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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2022

OR

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

For the transition period from _____ to _____.

Commission File Number: 001-38869

HOOKIPA PHARMA INC.
(Exact Name of Registrant as Specified in its Charter)

Delaware	**81-5395687**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
350 Fifth Avenue, 72nd Floor, Suite 7240 New York, New York	
(Address of principal executive offices)	**10118 (Zip Code)**

Registrant's telephone number, including area code: +43 1 890 63 60

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

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	HOOK	The Nasdaq Global Select Market

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

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

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

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

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

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

As of May 4, 2022, the registrant had 50,872,734 shares of common stock and 3,819,732 shares of Class A common stock outstanding, each $0.0001 par value per share.

FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements which are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These statements may be identified by such forward-looking terminology as "may," "should," "expects," "intends," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "continue" or the negative of these terms or other comparable terminology. Our forward-looking statements are based on a series of expectations, assumptions, estimates and projections about our company, are not guarantees of future results or performance and involve substantial risks and uncertainty. We may not actually achieve the plans, intentions or expectations disclosed in these forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements. Our business and our forward-looking statements involve substantial known and unknown risks and uncertainties, including the risks and uncertainties inherent in our statements regarding:

- the success, cost and timing of our product development activities and clinical trials;
- the timing, scope or likelihood of regulatory filings and approvals, including timing of Investigational New Drug Application and Biological Licensing Application filings for our current and future product candidates, and final U.S. Food and Drug Administration, European Medicines Agency or other foreign regulatory authority approval of our current and future product candidates;
- our ability to develop and advance our current product candidates and programs into, and successfully complete, clinical studies;
- our manufacturing, commercialization and marketing capabilities and strategy;
- the potential benefits of and our ability to maintain our collaboration with Gilead Sciences, Inc., and establish or maintain future collaborations or strategic relationships or obtain additional funding;
- the rate and degree of market acceptance and clinical utility of our current and future product candidates;
- our intellectual property position, including the scope of protection we are able to establish and maintain for intellectual property rights covering our non-replicating and replicating technologies and the product candidates based on these technologies, the validity of intellectual property rights held by third parties, and our ability not to infringe, misappropriate or otherwise violate any third-party intellectual property rights;
- future agreements with third parties in connection with the commercialization of our product candidates and any other approved product;
- regulatory developments in the United States and foreign countries;
- the effects of the ongoing coronavirus pandemic on business and operations;
- competitive companies, technologies and our industry and the success of competing therapies that are or may become available;
- our ability to attract and retain key scientific or management personnel;
- our ability to obtain funding for our operations, including funding necessary to complete further development and commercialization of our product candidates;
- the accuracy of our estimates of our annual total addressable market, future revenue, expenses, capital requirements and needs for additional financing;
- our expectations about market trends; and

- our expectations regarding the period during which we qualify as an emerging growth company under the Jumpstart Our Business Startups Act of 2012, as amended.

All of our forward-looking statements are as of the date of this Quarterly Report on Form 10-Q only. In each case, actual results may differ materially from such forward-looking information. We can give no assurance that such expectations or forward-looking statements will prove to be correct. An occurrence of or any material adverse change in one or more of the risk factors or risks and uncertainties referred to in this Quarterly Report on Form 10-Q or included in our other public disclosures or our other periodic reports or other documents or filings filed with or furnished to the Securities and Exchange Commission could materially and adversely affect our business, prospects, financial condition and results of operations. Except as required by law, we do not undertake or plan to update or revise any such forward-looking statements to reflect actual results, changes in plans, assumptions, estimates or projections or other circumstances affecting such forward-looking statements occurring after the date of this Quarterly Report on Form 10-Q, even if such results, changes or circumstances make it clear that any forward-looking information will not be realized. Any public statements or disclosures by us following this Quarterly Report on Form 10-Q that modify or impact any of the forward-looking statements contained in this Quarterly Report on Form 10-Q will be deemed to modify or supersede such statements in this Quarterly Report on Form 10-Q.

Investors and others should note that we announce material financial information to our investors using our investor relations website (https://ir.hookipapharma.com/), SEC filings, press releases, public conference calls and webcasts. We use these channels, as well as social media, to communicate with our members and the public about our company, our services and other issues. It is possible that the information we post on social media could be deemed to be material information. Therefore, we encourage investors, the media, and others interested in our company to review the information we post on the U.S. social media channels listed on our investor relations website.

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PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

HOOKIPA PHARMA INC.

CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)

(In thousands, except share amounts)

	March 31, 2022	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 140,825	$ 65,921
Restricted cash	555	566
Accounts receivable	703	6,895
Receivable research incentives	15,622	14,271
Prepaid expenses and other current assets	13,374	14,482
Total current assets	171,079	102,135
Non-current assets:		
Restricted cash	423	425
Property, plant and equipment, net	17,100	16,352
Operating lease right of use assets	5,313	5,673
Finance lease right of use assets	—	90
Other non-current assets	1,796	1,370
Total non-current assets	24,632	23,910
Total assets	$ 195,711	$ 126,045
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	$ 6,708	$ 8,762
Deferred revenues	10,696	5,538
Operating lease liabilities, current	1,724	1,682
Accrued expenses and other current liabilities	8,725	8,880
Loans payable, current	3,375	2,792
Total current liabilities	31,228	27,654
Non-current liabilities		
Loans payable, non-current	1,766	2,219
Operating lease liabilities, non-current	3,603	3,911
Deferred revenues, non-current	8,711	21
Other non-current liabilities	2,474	2,648
Total non-current liabilities	16,554	8,799
Total liabilities	47,782	36,453
Commitments and contingencies (Note 12)		
Stockholders' equity:		
Preferred stock, $0.0001 par value; 10,000,000 shares authorized at March 31, 2022 and December 31, 2021, respectively; Series A convertible preferred stock, 2,978 shares designated, 1,697 shares outstanding at March 31, 2022 and December 31, 2021, respectively; Series A-1 convertible preferred stock, 15,800 shares and no shares designated, 15,800 shares and no shares outstanding at March 31, 2022 and December 31, 2021, respectively	0	0
Common stock, $0.0001 par value; 100,000,000 shares authorized at March 31, 2022 and December 31, 2021, respectively; 50,872,734 shares and 27,383,483 shares issued and outstanding at March 31, 2022 and December 31, 2021, respectively	5	3
Class A common stock, $0.0001 par value; 3,900,000 shares authorized at March 31, 2022 and December 31, 2021, respectively; 3,819,732 shares issued and outstanding at March 31, 2022 and December 31, 2021, respectively	0	0
Additional paid-in capital	393,925	317,135
Accumulated other comprehensive loss	(5,267)	(4,780)
Accumulated deficit	(240,734)	(222,766)
Total stockholders' equity	147,929	89,592
Total liabilities and stockholders' equity	$ 195,711	$ 126,045

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

HOOKIPA PHARMA INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(UNAUDITED)

(In thousands, except share and per share amounts)

	Three months ended March 31,	
	2022	2021
Revenue from collaboration and licensing	$ 1,445	$ 5,301
Operating expenses:		
Research and development	(16,620)	(20,164)
General and administrative	(4,972)	(4,309)
Total operating expenses	(21,592)	(24,473)
Loss from operations	(20,147)	(19,172)
Other income (expense):		
Grant income	$ 1,887	$ 2,204
Interest income	7	7
Interest expense	(243)	(219)
Other income and (expenses), net	528	(58)
Total other income, net	2,179	1,934
Net loss before tax	(17,968)	(17,238)
Income tax expense	(0)	(0)
Net loss	(17,968)	(17,238)
Other comprehensive loss:		
Foreign currency translation gain (loss), net of tax	(487)	(476)
Comprehensive loss	$ (18,455)	$ (17,714)
Net loss per share — basic and diluted	$ (0.40)	$ (0.53)

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

HOOKIPA PHARMA INC.

CONDENSED CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (UNAUDITED)

(In thousands, except share amounts)

	Convertible Preferred Stock		Common Stock				Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
			Common Stock		Class A Common Stock					
	Shares	Amount	Shares	Amount	Shares	Amount				
Balances as of December 31, 2021	**1,697**	**$ 0**	**27,383,483**	**$ 3**	**3,819,732**	**$ 0**	**$ 317,135**	**$ (4,780)**	**$ (222,766)**	**$ 89,592**
Issuance of Series A-1 convertible preferred stock upon public offering at $2,000 per share for cash, net of issuance costs of $1,975	15,800	0	—	—	—	—	29,625	—	—	29,625
Issuance of common stock upon public offering at $2.00 per share for cash, net of issuance costs of $2,713	—	—	21,700,000	2	—	—	40,685	—	—	40,687
Issuance of common stock upon stock purchase agreement with Gilead at $3.00 per share for cash, no issuance costs	—	—	1,666,666	0	—	—	5,000	—	—	5,000
Issuance of common stock upon exercise of stock options	—	—	10,034	0	—	—	1	—	—	1
Vesting of equity grants	—	—	112,551	0	—	—	(0)	—	—	—
ATM costs	—	—	—	—	—	—	(142)	—	—	(142)
Foreign currency translation adjustment, net of tax	—	—	—	—	—	—	—	(487)	—	(487)
Stock-based compensation expense	—	—	—	—	—	—	1,621	—	—	1,621
Net loss	—	—	—	—	—	—	—	—	(17,968)	(17,968)
Balances as of March 31, 2022	**17,497**	**$ 0**	**50,872,734**	**$ 5**	**3,819,732**	**$ 0**	**$ 393,925**	**$ (5,267)**	**$ (240,734)**	**$ 147,929**
Balances as of December 31, 2020	**2,978**	**$ 0**	**25,948,712**	**$ 3**	**3,819,732**	**$ 0**	**$ 309,288**	**$ (6,067)**	**$ (147,101)**	**$ 156,123**
Issuance of common stock upon exercise of stock options	—	—	33,806	0	—	—	125	—	—	125
Vesting of restricted stock	—	—	12,140	0	—	—	(0)	—	—	—
Foreign currency translation adjustment, net of tax	—	—	—	—	—	—	—	(476)	—	(476)
Stock-based compensation expense	—	—	—	—	—	—	1,521	—	—	1,521
Net loss	—	—	—	—	—	—	—	—	(17,238)	(17,238)
Balances as of March 31, 2021	**2,978**	**$ 0**	**25,994,658**	**$ 3**	**3,819,732**	**$ 0**	**$ 310,934**	**$ (6,543)**	**$ (164,339)**	**$ 140,055**

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

HOOKIPA PHARMA INC.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

(In thousands)

	Three months ended March 31,	
	2022	**2021**
Operating activities:		
Net loss	$ (17,968)	$ (17,238)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation expense	1,621	1,521
Depreciation and amortization expense	1,078	1,103
Other non-cash items	74	—
Changes in operating assets and liabilities:		
Accounts receivable	6,075	1,055
Receivable research incentives	(1,655)	942
Prepaid expenses and other current assets	756	73
Other non-current assets	(460)	(1,267)
Accounts payable	(1,614)	444
Deferred revenues	14,128	(882)
Operating lease liabilities	(421)	(466)
Accrued expenses and other liabilities	9	(263)
Other non-current liabilities	110	581
Net cash provided by (used in) operating activities	1,733	(14,397)
Investing activities:		
Purchases of property and equipment	(1,828)	(330)
Net cash used in investing activities	(1,828)	(330)
Financing activities:		
Payments related to finance leases	(20)	(24)
Proceeds from issuance of convertible preferred stock, net of issuance costs	29,625	—
Proceeds from issuance of common stock, net of issuance costs	45,688	125
Net cash provided by financing activities	75,293	101
Net increase (decrease) in cash, cash equivalents and restricted cash	75,198	(14,626)
Cash, cash equivalents and restricted cash at beginning of period	66,912	143,177
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(307)	(406)
Cash, cash equivalents and restricted cash at end of period	$ 141,803	$ 128,145
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ —	$ —
Cash paid for income taxes	$ (0)	$ (0)
Supplemental disclosure of non-cash financing activities:		
Property and equipment additions in accounts payable and accrued expenses	$ (504)	$ (398)
Lease assets obtained in exchange for new operating lease liabilities	$ 240	$ —

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

HOOKIPA PHARMA INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

1. Nature of the business and organization

HOOKIPA Pharma Inc. ("HOOKIPA" or the "Company") is a clinical-stage biopharmaceutical company developing a new class of immunotherapeutics based on its proprietary arenavirus platform that is designed to reprogram the body's immune system.

