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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 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 September 30, 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: 001-40631

Caribou Biosciences, Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**45-3728228**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
2929 7th Street, Suite 105 **Berkeley, California**	**94710**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (510) 982-6030

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.0001 per share	CRBU	The Nasdaq Global Select Market

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes 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	o
		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 November 3, 2022, the registrant had 61,001,561 shares of common stock, $0.0001 par value per share, outstanding.

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PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

CARIBOU BIOSCIENCES, INC. AND ITS SUBSIDIARIES
Condensed Consolidated Balance Sheets
(Unaudited)
(in thousands, except share and per share amounts)

	September 30, 2022	December 31, 2021
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 82,085	$ 240,420
Marketable securities, short-term	211,284	135,412
Accounts receivable	397	1,153
Contract assets	1,899	1,488
Other receivables	2,699	5,483
Prepaid expenses and other current assets	8,558	7,236
Total current assets	306,922	391,192
NON-CURRENT ASSETS		
Investments in equity securities	7,759	7,626
Marketable securities, long-term	49,221	37,676
Property and equipment, net	8,959	4,887
Operating lease, right of use assets	24,626	—
Other assets	1,336	975
TOTAL ASSETS	$ 398,823	$ 442,356
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Accounts payable	$ 1,228	$ 3,990
Accrued expenses and other current liabilities	14,638	13,136
Lease liabilities, current	912	—
Deferred revenue ($150 and $0 from related party, respectively)	12,036	8,703
Total current liabilities	28,814	25,829
LONG-TERM LIABILITIES		
Deferred revenue, net of current portion ($0 and $100 from related party, respectively)	15,423	22,032
Deferred rent and lease incentive liability	—	2,097
MSKCC success payments liability	3,039	4,080
Lease liabilities, non-current	26,958	—
Other liabilities	—	17
Deferred tax liabilities	475	476
Total liabilities	74,709	54,531
COMMITMENTS AND CONTINGENCIES (Note 9)		
STOCKHOLDERS' EQUITY		
Preferred stock, par value $0.0001 per share, 10,000,000 shares authorized at September 30, 2022 and December 31, 2021; no shares issued and outstanding as of September 30, 2022 and December 31, 2021, respectively	—	—
Common stock, par value $0.0001 per share, 300,000,000 shares authorized at September 30, 2022 and December 31, 2021, respectively; 60,986,936 and 60,263,158 shares issued and outstanding at September 30, 2022 and December 31, 2021, respectively	6	6
Additional paid-in-capital	496,369	485,748
Accumulated other comprehensive loss	(2,035)	(135)
Accumulated deficit	(170,226)	(97,794)
Total stockholders' equity	324,114	387,825
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 398,823	$ 442,356

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

CARIBOU BIOSCIENCES, INC. AND ITS SUBSIDIARIES
Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)
(in thousands, except share and per share amounts)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Licensing and collaboration revenue	$ 3,303	$ 3,977	$ 10,159	$ 7,039
Operating expenses:				
Research and development	19,991	15,833	56,494	37,144
General and administrative	9,849	6,760	29,486	16,469
Total operating expenses	29,840	22,593	85,980	53,613
Loss from operations	(26,537)	(18,616)	(75,821)	(46,574)
Other income (expense):				
Change in fair value of equity securities	31	—	(73)	—
Change in fair value of the MSKCC success payments liability	(1,607)	(2,403)	1,041	(3,584)
Gain on extinguishment of PPP Loan	—	—	—	1,584
Other income, net	1,466	45	2,421	130
Total other income (expense)	(110)	(2,358)	3,389	(1,870)
Net loss	(26,647)	(20,974)	(72,432)	(48,444)
Other comprehensive loss:				
Net unrealized loss on available-for-sale marketable securities, net of tax	(454)	—	(1,900)	—
Net comprehensive loss	$ (27,101)	$ (20,974)	$ (74,332)	$ (48,444)
Net loss per share, basic and diluted	$ (0.44)	$ (0.46)	$ (1.19)	$ (2.20)
Weighted-average common shares outstanding, basic and diluted	60,886,921	45,889,646	60,731,520	22,052,944

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

CARIBOU BIOSCIENCES, INC. AND ITS SUBSIDIARIES
Condensed Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)
(Unaudited)
(in thousands, except share amounts)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount				
BALANCE—December 31, 2021	—	$ —	60,263,158	$ 6	$ 485,748	$ (135)	$ (97,794)	$ 387,825
Issuance of common stock under employee stock plans	—	—	36,596	—	361	—	—	361
Issuance of common stock on exercise of options	—	—	389,855	—	629	—	—	629
Stock-based compensation expense	—	—	—	—	3,024	—	—	3,024
Net loss	—	—	—	—	—	—	(19,088)	(19,088)
Other comprehensive loss	—	—	—	—	—	(954)	—	(954)
BALANCE—March 31, 2022	—	$ —	60,689,609	$ 6	$ 489,762	$ (1,089)	$ (116,882)	$ 371,797
Issuance of common stock on exercise of options	—	—	148,761	—	363	—	—	363
Stock-based compensation expense	—	—	—	—	2,918	—	—	2,918
Net loss	—	—	—	—	—	—	(26,697)	(26,697)
Other comprehensive loss	—	—	—	—	—	(492)	—	(492)
BALANCE—June 30, 2022	—	$ —	60,838,370	$ 6	$ 493,043	$ (1,581)	$ (143,579)	$ 347,889
Issuance of common stock on exercise of options	—	—	148,566	—	654	—	—	654
Stock-based compensation expense	—	—	—	—	2,672	—	—	2,672
Net loss	—	—	—	—	—	—	(26,647)	(26,647)
Other comprehensive loss	—	—	—	—	—	(454)	—	(454)
BALANCE—September 30, 2022	—	$ —	60,986,936	$ 6	$ 496,369	$ (2,035)	$ (170,226)	$ 324,114
BALANCE—December 31, 2020	7,766,582	$ 41,323	9,710,830	$ 1	$ 7,433	$ —	$ (30,871)	$ (23,437)
Issuance of Series C convertible preferred stock, net of issuance costs of $6.2 million	6,663,940	108,827	—	—	—	—	—	—
Issuance of common stock on exercise of options	—	—	584,614	—	564	—	—	564
Stock-based compensation expense	—	—	—	—	343	—	—	343
Net loss	—	—	—	—	—	—	(13,159)	(13,159)
BALANCE—March 31, 2021	14,430,522	$ 150,150	10,295,444	$ 1	$ 8,340	$ —	$ (44,030)	$ (35,689)
Repayment of promissory note	—	—	—	—	1,150	—	—	1,150
Issuance of common stock on exercise of options	—	—	1,037,979	—	566	—	—	566
Stock-based compensation expense	—	—	—	—	593	—	—	593
Net loss	—	—	—	—	—	—	(14,311)	(14,311)
BALANCE—June 30, 2021	14,430,522	$ 150,150	11,333,423	$ 1	$ 10,649	$ —	$ (58,341)	$ (47,691)
Conversion of convertible preferred stock into common stock	-14,430,522	(150,150)	26,234,654	3	150,147	—	—	150,150
Issuance of common stock upon initial public offering, net of issuance costs of $28.6 million	—	—	21,850,000	2	321,018	—	—	321,020
Issuance of common stock on exercise of options	—	—	603,246	—	961	—	—	961
Stock-based compensation expense	—	—	—	—	935	—	—	935
Net loss	—	—	—	—	—	—	(20,974)	(20,974)
BALANCE—September 30, 2021	—	$ —	60,021,323	$ 6	$ 483,710	$ —	$ (79,315)	$ 404,401

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

CARIBOU BIOSCIENCES, INC. AND ITS SUBSIDIARIES
Condensed Consolidated Statements of Cash Flows
(Unaudited)
(in thousands)

	Nine Months Ended September 30,	
	2022	2021
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (72,432)	$ (48,444)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	1,116	711
Loss on disposal of fixed assets	—	3
Non-cash consideration for licensing and collaboration revenue	(205)	—
Change in fair value of equity securities	73	—
Stock-based compensation expense	8,615	1,871
Change in fair value of MSKCC success payments liability	(1,041)	3,584
Acquired in-process research and development	300	1,000
Extinguishment of PPP Loan	—	(1,578)
Amortization of investment premiums	106	—
Non-cash lease expense	1,622	—
Changes in operating assets and liabilities:		
Accounts receivable	756	(428)
Contract assets	(411)	(525)
Other receivables	2,783	(1,673)
Prepaid expenses and other current assets	(1,613)	(2,759)
Other assets	(361)	(151)
Accounts payable	(2,568)	848
Accrued expenses and other current liabilities	909	4,855
Deferred revenue, current and long-term	(3,277)	30,669
Deferred rent and lease incentive liability	—	909
Operating lease liabilities	(279)	(22)
Other liabilities	(15)	—
Net cash used in operating activities	(65,922)	(11,130)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Maturities of marketable securities	163,130	—
Purchases of marketable securities	(252,552)	—
Purchases of property and equipment	(4,697)	(1,436)
Payments to acquire in-process research and development	(300)	(1,000)
Net cash used in investing activities	(94,419)	(2,436)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from initial public offering of common stock, net of offering costs	—	321,020
Proceeds from issuance of Series C convertible preferred stock, net of issuance costs	—	108,827
Proceeds from exercise of stock options and purchases of common stock under employee stock purchase plan	2,006	2,091
Repayment of promissory note	—	1,150
Payments on capital lease	—	(119)
Net cash provided by financing activities	2,006	432,969
NET (DECREASE) INCREASE IN CASH, CASH EQUIVALENTS, AND RESTRICTED CASH	(158,335)	419,403
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH — BEGINNING OF PERIOD	240,466	15,953
CASH, CASH EQUIVALENTS, AND RESTRICTED CASH — END OF PERIOD	$ 82,131	$ 435,356
RECONCILIATION OF CASH, CASH EQUIVALENTS, AND RESTRICTED CASH		
Cash and cash equivalents	$ 82,085	$ 435,310
Restricted cash	46	46
TOTAL CASH, CASH EQUIVALENTS, AND RESTRICTED CASH	$ 82,131	$ 435,356
SUPPLEMENTAL CASH FLOW INFORMATION:		
Cash paid for income taxes	$ —	$ 11
SUPPLEMENTAL SCHEDULE OF NON-CASH INVESTING AND FINANCING ACTIVITIES:		
Acquisition of property and equipment included in accrued expenses and other current liabilities	$ 757	$ 268
Acquired in-process research and development accrued	$ —	$ —
Extinguishment of PPP Loan	$ —	$ 1,578
Conversion of convertible preferred stock to common stock at closing of initial public offering	$ —	$ 150,150
Right-of-use-assets obtained in exchange for new operating lease liabilities	$ 26,249	$ —

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

CARIBOU BIOSCIENCES, INC. AND ITS SUBSIDIARIES
Notes to Condensed Consolidated Financial Statements
(Unaudited)

1. Description of the Business, Organization, and Liquidity

Business and Organization

Caribou Biosciences, Inc. (the "Company" or "we") is a clinical-stage CRISPR genome-editing biopharmaceutical company dedicated to developing innovative, transformative therapies for patients with devastating diseases. CRISPR is an acronym for **C**lustered **R**egularly **I**nterspaced **S**hort **P**alindromic **R**epeats. Our novel CRISPR platform, **C**RISPR **h**ybrid **R**NA-**DNA** ("chRDNA," pronounced "chardonnay"), enables high genome-editing precision to develop cell therapies that are specifically engineered to target cancer and are armored for enhanced persistence. We are advancing a pipeline of allogeneic, or off-the-shelf, chimeric antigen receptor ("CAR")-T ("CAR-T") and CAR-natural killer ("CAR-NK") cell therapies for the treatment of patients with hematologic malignancies and solid tumors.

We incorporated in October 2011 as a Delaware corporation and are headquartered in Berkeley, California. We have four wholly owned subsidiaries: Antler Holdco, LLC, incorporated in Delaware in April 2019; Microbe Holdco, LLC, incorporated in Delaware in June 2020; Arboreal Holdco, LLC, incorporated in Delaware in November 2020; and Biloba Holdco, LLC, incorporated in Delaware in April 2021. Our wholly owned subsidiaries hold interests in our equity investments and do not have operating activities.

Liquidity

We have incurred net losses and negative cash flows from operations since our inception and we had an accumulated deficit of $170.2 million as of September 30, 2022. During the nine months ended September 30, 2022, we incurred a net loss of $72.4 million and used $65.9 million of cash in operating activities. We expect to continue to incur substantial losses, and our ability to achieve and sustain profitability will depend on the successful development, approval, and commercialization of our product candidates and on our achievement of sufficient revenue to support our cost structure. We may never achieve profitability and, unless and until we do, we will need to continue to raise additional capital. Our management expects that existing cash, cash equivalents, and marketable securities of $342.6 million as of September 30, 2022, will be sufficient to fund our current operating plan for at least the next 12 months from the date of issuance of our condensed consolidated financial statements.

2. Summary of Significant Accounting Policies

There have been no changes to the significant accounting policies disclosed in Note 2 to the annual consolidated financial statements for the year ended December 31, 2021 included in our Annual Report on Form 10-K, other than changes to our leasing policy described below in connection with the adoption of the guidance under the Accounting Standards Codification ("ASC") 842, Leases.

Basis of Presentation and Principles of Consolidation

The condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States ("U.S. GAAP") and include the accounts of Caribou Biosciences, Inc. and its wholly owned subsidiaries. All intercompany accounts and transactions are eliminated in consolidation.

Use of Estimates

The preparation of condensed consolidated financial statements in conformity with U.S. GAAP requires our management to make estimates and assumptions that affect the reported amounts of assets and liabilities; the disclosure of contingent assets and liabilities at the date of our condensed consolidated financial statements; and the reported amounts of revenue, income, and expenses during the applicable reporting period. On an ongoing basis, we evaluate our estimates and assumptions, including those related to revenue recognition, common stock valuation, stock-based compensation expense, accrued expenses related to research and development activities, valuation of the Memorial Sloan Kettering Cancer Center ("MSKCC") success payments liability, and income taxes. Our management bases its estimates on historical experience and on various other assumptions that they believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ materially from those estimates.

Segments

We operate and manage our business as one reportable operating segment, which is the business of developing a pipeline of allogeneic CAR-T and CAR-NK cell therapies. Our president and chief executive officer, who is the chief operating decision maker, reviews financial information on an aggregate basis for allocating resources and evaluating financial performance. All long-lived assets are maintained in the United States.

Concentrations of Credit Risk and Other Uncertainties

Financial instruments that potentially subject us to concentration of credit risk consist of cash and cash equivalents, accounts receivable, contract assets, other receivables, and investments in marketable securities and equity securities. Substantially all of our cash and cash equivalents are deposited in accounts at two financial institutions, and account balances may at times exceed federally insured limits. We mitigate the risks by investing in high-grade instruments, limiting our exposure to one issuer, and we monitor the ongoing creditworthiness of the financial institutions and issuers. We believe these financial institutions to be of high credit quality.

Licensees that represent 10% or more of our revenue and accounts receivable and contract assets were as follows:

	Revenue		Revenue		Accounts Receivable and Contract Assets	
	Three Months Ended		Nine Months Ended			
	September 30, 2022	September 30, 2021	September 30, 2022	September 30, 2021	As of September 30, 2022	As of December 31, 2021
Licensee A	17.2 %	14.0 %	16.4 %	23.2 %	24.2 %	24.6 %
Licensee B	51.7 %	57.2 %	54.2 %	39.5 %	33.7 %	45.1 %
Licensee C	*	*	*	*	12.0 %	*
Total	68.9 %	71.2 %	70.6 %	62.7 %	69.9 %	69.7 %

*Less than 10%

We monitor economic conditions to identify facts or circumstances that may indicate if any of our accounts receivable are not collectible or if the contract assets should be impaired. No allowance for doubtful accounts or contract asset impairment was recorded as of September 30, 2022 or December 31, 2021.

Property and Equipment, Net

Property and equipment are recorded at cost, net of accumulated depreciation and amortization. Property and equipment are depreciated using the straight-line method over the estimated useful lives of the assets. The useful lives of property and equipment are as follows:

Computers	3 years
Furniture and fixtures	5 years
Laboratory equipment	5 years
Leasehold improvements	Shorter of remaining lease term or estimated useful life

Upon retirement or sale of the assets, the cost and related accumulated depreciation and amortization are removed from the balance sheet and the resulting gain or loss is recorded in the statements of operations. Repairs and maintenance are expensed as incurred.

Leases

We adopted the guidance under ASC 842 on January 1, 2022 using the modified retrospective approach with a cumulative-effect adjustment as of January 1, 2022 in accordance with the Accounting Standard Update (“ASU”) 2016-02, Leases (Topic 842). We determine whether an arrangement is or contains a lease at the inception of the arrangement and whether such a lease is classified as a finance lease or operating lease at the commencement date of the lease. Leases with a term greater than one year are recognized on the balance sheet as right-of-use assets, lease liabilities, and long-term lease liabilities. We elected not to recognize the right-of-use assets and lease liabilities for leases with lease terms of 12 months or less (short-term leases). Lease liabilities and their corresponding right-of-use assets are recorded based on the present

value of lease payments over the expected lease term. As the interest rate implicit in our lease contracts is not readily determinable, we utilize a collateralized incremental borrowing rate based on the information available at the commencement date to determine the present value of lease payments. Certain adjustments to the right-of-use assets may be required for items such as initial direct costs paid or incentives received and impairment charges if we determine the right-of-use assets are impaired. There was no cumulative-effect adjustment recorded to retained earnings on January 1, 2022.

