, non-enablement, anticipation or obviousness. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO or made a misleading statement during prosecution. The outcome of such invalidity and unenforceability claims is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art of which we or our licensors and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity or unenforceability, we could lose at least part, and perhaps all, of the patent protection for one or more of our potential future product candidates or certain aspects of our platform technology. Such a loss of patent protection could have a material adverse effect on our business, financial condition, results of operations and prospects. Patents and other intellectual property rights also will not protect our potential future product candidates and technologies if competitors or third parties design around such product candidates and technologies without legally infringing, misappropriating or violating our owned or in-licensed patents or other intellectual property rights.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

As referenced above, in addition to seeking patent protection for certain aspects of our current technologies and product candidates, we also consider trade secrets, including confidential and unpatented know-how, important to the maintenance of our competitive position. However, trade secrets and know-how can be difficult to protect. We protect and plan to protect trade secrets and confidential and unpatented know-how, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to such knowledge, such as our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and

consultants under which they are obligated to maintain confidentiality and to assign their inventions to us. Despite these efforts, we may not obtain these agreements in all circumstances. Moreover, individuals with whom we have such agreements may not comply with their terms. Any of these parties may breach such agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for any such breaches. We may also become involved in inventorship disputes relating to inventions and patents developed by our employees or consultants under such agreements. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret, or securing title to an employee- or consultant-developed invention if a dispute arises, is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts in the United States and certain foreign jurisdictions disfavor or are unwilling to protect trade secrets. Further, if any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent that competitor from using the technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be materially and adversely harmed.

We may be subject to claims that we or our employees or consultants have wrongfully used or disclosed alleged trade secrets or other proprietary information of our employees' or consultants' former employers or their clients.

Many of our employees or consultants and our licensors' employees or consultants were previously employed at universities or biotechnology or biopharmaceutical companies, including our competitors or potential competitors. We may be subject to claims that one or more of these employees or consultants or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of former employers. Litigation or arbitration may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel or may be enjoined from using such intellectual property. Any such proceedings and possible aftermath would likely divert significant resources from our core business, including distracting our technical and management personnel from their normal responsibilities. A loss of key research personnel or their work product could materially harm our business. Even if we are successful in defending against any such claims, litigation or arbitration could result in substantial costs and could be a distraction to management.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by government patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees, renewal fees, annuity fees and various other government fees on patents or applications will be due to be paid to the USPTO and various government patent agencies outside of the United States over the lifetime of our owned and in-licensed patents or applications and any patent rights we may own or in-license in the future. The USPTO and various non-U.S. government patent agencies require compliance with several procedural, documentary, fee payment and other similar provisions during the patent application process. We employ reputable law firms and other professionals to help us comply with these requirements, and we are also dependent on our licensors to take the necessary action to comply with these requirements with respect to our in-licensed intellectual property. In many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. There are situations, however, in which non-compliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, potential competitors might be able to enter the market with similar or identical products or platforms, which could have a material adverse effect on our business prospects and financial condition.

Intellectual property rights do not necessarily address all potential threats to our business.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect our business. The following examples are illustrative:

- others may be able to make compounds or formulations that are similar to our product candidates, but that are not covered by the claims of any patents that we own, license or control;
- we or any strategic partners might not have been the first to make the inventions covered by the issued patents or pending patent applications that we own, license or control;

- we or our licensors might not have been the first to file patent applications covering certain of our owned and in-licensed inventions;
- others may independently develop the same, similar, or alternative technologies without infringing, misappropriating or violating our owned or in-licensed intellectual property rights;
- it is possible that our owned or in-licensed pending patent applications will not lead to issued patents;
- issued patents that we own, in-license, or control may not provide us with any competitive advantages, or may be narrowed or held invalid or unenforceable, including as a result of legal challenges;
- our competitors might conduct research and development activities in the United States and other countries that provide a safe harbor from patent infringement claims for certain research and development activities, as well as in countries where we do not have patent rights, and may then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may choose not to file a patent in order to maintain certain trade secrets or know-how, and a third party may subsequently file a patent covering such trade secrets or know-how; and
- the patents of others may have an adverse effect on our business.

Should any of these events occur, they could have a material adverse impact on our business and financial condition.

Risks Related to Government Regulation

We are subject to U.S. and foreign anti-corruption and anti-money laundering laws with respect to our operations and non-compliance with such laws can subject us to criminal or civil liability and harm our business.

