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

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2022

OR

o 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: 001-39532

Humacyte, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**85-1763759**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
2525 East North Carolina Highway 54 **Durham, NC**	**27713**
(Address of principal executive offices)	(Zip code)

(919) 313-9633
(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 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.0001 per share	**HUMA**	**The Nasdaq Stock Market LLC**
Redeemable Warrants, each whole warrant exercisable for one share of Common Stock at an exercise price of $11.50	**HUMAW**	**The Nasdaq Stock Market LLC**

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

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

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

Large accelerated filer	o	Accelerated filer	o
Non-accelerated filer	x	Smaller reporting company	x
		Emerging growth company	x

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. o

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

As of May 5, 2022, 103,004,572 shares of common stock, par value $0.0001, were issued and outstanding.

Humacyte, Inc.
Quarterly Report on Form 10-Q
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FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q ("Quarterly Report") contains forward-looking statements that involve substantial risks and uncertainties. "Forward-looking statements," as that term is defined in the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 (the "Exchange Act") are statements that are not historical facts and involve a number of risks and uncertainties. These statements include, without limitation, statements regarding the financial position, business strategy and the plans and objectives of management for future operations. These statements constitute projections, forecasts and forward-looking statements, and are not guarantees of performance. Such statements can be identified by the fact that they do not relate strictly to historical or current facts. When used therein, words such as "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "might," "plan," "possible," "potential," "predict," "project," "should," "strive," "would" and similar expressions may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. Such statements are based on the beliefs of, as well as assumptions made by and information currently available to, our management.

Forward-looking statements may include, for example, statements about:

- our plans and ability to execute product development, process development and preclinical development efforts successfully and on our anticipated timelines;
- our plans and ability to obtain marketing approval from the U.S. Food and Drug Administration ("FDA") and other regulatory authorities, including the European Medicines Agency ("EMA"), for our bioengineered human acellular vessels ("HAVs") and other product candidates;
- our ability to design, initiate and successfully complete clinical trials and other studies for our product candidates and our plans and expectations regarding our ongoing or planned clinical trials, including for our ongoing V005 Phase II/III clinical trial and V007 Phase III clinical trial;
- the outcome of our ongoing discussions with the FDA concerning the design of our ongoing V005 Phase II/III clinical trial, including determination of trial size;
- our anticipated growth rate and market opportunities;
- the potential liquidity and trading of our securities;
- our ability to raise additional capital in the future;
- our ability to use our proprietary scientific technology platform to build a pipeline of additional product candidates;
- the characteristics and performance of our bioengineered human, acellular tissue-based vessels ("HAVs");
- our plans and ability to commercialize our HAVs and other product candidates, if approved by regulatory authorities;
- the expected size of the target populations for our product candidates;
- the anticipated benefits of our HAVs relative to existing alternatives;
- our assessment of the competitive landscape;
- the degree of market acceptance of HAVs, if approved, and the availability of third-party coverage and reimbursement;
- our ability to manufacture HAVs and other product candidates in sufficient quantities to satisfy our clinical trial and commercial needs;
- our expectations regarding our strategic partnership with Fresenius Medical Care Holdings, Inc. ("Fresenius Medical Care") to sell, market and distribute our 6 millimeter HAV for certain specified indications and in specified markets;
- the performance of other third parties on which we rely, including our third-party manufacturers, our licensors, our suppliers and the organizations conducting our clinical trials;
- our ability to obtain and maintain intellectual property protection for our product candidates as well as our ability to operate our business without infringing, misappropriating or otherwise violating the intellectual property rights of others;

- our ability to maintain the confidentiality of our trade secrets, particularly with respect to our manufacturing process;
- our compliance with applicable laws and regulatory requirements, including FDA regulations, healthcare laws and regulations, and anti-corruption laws;
- our ability to attract, retain and motivate qualified personnel and to manage our growth effectively;
- our future financial performance and capital requirements;
- our ability to implement and maintain effective internal controls; and
- the impact of the COVID-19 pandemic on our business, including our manufacturing efforts, and our preclinical studies and clinical trials.

We caution readers not to place undue reliance on any such forward-looking statements, which speak only as of the date they are made. Any forward-looking statement is based on information current as of the date of this Quarterly Report and speaks only as of the date on which such statement is made. Actual events or results may differ materially from the results, plans, intentions or expectations anticipated in these forward-looking statements as a result of a variety of factors, many of which are beyond our control. More information on factors that could cause actual results to differ materially from those anticipated is included from time to time in our reports filed with the Securities and Exchange Commission (the "SEC"), including, but not limited to, those described in the sections titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in this Quarterly Report and our Annual Report on Form 10-K for the year ended December 31, 2021, which we filed with the SEC on March 29, 2022. We disclaim any obligation, except as specifically required by law, to publicly update or revise any such statements to reflect any change in our expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

PART I – FINANCIAL INFORMATION

Item 1. Financial Statements

Humacyte, Inc.
Condensed Consolidated Balance Sheets
(unaudited)
(in thousands except for share and per share amounts)

	March 31, 2022	December 31, 2021
ASSETS		
Current assets		
Cash and cash equivalents	$ 198,222	$ 217,502
Short-term investments	8,000	8,000
Accounts receivable	233	176
Prepaid expenses and other current assets	2,840	3,662
Total current assets	209,295	229,340
Finance lease right-of-use assets, net	20,917	21,432
Operating lease right-of-use assets, net	716	727
Property and equipment, net	33,540	35,034
Total assets	**$ 264,468**	**$ 286,533**
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	$ 3,037	$ 2,094
Accrued expenses	5,460	6,757
Finance lease obligation, current portion	2,047	1,981
Deferred payroll tax, current portion	173	173
Operating lease obligation, current portion	46	45
Total current liabilities	10,763	11,050
Contingent earnout liability	100,402	103,660
Finance lease obligation, net of current portion	20,581	21,109
SVB loan payable	27,739	27,361
Operating lease obligation, net of current portion	670	682
Common stock warrant liabilities	423	497
Total liabilities	**160,578**	**164,359**
Commitments and contingencies (Note 11)		
Stockholders' equity		
Preferred stock, $0.0001 par value; 20,000,000 shares designated as of March 31, 2022 and December 31, 2021; 0 shares issued and outstanding as of March 31, 2022 and December 31, 2021	—	—
Common stock, $0.0001 par value; 250,000,000 shares authorized as of March 31, 2022 and December 31, 2021; 103,004,572 and 103,003,646 shares issued and outstanding as of March 31, 2022 and December 31, 2021, respectively.	10	10
Additional paid-in capital	538,285	536,737
Accumulated deficit	(434,405)	(414,573)
Total stockholders' equity	103,890	122,174
Total liabilities and stockholders' equity	**$ 264,468**	**$ 286,533**

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

Humacyte, Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(unaudited)
(in thousands except for share and per share amounts)

	For the Three Months Ended March 31,	
	2022	2021
Grant revenue	$ 233	$ 155
Operating expenses:		
Research and development	16,314	15,137
General and administrative	5,682	4,787
Total operating expenses	21,996	19,924
Loss from operations	**(21,763)**	**(19,769)**
Other income (expense), net:		
Interest income	31	1
Change in fair value of contingent earnout liability	3,258	—
Interest expense	(1,432)	(533)
Change in fair value of common stock warrant liabilities	74	—
Total other income (expense), net	1,931	(532)
Net loss and comprehensive loss	**$ (19,832)**	**$ (20,301)**
Net loss per share attributable to common stockholders, basic and diluted	$ (0.19)	$ (3.46)
Weighted-average shares outstanding used in computing net loss per share attributable to common stockholders, basic and diluted	103,004,088	5,874,700

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

Humacyte, Inc.
Condensed Consolidated Statements of Changes in Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)
(unaudited)
(in thousands except for share amounts)

	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' (Deficit) Equity
	Shares	Amount	Shares	Amount			
Balance as of December 31, 2021	**—**	**$ —**	**103,003,646**	**$ 10**	**$ 536,737**	**$ (414,573)**	**$ 122,174**
Proceeds from the exercise of stock options	—	—	926	—	1	—	1
Stock-based compensation	—	—	—	—	1,547	—	1,547
Net loss	—	—	—	—	—	(19,832)	(19,832)
Balance as of March 31, 2022	**—**	**$ —**	**103,004,572**	**$ 10**	**$ 538,285**	**$ (434,405)**	**$ 103,890**

	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' (Deficit) Equity
	Shares	Amount	Shares	Amount			
Balance as of December 31, 2020	**69,613,562**	**$ 420,989**	**5,822,396**	**$ 1**	**$ 37,778**	**$ (388,096)**	**$ (350,317)**
Proceeds from the exercise of stock options	—	—	116,149	—	206	—	206
Stock-based compensation	—	—	—	—	2,528	—	2,528
Issuance of warrants in conjunction with debt	—	—	—	—	2,360	—	2,360
Net loss	—	—	—	—	—	(20,301)	(20,301)
Balance as of March 31, 2021	**69,613,562**	**$ 420,989**	**5,938,545**	**$ 1**	**$ 42,872**	**$ (408,397)**	**$ (365,524)**

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

Humacyte, Inc.
Condensed Consolidated Statements of Cash Flows
(unaudited)
(in thousands)

	For the Three Months Ended March 31,	
	2022	**2021**
Cash flows from operating activities		
Net loss	$ (19,832)	$ (20,301)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	1,525	1,555
Stock-based compensation expense	1,547	2,528
Change in fair value of contingent earnout liability	(3,258)	—
Change in fair value of common stock warrant liabilities	(74)	—
Amortization expense	515	515
Non-cash operating lease costs	11	10
Amortization of SVB debt discount	378	—
Accrued interest on PPP loan obligation	—	8
Changes in operating assets and liabilities:		
Accounts receivable	(57)	(42)
Prepaid expenses and other current assets	822	7
Accounts payable	934	595
Accrued expenses	(1,297)	593
Operating lease obligation	(11)	(11)
Net cash used in operating activities	(18,797)	(14,543)
Cash flows from investing activities		
Purchase of property and equipment	(22)	(29)
Net cash used in investing activities	(22)	(29)
Cash flows from financing activities		
Proceeds from the exercise of stock options	1	206
Payment of finance lease principal	(462)	(402)
Proceeds from SVB loan	—	19,659
Payment of deferred offering costs	—	(192)
Net cash (used in) provided by financing activities	(461)	19,271
Net (decrease) increase in cash and cash equivalents	(19,280)	4,699
Cash and cash equivalents at the beginning of the period	217,502	39,929
Cash and cash equivalents at the end of the period	**$ 198,222**	**$ 44,628**
Supplemental disclosure		
Cash paid for interest on SVB loan	$ 563	$ —
Supplemental disclosure of noncash activities:		
Unpaid liabilities assumed in connection with Merger	$ 130	$ —
Purchase of property and equipment in accounts payable	$ 30	$ —
Issuance of warrants in conjunction with debt	$ —	$ 2,360
Unpaid deferred offering costs	$ —	$ 2,199

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

Humacyte, Inc.
Notes to Condensed Consolidated Financial Statements
(unaudited)

1. Organization and Description of Business

Organization

Humacyte, Inc. and subsidiary (the "Company") is pioneering the development and manufacture of off-the-shelf, universally implantable, bioengineered human tissues, complex tissue systems, and organs designed to improve the lives of patients and transform the practice of medicine. The Company is leveraging its technology platform to develop proprietary, bioengineered, acellular human tissues, complex tissue systems, and organs for use in the treatment of diseases and conditions across a range of anatomic locations in multiple therapeutic areas.

On August 26, 2021 (the "Closing Date"), Alpha Healthcare Acquisition Corp. ("AHAC") consummated a merger pursuant to a Business Combination Agreement, dated as of February 17, 2021 (the "Merger Agreement"), by and among Humacyte, Inc., a Delaware Corporation ("Legacy Humacyte"), AHAC and Hunter Merger Sub, Inc. ("Merger Sub"), a Delaware corporation and wholly owned subsidiary of AHAC. As contemplated by the Merger Agreement, Merger Sub merged with and into Legacy Humacyte, with Legacy Humacyte continuing as the surviving corporation and as a wholly owned subsidiary of AHAC (such transactions, the "Merger," and, collectively with the other transactions described in the Merger Agreement, the "Reverse Recapitalization"). On the Closing Date, AHAC changed its name to Humacyte, Inc. ("New Humacyte") and Legacy Humacyte changed its name to Humacyte Global, Inc. The Merger is accounted for as a reverse recapitalization in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP"), and under this method of accounting, AHAC is treated as the acquired company for financial reporting purposes and Legacy Humacyte is treated as the acquirer. Operations prior to the Merger are those of Legacy Humacyte.

Refer to Note 3 — Reverse Recapitalization for further details of the Merger.