We consider the lease term to be the noncancellable period that we have the right to use the underlying asset, together with any periods where it is reasonably certain we will exercise an option to extend (or not terminate) the lease. Periods covered by an option to extend (or not terminate) the lease in which the exercise of the option is controlled by the lessor are included in the lease term.

Rent expense for operating leases is recognized on a straight-line basis over the lease term and is presented in operating expenses on the statements of operations and comprehensive loss. We have elected to not separate lease and non-lease components for our facilities leases and leases of electroporation devices and, instead, we account for each separate lease component and the non-lease components associated with that lease component as a single lease component. Variable lease payments are recognized as incurred and are presented in operating expenses on the statements of operations and comprehensive loss.

As of September 30, 2022 and December 31, 2021, we had no finance leases. See Note 9 to our condensed consolidated financial statements included elsewhere in this Form 10-Q for additional information about the impact of adoption and disclosures on our leases.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board (the "FASB") or other standard-setting bodies and are adopted by us as of the specified effective date.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). This ASU requires a lessee to recognize in its statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term. We adopted the new standard as of January 1, 2022, using the modified retrospective approach. Comparative periods were not adjusted and continue to be presented under the previous accounting guidance. We elected the package of practical expedients permitted under the transition guidance, which allows us to carry forward the historical lease classification of contracts entered into prior to January 1, 2022.

Our adoption of the new standard impacted the condensed consolidated balance sheets as follows (in thousands):

	January 1, 2022		
	Pre-ASC 842 Balance	ASC 842 Adoption Impact	Post-ASC 842 Balance
Operating lease right-of-use assets	$ —	$ 22,818	$ 22,818
Prepaid rent	$ 291	$ (291)	$ —
Accrued expenses and other current liabilities*	$ 13,136	$ 683	$ 13,819
Long-term operating lease liabilities	$ —	$ 23,941	$ 23,941
Deferred rent and lease incentive liability	$ 2,097	$ (2,097)	$ —

*Adjustment represents the current portion of operating lease liabilities of $0.8 million and reclassification of the current portion of the lease incentive liability of $0.1 million to reduce the operating lease right-of-use assets.

New Accounting Pronouncements Not Yet Adopted

In June 2016, the FASB issued ASU 2016-13, Financial Instruments–Credit Losses: Measurement of Credit Losses on Financial Instruments (Topic 326). This ASU provides guidance on the measurement of credit losses for most financial assets and certain other instruments that are not measured at fair value through net income. ASU 2016-13 replaces the current incurred loss impairment approach with a methodology to reflect expected credit losses and requires consideration of a broader range of reasonable and supportable information to explain credit loss estimates. This ASU is to be applied on a modified retrospective approach and is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2022, and interim reporting periods within fiscal years beginning after December 15,

2023. Early adoption is permitted for all entities for fiscal years beginning after December 15, 2018, and interim periods therein. We are currently evaluating the impact of adoption of ASU 2016-13 on our condensed consolidated financial statements and related disclosures.

3. Fair Value Measurements and Fair Value of Financial Instruments

The authoritative guidance on fair value measurements establishes a three-tier fair value hierarchy for disclosure of fair value measurements as follows:

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

Level 2—Observable inputs other than Level 1 prices, 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 that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

Assets and liabilities measured at fair value are classified in their entireties based on the lowest level of input that is significant to the fair value measurement. Our assessment of the significance of a particular input to the fair value measurement in its entirety requires our management to make judgments and consider factors specific to the asset or liability.

Our financial instruments consist of Level 1, Level 2, and Level 3 financial instruments. We generally classify our marketable securities as Level 2. Instruments are classified as Level 2 when observable market prices for identical securities that are traded in less active markets are used. When observable market prices for identical securities are not available, such instruments are priced using benchmark curves, benchmarking of like securities, sector groupings, matrix pricing, and valuation models. These valuation models are proprietary to the pricing providers or brokers and incorporate a number of inputs, including in approximate order of priority: benchmark yields, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, and reference data including market research publications. For certain security types, additional inputs may be used, or some of the standard inputs may not be applicable. Evaluators may prioritize inputs differently on any given day for any security based on market conditions, and not all inputs listed are available for use in the evaluation process for each security evaluation on any given day. Changes in the ability to observe valuation inputs may result in a reclassification of levels of certain securities within the fair value hierarchy. We recognize transfers into and out of levels within the fair value hierarchy in the period in which the actual event or change in circumstances that caused the transfer occurs. No such transfers occurred during the three and nine months ended September 30, 2022. Level 1 financial instruments are comprised of money market fund investments and U.S. Treasury bills. Level 2 financial instruments are comprised of commercial paper, corporate debt securities, and U.S. government agency bonds. Financial assets and liabilities are considered Level 3 when their fair values are determined using pricing models, discounted cash flow methodologies, or similar techniques, and at least one significant model assumption or input is unobservable. Level 3 financial instruments consist of the MSKCC success payments liability.

The following table sets forth our financial instruments that were measured at fair value on a recurring basis by level within the fair value hierarchy (in thousands):

	Fair Value Measurements as of September 30, 2022			
	Total	Level 1	Level 2	Level 3
Assets:				
Commercial paper ($52,821 included in cash and cash equivalents)	$ 149,970	$ —	$ 149,970	$ —
U.S. Treasury bills	87,863	87,863	—	—
Corporate debt securities	46,635	—	46,635	—
Money market fund investments (included in cash and cash equivalents)	29,264	29,264	—	—
U.S. government agency bonds	28,858	—	28,858	—
Total fair value of assets	$ 342,590	$ 117,127	$ 225,463	$ —
Liabilities:				
MSKCC success payments liability	$ 3,039	$ —	$ —	$ 3,039
Total fair value of liabilities	$ 3,039	$ —	$ —	$ 3,039

	Fair Value Measurements as of December 31, 2021			
	Total	Level 1	Level 2	Level 3
Assets:				
Money market fund investments (included in cash and cash equivalents)	$ 181,528	$ 181,528	$ —	$ —
Commercial paper ($58,892 included in cash and cash equivalents)	141,676	—	141,676	—
Corporate debt securities	38,649	—	38,649	—
U.S. Treasury bills	26,590	26,590	—	—
U.S. government agency bonds	25,065	—	25,065	—
Total fair value of assets	$ 413,508	$ 208,118	$ 205,390	$ —
Liabilities:				
MSKCC success payments liability	$ 4,080	$ —	$ —	$ 4,080
Total fair value of liabilities	$ 4,080	$ —	$ —	$ 4,080

The fair value and amortized cost of cash equivalents and available-for-sale marketable securities by major security type as of September 30, 2022 and December 31, 2021 are presented in the following tables (in thousands):

	As of September 30, 2022			
	Amortized Cost Basis	Unrealized Gains	Unrealized Losses	Estimated Fair Value
Commercial paper ($52,821 included in cash and cash equivalents)	$ 150,135	$ —	$ (165)	$ 149,970
U.S. Treasury bills	89,027	—	(1,164)	87,863
Corporate debt securities	47,022	—	(387)	46,635
Money market investments (included in cash equivalents)	29,264	—	—	29,264
U.S. government agency bonds	29,178	1	(321)	28,858
Total cash equivalents and marketable securities	$ 344,626	$ 1	$ (2,037)	$ 342,590
Classified as:				
Cash and cash equivalents				$ 82,085
Marketable securities, short-term				211,284
Marketable securities, long-term				49,221
Total cash equivalents and marketable securities				$ 342,590

	As of December 31, 2021			
	Amortized Cost Basis	Unrealized Gains	Unrealized Losses	Estimated Fair Value
Money market investments (included in cash equivalents)	$ 181,528	$ —	$ —	$ 181,528
Commercial paper ($58,892 included in cash equivalents)	141,726	1	(51)	141,676
U.S. government agency bonds	25,102	—	(37)	25,065
Corporate debt securities	38,661	4	(16)	38,649
U.S. Treasury bills	26,626	1	(37)	26,590
Total cash equivalents and marketable securities	$ 413,643	$ 6	$ (141)	$ 413,508
Classified as:				
Cash and cash equivalents				$ 240,420
Marketable securities, short-term				135,412
Marketable securities, long-term				37,676
Total cash equivalents and marketable securities				$ 413,508

The following table sets forth a summary of the changes in the fair value of our Level 3 financial liability (in thousands):

	MSKCC Success Payments Liability
Balance at December 31, 2021	$ 4,080
Change in fair value	(1,041)
Balance at September 30, 2022	$ 3,039

Our liability for the MSKCC success payments is carried at fair value and changes are recognized as expense or income as part of other income (expense) until the success payments liability is paid or expires (Note 4). We recorded a

$1.6 million and $2.4 million change in fair value of the MSKCC success payments liability as a loss in other income (expense) in our condensed consolidated statements of operations and comprehensive loss for the three months ended September 30, 2022 and 2021, respectively. We recorded a $1.0 million and $3.6 million change in fair value of the MSKCC success payments liability as a gain and a loss, respectively, in other income (expense) and research and development expense in our condensed consolidated statements of operations and comprehensive loss for the nine months ended September 30, 2022 and 2021, respectively.

We utilize a Monte Carlo simulation model that models the future movement of stock prices based on several key variables. This model requires significant estimates and assumptions in determining the estimated fair value of the MSKCC success payments liability at each balance sheet date. The assumptions used to calculate the fair value of the MSKCC success payments are subject to a significant amount of judgment including the expected volatility that was estimated using available information about the historical volatility of stocks of publicly traded companies that are similar to us, the estimated term, and the estimated number and timing of valuation measurement dates. The table below summarizes key assumptions used in the valuation of MSKCC success payments liability:

	As of September 30, 2022	As of December 31, 2021
Fair value of common stock	$ 10.55	$ 15.09
Risk-free interest rate	3.83%	1.52%
Expected volatility	81%	75%
Probability of achieving multiple of Initial Share Price	5.7% to 17.9%	7.0% to 20.9%
Expected term (years)	3.9 to 5.3	4.2 to 5.5

The computation of expected volatility is estimated using a combination of available information about the historical volatility of stocks of similar publicly traded companies for a period matching the expected term assumption and the historical and implied volatility of our stock. The risk-free interest rate, expected volatility, and expected term assumptions depend on the estimated timing of our phase 1 clinical trial for our CB-012 product candidate utilizing the know-how, biological materials, and intellectual property licensed under the MSKCC Agreement and the estimated timing of marketing approval for this product candidate from the U.S. Food and Drug Administration (“FDA”). In addition, we incorporated the estimated number and timing of valuation measurement dates in the calculation of the MSKCC success payments liability.

A small change in the assumptions and other inputs, such as the fair value of our common stock, may have a relatively large change in the estimated valuation and associated liability and expense or income.

4. Significant Agreements

The Regents of the University of California and the University of Vienna

We entered into an Exclusive License Agreement, dated April 16, 2013 (as amended, the “UC/Vienna Agreement”) with The Regents of the University of California (“UC”) and the University of Vienna (“Vienna”) (together, “UC/Vienna”) wherein UC/Vienna granted us an exclusive worldwide license, with the right to sublicense, in all fields to the foundational CRISPR-Cas9 patent family co-owned by UC, Vienna, and Dr. Emmanuelle Charpentier (the “CVC IP”). Dr. Charpentier has not granted us any rights, either directly or indirectly. The UC/Vienna Agreement continues until the last-to-expire patent or last-to-be-abandoned patent application within the CVC IP; provided, however, that UC/Vienna may terminate the UC/Vienna Agreement upon the occurrence of certain events and we may terminate the UC/Vienna Agreement at our sole discretion upon written notice. Without patent term adjustment or patent term extension, the CVC IP will expire in 2033. The UC/Vienna Agreement includes certain diligence milestones that we must meet. For products and services sold by us that are covered by the CVC IP, we will owe low- to mid-single-digit percent royalties on net sales, subject to a minimum annual royalty. Prior to the time that we are selling products, we owe UC/Vienna an annual license maintenance fee. We may owe UC/Vienna up to $3.4 million in certain regulatory and clinical milestone payments in the field of human therapeutics and diagnostics for products that are covered by the CVC IP and developed by us, an affiliate, or a sublicensee. Additionally, we pay UC/Vienna a specified percentage of sublicensing revenue, including cash and equity, we receive from sublicensing the CVC IP, subject to certain exceptions. If we include intellectual property owned or controlled by us in a sublicense to the CVC IP, we pay UC/Vienna a low double-digit percentage of sublicensing revenues received under the sublicense. If we do not include intellectual property owned or controlled by us in a sublicense to the CVC IP, we pay UC/Vienna 50% of sublicensing revenues received under the sublicense. To date, we have entered

into over 25 sublicensing agreements in a variety of fields such as human therapeutics, forestry, agriculture, research reagents, transgenic animals, certain livestock targets, internal research, bioproduction, cell lines, and microbial applications that include the CVC IP as well as other Cas9 intellectual property owned or controlled by us. We are obligated to reimburse UC for its prosecution and maintenance costs of the CVC IP.

For each of the three-month periods ended September 30, 2022 and 2021, we incurred $0.3 million for payments we owe to UC related to sublicensing revenues, which we recorded in research and development expenses in our condensed consolidated statements of operations and comprehensive loss. For the nine months ended September 30, 2022 and 2021, we incurred $0.8 million and $1.3 million, respectively, for payments we owe to UC related to sublicensing revenues, which we recorded in research and development expenses in our condensed consolidated statements of operations and comprehensive loss.

For the three months ended September 30, 2022 and 2021, we reimbursed UC $1.4 million and $2.4 million, respectively, for prosecution and maintenance costs of the CVC IP, which were recorded in general and administrative expenses in our condensed consolidated statements of operations and comprehensive loss. For the nine months ended September 30, 2022 and 2021, we reimbursed UC $4.7 million and $8.9 million, respectively, for prosecution and maintenance costs of the CVC IP, which were recorded in general and administrative expenses in our condensed consolidated statements of operations and comprehensive loss.

On December 15, 2016, we entered into a Consent to Assignments, Licensing and Common Ownership and Invention Management Agreement ("IMA") relating to the CVC IP. Under the IMA, CRISPR Therapeutics AG ("CRISPR") reimburses us 50% of the amounts we reimburse UC for patent prosecution and maintenance costs of the CVC IP. For the three months ended September 30, 2022 and 2021, CRISPR reimbursed us $0.7 million and $1.2 million, respectively, which we recorded as reductions of general and administrative expenses in our condensed consolidated statements of operations and comprehensive loss. For the nine months ended September 30, 2022 and 2021, CRISPR reimbursed us $2.4 million and $4.4 million, respectively, which we recorded as reductions of general and administrative expenses in our condensed consolidated statements of operations and comprehensive loss.

Memorial Sloan Kettering Cancer Center

On November 13, 2020, we entered into an Exclusive License Agreement with MSKCC (the "MSKCC Agreement"), under which we exclusively licensed know-how, biological materials, and patent families relating to fully-human single-chain variable fragments targeting C-type lectin-like molecule-1 (CLL-1; also known as CD371) for use in T cells, NK cells, and genome-edited induced pluripotent stem cells ("iPSCs") for allogeneic CLL-1-targeted cell therapies (currently used in our CB-012 product candidate). We paid MSKCC an upfront payment of $0.5 million in cash and $2.1 million in stock. For each licensed CLL-1 product, we may owe potential clinical, regulatory, and commercial milestone payments totaling $112.0 million. In addition, in the event we, our affiliates, or sublicensees, receive regulatory approval for a licensed CLL-1 product, we will owe low- to mid-single-digit percent royalties on net sales by us, our affiliates, and our sublicensees. Our license from MSKCC includes the right to sublicense through multiple tiers and we will owe MSKCC a percentage of upfront cash or equity received from our sublicensees. The percentage owed decreases as our licensed CLL-1 product candidate moves through development, starting at a low-double-digit percentage if clinical trials have not yet begun and decreasing to a mid-single-digit percentage if our licensed CLL-1 product candidate is in later clinical trial stages. We are also responsible for paying a percentage of licensed patent costs. The MSKCC Agreement includes certain diligence milestones that we must meet by specified dates, which may be extended upon payment of additional fees.

MSKCC is entitled to certain success payments if our common stock fair value increases by certain multiples of increasing value based on a comparison of the fair market value of our common stock to $5.1914 per share, adjusted for any future stock splits (the "Initial Share Price"), during a specified time period. Under the MSKCC Agreement, as a publicly traded company, our common stock fair value is determined by any given 45-day volume weighted-average trading price. At our option, success payments to MSKCC may be made in cash or common stock. The relevant time period commences when the first patient is dosed with a licensed CLL-1 product candidate in the first phase 1 clinical trial and ends upon the earlier of the third anniversary from the approval of our, or our affiliate's, or sublicensee's biologics license application ("BLA") by the FDA or 10 years from the date the first patient was dosed with a licensed CLL-1 product candidate in the first phase 1 clinical trial. The aggregate success payments will not exceed $35.0 million. Additionally, if we undergo a change of control during the specified time period, we may owe a change of control payment, depending upon the increase in our stock price due to the change of control and also to what extent success payments have already been paid by us to MSKCC. In no event will the combination of success payments and the change of control payment owed to MSKCC exceed $35.0 million.