The Company was incorporated under the name of Hookipa Biotech, Inc. under the laws of the State of Delaware in February 2017 as a fully-owned subsidiary of Hookipa Biotech AG. In June 2018, the Company changed its name from Hookipa Biotech, Inc. to HOOKIPA Pharma Inc. and in order to effectuate the change of the jurisdiction of incorporation, the Company acquired all of the shares of Hookipa Biotech AG, now Hookipa Biotech GmbH. HOOKIPA is headquartered in New York, with European research and preclinical development operations headquartered in Vienna, Austria. In April 2019, the Company closed its initial public offering ("IPO") and its common stock started trading on the Nasdaq Global Select Market under the ticker symbol "HOOK".

The Company is subject to risks and uncertainties common to early-stage companies in the biotechnology industry, including, but not limited to, development by competitors of new technological innovations, dependence on key personnel, protection of proprietary technology, compliance with government regulations, the ability to establish clinical- and commercial-scale manufacturing processes and the ability to secure additional capital to fund operations. Product candidates currently under development will require significant additional research and development efforts, including extensive preclinical and clinical testing and regulatory approval prior to commercialization. These efforts require significant amounts of additional capital, adequate personnel and infrastructure and extensive compliance-reporting capabilities and may not ultimately lead to a marketing approval and commercialization of a product. Even if the Company's drug development efforts are successful, it is uncertain if and when the Company will realize significant revenue from product sales.

2. Summary of significant accounting policies

Basis of presentation

The Company's condensed consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP"). The accompanying condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiary. All intercompany accounts and transactions have been eliminated in consolidation.

The accompanying condensed consolidated balance sheet as of March 31, 2022, the condensed consolidated statements of operations, and comprehensive loss for the three months ended March 31, 2022 and 2021, the condensed consolidated statement of convertible preferred stock and stockholders' equity for the three months ended March 31, 2022 and 2021 and the condensed consolidated statements of cash flows for the three months ended March 31, 2022 and 2021 are unaudited.

The unaudited interim condensed consolidated financial statements have been prepared on the same basis as the audited annual consolidated financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for the fair statement for interim reporting. Certain information and footnote disclosures typically included in annual financial statements prepared in accordance with GAAP have been condensed or omitted. Accordingly, these unaudited interim condensed consolidated financial statements should be read in conjunction with the Company's audited financial statements for the year ended December 31, 2021 included in the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission. The results for any interim period are not necessarily indicative of results for any future period. Certain previous year amounts have been reclassified to conform to the current year presentation.

HOOKIPA PHARMA INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (continued)

Going concern

Since inception, the Company's activities have consisted primarily of performing research and development to advance its technologies. The Company is still in the development phase and has not been marketing its technologies to date. Through March 31, 2022, the Company has funded its operations with proceeds from sales of common stock, sales of convertible preferred stock, sales of redeemable convertible preferred stock, collaboration and licensing agreements, grants and borrowings under various agreements with foreign public funding agencies. Since inception, the Company has incurred recurring losses, including net losses of $18.0 million for the three months ended March 31, 2022 and $75.7 million for the year ended December 31, 2021. As of March 31, 2022, the Company had an accumulated deficit of $240.7 million. The Company expects to continue to generate operating losses in the foreseeable future. As of May 16, 2022, the filing date of this Quarterly Report on Form 10-Q, the Company expects that its cash and cash equivalents will be sufficient to fund its operating expenses, capital expenditure requirements and debt service payments through at least 12 months from the issuance date of the condensed consolidated financial statements.

The Company will seek additional funding in order to reach its development and commercialization objectives. The Company may seek funds through further equity financings, debt financings, collaborations, strategic alliances and marketing, distribution or licensing arrangements. The Company may not be able to obtain financing on acceptable terms, or at all, and the Company may not be able to enter into collaborations or other arrangements. The terms of any financing may adversely affect the holdings or the rights of the Company's stockholders. If the Company is unable to obtain funding, the Company could be forced to delay, reduce or eliminate some or all of its research and development programs, product portfolio expansion or commercialization efforts, which could adversely affect its business prospects.

The accompanying condensed consolidated financial statements have been prepared assuming that the Company will continue as a going concern, which contemplates the realization of assets and the settlement of liabilities and commitments in the normal course of business. The condensed consolidated financial statements do not reflect any adjustments relating to the recoverability and classification of assets or the amounts and classification of liabilities that might be necessary if the Company is unable to continue as a going concern.

Use of estimates

The preparation of financial statements in conformity with GAAP requires 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 the financial statements and the reported amounts of revenue, income and expenses during the reporting periods. Significant estimates and assumptions reflected in these condensed consolidated financial statements include, but are not limited to, the recognition of revenue and income, the accrual of research and development expenses and general and administrative expenses, the present value of lease right of use assets and corresponding liabilities, the valuation of stock-based awards and the valuation of current and non-current loans payable. The Company bases its estimates on historical experience, known trends and other market-specific or other relevant factors that it believes to be reasonable under the circumstances. On an ongoing basis, management evaluates its estimates as there are changes in circumstances, facts and experience.

On March 11, 2020 the World Health Organization designated COVID-19 as a global pandemic. The Company believes the extent of the COVID-19 pandemic's impact on the Company's business, results of operations and financial condition has been, and will continue to be driven by many factors, most of which are beyond the Company's control and ability to forecast. Because of these uncertainties, the Company cannot estimate how long or to what extent the pandemic will impact its operations. The Company's accounting estimates and assumptions may change over time in response to COVID-19 and the change could be material in future periods. As of the date of issuance of these unaudited condensed consolidated financial statements, the Company is not aware of any specific event or circumstance that would require the Company to update estimates, judgments or revise the carrying value of any assets or liabilities. Actual results may differ from those estimates or assumptions.

HOOKIPA PHARMA INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (continued)

Deferred offering costs

The Company capitalizes certain legal, professional accounting and other third-party fees that are directly associated with in-process equity financings as deferred offering costs until such financings are consummated. After consummation of an equity financing, these costs are recorded in stockholders' equity as a reduction of the additional paid-in capital on a pro-rata basis generated as a result of the offering. Should the in-process equity financing be abandoned, the deferred offering costs will be expensed immediately as a charge to operating expenses in the consolidated statements of operations and comprehensive loss.

Concentrations of credit risk and of significant suppliers

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash, cash equivalents and short-term bank deposits held with banks in excess of publicly insured limits. For the three months ended March 31, 2022 and March 31, 2021 the net proceeds from the Company's offerings have been deposited in bank accounts with investment grade U.S. financial institutions and have been partially invested in a money market fund. The money market fund, held in U.S. dollars, is primarily invested in U.S. and foreign short-term debt obligations. As of March 31, 2022 and December 31, 2021, the Company's cash and cash equivalents included smaller amounts of cash balances held in accounts with European banks at the Company's Austrian subsidiary, partially in euros. The Company does not believe that it is subject to unusual credit risk beyond the normal credit risk associated with commercial banking relationships.

The Company relies, and expects to continue to rely, on a small number of vendors to manufacture supplies and raw materials for its development programs. These programs could be adversely affected by a significant interruption in these manufacturing services or the availability of raw materials.

As of March 31, 2022 and December 31, 2021, respectively, Gilead Sciences, Inc. ("Gilead") accounted for the majority of the accounts receivable balance. For the three months ended March 31, 2022 and March 31, 2021 Gilead accounted for the majority of the Company's revenues. No other customers accounted for more than 10.0% of accounts receivable or net sales. The Company monitors the financial performance of its customers so that it can appropriately respond to changes in their credit worthiness. To date, the Company has not experienced any significant losses with respect to collection of its accounts receivable.

Cash equivalents

The Company considers all highly liquid investments with maturities of three months or less at the date of purchase to be cash equivalents. As of March 31, 2022 and December 31, 2021, cash equivalents consisted of money market funds.

Fair value measurements

Certain assets and liabilities are carried at fair value under GAAP. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

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

HOOKIPA PHARMA INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (continued)

- Level 2 - Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.
- Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

The Company's cash equivalents are carried at fair value, determined according to the fair value hierarchy described above (see Note 4).

Property and equipment

Property and equipment are stated at cost less accumulated depreciation and amortization. Depreciation and amortization expense is recognized using the straight-line method over the estimated useful life of each asset as follows:

	Estimated useful life
Leasehold improvements	shorter of useful life or term of lease
Laboratory equipment	2 - 10 years
Furniture and fixtures	2 - 10 years
Computer equipment and software	2 - 4 years

Costs for capital assets not yet placed into service are capitalized as construction-in-progress and depreciated once placed into service. Expenditures for repairs and maintenance are charged to expense as incurred. When property and equipment is sold or otherwise disposed of, the cost and related accumulated depreciation are eliminated from the accounts and any resulting gain or loss is reflected in the consolidated statements of operations.

Leases

The determination whether an arrangement qualifies as a lease is made at contract inception. A lease qualifies as a finance lease if any of the following criteria are met at the inception of the lease: (i) there is a transfer of ownership of the leased asset to the Company by the end of the lease term, (ii) the Company holds an option to purchase the leased asset that it is reasonably certain to exercise, (iii) the lease term is for a major part of the remaining economic life of the leased asset, (iv) the present value of the sum of lease payments equals or exceeds substantially all of the fair value of the leased asset, or (v) the nature of the leased asset is specialized to the point that it is expected to provide the lessor no alternative use at the end of the lease term. All other leases are recorded as operating leases and are included in right of use ("ROU") assets and lease liabilities in the consolidated balance sheets. For leases with an initial term of 12 months or less, the Company does not recognize a right of use asset or lease liability. These short-term leases are expensed on a straight-line basis over the lease term.

ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent its obligation to make lease payments arising from the lease. ROU assets and lease liabilities are recognized at the commencement date of the lease based upon the present value of lease payments over the lease term. When determining the lease term, the Company includes options to extend or terminate the lease when it is reasonably certain that the option will be exercised. The Company uses the implicit rate when readily determinable and uses its incremental borrowing rate when the implicit rate is not readily determinable based upon the information available at the commencement date in determining the present value of the lease payments. The incremental borrowing rate is determined using a secured borrowing rate for the same currency and term as the associated lease. The lease payments used to determine ROU assets may include lease incentives, stated rent increases and escalation clauses linked to rates of

inflation when determinable and are recognized as a ROU asset on the consolidated balance sheet. In addition, certain of the Company's arrangements contain lease and non-lease components. The Company generally separates lease payments from non-lease payments. Operating leases are reflected in operating lease assets, in current operating lease liabilities and non-current operating lease liabilities in the consolidated balance sheets. Finance leases are reflected in finance lease assets, in accrued expenses and other current liabilities and in other non-current operating lease liabilities in the consolidated balance sheets. The ROU asset is tested for impairment in accordance with Accounting Standards Codification ("ASC") 360.

Capitalized Software Development Cost

The Company capitalizes certain implementation costs for internal-use software incurred in a cloud computing agreement that is a service contract. Eligible costs associated with cloud computing arrangements, such as software business applications used in the normal course of business, are capitalized in accordance with ASC 350. These costs are recognized on a straight-line basis in the same line item in the statement of operations and comprehensive loss as the expense for fees for the associated cloud computing arrangement, over the term of the arrangement, plus reasonably certain renewals.

