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

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER
PURSUANT TO RULE 13a-16 OR 15d-16 OF THE
SECURITIES EXCHANGE ACT OF 1934

For the month of August 2022

Commission File Number: 001-39446

CureVac N.V.

(*Exact Name of Registrant as Specified in Its Charter*)

Friedrich-Miescher-Strasse 15, 72076
Tübingen, Germany
+49 7071 9883 0
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F:

Form 20-F ☒ Form 40-F ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Yes ☐ No ☒

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

Yes ☐ No ☒

This Report of Foreign Private Issuer on Form 6-K (this "Form 6-K") is being furnished by CureVac N.V. ("CureVac") to the Securities and Exchange Commission (the "SEC") for the sole purposes of: (i) furnishing, as Exhibit 99.1 to this Form 6-K, Unaudited Interim Condensed Consolidated Financial Statements announcing CureVac's financial results and business updates as of June 30, 2022 and for the six month periods ended June 30, 2022 and 2021; (ii) furnishing, as Exhibit 99.2 to this Form 6-K, Management's Discussion and Analysis of Financial Condition and Results of Operations, which discusses and analyzes CureVac's financial condition and results of operations as of June 30, 2022 and for the six month periods ended June 30, 2022 and 2021;

The information included in this Form 6-K (including Exhibits 99.1 and 99.2) is hereby incorporated by reference into the Company’s Registration Statement on Form F-3 (File No. 333-259613).

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.

CUREVAC N.V.

By: /s/ Franz-Werner Haas, LLD, LLM
Chief Executive Officer

Date: August 18, 2022

EXHIBIT INDEX

EXHIBIT NO.	DESCRIPTION
99.1	Unaudited Interim Condensed Consolidated Financial Statements As of June 30, 2022 and for the six months ended June 30, 2022 and 2021
99.2	Management's Discussion and Analysis of Financial Condition and Results of Operations

CureVac N.V.

Unaudited Interim Condensed Consolidated Financial Statements

As of June 30, 2022 and for the six months ended June 30, 2022 and 2021

CureVac N.V.

Interim Condensed Consolidated Statements of Operations and Other Comprehensive Income (Loss)

(in thousands of EUR, except per share amounts)	Note	Six months ended June 30, 2021	2022
		(unaudited)	
Revenue	3.1	32,425	44,519
Cost of sales	3.2	(53,156)	(79,913)
Selling and distribution expenses	3.3	(1,029)	(819)
Research and development expenses	3.4	(236,267)	(22,422)
General and administrative expenses	3.5	(50,651)	(51,678)
Other operating income	3.6	45,234	35,207
Other operating expenses		(214)	(461)
Operating loss		**(263,658)**	**(75,567)**
Finance income		7,296	5,343
Finance expenses		(8,065)	(2,535)
Loss before income tax		**(264,427)**	**(72,759)**
Income tax benefit/ (expense)	12	(1,329)	82
Net loss for the period		**(265,756)**	**(72,677)**
Other comprehensive income (loss):			
Foreign currency adjustments		(30)	(212)
Total comprehensive loss for the period		**(265,786)**	**(72,889)**
Net loss per share (basic and diluted)		**(1.44)**	**(0.39)**

CureVac N.V.