The following table summarizes the amounts of the MSKCC success payments:

Multiple of Initial Share Price giving rise to a success payment		5x		10x		15x
MSKCC success payments (in millions)	$	10.0	$	10.0	$	15.0

We may terminate the MSKCC Agreement upon 90 calendar days' prior written notice to MSKCC. MSKCC may terminate the MSKCC Agreement in the event of our uncured material breach, bankruptcy, or criminal activity. If MSKCC materially breaches the MSKCC Agreement in certain circumstances (e.g., granting a third party a license in our field) then, during the time of such uncured breach, MSKCC will not be entitled to receive any success payments or any change of control payment.

As of September 30, 2022, the estimated fair value of the total success payments obligation to MSKCC was $3.0 million, which was included in long-term liabilities in our condensed consolidated balance sheets. For the three months ended September 30, 2022 and 2021, we recognized a $1.6 million and $2.4 million, respectively, change in fair value of the MSKCC success payments liability, which was recorded as a loss in other income (expense) in our condensed consolidated statements of operations and comprehensive loss. For the nine months ended September 30, 2022 and 2021, we recognized a $1.0 million and $3.6 million, respectively, change in fair value of the MSKCC success payments liability, which was recorded as a gain and a loss, respectively, in other income (expense) and research and development expense in our condensed consolidated statements of operations and comprehensive loss.

Intellia Therapeutics, Inc.

On July 16, 2014, we entered into a License Agreement (as amended, the "Intellia License Agreement") with Intellia, LLC, to which Intellia Therapeutics, Inc. ("Intellia") is a successor in interest. Under the Intellia License Agreement, we granted Intellia an exclusive worldwide license, with the right to sublicense, to certain CRISPR-Cas9 technology for a defined field of human therapeutics. Intellia granted us an exclusive worldwide license, with the right to sublicense, to certain of its CRISPR-Cas9 technology for all fields outside of the defined field of human therapeutics. Under the Intellia License Agreement, each party is responsible for 30% of the other party's expenses for prosecution and maintenance of the licensed intellectual property.

During each of the three- and nine-month periods ended September 30, 2022 and 2021, we recognized less than $0.1 million of expenses in reimbursable patent prosecution and maintenance costs, which were recorded as general and administrative expenses in our condensed consolidated statements of operations and comprehensive loss. During the three months ended September 30, 2022 and 2021, Intellia reimbursed us $0.2 million and $0.4 million, respectively (including reimbursement for a portion of the patent prosecution and maintenance costs of the CVC IP paid to UC), which were recorded as reductions of general and administrative expenses in our condensed consolidated statements of operations and comprehensive loss. During the nine months ended September 30, 2022 and 2021, Intellia reimbursed us $0.7 million and $1.7 million, respectively (including reimbursement for a portion of the patent prosecution and maintenance costs of the CVC IP paid to UC), which were recorded as reductions of general and administrative expenses in our condensed consolidated statements of operations and comprehensive loss. The term of the Intellia License Agreement continues for the life of the licensed patents and patent applications; provided, however, either party may terminate the agreement upon the occurrence of certain events.

On June 16, 2021, we entered into a leaseback agreement with Intellia (the "Leaseback Agreement"). Pursuant to the Leaseback Agreement, in exchange for Intellia's grant to us of an exclusive license to certain intellectual property relating to CRISPR-Cas9, including Cas9 chRDNAs, for use solely in the manufacture of our CB-010 product candidate, we paid Intellia an upfront cash payment of $1.0 million and will pay up to $23.0 million in potential future regulatory and sales milestones. Additionally, we will owe Intellia low- to mid-single-digit percent royalties on net sales of our CB-010 product candidate by us, our affiliates, and sublicensees until the expiration, abandonment, or invalidation of the last patent within the intellectual property relating to CRISPR-Cas9, including that relating to Cas9 chRDNAs (i.e., 2036, without patent term adjustment or patent term extension).

Pioneer Hi-Bred International, Inc. (now Corteva Agriscience)

On July 13, 2015, we and Pioneer Hi-Bred International, Inc. ("Pioneer") (now Corteva Agriscience), then a DuPont company ("DuPont"), entered into an Amended and Restated Collaboration and License Agreement, as amended (the "Pioneer Agreement"). Under the terms of the Pioneer Agreement, we and Pioneer cross licensed CRISPR intellectual property portfolios. Pioneer granted us an exclusive worldwide license, with the right to sublicense, to its CRISPR intellectual property in the field of research tools, as well as a non-exclusive worldwide license to such intellectual property

in human and animal therapeutics, industrial biotechnology, certain agriculture segments, and other fields; and we granted Pioneer an exclusive worldwide license, with the right to sublicense, to our CRISPR intellectual property, including the CVC IP, in a defined field of agriculture relating to specified row crops, as well as a non-exclusive worldwide license to the intellectual property in other agricultural applications, industrial biotechnology, nutrition and health, and other fields. The Pioneer Agreement continues until the expiration, abandonment, or invalidation of the last patent or patent application within the licensed intellectual property; provided, however, that the parties may terminate the Pioneer Agreement by mutual consent or either party may unilaterally terminate the Pioneer Agreement in the event of an uncured breach of a payment obligation, bankruptcy, or failure to maintain or own licensed intellectual property by the other party if the non-breaching party is materially adversely affected by the failure. We are obligated to pay low-single-digit percent royalties to Pioneer for the sales of our products in the research tools field as well as certain sublicensing revenues in that field. We are eligible to receive milestone payments from Pioneer if certain regulatory and commercial milestones are met related to specified row crops, for a total of up to $22.4 million, as well as to receive low-single-digit percent royalties for sales of defined agricultural products and certain sublicensing revenues in that field. In March 2021, we received a milestone payment of $0.3 million from Pioneer. Initially, Pioneer owned the patents and patent applications developed under the collaboration, including the chRDNA patent family, and granted us an exclusive license to these patents and patent applications in the fields of research tools and therapeutics.

In December 2020, we and Pioneer entered into an amendment to the Pioneer Agreement under which Pioneer assigned to us the chRDNA patent family developed under the research collaboration, and we paid Pioneer an upfront payment of $0.5 million. We considered the payment to Pioneer in accordance with revenue recognition guidance and accounted for it as a reduction of the licensing and collaboration revenue in our condensed consolidated statements of operations and comprehensive loss. In addition to the upfront payment, we are now obligated to pay all patent prosecution and maintenance costs for the chRDNA patent family; up to $2.8 million in regulatory milestone payments for therapeutic products developed by us, our affiliates, or licensees that are covered by the chRDNA patent family; up to $20.0 million in sales milestones over a total of four therapeutics products sold by us, our affiliates, or licensees that are covered by the chRDNA patent family; and a low-single-digit percentage of licensing revenue we receive for licensing the chRDNA patent family after December 2020.

For the three and nine months ended September 30, 2022, and for the three months ended September 30, 2021, we did not incur any expenses for payments we owe to Pioneer related to licensing revenues. For the nine months ended September 30, 2021, we incurred $0.8 million for payments we owed to Pioneer related to licensing revenues, which were recorded as a research and development expense in our condensed consolidated statements of operations and comprehensive loss.

AbbVie Manufacturing Management Unlimited Company

On February 9, 2021, we entered into a Collaboration and License Agreement (the “AbbVie Agreement”) with AbbVie Manufacturing Management Unlimited Company (“AbbVie”). Pursuant to the AbbVie Agreement, AbbVie selects one target or, for a dual CAR-T cell product, two targets (each selection, a “Program Slot”) to develop collaboration CAR-T cell products (and corresponding licensed products). For each of AbbVie’s two Program Slots (or up to four Program Slots, if AbbVie elects to expand the number as set forth below), we are collaborating to develop one or more collaboration allogeneic CAR-T cell products directed toward the single cancer target or target combination chosen by AbbVie as described in an applicable research plan, utilizing our Cas12a chRDNA genome-editing and cell therapy technologies. We granted AbbVie an exclusive (even as to us), royalty-bearing, worldwide license, with the right to grant sublicenses, under our Cas12a chRDNA and cell therapy intellectual property, as well as certain genome-editing technology that we may gain rights to in the future and intellectual property that may be developed under the collaboration, solely for AbbVie to develop, commercialize, manufacture, and otherwise exploit the collaboration CAR-T cell products in the field of human diagnostics, prophylactics, and therapeutics. Under the terms of the AbbVie Agreement, we conduct certain preclinical research, development, and manufacturing activities under the collaboration, including certain activities for the manufacture and supply of licensed product for AbbVie’s phase 1 clinical trials. AbbVie reimburses us for all such activities, including reimbursement for time spent by employees at a designated FTE rate. The duration of the collaboration is not fixed. Under the terms of the AbbVie Agreement, AbbVie has selected its initial Program Slot and has reserved six additional targets, which AbbVie may choose to be used or substituted into the two Program Slots or used for the third or fourth Program Slots if AbbVie expands the number of Program Slots during the collaboration.

During the collaboration, AbbVie may expand from two Program Slots to a total of four Program Slots by paying us an additional $15.0 million for each Program Slot, provided that AbbVie must make such payment within the earlier of (a) 60 calendar days following completion of the phase 1 clinical trials for the initial collaboration CAR-T cell product and (b) December 31, 2025. Under the terms of the AbbVie Agreement, we are eligible to receive up to $150.0 million in future

developmental and regulatory milestone payments for each Program Slot and up to $200.0 million in sales-based milestones for each Program Slot. We are also eligible to receive global royalties on net sales of licensed products sold by AbbVie, its affiliates, and sublicensees in the high-single-digit to low-teens percent range, subject, in certain instances, to various reductions.

The term of the AbbVie Agreement continues in force and effect until the date of expiration of the last royalty term of the last country in which a licensed product is exploited. On a licensed product-by-licensed product and country-by-country basis, the royalty term is the period of time beginning on the first commercial sale of a licensed product in a country and ending on the latest of the following three dates: (a) the expiration, invalidation, revocation, cancellation, or abandonment date of the last patent that includes a valid claim to either (i) the collaboration CAR-T cell product in the licensed product or (ii) the method of making the collaboration CAR-T cell product in the licensed product in such country (in the case of (ii), only for so long as no biosimilar product is commercially available in such country); (b) 10 years from the date of the first commercial sale of such licensed product in such country; and (c) the expiration date of regulatory exclusivity for such licensed product in such country. The AbbVie Agreement may be terminated during the term by either party for an uncured material breach or bankruptcy by the other party. Additionally, AbbVie may terminate the AbbVie Agreement, in its entirety or on a licensed product-by-licensed product basis, effective immediately upon written notice to us, if AbbVie in good faith believes that it is not advisable for AbbVie to continue to exploit the collaboration CAR-T cell products or licensed products as a result of a perceived serious safety issue. AbbVie may also terminate the AbbVie Agreement in its entirety at its sole discretion upon 90 days' prior written notice to us.

The transaction price we received under the AbbVie Agreement associated with the first two Program Slots consisted of a $30.0 million upfront cash payment and the estimated variable consideration related to our performance of preclinical, development, and manufacturing activities under the collaboration and the developmental and regulatory milestone payments. We constrain the estimated variable consideration if we assess that it is probable that a significant reversal in the amount of cumulative revenue recognized may occur in future periods. We constrained all developmental and regulatory milestone payments as of September 30, 2022. The transaction price is reevaluated at the end of each reporting period and as changes in circumstances occur. We determined that the licenses we granted to AbbVie and our participation in the joint governance committee are not capable of being distinct from the preclinical research, development, and manufacturing activities and therefore are combined into one performance obligation. We recognize revenue based on the measure of progress using an estimated cost-based input method each reporting period.

We received an upfront cash payment of $30.0 million from AbbVie during the year ended December 31, 2021. We recognized short-term deferred revenue in the amount of $11.5 million and long-term deferred revenue in the amount of $12.7 million related to this upfront cash payment in our condensed consolidated balance sheets as of September 30, 2022. We recognized short-term deferred revenue in the amount of $8.3 million and long-term deferred revenue in the amount of $19.1 million related to these payments in our consolidated balance sheets as of December 31, 2021.

We recognized $1.7 million and $2.3 million in revenue for the three months ended September 30, 2022 and 2021, respectively, relating to the AbbVie Agreement. We recognized $5.5 million and $2.8 million in revenue for the nine months ended September 30, 2022 and 2021, respectively, relating to the AbbVie Agreement. As of September 30, 2022, we did not record anything in accounts receivable and as of December 31, 2021, we recorded $1.0 million in accounts receivable, respectively, and $0.8 million and $0.2 million, respectively, in contract assets in our condensed consolidated balance sheets.

5. Revenue

Disaggregation of Revenue

We disaggregate revenue by geographical market based on the location of research and development activities of our licensees and collaborators. The following is a summary of revenue by geographic location for the three and nine months ended September 30, 2022 and 2021 (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
United States	$ 2,966	$ 3,507	$ 9,761	$ 6,483
Rest of world	337	470	398	556
Total	$ 3,303	$ 3,977	$ 10,159	$ 7,039

During the three months ended September 30, 2022, we recognized $1.6 million of revenue related to performance obligations satisfied at a point in time, and we recognized $1.7 million of revenue related to performance obligations satisfied over time.

During the three months ended September 30, 2021, we recognized $1.7 million of revenue related to performance obligations satisfied at a point in time, and we recognized $2.3 million of revenue related to performance obligations satisfied over time.

During the nine months ended September 30, 2022, we recognized $4.7 million of revenue related to performance obligations satisfied at a point in time, and we recognized $5.5 million of revenue related to performance obligations satisfied over time.

During the nine months ended September 30, 2021, we recognized $4.2 million of revenue related to performance obligations satisfied at a point in time, and we recognized $2.8 million of revenue related to performance obligations satisfied over time.

Contract Balances

Accounts receivable relate to our right to consideration for performance obligations completed (or partially completed) for which we have an unconditional right to consideration. Our accounts receivable balances represent amounts that we billed to our licensees with invoices outstanding as of the end of a reporting period.

Contract assets are rights to consideration in exchange for a license that we have granted to a licensee when the right is conditional on something other than the passage of time. Our contract asset balances represent royalties, milestone payments, and research costs related to the AbbVie Agreement that are unbilled as of the end of a reporting period.

Contract liabilities consist of deferred revenue and relate to amounts invoiced to, or advance consideration received from, licensees that precede our satisfaction of the associated performance obligations. Our deferred revenue primarily results from the upfront payment received relating to the performance obligation that is satisfied over time under the AbbVie Agreement. The remaining deferred revenue relates to upfront payments received under license agreements that also include non-refundable annual license fees, which are accounted for as material rights for license renewals and are recognized at the point in time annual license fees are paid by the licensees and the renewal periods begin.

The following table presents changes in our contract assets and liabilities during the nine months ended September 30, 2022 (in thousands):

	Balance as of December 31, 2021	Additions	Deductions	Balance as of September 30, 2022
Accounts receivable	$ 1,153	$ 6,271	$ (7,027)	$ 397
Contract assets:				
Unbilled accounts receivable	$ 1,488	$ 5,486	$ (5,075)	$ 1,899
Contract liabilities:				
Deferred revenue, current and long-term	$ 30,735	$ 3,514	$ (6,791)	$ 27,458

Unbilled accounts receivable increased $0.4 million during the nine months ended September 30, 2022, primarily due to the increase in unbilled research costs under the AbbVie Agreement.

Deferred revenue decreased during the nine months ended September 30, 2022, primarily due to a higher amount of revenue recognized compared to the amount of additional billings during the nine months ended September 30, 2022.

During the nine months ended September 30, 2022 and 2021, we recognized $3.4 million and $0.1 million of revenue, respectively, which were included in the opening contract liabilities balances as of December 31, 2021 and 2020, respectively.

Transaction Prices Allocated to Remaining Performance Obligations

Remaining performance obligations represent in aggregate the amount of a transaction price that has been allocated to performance obligations not delivered as of the end of a reporting period. The value of transaction prices allocated to remaining unsatisfied performance obligations as of September 30, 2022 was approximately $43.4 million. We expect to recognize approximately $12.0 million of remaining performance obligations as revenue in the next 12 months and to recognize the remainder thereafter.

Capitalized Contract Acquisition Costs and Fulfillment Costs

We did not incur any expenses to obtain license and collaboration agreements, and costs to fulfill those contracts do not generate or enhance our resources. As such, no costs to obtain or fulfill a contract have been capitalized in any period.