Revenue recognition from contracts with customers

The Company entered into a collaboration and license agreement (as amended and restated, the "Gilead Agreement") with Gilead whereby the parties agreed to collaborate with respect to two preclinical research programs to evaluate potential vaccine products for the treatment, cure, diagnosis or prevention of the hepatitis B virus ("HBV") and the human immunodeficiency virus ("HIV"). In February 2022, the Company signed an amended and restated collaboration agreement (the "Restated Collaboration Agreement"), which revised the terms only for the HIV program, whereby the Company will take on development responsibilities for the HIV program candidate through a Phase 1b clinical trial. The Company's performance obligations under the terms of the original agreement include one combined performance obligation for each research program (HBV and HIV) comprised of the transfer of intellectual property rights (licenses) and providing research and development services. The terms of the Restated Collaboration Agreement added an additional performance obligation to perform research and development work for the HIV program to the Company. The licenses do not represent distinct performance obligations, because they cannot be used without the research and development services. Payments to the Company under this agreement include a non-refundable up-front payment, payments for research and development activities, payments based upon the achievement of defined milestones, and if certain future conditions are met, payments for manufacturing services, commercial milestones and royalties on product sales.

The Company evaluates its collaboration and licensing arrangements pursuant to ASC 606 Revenue from Contracts with Customers. To determine the recognition of revenue from arrangements that fall within the scope of ASC 606, the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the Company satisfies a performance obligation.

Under ASC 606, the Company applies significant judgement to evaluate whether the obligations under the collaboration and licensing arrangement, represent separate or one or more combined performance obligations, the allocation of the transaction price to identified performance obligations, and the determination of when milestone payments are probable of being received.

HOOKIPA PHARMA INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (continued)

Upfront payment and program initiation payment

The non-refundable upfront-payment received by the Company upon signing of the Gilead Agreement, and milestone payments that were linked to future performance obligations, were initially recorded as deferred revenue and allocated between the two research program performance obligations. Such amounts are recognized as revenue over the performance period of the respective services on a percent of completion basis using total estimated research and development labor hours (input method) for each of the obligations. The percent of completion basis using labor hours was considered the best measure of progress in which control of the combined performance obligations transfers to the customer, due to the short time intervals in which research results are shared with the collaboration partner and the nature of the work being performed.

The non-refundable program initiation payment received by the Company upon signing of an amendment and restatement of the Gilead Agreement was also initially recorded as deferred revenue and is recognized on a percent of completion basis using total estimated research and development costs (input method) for the performance of the obligations. The percent of completion basis using research and development costs was considered the best measure of progress in which control of the performance obligations transfers to the customer, due to the immediate benefit that it adds to the value of the customer’s rights on the program, the short time intervals in which development results are shared and the nature of the work being performed.

Reimbursement for services

Under the Gilead Agreement, the Company incurs employee expenses as well as external costs for research and manufacturing activities presented as operating expenses or prepaid expenses. Based on the nature of the Company's responsibilities under the collaboration arrangement, reimbursement of those costs are presented as revenue and not deducted from expenses, as the Company controls the research activities. Amounts of consideration allocated to the performance of research or manufacturing services are recognized over the period in which services are performed. Reimbursements for external costs are recognized as revenues in the period in which the goods or services are received and external costs are recognized. Unpaid reimbursement amounts are presented as Accounts receivable.

Research and development milestones

The Gilead Agreement includes contingent milestone payments related to specified preclinical and clinical development milestones. These milestone payments represent variable consideration that are not initially recognized within the transaction price as they are fully constrained under the guidance in ASC 606, due to the scientific uncertainties and the required commitment from Gilead. The Company will continue to assess the probability of significant reversals for any amounts that become likely to be realized prior to recognizing the variable consideration associated with these payments within the transaction price.

Sales-based milestones and royalty payments

The Gilead Agreement also includes certain sales-based milestone and royalty payments upon successful commercialization of a licensed product. In accordance with ASC 606-10-55-65 Sales-Based or Usage-Based Royalties, the Company recognizes revenues from sales-based milestone and royalty payments at the later of (i) the occurrence of the subsequent sale; or (ii) the performance obligation to which some or all of the sales-based milestone or royalty payments has been allocated has been satisfied. The Company anticipates recognizing these milestones and royalty payments if and when subsequent sales are generated from a licensed product by the collaboration partner.

HOOKIPA PHARMA INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (continued)

Cost to fulfill contracts

The Company incurs costs for personnel, supplies and other costs related to its laboratory operations as well as fees from third parties and license expenses in connection with its research and development obligations under the collaboration and licensing agreement. These costs are recognized as research and development expenses over the period in which services are performed. Sublicense fees triggered by the receipt of payments are capitalized as an asset when the obligation to pay the fee arises. The capitalized asset is amortized over the period in which the revenue from the triggering payment is recognized.

Recent accounting pronouncements

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

Adopted as of current period

In November 2021, the FASB issued ASU 2021-10, Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance, which requires business entities to provide certain disclosures when they have received government assistance and when they use a grant or contribution accounting model by analogy to other accounting guidance (e.g., a grant model under IAS 20, Accounting for Government Grants and Disclosure of Government Assistance, or ASC 958-605, Not-For-Profit Entities — Revenue Recognition). Topic 832 requires the annual disclosures about transactions with a government that are accounted for by applying a grant or contribution accounting model by analogy of information about the nature of the transactions and the related accounting policy used to account for the transactions, the line items on the balance sheet and income statement that are affected by the transactions, and the amounts applicable to each financial statement line item, significant terms and conditions of the transactions, including commitments and contingencies. The guidance in ASU 2021-10 is effective for all entities for fiscal years beginning after December 15, 2021. The Company has already provided all relevant disclosures regarding Government Assistance on its consolidated financial statements prior adoption of ASU 2021-10. Therefore, the early adoption of this standard as of January 1, 2022 on a prospective basis did not have a material impact on the Company's consolidated financial statements.

Recently Issued Accounting Pronouncements

In August 2020, the FASB issued ASU 2020-06, Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging – Contracts in Entity's Own Equity (Subtopic 815-40). The ASU provides guidance that simplified the accounting for certain financial instruments with characteristics of liabilities and equity. The new guidance reduced the number of accounting models for convertible debt and convertible preferred stock instruments and made certain disclosure amendments intended to improve the information provided to users. The guidance also amended the derivative guidance for the "own stock" scope exception, which exempts qualifying instruments from being accounted for as derivatives if certain criteria are met. Finally, the standard changed the way certain convertible instruments are treated when calculating earnings per share. This guidance is effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years, with early adoption permitted. The Company is currently assessing the impact that this guidance will have on its consolidated financial statements.

3. Collaboration and Licensing Agreements

Gilead Collaboration and License Agreement

In June 2018, the Company entered into the Gilead Agreement whereby the Company and Gilead agreed to collaborate with respect to two preclinical research programs to evaluate potential vaccine products for the treatment,

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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (continued)

cure, diagnosis or prevention of HBV and HIV. In February 2022, the Company signed an Amended and Restated Collaboration Agreement, which altered key aspects of the collaboration pertaining to the HIV therapeutic. Most importantly, the Amended and Restated Collaboration Agreement allocated additional research and development responsibility to the Company with respect to the Company's HIV candidate and provided for additional funding by Gilead of such research and development activities as well as increased later stage development and commercial milestone payments.

Under the original Gilead Agreement, the Company granted Gilead an exclusive, royalty-bearing license to the Company's technology platforms. Upon entering into the agreement in June 2018, the Company received a non-refundable $10.0 million upfront payment from Gilead and upon signing of the amended and restated agreement, the Company received a program initiation fee of $15.0 million. Gilead is also obligated to make additional payments to the Company upon the achievement of pre-clinical, development and commercial milestones. The development milestones amount to $140 million for the HBV program, and up to $172.5 million, inclusive of the $10.0 million option exercise payment, for the HIV program upon Gilead's exercise of such option. The commercial milestones amount to a total of $50.0 million for the HBV program, and $65.0 million for the HIV program upon Gilead's exercise of the option. Additionally, Gilead is obligated to pay royalties on net sales for each program. Payments from Gilead generally have a 60 days payment term.

The $10.0 million upfront payment, the $15.0 million initiation fee and $8.0 million in milestone payments were initially recorded as deferred revenue in the consolidated balance sheet and are recognized as revenue when revenue recognition criteria are met. As of March 31, 2022, $18.2 million of such payments were included as a liability in deferred revenues, current and non-current. As of December 31, 2021, $4.3 million of upfront and milestone payments were included as a liability in deferred revenues, current. Approximately 45% of deferred revenue is expected to be recognized as revenue in the remainder of 2022, 29% in 2023, 16% in 2024 and the remaining 10% in 2025.

As of March 31, 2022, $1.1 million of cost reimbursements for research and development services were included as a liability in deferred revenues. As of December 31, 2021, $1.2 million of cost reimbursements for research and development services were included as a liability in deferred revenues. Reimbursements for external costs are recognized as revenues in the period in which the services are provided and external costs are recognized.

In the three months ended March 31, 2022, the Company recognized $0.6 million of the milestone and initiation payments that were originally recorded as deferred revenue. Furthermore, the Company recognized $0.8 million revenue from cost reimbursements for research and development services, of which $0.1 million were initially recorded as deferred revenue in the consolidated balance sheet. In the three months ended March 31, 2021, the Company recognized $0.7 million of the upfront and milestone payments that were originally recorded as deferred revenue. Furthermore, the Company recognized $4.6 million revenue from cost reimbursements for research and development services, of which $0.3 million were initially recorded as deferred revenue in the consolidated balance sheet.

Sublicense fees payable to certain licensors of technologies upon the receipt of the deferred upfront and milestone payments, were capitalized as a contract asset and will be amortized over the period in which the revenue from the triggering payment is recognized. As of March 31, 2022 and December 31, 2021, the contract asset and the liability relating to the sublicense payment was $0.3 million and $0.3 million, respectively.

4. Fair Value of Financial Assets

The following tables present information about the Company's financial assets measured at fair value on a recurring basis and indicating the level of the fair value hierarchy utilized to determine such fair values (in thousands):

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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (continued)

	Fair Value Measurement at March 31, 2022 Using			
	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market funds	$ 25,406	$ —	$ —	$ 25,406
Total	$ 25,406	$ —	$ —	$ 25,406

	Fair Value Measurement at December 31, 2021 Using			
	Level 1	Level 2	Level 3	Total
Cash equivalents:				
Money market funds	$ 35,403	$ —	$ —	$ 35,403
Total	$ 35,403	$ —	$ —	$ 35,403

During the three months ended March 31, 2022, there were no transfers between Level 1, Level 2 and Level 3.

5. Property, plant and equipment, net

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

	March 31, 2022	December 31, 2021
Land	$ 2,031	$ 2,072
Leasehold improvements	3,281	3,348
Construction in progress	8,783	7,746
Laboratory equipment	7,155	7,025
Furniture and fixtures	638	651
Computer equipment and software	1,843	1,876
Property and equipment, gross	23,731	22,718
Less: Accumulated depreciation	(6,631)	(6,366)
Property and equipment, net	$ 17,100	$ 16,352

Construction-in-progress as of March 31, 2022 and December 31, 2021 related to investments in connection with the Company's GMP manufacturing facility project.

6. Receivable research incentive

The Company participates in a research incentive program provided by the Austrian government under which it is entitled to reimbursement of a percentage of qualifying research and development expenses and capital expenditures incurred in Austria. Submissions for reimbursement under the program are submitted annually. Incentive amounts are generally paid out during the calendar year that follows the year of the expenses but remain subject to subsequent examinations by the responsible authority. Reimbursements received in excess of the recognized receivable research incentive for a certain period are recorded within other long term liabilities for potential repayment until such time that an audit has taken place, upon expiration of the potential reclaim period, or when it is no longer probable that a reclaim will happen. The years 2018 to present remain open to examination by the authorities.

As of March 31, 2022, the Company recognized receivables of $15.6 million from the research incentive program, which are reported in research incentive receivables in the Company's condensed consolidated balance sheet. As of December 31, 2021, the receivables from the research incentive program were $14.3 million.