Liquidity and Going Concern

Since its inception in 2004, the Company has generated no product revenue and has incurred net losses and negative cash flows from operations in each year. To date, the Company has financed its operations primarily through the sale of equity securities and convertible debt, proceeds from the Reverse Recapitalization, borrowings under loan facilities and, to a lesser extent, through governmental and other grants. At March 31, 2022 and December 31, 2021, the Company had an accumulated deficit of $434.4 million and $414.6 million, respectively. The Company's net losses were $19.8 million and $20.3 million for the three months ended March 31, 2022 and 2021, respectively. Net cash flows used in operating activities were $18.8 million and $14.5 million during the three months ended March 31, 2022 and 2021, respectively. Substantially all of the Company's net losses resulted from costs incurred in connection with the Company's research and development programs and from general and administrative costs associated with the Company's operations. The Company expects to incur substantial operating losses and negative cash flows from operations for the foreseeable future as the Company advances its product candidates.

As of March 31, 2022, the Company had cash and cash equivalents and short-term investments of $206.2 million. The Company believes its combined cash and cash equivalents and short-term investments on hand will be sufficient to fund operations, including clinical trial expenses and capital expenditure requirements, for at least 12 months from the issuance date of these interim financial statements.

Impact of COVID-19

The COVID-19 pandemic has caused many governments to implement measures to slow the spread of the outbreak, including shelter-in-place orders and the mandatory shutdown of certain businesses. The outbreak and government measures taken in response have had a significant impact, both direct and indirect, on the Company's business, as supply chains have been disrupted, and facilities and production have been suspended. The future progression of the pandemic and its effects on the Company's business and operations are uncertain. The COVID-19 pandemic may affect the Company's ability to initiate and complete preclinical studies, delay its clinical trials or future clinical trials, disrupt regulatory activities, or have other adverse effects on its business and operations. The pandemic has already caused significant disruptions in the financial markets, and may continue to cause such disruptions, which could impact the Company's ability to raise additional funds to support its operations. Moreover, the pandemic has significantly impacted economies worldwide and could result in adverse effects on the Company's business and operations.

To date, there have been no material financial impacts or impairment losses in the carrying values of the Company's assets as a result of the pandemic and the Company is not aware of any specific related event or circumstance that would require it to revise the estimates reflected in these financial statements. The extent to which the COVID-19 pandemic will directly or indirectly impact the Company's business, results of operations and financial condition, including current and future clinical trials and research and development costs, will depend on future developments that are highly uncertain, including as a result of new information that may emerge concerning COVID-19, the actions taken to contain or treat it, and the duration and intensity of the related economic impact of the pandemic.

2. Summary of Significant Accounting Policies

Basis of Presentation

The Company has prepared the accompanying financial statements in conformity with U.S. GAAP. The Company's condensed consolidated financial statements reflect the operations of the Company and its wholly owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Unless otherwise noted, the Company has retroactively adjusted all common and preferred share and related price information to give effect to the exchange ratio established in the Merger Agreement. Operations prior to the Merger are those of Legacy Humacyte.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates in the financial statements include stock-based compensation costs, right-of-use assets, accruals for research and development activities, contingent earnout liability, fair value of common stock warrants, redeemable convertible preferred stock and income taxes. The Company evaluates its estimates and assumptions on an ongoing basis using historical experience and other factors and adjusts those estimates and assumptions when facts and circumstances dictate. Actual results could differ from those estimates.

Unaudited Interim Condensed Consolidated Financial Statements

The accompanying interim condensed consolidated financial statements and the related footnote disclosures are unaudited. These unaudited interim financial statements have been prepared on the same basis as the audited financial statements, and in management's opinion, include all adjustments, consisting of only normal recurring adjustments, necessary for the fair statement of the Company's financial position as of March 31, 2022 and its results of operations for the three months ended March 31, 2022 and 2021, and cash flows for the three months ended March 31, 2022 and 2021. The results of operations for the three months ended March 31, 2022 are not necessarily indicative of the results to be expected for the year ended December 31, 2022 or any other period. The December 31, 2021 year-end condensed consolidated balance sheet was derived from audited annual financial statements but does not include all disclosures from the annual financial statements.

Humacyte, Inc.
Notes to Condensed Consolidated Financial Statements
(unaudited)

Certain information and footnote disclosures normally included in consolidated financial statements prepared in accordance with U.S. GAAP have been condensed or omitted pursuant to such rules and regulations. Accordingly, these condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements for the year ended December 31, 2021 and the related notes included in the Company's Annual Report on Form 10-K, filed with the SEC on March 29, 2022 (the "Annual Report"), which provides a more complete discussion of the Company's accounting policies and certain other information. There have been no significant changes to the significant accounting policies disclosed in Note 2 of the audited consolidated financial statements as of and for the years ended December 31, 2021 and 2020 included in the Company's Annual Report.

Segments

The Company operates and manages its business as one reportable and operating segment. The Company is developing proprietary, bioengineered, acellular human tissues, complex tissue systems, and organs that are designed to be used in the treatment of diseases and conditions across a range of anatomic locations in multiple therapeutic areas. The Company's chief executive officer, who is the chief operating decision maker, reviews financial information on an aggregate basis for purposes of evaluating financial performance and allocating resources.

Concentration of Credit Risk

Financial instruments which potentially subject the Company to concentrations of credit risk consist principally of cash and cash equivalents and short-term investments consisting of certificates of deposit ("CDs"). Total cash balances exceeded insured balances by the Federal Deposit Insurance Corporation ("FDIC") as of March 31, 2022 and December 31, 2021. The Company has cash equivalents that are invested in highly rated money market funds invested only in obligations of the U.S. government and its agencies.

As of both March 31, 2022 and December 31, 2021, the Company had approximately $10.0 million in CDs. These cash deposits are deposited at a bank that is a member of the Certificate of Deposit Account Registry Service ("CDARS"), in which large deposits are divided into smaller amounts and placed with other FDIC insured banks which are also members of the CDARS network. Those members issue CDs in amounts under $250,000, so that the entire deposit balance is eligible for FDIC insurance. As of both March 31, 2022 and December 31, 2021, the Company classified $2.0 million of its certificates of deposit as cash and cash equivalents and $8.0 million of its certificates of deposit as short-term investments on its condensed consolidated balance sheets.

During the three months ended March 31, 2022 and 2021, 100% of the Company's total revenue relates to an award it received from the Department of Defense ("DoD") in August 2017. As of March 31, 2022 and December 31, 2021 100% of the Company's accounts receivable relates to the DoD grant.

All of the Company's revenues were generated from grants from government and other entities located in the United States, for the three months ended March 31, 2022 and 2021.

Net Loss per Share Attributable to Common Stockholders

Basic net loss per share attributable to common stockholders is computed by dividing net loss attributable to common stockholders by the weighted-average number of common shares outstanding during the period without consideration of potentially dilutive common stock. Diluted net loss per share attributable to common stockholders reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock or resulted in the issuance of common stock that then shared in the earnings of the Company unless inclusion of such shares would be anti-dilutive. As the Company has only incurred losses, basic and diluted net loss per share is the same.

Humacyte, Inc.
Notes to Condensed Consolidated Financial Statements
(unaudited)

The potential shares of common stock that were excluded from the computation of diluted net loss per share for each period because including them would have had an antidilutive effect were as follows:

	March 31,	
	2022	2021
Shares issuable upon conversion of Series A redeemable convertible preferred stock	—	18,421,897
Shares issuable upon conversion of Series B redeemable convertible preferred stock	—	24,137,647
Shares issuable upon conversion of Series C redeemable convertible preferred stock	—	11,241,283
Shares issuable upon conversion of Series D redeemable convertible preferred stock	—	15,812,735
Exercise of options under stock plan	6,641,647	6,237,914
Warrants to purchase common stock	5,588,506	287,704

The 15,000,000 Contingent Earnout Shares, as defined in Note 3, are excluded from the anti-dilutive table for the three months ended March 31, 2022 as such shares are contingently issuable until the share price of the Company exceeds specified thresholds that have not yet been achieved, or upon the occurrence of a change in control.

Other Risks and Uncertainties

The Company is subject to risks and uncertainties common to early-stage companies in the biotechnology industry, including, but not limited to, successful discovery and development of its product candidates, the success of clinical trials and other studies for its product candidates, including for its ongoing V005 Phase II/III clinical trial and V007 Phase III clinical trial, the regulatory approval and commercialization of its HAVs and other product candidates, the expected size of the target populations for the Company's product candidates, the degree of market acceptance of the HAVs, if approved, the availability of third-party coverage and reimbursement, development by competitors of new technological innovations, the ability to manufacture HAVs and other product candidates in sufficient quantities, expectations regarding the Company's strategic partnerships, dependence on third parties, key personnel and the ability to attract and retain qualified employees, protection of proprietary technology and confidentiality of trade secrets, compliance with governmental regulations, the impact of the COVID-19 pandemic, the Company's implementation and maintenance of effective internal controls, and the ability to secure additional capital to fund operations and commercial success of its product candidates.

Product candidates currently under development will require extensive preclinical and clinical testing and regulatory approval prior to commercialization. These efforts require significant amounts of additional capital, adequate personnel, and infrastructure and extensive compliance-reporting capabilities. Even if the Company's commercialization efforts are successful, it is uncertain when, if ever, the Company will realize significant revenue from product sales, and the Company may depend on certain strategic relationships to distribute its products, including the Company's strategic partnership with Fresenius Medical Care Holdings, Inc., ("Fresenius Medical Care"), to sell, market and distribute its 6 millimeter HAV for certain specified indications outside the United States.

Recently Adopted Accounting Pronouncements

In May 2021, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Update ("ASU") No. 2021-04, "Earnings Per Share (Topic 260), Debt-Modifications and Extinguishments (Subtopic 470-50), Compensation-Stock Compensation (Topic 718), and Derivatives and Hedging-Contracts in Entity's Own Equity (Subtopic 815-40): Issuer's Accounting for Certain Modifications or Exchanges of Freestanding Equity-Classified Written Call Options" ("ASU 2021-04"). The FASB issued this update to clarify and reduce diversity in an issuer's accounting for modifications or exchanges of freestanding equity classified written call options (for example, warrants) that remain equity classified after modification or exchange. ASU 2021-04 is effective for all entities for fiscal years beginning after December 15, 2021, including interim periods within those fiscal years. An entity should apply the amendments prospectively to modifications or exchanges occurring after the effective date of the amendments. The Company adopted ASU 2021-04 as of January 1, 2022. The adoption of this ASU had no impact on the Company's financial statements and related disclosures.

In November 2021, the FASB issued ASU No. 2021-10, "Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance" ("ASU 2021-10") to improve financial reporting by requiring annual disclosures that increase the transparency of transactions with a government accounted for by applying a grant or contribution model by analogy, including (i) the types of transactions, (ii) an entity's accounting for those transactions, and (iii) the effect of those transactions on an entity's financial statements. ASU 2021-10 is effective for all entities within their scope for financial statements issued for annual periods beginning after December 15, 2021, and an entity can elect to apply the amendments in this guidance prospectively or retrospectively. The Company adopted ASU 2021-10 effective January 1, 2022, and does not expect a material impact to its annual consolidated financial statement disclosures.

3. Reverse Recapitalization

On August 26, 2021, Merger Sub, a wholly-owned subsidiary of AHAC, merged with Legacy Humacyte, with Legacy Humacyte surviving as a wholly-owned subsidiary of AHAC. At the effective time of the Merger:

- each outstanding share of Legacy Humacyte common stock was converted into approximately 0.26260 shares of the Company's common stock, par value $0.0001 ("Common Stock");

- each outstanding share of preferred stock of Legacy Humacyte was cancelled and converted into the aggregate number of shares of New Humacyte's common stock that would be issued upon conversion of the shares of Legacy Humacyte preferred stock based on the applicable conversion ratio immediately prior to the effective time, multiplied by approximately 0.26260; and

- each outstanding option or warrant to purchase Legacy Humacyte common stock was converted into an option or warrant, as applicable, to purchase a number of shares of Common Stock equal to the number of shares of Legacy Humacyte common stock subject to such option or warrant multiplied by approximately 0.26260, at an exercise price per share equal to the current exercise price per share for such option or warrant divided by approximately 0.26260;

in each case, rounded down to the nearest whole share.

In addition, upon the closing of the merger (the "Closing"), 2,500,000 Class B shares of AHAC (the "Founder Shares") automatically converted into shares of Common Stock, on a one-for-one basis.

Former holders of the Legacy Humacyte common stock and Legacy Humacyte preferred stock are eligible to receive up to an aggregate of 15,000,000 additional shares of Common Stock (the "Contingent Earnout Shares") in the aggregate, comprised of two equal tranches of 7,500,000 shares per tranche if the volume-weighted average closing sale price of the Common Stock is greater than or equal to $15.00 and $20.00, respectively, for any 20 trading days within any 30 consecutive trading day period. At the Closing on August 26, 2021, the Company recorded a liability ("Contingent Earnout Liability") of $159.4 million, based on the estimated fair value of the 15,000,000 Contingent Earnout Shares with a corresponding reduction of additional paid-in capital in the equity section of the Company's condensed consolidated balance sheet.