We are subject to the U.S. Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and possibly other state and national anti-bribery and anti-money laundering laws in countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, third-party intermediaries, joint venture partners and collaborators from authorizing, promising, offering or providing, directly or indirectly, improper payments or benefits to recipients in the public or private sector. We interact with officials and employees of government agencies and government-affiliated hospitals, universities and other organizations. In addition, we may engage third-party intermediaries to promote our clinical research activities abroad or to obtain necessary permits, licenses and other regulatory approvals. We can be held liable for the corrupt or other illegal activities of these third party intermediaries, our employees, representatives, contractors, partners and agents, even if we do not explicitly authorize or have actual knowledge of such activities.

Our Code of Business Conduct and Ethics mandates compliance with the FCPA and other anti-corruption laws applicable to our business throughout the world. However, we cannot assure you that our employees and third-party intermediaries will comply with this code or such anti-corruption laws. Noncompliance with anti-corruption and anti-money laundering laws could subject us to whistleblower complaints, investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, suspension or debarment from contracting with certain persons, the loss of export privileges, reputational harm, adverse media coverage and other collateral consequences. If any subpoenas, investigations or other enforcement actions are launched, or governmental or other sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation, our business and financial condition could be materially harmed. In addition, responding to any action will likely result in a materially significant diversion of management’s attention and resources and significant defense and compliance costs and other professional fees. In certain cases, enforcement authorities may even cause us to appoint an independent compliance monitor which can result in added costs and administrative burdens.

Risks Related to Our Class A Common Stock

If Nasdaq determines we are a "public shell" company, then Nasdaq could determine to delist of our Class A common stock.*

If Nasdaq determines we are a "public shell," then it could delist our Class A common stock from trading. The evaluation of whether a listed company is a public shell company is based on a facts and circumstances determination. A Nasdaq-listed company with no or nominal operations and either no or nominal assets, assets consisting solely of cash and cash equivalents, or assets consisting of any amount of cash and cash equivalents and nominal other assets may be determined to be a public shell. If Nasdaq makes such a determination, then a reduction in some or all of the following may occur, each of which could harm the holders of our Class A common stock: the liquidity of our Class A common stock; the market price of our Class A common stock; the number of institutional and general investors that will consider investing in our Class A common stock; the number of market makers in our Class A common stock; the availability of information concerning the trading prices and volume of our Class A common stock; and the number of broker-dealers willing to execute trades in our Class A common stock. In addition, there are certain consequences under the Securities Act of being a public shell, including the unavailability of Rule 144 thereunder for the resale of restricted securities, the inability to utilize Form S-8 for the registration of employee benefit plan securities; and the inability to utilize Form S-3 under the "baby shelf" rules applicable to companies with a non-affiliate market capitalization of less than $75 million. Finally, the potential determination that we are a shell company or the prospective loss of our listing on Nasdaq could make us less attractive as a partner in any potential strategic transaction.

The price of our Class A common stock currently does not meet the requirements for continued listing on Nasdaq. If we fail to maintain or regain compliance with the minimum listing requirements, our Class A common stock will be subject to delisting. Our ability to publicly or privately sell equity securities and the liquidity of our Class A common stock could be adversely affected if our Class A common stock is delisted.*

The continued listing standards of the Nasdaq require, among other things, that the minimum price of a listed company's stock be at or above $1.00. If the minimum bid price is below $1.00 for a period of more than 30 consecutive trading days, the listed company will fail to be in compliance with Nasdaq's listing rules and, if it does not regain compliance within the grace period, will be subject to delisting. The bid price of our Class A common stock has recently closed below the minimum $1.00 per share requirement and on September 8, 2023 we received a notification of noncompliance from Nasdaq. In accordance with Nasdaq's listing rules, we were afforded 180 calendar days to regain compliance with the bid price requirement. In order to regain compliance with the bid price requirement., the bid price of our Class A common stock must close at a price of at least $1.00 per share for a minimum of ten consecutive trading days.

If we fail to regain compliance with the minimum bid price requirement, or if we fail to meet other continued listing requirements in the future, our Class A common stock will be subject to delisting. Delisting from Nasdaq could adversely affect our ability to consummate a strategic transaction and would significantly affect the ability of investors to trade our securities and negatively affect the value and liquidity of our Class A common stock. Delisting could also have other negative results, including the potential loss of confidence by employees and the loss of institutional investor interest.