6. Balance Sheet Items

Other receivables consisted of the following (in thousands):

	September 30, 2022	December 31, 2021
Patent cost reimbursements	$ 2,197	$ 4,702
Accrued interest on marketable securities	499	226
Other	3	555
Total	$ 2,699	$ 5,483

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

	September 30, 2022	December 31, 2021
Prepaid contract manufacturing and clinical costs	$ 4,789	$ 2,714
Prepaid insurance	2,228	1,897
Prepaid income taxes	438	1,486
Prepaid rent	—	468
Other	1,103	671
Total	$ 8,558	$ 7,236

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

	September 30, 2022	December 31, 2021
Lab equipment	$ 10,782	$ 6,848
Leasehold improvements	1,836	1,701
Computer equipment	614	273
Furniture and equipment	161	133
Construction in progress	747	9
Total property and equipment, gross	14,140	8,964
Less: accumulated depreciation and amortization	(5,181)	(4,077)
Property and equipment, net	$ 8,959	$ 4,887

Depreciation and amortization expenses related to property and equipment were $0.4 million and $0.3 million, respectively, for the three months ended September 30, 2022 and 2021. Depreciation and amortization expenses related to property and equipment were $1.1 million and $0.7 million for the nine months ended September 30, 2022 and 2021, respectively.

Accrued expenses and other current liabilities consisted of the following (in thousands):

	September 30, 2022	December 31, 2021
Accrued employee compensation and related expenses	$ 4,631	$ 4,225
Accrued research and development expenses	5,717	4,065
Accrued patent expenses	1,877	3,213
Accrued expenses related to sublicensing revenues	528	586
Credit card liability	—	259
Other	1,885	788
Total	$ 14,638	$ 13,136

7. Related Party Transactions

Private Company, Related Party

On May 15, 2020, we entered into an Exclusive License Agreement, as amended, with a private company, related party (the "Private Company License Agreement"), under which we granted the private company an exclusive worldwide license to certain CRISPR intellectual property rights and know-how in a defined field. As consideration for the exclusive license, the private company issued to us 7,500,000 shares of convertible preferred stock with an estimated fair value of $7.5 million, which was the price paid for similar shares by another investor, and which was an arm's length transaction. This represents a material voting interest in the private company and entitles us to hold one of the four private company's board of director seats and to jointly vote with another stockholder on a second board of director seat. As of September 30, 2022, we have appointed one of the four directors of the private company. We concluded that the private company is a variable interest entity and that we are not its primary beneficiary based on our representation on its board of directors. As the private company's convertible preferred stock is not in substance common stock, we record this investment using the measurement alternative in accordance with ASC 321, Investments–Equity Securities. Under the measurement alternative, our investment in the private company's convertible preferred stock was initially recorded at its estimated fair value, but the carrying value may be adjusted through earnings upon an impairment or when there is an observable price change involving the same or a similar investment with the private company. As of each of September 30, 2022 and December 31, 2021, the carrying value of the investment was $7.5 million. There have been no changes to the carrying value of the investment during the three months ended September 30, 2022. We did not recognize any revenue in connection with the Private Company License Agreement for each of the three- and nine-month periods ended September 30, 2022 and 2021.

Scientific Advisory Board Payments

Dr. Jennifer A. Doudna, a co-founder and stockholder of the Company, receives compensation for participating on our scientific advisory board (the "SAB"). During each of the three- and nine-month periods ended September 30, 2022 and 2021, we paid Dr. Doudna less than $0.1 million for her participation on our SAB.

Loan to our President and Chief Executive Officer

In November 2018, our president and chief executive officer entered into a promissory note with us for $1.1 million, as a means to provide liquidity without triggering a taxable event. The note bore interest at a rate of 3.04%, compounded annually, and was payable in five years, together with principal and accrued interest. The promissory note was secured by 409,795 shares of our common stock owned by our president and chief executive officer and was determined to be non-recourse for accounting purposes. As such, the issuance of the promissory note was effectively the grant of a new share option. The promissory note was repaid in full amount in June 2021 by our president and chief executive officer and recognized as an increase in additional paid in capital of $1.2 million.

8. Paycheck Protection Program Loan

On May 6, 2020, we entered into a promissory note with WebBank (the "Lender") pursuant to the Paycheck Protection Program for a total amount of $1.6 million (the "PPP Loan"). Our PPP Loan had a two-year term and bore interest at a stated rate of 1.0% per annum, accrued monthly, beginning on the date our PPP Loan was issued by the Lender. No monthly principal and interest payments were required under our PPP Loan. We did not provide any collateral or guarantees for our PPP Loan, nor did we pay any facility charge to obtain our PPP Loan. Our PPP Loan provided for customary events of default, including those relating to failure to make payment, bankruptcy, breaches of representations,

and material adverse effects. We could have prepaid the principal of our PPP Loan at any time without incurring any prepayment charges. On May 22, 2021, our PPP Loan was forgiven in full by the SBA and, at that time, we recognized a PPP Loan extinguishment gain of $1.6 million in our condensed consolidated statements of operations and comprehensive loss.

9. Commitments and Contingencies

Facility Lease Agreements

We lease laboratory and office space under noncancellable operating agreements. In March 2021, we entered into a ten-year lease agreement, which superseded and replaced our prior lease, as amended, for our corporate headquarters and the new lease included additional office and laboratory space located within the same building in Berkeley, California. This lease agreement contains a renewal option for an additional term of five years. In addition to base rent, we pay our share of operating expenses and taxes.

In January 2022, we entered into a ten-and-a-half-year lease agreement for approximately 10,000 square feet of office and laboratory space in Berkeley, California, near our current corporate headquarters. In connection with signing this lease, we paid a deposit in the amount of $0.4 million to the lessor. This lease agreement contains an escalation clause for increased base rent over the term and a renewal option for an additional term of five years. In addition to base rent, we pay our share of operating expenses and taxes. To complete certain leasehold improvements, the lessor has agreed to provide us a tenant improvement allowance of $1.8 million. The leasehold improvements constructed are presented under property and equipment on our condensed consolidated balance sheets and are depreciated on a straight-line basis over the remaining lease term.

The components of lease costs, which are included in our statements of operations and comprehensive loss, are as follows (in thousands):

	Three Months Ended September 30, 2022	Nine Months Ended September 30, 2022
Operating lease cost[(1)]	$ 1,822	$ 5,443
Short-term lease cost	—	83
Total lease cost	$ 1,822	$ 5,526

(1) Includes $0.6 million and $1.6 million of variable lease cost related to operating expenses and taxes for the three and nine months ended September 30, 2022, respectively.

Supplemental information related to our leases is as follows (in thousands):

	Nine Months Ended September 30, 2022
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	$ 2,454

As of September 30, 2022, the weighted-average remaining lease term was 8.6 years for our corporate office and laboratory leases, and the weighted-average discount rate was 11.29%.

The following table summarizes a maturity analysis of our operating lease liabilities showing the aggregate lease payments as of September 30, 2022 (in thousands):

Remainder of 2022[(1)]	$	681
2023[(2)]		3,197
2024[(3)]		4,353
2025		4,475
2026		5,720
Thereafter		28,037
Total undiscounted lease payments		46,463
Less: imputed interest		(18,593)
Total discounted lease payments		27,870
Less: current portion of lease liability		(912)
Noncurrent portion of lease liability	$	26,958

(1) Reflects an offset of $0.1 million related to incentives expected to be received in 2022.
(2) Reflects an offset of $1.5 million related to incentives expected to be received in 2023.
(3) Reflects an offset of $0.2 million related to incentives expected to be received in 2024.

Capital Lease

We accounted for certain leased equipment as a capital lease due to the ownership of such equipment transferring to us at the end of the lease term. As of December 31, 2021, the capital lease obligation was repaid in full and we do not have any remaining future minimum lease payments related to this capital lease.

Research and Development Agreements

We enter into various agreements in the ordinary course of business, such as those with suppliers, contract research organizations (“CROs”), contract manufacturing organizations (“CMOs”), clinical trial sites, and the like. These agreements provide for termination at the request of either party, generally with less than one-year notice and are, therefore, cancellable contracts and, if cancelled, are not anticipated to have a material effect on our condensed consolidated financial condition, results of operations, or cash flows.

Guarantees and Indemnifications

In the normal course of business, we enter into agreements that contain a variety of representations and warranties and provide for certain indemnifications by us. Our exposure under these agreements is unknown because claims may be made against us in the future. To date, we have not paid any claims or been required to defend any action related to our indemnification obligations. As of September 30, 2022 and December 31, 2021, we did not have any material indemnification claims that were probable or reasonably possible, and consequently, we have not recorded related liabilities.

Litigation

From time to time, we may become involved in legal proceedings arising in the ordinary course of business. We record a liability for such matters when it is probable that future losses will be incurred and if such losses can be reasonably estimated. Significant judgment by us is required to determine both probability and the estimated amount. We are not currently subject to any material legal proceedings, and we are not aware of any unasserted claims pending that could, individually or in the aggregate, have a material adverse effect on our results of operations or financial condition.

10. Common Stock

Common stock reserved for future issuance consists of the following:

	As of September 30, 2022	As of December 31, 2021
Stock options, issued and outstanding	6,649,892	6,757,591
Stock options, authorized for future issuance	5,955,761	3,749,339
Stock available under our employee stock purchase plan	1,044,518	511,000
Unvested restricted stock units and performance-based restricted stock units	259,769	—
	13,909,940	11,017,930

Shelf Registration Statement

On August 9, 2022, we filed a shelf registration statement on Form S-3 ("Shelf Registration Statement") with the U.S. Securities and Exchange Commission ("SEC"). The Shelf Registration Statement allows us to sell from time to time up to $400.0 million of common stock, preferred stock, debt securities, warrants, rights, or units comprised of any combination of these securities, for our own account in one or more offerings (including the $100.0 million of common stock reserved for our at-the-market equity offering program described below). The SEC declared the Shelf Registration Statement effective on August 16, 2022. The terms of any offering under the Shelf Registration Statement will be established at the time of such offering and will be described in a prospectus supplement to the Shelf Registration Statement filed with the SEC prior to the completion of any such offering.

At-the-market Equity Offering Program

On August 9, 2022, we also entered into an Open Market Sale Agreement[SM] (the "Sales Agreement") with Jefferies LLC ("Jefferies") with respect to an at-the-market ("ATM") equity offering program, pursuant to which, through Jefferies as sales agent, we may from time to time, sell shares of our common stock having an aggregate offering price of up to $100.0 million in gross proceeds under the Shelf Registration Statement. As of September 30, 2022, there have been no sales under the ATM equity offering program and, as of September 30, 2022, the full capacity remained available for issuance.

11. Stock-Based Compensation

Equity Incentive Plans

In July 2021, our board of directors adopted and our stockholders approved the 2021 Equity Incentive Plan (the "2021 Plan") that became effective on July 22, 2021. We reserved 5,200,000 shares of common stock for issuance under the 2021 Plan. In addition, 934,562 shares available for issuance under the 2013 Equity Incentive Plan, adopted in 2013 and amended and restated in 2019, were transferred into the 2021 Plan. In addition, any shares subject to awards under the 2013 Plan that terminate, expire, or lapse for any reason without the delivery of shares, or are reacquired or withheld (or not issued) to satisfy a tax withholding obligation or the purchase or exercise price, will be added to the 2021 Plan. The 2021 Plan also provides that the number of shares initially reserved and available for issuance will automatically increase each January 1, beginning on January 1, 2022 and ending on January 1, 2031, by an amount equal to the lesser of (a) 5% of the shares of common stock outstanding on the last day of the immediately preceding fiscal year and (b) such smaller number of shares of stock as determined by our Board. No more than 56,000,000 shares of stock may be issued upon the exercise of incentive stock options under the 2021 Plan. Options under the 2021 Plan may be granted for periods of up to 10 years at exercise prices no less than the fair market value of our common stock on the date of grant; provided, however, that the exercise price of an incentive stock option granted to a 10% stockholder may not be less than 110% of the fair market value of the shares on the date of grant and such option may not be exercisable after the expiration of five years from the date of grant. The grant date fair market value of all awards made under the 2021 Plan and all cash compensation paid by us to any non-employee director for services as a director in any fiscal year may not exceed $750,000, increased to $1,000,000 in the fiscal year of their initial service as a non-employee director. As of September 30, 2022, we had 5,955,761 shares available for issuance under the 2021 Plan.

The following table summarizes stock option activity under our equity incentive plans during the nine months ended September 30, 2022:

	Stock Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (in thousands)*
Outstanding at December 31, 2021	6,757,591	$ 8.57	8.7	$ 50,085
Options granted	1,206,750	8.88		
Options exercised	(654,665)	2.09		
Options cancelled or forfeited	(659,784)	9.74		
Outstanding at September 30, 2022	6,649,892	$ 9.14	8.5	$ 24,431
Exercisable at September 30, 2022	2,207,115	$ 6.13	7.4	$ 12,416
Vested and expected to vest at September 30, 2022	6,649,892	$ 9.14	8.5	$ 24,431

*The aggregate intrinsic value is calculated as the difference between the stock option exercise price and the estimated fair value of the underlying common stock at the end of each reporting period referenced above.

Grant Date Fair Value

During the three months ended September 30, 2022, we granted 372,600 stock options to employees (no stock options were granted to non-employees) with a weighted average grant date fair value of $6.43. During the nine months ended September 30, 2022, we granted 1,206,750 stock options to employees and non-employees with a weighted average grant date fair value of $5.84.

During the three months ended September 30, 2021, we granted 351,750 stock options to employees (no stock options were granted to non-employees) with a weighted average grant date fair value of $16.64. During the nine months ended September 30, 2021, we granted 2,809,660 stock options to employees and non-employees with a weighted average grant date fair value of $4.70.

We estimated the fair value of each employee and non-employee stock option award on the grant date using the Black-Scholes option-pricing model based on the following assumptions:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Volatility	74.2%	74.8%	71.7% to 74.2%	74.8% to 76.5%
Expected term (in years)	6.0	7.0	5.5 to 6.0	5.5 to 7.0
Risk-free interest rate	3.1% to 3.7%	1.1%	1.7% to 3.7%	0.9% to 1.2%
Expected dividend yield	0.0%	0.0%	0.0%	0.0%

As of September 30, 2022, there was $29.2 million of unrecognized stock-based compensation expense related to employee and non-employee stock options that is expected to be recognized over a weighted-average period of 2.8 years.

Restricted Stock Units

During the nine months ended September 30, 2022, we granted 200,058 restricted stock units ("RSUs") and 59,781 performance-based RSUs ("PSUs") under the 2021 Plan. A summary of the status of and change in unvested RSUs and PSUs as of September 30, 2022 was as follows:

	Number of Shares Underlying Outstanding RSUs and PSUs	Weighted-Average Grant Date Fair Value per RSU and PSU
Unvested, January 1, 2022	—	$ —
Granted	259,839	10.07
Forfeited	(70)	9.90
Unvested, September 30, 2022	259,769	$ 10.07

The PSUs were granted to our executive officers and will vest if and when a certain milestone is reached within a specific time period, contingent upon the executive officer remaining an employee at that time. As of September 30, 2022, the achievement of this milestone was not considered probable and, therefore, no stock-based compensation was recorded.

As of September 30, 2022, the total unrecognized stock-based compensation expense related to unvested RSUs was $1.8 million, which is expected to be recognized over the remaining weighted-average vesting period of 2.3 years. As of September 30, 2022, there was approximately $0.6 million of unrecognized stock-based compensation expense related to unvested PSUs.

Employee Stock Purchase Plan ("ESPP")

In July 2021, our board of directors adopted and our stockholders approved the ESPP, which became effective on July 22, 2021. The ESPP is intended to qualify as an employee stock purchase plan under Section 423 of the Internal Revenue Code of 1986, as amended (the "Tax Code"). We reserved 511,000 shares of our common stock for employee purchases under the ESPP. The number of shares of common stock reserved for issuance under the ESPP will be automatically increased each January 1, beginning on January 1, 2022 and ending on January 1, 2031 by an amount equal to the lesser of (a) 1% of the shares of common stock outstanding on the last day of the immediately preceding fiscal year and (b) such smaller number of shares of stock as determined by our Board; provided that the maximum number of shares that may be issued under the ESPP is 10,000,000 shares. The ESPP allows an eligible employee to purchase shares of our common stock at a discount through payroll deductions of up to 15% of the employee's eligible compensation. At the end of each purchase period, employees are able to purchase shares at 85% of the lower of the fair market value of our common stock at the beginning of the offering period or at the end of each applicable offering period. The first offering period commenced on August 16, 2021 and ended on February 15, 2022. We have issued 36,596 shares of common stock under the ESPP as of September 30, 2022. We recorded $0.1 million in accrued liabilities related to contributions withheld as of September 30, 2022.

Stock-Based Compensation Expense

We recorded stock-based compensation expense related to employee and non-employee equity-based awards grants in our condensed consolidated statements of operations and comprehensive loss as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Research and development	$ 1,072	$ 484	$ 3,139	$ 970
General and administrative	1,601	451	5,476	901
Total	$ 2,673	$ 935	$ 8,615	$ 1,871

The above stock-based compensation expense related to the following equity-based awards (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Stock options	$ 2,479	$ 894	$ 8,190	$ 1,830
ESPP	80	41	209	41
RSUs	114	—	216	—
Total	$ 2,673	$ 935	$ 8,615	$ 1,871

Stock-based compensation expense related to employees was $2.7 million and $0.9 million for the three months ended September 30, 2022 and 2021, respectively. Stock-based compensation expense related to employees was $8.5 million and $1.9 million for the nine months ended September 30, 2022 and 2021, respectively. Stock-based compensation expense related to non-employees was less than $0.1 million for the three months ended September 30, 2022 and 2021, respectively. Stock-based compensation expense related to non-employees was $0.1 million and less than $0.1 million for the nine months ended September 30, 2022 and 2021, respectively.