Concurrently with the execution of the Merger Agreement, AHAC entered into subscription agreements (the "Subscription Agreements") with certain investors (the "PIPE Investors"). Pursuant to the Subscription Agreements, the PIPE Investors purchased an aggregate of 17,500,000 shares of Common Stock (the "PIPE Shares") in a private placement at a price of $10.00 per share for an aggregate purchase price of $175 million (the "PIPE Financing"). The PIPE Financing was consummated in connection with the Closing.

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The number of shares of Common Stock outstanding immediately following the consummation of the Merger was:

	Shares	
Common stock of AHAC, outstanding prior to Merger	10,355,000	
Less redemption of AHAC shares	(3,008,551)	
Common stock of AHAC	7,346,449	
AHAC Founder Shares	2,500,000	
New Humacyte shares issued to PIPE Investors	17,500,000	
Issuance of common stock upon reverse recapitalization and PIPE Financing	27,346,449	
New Humacyte shares issued in Merger to Legacy Humacyte stockholders	75,656,935	(1)
Total shares of Common Stock immediately after Merger	103,003,384	

(1) Includes 69,613,562 shares of Common Stock issued upon conversion of Legacy Humacyte's redeemable convertible preferred stock.

The Merger is accounted for as a reverse recapitalization in accordance with U.S. GAAP. Under this method of accounting, AHAC is treated as the acquired company for financial reporting purposes and Legacy Humacyte is treated as the acquirer. This determination is primarily based on the fact that subsequent to the Merger, the Legacy Humacyte stockholders hold a majority of the voting rights of the combined company, Legacy Humacyte comprises all of the ongoing operations of the combined company, Legacy Humacyte comprises a majority of the carryover governing body of the combined company, and Legacy Humacyte's senior management comprises all of the senior management of the combined company. Accordingly, for accounting purposes, the Merger was treated as the equivalent of Legacy Humacyte issuing shares for the net assets of AHAC, accompanied by a recapitalization. The net assets of AHAC were stated at historical costs. No goodwill or other intangible assets were recorded. Operations prior to the Merger are those of Legacy Humacyte.

In connection with the Merger, the Company received $242.4 million in proceeds from the Merger and related PIPE Financing. The Company incurred $3.9 million of transaction costs, consisting of banking, legal, and other professional fees, of which $3.9 million was recorded as a reduction of proceeds to additional paid-in capital, and less than $0.1 million related to the Private Placement Warrants, which are classified as liabilities in the condensed consolidated balance sheets, was expensed in the condensed consolidated statements of operations and comprehensive loss during the three months ended September 30, 2021. All transaction costs were paid as of December 31, 2021. Legacy Humacyte assumed $15.2 million of liabilities, including PIPE Financing fees and legal fees, and $0.1 million of assets from AHAC. Of the $15.2 million of liabilities assumed from AHAC, as of March 31, 2022 and December 31, 2021, $0.1 million was included in accrued expenses.

4. Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market in an orderly transaction between market participants at the measurement date. Accounting Standards Codification ("ASC") 820, *Fair Value Measurement and Disclosures*, establishes a hierarchy whereby inputs to valuation techniques used in measuring fair value are prioritized, or the fair value hierarchy. There are three levels to the fair value hierarchy based on reliability of inputs, as follows:

- Level 1 — Observable inputs that reflect unadjusted quoted prices for identical assets or liabilities in active markets.
- Level 2 — Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

- Level 3 — Unobservable inputs in which little or no market data exists, therefore requiring the Company to develop its own assumptions.

The Company evaluates assets and liabilities subject to fair value measurements on a recurring basis to determine the appropriate level at which to classify them for each reporting period, utilizing valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible. The determination requires significant judgments to be made by the Company.

The Company's assets and liabilities that were measured at fair value on a recurring basis were as follows:

	Fair Value Measured as of March 31, 2022			
($ in thousands)	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents (money market funds)	$ 191,152	$ —	$ —	$ 191,152
Cash equivalents (certificates of deposit)	—	2,000	—	2,000
Short-term investments (certificates of deposit)	—	8,000	—	8,000
Total financial assets	$ 191,152	$ 10,000	$ —	$ 201,152
Liabilities:				
Contingent Earnout Liability	$ —	$ —	$ 100,402	$ 100,402
Private Placement Warrants liability	—	—	423	423
Total financial liabilities	$ —	$ —	$ 100,825	$ 100,825

	Fair Value Measured as of December 31, 2021			
($ in thousands)	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents (money market funds)	$ 208,821	$ —	$ —	$ 208,821
Cash equivalents (certificates of deposit)	—	2,000	—	2,000
Short-term investments (certificates of deposit)	—	8,000	—	8,000
Total financial assets	$ 208,821	$ 10,000	$ —	$ 218,821
Liabilities:				
Contingent Earnout Liability	$ —	$ —	$ 103,660	$ 103,660
Private Placement Warrants liability	—	—	497	497
Total financial liabilities	$ —	$ —	$ 104,157	$ 104,157

The following table presents a summary of the changes in the fair value of the Company's Level 3 financial instruments:

($ in thousands)	Contingent Earnout Liability	Private Placement Warrants
Fair value as of December 31, 2021	$ (103,660)	$ (497)
Change in fair value included in other income (expense), net	3,258	74
Fair value as of March 31, 2022	$ (100,402)	$ (423)

The fair value of the Contingent Earnout Liability and Private Placement Warrants (as defined in Note 8 — Stockholders' Equity (Deficit)) liability are based on significant unobservable inputs, which represent Level 3 measurements within the fair value hierarchy.

In determining the fair value of the Contingent Earnout Liability, the Company used the Monte Carlo simulation value model using a distribution of potential outcomes on a monthly basis over a 10-year period prioritizing the most reliable information available. The assumptions utilized in the calculation were based on the achievement of certain stock price milestones, including the current Common Stock price, expected volatility, risk-free rate, expected term and expected dividend yield (see Note 8 — Stockholders' Equity (Deficit)). Contingent earnout payments involve certain assumptions requiring significant judgment and actual results can differ from assumed and estimated amounts.

In determining the fair value of the Private Placement Warrants liability, the Company used the Monte Carlo simulation valuation model to estimate the fair value utilizing assumption including the current Company stock price, expected volatility, risk-free rate, expected term and expected dividend yield (see Note 8 — Stockholders' Equity (Deficit)).

The Company's money market funds are classified within Level 1 of the fair value hierarchy because they are valued using quoted market prices. Certificates of deposit are carried at amortized cost in the Company's condensed consolidated balance sheets, which approximates their fair value based on Level 2 inputs. The carrying values of other receivables, accounts payable and accrued expenses as of March 31, 2022 and December 31, 2021 approximated their fair values due to the short-term nature of these items.

5. Property and Equipment, Net

Property and equipment, net consist of the following:

($ in thousands)	March 31, 2022	December 31, 2021
Scientific equipment[1]	$ 27,673	$ 27,641
Computer equipment	155	155
Software	335	335
Furniture and fixtures	988	988
Leasehold improvements	26,355	26,355
	55,506	55,474
Accumulated depreciation	(21,966)	(20,440)
Property and equipment, net	$ 33,540	$ 35,034

(1) Includes $3.6 million as of both March 31, 2022 and December 31, 2021 related to scientific equipment not placed into service and therefore not being depreciated.

Depreciation expense totaled $1.5 million and $1.6 million for the three months ended March 31, 2022 and 2021, respectively. All long-lived assets are maintained in the United States.

6. Accrued Expenses

Accrued expenses consisted of the following:

($ in thousands)	March 31, 2022	December 31, 2021
Accrued external research, development and manufacturing costs	$ 2,348	$ 2,520
Accrued employee compensation and benefits	2,781	3,943
Accrued professional fees	331	294
Total	$ 5,460	$ 6,757

7. Debt

On March 30, 2021, the Company entered into a term loan agreement with Silicon Valley Bank and SVB Innovation Credit Fund VIII, L.P., as amended in June 2021 and September 2021 (the "Loan Agreement"), which provides a term loan facility of up to $50.0 million with a maturity date of March 1, 2025. The Company's obligations under the Loan Agreement are secured by substantially all of its assets except for its intellectual property. The Loan Agreement contains certain customary covenants, including, but not limited to, those relating to additional indebtedness, liens, asset divestitures, and affiliate transactions. If a minimum liquidity amount is not maintained, 50% of the outstanding principal and interest will become cash collateralized. As of March 31, 2022, the Company was in compliance with all covenants. The Company may use the proceeds of borrowings under the Loan Agreement as working capital and to fund its general business requirements.

The Loan Agreement provides that the term loans will be distributed in tranches. The initial term loan tranche of $20.0 million was drawn on March 31, 2021, and on October 13, 2021, the Company borrowed an additional $10.0 million under the Loan Agreement. Borrowings under the Loan Agreement are accounted for net of issuance costs which are being accreted to interest expense over the term of the loan using the effective interest method. As of March 31, 2022, two subsequent $10.0 million term loan tranches were eligible to be disbursed at the request of the Company during specified draw periods between now and 2023 if certain business milestones and other requirements are met by the dates specified in the Loan Agreement. Borrowings bear interest at the greater of 7.5% or the Wall Street Journal Prime Rate plus 4.25% (7.75% as of March 31, 2022). Interest only payments on the principal amount outstanding are due monthly beginning in the first month after the loan is dispersed. Repayment of principal may begin as soon as July 1, 2023 under the level of borrowing outstanding at March 31, 2022, and no later than April 1, 2024 if the remaining two loan tranches are drawn. The term loans may only be prepaid in full, and such prepayment requires 30 days' advance notice and was subject initially to a prepayment fee of 3.00% that was stepped down to 2.00% after March 30, 2022 (with a further step down to 1.00% after March 30, 2023). The Company is not obligated to pay a prepayment fee if the Company makes a prepayment after March 30, 2024.

In connection with the Loan Agreement, the Company granted warrants to the lenders to purchase shares of Common Stock at an exercise price of $10.28 per share, of which 287,704 warrants were immediately exercisable. The warrants are classified within stockholders' equity as the settlement of the warrants is indexed to the Company's own stock. The Company recognized the fair value of the warrants immediately exercisable within stockholders' equity using a Black-Scholes valuation model at issuance.

At issuance, the Company initially determined that the funding of an additional tranche was not probable, and therefore no value was ascribed to the remaining 123,302 warrants that were only exercisable upon the funding of the additional tranche. As a result of the Company's additional $10.0 million borrowings under the Loan Agreement on October 13, 2021, the warrants to purchase the additional 123,302 shares of Common Stock became exercisable at an exercise price of $10.28 per share and the value of the warrants was recorded as of that date. The additional warrants are classified within stockholders' equity using a Black-Scholes valuation model, as the settlement of the warrants is indexed to the Company's own stock.

As of March 31, 2022, the fair value of warrants ($3.3 million), a 5% final payment fee ($1.5 million) and debt issuance costs ($0.3 million) are being accreted to interest expense over the term of the loan using the effective interest method.

SVB loan payable and net discount or premium balances are as follows:

($ in thousands)	March 31, 2022
Principal amount of SVB loan payable	$ 30,000
Final payment amount of SVB loan payable	1,500
Net premium associated with accretion of final payment and other debt issuance costs	(3,761)
SVB loan payable, current and noncurrent	27,739
Less SVB loan payable, current portion	—
SVB loan payable, noncurrent portion	$ 27,739

Future minimum payments of principal on the Company's outstanding variable rate borrowings as of March 31, 2022 are as follows:

Year ending December 31:	*($ in thousands)*
2022 (remainder)	$ —
2023	10,000
2024	17,143
2025	2,857
Total future payments	$ 30,000

8. Stockholders' Equity (Deficit)

Redeemable Convertible Preferred Stock

Immediately prior to the Merger, Legacy Humacyte had outstanding series A redeemable convertible preferred stock, series B redeemable convertible preferred stock, series C redeemable convertible preferred stock and series D redeemable convertible preferred stock, which are collectively referred to as "redeemable convertible preferred stock."

In connection with the Merger, all previously issued and outstanding redeemable convertible preferred stock was converted into an equivalent number of shares of Common Stock of the Company on a one-for-one basis, then multiplied by the exchange ratio pursuant to the Merger Agreement and the amounts were reclassified as additional paid-in capital.

Common Stock

On August 26, 2021, the Merger and related PIPE Financing was consummated and the Company issued 27,346,449 shares of common stock for proceeds of $242.4 million. The Company incurred $3.9 million of transaction costs, consisting of banking, legal, and other professional fees. Legacy Humacyte assumed $15.2 million of liabilities, including PIPE Financing fees and legal fees, and $0.1 million of assets from AHAC. Immediately following the Merger, there were 103,003,384 shares of Common Stock outstanding with a par value of $0.0001.