Interim Condensed Consolidated Statements of Financial Position

(in thousands of EUR)	Note	December 31, 2021	June 30, 2022 (unaudited)
Assets			
Non-current assets			
Intangible assets	6.1	13,238	12,281
Property, plant and equipment	6.2	168,264	192,015
Right-of-use assets		32,129	42,996
Other assets		1,731	1,663
Deferred tax assets	13	2,861	1,276
Total non-current assets		**218,223**	**250,231**
Current assets			
Assets held for sale	7	—	865
Inventories	8	56,159	13,241
Trade receivables	3.1	18,504	13,341
Other financial assets		4,648	3,608
Prepaid expenses and other assets	9	49,244	70,968
Cash and cash equivalents		811,464	573,566
Total current assets		**940,019**	**675,589**
Total assets		**1,158,242**	**925,820**
Equity and liabilities			
Equity	4		
Issued capital		22,454	22,496
Capital reserve		1,728,658	1,732,148
Treasury Shares		(5,817)	(1,734)
Accumulated deficit		(1,056,785)	(1,129,462)
Other comprehensive income		(34)	(246)
Total equity		**688,476**	**623,202**
Non-current liabilities			
Lease liabilities		25,423	35,931
Contract liabilities	3.1	86,345	70,790
Other liabilities		264	264
Total non-current liabilities		**112,032**	**106,985**
Current liabilities			
Lease liabilities		3,469	4,278
Trade and other payables	11	127,703	48,496
Other liabilities	12	170,073	92,758
Income taxes payable	13	739	613
Contract liabilities	3.1	55,750	49,488
Total current liabilities		**357,734**	**195,633**
Total liabilities		**469,766**	**302,618**
Total equity and liabilities		**1,158,242**	**925,820**

CureVac N.V.

Interim Condensed Consolidated Statements of Changes in Shareholders' Equity
for the six months ended June 30, 2022 and 2021

(in thousands of EUR)	Issued capital	Capital reserve	Treasury Shares	Accumulated deficit	Currency translation reserve	Total equity
Balance as of January 1, 2021	**21,655**	**1,334,704**	**—**	**(645,069)**	**57**	**711,347**
Net loss	—	—	—	(265,756)	—	(265,756)
Other comprehensive income (loss)	—	—	—	—	(30)	(30)
Total comprehensive income (loss)	**—**	**—**	**—**	**(265,756)**	**(30)**	**(265,786)**
Share-based payments (net of taxes)	—	9,382	—	—	—	9,382
Issuance of share capital (net of transaction costs)	690	403,372	—	—	—	404,062
Exercise of options	80	1,994	—	—	—	2,074
Repurchase of common shares	—	(22,739)	(3,022)	—	—	(25,761)
Balance as of June 30, 2021 (unaudited)	**22,425**	**1,726,713**	**(3,022)**	**(910,825)**	**27**	**835,318**

(in thousands of EUR)	Issued capital	Capital reserve	Treasury Shares	Accumulated deficit	Currency translation reserve	Total equity
Balance as of January 1, 2022	**22,454**	**1,728,658**	**(5,817)**	**(1,056,785)**	**(34)**	**688,476**
Net loss	—	—	—	(72,677)	—	(72,677)
Other comprehensive income (loss)	—	—	—	—	(212)	(212)
Total comprehensive income (loss)	**—**	**—**	**—**	**(72,677)**	**(212)**	**(72,889)**
Share-based payments (net of taxes)	—	2,262	—	—	—	2,262
Issuance of share capital (net of transaction costs)	41	4,680				4,721
Exercise of options	1	—	—	—	—	1
Settlement of share-based payment awards	—	(3,452)	4,083	—	—	631
Balance as of June 30, 2022 (unaudited)	**22,496**	**1,732,148**	**(1,734)**	**(1,129,462)**	**(246)**	**623,202**

CureVac N.V.