Unless our Class A common stock continues to be listed on a national securities exchange, it will become subject to the so-called "penny stock" rules that impose restrictive sales practice requirements.*

If we are unable to maintain the listing of our Class A common stock on Nasdaq or another national securities exchange, our Class A common stock could become subject to the so-called "penny stock" rules if the shares have a market value of less than $5.00 per share. The SEC has adopted regulations that define a penny stock to include any stock that has a market price of less than $5.00 per share, subject to certain exceptions, including an exception for stock traded on a national securities exchange. The SEC regulations impose restrictive sales practice requirements on broker-dealers who sell penny stocks to persons other than established customers and accredited investors. An accredited investor generally is a person whose individual annual income exceeded $200,000, or whose joint annual income with a spouse exceeded $300,000 during the past two years and who expects their annual income to exceed the applicable level during the current year, or a person with net worth in excess of $1.0 million, not including the value of the investor's principal residence and excluding mortgage debt secured by the investor's principal residence up to the estimated fair market value of the home, except that any mortgage debt incurred by the investor within 60 days prior to the date of the transaction shall not be excluded from the determination of the investor's net worth unless the mortgage debt was incurred to acquire the residence. For transactions covered by this rule, the broker-dealer must make a special suitability determination for the purchaser and must have received the purchaser's written consent to the transaction prior to the sale. This means that if we are unable to maintain the listing of our Class A common stock on a national securities exchange, the ability of stockholders to sell their Class A common stock in the secondary market could be adversely affected. If a transaction involving a penny stock is not exempt from the SEC's rule, a broker-dealer must deliver a disclosure schedule relating to the penny stock market to each investor prior to a transaction. The broker-dealer must also disclose the commissions payable to both the broker-dealer and its registered representative, current quotations for the penny stock, and, if the broker-dealer is the sole market-maker, the broker-dealer must disclose this fact and the broker-dealer's presumed control over the market. Finally, monthly statements must be sent disclosing recent price information for the penny stock held in the customer's account and information on the limited market in penny stocks.

Our stock price may be volatile and purchasers of our Class A common stock could incur substantial losses.*

The price of our Class A common stock is likely to be highly volatile. The market price for our Class A common stock has been, and may continue to be, impacted by many factors, including the other risks described in "*Risk Factors*" under Part II, Item 1A of this Form 10-Q, including the following:

- our ability to identify and consummate a strategic transaction;
- inability to obtain additional funding and deterioration of financing conditions in our industry;
- our internal restructuring and workforce reduction;
- regulatory or legal developments in the United States and other countries, especially changes in laws or regulations applicable to our product candidates;
- the success of competitive products or technologies;
- actions taken by regulatory agencies with respect to our product candidates or clinical trials;
- market conditions in the pharmaceutical and biotechnology sectors;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- developments or disputes concerning patents or other proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our product candidates;
- actual or anticipated changes in earnings estimates or changes in stock market analyst recommendations regarding our Class A common stock, other comparable companies or our industry generally;
- our failure or the failure of our competitors to meet analysts' projections or guidance that we or our competitors may give to the market;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- speculation in the press or investment community;
- trading volume of our Class A common stock;
- sales of our Class A common stock by us or our stockholders;
- the concentrated ownership of our Class A common stock;
- changes in accounting principles;
- political, social, and economic instability abroad, including as a result of armed conflict, war or the threat of war, terrorist activity and other security concerns in general;
- natural disasters and other calamities, including global health epidemics or other contagious diseases; and

- general economic, industry and market conditions, including changes in interest rates and inflation.

In addition, the stock markets in general, and the markets for pharmaceutical, biopharmaceutical and biotechnology stocks in particular, have experienced, and may continue to experience, extreme volatility that has been often, and may in the future be, unrelated to the operating performance of the issuer. These broad market and industry factors have adversely impacted, and may continue to adversely impact, the market price of our Class A common stock, regardless of our business.

The dual class structure of our common stock and the option of the holder of shares of our Class B common stock to convert into shares of our Class A common stock may limit stockholders' ability to influence corporate matters.

Our Class A common stock has one vote per share, while our Class B common stock is non-voting. Nonetheless, each share of our Class B common stock may be converted at any time into one share of Class A common stock at the option of its holder, subject to the limitations provided for in our amended and restated certificate of incorporation. Consequently, if holders of Class B common stock exercise their option to make this conversion, this will have the effect of increasing the relative voting power of those prior holders of our Class B common stock, and correspondingly decrease the voting power of the current holders of our Class A common stock, which may limit stockholders' ability to influence corporate matters. Because our Class B common stock is generally non-voting, stockholders who own more than 10% of our common stock overall but 10% or less of our Class A common stock will not be required to report changes in their ownership from transactions in our Class B common stock pursuant to Section 16(a) of the Exchange Act, and would not be subject to the short-swing profit provisions of Section 16(b) of the Exchange Act. In addition, acquisitions of Class B common stock would not be subject to notification pursuant to the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended.