12. 401(k) Savings Plan

In 2017, we established a defined-contribution savings plan under Section 401(k) of the Tax Code. Our 401(k) plan is available to all employees and allows participants to defer a portion of their annual compensation on a pretax basis subject to applicable laws. We also provide a 4% match for employee contributions up to a certain limit. During the nine months ended September 30, 2022 and 2021, we contributed $0.6 million and $0.3 million, respectively, to our 401(k) plan.

13. Income Taxes

No income tax expense was recorded during each of the three- and nine-month periods ended September 30, 2022 and 2021 due to our operating losses.

14. Net Loss Per Share

The following table sets forth the computation of the basic and diluted net loss per share (in thousands, except share and per share amounts):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Numerator:				
Net loss	$ (26,647)	$ (20,974)	$ (72,432)	$ (48,444)
Denominator:				
Weighted-average common shares outstanding used to compute net loss per share, basic and diluted	60,886,921	45,889,646	60,731,520	22,052,944
Net loss per share, basic and diluted	$ (0.44)	$ (0.46)	$ (1.19)	$ (2.20)

Because we were in a net loss position for all periods presented, basic net loss per share is the same as diluted net loss per share for all periods, as the inclusion of all common stock equivalents outstanding would have been anti-dilutive.

Potentially dilutive securities that were not included in the diluted per share calculations because they would be anti-dilutive were as follows:

	As of September 30, 2022	As of September 30, 2021
Convertible preferred stock	—	—
Stock options outstanding	6,649,892	4,965,952
RSUs and PSUs issued and outstanding	259,769	—
Shares committed under ESPP	49,109	18,804
	6,958,770	4,984,756

15. Subsequent Events

We did not have any subsequent events as of the filing date of this Quarterly Report on Form 10-Q.

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

You should read the following discussion and analysis of our financial condition and results of operations together with our unaudited condensed consolidated financial statements and related notes included in Part I, Item 1, of this Quarterly Report on Form 10-Q ("Form 10-Q") and with the audited consolidated financial statements and the related notes for the fiscal year ended December 31, 2021 included in our Annual Report on Form 10-K ("Form 10-K") filed with the U.S. Securities and Exchange Commission ("SEC") on March 21, 2022.

Special Note Regarding Forward-Looking Statements

This Form 10-Q contains forward-looking statements. All statements other than statements of historical facts contained in this Form 10-Q, including statements regarding our business strategy, plans, and objectives; expectations regarding our clinical and preclinical development programs, including our timing expectations with respect to such programs and the expected timing of disclosure of clinical data from such programs; future regulatory filings; our results of operations and financial position; plans and objectives of management for future operations; and the like, are forward-looking statements. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "expect," "plan," "anticipate," "could," "intend," "target," "project," "contemplate," "believe," "estimate," "predict," "potential," or "continue" or the negative of these terms or other similar expressions, although not all forward-looking statements contain these words.

As a result of many factors, including but not limited to risks related to our limited operating history, history of net operating losses, financial position and our ability to raise additional capital as needed to fund our operations and product candidate development; risks associated with the initiation, cost, timing, progress, and results of current and future research and development programs, preclinical studies, and clinical trials; the risk that initial or interim clinical trial data will not ultimately be predictive of the safety and efficacy of our product candidates or that clinical outcomes may differ as more clinical data becomes available; risks related to our ability to obtain and maintain regulatory approval for our product candidates; risks that our product candidates, if approved, may not gain market acceptance due to negative public opinion and increased regulatory scrutiny of cell therapies involving genome editing; risks related to our ability to meet future regulatory standards with respect to our products; risks related to our ability to establish and/or maintain intellectual property rights covering our product candidates and genome-editing technology; risks of third parties asserting that our product candidates infringe their patents; risks related to developments of our competitors and our industry; risks related to our reliance on third parties to conduct our clinical trials and manufacture our product candidates; risks caused by the impact of COVID-19 or geopolitical events on our business and operations; and other risks described in greater detail in the section of our Form 10-K titled "Risk Factors," and in other filings we make with the SEC, the events and circumstances reflected in our forward-looking statements may not be achieved or may not occur, and actual results could differ materially from those described in or implied by the forward-looking statements contained in the following discussion and analysis. As a result of these risks, you should not place undue reliance on these forward-looking statements. We assume no obligation to revise or update any forward-looking statements for any reason, except as required by law.

Overview

We are a clinical-stage CRISPR genome-editing biopharmaceutical company dedicated to developing innovative, transformative therapies for patients with devastating diseases. CRISPR is an acronym for **C**lustered **R**egularly **I**nterspaced **S**hort **P**alindromic **R**epeats. We are advancing a pipeline of allogeneic, or off-the-shelf, chimeric antigen receptor ("CAR")-T ("CAR-T") and CAR-natural killer ("CAR-NK") cell therapies for the treatment of patients with hematologic malignancies and solid tumors. Our renowned founders, including a Nobel Prize laureate, are pioneers in the field of CRISPR genome editing. Our novel CRISPR platform, CRISPR hybrid RNA-DNA ("chRDNA," pronounced "chardonnay") genome-editing technology, has demonstrated superior specificity and high efficiency in preclinical studies and enables us to perform multiple, precise genomic edits, while maintaining genomic integrity.

Our lead product candidate, CB-010, to our knowledge, is the first clinical-stage allogeneic anti-CD19 CAR-T cell therapy with programmed cell death protein 1 ("PD-1") removed from the CAR-T cell surface by a genome-edited knockout of the PDCD1 gene. We have demonstrated in preclinical models that the PD-1 knockout improves the persistence of antitumor activity by disrupting a pathway that leads to rapid T cell exhaustion. CB-010 is being evaluated in our ANTLER phase 1 clinical trial in patients with relapsed or refractory B cell non-Hodgkin lymphoma ("r/r B-NHL"). We presented initial clinical data from cohort 1 at dose level 1 ($40x10^6$ CAR-T cells) from our ANTLER trial in June 2022 at the European Hematology Association 2022 Congress, and we expect to share additional clinical data from cohort 1 by the end of 2022. The ANTLER trial is currently enrolling patients at dose level 2 ($80x10^6$ CAR-T cells).

Our CB-011 product candidate is an allogeneic CAR-T cell product candidate that targets B cell maturation antigen ("BCMA"). To our knowledge, it is the first anti-BCMA CAR-T cell therapy incorporating an immune cloaking approach that includes both the removal of the endogenous beta-2 microglobulin ("B2M") protein by a genome-edited knockout of the B2M gene and insertion of a B2M–human-leukocyte-antigen-E–peptide transgene ("B2M–HLA-E"), enabling expression of HLA-E on the CAR-T cell surface. This strategy is designed to blunt CAR-T cell rejection by both patient T cells and natural killer ("NK") cells to enable more durable antitumor activity. CB-011 is in preclinical development for relapsed or refractory multiple myeloma ("r/r MM"). We submitted our investigational new drug ("IND") application to the U.S. Food and Drug Administration ("FDA") for CB-011 in r/r MM in the fourth quarter of 2022.

CB-012 is our allogeneic armored CAR-T cell product candidate targeting CLL-1 (also known as CD371), currently in preclinical development for the treatment of relapsed or refractory acute myeloid leukemia ("r/r AML"). CLL-1 is an attractive target for AML due to its expression on myeloid cancer cells, its enrichment in leukemic stem cells, and its absence on hematopoietic stem cells. We expect to submit an IND application to the FDA for CB-012 in r/r AML in 2023.

We are also developing allogeneic CAR-NK cell therapies derived from genome-edited induced pluripotent stem cells ("iPSCs") for the treatment of solid tumors. CB-020 is our first CAR-NK product candidate from our CAR-NK platform and it will contain genome edits designed to overcome some of the challenges of targeting solid tumors, such as trafficking, tumor infiltration, heterogeneity, and the immunosuppressive tumor microenvironment. We expect to select a tumor cell-surface target for our CB-020 product candidate in the fourth quarter of 2022. Also in the fourth quarter of 2022, we expect to disclose armoring strategies we are developing for our CAR-NK platform.

Since our founding in 2011, we have devoted substantially all of our resources to organizing and staffing, business planning, raising capital, developing our genome-editing platform technologies, developing our product candidates and building our pipeline, creating and maintaining our intellectual property portfolio, and establishing arrangements with third parties for the manufacture and testing of our product candidates. We do not have any products approved for commercial sale and have not generated any revenue from product sales. We have incurred net losses since commencement of our operations.

To date, we have primarily funded our operations through revenue from our license agreements, license and collaboration agreements, and a service agreement; the sale of shares of Intellia Therapeutics, Inc. ("Intellia") common stock that we received as consideration for a License Agreement (as amended, the "Intellia License Agreement") with Intellia, LLC, to which Intellia is a successor in interest; the sale of our convertible preferred stock in private placements before our initial public offering ("IPO"); and proceeds from our IPO.

Our net losses for the three months ended September 30, 2022 and 2021 were $26.6 million and $21.0 million, respectively. Our net losses for the nine months ended September 30, 2022 and 2021 were $72.4 million and $48.4 million, respectively. We had an accumulated deficit of $170.2 million as of September 30, 2022. Our net losses and operating losses may fluctuate from quarter to quarter and year to year depending primarily on the timing of expenses associated with our clinical trials and nonclinical studies and our other research and development expenses. In addition, we are incurring increased costs associated with operating as a public company, including legal, audit, and accounting fees; maintaining compliance with the rules and regulations of the SEC and Nasdaq; director and officer insurance premiums; investor and public relations activities; and other accompanying compliance and governance requirements. We anticipate that our expenses will increase substantially if and as we:

- progress our ANTLER phase 1 clinical trial for our CB-010 product candidate;
- continue our current research programs and our preclinical and clinical development of our other current product candidates, including CB-011, CB-012, and CB-020, and any other product candidates we identify and choose to develop;
- hire additional clinical, quality control, and scientific personnel;
- seek to identify additional research programs and additional product candidates;
- further develop our genome-editing technologies;
- acquire or in-license technologies;
- expand, maintain, enforce, and defend our intellectual property portfolio;
- seek regulatory and marketing approvals for any of our product candidates that successfully complete clinical trials, if any;

- establish and expand manufacturing capabilities and supply chain capacity for our product candidates;
- add operational, legal, financial, and management information systems and personnel;
- experience any delays, challenges, or other issues associated with any of the above, including the failure of clinical trials meeting endpoints, the generation of unanticipated preclinical results or clinical trial data subject to differing interpretations, or the occurrence of potential safety issues or other development or regulatory challenges;
- make royalty, milestone, or other payments under current, and any future, in-license or assignment agreements;
- establish a sales, marketing, and distribution infrastructure to commercialize any product candidates for which we obtain marketing approval; and
- continue to operate as a public company.

We do not own or operate any manufacturing facilities and we outsource a substantial portion of our clinical trial studies to third parties. We use multiple contract manufacturing organizations ("CMOs") to individually manufacture, under current good manufacturing processes, chRDNA guides, Cas proteins, plasmids, and adeno-associated virus serotype 6 vectors used in the manufacture of our CAR-T cells as well as our CAR-NK cell therapy product candidates. We expect to rely on our CMOs for the manufacturing of our product candidates to expedite readiness for future clinical trials, and most of these CMOs have capabilities for commercial manufacturing. Additionally, we may decide to build our own manufacturing facility in the future to provide us greater flexibility and control over our clinical or commercial manufacturing needs.

Because of the numerous risks and uncertainties associated with therapeutic product development, we may never achieve profitability and, unless and until we are able to develop and commercialize our product candidates, we will need to continue to raise additional capital. Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations through public or private equity or debt financings, collaborations, strategic alliances, and licensing arrangements with third parties. There are no assurances that we will be successful in obtaining an adequate level of financing to support our business plans as needed on acceptable terms, or at all. If we raise additional funds through collaborations, strategic alliances, or licensing arrangements with third parties, we may have to relinquish valuable rights to our intellectual property, future revenue streams, research programs, or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise capital as and when needed or on attractive terms, we may have to significantly delay, reduce, or discontinue the development and commercialization of our product candidates or scale back or terminate our pursuit of new in-licenses and acquisitions.

Impact of the COVID-19 Pandemic and Geopolitical Events

We are currently unable to predict the effect that the ongoing COVID-19 pandemic may have on our Company in the future. Furthermore, we cannot predict the impact that national or international geopolitical events, such as the ongoing war in Ukraine, may have on our operations. To the extent the COVID-19 pandemic or geopolitical events adversely affect our business prospects, financial condition, and results of operation, they may also have the effect of exacerbating many of the other risks described or referenced in the section of our Form 10-K titled "Risk Factors," such as those relating to the supply of materials for our product candidates, and the timing and possible disruptions to our ongoing and future preclinical studies and clinical trials, and our access to the financial markets.

Components of Results of Operations

Licensing and Collaboration Revenue

We have not generated any revenue from product sales to date and do not expect to generate any revenue from the sale of products in the foreseeable future. If our development efforts for our product candidates are successful and result in regulatory approval and commercialization, we may generate revenue in the future from product sales. We cannot predict if, when, or to what extent we will generate revenue from the commercialization and sale of our product candidates if we succeed in obtaining regulatory approval for these product candidates.

To date, all of our revenue consists of licensing and collaboration revenue earned from collaboration and/or licensing agreements entered into with third parties, including related parties. Under these agreements, we license rights to certain intellectual property controlled by us. The terms of these arrangements typically include payments to us of one or more of the following: nonrefundable, upfront license fees or exclusivity fees; annual maintenance fees; regulatory and/or

commercial milestone payments; research and development payments; and royalties on the net sales of products and/or services. Each of these payments results in licensing and collaboration revenue. Revenue under such licensing and collaboration agreements was $3.3 million and $4.0 million for the three months ended September 30, 2022 and 2021, respectively, and $10.2 million and $7.0 million for the nine months ended September 30, 2022 and 2021, respectively. See Notes 4 and 5 to our condensed consolidated financial statements included elsewhere in this Form 10-Q.

For additional information about our revenue recognition policy related to our licensing and collaboration agreements, see Note 2 to the annual consolidated financial statements included in our Form 10-K.

For the foreseeable future we expect substantially all of our revenue will be generated from licensing and collaboration agreements.

Operating Expenses

Research and Development Expenses

Our research and development expenses consist of internal and external expenses incurred in connection with the development of our product candidates and our platform technologies, and our in-licensing and assignment agreements.

External costs include:

- costs associated with acquiring technology and intellectual property licenses that have no alternative future uses, sublicensing revenue, and milestones;
- costs incurred in connection with the preclinical and clinical development and manufacturing of our product candidates, including under agreements with contract research organizations (“CROs”), CMOs, and clinical sites; and
- other research and development costs, including laboratory materials and supplies, and consulting services.

Internal costs include:

- personnel-related costs, including salaries, benefits, and share-based compensation expense, for our research and development personnel; and
- allocated facilities and other overhead expenses, including expenses for rent, facilities maintenance, and depreciation.

We expense research and development costs as incurred. Costs of certain activities are recognized based on an evaluation of the progress to completion of specific tasks. However, payments made prior to the receipt of goods or services that will be used or rendered for future research and development activities are deferred and capitalized as prepaid expenses and other current assets on our condensed consolidated balance sheets. The capitalized amounts are recognized as expense as the goods are delivered or as related services are performed. Historically, we have not tracked external costs by clinical program. We intend to separately track certain external costs for each clinical program. However, we do not currently track, and do not intend to track, costs that are deployed across multiple programs.

Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect that our research and development expenses will increase substantially for the foreseeable future as we continue to implement our business strategy; advance our CB-010 product candidate through clinical trials and later stages of development; conduct preclinical studies and clinical trials for our other product candidates; seek regulatory approvals for any product candidates that successfully complete clinical trials; expand our research and development efforts and incur expenses associated with hiring additional personnel to support our research and development efforts; and seek to identify, in-license, acquire, and/or develop additional product candidates.

The successful development of our CB-010, CB-011, CB-012, and CB-020 product candidates, as well as other potential future product candidates, is highly uncertain. Accordingly, at this time, we cannot reasonably estimate or know the nature, timing, and costs of the efforts that will be necessary to complete the development of our product candidates. We are also unable to predict when, if ever, we will generate revenue and material net cash inflows from the commercialization and sale of any of our product candidates for which we may obtain marketing approval. We may never

succeed in achieving regulatory approval for any of our product candidates. The duration, costs, and timing of preclinical studies, clinical trials, and development of our product candidates will depend on a variety of factors, including:

- sufficiency of our financial and other resources;
- acceptance of our CRISPR chRDNA genome-editing technology;
- ability to develop differentiating features so that our products have a competitive edge;
- completion of preclinical studies;
- establishment, maintenance, enforcement, and defense of our patents and other intellectual property rights;
- our ability to not infringe, misappropriate, or otherwise violate third-party intellectual property rights;
- clearance of IND applications to initiate clinical trials on product candidates;
- successful enrollment in, and completion of, our clinical trials on our product candidates;
- data from our clinical trials that support an acceptable risk-benefit profile of our product candidates for the intended patient populations and that demonstrate safety and efficacy;
- entry into collaborations to further the development of our product candidates or for the development of new product candidates;
- successful development of our internal process development and transfer to larger-scale facilities;
- establishment of agreements with CMOs for clinical and commercial supplies and scaling up manufacturing processes and capabilities to support our clinical trials;
- receipt of marketing approvals from applicable regulatory authorities;
- grant of regulatory exclusivity for our product candidates;
- establishment of sales, marketing, and distribution capabilities necessary for commercialization of our product candidates if and when approved, whether by us or in collaboration with third parties;
- maintenance of a continued acceptable safety profile of our products post-approval;
- acceptance of our product candidates, if and when approved by the applicable regulatory authorities, by patients, the medical community, and third-party payors;
- ability of our products to compete with other therapies and treatment options;
- establishment and maintenance of healthcare coverage and adequate reimbursement; and
- expanded indications and patient populations for our products.