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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (continued)

During the three months ended March 31, 2022 and 2021, the Company recorded $1.7 million and $2.0 million, respectively, of income related to the incentive program within the Company's condensed consolidated statements of operations as part of the grant income.

7. Accrued expenses and other current liabilities

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

	March 31, 2022	December 31, 2021
Salaries and bonuses	3,217	4,754
Social security contributions	271	250
Unearned grant income (current)	571	693
Sublicense fees	—	304
Accrued external research and development expenses	3,511	2,165
Accrued external general and administration expenses	895	629
Accrued for property and equipment acquisitions	—	7
Finance lease liabilities	—	21
Other accruals and liabilities	260	57
	$ 8,725	$ 8,880

8. Loans payable

As of March 31, 2022 and December 31, 2021, loans payable consisted of the following (in thousands):

	March 31, 2022	December 31, 2021
Loans from FFG	$ 5,954	$ 6,074
Unamortized debt discount	(813)	(1,063)
Total loans payable, net	$ 5,141	$ 5,011

In connection with the funding agreements with the Austrian Research Promotion Agency, (*Österreichische Forschungsförderungsgesellschaft,* or "FFG"), the Company has received various loans ("FFG Loans"). The FFG Loans were made on a project-by-project basis. Amounts due under the FFG Loans bear interest at a rate of 0.75% per annum and mature at various dates between June 2022 and March 2024. Interest on amounts due under the loans is payable semi-annually in arrears, with all principal and remaining accrued interest due upon maturity.

The FFG Loans bear interest at rates that are below market rates of interest. The Company accounts for the imputed benefit arising from the difference between an estimated market rate of interest and the rate of interest charged by FFG as grant income from FFG. On the date that FFG loan proceeds are received, the Company recognizes the portion of the loan proceeds allocated to grant funding as a discount to the carrying value of the loan and as unearned income, which is recognized as grant income over the term of the funding agreement.

No principal repayment was made in the three months ended March 31, 2022 and March 31, 2021, respectively.

As of March 31, 2022, the aggregate minimum future principal payments due in connection with the FFG Loans are summarized as follows (in thousands):

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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (continued)

Payments Due by Calendar Year	Amount
2022 (remaining 9 months)	2,993
2023	1,785
2024	1,176
2025	—
2026	—
Thereafter	—
Total	$ 5,954

9. Common stock, Class A common stock and convertible preferred stock

The Company's capital structure consists of common stock, Class A common stock and preferred stock. As of March 31, 2022, the Company was authorized to issue 100,000,000 shares of common stock, 3,900,000 shares of Class A common stock and 10,000,000 shares of preferred stock. The Company has designated 2,978 of the 10,000,000 authorized shares of preferred stock as non-voting Series A convertible preferred stock and 15,800 of the 10,000,000 authorized shares of preferred stock as non-voting Series A-1 convertible preferred stock. As of March 31, 2022, the Company had 50,872,734 shares of common stock, 3,819,732 shares of Class A common stock, 1,697 shares of Series A convertible preferred stock and 15,800 shares of Series A-1 convertible preferred stock outstanding and issued.

On February 15, 2022, the Company entered into a Stock Purchase Agreement (the "Stock Purchase Agreement") with Gilead, that requires Gilead, at the Company's option, to purchase up to $35.0 million of the Company's common stock. On February 15, 2022, Gilead purchased an initial amount of 1,666,666 unregistered shares of the Company's common stock in exchange for $5.0 million in cash at a purchase price per share equal to $3.00. Pursuant to the terms of the Stock Purchase Agreement, the Company may require Gilead to purchase the balance of the $30.0 million of common stock, at the discretion of the Company, in one or two subsequent purchases at a price equal to the volume weighted average purchase price preceding such purchase, as defined in the Stock Purchase Agreement, plus, for the first subsequent purchase, which can be up to the full $30.0 million balance, a premium of 30%. The Company's right to sell shares of its common stock to Gilead is subject to specified limitations, including a limitation that prevents the Company from requesting purchases of shares of common stock by Gilead that would result in a beneficial ownership of more than 19.9% of the total number of outstanding shares of common stock by Gilead. At March 31, 2022, this limitation would have prevented the Company to request from Gilead the purchase of the full $30.0 million balance of the investment commitment. The Company agreed to file a registration statement on Form S-3 to register for resale the shares of common stock issued to Gilead within six months from the issuance of the initial 1,666,666 shares of common stock, and within four months for any additional issuances of common stock to Gilead.

On March 4, 2022, the Company closed a public offering of 21,700,000 shares of its common stock and of 15,800 shares of Series A-1 convertible preferred stock at a public offering price of $2.00 and $2,000.00 per share, respectively, for net proceeds of $70.2 million after deducting underwriting discounts and commissions and offering expenses including pro-rata ATM expenses.

The Company has two series of preferred stock authorized, issued and outstanding as of March 31, 2022: Series A convertible preferred stock and Series A-1 convertible preferred stock. Shares of Series A and Series A-1 convertible preferred stock may be independently converted into common stock. Holders of Series A and Series A-1 convertible preferred stock have equal rights, powers and privileges.

Holders of common stock are entitled to one vote for each share held on all matters submitted to a vote of the stockholders. The holders of Class A common stock and Series A and Series A-1 convertible preferred stock are not entitled to vote, except as required by law. The holders of common stock and Class A common stock do not have any cumulative voting rights.

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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (continued)

Each holder of Class A common stock has the right to convert each share of Class A common stock into one share of common stock at such holder's election. Each holder of Series A and Series A-1 convertible preferred stock has the right to convert each share of Series A and Series A-1 convertible preferred stock into 1,000 shares of common stock at any time at the holder's option, provided that the holder will be prohibited, subject to certain exceptions, from converting Series A and Series A-1 preferred stock into shares of our common stock if, as a result of such conversion, the holder, together with its affiliates, would own more than 9.99% of the total number of shares of the Company's common stock then issued and outstanding.

Holders of common stock and Class A common stock are entitled to receive ratably any dividends declared by the board of directors out of funds legally available for that purpose, subject to any preferential dividend rights of any outstanding preferred stock. Holders of Series A and Series A-1 preferred stock will be entitled to receive dividends at a rate equal to (on an as-if-converted-to-common stock basis), and in the same form and manner as, dividends actually paid on shares of the Company's common stock. Holders of common stock and Class A common stock have no preemptive rights, conversion rights, or other subscription rights or redemption or sinking fund provisions.

In the event of a liquidation, dissolution, or winding up of the Company, holders of our Series A and Series A-1 preferred stock will receive a payment equal to $0.001 per share of Series A and Series A-1 preferred stock before any proceeds are distributed to the holders of common stock. Then, holders of common stock and Class A common stock will be entitled to share ratably in all assets remaining after payment of all debts and other liabilities.

10. Stock-based compensation

2018 Stock Option and Grant Plan

In June 2018, the Board of Directors approved the 2018 Stock Option and Grant Plan. Options granted under the 2018 Stock Option and Grant Plan generally vest over four years, with 25% of the options vesting upon the first anniversary of the grant date and the remaining 75% of the options vesting in 12 equal quarterly installments following the first anniversary of the grant date, provided the option holder continues to have an employment or service relationship with the Company on each vesting date. The options expire on the 10th anniversary of the grant date. As of March 31, 2022, 946,563 options granted under the 2018 Stock Option and Grant Plan remained outstanding. Any authorization to issue new options under the 2018 Stock Option and Grant Plan was cancelled upon the effectiveness of the 2019 Stock Option and Incentive Plan and no further awards will be granted under the 2018 Plan.

2019 Stock Option and Incentive Plan

On April 1, 2019, the Company's stockholders approved the 2019 Stock Option and Incentive Plan, which became effective as of the effective date of the registration statement in connection with the Company's IPO. The plan provides for the grant of shares of restricted stock, long term incentive awards, stock options or other equity-based awards. The maximum number of shares of the Company's common stock that may be issued under the Company's 2019 Stock Option and Incentive Plan is 3,630,686 shares which shall be cumulatively increased each year by up to 4% of the then outstanding number of shares. Options granted under the 2019 Stock Option and Incentive Plan generally vest over four years, with 25% of the options vesting upon the first anniversary of the grant date and the remaining 75% of the options vesting in 12 equal quarterly installments following the first anniversary of the grant date, provided the option holder continues to have an employment or service relationship with the Company on each vesting date. Initial options granted to non-executive directors upon their election generally vest over a three-year term with 33% of the options vesting upon the first anniversary of the grant date and the remaining 67% of the options vesting in eight equal quarterly installments following the first anniversary of the grant date. Option re-grants to non-executive directors generally vest on the first anniversary of the grant date. The options expire on the 10th anniversary of the grant date. For each option, the beneficiary is entitled to receive one share of common stock upon the exercise of the option.

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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (continued)

Stock option valuation

The Company estimates the option's fair value on the date of grant using the Black-Scholes option-pricing model. Black-Scholes utilizes assumptions related to expected term, volatility, the risk-free interest rate, the dividend and employee exercise behavior. Forfeitures are accounted for when they occur. Expected volatilities utilized in the Black-Scholes model are based on historical volatilities of a group of comparable companies. The group of representative companies have characteristics similar to the Company, including the stage of product development and focus on the life science industry. Management believes that this represents the most accurate basis for estimating expected future volatilities under the current conditions. The risk-free interest rate is derived from the yields for U.S. Treasuries with a remaining term approximating the expected life of the options. The expected term represents the period of time that the options granted are expected to be outstanding.

The following table summarizes the assumptions used in the Black-Scholes option-pricing model for estimating the fair value of stock options granted during:

	Three months ended March 31, 2022
Risk-free interest rate	1.64 %
Expected term (in years)	5.0
Expected volatility	85.8 %
Expected dividends	— %

For the 2022 grants, the Company used the simplified method in developing an estimate of the expected term due to a lack of historical exercise data. There were no stock options granted during the three months ended March 31, 2021.

Stock option activity

The following table summarizes the Company's stock option activity since January 1, 2022 (in thousands, except share and per share amounts):

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding as of December 31, 2021	4,231,178	$ 9.21	7.5	$ 1,640
Granted	145,071	1.50		
Exercised	(10,034)	0.10		
Forfeited	(67,269)	10.09		
Outstanding as of March 31, 2022	4,298,946	$ 8.96	7.3	$ 1,688
Options exercisable as of March 31, 2022	2,682,044	$ 7.80	6.8	$ 1,681
Options unvested as of March 31, 2022	1,616,902	$ 10.86	8.2	$ 7

The aggregate intrinsic value of stock options was calculated as the difference between the exercise price of the stock options and the fair value of the Company's common stock for those stock options that had exercise prices lower than the fair value of the Company's common stock. The fair value per common stock used for calculating the intrinsic values as of March 31, 2022 and December 31, 2021, was $2.28 and $2.33, respectively.

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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (continued)

Cash received from stock option exercise under share-based payment arrangements for the three months ended March 31, 2022 was $1 thousand. Cash received from stock option exercise under share-based payment arrangements for the three months ended March 31, 2021 was $125 thousand.

Common Stock Awards

In the three months ended March 31, 2022 the Company issued unrestricted shares of common stock to its executive team. The Company's executive team agreed to convert a portion of their base salaries, for the six months ending June 30, 2022 for shares of the Company's fully vested common stock having a value equal to their foregone salary, determined based on a value of $3.00 per share, resulting in the issuance of 112,551 shares of common stock. The total fair value of common stock awards issued during the three months ended March 31, 2022 was $0.2 million. The grant date fair value per share of common stock was $1.50 and was measured at the closing price of the common stock on the date of grant. Expenses were recorded immediately and are included in stock based compensation in the three months ended March 31, 2022.