As of March 31, 2022, the Company's Second Amended and Restated Certificate of Incorporation authorized the Company to issue 250,000,000 shares of Common Stock. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding or reserved for issuance) by the affirmative vote of the holders of a majority of the capital stock of the Company entitled to vote and may require a separate class vote of the Common Stock.

The holders of Common Stock are entitled to receive dividends from time to time as may be declared by the Company's board of directors. Through March 31, 2022, no dividends have been declared.

The holders of Common Stock are entitled to one vote for each share held with respect to all matters voted on by the common stockholders of the Company.

In the event of a reorganization of the Company, after payment to the preferred stockholders of their liquidation preferences, holders of Common Stock are entitled to share ratably in all remaining assets of the Company.

As of March 31, 2022, the Company had reserved Common Stock for future issuances as follows:

	March 31, 2022
Common stock reserved for Contingent Earnout Shares	15,000,000
Exercise of options under stock plans	6,641,647
Issuance of options under stock plans	7,487,556
Shares available for grant under ESPP	1,030,033
Warrants to purchase Common Stock	5,588,506
	35,747,742

Preferred Stock

The Company's Second Amended and Restated Certificate of Incorporation provides the Company's board of directors with the authority to issue $0.0001 par value preferred stock in one more series and to establish from time to time the number of shares to be included in each such series, by adopting a resolution and filing a certification of designations. Voting powers, designations, powers, preferences and relative, participating, optional, special and other rights shall be stated and expressed in such resolutions. There were 20,000,000 shares designated as preferred stock and none were outstanding as of March 31, 2022 and December 31, 2021.

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Warrants

There were no issuances, exercises or expirations of warrants during the three months ended March 31, 2022. During the three months ended March 31, 2021 there were 32,961 of warrants exercised that were issued in conjunction with a long-term debt agreement entered into on March 2006 and paid in full during 2011. See Note 7 — Debt for a discussion of common stock warrants issued in conjunction with the Company's Loan Agreement in 2021 (such warrants, "Legacy Humacyte Common Stock Warrants"). There were no expirations of warrants during the three months ended March 31, 2021.

The Company had the following common stock warrants outstanding as of March 31, 2022 and December 31, 2021:

	Common Stock Warrants Outstandi
Legacy Humacyte Common Stock Warrants	411,0(
Private Placement Warrants	177,5(
Public Warrants	5,000,0(
Total Common Stock Warrants	5,588,5(

In connection with the Merger, the Company assumed 5,000,000 publicly-traded warrants ("Public Warrants") and 177,500 private placement warrants issued to AHAC Sponsor LLC (the "Sponsor"), Oppenheimer & Co. Inc. and Northland Securities, Inc, in connection with AHAC's initial public offering ("Private Placement Warrants" and, together with the Public Warrants, the "Common Stock Warrants"). The Common Stock Warrants entitle the holder to purchase one share of Common Stock at an exercise price of $11.50 per share. The Company evaluated the Common Stock Warrants to determine the appropriate financial statement classification upon the consummation of the Merger. The Common Stock Warrants are not mandatorily redeemable and are considered to be freestanding instruments as they are separately exercisable into common shares. As such, the Common Stock Warrants were not classified as liabilities under FASB ASC Topic 480, *Distinguishing Liabilities from Equity* ("ASC 480"). The Company then evaluated the Common Stock Warrants under FASB ASC Topic 815, *Derivatives and Hedging*.

Public Warrants

The Public Warrants are publicly traded and are exercisable for cash unless certain conditions occur, such as the failure to have an effective registration statement related to the shares issuable upon exercise or redemption by the Company under certain conditions, at which time the warrants may be eligible for a cashless exercise. The Public Warrants may only be exercised for a whole number of shares and will expire five years after the completion of the Merger. The Public Warrants became exercisable 30 days after the completion of the Merger.

The Public Warrants are considered to be "indexed to the Company's own stock". The agreement provides that in the event of a tender or exchange offer made to and accepted by holders of more than 50% of the outstanding shares of the Company's Common Stock, all holders of the Common Stock Warrants (both the Public Warrants and the Private Placement Warrants) would be entitled to receive cash for all of their Common Stock Warrants. As the Company has a single class of Common Stock, a qualifying cash tender offer of more than 50% of the Company's Common Stock will always result in a change in control and would not preclude permanent equity classification of the Public Warrants. Based on this evaluation, the Company concluded that the Public Warrants meet the criteria to be classified within stockholders' equity. The Public Warrants were initially recognized as equity on the Closing Date at a fair value of $2.80 per share.

Private Placement Warrants

The Private Placement Warrants are non-redeemable for cash so long as they are held by the initial purchasers or their permitted transferees. If the Private Placement Warrants are held by someone other than the initial purchasers or their permitted transferees, the Private Placement Warrants are redeemable by the Company and exercisable by such holders on the same basis as the Public Warrants.

The agreement governing the Common Stock Warrants includes a provision, the application of which could result in a different settlement value for the Private Placement Warrants depending on their holder. Because the holder of an instrument is not an input into the pricing of a fixed-for-fixed option on the Company's ordinary shares, the Private Placement Warrants are not considered to be "indexed to the Company's own stock" and therefore are not classified in stockholders' equity. As the Private Placement Warrants meet the definition of a derivative, the Company recorded these warrants as liabilities on the condensed consolidated balance sheet at fair value, with subsequent changes in their respective fair values recognized in the condensed consolidated statements of operations and comprehensive loss at each reporting date.

The Private Placement Warrants were initially recognized as a liability on the Closing Date, at a fair value of $0.6 million, and the liability was remeasured to an estimated fair value of $0.5 million as of December 31, 2021. The Private Placement Warrant liability was remeasured to a fair value of $0.4 million as of March 31, 2022, resulting in a non-cash gain of $0.1 million for the three months ended March 31, 2022, classified within Change in fair value of common stock warrant liabilities in the condensed consolidated statements of operations and comprehensive loss.

The Private Placement Warrants were valued using the following assumptions under the Monte Carlo simulation value model:

	March 31, 2022	December 31, 2021
Market price of public stock	$ 7.06	$ 7.25
Exercise price	$ 11.50	$ 11.50
Expected term (years)	4.41	4.65
Expected share price volatility	55.8 %	61.0 %
Risk-free interest rate	2.43 %	1.21 %
Estimated dividend yield	0 %	0 %

Contingent Earnout Liability

Following the Closing, former holders of Legacy Humacyte common and preferred shares may receive up to 15,000,000 additional shares of Common Stock in the aggregate, in two equal tranches of 7,500,000 shares of Common Stock per tranche. The first and second tranches are issuable if the closing volume weighted average price ("VWAP") per share of Common Stock quoted on Nasdaq (or the exchange on which the shares of Common Stock are then listed) is greater or equal to $15.00 and $20.00, respectively, over any 20 trading days within any 30 consecutive trading day period.

Upon the Closing, the contingent obligation to issue Contingent Earnout Shares was accounted for as a liability because the triggering events that determine the number of Contingent Earnout Shares required to be issued include events that are not solely indexed to the Common Stock. The Contingent Earnout Shares are subsequently remeasured at each reporting date with changes in fair value recorded as a component of other (expense) income, net in the condensed consolidated statements of operations and comprehensive loss. The estimated fair value of the total Contingent Earnout Shares at the Closing on August 26, 2021 was $159.4 million based on a Monte Carlo simulation valuation model using a distribution of potential outcomes on a monthly basis over a ten-year period using the most reliable information available. The estimated fair value of the total Contingent Earnout Shares at December 31, 2021 was $103.7 million.

The Contingent Earnout Liability was remeasured to a fair value of $100.4 million as of March 31, 2022, resulting in the recording of a non-cash gain of $3.3 million for the three months ended March 31, 2022, classified within Change in fair value of contingent earnout liability in the condensed consolidated statements of operations and comprehensive loss. The assumptions utilized in the calculations of fair value were based on the achievement of certain stock price milestones, including the current Common Stock price, expected volatility, risk-free rate, expected term and expected dividend yield.

Assumptions used in the valuations are described below:

	March 31, 2022	December 31, 2021
Current stock price	$ 7.06	$ 7.25
Expected share price volatility	82.7 %	85.8 %
Risk-free interest rate	2.32 %	1.52 %
Estimated dividend yield	0.0 %	0 %
Expected term (years)	10.00	10.00

9. Stock-based Compensation

At Closing, the 2021 Long-Term Incentive Plan, (the "2021 Plan"), and the 2021 Employee Stock Purchase Plan, (the "ESPP"), became effective. As of March 31, 2022, 7,487,556 and 1,030,033 shares of Common Stock were available under the 2021 Plan and ESPP, respectively. The 2021 Plan and ESPP provide that on January 1 of each year commencing January 1, 2022, the 2021 Plan and the ESPP reserve will automatically increase in an amount equal to the lesser of (a) 5% and 1%, respectively, of the number of shares of the Company's Common Stock outstanding on December 31 of the preceding year and (b) a number of shares of Common Stock determined by the Company's board of directors. In December 2021, the Company's board of directors determined that there would be no automatic increase in the number of shares reserved under the 2021 Plan or the ESPP on January 1, 2022.

Under the 2021 Plan, the Company can grant non-statutory stock options ("NSOs"), incentive stock options ("ISOs), stock appreciation rights, restricted stock, restricted stock units, unrestricted stock, performance awards and other forms of awards. Under the ESPP, when and if implemented, eligible employees will be permitted to purchase shares of the Company's Common Stock at the lower of 85% of the closing trading price per share of the Company's Common Stock on the first day of the offering or 85% of the closing trading price per share on the exercise date, which will occur on the last day of each offering.

Prior to the Closing, Legacy Humacyte had two equity incentive plans, the 2015 Omnibus Incentive Plan, as amended (the "2015 Plan"), and the 2005 Stock Option Plan (the "2005 Plan"). As a result of the Merger, no further awards may be granted under either the 2015 Plan or the 2005 Plan. All awards previously granted and outstanding as of the effective date of the Merger, were adjusted to reflect the impact of the Merger as set forth in the Merger Agreement, but otherwise remain in effect pursuant to their original terms. The shares underlying any award granted under the 2021 Plan or the 2015 Plan that are forfeited, cancelled or reacquired by the Company prior to vesting, that expire or that are paid out in cash rather than shares will become available for grant and issuance under the 2021 Plan. As of March 31, 2022, 5,700,883 and 517,506 shares of Common Stock remain reserved for outstanding options issued under the 2015 Plan and 2005 Plan, respectively.

The Company's stock option plans allow for the grant of awards that the Company believes aid in aligning the interests of award recipients with those of its stockholders. The Company's board of directors or compensation committee determines the specific terms of equity incentive grants, including the exercise price per share and vesting period for option awards. Option awards are granted with an exercise price equal to the fair market value of the Company's Common Stock at the date of grant.

The Company has granted options that include either a service-based or performance-based vesting condition, or both, and a 10-year contractual term. The service-based vesting condition for the plans is generally satisfied over 36 to 48 months from the date of grant. The performance-based vesting conditions are satisfied upon the attainment of certain product development milestones. The Company recognizes stock-based compensation expense based on the grant date fair value of the awards measured using the Black-Scholes option pricing model. Compensation expense related to awards with service-based vesting conditions is recognized on a straight-line basis over the requisite service period. Option valuation models, including the Black-Scholes option-pricing model, require the input of highly subjective assumptions, and changes in the assumptions used can materially affect the grant-date fair value of an award. These assumptions include the risk-free rate of interest, expected dividend yield, expected volatility, the expected term of the award, and the fair value of the underlying Common Stock on the date of grant. Forfeitures are accounted for as they occur.

Compensation expense related to awards with performance-based vesting conditions is recognized over the requisite service period using the accelerated attribution method to the extent achievement of the performance-based condition is probable. The Company does not recognize compensation expense related to awards with performance-based vesting conditions until it is probable that the performance-based vesting condition will be achieved. Forfeitures are accounted for as they occur.

Option awards under the Company's option plans generally provide for accelerated vesting of the unvested portions of any option award in the event of an involuntary termination, as such term is defined in the relevant stock option agreement, of a grantee's employment during the period that commences 30 days prior to the effective date of a corporate transaction and that ends 12 months following the effective date of such transaction. Additionally, the Company's board of directors may, in its sole discretion, accelerate the vesting of any unvested stock options in the event of a corporate transaction.