If securities or industry analysts do not publish research or reports about us, or if they issue an adverse or misleading opinion regarding our stock, our stock price and trading volume could decline.

The trading market for our Class A common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. If any of the analysts who cover us, or who commence covering us in the future, issue an adverse or misleading opinion regarding us, our business model, our intellectual property rights or our Class A common stock performance, or if our target studies and operating results fail to meet the expectations of the analysts, our stock price would likely decline. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

Based on the beneficial ownership of our capital stock as of September 30, 2023, our executive officers and directors, together with holders of 5% or more of our capital stock and their respective affiliates, beneficially owned a significant percentage of our Class A common stock and Class B common stock. As a result, these stockholders, if acting together, will continue to have significant influence over the outcome of corporate actions requiring stockholder approval, including the election of directors, any merger, consolidation or sale of all or substantially all of our assets and any other significant corporate transaction. In addition, pursuant to a nominating agreement between us and Baker Brothers Life Sciences L.P. and 667, L.P., or together, Baker Brothers, following the closing of our initial public offering and so long as Baker Brothers together with its affiliates beneficially owns at least 3,333,333 shares of our common stock, we will have the obligation to support the nomination of, and to cause our board of directors to include in the slate of nominees recommended to our stockholders for election, two individuals designated by Baker Brothers, each a Baker Designee, subject to customary conditions and exceptions, as well as the obligation to invite two board of directors observer designees of Baker Brothers to attend all meetings of our board of directors and all meetings of the committees of our board of directors as a nonvoting observer, if there is no Baker Designee on our board of directors, subject to customary conditions and exceptions. Baker Brothers and its affiliates may therefore have influence over management and control over matters requiring stockholder approval, including the annual election of directors and

significant corporate transactions, such as a merger or other sale of our company or its assets, following the closing of our initial public offering and for the foreseeable future.

The interests of these stockholders may not be the same as, and may even conflict with, your interests. For example, these stockholders could delay or prevent a change of control of our company, even if such a change of control would benefit our other stockholders, which could deprive our stockholders of an opportunity to receive a premium for their Class A common stock as part of a sale of our company or our assets and might affect the prevailing market price of our Class A common stock. The significant concentration of stock ownership may adversely affect the trading price of our Class A common stock due to investors' perception that conflicts of interest may exist or arise.

We may incur significant costs from class action litigation due to expected volatility of the price of our Class A common stock.

The price of our Class A common stock may fluctuate for many reasons, including as a result of public announcements regarding the progress of our development efforts for our discovery platform and our potential future product candidates, the development efforts of future partners or competitors, the addition or departure of our key personnel, variations in our quarterly operating results and changes in market valuations of biopharmaceutical and biotechnology companies. This risk is especially relevant to us because biopharmaceutical and biotechnology companies have experienced significant stock price volatility in recent years. When the market price of a stock has been volatile as our stock price may be, holders of that stock have occasionally brought securities class action litigation against the company that issued the stock. If any of our stockholders were to bring a lawsuit of this type against us, even if the lawsuit is without merit, we could incur substantial costs defending the lawsuit. The lawsuit could also divert the time and attention of our management.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of our company, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our amended and restated certificate of incorporation and our amended and restated bylaws may delay or prevent an acquisition of our company or a change in our management. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Because our board of directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team. These provisions include:

- a prohibition on actions by our stockholders by written consent;
- a requirement that special meetings of stockholders, which our company is not obligated to call more than once per calendar year, be called only by the chairman of our board of directors, our chief executive officer, or our board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors;
- advance notice requirements for election to our board of directors and for proposing matters that can be acted upon at stockholder meetings;
- division of our board of directors into three classes, serving staggered terms of three years each; and
- the authority of the board of directors to issue preferred stock with such terms as the board of directors may determine.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, as amended, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner. These provisions would apply even if the proposed merger or acquisition could be considered beneficial by some stockholders.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware and, to the extent enforceable, the federal district courts of the United States of America will be the exclusive forums for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law:

- any derivative action or proceeding brought on our behalf;
- any action asserting a breach of fiduciary duty;
- any action asserting a claim against us or our directors, officers, or employees arising under the Delaware General Corporation Law, our amended and restated certificate of incorporation, or our amended and restated bylaws; and
- any action asserting a claim against us that is governed by the internal-affairs doctrine.

This provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act or any other claim for which the U.S. federal courts have exclusive jurisdiction. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, our amended and restated certificate of incorporation further provides that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions. In such instance, we would expect to vigorously assert the validity and enforceability of the exclusive forum provisions of our amended and restated certificate of incorporation. This may require significant additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition, and there can be no assurance that the provisions will be enforced by a court in those other jurisdictions.

These exclusive-forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees, which may discourage lawsuits against us and our directors, officers, and other employees. If any other court of competent jurisdiction were to find either exclusive-forum provision in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur further significant additional costs associated with resolving the dispute in other jurisdictions, all of which could seriously harm our business.

Item 2. Unregistered Sales of Equity Securities, Use of Proceeds and Issuer Purchases of Equity Securities

(a) Recent Sales of Unregistered Equity Securities

None.

(b) Use of Proceeds

None.

(c) Issuer Purchases of Equity Securities

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

For a discussion of the November 2023 Reorganization, see the section entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations – Overview – Reorganization Activities” included in Item 2 of Part II of this Quarterly Report on Form 10-Q, which is incorporated herein by reference.

Item 6. Exhibits

The exhibits listed on the accompanying Exhibit Index are filed or incorporated by reference (as stated therein) as part of this Quarterly Report on Form 10-Q.

Number	Exhibit Title	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
3.1	Amended and Restated Certificate of Incorporation of the Registrant.	8-K	001-38935	3.1	06/26/19	
3.2	Amended and Restated Bylaws of the Registrant.	8-K	001-38935	3.2	06/26/19	
4.1	Amended and Restated Investors' Rights Agreement, dated as of September 5, 2018, by and among the Registrant and certain of its stockholders.	S-1/A	333-231770	4.1	06/10/19	
4.2	Form of Warrant to Purchase Shares of Series A Preferred Stock, dated as of August 21, 2015, by and between the Registrant and Warrant holders of the Registrant.	S-1/A	333-231770	4.2	06/10/19	
4.3	Form of Class A Common Stock Certificate of the Registrant.	8-K	001-38935	4.1	06/26/19	
4.4	Form of Class B Common Stock Certificate of the Registrant.	8-K	001-38935	4.2	06/26/19	
10.1	Agreement for Modification of Lease and Voluntary Surrender of Premises, dated as of September 20, 2023, by and between ARE-San Francisco No. 63, LLC and the Registrant.	8-K	001-38935	10.1	09/21/23	
10.2	Separation and Consulting Agreement between the Registrant and Herb Cross dated September 18, 2023.	8-K	001-38935	10.2	09/21/23	
31.1	Certification of Principal Executive Officer and Principal Financial Officer, as required by Rule 13a-14(a) or Rule 15d-14(a).					X
32.1*	Certification of Principal Executive Officer and Principal Financial Officer, as required by Rule 13a-14(b) or Rule 15d-14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. Section 1350).					X
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).					X
101.SCH	Inline XBRL Taxonomy Extension Schema Document.					X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.					X

101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.	X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.	X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.	X
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101).	

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

SIGNATURES

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

ATRECA, INC.

Date: November 14, 2023

By: /s/ JOHN A. ORWIN
John A. Orwin
President and Chief Executive Officer
(Principal Executive and Financial Officer)

Exhibit 31.1

CERTIFICATION

I, John A. Orwin, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Atreca, 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. I am 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 my supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to me 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 my 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 my conclusion 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. I have disclosed, based on my 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: November 14, 2023

By: /s/ JOHN A. ORWIN
John A. Orwin
Chief Executive Officer
(Principal Executive and Financial Officer)

Exhibit 32.1

CERTIFICATION

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and Section 1350 of Chapter 63 of Title 18 of the United States Code, John A. Orwin, President and Chief Executive Officer of Atreca, Inc. (the "Company") hereby certifies that, to the best of his knowledge:

1. The Company's Quarterly Report on Form 10-Q for the period ended September 30, 2023, to which this Certification is attached as Exhibit 32.1 (the "Report"), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

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

Dated: November 14, 2023

/s/ John A. Orwin
John A. Orwin
President and Chief Executive Officer
(Principal Executive and Principal Financial Officer)

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