Stock-based compensation

Stock-based compensation expense was classified in the condensed consolidated statements of operations and comprehensive loss as follows (in thousands):

	Three months ended March 31,	
	2022	2021
Research and development expenses	$ 618	$ 624
General and administrative expenses	1,003	897
	$ 1,621	$ 1,521

11. Income taxes

Income tax expense during the three months ended March 31, 2022 and 2021 resulted from minimum tax obligations. During the three months ended March 31, 2022 and 2021, the Company recorded no income tax benefits for the net operating losses incurred, due to its uncertainty of realizing a benefit from those items. The Company's losses before income taxes were generated in the United States and Austria. The Company has evaluated the positive and negative evidence bearing upon its ability to realize the deferred tax assets resulting from its net operating loss carryforwards. Management has considered the Company's history of cumulative net losses incurred since inception and its lack of commercialization of any products or generation of any revenue from product sales since inception and has concluded that it is more likely than not that the Company will not realize the benefits of its deferred tax assets. Accordingly, a full valuation allowance has been established against the deferred tax assets as of March 31, 2022 and December 31, 2021. Management reevaluates the positive and negative evidence at each reporting period.

12. Commitments and contingencies

Operating and Finance Leases

The Company leases real estate, including office and laboratory space and has entered into various other agreements with respect to assets used in conducting its business. The Company is required to maintain a cash balance of $0.4 million to secure letters of credit associated with real estate leases. This amount was classified as non-current restricted cash in the Company's condensed consolidated balance sheet as of March 31, 2022.

As of March 31, 2022 and December 31, 2021, the Company's operating lease right-of-use assets were $5.3 million and $5.7 million, respectively, which are reported in operating lease right-of-use assets in the Company's

condensed consolidated balance sheets. As of March 31, 2022 the Company had no finance lease right-of-use assets, as of December 31, 2021, the Company's finance lease right-of-use assets were $0.1 million, which are reported in finance lease right-of-use assets in the Company's condensed consolidated balance sheets. As of March 31, 2022, the Company had outstanding operating lease obligations of $5.3 million, of which $1.7 million is reported in operating lease liabilities, current portion and $3.6 million is reported in operating lease liabilities, non-current portion in the Company's condensed consolidated balance sheets. As of March 31, 2022, the Company had no outstanding finance lease obligations. As of December 31, 2021, the Company had outstanding operating lease obligations of $5.6 million, of which $1.7 million is reported in operating lease liabilities, current portion and $3.9 million is reported in operating lease liabilities, non-current portion in the Company's condensed consolidated balance sheets. As of December 31, 2021, the Company had outstanding finance lease obligations of less than $0.1 million, which is reported in accrued expenses and other current liabilities in the Company's condensed consolidated balance sheets. The Company's weighted average discount rate and weighted average lease term remaining on operating lease liabilities is approximately 1.4% and 3.5 years, respectively.

Contract manufacturing arrangements

The Company has entered into arrangements with contract manufacturing organizations ("CMOs") for manufacturing of materials for research and development purposes, including manufacturing of clinical trial materials. These contracts generally provide for non-cancellable obligations or cancellation penalties depending on the time of cancellation. As of March 31, 2022, the Company's total non-cancellable obligations under contracts with CMOs, excluding embedded lease liabilities, were $8.1 million, of which $8.0 million relate to 2022 (remaining nine months) deliverables, less than $0.1 million relate to 2023, and less than $0.1 million relate to 2024 deliverables.

Intellectual property licenses

The Company has entered into certain license agreements under which it is obligated to make milestone payments upon the achievement of certain development and regulatory milestones, to pay royalties on net sales of licensed products, and to pay a percentage of the sublicense fees which the Company receives from its sublicensees.

In the three months ended March 31, 2022, the Company recorded $0.3 million, in licensing fees related to intellectual property licenses as general and administrative expenses. These amounts are partly related to the upfront payment and milestone payments received by the Company under the Gilead Agreement. The amounts recognized as expenses have been agreed to by the licensors but calculation of sublicensing fees on future payments may be subject to interpretation and may change until agreed to by the receiving party.

Indemnification agreements

In the ordinary course of business, the Company may provide indemnification of varying scope and terms to vendors, lessors, business partners and other parties with respect to certain matters including, but not limited to, losses arising out of breach of such agreements or from intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with members of its Board of Directors and senior management that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnifications. The Company is not aware of any claims under indemnification arrangements, and it has not accrued any liabilities related to such obligations in its condensed consolidated financial statements as of March 31, 2022 or December 31, 2021.

HOOKIPA PHARMA INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (continued)

Legal proceedings

At each reporting date, the Company evaluates whether or not a potential loss amount or a potential range of loss is probable and reasonably estimable under the provisions of the authoritative guidance that addresses accounting for contingencies. The Company is currently a party to a patent proceeding opposing European Patent No. 3218504, which was granted to the University of Geneva in July 2020 and is exclusively licensed to the Company. While it is not feasible to predict the outcome of these matters with certainty, and some lawsuits, claims or proceedings may be disposed or decided unfavorably, the Company does not expect that the pending patent opposition, and any asserted or unasserted legal claims or proceedings, individually or in the aggregate, will have a material adverse effect on the Company. However, if, as a result of the current patent proceeding, the Company would lose all, or at least part, of the protection under the opposed patent, such loss could erode the Company's competitive position and harm its business and ability to achieve profitability. The Company expenses the costs related to the pending and other such legal proceedings as incurred.

13. Net loss per share

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

	Three months ended March 31,	
	2022	2021
Numerator:		
Net loss	$ (17,968)	$ (17,238)
Denominator:		
Weighted-average common shares outstanding, basic and diluted	38,603,022	29,788,284
Weighted-average Series A convertible preferred shares outstanding, basic and diluted, presented as if converted into common stock[(1)]	1,697,000	2,978,000
Weighted-average Series A-1 convertible preferred shares outstanding, basic and diluted, presented as if converted into common stock[(1)]	4,740,000	—
Total number of shares used to calculate net loss per share, basic and diluted	45,040,022	32,766,284
Net loss per share, basic and diluted	$ (0.40)	$ (0.53)

[(1)] Series A and Series A-1 convertible preferred stock are participating securities that have substantially the same terms and features as the Company's common stock. Series A and Series A-1 convertible preferred stock is therefore included in the weighted-average number of shares outstanding to calculate net loss per share, basic and diluted as if converted in common stock. Each share of Series A and Series A-1 convertible preferred stock is independently convertible into 1,000 shares of common stock. 1,697,000 shares of the Company's common stock are issuable upon conversion of Series A convertible preferred stock and 15,800,000 shares of the Company's common stock are issuable upon conversion of Series A-1 convertible preferred stock (see Note 9).

Since the Company was in a 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 potential common shares (common stock and Class A common stock) 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:

HOOKIPA PHARMA INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) (continued)

	Three months ended March 31,	
	2022	2021
Options issued and outstanding	4,298,946	3,504,766
Unvested restricted stock units	—	31,560
Total	4,298,946	3,536,326

14. Subsequent events

Stock option grant

In April 2022, the Company granted stock options at an exercise price of $1.66 per stock option to employees to purchase 1,065,370 shares of common stock. All options granted on April 19, 2022 vest over four years, with 25% of the options vesting on February 15, 2023 and the remaining 75% of the options vesting in 12 equal quarterly installments following the first anniversary of the vesting date, provided the option holder continues to have an employment relationship with the Company on each vesting date.

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our unaudited condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q and our audited consolidated financial statements and related notes for the year ended December 31, 2021 included in our Annual Report on Form 10-K filed with the Securities and Exchange Commission, or the SEC. As a result of many factors, including those factors set forth in the "Risk Factors" section of our Annual Report on Form 10-K for the year end December 31, 2021, our actual results could differ materially from the results described in, or implied by, the forward-looking statements contained in the following discussion and analysis.

Overview

We are a clinical-stage biopharmaceutical company developing a new class of immunotherapeutics based on our proprietary arenavirus platform that is designed to target and amplify T cell immune responses to disease. We believe that our technologies can meaningfully leverage the human immune system for prophylactic and therapeutic purposes by inducing CD8+ T cell response levels previously not achieved by other immunotherapy approaches.

We are building a proprietary immuno-oncology pipeline by targeting oncoviral cancer antigens, self-antigens and next-generation antigens. Our oncology portfolio includes three disclosed programs, HB-200, HB-300, and HB-700, which all use our replicating technology. HB-200 is in clinical development for the treatment of Human Papillomavirus 16-positive cancers, or HPV16+, in an ongoing Phase 1/2 clinical trial. HB-300 is in development for the treatment of prostate cancer and expected to move into the clinic after our planned third quarter 2022 filing of an investigational new drug application filing. HB-700 is our newest asset in preclinical development for treatment of KRAS mutated cancers, including, lung, colorectal and pancreatic cancers.

Our HB-200 program is comprised of HB-201 single vector therapy and HB-201/HB-202 two vector therapy. Both therapies are being evaluated in an ongoing HB-200 Phase 1/2 clinical trial. In November 2021, we announced interim data from our ongoing Phase 1 portion of the study, showing promising anti-tumor activity against advanced/metastatic HPV16+ cancers and favorable tolerability. Data demonstrated responses and stable disease in head and neck cancer patients who failed prior standard of care therapy. We believe that these early-stage data establish proof of concept for our replicating single-vector immunotherapy in oncology.

In September 2021, we entered into a clinical collaboration with Merck & Co., Inc. to evaluate the combination of HB-200 and Merck & Co., Inc's anti-PD-1 therapy, KEYTRUDA® (pembrolizumab) in a separate randomized Phase 2 trial. In January 2022, we dosed the first patient with a combination of HB-201 and pembrolizumab for the treatment of first line advanced/metastatic HPV16+ HNSCC in the Phase 2 expansion portion of the ongoing Phase 1/2 trial.

Our non-replicating prophylactic Cytomegalovirus, or CMV, vaccine candidate, HB-101, is a potential first in-class compound in a Phase 2 clinical trial for patients awaiting kidney transplantation. In November 2021, we reported safety, immunogenicity and efficacy data, whereby the three-dose schedule of HB-101 pre-transplantation showed a trend of reducing incidence of CMV viremia and antiviral use. The trial will continue to follow patients currently on-study with final top-line data readout in the first half of 2023. We have decided to pursue HB-101 further only if we are able to partner the program with a collaborator, thereby enabling greater strategic focus on the immuno-oncology programs.

We have funded our operations to date primarily from public offerings of common stock and convertible preferred stock, including our initial public offering, as well as private placements of our redeemable convertible preferred stock, grant funding and loans from an Austrian government agency, and upfront, milestone and initiation payments from Gilead in connection with a research collaboration and license agreement.

On April 23, 2019, we completed an initial public offering of our common stock, the IPO, in which we issued 6.0 million shares of our common stock, at $14.00 per share, for gross proceeds of $84.0 million, or net proceeds of $74.6 million. On December 11, 2020, we completed a follow-on public offering in which we issued 3.9 million shares

of our common stock, at $11.75 per share, and 2,978 shares of our Series A convertible preferred stock, at $11,750.00 per share, for net proceeds of $75.0 million after deducting underwriting discounts and commissions and offering expenses. On March 4, 2022, we completed a follow-on public offering in which we issued 21.7 million shares of our common stock, at $2.00 per share, and 15,800 shares of our Series A-1 convertible preferred stock, at $2,000.00 per share, for net proceeds of $70.2 million after deducting underwriting discounts and commissions and offering expenses including pro-rata ATM expenses. In addition, in February 2022, Gilead purchased 1.7 million unregistered shares of our common stock for $5.0 million. As of March 31, 2022, the principal amount outstanding under loans from government agencies was $6.0 million and we had cash, cash equivalents and restricted cash of $141.8 million.

We do not expect to generate revenue from any product candidates that we develop until we obtain regulatory approval for one or more of such product candidates, if at all, and commercialize our products or enter into additional collaboration agreements with third parties. Substantially all of our net losses have resulted from costs incurred in connection with our research and development programs and from general and administrative costs associated with our operations.