The Company estimated the fair value of the stock options on the date of grant using the following assumptions in the Black-Scholes option-pricing model:

	Three Months Ended March 31,	
	2022	2021
Estimated dividend yield	0 %	0 %
Expected share price volatility (weighted average and range, if applicable)	100 %	91.5% (91.5% to 92.1%)
Risk-free interest rate (weighted average and range, if applicable)	1.89 %	0.62% (0.62% to 0.97%)
Expected term of options (in years)	6.25	6.00

- *Fair Value of Common Stock.* Prior to the Merger, as the Company's common stock was not publicly traded, the fair value of the shares of its common stock underlying the options was determined by the Company's board of directors with input from management, after considering independent third-party valuation reports. Subsequent to the Merger, the fair value of the Common Stock has been determined based on the closing price of the shares on the Nasdaq market.
- *Expected Term.* The expected term represents the period that stock options are expected to be outstanding. The Company calculated the expected term using the simplified method for options, which is available where there is insufficient historical data about exercise patterns and post-vesting employment termination behavior. The simplified method is based on the vesting period and the contractual term for each grant, or for each vesting-tranche for awards with graded vesting. The mid-point between the vesting date and the maximum contractual expiration date is used as the expected term under this method. For awards with multiple vesting-tranches, the times from grant until the mid-points for each of the tranches may be averaged to provide an overall expected term.
- *Expected Volatility.* The expected volatility was based on the historical share volatility of several publicly traded peer companies over a period of time equal to the expected term of the options, as the Company has a limited trading history to use the volatility of its Common Stock. For purposes of identifying these peer companies, the Company considered the industry, stage of development, size and financial leverage of potential comparable companies.
- *Risk-Free Interest Rate.* The risk-free interest rate was based on the yields of U.S. Treasury zero-coupon securities with maturities similar in duration to the expected term of the options.
- *Expected Dividend Yield.* The Company has not paid dividends on its Common Stock nor does it expect to pay dividends in the foreseeable future. Accordingly, the Company has estimated the dividend yield to be zero.

At March 31, 2022, there were 7,487,556 options remaining available for grant under the 2021 Plan. The Company has sufficient authorized and unissued shares to make all issuances currently available under the 2021 Plan.

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The following tables show a summary of stock-based compensation expense included in the condensed consolidated statements of operations and comprehensive loss for the three months ended March 31, 2022 and 2021, and remaining unrecognized cost as of March 31, 2022 and December 31, 2021:

($ in thousands)	Three Months Ended March 31, 2022	2021
Research and development	$ 281	$ 636
General and administrative	1,266	1,892
Total	$ 1,547	$ 2,528

($ in thousands)	March 31, 2022	December 31, 2021
Unrecognized share-based compensation cost	$ 10,584	$ 13,346
Expected weighted average period compensation costs to be recognized (years)	2.0	2.3

A summary of option activity under the Company's stock option plans during the three months ended March 31, 2022 is presented below:

	Number of Shares	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (in thousands)
Options outstanding at December 31, 2021	6,711,192	$ 7.48	5.3	$ 8,276
Granted	113,700	$ 5.90		
Exercised	(926)	$ 1.15		
Forfeited	(182,319)	$ 9.50		
Options outstanding at March 31, 2022	6,641,647	$ 7.40	5.1	$ 8,028
Vested and exercisable, March 31, 2022	4,645,602	$ 6.30	3.4	$ 7,896
Vested and expected to vest, March 31, 2022	6,641,647	$ 7.40	5.1	$ 8,028

10. Income Taxes

The Company's tax provision for interim periods is determined using an estimate of its annual effective tax rate, adjusted for discrete items, if any, that arise during the period. Each quarter, the Company updates its estimate of the annual effective tax rate and, if the estimated annual effective tax rate changes, the Company makes a cumulative adjustment in such period. No such adjustment was made as of March 31, 2022. The Company's effective federal tax rate for the three months ended March 31, 2022 and 2021 was 0%, primarily as a result of estimated tax losses for the fiscal year to date offset by the increase in the valuation allowance in the net operating loss carryforwards.

The Company did not record any income tax expense or benefit during the three months ended March 31, 2022 and 2021. The Company has a net operating loss and has provided a valuation allowance against net deferred tax assets due to uncertainties regarding the Company's ability to realize these assets. All losses before income taxes arose in the United States.

11. Commitments and Contingencies

Patent License Agreements

Duke University

In March 2006, the Company entered into a license agreement with Duke University ("Duke"), which was subsequently amended in 2011, 2014, 2015, 2018, 2019 and January 2022. Under this license agreement, Duke granted the Company a worldwide, exclusive, sublicensable license to certain patents related to decellularized tissue engineering, referred to as the patent rights, as well as a non-exclusive license to use and practice certain know-how related to the patent rights. The relevant licensed patent on decellularization of tissue expired in 2021. The Company has agreed to use commercially reasonable efforts to develop, register, market and sell products utilizing the patent rights, referred to as the licensed products. Any services provided to a third party utilizing licensed products are referred to as licensed services. The Company has also agreed to meet certain benchmarks in its development efforts, including as to development events, clinical trials, regulatory submissions and marketing approval, within specified timeframes. Under the license agreement, Duke retains the right to use the patent rights for its own educational and research purposes, and to provide the patent rights to other non-profit, governmental or higher-learning institutions for non-commercial purposes without paying royalties or other fees.

In connection with the Company's entry into the license agreement, the Company granted equity consideration to Duke in the form of 52,693 shares of the Company's common stock. Under the license agreement, the Company also agreed to pay Duke:

- a low single-digit percentage royalty on eligible sales of licensed products and licensed services, plus a low double-digit percentage of any sublicensing revenue;
- an annual minimum royalty beginning in 2012, which increases in the calendar year immediately following the first commercial sale of licensed products or licensed services (whichever occurs first); and
- an additional amount in license fees, as certain milestones are met.

The license agreement remains effective until the later of (i) the last of the patent rights expires or (ii) four years after the Company's first commercial sale, unless terminated earlier. Either party may terminate the agreement for fraud, willful misconduct or illegal conduct, or uncured material breach. Duke may terminate the agreement if the Company becomes insolvent. Duke may also terminate the license, convert the license into a non-exclusive license or seek assignment of any sublicense if the Company fails to reach diligence milestones within the applicable time period. If the Company abandons any claim, patent or patent application, its rights under the license with respect to such patent rights will be terminated in the territory in which the Company abandons such rights. The Company may terminate the license agreement unilaterally upon three months' prior notice to Duke. The Company agrees to indemnify Duke against certain third-party claims. Payments to Duke under the license agreement were immaterial during the periods presented.

Yale University

In February 2014, the Company entered into a license agreement with Yale University ("Yale") that granted the Company a worldwide license to the patents related to coatings for small-diameter vessels to inhibit clotting. The license granted under the agreement is exclusive in the field of engineered vascular tissues and tissues and extracellular matrix-based implants used for vascular repair, reconstruction and replacement (provided that all uses are vascular tissues within the range of 1 – 12mm in diameter), except that it is subject to Yale's non-exclusive right, on behalf of itself and all other non-profit academic institutions, to use the licensed products for research, teaching, and other non-commercial purposes. The Company has agreed to pay to Yale an annual maintenance fee, increasing between the first and fourth anniversaries of the agreement up to a maximum of less than $0.1 million per year for this license.

Humacyte, Inc.
Notes to Condensed Consolidated Financial Statements
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In August 2019, the Company entered into a license agreement with Yale, that granted the Company a worldwide license to the patents related to Bioartificial Vascular Pancreas ("BVP"). The license granted under the agreement is exclusive in the field of engineered vascular tissues that deliver pancreatic islet cells to patients, except that it is subject to Yale's non-exclusive right, on behalf of itself and all other non-profit academic institutions, to use the licensed products for research, teaching, and other non-commercial purposes. The Company has agreed to pay to Yale an annual maintenance fee, increasing between the first and fourth anniversaries of the agreement up to a maximum of less than $0.1 million per year for this license.

In August 2019, the Company entered into a license agreement with Yale that granted the Company a worldwide license to the patents related to tubular prostheses. The license granted under the agreement is exclusive in the field of engineered urinary conduits, engineered tracheas/airways, and engineered esophagi, except that it is subject to Yale's non-exclusive right, on behalf of itself and all other non-profit academic institutions, to use the licensed products for research, teaching, and other non-commercial purposes. The Company has agreed to pay to Yale an annual maintenance fee, increasing between the first and fourth anniversaries of the agreement up to a maximum of less than $0.1 million per year for this license.

The Company has agreed to use reasonable commercial efforts to develop and commercialize the licensed patents and any licensed products and methods, and to use reasonable efforts to make the licensed products available to patients in low and low-middle income countries. The Company is also obligated to provide Yale periodically an updated and revised copy of its plan for each license, which must indicate progress of its development and commercialization. The Company may also sublicense the Company's rights without Yale's prior written consent, but such sublicense is subject to certain conditions.

In connection with its entry into the license agreement, the Company paid Yale upfront cash fees. The Company has also agreed to pay Yale:

- annual maintenance fees, increasing between the first anniversary of the agreement until the fifth anniversary for the coating and BVP licenses and until the fourth anniversary for the tubular prostheses license up to a maximum of less than $0.1 million per year;
- milestone payments upon achievement of certain regulatory and commercial milestones of $0.2 million and $0.6 million, respectively;
- a low single-digit percentage royalty on worldwide net sales, subject to reductions for third-party license fees; and
- a low double-digit percentage of sublicensing income.

If the Company or any of its future sublicensees bring a patent challenge against Yale or assists another party in bringing a patent challenge against Yale, the license fees described above will be subject to certain increases and penalties.

The agreements expire on a country-by-country basis on the date on which the last of the patents in such country expires, lapses or is declared invalid. Yale may terminate the agreements if the Company fails to (i) provide written diligence reports, (ii) provide commercially reasonable diligence plans, (iii) implement the plans in accordance with the obligations under the agreements, or (iv) reach certain research and development milestones within the scheduled timeframe set forth in the agreements; however, any such termination right would be limited in scope to the country to which such failure relates. Yale may also terminate for the Company's non-payment, uncured material breach, failure to obtain adequate insurance, bringing or assisting in bringing of a patent challenge against Yale, abandonment of the research and development of the Company's products or insolvency. The Company may terminate the license agreements (i) on 90 days' prior written notice to Yale, provided the Company is not in breach of the license agreements and has made all required payments to Yale thereunder and (ii) on written notice to Yale following an uncured material breach. With respect to the license agreements related to small-diameter vessels and BVP, the Company's rights under the license agreements will also terminate automatically with respect to a patent application or patent within the licensed patents in a specified country if, upon receipt of written notice from Yale, the Company does not agree to pay the patent filing, prosecution and maintenance fees incurred by Yale for such patent applications or patents in the specified country. Under certain circumstances, Yale may, at its option, convert the exclusive licenses to non-exclusive licenses if the Company declines to initiate certain infringement or interference proceedings with respect to the licensed patents. The Company has agreed to indemnify Yale against certain third-party claims. Payments to Yale under the license agreement were immaterial during the periods presented.

Legal Matters

The Company currently is not aware of any legal proceedings or claims that management believes will have, individually or in the aggregate, a material adverse effect on the Company's business, financial condition, results of operations, or cash flows.

Indemnification

To the extent permitted under Delaware law, the Company has agreed to indemnify its directors and officers for certain events or occurrences while the director or officer is, or was serving, at the Company's request in such capacity. The indemnification period covers all pertinent events and occurrences during the director's or officer's service. The maximum potential amount of future payments the Company could be required to make under these indemnification arrangements is not specified in such arrangements; however, the Company has director and officer insurance coverage that is intended to reduce its exposure and enable the Company to recover a portion of any potential future amounts the Company could be required to make. To date, the Company has not incurred any costs as a result of such obligations and has not accrued any liabilities related to such obligations in the condensed consolidated financial statements.

12. Related Party Transactions

Fresenius Medical Care investments and distribution agreement

In June 2018, the Company completed a $150 million financing transaction pursuant to which Fresenius Medical Care purchased shares of series D redeemable convertible preferred stock that at the Closing of the Merger converted into 15,812,735 shares of the Company's common stock. In August 2021, Fresenius Medical Care invested $25 million as part of the PIPE Financing and received an additional 2.5 million shares of the Company's common stock.

In addition, the Company entered into a distribution agreement with Fresenius Medical Care in June 2018 which, as amended as of February 16, 2021, granted Fresenius Medical Care and its affiliates exclusive rights to develop outside the United States and European Union (the "EU") and commercialize outside of the United States the Company's 6 millimeter x 42 centimeter HAV and all improvements thereto, and modifications and derivatives thereof (including any changes to the length, diameter or configuration of the foregoing), for use in vascular creation, repair, replacement or construction, including renal replacement therapy for dialysis access, the treatment of peripheral arterial disease, and the treatment of vascular trauma, but excluding coronary artery bypass graft, pediatric heart surgery, or adhering pancreatic islet cells onto the outer surface of the distribution product for use in diabetic patients. Within the United States, Fresenius Medical Care will collaborate with the Company in its commercialization of the product in the field, including adoption of the distribution product as a standard of care in patients for which such use is supported by clinical results and health economic analyses.