The following table summarizes our research and development expenses for the periods indicated:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
	(in thousands)		(in thousands)	
External costs:				
Expenses related to licensing, sublicensing revenue, and milestones	$ 439	$ 359	$ 1,301	$ 3,644
Services provided by CROs, CMOs, clinical sites, and other third parties that conduct preclinical studies and clinical trials on our behalf	6,557	7,515	20,190	14,210
Other research and development expenses	4,627	2,322	11,957	5,981
Total external costs	11,623	10,196	33,448	23,835
Internal costs:				
Personnel-related expenses	6,365	4,176	17,256	9,380
Facilities and other allocated expenses	2,003	1,461	5,790	3,929
Total internal costs	8,368	5,637	23,046	13,309
Total research and development expenses	$ 19,991	$ 15,833	$ 56,494	$ 37,144

General and Administrative Expenses

Our general and administrative expenses consist primarily of personnel-related costs, intellectual property costs, consulting costs, and allocated overhead, including rent, equipment depreciation, and utilities. Personnel-related costs consist of salaries, benefits, and stock-based compensation for our general and administrative personnel. Intellectual property costs include expenses for filing, prosecuting, and maintaining patents and patent applications, including certain patents and patent applications that we license from third parties. We are entitled to receive reimbursement from third parties for a portion of the costs for filing, prosecuting, and maintaining certain patents and patent applications. We accrue for these reimbursements as the respective expenses are incurred and classify such reimbursements as a reduction of general and administrative expenses. During the three months ended September 30, 2022 and 2021, we recorded $1.0 million and $1.6 million, respectively, of patent cost reimbursements as a reduction to general and administrative expense. During the nine months ended September 30, 2022 and 2021, we recorded $3.1 million and $6.1 million, respectively, of patent cost reimbursements as a reduction to general and administrative expense.

We expect that our general and administrative expenses may increase in the future as a result of expanding our operations, including hiring personnel, preparing for potential commercialization of our product candidates, and additional facility occupancy costs, as well as other expenses necessary to support the growth and operations of a clinical-stage public company.

Other Income (Expense)

Other income (expense) consists primarily of interest income earned on cash and marketable securities, change in the fair value of our equity investments, change in fair value of the Memorial Sloan Kettering Cancer Center (“MSKCC”) success payments liability under the Exclusive License Agreement with MSKCC (the “MSKCC Agreement”).

Results of Operations

Comparison of the Three Months Ended September 30, 2022 and 2021

The following table summarizes our results of operations for the periods indicated:

	Three Months Ended September 30,		
	2022	2021	Change
	(in thousands)		
Licensing and collaboration revenue	$ 3,303	$ 3,977	$ (674)
Operating expenses			
Research and development	19,991	15,833	4,158
General and administrative	9,849	6,760	3,089
Total operating expenses	29,840	22,593	7,247
Loss from operations	(26,537)	(18,616)	(7,921)
Other income (expense)			
Change in fair value of equity securities	31	—	31
Change in fair value of the MSKCC success payments liability	(1,607)	(2,403)	796
Gain on extinguishment of PPP Loan	—	—	—
Other income, net	1,466	45	1,421
Total other income (expense)	(110)	(2,358)	2,248
Net loss	$ (26,647)	$ (20,974)	$ (5,673)

Licensing and Collaboration Revenue

Licensing and collaboration revenue decreased by $0.7 million, or 17%, to $3.3 million for the three months ended September 30, 2022 from $4.0 million for the three months ended September 30, 2021. This decrease was primarily related to a decrease of $0.6 million related to recognition of revenue under the Collaboration and License Agreement (the "AbbVie Agreement") with AbbVie Manufacturing Management Unlimited Company ("AbbVie").

The following table summarizes our revenue by licensee for the periods indicated:

	Three Months Ended September 30,		
	2022	2021	Change
	(in thousands)		
AbbVie	$ 1,709	$ 2,274	$ (565)
Other licensees	1,594	1,703	(109)
Total licensing revenue	$ 3,303	$ 3,977	$ (674)

Research and Development Expenses

Research and development expenses increased by $4.2 million, or 26%, to $20.0 million for the three months ended September 30, 2022 from $15.8 million for the three months ended September 30, 2021. This increase was primarily related to increases of $2.2 million in other research and development expenses to advance IND-enabling studies for CB-011 and preclinical research for additional programs, as well as other consulting services related to research and development; $2.2 million in personnel-related expenses (which include an increase in stock-based compensation expense of $0.7 million) due to incremental hiring; and $0.5 million in other facilities and allocated expenses; partially offset by a net decrease of $0.8M in external CMO and CRO activities, driven by a decrease of $2.2 million due to timing of CMO activities for our product candidates, partially offset by a $1.4 million increase in CRO activities primarily to advance our ANTLER phase 1 trial for CB-010.

General and Administrative Expenses

General and administrative expenses increased by $3.1 million, or 46%, to $9.8 million for the three months ended September 30, 2022 from $6.8 million for the three months ended September 30, 2021. This increase was primarily related

to increases of $1.6 million in personnel-related expenses (which include an increase in stock-based compensation expense of $1.1 million) due to incremental hiring; $0.7 million in facilities and other allocated expenses; and $0.7 million in legal, accounting, insurance, and other expenses necessary to support the growth and operations of a clinical-stage public company.

Total Other Income (Expense)

We recognized a loss related to the change in the fair value of the MSKCC success payments liability in the amount of $1.6 million and $2.4 million for the three months ended September 30, 2022 and 2021, respectively.

Other income, net during the three months ended September 30, 2022 increased to $1.5 million from less than $0.1 million during the three months ended September 30, 2021 primarily due to an increase in interest income related to increased market rates and growth of our marketable securities portfolio.

Comparison of the Nine Months Ended September 30, 2022 and 2021

The following table summarizes our results of operations for the periods indicated:

	Nine Months Ended September 30,		
	2022	2021	Change
	(in thousands)		
Licensing and collaboration revenue	$ 10,159	$ 7,039	$ 3,120
Operating expenses			
Research and development	56,494	37,144	19,350
General and administrative	29,486	16,469	13,017
Total operating expenses	85,980	53,613	32,367
Loss from operations	(75,821)	(46,574)	(29,247)
Other income (expense)			
Change in fair value of equity securities	(73)	—	(73)
Change in fair value of the MSKCC success payments liability	1,041	(3,584)	4,625
Gain on extinguishment of PPP Loan	—	1,584	(1,584)
Other income, net	2,421	130	2,291
Total other income (expense)	3,389	(1,870)	5,259
Net loss	$ (72,432)	$ (48,444)	$ (23,988)

Licensing and Collaboration Revenue

Licensing and collaboration revenue increased by $3.1 million, or 44%, to $10.2 million for the nine months ended September 30, 2022 from $7.0 million for the nine months ended September 30, 2021. This increase was primarily related to increases of $2.7 million related to recognition of revenue under the AbbVie Agreement and $0.4 million related to other license agreements with various licensees.

The following table summarizes our revenue by licensee for the periods indicated:

	Nine Months Ended September 30,		
	2022	2021	Change
	(in thousands)		
AbbVie	$ 5,506	$ 2,781	$ 2,725
Other licensees	4,653	4,258	395
Total licensing revenue	$ 10,159	$ 7,039	$ 3,120

Research and Development Expenses

Research and development expenses increased by $19.4 million, or 52%, to $56.5 million for the nine months ended September 30, 2022 from $37.1 million for the nine months ended September 30, 2021. This increase was primarily

related to increases of $7.8 million in personnel-related expenses (which include an increase in stock-based compensation expense of $2.3 million) due to incremental hiring; $6.4 million in external CMO and CRO activities, driven by increases of $4.6 million due to the timing of CMO activities for our product candidates, and $1.8 million in CRO activities primarily to advance our ANTLER phase 1 trial for CB-010; $5.7 million in other research and development expenses to advance IND-enabling studies for CB-011 and preclinical research for additional programs, as well as other consulting services related to research and development; and $1.8 million in other facilities and allocated expenses; partially offset by a decrease of $2.3 million in expenses related to licensing, sublicensing revenue, and milestones.

General and Administrative Expenses

General and administrative expenses increased by $13.0 million, or 79%, to $29.5 million for the nine months ended September 30, 2022 from $16.5 million for the nine months ended September 30, 2021. This increase was primarily related to increases of $8.0 million in personnel-related expenses (which include an increase in stock-based compensation expense of $4.5 million) due to incremental hiring; $4.0 million in legal, accounting, insurance, and other expenses associated with being a public company; and $1.9 million in facilities and other allocated expenses; partially offset by a $0.9 million decrease in patent cost reimbursements.

Total Other Income (Expense)

We recognized a gain and a loss related to the change in the fair value of the MSKCC success payments liability in the amount of $1.0 million and $3.6 million, respectively, for the nine months ended September 30, 2022 and 2021, respectively.

The PPP Loan was forgiven in May 2021, and we recognized gain on the PPP Loan extinguishment of $1.6 million for the nine months ended September 30, 2021. No such gain was recognized for the nine months ended September 30, 2022.

Other income, net during the nine months ended September 30, 2022 increased to $2.4 million from $0.1 million during the nine months ended September 30, 2021 primarily due to an increase in interest income related to increased market rates and growth of our marketable securities portfolio.

Liquidity, Capital Resources, and Capital Requirements

Sources of Liquidity

Since our inception, we have not generated any revenue from product sales and have incurred significant operating losses and negative cash flows from our operations. We have funded our operations through sales of our convertible preferred stock, which generated approximately $150.1 million in aggregate net proceeds, and from our IPO, which generated approximately $321.0 million in net proceeds. We have also received approximately $88.4 million in net proceeds from the sale of Intellia common stock that we received under the Intellia Agreement. Additionally, through September 30, 2022, we received approximately $82.3 million from licensing agreements, licensing and collaboration agreements, a service agreement, patent assignments, and government grants, including $33.0 million that was received from AbbVie under the AbbVie Agreement.

In order to assist in funding our future operations, including our planned clinical trials, on August 9, 2022, we filed a universal shelf registration statement on Form S-3 (the “Shelf Registration Statement”) with the SEC, which allows us to, from time to time, sell up to $400.0 million of common stock, preferred stock, debt securities, warrants, rights, or units comprised of any combination thereof (including the $100.0 million of common stock reserved for our at-the-market equity offering program described below). The Shelf Registration Statement was declared effective by the SEC on August 16, 2022. We believe that our Shelf Registration Statement will provide us with the flexibility to raise additional capital to finance our operations as needed. From time to time, we may offer securities under our Shelf Registration Statement in response to market conditions or other circumstances if we believe such a plan of financing is in the best interests of our stockholders. The terms of any offering under the Shelf Registration Statement will be established at the time of such offering and will be described in a prospectus supplement to the Shelf Registration Statement filed with the SEC prior to the completion of any such offering.

On August 9, 2022, we entered into an Open Market Sale Agreement℠ (the “Sales Agreement”) with Jefferies LLC (“Jefferies”) pursuant to which we may, from time to time, in our sole discretion, issue and sell, through Jefferies, acting as sales agent, up to $100.0 million of our shares of common stock, by any method permitted by law deemed to be an “at the market offering” as defined in Rule 415(a)(4) of the Securities Act of 1933, as amended (the “Securities Act”).

Jefferies will use commercially reasonable efforts consistent with its normal sales and trading practices to sell shares from time to time, based upon our instructions (including any price or size limits or other customary parameters or conditions we may impose). We will pay Jefferies a commission equal to 3.0% of the aggregate gross proceeds of any shares sold through Jefferies pursuant to the Sales Agreement. We are not obligated to sell any shares under the Sales Agreement. Unless otherwise terminated earlier, the Sales Agreement will continue until all shares available under the Sales Agreement have been sold. As of September 30, 2022, there have been no sales under the Sales Agreement and, as of September 30, 2022, the full capacity remained available for issuance.

As of September 30, 2022, we had cash, cash equivalents, and marketable securities of $342.6 million. We will continue to be dependent upon equity financing, debt financing, collaborations and licensing arrangements, and/or other forms of capital raises at least until we are able to generate significant positive cash flows from our operations. We have no current ongoing material financing commitments, such as lines of credit or guarantees, that are expected to affect our liquidity over the next five years, except for our lease commitments as described in Note 9 to our condensed consolidated financial statements included elsewhere in this Form 10-Q, and payments under certain of our license agreements as described in Note 4 to our condensed consolidated financial statements included elsewhere in this Form 10-Q.

Based on our current operating plan, we expect that our existing cash and cash equivalents will enable us to fund our current operating plan for at least the next 12 months from the date of this Form 10-Q. We have based these estimates on our current assumptions, which may require future adjustments based on our ongoing business decisions.

Funding Requirements

Our primary use of cash is to fund operating expenses and research and development expenditures. Cash used to fund operating expenses is impacted by the timing of when we pay these expenses, as reflected in the change in our outstanding accounts payable, accrued expenses, and prepaid expenses.

Our future funding requirements will depend on many factors, including the following:

- the initiation, progress, timing, costs, and results of preclinical studies and clinical trials for our product candidates;
- the clinical development plans we establish for these product candidates;
- the number and characteristics of the product candidates that we develop;
- the increase in the number of our employees and expansion of our physical facilities to support growth initiatives;
- the outcome, timing, and cost of meeting regulatory requirements established by the FDA and other comparable foreign regulatory authorities;
- whether we enter into any additional collaboration agreements and the terms of any such agreements;
- the cost of filing and prosecuting our patent applications, and maintaining and enforcing our patents and other intellectual property rights;
- the extent to which we acquire or in-license other product candidates and technologies;
- the cost of defending intellectual property disputes, including patent infringement actions brought by third parties against our products after we receive regulatory approval;
- the effect of competing technological and market developments;
- the cost and timing of completion of commercial-scale outsourced manufacturing activities or the cost and timing of completion of clinical-scale and commercial-scale internal manufacturing activities;
- the cost of establishing sales, marketing, and distribution capabilities for any product candidates for which we may receive regulatory approval in regions where we choose to commercialize our products without a partner;
- the amount of revenue, if any, received from commercial sales of our product candidates, should any of our product candidates receive marketing approval;
- the achievement of milestones or occurrence of other developments that trigger payments by or to third parties under any collaboration or licensing agreements;

- our implementation of various computerized informational systems and efforts to enhance operational systems;
- the impact of the COVID-19 pandemic or geopolitical events on our clinical development or operations;
- the impact of inflationary pressures on the cost of our operations; and
- the costs associated with being a public company.

Furthermore, our operating plans may change, and we may need additional funds to meet operational needs and capital requirements for clinical trials and other research and development expenditures.

If we need to raise additional capital to fund our operations, funding may not be available to us on acceptable terms, or at all. If we are unable to obtain adequate financing when needed, we may have to delay, reduce the scope of, or suspend one or more of our preclinical studies, clinical trials, research and development programs, and/or commercialization efforts. We may seek to raise any necessary additional capital through a combination of public or private equity offerings, debt financings, collaborations, and licensing arrangements. If we raise additional capital through debt financing, we may be subject to covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures, or declaring dividends. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in dilution to our stockholders. If we raise additional capital through marketing and distribution arrangements or other collaborations, strategic alliances, or licensing arrangements with third parties, we may have to relinquish certain valuable rights to our product candidates, technologies, future revenue streams, or research programs or grant licenses on terms that may not be favorable to us.

Cash Flows

Comparison of the Nine Months Ended September 30, 2022 and 2021

The following summarizes our cash flows for the periods indicated:

	Nine Months Ended September 30,		
	2022	**2021**	**Change**
		(in thousands)	
Cash used in operating activities	$ (65,922)	$ (11,130)	$ (54,792)
Cash used in investing activities	(94,419)	(2,436)	(91,983)
Cash provided by financing activities	2,006	432,969	(430,963)
Net (decrease) increase in cash and cash equivalents	$ (158,335)	$ 419,403	$ (577,738)

Cash Used in Operating Activities

Net cash used in operating activities was $65.9 million and $11.1 million for the nine months ended September 30, 2022 and 2021, respectively.