Interim Condensed Consolidated Statements of Cash Flows

(in thousands of EUR)	For the six months ended June 30, 2021 (unaudited)	2022 (unaudited)
Operating activities		
Loss before income tax	**(264,427)**	**(72,759)**
Adjustments to reconcile loss before tax to net cash flows		
Finance income	(7,296)	(5,343)
Finance expense	8,066	2,536
Depreciation and impairment of property, plant and equipment and right-of-use assets	6,623	16,651
Impairment of inventory and prepayments	—	25,687
Share-based payment expense	8,212	3,597
Non-cash income from release of provisions	—	(47,242)
Working capital changes		
Decrease / (increase) in trade receivables and contract assets	(3,072)	5,164
Decrease / (increase) in inventory	(48,381)	16,367
Decrease / (increase) in other assets	(135,440)	(14,051)
(Decrease) / increase in trade and other payables, other liabilities and contract liabilities	165,912	(129,038)
(Decrease) / increase in other current financial liabilities	96	—
Decrease / (increase) in deferred taxes	—	(10)
Income taxes paid	—	(126)
Interest received	19	—
Interest paid	(5,210)	(2,608)
Net cash flow (used in) operating activities	**(274,898)**	**(201,175)**
Investing activities		
Purchase of property, plant and equipment	(69,751)	(43,507)
Purchase of intangible assets	(3,966)	(1,208)
Net cash flow (used in) investing activities	**(73,717)**	**(44,715)**
Financing activities		
Payments on lease obligations	(1,531)	(1,943)
Payment on / Proceeds from Treasury Shares	(23,767)	631
Proceeds on At-the-market offering program (net of transaction costs)	—	4,721
Proceeds from the issuance of shares (net of transaction costs)	404,143	—
Net cash flow (used in)provided by financing activities	**378,845**	**3,409**
Net increase (decrease) in cash and cash equivalents	30,230	(242,481)
Currency translation gains (losses) on cash and cash equivalents	2,989	4,583
Cash and cash equivalents, beginning of period	1,322,593	811,464
Cash and cash equivalents, end of period	**1,355,812**	**573,566**

1. Corporate Information

CureVac N.V. ("CureVac" or "CV" or the "Company") is the parent company of CureVac Group ("Group") and, along with its subsidiaries, is a global biopharmaceutical company developing a new class of transformative medicines based on the messenger ribonucleic acid (mRNA) that has the potential to improve the lives of people.

The Company is incorporated in the Netherlands and is registered in the commercial register at the Netherlands Chamber of Commerce under RSIN 861149336. The Company's registered headquarters is Friedrich-Miescher-Strasse 15, 72076 Tuebingen, Germany. During 2021 until now, Dievini Hopp BioTech holding GmbH & Co. KG (dievini), which is an investment company dedicated to the support of companies in health and life sciences, is the largest shareholder of CureVac. Together with its related parties, dievini has held shares and voting rights in CureVac between appr. 46 – 49 % during that period. dievini is thus considered to be the de facto parent of the Group. Dietmar Hopp, Daniel Hopp and Oliver Hopp are the ultimate controlling persons (of the main shareholders) of dievini, and, therefore, control the voting and investment decisions of dievini.

2. Basis of preparation

The interim condensed consolidated financial statements for the six months ended June 30, 2022, have been prepared in accordance with IAS 34 Interim Financial Reporting.

The interim condensed consolidated financial statements do not include all the information and disclosures required in the annual consolidated financial statements and should be read in conjunction with the Group's annual consolidated financial statements as of December 31, 2021 and 2020 and for the three years in the period ended December 31, 2021. The interim condensed consolidated financial statements were authorized by the Management Board for presentation to the Supervisory Board on August 18, 2022. The Group's interim condensed consolidated financial statements are presented in Euros ("EUR"). Unless otherwise stated, amounts are rounded to thousands of Euros, except per share amounts.

New standards, interpretations and amendments adopted by the Group

The accounting policies adopted in the preparation of the interim condensed consolidated financial statements are consistent with those followed in the preparation of the Group's annual consolidated financial statements for the year ended December 31, 2021. The new and amended standards and interpretations applied for the first time as of January 1, 2022, as disclosed in the notes to the consolidated financial statements as of December 31, 2021, had no impact on the interim condensed consolidated financial statements of the Group as of and for the six months ended June 30, 2022. The Group has not early adopted any standard, interpretation or amendment that has been issued but is not yet effective.