All of our product candidates, including our most advanced oncology product candidate, HB-200, will require substantial additional development time and resources before we would be able to apply for and receive regulatory approvals and begin generating revenue from product sales. Before launching our first products, if approved, we plan to establish our own manufacturing facility to reduce or eliminate our reliance on contract manufacturing organizations, or CMOs, which will require substantial capital expenditures and cause additional operating expenses. We currently have no marketing and sales organization and have no experience in marketing products; accordingly, we will incur significant expenses to develop a marketing organization and sales force in advance of generating any commercial product sales. As a result, we will need substantial additional capital to support our operating activities. In addition, we expect to continue to incur legal, accounting and other expenses in operating our business, including the costs associated with operating as a public company.

We currently anticipate that we will seek to fund our operations through equity or debt financings or other sources, such as government grants and additional collaboration agreements with third parties. Adequate funding may not be available to us on acceptable terms, or at all. If sufficient funds on acceptable terms are not available when needed, we will be required to significantly reduce our operating expenses and delay, reduce the scope of, or eliminate one or more of our development programs.

We have incurred net losses each year since our inception in 2011, including net losses of $18.0 million for the three months ended March 31, 2022. As of March 31, 2022, we had an accumulated deficit of $240.7 million and we do not expect positive cash flows from operations in the foreseeable future, if ever. We expect to continue to incur net operating losses for at least the next several years as we advance our product candidates through clinical development, seek regulatory approval, prepare for and, if approved, proceed to commercialization, continue our research and development efforts and invest to establish further commercial manufacturing capacity.

Special Note About Coronavirus (COVID-19)

In March 2020, we announced initial potential business impacts related to the outbreak of a novel strain of virus named SARS-CoV-2 (severe acute respiratory syndrome 2), or coronavirus, which causes coronavirus disease, or COVID-19. As a result of the ongoing COVID-19 pandemic, we have experienced, and may further experience, disruptions that have and could further adversely impact our business operations as well as our preclinical studies and clinical trials. Specifically, nearly all of the Phase 2 trial sites we utilize for our HB-101 Phase 2 trial had temporarily suspended enrollment of patients, resumed patient enrollment, but suspended enrollment again during periods of increased confirmed infections in the United States and Europe. As a result, the total number of patients in the trial at the conclusion of enrollment in June 2021 was below the originally planned number of patients. While we have since commenced enrollment in this trial, we continue to evaluate the impact of the ongoing COVID-19 pandemic on our trials.

In addition, certain aspects of our supply chain were temporarily impacted as certain of our third-party suppliers and manufacturers had paused their operations in response to the COVID-19 pandemic or had otherwise encountered delays in providing their services. The uncertainties resulting from the COVID-19 pandemic led us to temporarily focus on our core program, HB-200, as well as research and development activities under our collaboration with Gilead. Certain earlier stage programs, including HB-300 were temporarily de-prioritized and only allocated the resources that could be made available without impacting our core programs. While we have resumed activities for these earlier stage programs in 2021, we continue to evaluate the extent to which potential constraints of our third-party suppliers and manufacturers will impact our ability to manufacture our product candidates for our clinical trials and conduct other research and development operations and maintain applicable timelines. The ultimate impact of the coronavirus pandemic on our business operations as well as our preclinical studies and clinical trials remains uncertain and subject to change and will depend on future developments, which cannot be accurately predicted. We will continue to monitor the situation closely.

Furthermore, in order to preserve resources and liquidity during the pandemic, all of our officers had waived at least 25% of their cash salaries for the three months ended June 30, 2020, and the vast majority of our employees agreed to a temporary salary reduction of 20% for the three months ended June 30, 2020. We compensated our officers and employees for the forgone cash salaries by issuing restricted stock units in July 2020. During 2020, our directors also elected to receive equity instead of cash for their accrued board fees. Staff may work from home in accordance with our "working from home" policy, and we encourage our Vienna employees to make use of the readily-available PCR testing in order to enhance health and safety, in particular for laboratory work that has to be performed on site.

Components of Our Results of Operations

Revenue from collaboration and licensing

To date, we have not generated any revenue from product sales and do not expect to do so in the near future, if at all. All of our revenue to date has been derived from a research collaboration and license agreement with Gilead.

On June 4, 2018, we entered into a Research Collaboration and License Agreement, or the Collaboration Agreement, with Gilead to evaluate potential vaccine products using or incorporating our replicating technology and non-replicating technology for the treatment, cure, diagnosis or prevention of HBV and HIV.

Under the Collaboration Agreement, we granted Gilead an exclusive, royalty-bearing license to our technology platform for researching, developing, manufacturing and commercializing products for HIV or HBV. We received a non-refundable $10.0 million upfront payment upon entering the Collaboration Agreement. In February 2022, we signed an amended and restated collaboration agreement, which revised the terms only for the HIV program, whereby we will take on development responsibilities for the HIV program candidate through a Phase 1b clinical trial. Pursuant to the Restated Collaboration Agreement, Gilead will retain an exclusive right, the Option, to take back the development responsibilities, thus keeping the rights for the HIV program, including further development and commercialization in return for an option exercise payment of $10.0 million. Pursuant to the Restated Collaboration Agreement, we are eligible for up to $140.0 million in developmental milestone payments for the HBV program and $50.0 million in commercialization milestone payments. If Gilead exercises the Option, we are eligible for up to $172.5 million in developmental milestone payments for the HIV program, inclusive of the $10.0 million Option exercise payment, and $65.0 million in commercialization milestone payments for the HIV program. Upon the commercialization of a product, we are eligible to receive tiered royalties of a high single-digit to mid-teens percentage on the worldwide net sales of each HBV product, and royalties of a mid-single-digit to 10% of worldwide net sales of each HIV product. Gilead is obligated to reimburse us for our costs, including all benefits, travel, overhead, and any other expenses, relating to performing research and development activities under the Restated Collaboration Agreement with respect to the HBV program, and if the Option is exercised, any manufacturing costs related to the HIV program. Through to March 31, 2022, we have received from Gilead the non-refundable upfront payment of $10.0 million, $16.2 million in milestone payments for the achievement of pre-clinical research milestones, and the initiation payment of $15.0 million upon execution of the Restated Collaboration Agreement to fund our future performance of development activities under the Restated Collaboration Agreement. In addition, we have recognized $36.4 million of cost reimbursements for research and development services performed under the Collaboration Agreement.

We determined that our performance obligations under the terms of the original Collaboration Agreement included one combined performance obligation for each of the HBV and HIV research programs, comprised of the transfer of intellectual property rights and providing research and development services. Accordingly, we recognized these amounts as revenue over the performance period of the respective services on a percent of completion basis using total estimated research and development labor hours for each of the performance obligations. The terms of the Restated Collaboration Agreement added an additional performance obligation to perform research and development work for the HIV program to the Company. We recognize the amounts of revenue allocated to the performance obligation resulting from the Restated Collaboration Agreement on a percent of completion basis over the performance period, using total estimated research and development costs as the measure of progress.

Operating Expenses

Our operating expenses since inception have only consisted of research and development costs and general administrative costs.

Research and Development Expenses

Since our inception, we have focused significant resources on our research and development activities, including establishing our arenavirus platform, conducting preclinical studies, developing a manufacturing process, conducting a Phase 1 clinical trial and the ongoing Phase 2 clinical trial for HB-101 as well as the ongoing HB-200 Phase 1/2 study, and preparing an investigational new drug, or IND, application for HB-300. Research and development activities account for a significant portion of our operating expenses. Research and development costs are expensed as incurred. These costs include:

- salaries, benefits and other related costs, including stock-based compensation, for personnel engaged in research and development functions;
- expenses incurred in connection with the preclinical development of our programs and clinical trials of our product candidates, including under agreements with third parties, such as consultants, contractors, academic institutions and contract research organizations (CROs);
- the cost of manufacturing drug products for use in clinical trials, including under agreements with third parties, such as CMOs, consultants and contractors;
- laboratory costs;
- leased facility costs, equipment depreciation and other expenses, which include direct and allocated expenses; and

The majority of our research and development costs are external costs, which we track on a program-by-program basis. We do not track our internal research and development expenses on a program-by-program basis as they primarily relate to shared costs deployed across multiple projects under development.

We expect our research and development expenses to increase substantially in the future as we advance our existing and future product candidates into and through clinical trials and pursue regulatory approval. The process of conducting the necessary clinical studies to obtain regulatory approval is costly and time-consuming. Clinical trials generally become larger and more costly to conduct as they advance into later stages and, in the future, we will be required to make estimates for expense accruals related to clinical trial expenses.

At this time, we cannot reasonably estimate or know the nature, timing and estimated costs of the efforts that will be necessary to complete the development of any product candidates that we develop from our programs. We are also unable to predict when, if ever, material net cash inflows will commence from sales of product candidates we

develop, if at all. This is due to the numerous risks and uncertainties associated with developing product candidates, including the uncertainty of:

- successful completion of preclinical studies and clinical trials;
- sufficiency of our financial and other resources to complete the necessary preclinical studies and clinical trials;
- acceptance of INDs for our planned clinical trials or future clinical trials;
- successful enrollment and completion of clinical trials;
- successful data from our clinical program that support an acceptable risk-benefit profile of our product candidates in the intended populations;
- receipt and maintenance of regulatory and marketing approvals from applicable regulatory authorities;
- scale-up of our manufacturing processes and formulation of our product candidates for later stages of development and commercialization;
- establishing our own manufacturing capabilities or agreements with third-party manufacturers for clinical supply for our clinical trials and commercial manufacturing, if our product candidate is approved;
- entry into collaborations to further the development of our product candidates;
- obtaining and maintaining patent and trade secret protection or regulatory exclusivity for our product candidates;
- successfully launching commercial sales of our product candidates, if and when approved;
- acceptance of the product candidates benefits and uses, if and when approved, by patients, the medical community and third-party payors;
- the prevalence and severity of adverse events experienced with our product candidates;
- maintaining a continued acceptable safety profile of the product candidates following approval;
- effectively competing with other therapies;
- obtaining and maintaining healthcare coverage and adequate reimbursement from third-party payors; and
- qualifying for, maintaining, enforcing and defending intellectual property rights and claims.

A change in the outcome of any of these variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate. For example, if the U.S. Food and Drug Administration or another regulatory authority were to require us to conduct clinical trials beyond those that we anticipate will be required for the completion of clinical development of a product candidate, or if we experience significant delays in our clinical trials due to patient enrollment or other reasons, we would be required to expend significant additional financial resources and time on the completion of clinical development.

The following table summarizes our research and development expenses by product candidate or program (in thousands):

	Three months ended March 31,	
	2022	2021
HB-200 program	$ 7,413	$ 9,754
HB-300 program	2,767	1,250
Gilead partnered programs[1]	1,733	4,820
Other and earlier-stage programs	4,089	3,643
Other unallocated research and development expenses	618	697
Total research and development expenses	$ 16,620	$ 20,164

[1] Expenses incurred in connection with Gilead partnered programs were fully reimbursed by Gilead in 2021 and partially reimbursed in 2022, and such reimbursements were accounted for as revenue.

Other unallocated research and development expenses include stock-based compensation expense, certain lease expenses and other operating expenses that we do not track on a program-by-program basis, since our research and development employees and infrastructure ressources are utilized across our programs.

General and Administrative Expenses

Our general and administrative expenses consist primarily of personnel costs in our executive, finance and investor relations, business development and administrative functions. Other general and administrative expenses include consulting fees and professional service fees for auditing, tax and legal services, lease expenses related to our offices, premiums for directors and officers liability insurance, intellectual property costs incurred in connection with filing and prosecuting patent applications as well as third-party license fees, depreciation and other costs. We expect our general and administrative expenses to continue to increase in the future as we expand our operating activities and prepare for potential commercialization of our current and future product candidates, increase our headcount and investor relations activities and maintain compliance with requirements of the Nasdaq Global Select Market and the Securities and Exchange Commission.

Grant Income

Since inception, we have received grants from the Austrian Research Promotions Agency, either under funding agreements or under research incentive programs. In addition, we have received loans under funding agreements that bear interest at below market interest rate. We account for the grants received as other income and for the imputed benefits arising from the difference between a market rate of interest and the rate of interest as additional grant income, and record interest expense for the loans at a market rate of interest.