Cash used in operating activities for the nine months ended September 30, 2022 was primarily due to our net loss of $72.4 million, adjusted by non-cash charges of $10.6 million and net changes in our operating assets and liabilities of $4.1 million. Our non-cash charges were primarily comprised of $8.6 million of stock-based compensation, non-cash lease expense of $1.6 million, $1.1 million of depreciation and amortization expense, and acquired in-process research and development of $0.3 million, which were partially offset by the change in the fair value of the MSKCC success payments liability of $1.0 million. The changes in our operating assets and liabilities were due to increases of $1.6 million in prepaid expenses and other current assets, $0.4 million in contract assets, $0.4 million in other assets, and decreases of $2.6 million in accounts payable, $3.3 million in deferred revenue, and $0.3 million in operating lease liabilities, partially offset by decreases of $0.8 million in accounts receivable and $2.8 million in other receivables, an increase of $0.9 million in accrued expenses and other current liabilities.

Cash used in operating activities in the nine months ended September 30, 2021 was primarily due to our net loss of $48.4 million, adjusted by non-cash charges of $5.6 million and net changes in our net operating assets and liabilities of $31.7 million. Our non-cash charges consisted of a change in the fair value of the MSKCC success payments liability of $3.6 million, $1.9 million of stock-based compensation, $1.0 million of acquired in-process research development, which represents an investing activity, and $0.7 million of depreciation and amortization expense, which were offset by our PPP

Loan extinguishment gain upon the loan forgiveness of $1.6 million. The changes in our net operating assets and liabilities were due to increases of $30.7 million in deferred revenue, $4.9 million in accrued expenses and other current liabilities, $0.9 million in deferred rent and lease incentive liability, and $0.8 million in accounts payable, partially offset by increases of $2.8 million in prepaid expenses and other current assets, $1.7 million in other receivables, $0.5 million in contract assets, $0.4 million in accounts receivable, and $0.2 million in other assets.

Cash Used in Investing Activities

During the nine months ended September 30, 2022, and 2021 cash used in investing activities was $94.4 million and $2.4 million, respectively.

Cash used in investing activities for the nine months ended September 30, 2022, was primarily due to purchases of marketable securities of $252.6 million, property and equipment of $4.7 million, and in-process research and development of $0.3 million, partially offset by the proceeds from maturities of marketable securities of $163.1 million.

Cash used in investing activities for the nine months ended September 30, 2021 was primarily due to purchases of property and equipment of $1.4 million and payments for the acquisition of in-process research and development of $1.0 million.

Cash Provided by Financing Activities

During the nine months ended September 30, 2022 and 2021, cash provided by financing activities was $2.0 million and $433.0 million, respectively.

Cash provided by financing activities for the nine months ended September 30, 2022 was due to the exercise of stock options and purchases of common stock under the 2021 Employee Stock Purchase Plan of $2.0 million.

Cash provided by financing activities for the nine months ended September 30, 2021 was primarily due to the receipt of net proceeds from our IPO in the amount of $321.0 million, net proceeds from the issuance of Series C convertible preferred stock in the amount of $108.8 million, proceeds from the exercise of stock options of $2.1 million, and repayment of the promissory note issued to our president and chief executive officer in the amount of $1.2 million.

Critical Accounting Policies and Significant Judgments and Estimates

Our critical accounting policies are disclosed in our audited consolidated financial statements for the year ended December 31, 2021, and the related notes included in our Form 10-K. Since the date of such financial statements, there have been no material changes to our significant accounting policies other than those described in Note 2 to our condensed consolidated financial statements included elsewhere in this Form 10-Q. There have been no material changes to our critical accounting estimates as compared to those disclosed in our Form 10-K.

Recently Issued Accounting Pronouncements

See Note 2 to our condensed consolidated financial statements included elsewhere in this Form 10-Q for more information regarding recently issued accounting pronouncements.

Indemnification Agreements

As permitted under Delaware General Corporation Law and in accordance with our amended and restated bylaws, we indemnify our executive officers and directors for certain events or occurrences while such officer or director is or was serving in such capacity. We are also party to indemnification agreements with our executive officers, directors, and controller. We believe the fair value of the indemnification rights and agreements is minimal. Accordingly, we have not recorded any liabilities for these indemnification rights and agreements as of September 30, 2022.

Emerging Growth Company Status

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”). Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date that we (a) are no longer an emerging growth company or (b) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a

result, our condensed consolidated financial statements may not be comparable to those of companies that comply with the new or revised accounting pronouncements as of public company effective dates.

We expect to use the extended transition period for any other new or revised accounting standards during the period in which we remain an emerging growth company. As described in Note 2 to our condensed consolidated financial statements included elsewhere in this Form 10-Q, we have early adopted certain accounting standards, because the JOBS Act does not preclude an emerging growth company from adopting a new or revised accounting standard earlier than the time that such standard applies to private companies, to the extent early adoption is allowed by the accounting standard.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

There have been no material changes to the Company's market risk during the nine months ended September 30, 2022. For a discussion of the Company's exposure to market risk, refer to the section titled "Quantitative and Qualitative Disclosures About Market Risk" in our Form 10-K.

Item 4. Controls and Procedures.

Management's Evaluation of our Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Securities and Exchange Act of 1934, as amended (the "Exchange Act") is (a) recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms and (b) accumulated and communicated to our management, including our principal executive officer and principal financial officer, to allow timely decisions regarding required disclosure.

As of September 30, 2022, our management, with the participation of our principal executive officer and principal 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). Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and our management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our principal executive officer and principal financial officer have concluded that, based upon the evaluation described above, as of September 30, 2022, our disclosure controls and procedures were effective.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting identified in management's evaluation pursuant to Rules 13a-15(f) or 15d-15(f) under the Exchange Act during the three months ended September 30, 2022 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

From time to time, we may be subject to various legal proceedings and claims that arise in the ordinary course of our business activities. Regardless of the outcome, litigation can have a material adverse effect on us due to defense and settlement costs, diversion of our management resources, and other factors. We are not currently subject to any material legal proceedings.

Item 1A. Risk Factors.

There have been no material changes to the Risk Factors previously disclosed in Item 1A. to Part I of our Form 10-K. The risks described in our Form 10-K are not the only risks facing our Company. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition, and/or operating results.

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

Unregistered Sales of Equity Securities for the Three Months Ended September 30, 2022

There were no unregistered sales of equity securities during the three months ended September 30, 2022.

Use of Proceeds from our IPO

The net proceeds from our IPO, after deducting underwriting discounts and commissions and offering expenses of $28.6 million, were $321.0 million. We are holding a significant portion of the balance of the net proceeds from our IPO in money market mutual funds, U.S. Treasury bills, corporate debt securities, and U.S. government agency bonds. There has been no material change in our planned use of the net proceeds from our IPO described in the final prospectus for our IPO filed on July 23, 2021 with the SEC pursuant to Rule 424(b)(4) of the Securities Act of 1933, as amended.

Item 6. Exhibits.

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation of Caribou Biosciences, Inc. (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed by the Registrant with the SEC on July 28, 2021)
3.2	Amended and Restated Bylaws of Caribou Biosciences, Inc. (incorporated by reference to Exhibit 3.2 to the Current Report on Form 8-K filed by the Registrant with the SEC on July 28, 2021)
4.1	Description of Common Stock (incorporated by reference to Exhibit 4.1 to the Form 10-K filed by the Registrant on March 21, 2022)
10.1*	Form of Restricted Stock Unit Award Grant Notice and Restricted Stock Unit Award Agreement under the 2021 Equity Incentive Plan of the Registrant
10.2*	Form of Performance Stock Unit Award Grant Notice and Performance Stock Unit Award Agreement under the 2021 Equity Incentive Plan of the Registrant
10.3	Open Market Sale Agreement℠, dated August 9, 2022, by and between the Registrant and Jefferies LLC (incorporated by reference to Exhibit 1.2 to the Company's Registration Statement on Form S-3 (File No. 333-266712) filed with the SEC on August 9, 2022)
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Exchange Act, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Exchange Act, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2**	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS*	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document.
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104*	Cover Page Interactive Data File (embedded within the Inline XBRL document)

* Filed herewith.
** Furnished herewith.

SIGNATURES

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

Caribou Biosciences, Inc.

Date: November 8, 2022

By: /s/ Rachel E. Haurwitz

Rachel E. Haurwitz
President and Chief Executive Officer
(Principal Executive Officer)

Date: November 8, 2022

By: /s/ Jason V. O'Byrne

Jason V. O'Byrne
Chief Financial Officer
(Principal Financial Officer)

Exhibit 10.1

CARIBOU BIOSCIENCES, INC.
2021 EQUITY INCENTIVE PLAN

RESTRICTED STOCK UNIT AWARD GRANT NOTICE

Caribou Biosciences, Inc., a Delaware corporation, (the "Company"), pursuant to its 2021 Equity Incentive Plan (the "Plan"), hereby grants to the holder listed below (the "Participant"), an award of restricted stock units ("Restricted Stock Units" or "RSUs"). Each vested Restricted Stock Unit represents the right to receive, in accordance with the Restricted Stock Unit Award Agreement attached hereto as Exhibit A (the "Agreement"), one share of Common Stock ("Share"). This award of Restricted Stock Units is subject to all of the terms and conditions set forth herein and in the Agreement and the Plan, each of which are incorporated herein by reference. Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Restricted Stock Unit Award Grant Notice (the "Grant Notice") and the Agreement.

Participant:	[ ]
Grant Date:	[ ]
Total Number of RSUs:	[ ]
Vesting Commencement Date:	[ ]
Vesting Schedule:	[ ]
Termination:	If the Participant experiences a Termination of Service, all RSUs that have not become vested on or prior to the date of such Termination of Service will thereupon be automatically forfeited by the Participant without payment of any consideration therefor.

By his or her signature and the Company's signature below, the Participant agrees to be bound by the terms and conditions of the Plan, the Agreement and this Grant Notice. The Participant has reviewed the Agreement, the Plan and this Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of this Grant Notice, the Agreement and the Plan. The Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, this Grant Notice or the Agreement. In addition, by signing below, the Participant also agrees that the Company, in its sole discretion, may satisfy any withholding obligations in accordance with Section 2.6(b) of the Agreement by (i) withholding shares of Common Stock otherwise issuable to the Participant upon vesting of the RSUs, (ii) instructing a broker on the Participant's behalf to sell shares of Common Stock otherwise issuable to the Participant upon vesting of the RSUs and submit the proceeds of such sale to the Company, or (iii) using any other method permitted by Section 2.6(b) of the Agreement or the Plan.

CARIBOU BIOSCIENCES, INC.: **PARTICIPANT:**

By:

EXHIBIT A
TO RESTRICTED STOCK UNIT AWARD GRANT NOTICE

RESTRICTED STOCK UNIT AWARD AGREEMENT

Pursuant to the Restricted Stock Unit Award Grant Notice (the "Grant Notice") to which this Restricted Stock Unit Award Agreement (this "Agreement") is attached, Caribou Biosciences, Inc., a Delaware corporation (the "Company"), has granted to the Participant the number of restricted stock units ("Restricted Stock Units" or "RSUs") set forth in the Grant Notice under the Company's 2021 Equity Incentive Plan (the "Plan"). Each Restricted Stock Unit represents the right to receive one share of Common Stock (a "Share") upon vesting. Capitalized terms not specifically defined herein shall have the meanings specified in the Plan and Grant Notice.

ARTICLE I
GENERAL

1.1 Incorporation of Terms of Plan. The RSUs are subject to the terms and conditions of the Plan, which are incorporated herein by reference. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan shall control.

ARTICLE II
GRANT OF RESTRICTED STOCK UNITS

1.2 Grant of RSUs. Pursuant to the Grant Notice and upon the terms and conditions set forth in the Plan and this Agreement, effective as of the Grant Date set forth in the Grant Notice, the Company hereby grants to the Participant an award of RSUs under the Plan in consideration of the Participant's past and/or continued employment with or service to the Company or any Subsidiaries and for other good and valuable consideration.

1.3 Unsecured Obligation to RSUs. Unless and until the RSUs have vested in the manner set forth in Article 2 hereof, the Participant will have no right to receive Common Stock under any such RSUs. Prior to actual payment of any vested RSUs, such RSUs will represent an unsecured obligation of the Company, payable (if at all) only from the general assets of the Company.

1.4 Vesting Schedule. Subject to Section 2.5 hereof, the RSUs shall vest and become nonforfeitable with respect to the applicable portion thereof according to the vesting schedule set forth in the Grant Notice (rounding down to the nearest whole Share). Except as may otherwise be provided in any employment agreement, in the event of any transaction or Change in Control (as defined in the Plan), the RSUs may, in the discretion of the Administrator, be terminated, which may be in exchange for cash or property, be assumed or substituted by the successor corporation or otherwise continued in full force and effect pursuant to the terms of the Change in Control or other transaction on such terms and conditions as the Administrator determines.

1.5 Consideration to the Company. In consideration of the grant of the award of RSUs pursuant hereto, the Participant agrees to render faithful and efficient services to the Company or any Subsidiary.

1.6 Forfeiture, Termination and Cancellation upon Termination of Service. Notwithstanding any contrary provision of this Agreement or the Plan, upon the Participant's Termination of Service for any or no reason, all Restricted Stock Units which have not vested prior to or in connection with such Termination of Service shall thereupon automatically be forfeited, terminated and cancelled as of the applicable termination date without payment of any consideration by the Company, and the Participant, or the Participant's beneficiary or personal representative, as the case may be, shall have no further rights hereunder. No portion of the RSUs which has not become vested as of the date on which the Participant incurs a Termination of Service shall thereafter become vested.

1.7 Issuance of Common Stock upon Vesting.

(a) As soon as administratively practicable following the vesting of any Restricted Stock Units pursuant to Section 2.3 hereof, but in no event later than thirty (30) days after such vesting date (for the avoidance of doubt, this deadline is intended to comply with the "short term deferral" exemption from Section 409A of the Code), the Company shall deliver to the Participant (or any transferee permitted under Section 3.2 hereof) a number of Shares equal to the number of RSUs subject to this Award that vest on the applicable vesting date.

(b) As set forth in Section 12.2 of the Plan, the Company shall have the authority and the right to deduct or withhold, or to require the Participant to remit to the Company, an amount sufficient to satisfy all applicable federal, state and local taxes required by law to be withheld with respect to any taxable event arising in connection with the Restricted Stock Units. The Company shall not be obligated to deliver any Shares to the Participant or the Participant's legal representative unless and until the Participant or the Participant's legal representative shall have paid or otherwise satisfied in full the amount of all federal, state and local taxes applicable to the taxable income of the Participant resulting from the grant or vesting of the Restricted Stock Units or the issuance of Shares.

1.8 Conditions to Delivery of Shares. The Shares deliverable hereunder may be either previously authorized but unissued Shares, treasury Shares or issued Shares which have then been reacquired by the Company. Such Shares shall be fully paid and nonassessable. The Company shall not be required to issue Shares deliverable hereunder prior to fulfillment of the conditions set forth in Section 12.4 of the Plan.

1.9 Rights as Stockholder. The holder of the RSUs shall not be, nor have any of the rights or privileges of, a stockholder of the Company, including, without limitation, voting rights and rights to dividends, in respect of the RSUs and any Shares underlying the RSUs and deliverable hereunder unless and until such Shares shall have been issued by the Company and held of record by such holder (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company). No adjustment shall be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 14.2 of the Plan.

ARTICLE III
OTHER PROVISIONS

1.10 Administration. The Administrator shall have the power to interpret the Plan and this Agreement and to adopt such rules for the administration, interpretation and application of the Plan as are consistent therewith and to interpret, amend or revoke any such rules. All actions taken and all interpretations and determinations made by the Administrator in good faith shall be final and binding upon the Participant, the Company and all other interested persons. No member of the Administrator or the Board shall be personally liable for any action, determination or interpretation made in good faith with respect to the Plan, this Agreement or the RSUs.

1.11 RSUs Not Transferable. The RSUs shall be subject to the restrictions on transferability set forth in Section 12.3 of the Plan.

1.12 Tax Consultation. The Participant understands that the Participant may suffer adverse tax consequences in connection with the RSUs granted pursuant to this Agreement (and the Shares issuable with respect thereto). The Participant represents that the Participant has consulted with any tax consultants the Participant deems advisable in connection with the RSUs and the issuance of Shares with respect thereto and that the Participant is not relying on the Company for any tax advice.

1.13 Binding Agreement. Subject to the limitation on the transferability of the RSUs contained herein, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

1.14 Adjustments Upon Specified Events. The Administrator may accelerate the vesting of the RSUs in such circumstances as it, in its sole discretion, may determine. The Participant acknowledges that the RSUs are subject to adjustment, modification and termination in certain events as provided in this Agreement and Section 14.2 of the Plan.

1.15 Notices. Any notice to be given under the terms of this Agreement to the Company shall be addressed to the Company in care of the Secretary of the Company at the Company's principal office, and any notice to be given to the Participant shall be addressed to the Participant at the Participant's last address reflected on the Company's records. By a notice given pursuant to this Section 3.6, either party may hereafter designate a different address for notices to be given to that party. Any notice shall be deemed duly given when sent via email or when sent by certified mail (return receipt requested) and deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service.

1.16 Participant's Representations. If the Shares issuable hereunder have not been registered under the Securities Act or any applicable state laws on an effective registration statement at the time of such issuance, the Participant shall, if required by the Company, concurrently with such issuance, make such written representations as are deemed necessary or appropriate by the Company and/or its counsel.