The Company is responsible for developing and seeking regulatory approval for the distribution product in the field in the United States. For countries outside the United States, the parties agreed to use commercially reasonable efforts to satisfy certain agreed minimum market entry criteria for the distribution product in the field in such country. For the EU, once such criteria have been satisfied for the applicable country, or if the parties otherwise mutually agree to obtain regulatory approval for the distribution product in the field in the applicable country, the Company agreed to use commercially reasonable efforts to obtain such regulatory approval (other than pricing approval), and Fresenius Medical Care agreed to use commercially reasonable efforts to obtain the corresponding pricing approval. For the rest of the world (i.e., outside the United States and the EU), once such criteria have been satisfied for the applicable country, or if the parties otherwise mutually agree to obtain regulatory and pricing approval for the distribution product in the field in the applicable country, Fresenius Medical Care agreed to use commercially reasonable efforts to obtain such approvals, and the Company agreed to use commercially reasonable efforts to support Fresenius Medical Care in its efforts.

Under the distribution agreement, the Company grants an exclusive, sublicensable license to Fresenius Medical Care under the patents, know-how and regulatory materials controlled by the Company during the term to commercialize the distribution product in the field outside the United States, subject to the Company's retained rights to carry out its obligations under the distribution agreement. The Company also grants a non-exclusive, sublicensable license to Fresenius Medical Care under the patents, know-how and regulatory materials controlled by the Company during the term to develop the distribution product in accordance with the terms of the distribution agreement. In addition, the Company grants to Fresenius Medical Care, among other things, a perpetual, irrevocable, non-exclusive sublicensable license under the patents and know-how that primarily relate to the distribution product or its manufacture and that were created, conceived or developed solely or jointly by or on behalf of Fresenius Medical Care in the performance of its activities under the distribution agreement.

The distribution agreement provides that the Company will own all know-how and patents that primarily relate to the distribution product or its manufacture that are created, conceived or developed by or on behalf of either party in the performance of activities under the distribution agreement. Ownership of all other know-how, patents, materials and other intellectual property created, conceived or developed during the performance of activities under the distribution agreement will be determined in accordance with U.S. patent laws for determining inventorship.

The Company is obligated to make payments to Fresenius Medical Care based on a share of aggregate net sales by or on behalf of the Company of the distribution product in the United States in the field. Such revenue-share payments will be a percentage of net sales in the low double digits, without regard to the calendar year in which such net sales are attributable, until such time that the Company has paid to Fresenius Medical Care a certain total amount, at which time the revenue-share will decrease to a percentage of net sales in the mid-single digits. The amounts that Fresenius Medical Care will be obligated to pay the Company under the distribution agreement for sales of the distribution product in the field outside of the United States will vary. Fresenius Medical Care agreed to pay the Company initially, on a country-by-country basis for sales outside of the United States, the amount equal to the average cost of manufacturing the Company's distribution product plus a fixed dollar amount per unit. Following a specified period, on a country-by-country basis outside of the United States, Fresenius Medical Care will pay the Company a fixed percentage of net sales for each unit sold in such country, such that the Company will receive more than half of such net sales.

The distribution agreement will generally continue on a country-by-country basis until the later of (a) the tenth anniversary of the launch date of the distribution product in the relevant country or (b) the expiration of the last-to-expire valid claim of specified patents in such country. Each party is permitted to terminate the distribution agreement for insolvency of, or, under certain circumstances, including various cure periods, material breach by the other party. Subject to a cure period, Fresenius Medical Care may also terminate the distribution agreement in its entirety or on a country-by-country basis (i) for certain withdrawals of regulatory approval or (ii) for termination or expiration of any of our in-licenses that is necessary for the exercise of Fresenius Medical Care's rights, or the satisfaction of its obligations, under the distribution agreement. In addition, Fresenius Medical Care may terminate the distribution agreement for convenience on a country-by-country basis upon not less than 12 months' written notice to the Company, although Fresenius Medical Care is not permitted to give such notice prior to the end of the second year following launch of the distribution product in such country. Each party is required to indemnify one another for certain third-party claims.

Arrangements with Yale University

The Company's President and Chief Executive Officer, Laura Niklason M.D., PhD., serves as an Adjunct Professor in Anesthesia at Yale University. As of March 31, 2022 and December 31, 2021, the Company was a party to license agreements with Yale University as described in Note 11 — Commitments and Contingencies, above.

The following table shows a summary of related party expenses included in the statements of operations and comprehensive loss for the three months ended March 31, 2022 and 2021:

($ in thousands)	**Three Months Ended March 31, 2022**	**2021**
License expenses	$ 50	$ 50
Other	2	35
Total	52	85

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our unaudited condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q ("Quarterly Report") and with our audited financial statements and the notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2021 ("Annual Report"), filed with the Securities and Exchange Commission (the "SEC") on March 29, 2022. In addition, you should read the "Risk Factors" and "Information Regarding Forward-Looking Statements" sections of this Quarterly Report and our Annual Report for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Unless the context indicates otherwise, references in this Quarterly Report to the "Company," "Humacyte," "we," "us," "our" and similar terms refer to Humacyte, Inc. (formerly known as Alpha Healthcare Acquisition Corp.) and its consolidated subsidiaries (including Humacyte Global, Inc.) following the Merger (defined below); references to "Legacy Humacyte" refer to Humacyte, Inc. prior to the Merger; and references to "AHAC" refer to Alpha Healthcare Acquisition Corp. prior to the Merger.

Overview

We are pioneering the development and manufacture of off-the-shelf, universally implantable, bioengineered human tissues, complex tissue systems, and organs with the goal of improving the lives of patients and transforming the practice of medicine. We believe our technology has the potential to overcome limitations in existing standards of care and address the lack of significant innovation in products that support tissue repair, reconstruction and replacement. We are leveraging our novel, scalable technology platform to develop proprietary, bioengineered, acellular human tissues, complex tissue systems, and organs for use in the treatment of diseases and conditions across a range of anatomic locations in multiple therapeutic areas.

We are initially using our proprietary, scientific technology platform to engineer and manufacture human, acellular tissue-based vessels ("HAVs"). Our investigational HAVs are designed to be easily implanted into any patient without inducing a foreign body response or leading to immune rejection. We are developing a portfolio, or "cabinet", of HAVs with varying diameters and lengths. The HAV cabinet would initially target the vascular repair, reconstruction and replacement market, including use in vascular trauma; arteriovenous ("AV") access for hemodialysis, peripheral arterial disease ("PAD"); and coronary artery bypass grafting ("CABG"). In addition, we are developing our HAVs for pediatric heart surgery and the delivery of cellular therapies, including pancreatic islet cell transplantation to treat Type 1 diabetes (our biovascular pancreas). We will continue to explore the application of our technology across a broad range of markets and indications, including the development of urinary conduit, trachea, esophagus and other novel cell delivery systems.

We believe there is substantial clinical demand for safe and effective vascular conduits to replace and repair blood vessels throughout the body. Vascular injuries resulting from trauma are common in civilian and military populations, frequently resulting in the loss of either life or limb. Existing treatment options in the vascular repair, reconstruction and replacement market include the use of autologous vessels and synthetic grafts, which we believe suffer from significant limitations. For example, the use of autologous veins to repair traumatic vascular injuries can lead to significant morbidity associated with the surgical wounds created for vein harvest and prolonged times to restore blood flow to injured limbs leading to an increased risk of amputation and infection. Synthetic grafts are often contraindicated in the setting of vascular trauma due to higher infection risk that can lead to prolonged hospitalization and limb loss. Given the competitive advantages our HAVs are designed to have over existing vascular substitutes, we believe that HAVs have the potential to become the standard of care and lead to improved patient outcomes and lower healthcare costs.

We have generated no product revenue and incurred losses and negative cash flows from operations in each year since our inception in 2004. As of March 31, 2022 and December 31, 2021, we had an accumulated deficit of $434.4 million and $414.6 million, respectively, and working capital of $198.5 million and $218.3 million, respectively. Our net losses were approximately $19.8 million and $20.3 million for the three months ended March 31, 2022 and 2021, respectively. Net cash flows used in operating activities were $18.8 million and $14.5 million, respectively. Substantially all of our net losses resulted from costs incurred in connection with our research and development programs and from general and administrative costs associated with our operations. We expect to incur substantial operating losses and negative cash flows from operations for the foreseeable future as we advance our product candidates.

As of March 31, 2022, we had cash and cash equivalents and short-term investments of $206.2 million. We believe our cash and cash equivalents and short-term investments on hand will be sufficient to fund operations, including clinical trial expenses and capital expenditure requirements, for at least 12 months from the date of this Quarterly Report. See Note 1 — Organization and Description of Business in the notes to our unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report for additional information regarding this assessment.

Our need for additional capital will depend in part on the scope and costs of our development and commercial manufacturing activities. To date, we have not generated any revenue from the sale of commercialized products. Our ability to generate product revenue will depend on the successful development and eventual commercialization of one or more of our product candidates. Until such time, if ever, we expect to finance our operations through the use of existing cash and cash equivalents and short-term investments, the sale of equity or debt, borrowings under credit facilities, or through potential collaborations, other strategic transactions or government and other grants. Adequate capital may not be available to us when needed or on acceptable terms. If we are unable to raise capital, we could be forced to delay, reduce, suspend or cease our research and development programs or any future commercialization efforts, which would have a negative impact on our business, prospects, operating results and financial condition. See “Risk Factors” for additional information.

We expect to continue to incur significant expenses and to increase operating losses for at least the next several years. We anticipate that our expenses will increase substantially as we seek to:

- obtain marketing approval for our 6 millimeter HAV for vascular repair, reconstruction and replacement, including for vascular trauma and AV access for hemodialysis;
- commercialize the HAV via U.S. market launches in vascular trauma and hemodialysis AV access;
- scale out our manufacturing facility to the extent required to satisfy potential demand following any receipt of marketing approval;
- continue our preclinical and clinical development efforts;
- maintain, expand and protect our intellectual property portfolio;
- add operational, financial and management information systems and personnel to support, among other things, our product development and commercialization efforts and operations; and
- operate as a public company, which includes higher costs associated with hiring additional personnel, director and officer insurance premiums, audit and legal fees, and expenses for compliance with public company reporting requirements under the Securities Exchange Act of 1934 (the “Exchange Act”) and rules implemented by the SEC and The Nasdaq Stock Market LLC (“Nasdaq”).

Merger and Public Company Costs

On August 26, 2021 (the “Closing Date”), Legacy Humacyte and AHAC consummated a merger pursuant to that certain Business Combination Agreement, dated as of February 17, 2021 (the “Merger Agreement”), by and among Legacy Humacyte, AHAC and Hunter Merger Sub, Inc. (“Merger Sub”), a Delaware corporation and wholly owned subsidiary of AHAC. As contemplated by the Merger Agreement, Merger Sub merged with and into Legacy Humacyte, with Legacy Humacyte continuing as the surviving corporation and as a wholly owned subsidiary of AHAC (the “Merger”). On the Closing Date, AHAC changed its name to Humacyte, Inc. and Legacy Humacyte changed its name to Humacyte Global, Inc. Operations prior to the Merger included in this Quarterly Report are those of Legacy Humacyte.

Pursuant to the terms of the Merger Agreement, at the effective time of the Merger (the "Effective Time"), (1) each outstanding share of common stock of Legacy Humacyte ("Legacy Humacyte common stock") was cancelled and converted into the right to receive approximately 0.26260 shares of the Company's common stock, par value $0.0001 per share ("Common Stock"), and (2) each outstanding share of preferred stock of Legacy Humacyte ("Legacy Humacyte preferred stock") was cancelled and converted into the aggregate number of shares of Common Stock that would be issued upon conversion of the shares of Legacy Humacyte preferred stock based on the applicable conversion ratio immediately prior to the Effective Time, multiplied by approximately 0.26260, resulting in the issuance of a total of 75,656,935 shares of Common Stock. Prior holders of shares of Legacy Humacyte common stock and Legacy Humacyte preferred stock also received the contingent right to receive certain Contingent Earnout Shares (as defined below), for each share owned by each such Legacy Humacyte stockholder that was outstanding immediately prior to the closing of the Merger (the "Closing"). In addition, certain investors purchased an aggregate of 17,500,000 shares of Common Stock (such investors, the "PIPE Investors") in a private placement that closed concurrently with the Closing for an aggregate purchase price of $175 million (the "PIPE Financing"). Additionally, at the Closing, 2,500,000 shares of AHAC's Class B common stock ("Founder Shares") automatically converted into shares of Common Stock on a one-for-one basis.