We participate in a research incentive program provided by the Austrian government under which we are entitled to reimbursement of a percentage of qualifying research and development expenses and capital expenditures incurred in Austria. Submissions for reimbursement under the program are submitted annually. Incentive amounts are generally paid out during the calendar year that follows the year of the expenses but remain subject to subsequent examinations by the responsible authority.

Interest Expense

Interest expense results primarily from loans under funding agreements with the Austrian Research Promotion Agency, recorded at a market rate of interest. The difference between interest payments payable pursuant to the loans, which rates are at below market interest rates, and the market interest rate, is accounted for as grant income.

Income Taxes

Income tax expense results from foreign minimum income tax and profit on a legal entity basis. The losses that we have incurred since inception result primary from the losses of our Austrian subsidiary. We have considered that, at this point in time, it is uncertain whether we will ever be able to realize the benefits of the deferred tax asset, and accordingly, have established a full valuation allowance as of March 31, 2022.

Results of Operations

Comparison of Three Months Ended March 31, 2022 and 2021

The following table summarizes our results of operations for the three months ended March 31, 2022 and 2021 (in thousands):

	Three months ended March 31,	
	2022	2021
Revenue from collaboration and licensing	$ 1,445	$ 5,301
Operating expenses:		
Research and development	(16,620)	(20,164)
General and administrative	(4,972)	(4,309)
Total operating expenses	(21,592)	(24,473)
Loss from operations	(20,147)	(19,172)
Other income (expense):		
Grant income	1,887	2,204
Interest income	7	7
Interest expense	(243)	(219)
Other income and expenses, net	528	(58)
Total other income (expense), net	2,179	1,934
Net loss before tax	(17,968)	(17,238)
Income tax expense	(0)	(0)
Net loss	$ (17,968)	$ (17,238)

Revenue from Collaboration and Licensing

Revenue was $1.4 million for the three months ended March 31, 2022 and $5.3 million for the three months ended March 31, 2021.

The decrease of $3.9 million for the three months ended March 31, 2022 compared to the three months ended March 31, 2021 was primarily due to lower cost reimbursements received under the Collaboration Agreement with Gilead and the fact that the $4.0 million milestone payment and the $15.0 million initiation fee received in the three months ended March 31, 2022 were mostly recorded as deferred revenue to be recognized in future accounting periods.

For the three months ended March 31, 2022, revenue included $0.8 million from reimbursement of research and development expenses, and $0.6 million from partial recognition of the milestone and initiation payments that were initially recorded as deferred revenue.

For the three months ended March 31, 2021, revenue included $4.6 million from reimbursement of research and development expenses and $0.7 million from partial recognition of the upfront and milestone payments that were initially recorded as deferred revenue.

Research and Development Expenses

For the three months ended March 31, 2022, our research and development expenses were $16.6 million, compared to $20.2 million for the three months ended March 31, 2021.

The decrease of $3.6 million for the three months ended March 31, 2022 compared to the three months ended March 31, 2021 was attributable to a decrease in direct research and development expenses of $3.6 million, partially offset by an increase in indirect research and development expenses of less than $0.1 million. The decrease in direct research and development expenses was primarily driven by lower manufacturing expenses for our HB-200 and Gilead partnered programs and lower clinical study expenses due to the completion of patient enrollment of the Phase 2 trial for

our HB-101 program. Indirect research and development expenses increased mainly because of an increase in professional and consulting fees, partially offset by a decrease in personnel related costs.

General and Administrative Expenses

General and administrative expenses for the three months ended March 31, 2022 were $5.0 million, compared to $4.3 million for the three months ended March 31, 2021. The increase of $0.7 million was primarily due to an increase in professional and consulting fees of $0.7 million, an increase in personnel-related expenses of $0.2 million, partially offset by a decrease in other expenses of $0.2 million. The increase in personnel-related expenses resulted from increased stock compensation expenses, a growth in headcount along with increased salaries in our general and administrative functions. The increase in professional and consulting fees was primarily attributable to $0.6 million of intellectual property costs incurred in connection with filing and prosecuting patent applications as well as third-party license fees.

Grant Income

In the three months ended March 31, 2022 we recorded grant income of $1.9 million, compared to $2.2 million in the three months ended March 31, 2021. Income from grants mainly included research incentives and imputed benefits from below market interest rates on loans from governmental agencies. The decrease of $0.3 million was primarily due to lower income from Austrian research and development incentives.

Interest Income and Expense

Interest income was less than $0.1 million for the three months ended March 31, 2022 and for the three months ended March 31, 2021 as a result of the low or zero interest rates in the United States and Europe. Interest income represents interest from cash and cash equivalents held in US dollars resulting from the proceeds from the issuance of common and preferred stock as well as payments received under our Collaboration Agreement with Gilead. During the three months ended March 31, 2022 our cash, cash equivalents and restricted cash were mainly held in dollars at U.S. investment grade financial institutions or in money market funds. In addition, smaller amounts were held in euros at our Austrian subsidiary that produced no material interest income due the low or zero interest rate policy in the European Monetary Union.

Interest expenses for loans from government agencies were $0.2 million for the three months ended March 31, 2022 and for the three months ended March 31, 2021, respectively. Interest expense was recorded at the market rate of interest, which exceeded the contractual interest.

Other Income and Expenses

Other income was $0.5 million for the three months ended March 31, 2022, compared to other expenses of $0.1 million for the three months ended March 31, 2021. The change in the three months ended March 31, 2022 resulted primarily from exchange rate differences and foreign currency remeasurements.

Liquidity and Capital Resources

Since our inception in 2011, we have funded our operations primarily from public offerings and private placements of common stock and convertible preferred stock, including our initial public offering, as well as private placements of our redeemable convertible preferred stock, grant funding and loans from an Austrian government agency, and upfront, milestone and initiation payments from Gilead in connection with a research collaboration and license agreement.

Prior to our IPO, we raised gross proceeds of approximately $142.5 million from the issuance of our redeemable convertible preferred stock. In April 2019, we completed our IPO in which we issued and sold 6,000,000 shares of our common stock, at $14.00 per share, for gross proceeds of $84.0 million, or net proceeds of $74.6 million. On December 11, 2020, we completed a follow-on public offering in which we issued 3,910,000 shares of

our common stock, at $11.75 per share, and 2,978 shares of our Series A convertible preferred stock, at $11,750.00 per share, for net proceeds of $75.0 million after deducting underwriting discounts and commissions and offering expenses. On March 4, 2022, we completed a follow-on public offering in which we issued 21,700,000 shares of our common stock, at $2.00 per share, and 15,800 shares of our Series A-1 convertible preferred stock, at $2,000.00 per share, for net proceeds of $70.2 million after deducting underwriting discounts and commissions and offering expenses including pro-rate ATM costs. We also received $41.2 million from non-refundable upfront, milestone and initiation payments pursuant to the Restated Collaboration Agreement with Gilead. In addition, in February 2022, Gilead purchased 1,666,666 unregistered shares of our common stock for $5.0 million. As of March 31, 2022, we had cash, cash equivalents and restricted cash of $141.8 million.

We entered into various funding agreements with the Austrian Research Promotion Agency, (Österreichische Forschungsförderungsgesellschaft, or FFG). The loans by FFG, or the FFG Loans, were made on a project-by-project basis and bear interest at a rate of 0.75% per annum. In the event that the underlying program research results in a scientific or technical failure, the principal then outstanding under any loan may be forgiven by FFG and converted to non-repayable grant funding on a project-by-project basis. The FFG Loans contain no financial covenants and are not secured by any of our assets. The debt obligation is $6.0 million, principal repayments are due as follows: $3.0 million are due in the remaining nine months of 2022, $1.8 million are due in 2023, and the remaining $1.2 million are due upon final maturity in 2024.

Because the FFG Loans bear interest at below market rates we account for the imputed benefit arising from the difference between an estimated market rate of interest and the contractual interest rate as grant funding from FFG, which is included in grant income. On the date that FFG Loan proceeds are received, we recognize the portion of the loan proceeds allocated to grant funding as a discount to the carrying value of the loan and as unearned income. As of March 31, 2022, the unamortized debt discount related to FFG Loans was $0.8 million.

We entered into arrangements with contract manufacturing organizations. As of March 31, 2022, we had total non-cancellable obligations under such contracts of $8.1 million.

We do not expect positive cash flows from operations in the foreseeable future, if at all. Historically, we have incurred operating losses as a result of ongoing efforts to develop our arenavirus technology platform and our product candidates, including conducting ongoing research and development, preclinical studies, clinical trials, providing general and administrative support for these operations and developing our intellectual property portfolio. We expect to continue to incur net operating losses for at least the next several years as we progress clinical development, seek regulatory approval, prepare for and, if approved, proceed to commercialization of our most advanced oncology product candidate HB-200, continue our research and development efforts relating to our other and future product candidates, and invest in our manufacturing capabilities and our own manufacturing facility.

Future Funding Requirements

We have no products approved for commercial sale. To date, we have devoted substantially all of our resources to organizing and staffing our company, business planning, raising capital, undertaking preclinical studies and clinical trials of our product candidates. As a result, we are not profitable and have incurred losses in each period since our inception in 2011. As of March 31, 2022, we had an accumulated deficit of $240.7 million. We expect to continue to incur significant losses for the foreseeable future. We anticipate that our expenses will increase substantially as we:

- pursue the clinical and preclinical development of our current and future product candidates;
- leverage our technologies to advance product candidates into preclinical and clinical development;
- seek regulatory approvals for product candidates that successfully complete clinical trials, if any;
- attract, hire and retain additional clinical, quality control and scientific personnel;

- establish our manufacturing capabilities through third parties or by ourselves and scale-up manufacturing to provide adequate supply for clinical trials and commercialization;
- expand our operational, financial and management systems and increase personnel, including personnel to support our clinical development, manufacturing and commercialization efforts and our operations as a public company;
- expand and protect our intellectual property portfolio;
- establish a sales, marketing, medical affairs and distribution infrastructure to commercialize any products for which we may obtain marketing approval and intend to commercialize on our own or jointly;
- acquire or in-license other product candidates and technologies; and
- incur additional legal, accounting and other expenses in operating our business, including ongoing costs associated with operating as a public company.

Even if we succeed in commercializing one or more of our product candidates, we will continue to incur substantial research and development and other expenditures to develop and market additional product candidates. We may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital.

We will require substantial additional financing and a failure to obtain this necessary capital could force us to delay, limit, reduce or terminate our product development programs, commercialization efforts or other operations.

Since our inception, we have invested a significant portion of our efforts and financial resources in research and development activities for our non-replicating and replicating technologies and our product candidates derived from these technologies. Preclinical studies and clinical trials and additional research and development activities will require substantial funds to complete. We believe that we will continue to expend substantial resources for the foreseeable future in connection with the development of our current product candidates and programs as well as any future product candidates we may choose to pursue, as well as the gradual gaining of control over our required manufacturing capabilities and other corporate uses. These expenditures will include costs associated with conducting preclinical studies and clinical trials, obtaining regulatory approvals, and manufacturing and supply, as well as marketing and selling any products approved for sale. In addition, other unanticipated costs may arise. Because the outcome of any preclinical study or clinical trial is highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the development and commercialization of our current or future product candidates.

Our future capital requirements depend on many factors, including:

- the scope, progress, results and costs of researching and developing our current and future product candidates and programs, and of conducting preclinical studies and clinical trials;
- the number and development requirements of other product candidates that we may pursue, and other indications for our current product candidates that we may pursue;
- the stability, scale and yields of our future manufacturing process as we scale-up production and formulation of our product candidates for later stages of development and commercialization;
- the timing of, and the costs involved in, obtaining regulatory and marketing approvals and developing our ability to establish sales and marketing capabilities, if any, for our current and future product candidates we develop if clinical trials are successful;

- the success of our collaboration with Gilead;
- our ability to establish and maintain collaborations, strategic licensing or other arrangements and the financial terms of such agreements;
- the cost of commercialization activities for our current and future product candidates that we may develop, whether alone or with a collaborator;
- the costs involved in preparing, filing, prosecuting, maintaining, expanding, defending and enforcing patent claims, including litigation costs and the outcome of such litigation;
- the timing, receipt and amount of sales of, or royalties on, our future products, if any; and
- the emergence of competing oncology and infectious disease therapies and other adverse market developments.