1.17 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

1.18 Governing Law. The laws of the State of Delaware shall govern the interpretation, validity, administration, enforcement and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

1.19 Conformity to Securities Laws. The Participant acknowledges that the Plan and this Agreement are intended to conform to the extent necessary with all provisions of the Securities Act and the Exchange Act and any other Applicable Law. Notwithstanding anything herein to the contrary, the Plan shall be administered, and the RSUs are granted, only in such a manner as to conform to Applicable Law. To the extent permitted by Applicable Law, the Plan and this Agreement shall be deemed amended to the extent necessary to conform to such Applicable Law.

1.20 Amendment, Suspension and Termination. To the extent permitted by the Plan, this Agreement may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Administrator or the Board; *provided, however,* that, except as may otherwise be provided by the Plan, no amendment, modification, suspension or termination of this Agreement shall adversely affect the RSUs in any material way without the prior written consent of the Participant.

1.21 Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth in Section 3.2 hereof, this Agreement shall be binding upon the Participant and his or her heirs, executors, administrators, successors and assigns.

1.22 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan or this Agreement, if the Participant is subject to Section 16 of the Exchange Act, then the Plan, the RSUs and this Agreement shall be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3 of the Exchange Act) that are requirements for the application of such exemptive rule. To the extent permitted by Applicable Law, this Agreement shall be deemed amended to the extent necessary to conform to such applicable exemptive rule.

1.23 Not a Contract of Service Relationship. Nothing in this Agreement or in the Plan shall confer upon Participant any right to continue to serve as an employee or other service provider of the Company or any of its Subsidiaries or interfere with or restrict in any way with the right of the Company or any of its Subsidiaries, which rights are hereby expressly reserved, to discharge or to terminate for any reason whatsoever, with or without cause, the services of the Participant's at any time.

1.24 Entire Agreement. The Plan, the Grant Notice and this Agreement (including all Exhibits thereto, if any) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and the Participant with respect to the subject matter hereof.

1.25 Section 409A. This Award is not intended to constitute "nonqualified deferred compensation" within the meaning of Section 409A of the Code (together with any Department of Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance that may be issued after the date hereof, "Section 409A"). However, notwithstanding any other provision of the Plan, the Grant Notice or this Agreement, if at any time the Administrator determines that this Award (or any portion thereof) may be subject to Section 409A, the Administrator shall have the right in its sole discretion (without any obligation to do so or to indemnify Participant or any other person for failure to do so) to adopt such amendments to the Plan, the Grant Notice or this Agreement, or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions, as the Administrator determines are necessary or appropriate for this Award either to be exempt from the application of Section 409A or to comply with the requirements of Section 409A.

1.26 Limitation on Participant's Rights. Participation in the Plan confers no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and shall not be construed as creating a trust. Neither the Plan nor any underlying program, in and of itself, has any assets. The Participant shall have only the rights of a general unsecured creditor of the Company and its Subsidiaries with respect to amounts credited and benefits payable, if any, with respect to the RSUs, and rights no greater than the right to receive the Common Stock as a general unsecured creditor with respect to RSUs, as and when payable hereunder.

CARIBOU BIOSCIENCES, INC.
2021 EQUITY INCENTIVE PLAN

PERFORMANCE STOCK UNIT AWARD GRANT NOTICE

Caribou Biosciences, Inc., a Delaware corporation, (the "Company"), pursuant to its 2021 Equity Incentive Plan (the "Plan"), hereby grants to the holder listed below (the "Participant"), an award of performance stock units ("Performance Stock Units" or "PSUs"). Each vested Performance Stock Unit represents the right to receive, in accordance with the Performance Stock Unit Award Agreement attached hereto as Exhibit A (the "Agreement"), one share of Common Stock ("Share"). This award of Performance Stock Units is subject to all of the terms and conditions set forth herein and in the Agreement and the Plan, each of which are incorporated herein by reference. Unless otherwise defined herein, the terms defined in the Plan shall have the same defined meanings in this Performance Stock Unit Award Grant Notice (the "Grant Notice") and the Agreement.

Participant:	[ ]
Grant Date:	[ ]
Total Number of PSUs:	[ ]
Performance Period:	[ ]
Performance Criteria:	Exhibit B
Termination:	If the Participant experiences a Termination of Service, all PSUs that have not become vested on or prior to the date of such Termination of Service will thereupon be automatically forfeited by the Participant without payment of any consideration therefor.

By their signature and the Company's signature below, the Participant agrees to be bound by the terms and conditions of the Plan, the Agreement and this Grant Notice. The Participant has reviewed the Agreement, the Plan and this Grant Notice in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Grant Notice and fully understands all provisions of this Grant Notice, the Agreement and the Plan. The Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan, this Grant Notice or the Agreement. In addition, by signing below, the Participant also agrees that the Company, in its sole discretion, may satisfy any withholding obligations in accordance with Section 2.6(b) of the Agreement by (i) withholding shares of Common Stock otherwise issuable to the Participant upon vesting of the PSUs, (ii) instructing a broker on the Participant's behalf to sell shares of Common Stock otherwise issuable to the Participant upon vesting of the PSUs and submit the proceeds of such sale to the Company, or (iii) using any other method permitted by Section 2.6(b) of the Agreement or the Plan.

CARIBOU BIOSCIENCES, INC.: **PARTICIPANT:**

By:

EXHIBIT A

PERFORMANCE STOCK UNIT AWARD AGREEMENT

Pursuant to the Performance Stock Unit Award Grant Notice (the "Grant Notice") to which this Performance Stock Unit Award Agreement (this "Agreement") is attached, Caribou Biosciences, Inc., a Delaware corporation (the "Company"), has granted to the Participant the number of performance stock units ("Performance Stock Units" or "PSUs") set forth in the Grant Notice under the Company's 2021 Equity Incentive Plan (the "Plan"). Each Performance Stock Unit represents the right to receive one share of Common Stock (a "Share") upon vesting. Capitalized terms not specifically defined herein shall have the meanings specified in the Plan and Grant Notice.

ARTICLE I
GENERAL

1.1 Incorporation of Terms of Plan. The PSUs are subject to the terms and conditions of the Plan, which are incorporated herein by reference. In the event of any inconsistency between the Plan and this Agreement, the terms of the Plan shall control.

ARTICLE II
GRANT OF PERFORMANCE STOCK UNITS

1.2 Grant of PSUs. Pursuant to the Grant Notice and upon the terms and conditions set forth in the Plan and this Agreement, effective as of the Grant Date set forth in the Grant Notice, the Company hereby grants to the Participant an award of PSUs under the Plan in consideration of the Participant's past and/or continued employment with or service to the Company or any Subsidiaries and for other good and valuable consideration. The PSUs will vest as set forth in Sections 2.2 and 2.3 below and will be settled as set forth in Section 3.

1.3 Vesting of the PSUs. Subject to earlier expiration or termination as provided herein, the PSUs will become vested and may be earned based on achieving performance levels against pre-determined performance goals, and satisfying the condition of employment, as described herein, and are forfeited if defined performance levels or condition of employment are not achieved or satisfied. The PSUs shall be held in escrow by the Company subject to satisfaction of the terms and conditions described herein. Except as may otherwise be provided in any employment agreement, in the event of any transaction or Change in Control (as defined in the Plan), the PSUs may, in the discretion of the Administrator, be terminated, which may be in exchange for cash or property, be assumed or substituted by the successor corporation or otherwise continued in full force and effect pursuant to the terms of the Change in Control or other transaction on such terms and conditions as the Administrator determines.

1.4 Performance Condition and Required Employment. Subject to forfeiture as provided in Section 2.6, the total number of PSUs that may be earned by a Participant will be based on (i) the performance criteria described on Exhibit B, and (ii) continued employment through the Performance Period.

1.5 Unsecured Obligation to PSUs. Unless and until the PSUs have vested in the manner set forth in Article 2 hereof, the Participant will have no right to receive Common Stock under any such PSUs. Prior to actual payment of any vested PSUs, such PSUs will represent an unsecured obligation of the Company, payable (if at all) only from the general assets of the Company.

1.6 Consideration to the Company. In consideration of the grant of the award of PSUs pursuant hereto, the Participant agrees to render faithful and efficient services to the Company or any Subsidiary.

1.7 Forfeiture, Termination and Cancellation upon Termination of Service. Notwithstanding any contrary provision of this Agreement or the Plan, upon the Participant's Termination of Service for any or no reason, all Performance Stock Units which have not vested prior to or in connection with such Termination of Service shall thereupon automatically be forfeited, terminated and cancelled as of the applicable termination date without payment of any consideration by the Company, and the Participant, or the Participant's beneficiary or personal representative, as the case may be, shall have no further rights hereunder. No portion of the PSUs which has not become vested as of the date on which the Participant incurs a Termination of Service shall thereafter become vested.

1.8 Issuance of Common Stock upon Vesting.

(a) As soon as administratively practicable following the vesting of any Performance Stock Units pursuant to Section 2 hereof, but in no event later than thirty (30) days after such vesting date (for the avoidance of doubt, this deadline is intended to comply with the "short term deferral" exemption from Section 409A of the Code), the Company shall deliver to the Participant (or any transferee permitted under Section 3.2 hereof) a number of Shares equal to the number of PSUs subject to this Award that vest on the applicable vesting date.

(b) As set forth in Section 12.2 of the Plan, the Company shall have the authority and the right to deduct or withhold, or to require the Participant to remit to the Company, an amount sufficient to satisfy all applicable federal, state and local taxes required by law to be withheld with respect to any taxable event arising in connection with the Performance Stock Units. The Company shall not be obligated to deliver any Shares to the Participant or the Participant's legal representative unless and until the Participant or the Participant's legal representative shall have paid or otherwise satisfied in full the amount of all federal, state and local taxes applicable

to the taxable income of the Participant resulting from the grant or vesting of the Performance Stock Units or the issuance of Shares.

1.9 Conditions to Delivery of Shares. The Shares deliverable hereunder may be either previously authorized but unissued Shares, treasury Shares or issued Shares which have then been reacquired by the Company. Such Shares shall be fully paid and nonassessable. The Company shall not be required to issue Shares deliverable hereunder prior to fulfillment of the conditions set forth in Section 12.4 of the Plan.

1.10 Rights as Stockholder. The holder of the PSUs shall not be, nor have any of the rights or privileges of, a stockholder of the Company, including, without limitation, voting rights and rights to dividends, in respect of the PSUs and any Shares underlying the PSUs and deliverable hereunder unless and until such Shares shall have been issued by the Company and held of record by such holder (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company). No adjustment shall be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 14.2 of the Plan.

ARTICLE III
OTHER PROVISIONS

1.11 Administration. The Administrator shall have the power to interpret the Plan and this Agreement and to adopt such rules for the administration, interpretation and application of the Plan as are consistent therewith and to interpret, amend or revoke any such rules. All actions taken and all interpretations and determinations made by the Administrator in good faith shall be final and binding upon the Participant, the Company and all other interested persons. No member of the Administrator or the Board shall be personally liable for any action, determination or interpretation made in good faith with respect to the Plan, this Agreement or the PSUs.

1.12 PSUs Not Transferable. The PSUs shall be subject to the restrictions on transferability set forth in Section 12.3 of the Plan.

1.13 Tax Consultation. The Participant understands that the Participant may suffer adverse tax consequences in connection with the PSUs granted pursuant to this Agreement (and the Shares issuable with respect thereto). The Participant represents that the Participant has consulted with any tax consultants the Participant deems advisable in connection with the PSUs and the issuance of Shares with respect thereto and that the Participant is not relying on the Company for any tax advice.

1.14 Binding Agreement. Subject to the limitation on the transferability of the PSUs contained herein, this Agreement will be binding upon and inure to the benefit of the heirs, legatees, legal representatives, successors and assigns of the parties hereto.

1.15 Adjustments Upon Specified Events. The Administrator may accelerate the vesting of the PSUs in such circumstances as it, in its sole discretion, may determine. The Participant acknowledges that the PSUs are subject to adjustment, modification and termination in certain events as provided in this Agreement and Section 14.2 of the Plan.

1.16 Notices. Any notice to be given under the terms of this Agreement to the Company shall be addressed to the Company in care of the Secretary of the Company at the Company's principal office, and any notice to be given to the Participant shall be addressed to the Participant at the Participant's last address reflected on the Company's records. By a notice given pursuant to this Section 3.6, either party may hereafter designate a different address for notices to be given to that party. Any notice shall be deemed duly given when sent via email or when sent by certified mail (return receipt requested) and deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service.

1.17 Participant's Representations. If the Shares issuable hereunder have not been registered under the Securities Act or any applicable state laws on an effective registration statement at the time of such issuance, the Participant shall, if required by the Company, concurrently with such issuance, make such written representations as are deemed necessary or appropriate by the Company and/or its counsel.

1.18 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

1.19 Governing Law. The laws of the State of Delaware shall govern the interpretation, validity, administration, enforcement and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

1.20 Conformity to Securities Laws. The Participant acknowledges that the Plan and this Agreement are intended to conform to the extent necessary with all provisions of the Securities Act and the Exchange Act and any other Applicable Law. Notwithstanding anything herein to the contrary, the Plan shall be administered, and the PSUs are granted, only in such a manner as to conform to Applicable Law. To the extent permitted by Applicable Law, the Plan and this Agreement shall be deemed amended to the extent necessary to conform to such Applicable Law.

1.21 Amendment, Suspension and Termination. To the extent permitted by the Plan, this Agreement may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Administrator or the Board; *provided*, *however*, that, except as may otherwise be provided by the Plan, no amendment, modification, suspension or termination of this Agreement shall adversely affect the PSUs in any material way without the prior written consent of the Participant.

1.22 Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth in Section 3.2 hereof, this Agreement shall be binding upon the Participant and their heirs, executors, administrators, successors and assigns.

1.23 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan or this Agreement, if the Participant is subject to Section 16 of the Exchange Act, then the Plan, the PSUs and this Agreement shall be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including any amendment to Rule 16b-3 of the Exchange Act) that are requirements for the application of such exemptive rule. To the extent permitted by Applicable Law, this Agreement shall be deemed amended to the extent necessary to conform to such applicable exemptive rule.

1.24 Not a Contract of Service Relationship. Nothing in this Agreement or in the Plan shall confer upon Participant any right to continue to serve as an employee or other service provider of the Company or any of its Subsidiaries or interfere with or restrict in any way with the right of the Company or any of its Subsidiaries, which rights are hereby expressly reserved, to discharge or to terminate for any reason whatsoever, with or without cause, the services of the Participant's at any time.

1.25 Entire Agreement. The Plan, the Grant Notice and this Agreement (including all Exhibits thereto, if any) constitute the entire agreement of the parties and supersede in their entirety all prior undertakings and agreements of the Company and the Participant with respect to the subject matter hereof.

1.26 Section 409A. This Award is not intended to constitute "nonqualified deferred compensation" within the meaning of Section 409A of the Code (together with any Department of Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance that may be issued after the date hereof, "Section 409A"). However, notwithstanding any other provision of the Plan, the Grant Notice or this Agreement, if at any time the Administrator determines that this Award (or any portion thereof) may be subject to Section 409A, the Administrator shall have the right in its sole discretion (without any obligation to do so or to indemnify Participant or any other person for failure to do so) to adopt such amendments to the Plan, the Grant Notice or this Agreement, or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions, as the Administrator determines are necessary or appropriate for this Award either to be exempt from the application of Section 409A or to comply with the requirements of Section 409A.

1.27 Limitation on Participant's Rights. Participation in the Plan confers no rights or interests other than as herein provided. This Agreement creates only a contractual obligation on the part of the Company as to amounts payable and shall not be construed as creating a trust. Neither the Plan nor any underlying program, in and of itself, has any assets. The Participant shall have only the rights of a general unsecured creditor of the Company and its Subsidiaries with respect to amounts credited and benefits payable, if any, with respect to the PSUs, and rights no greater than the right to receive the Common Stock as a general unsecured creditor with respect to PSUs, as and when payable hereunder.

Exhibit 31.1

CERTIFICATION 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

I, Rachel E. Haurwitz, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended September 30, 2022 of Caribou Biosciences, Inc.;

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

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

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) 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) 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

   (c) 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.

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

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

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

Date: November 8, 2022

By: /s/ Rachel E. Haurwitz

Rachel E. Haurwitz
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION 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

I, Jason V. O'Byrne, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q for the period ended September 30, 2022 of Caribou Biosciences, Inc.;

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

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

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) 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) 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

   (c) 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.

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

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

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

Date: November 8, 2022

By: /s/ Jason V. O'Byrne

Jason V. O'Byrne
Chief Financial Officer

Exhibit 32.1

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

In connection with the Quarterly Report of Caribou Biosciences, Inc. (the "Company") on Form 10-Q for the period ended September 30, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

Date: November 8, 2022

By: /s/ Rachel E. Haurwitz

Rachel E. Haurwitz
President and Chief Executive Officer

Exhibit 32.2

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

In connection with the Quarterly Report of Caribou Biosciences, Inc. (the "Company") on Form 10-Q for the period ended September 30, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

Date: November 8, 2022

By: /s/ Jason V. O'Byrne

Jason V. O'Byrne
Chief Financial Officer