Following the Closing Date, former holders of Legacy Humacyte common stock and Legacy Humacyte preferred stock may receive up to 15,000,000 additional shares of Common Stock ("Contingent Earnout Shares") in the aggregate in two equal tranches if the volume-weighted average closing sale price of our Common Stock is greater than or equal to $15.00 and $20.00, respectively, for any 20 trading days within any 30 consecutive trading day period.

Unless otherwise noted, the Company has retroactively adjusted all common and preferred share and related price information to give effect to the exchange ratio established in the Merger Agreement.

Impact of COVID-19

The COVID-19 pandemic, which began in December 2019 and has spread worldwide, has caused many governments to implement measures to slow the spread of the outbreak, including shelter-in-place orders and the mandatory shutdown of certain businesses. The outbreak and government measures taken in response have had a significant impact, both direct and indirect, on our business, as supply chains have been disrupted, and facilities and production have been suspended. The future progression of the COVID-19 pandemic, including any existing or potential variants of the virus which causes COVID-19, and its effects on our business and operations are uncertain. The COVID-19 pandemic may affect our ability to initiate and complete preclinical studies, delay our clinical trials or future clinical trials, disrupt regulatory activities, or have other adverse effects on our business and operations. The pandemic has already caused significant disruptions in the financial markets, and may continue to cause such disruptions, which could impact our ability to raise additional funds to support our operations. Moreover, the pandemic has significantly impacted economies worldwide and could result in adverse effects on our business and operations.

To date, the COVID-19 pandemic has not resulted in material financial impacts or impairment losses in the carrying values of our assets and we are not aware of any specific related event or circumstance that would require us to revise the estimates reflected in our financial statements. The extent to which the COVID-19 pandemic will directly or indirectly impact our business, results of operations and financial condition, including current and future clinical trials and research and development costs, will depend on future developments that are highly uncertain, including as a result of new information that may emerge concerning COVID-19, the actions taken to contain or treat it, and the duration and intensity of the related economic impact of the COVID-19 pandemic.

Components of Results of Operations

Revenue

To date, we have not generated revenue from the sale of any products. All of our revenue has been derived from government and other grants. Since inception we have been awarded grants from the California Institute of Regenerative Medicine ("CIRM"), the National Institutes of Health ("NIH"), and the Department of Defense ("DoD"), to support our development, production scaling and clinical trials of our product candidates. We may generate revenue in the future from government and other grants, payments from future license or collaboration agreements and, if any of our product candidates receive marketing approval, from product sales. We expect that any revenue we generate will fluctuate from quarter to quarter. If we fail to complete the development of, or obtain marketing approval for, our product candidates in a timely manner, our ability to generate future revenue, and our results of operations and financial position, would be materially adversely affected.

Research and Development Expenses

Since our inception, we have focused our resources on our research and development activities, including conducting preclinical studies and clinical trials, developing our manufacturing process and activities related to regulatory filings for our product candidates. We recognize research and development expenses as they are incurred. Our research and development expenses consist primarily of:

- salaries and related overhead expenses for personnel in research and development functions, including stock-based compensation and benefits;
- fees paid to consultants and clinical research organizations ("CROs"), including in connection with our clinical trials, and other related clinical trial fees, such as for investigator grants, patient screening, laboratory work and statistical compilation and analysis;
- allocation of facility lease and maintenance costs;
- depreciation of leasehold improvements, laboratory equipment and computers;
- costs related to purchasing raw materials and producing our product candidates for clinical trials;
- costs related to compliance with regulatory requirements;
- costs related to our manufacturing development and expanded-capabilities initiatives; and
- license fees related to in-licensed technologies.

The majority of our research and development resources are currently focused on our Phase III clinical trials for our 6 millimeter HAV and other work needed to obtain marketing approval for our 6 millimeter HAV for use for vascular repair, reconstruction and replacement, including vascular trauma and AV access in hemodialysis in the United States. We have incurred and expect to continue to incur significant expenses in connection with these and our other clinical development efforts, including expenses related to regulatory filings, trial enrollment and conduct, data analysis, patient follow up and study report generation for our Phase II and Phase III clinical trials. We do not allocate all of our costs by each research and development program for which we are developing our cabinet of HAVs, as a significant amount of our development activities broadly support multiple programs that use our technology platform. We plan to further increase our research and development expenses for the foreseeable future as we continue the development of our proprietary scientific technology platform and our novel manufacturing paradigm.

The successful development of our preclinical and clinical product candidates is highly uncertain. At this time, we cannot estimate with any reasonable certainty the nature, timing or costs of the efforts that will be necessary to complete the remainder of the development of any of our preclinical or clinical product candidates or the period, if any, in which material net cash inflows from these product candidates may commence. This is due to the numerous risks and uncertainties associated with the development of our product candidates, including:

- the scope, rate of progress, expense and results of our preclinical development activities, our ongoing clinical trials and any additional clinical trials that we may conduct, and other research and development activities;
- successful patient enrollment in and the initiation and completion of clinical trials;
- the timing, receipt and terms of any marketing approvals from applicable regulatory authorities including the U.S. Food and Drug Administration ("FDA") and non-U.S. regulators;
- the extent of any required post-marketing approval commitments to applicable regulatory authorities;
- development of clinical and commercial manufacturing capabilities or making arrangements with third-party manufacturers in order to ensure that it or its third-party manufacturers are able to successfully manufacture our product;
- obtaining, maintaining, defending and enforcing patent claims and other intellectual property rights;
- significant and changing government regulations;

- launching commercial sales of our product candidates, if approved, whether alone or in collaboration with others;
- the degree of market acceptance of any product candidates that obtain marketing approval; and
- maintaining a continued acceptable safety profile following approval, if any, of our product candidates.

A change in the outcome of any of these variables could lead to significant changes in the costs and timing associated with the development of our product candidates. For example, if the FDA or another regulatory authority were to require us to conduct clinical trials beyond those that we currently anticipate being required to conduct in order to complete the clinical development of any of our product candidates, or if we experience significant delays in the enrollment or the conduct of any of our clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related costs for employees in executive, finance, human resources, commercialization, and administrative support functions, which also include stock-based compensation expenses and benefits for such employees. Other significant general and administrative expenses include facilities costs, professional fees for accounting and legal services and expenses associated with obtaining and maintaining patents.

We expect our general and administrative expenses will continue to increase for the foreseeable future to support our expanded infrastructure and increased costs of operating as a public company. These increases are expected to include increased employee-related expenses and increased director and officer insurance premiums, audit and legal fees, and expenses for compliance with public company reporting requirements under the Exchange Act and rules implemented by the SEC, as well as Nasdaq rules.

Other Income (Expense), Net

Total other income (expense), net consists of (i) the change in fair value of the contingent earnout liability that was accounted for as a liability as of the date of the Merger, and is remeasured to fair value at each reporting period, resulting in a non-cash gain or loss, (ii) interest income earned on our cash and cash equivalents and short-term investments, (iii) interest expense incurred on our term loan agreement with Silicon Valley Bank and SVB Innovation Credit Fund VIII, L.P. (the "Loan Agreement"), finance leases, and our Paycheck Protection Program ("PPP") loan during the periods each were outstanding, and (iv) a change in fair value of private placement common stock warrant liabilities related to private placement warrants originally issued in a private placement to AHAC Sponsor LLC ("Private Placement Warrants"), which we assumed in connection with the Merger, and which are subject to remeasurement to fair value at each balance sheet date resulting in a non-cash gain or loss.

Results of Operations

Comparison of the Three Months Ended March 31, 2022 and 2021

($ in thousands)	Three Months Ended March 31, 2022	2021	Change $	Change %
Revenue	$ 233	$ 155	$ 78	50 %
Operating expenses:				
Research and development	16,314	15,137	1,177	8 %
General and administrative	5,682	4,787	895	19 %
Total operating expenses	21,996	19,924	2,072	10 %
Loss from operations	**(21,763)**	**(19,769)**	**(1,994)**	10 %
Other income (expense), net				
Change in fair value of contingent earnout liability	3,258	—	3,258	100 %
Interest expense	(1,432)	(533)	(899)	169 %
Other income	105	1	104	*
Total other income (expense), net	1,931	(532)	2,463	(463)%
Net loss	**$ (19,832)**	**$ (20,301)**	**$ 469**	(2)%

** Not meaningful*

Grant Revenue

For each of the three months ended March 31, 2022 and 2021, revenue was approximately $0.2 million and related to our grant from DoD.

Research and Development Expenses

The following table discloses the breakdown of research and development expenses:

($ in thousands)	Three Months Ended March 31, 2022	2021	Change $	Change %
External services	$ 3,850	$ 3,852	$ (2)	— %
Materials and supplies	3,737	3,201	536	17 %
Payroll and personnel expenses	5,641	5,321	320	6 %
Other research and development expenses	3,086	2,763	323	12 %
	$ 16,314	**$ 15,137**	**$ 1,177**	8 %

Research and development expenses increased from $15.1 million for the three months ended March 31, 2021 to $16.3 million for the three months ended March 31, 2022. The increase of $1.2 million, or 8%, was primarily driven by (i) increased salaries and benefits of $0.7 million to support our expanding research and development initiatives, (ii) a $0.5 million increase in the purchase of materials and supplies, and (iii) a $0.3 million increase in other research and development expenses, partially offset by (iv) a $0.4 million decrease in non-cash stock compensation expense.

General and Administrative Expenses

General and administrative expenses were $5.7 million and $4.8 million for the three months ended March 31, 2022 and 2021, respectively. The increase in general and administrative expenses during this period of $0.9 million, or 19%, was primarily driven by expenses associated with the transition to a public company, including (i) increased salaries and benefits of $0.5 million primarily due to higher headcount, (ii) increased professional fees of $0.4 million primarily related to increased legal and audit fees, and (iii) a $0.3 million increase in insurance costs related to directors and officers liability insurance premiums.

Total Other Income (Expense)

Total other income (expense) was $1.9 million and $(0.5) million for the three months ended March 31, 2022 and 2021, respectively. The increase of $2.5 million in income resulted from a $3.3 million non-cash gain related to the remeasurement of the contingent earnout liability as of March 31, 2022, partially offset by a $0.9 million increase in interest expense related to our loan facility with Silicon Valley Bank, which commenced in March 2021.

Liquidity and Capital Resources

Sources of Liquidity

To date, we have financed our operations primarily through the sale of equity securities and convertible debt, proceeds from the Merger and related PIPE Financing, borrowings under loan facilities and, to a lesser extent, through grants from governmental and other agencies. Since our inception, we have incurred significant operating losses and negative cash flows. As of March 31, 2022 and December 31, 2021, we had an accumulated deficit of $434.4 million and $414.6 million, respectively.

As of March 31, 2022 and December 31, 2021, we had cash and cash equivalents and short-term investments of $206.2 million and $225.5 million, respectively. We believe our cash and cash equivalents and short-term investments will be sufficient to fund operations, including clinical trial expenses and capital expenditure requirements for at least 12 months from the date of this Quarterly Report. See Note 1 — Organization and Description of Business to our accompanying unaudited condensed consolidated financial statements included elsewhere in this Quarterly Report for additional information regarding our assessment. We believe that our longer-term working capital, planned research and development, capital expenditures and other general corporate funding requirements will be satisfied through the sale of equity, debt, borrowings under credit facilities or through potential collaborations with other companies, other strategic transactions or government or other grants. Our liquidity plans are subject to a number of risks and uncertainties, including those described in the sections entitled “Forward-Looking Statements” and “Risk Factors” in this Quarterly Report and our Annual Report.

As of March 31, 2022 and December 31, 2021, we had working capital of $198.5 million and $218.3 million, respectively. As of March 31, 2022, we had $30.0 million outstanding principal and $20.0 million of contingent borrowing capacity under our Loan Agreement. We do not currently have any committed external source of funds beyond the Loan Agreement.

Material Cash Requirements

Our known material cash requirements include: (1) the purchase of supplies and services that are primarily for research and development; (2) debt repayments (for additional information, see below and Note 7 — Debt to our accompanying unaudited condensed consolidated financial statements contained elsewhere in this Quarterly Report); (3) employee wages, benefits, and incentives; and (4) financing and operating lease payments (for additional information see below). We have also entered into contracts with CROs primarily for clinical trials. These contracts generally provide for termination upon limited notice, and therefore we believe that our non-cancellable obligations under these agreements are not material. Moreover, we may be subject to additional material cash requirements that are contingent upon the occurrence of certain events, for example, legal contingencies, uncertain tax positions, and other matters.

As of March 31, 2022, we had non-cancellable purchase commitments of $13.4 million for supplies and services that are primarily for research and development. We have existing license agreements with Duke University and Yale University and have a distribution agreement with Fresenius Medical Care Holdings, Inc. The amount and timing of any potential milestone payments, license fee payments, royalties and other payments that we may be required to make under these agreements are unknown or uncertain at March 31, 2022. For additional information regarding our agreement with Fresenius Medical Care, and our agreements with Duke University and Yale University, see Note 12 — Related Party Transactions and Note 11 — Commitments and Contingencies, respectively, to our accompanying unaudited condensed consolidated financial statements contained elsewhere in this Quarterly Report.