A change in the outcome of any of these or other variables with respect to the development of any of our current and future product candidates could significantly change the costs and timing associated with the development of that product candidate. Furthermore, our operating plans may change in the future, and we will need additional funds to meet operational needs and capital requirements associated with such operating plans.

We do not have any committed external source of funds or other support for our development efforts. Until we can generate sufficient product and royalty revenue to finance our cash requirements, which we may never do, we expect to finance our future cash needs through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing or distribution arrangements as well as grant funding. Based on our research and development plans, we expect that our existing cash and cash equivalents, will enable us to fund our operating expenses and capital expenditure requirements for at least the next 12 months. These estimates are based on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we expect.

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. If we raise additional capital through public or private equity offerings, the terms of these securities may include liquidation or other preferences that adversely affect our stockholders' rights. Further, to the extent that we raise additional capital through the sale of common stock or securities convertible or exchangeable into common stock, the ownership interest of our shareholders will be diluted. If we raise additional capital through debt financing, we would be subject to fixed payment obligations and 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 are unable to obtain additional funding on favorable terms when needed, we may have to delay, reduce the scope of or terminate one or more of our research and development programs or clinical trials.

Cash Flows

The following table sets forth a summary of the primary sources and uses of cash (in thousands):

	Three months ended March 31,	
	2022	2021
Net cash provided by (used in) operating activities	$ 1,733	$ (14,397)
Net cash used in investing activities	(1,828)	(330)
Net cash provided by financing activities	75,293	101
Net increase (decrease) in cash and cash equivalents	75,198	(14,626)

Cash Provided by (Used in) Operating Activities

During the three months ended March 31, 2022, cash provided by operating activities was $1.7 million, which consisted of a net loss of $18.0 million, adjusted by non-cash charges of $2.8 million and cash provided due to changes in our operating assets and liabilities of $16.9 million. The non-cash charges consisted primarily of stock-based compensation of $1.6 million and depreciation and amortization expense of $1.1 million. The change in our operating assets and liabilities was primarily due an increase in deferred revenues of $14.1 million, resulting from the receipt of the $15.0 million program initiation payment, a decrease in accounts receivable of $6.1 million, resulting from the collection of pass through costs from Gilead, a decrease in prepaid expenses and other current assets of $0.8 million, and an increase in other non-current liabilities of $0.1 million, partially offset by an increase in receivable research incentives of $1.7 million, resulting from research incentive eligible research and development activities, a decrease in accounts payable of $1.6 million, an increase in other non-current assets of $0.5 million, and a decrease in operating lease liabilities of $0.4 million.

During the three months ended March 31, 2021, cash used in operating activities was $14.4 million, which consisted of a net loss of $17.2 million, adjusted by non-cash charges of $2.6 million and cash provided from changes in our operating assets and liabilities of $0.2 million. The non-cash charges consisted primarily of stock-based compensation of $1.5 million and depreciation and amortization expense of $1.1 million. The change in our operating assets and liabilities was primarily due to a decrease in accounts receivable of $1.1 million, a decrease in receivable research incentives of $0.9 million, an increase in other non-current liabilities of $0.6 million, an increase in accounts payable of $0.4 million, and a decrease in prepaid expenses and other current assets of $0.1 million, partially offset by an increase in other non-current assets of $1.3 million, a decrease in deferred revenues of $0.9 million, a decrease in operating lease liabilities of $0.5 million, and a decrease in accrued expenses and other current liabilities of $0.2 million.

Cash Used in Investing Activities

During the three months ended March 31, 2022, cash used in investing activities was $1.8 million. The increase of $1.5 million compared to the three months ended March 31, 2021 resulted from capital expenditures in connection with our own GMP manufacturing facility project and was partially offset by lower expenditures for improvements in our laboratory and office space, which were performed in 2021, and lower expenditures for purchase of equipment.

During the three months ended March 31, 2021, cash used in investing activities was $0.3 million and resulted from capital expenditures in connection with improvements of our laboratory and office space and purchase of property and equipment.

Cash Provided by Financing Activities

During the three months ended March 31, 2022, cash provided by financing activities was $75.3 million and consisted mainly of net proceeds of $70.2 million from our follow-on public offering in March 2022 and of net proceeds of $5.0 million from Gilead's purchase of 1,666,666 unregistered shares of our common stock in February 2022.

During the three months ended March 31, 2021, cash provided by financing activities was $0.1 million and resulted primarily from the payment of exercise prices of stock options.

Critical Accounting Policies and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our condensed consolidated financial statements, which we have prepared in accordance with the rules and regulations of the SEC, and generally accepted accounting principles in the United States, or GAAP. The preparation of these condensed consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported expenses during the reporting periods. We evaluate our estimates and judgments on an ongoing basis. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities

that are not readily apparent from other sources. Our actual results may differ from these estimates under different assumptions or conditions.

Our critical accounting policies and the methodologies and assumptions we apply under them have not materially changed, as compared to those disclosed in "Management's Discussion and Analysis of Financial Condition and Results of Operations - Critical Accounting Policies" in our Annual Report on Form 10-K for the year ended December 31, 2021 filed with the SEC on March 24, 2022.

Recently Issued Accounting Pronouncements

A description of recently issued accounting pronouncements that may potentially impact our financial position and results of operations is disclosed in Note 2 to our condensed consolidated financial statements appearing in this Form 10-Q.

Emerging Growth Company Status and Smaller Reporting Company

As an "emerging growth company," the Jumpstart Our Business Startups Act of 2012 allows us to delay adoption of new or revised accounting standards applicable to public companies until such standards are made applicable to private companies. However, we have irrevocably elected not to avail ourselves of this extended transition period for complying with new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

We are also a "smaller reporting company" meaning that the market value of our stock held by non-affiliates is less than $700 million and our annual revenue was less than $100 million during our most recently completed fiscal year. We may continue to be a smaller reporting company if either (i) the market value of our stock held by non-affiliates is less than $250 million or (ii) our annual revenue was less than $100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. For so long as we remain a smaller reporting company, we are permitted and intend to rely on exemptions from certain disclosure and other requirements that are applicable to other public companies that are not smaller reporting companies.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

We are subject to the risk of fluctuations in foreign currency exchange rates, specifically with respect to the euro. Our functional currency is the U.S. dollar and the functional currency of our wholly owned foreign subsidiary, Hookipa Biotech GmbH, is the euro. Our cash, cash equivalents and restricted cash as of March 31, 2022 included small amounts of cash balances held by Hookipa Biotech GmbH in euro. We are exposed to market risk related to changes in interest rates. We had cash, cash equivalents and restricted cash of $141.8 million as of March 31, 2022, which included account balances with foreign banks. Interest income is sensitive to changes in the general level of interest rates; however, due to the nature of these investments, we do not believe that we have any material exposure to changes in the fair value of our investment portfolio as a result of changes in interest rates.

Item 4. Controls and Procedures.

The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, refers to controls and procedures that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Evaluation of Disclosure Controls and Procedures

As of March 31, 2022, management, with the participation of our Principal Executive Officer and Principal Financial and Accounting 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 of 1934). Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including the Chief Executive Officer and the Chief Financial and Accounting Officer, to allow timely decisions regarding required disclosures.

Any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objective and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on that evaluation, our Principal Executive Officer and Principal Financial and Accounting Officer concluded that our disclosure controls and procedures were effective at a reasonable assurance level as of March 31, 2022.

Changes in Internal Control over Financial Reporting

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

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

In April 2021, a third party opposed European Patent No. 3218504, or the EP '504 Patent, which was granted to the University of Geneva in July 2020 and is exclusively licensed to us. While the opposition was filed in the name and on behalf of Dr. Ursula Sprenzel, we believe that the real party in interest has not identified itself. The patent is directed to our replicating arenavirus platform technology and is part of our strategy to protect current product candidates based on this platform technology, including our lead oncology product candidates HB-201 and HB-202. We filed our formal response to the opposition with the European Patent Office (EPO) on September 3, 2021, in which we requested that the opposition be rejected and the EP '504 Patent be maintained as granted. It is expected that the EPO's opposition division will issue a preliminary opinion in the next 1 to 4 months, and summons the parties to oral proceedings within the next 6 to 10 months.

From time to time, we may become involved in other litigation or legal proceedings relating to claims arising from the ordinary course of business.

Item 1A. Risk Factors.

We do not believe that inflation has had a material effect on our business, results of operations, or financial condition. Nonetheless, if our costs were to become further subject to significant inflationary pressures, we may not be able to fully offset such higher costs. Our inability or failure to do so could harm our business, results of operations, or financial condition. Other than that, there have been no material changes from the risk factors disclosed in our Annual Report on Form 10-K filed with the SEC on March 24, 2022.

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

There were no unregistered sales of equity securities by us during the three months ended March 31, 2022.

Item 3. Defaults upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

None.

Item 6. Exhibits.

The exhibits listed on the Exhibit Index immediately preceding such exhibits, which is incorporated herein by reference, are filed or furnished as part of this Quarterly Report on Form 10-Q.

Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation of the Company (filed as Exhibit 3.1 to the Company's Annual Report on Form 10-K filed on March 24, 2022 (File No. 001-38869) and incorporated herein by reference).
10.1†	Amended and Restated Research Collaboration and License Agreement by and between the Registrant and Gilead Sciences, Inc., dated as of February 15, 2022 (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K/A filed on March 1, 2022 (File No. 001-38869) and incorporated herein by reference).
10.2	Stock Purchase Agreement, dated February 15, 2022, by and between the Registrant and Gilead Sciences, Inc. (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 15, 2022 (File No. 001-38869) and incorporated herein by reference).
31.1*	Certificate of Principal Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certificate of Principal Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1**	Certificate of Principal Executive Officer and 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
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 (formatted as inline XBRL with applicable taxonomy extension information contained in Exhibits 101)

* Filed herewith.

**°°The certification furnished in Exhibit 32.1 hereto is deemed to accompany this Quarterly Report on Form 10 Q and will not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent that the Registrant specifically incorporates it by reference. Such certification will not be deemed to be incorporated by reference into any filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that the Registrant specifically incorporates it by reference.

†°°°Confidential portions of this exhibit have been redacted and filed separately with the Securities and Exchange Commission pursuant to a confidential treatment request in accordance with Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

SIGNATURES

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

HOOKIPA Pharma Inc.

Date: May 16, 2022

By: /s/ Joern Aldag
Joern Aldag
Chief Executive Officer (Principal Executive Officer)

By: /s/ Reinhard Kandera
Reinhard Kandera
Chief Financial Officer (Principal Financial and Accounting Officer)

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Joern Aldag, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of HOOKIPA Pharma Inc.;

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

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

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

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

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

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

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

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

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

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

Dated: May 16, 2022

/s/ Joern Aldag

Joern Aldag
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Reinhard Kandera, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of HOOKIPA Pharma Inc.;

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

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

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

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

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

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

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

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

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

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

Dated: May 16, 2022

/s/ Reinhard Kandera

Reinhard Kandera
Chief Financial Officer
(Principal Financial and Accounting 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 HOOKIPA Pharma Inc. (the "Company") on Form 10-Q for the quarterly period ended March 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, hereby certify, that to the best of their knowledge:

(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 results of operations of the Company.

Dated: May 16, 2022

/s/ Joern Aldag

Joern Aldag
Chief Executive Officer
(Principal Executive Officer)

Dated: May 16, 2022

/s/ Reinhard Kandera

Reinhard Kandera
Chief Financial Officer
(Principal Financial and Accounting Officer)