Debt

In March 2021, we entered into the Loan Agreement with Silicon Valley Bank and SVB Innovation Credit Fund VIII, L.P., as amended in June and September 2021, which provides a term loan facility of up to $50.0 million, with a maturity date of March 1, 2025. The initial term loan tranche of $20.0 million was funded upon the closing of the Loan Agreement, and on October 13, 2021, we borrowed an additional $10.0 million under the Loan Agreement. The additional $20.0 million becomes accessible in two tranches of $10.0 million each contingent on the achievement of certain business and clinical development milestones. As a result of the additional borrowing in October 2021, the commencement of repayment of principal was deferred until no earlier than July 2023 and potentially later if the remaining tranches are drawn. As of March 31, 2022, principal of $30.0 million was outstanding under the Loan Agreement and we were in compliance with all covenants in all material respects. Assuming no additional borrowings under the Loan Agreement, we expect to make interest payments of approximately $5.1 million under the Loan Agreement from April 1, 2022 through March 1, 2025, approximately $2.4 million of which we expect to pay within one year of March 31, 2022.

Our obligations under the Loan Agreement are secured by substantially all of our assets, except for our intellectual property. The Loan Agreement contains certain customary covenants, including, but not limited to, those relating to additional indebtedness, liens, asset divestitures, and affiliate transactions. We may use the proceeds of borrowings under the Loan Agreement as working capital and to fund our general business requirements.

Borrowings under the Loan Agreement bear interest at a rate of 7.5% or the sum of the Wall Street Journal Prime Rate plus 4.25%, whichever is greater. In addition, the lenders were granted warrants to purchase common stock. Interest-only payments on the principal amount outstanding are due monthly beginning in the first month after the loan is dispersed. We are required to repay principal beginning on July 1, 2023, unless we draw the remaining two loan tranches, in which case repayment of the outstanding principal amount will begin no later than April 1, 2024. Additionally, we are obligated to pay to the lenders a final payment fee of $1.5 million upon the maturity of the loan.

Our contractual obligations under the Loan Agreement as of March 31, 2022 include no cash payments related to principal within one year and $30.0 million of principal payments within one to three years.

Leases

Our finance lease relates to our headquarters facility containing our manufacturing, research and development and general and administrative functions, which was substantially completed in June 2018 and leased through May 2033, and our operating lease relates to the land lease associated with our headquarters. Our future contractual obligations under our lease agreements as of March 31, 2022 are as follows:

($ in thousands)	Total	Less than 1 year	1 – 3 years	3 – 5 years	More than 5 years
Finance leases	$ 32,052	$ 3,892	$ 8,079	$ 8,434	$ 11,647
Operating leases	1,073	105	211	211	546

Future Funding Requirements

We expect to incur significant expenses in connection with our ongoing activities as we seek to (i) continue clinical development of our 6 millimeter HAV for use in vascular trauma and hemodialysis AV access and submit biologics license applications for FDA approval, (ii) if marketing approval is obtained, to launch and commercialize our HAVs for hemodialysis AV access and vascular repair in the U.S. market, including subsequent launches in key international markets, (iii) advance our pipeline in major markets, including PAD Phase III trials and continue preclinical development and advance to planned clinical studies in CABG and biovascular pancreas for diabetes, and (iv) scale out our manufacturing facility as required to satisfy potential demand if our HAVs receive marketing approval. We will need additional funding in connection with these activities.

Our future funding requirements, both short-term and long-term, will depend on many factors, including:

- the progress and results of our clinical trials and interpretation of those results by the FDA and other regulatory authorities;
- the cost, timing and outcome of regulatory review of our product candidates, particularly for marketing approval of our HAVs in the United States;
- the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials for our additional product candidates;
- the cost and timing of our future commercialization activities, including product manufacturing, marketing and distribution for our HAVs if approved by the FDA, and any other product candidate for which we receive marketing approval in the future;
- the amount and timing of revenues, if any, that we receive from commercial sales of any product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims; and
- the costs of operating as a public company, including hiring additional personnel as well as increased director and officer insurance premiums, audit and legal fees, and expenses for compliance with public company reporting requirements under the Exchange Act and rules implemented by the SEC and Nasdaq.

Until such time, if ever, as we are able to successfully develop and commercialize one or more of our product candidates, we expect to continue financing our operations through the sale of equity, debt, borrowings under credit facilities or through potential collaborations with other companies, other strategic transactions or government or other grants. Adequate capital may not be available to us when needed or on acceptable terms. We do not currently have any committed external source of funds beyond the Loan Agreement. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interest of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of stockholders. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making acquisitions or capital expenditures. Debt financing would also result in fixed payment obligations. If we are unable to raise capital, we could be forced to delay, reduce, suspend or cease our research and development programs or any future commercialization efforts, which would have a negative impact on our business, prospects, operating results and financial condition.

Our principal use of cash in recent periods has been primarily to fund our operations, including the clinical and preclinical development of our product candidates. Our future capital requirements, both short-term and long-term, will depend on many factors, including the progress and results of our clinical trials and preclinical development, timing and extent of spending to support development efforts, cost and timing of future commercialization activities, and the amount and timing of revenues, if any, that we receive from commercial sales.

See the section of this Quarterly Report entitled “Risk Factors” for additional risks associated with our substantial capital requirements.

Cash Flows

The following table shows a summary of our cash flows for each of the periods shown below:

($ in thousands)	Three Months Ended March 31, 2022	2021
Net loss	$ (19,832)	$ (20,301)
Non-cash adjustments to reconcile net loss to net cash used in operating activities[(1)]:	644	4,616
Changes in operating assets and liabilities:	391	1,142
Net cash used in operating activities	(18,797)	(14,543)
Net cash used in investing activities	(22)	(29)
Net cash (used in) provided by financing activities	(461)	19,271
Net decrease (increase) in cash and cash equivalents	$ (19,280)	$ 4,699
Cash and cash equivalents at the beginning of the period	$ 217,502	$ 39,929
Cash and cash equivalents at the end of the period	$ 198,222	$ 44,628

(1) Includes depreciation, amortization related to our leases and our debt discount, stock-based compensation expense, and in 2022 includes the change in fair value of our contingent earnout liability and our common stock warrant liabilities.

Cash Flow from Operating Activities

The increase in net cash used in operating activities from the three months ended March 31, 2021 to the three months ended March 31, 2022 was primarily due to increased spending on pre-clinical, clinical and pre-commercial activities as well as payroll and personnel expenses.

Cash Flow from Investing Activities

Net cash used in investing activities remained consistent at less than $0.1 million for each of the three months ended March 31, 2022 and the three months ended March 31, 2021, and consisted of the purchases of laboratory equipment.

Cash Flow from Financing Activities

The current-quarter decrease in net cash provided by financing activities was primarily due to $19.7 million of net proceeds in connection with draws under our loan facility with Silicon Valley Bank in March 2021.

Off-Balance Sheet Arrangements

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

Critical Accounting Estimates

Our discussion and analysis of our financial condition and results of operations are based upon our unaudited condensed consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of our unaudited condensed consolidated financial statements requires us to make estimates, assumptions and judgments that affect the reported amounts of assets, liabilities, revenues, and expenses, and disclosure of contingent liabilities. We base our estimates and assumptions on historical experience and other factors that we believe to be reasonable under the circumstances. We evaluate our estimates and assumptions on an ongoing basis. Although we believe that our estimates, assumptions, and judgments are reasonable, they are based upon information presently available. Actual results may differ significantly from these estimates based on different assumptions, judgments, or conditions.

An accounting estimate or assumption is considered critical if both (a) the nature of the estimate or assumption involves a significant level of estimation uncertainty, and (b) the impact within a reasonable range of outcomes of the estimate and assumption is material to our financial condition. There have been no material changes to our critical accounting policies and estimates as compared to those disclosed in our audited consolidated financial statements as of and for the years ended December 31, 2021 and 2020, included in our Annual Report.

Emerging Growth Company and Smaller Reporting Company Status

We are an "emerging growth company" as defined in the Jumpstart our Business Startups Act of 2012 (the "JOBS Act"), and may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies until it is no longer an emerging growth company. Section 107 of the JOBS Act provides that an emerging growth company can take advantage of the extended transition period afforded by the JOBS Act for the implementation of new or revised accounting standards. We expect to use the extended transition period and, therefore, while we are an emerging growth company we will not be subject to new or revised accounting standards at the same time that they become applicable to other public companies that are not emerging growth companies, unless we choose to early adopt a new or revised accounting standard. This may make it difficult or impossible to compare our financial results with the financial results of another public company because of the potential differences in accounting standards used.

Additionally, we are a "smaller reporting company" as defined in Item 10(f)(1) of Regulation S-K under the Exchange Act ("Regulation S-K"). Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We will remain a smaller reporting company if (1) the market value of Common Stock held by non-affiliates is less than $250 million as of the last business day of the second fiscal quarter, or (2) our annual revenues in its most recent fiscal year completed before the last business day of its second fiscal quarter are less than $100 million and the market value of Common Stock held by non-affiliates is less than $700 million as of the last business day of the second fiscal quarter.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We qualify as a smaller reporting company, as defined by Item 10 of Regulation S-K and, thus, are not required to provide the information required by this Item.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Disclosure controls and procedures are designed to ensure that information required to be disclosed in our reports filed or submitted under the Exchange Act is (i) recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms and (ii) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure.

As of March 31, 2022, our management, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of March 31, 2022.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act) during the three months ended March 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

The Company currently is not aware of any legal proceedings or claims that management believes will have, individually or in the aggregate, a material adverse effect on the Company's business, financial condition, results of operations, or cash flows.

Item 1A. Risk Factors

Our risk factors are disclosed in Part I, Item 1A of our Annual Report. There have been no material changes during the three months ended March 31, 2022 from or updates to the risk factors discussed in Part I, Item 1A, Risk Factors of our Annual Report.

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

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

The following exhibits are filed as part of, or incorporated by reference into, this Quarterly Report on Form 10-Q.

Exhibit Number	Description
31.1*	Certification of Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2**	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101*	The following materials from Humacyte, Inc.'s Quarterly Report on Form 10-Q for the quarter ended March 31, 2022, formatted in Inline XBRL (Inline eXtensible Business Reporting Language): (i) Condensed Consolidated Balance Sheets (unaudited), (ii) Condensed Consolidated Statements of Operations and Comprehensive Loss, (iii) Condensed Consolidated Statements of Changes in Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit) (unaudited), (iv) Condensed Consolidated Statements of Cash Flows (unaudited), (v) Notes to Condensed Consolidated Financial Statements, and (vi) Cover Page.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

* Filed herewith.

** This exhibit is being furnished rather than filed, and shall not be deemed incorporated by reference into any filing, in accordance with Item 601 of Regulation S-K.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized on this 13th day of May, 2022.

HUMACYTE, INC.

Date: May 13, 2022

By: /s/ Laura E. Niklason, M.D., Ph.D.

Name: Laura E. Niklason, M.D., Ph.D.

Title: President and Chief Executive Officer

By: /s/ Dale A. Sander

Name: Dale A. Sander

Title: Chief Financial Officer, Chief Corporate Development Officer and Treasurer

Exhibit 31.1

CERTIFICATION

I, Laura E. Niklason, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Humacyte, Inc. for the quarter ended March 31, 2022;

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

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

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

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

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

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

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

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

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

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

Date: May 13, 2022

By: /s/ Laura E. Niklason

Name: Laura E. Niklason, M.D., Ph.D.

Title: President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION

I, Dale A. Sander, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Humacyte, Inc. for the quarter ended March 31, 2022;

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

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

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

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

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

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

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

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

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

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

Date: May 13, 2022

By: /s/ Dale A. Sander

Name: Dale A. Sander

Title: Chief Financial Officer, Chief Corporate Development Officer and Treasurer

Exhibit 32.1

CERTIFICATION

In connection with the Quarterly Report on Form 10-Q of Humacyte, Inc. (the "Company") for the quarter ended March 31, 2022 (the "Report"), as filed with the Securities and Exchange Commission on the date hereof, I, Laura E. Niklason, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

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

Date: May 13, 2022

By: /s/ Laura E. Niklason

Name: Laura E. Niklason, M.D., Ph.D.

Title: President and Chief Executive Officer

Exhibit 32.2

CERTIFICATION

In connection with the Quarterly Report on Form 10-Q of Humacyte, Inc. (the "Company") for the quarter ended March 31, 2022 (the "Report"), as filed with the Securities and Exchange Commission on the date hereof, I, Dale A. Sander, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

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

Date: May 13, 2022

By: /s/ Dale A. Sander

Name: Dale A. Sander

Title: Chief Financial Officer, Chief Corporate Development Officer and Treasurer