Impact of COVID-19 and the Russia-Ukraine Conflict

As the Group is currently devoting significant resources to the development of COVID vaccines, such development may impair the ability to timely progress other product candidates in clinical trials or into clinical trials from their current preclinical stage. In addition, enrollment in other programs may be delayed as a result of the COVID-19 pandemic and our focus on developing a COVID vaccine could have a negative impact on our progress on and associated revenue recognition from our non-COVID-19 collaborations. The partial disruption, even temporary, may negatively impact the Company's operations and overall business by delaying the progress of its clinical trials and preclinical studies. The Group's operations, including research and manufacturing, could also be disrupted due to the potential of the impact of staff absences as a result of self-isolation procedures or extended illness. However, the Group has taken a series of actions aimed at safeguarding its employees and business associates, including implementing a work-from-home policy for employees except for those related to its laboratory and production operations. The Group is running COVID antigen tests on a weekly basis for employees on the premises.

The ongoing military conflict between Russia and Ukraine has not and is not expected to have a material direct or indirect effect on the Group's operations or financial condition: however, the Group is currently operating in a period of economic uncertainty and capital markets disruption, which has been significantly impacted by geopolitical instability due to the ongoing military conflict between Russia and Ukraine. As a result of this instability and responding actions taken by the United States, Russia, EU, and other Foreign Governments, this may limit or prevent filing, prosecuting, and maintaining of patient applications in Russia. Government actions may also prevent maintenance of issued patents in Russia. These actions could result in abandonment or lapse of our patents or patent applications in Russia, resulting in partial or complete loss of patent rights in Russia. In addition, a decree was adopted by the Russian government in March 2022, allowing Russian companies and individuals to exploit, without consent or compensation, inventions owned by patentees that have citizenship or nationality in, are registered in, or have predominately primary place of business or profit-making activities in countries that Russia has deemed unfriendly. Consequently, we would not be able to prevent third parties from using our inventions in Russia or from selling or importing products made using our inventions in and into Russia. Accordingly, our competitive position may be impaired, and our business, financial condition, results of operations and prospects may be materially adversely affected.

3. Notes to the consolidated financial statements

3.1 Revenue from contract with customers

The Group recognized the following revenues:

	Six months ended June 30	
	2021	2022
	EUR k	EUR k
Belgium		
GSK	29,335	43,041
Germany		
Boehringer Ingelheim	2,051	—
Switzerland		
CRISPR	169	586
Netherlands		
Genmab	870	892
Total	**32,425**	**44,519**

Of these revenues, all of which were recognized over time as part of collaboration agreements, during the six months ended June 30, 2022 EUR 31,818k (2021: EUR 27,730k) related to (i) delivery of research services combined with an IP license (recognized from the upfront payments as further illustrated in the table below) and the reaching of a milestone, (ii) EUR 431k (2021: EUR 338k) related to delivery of products and (iii) EUR 12,270k (2021: EUR 4,357k) were recognized from those research and development services considered distinct within the agreements.

Of the total revenues recognized, in the six months ended June 30, 2022, EUR 43,041k in revenue was recognized under the collaboration agreements with GSK, entered into in July 2020, for the research, development, manufacturing and commercialization of mRNA-based vaccines and monoclonal antibodies targeting infectious disease pathogens (”GSK I”) and in April 2021 for research, development and manufacturing of next-generation mRNA vaccines targeting the original SARS-CoV-2 strain as well as emerging variants, including multivalent and monovalent approaches, such as the CureVac’s second-generation COVID-19 vaccine candidate, CV2CoV (“GSK II”). In the first quarter of 2022, the Company reached a development milestone of EUR 10,000k under the GSK I collaboration. Therefore, revenue for the six months ending June 30, 2022, also includes recognition of EUR 5,321k of the milestone amount. The remaining EUR 4,679k of the milestone amount is deferred as contract liability and will be recognized into revenue through the estimated completion date of Phase 1 clinical trials, which represents the period of time during which CureVac is responsible for development as, subsequent to this period, GSK will be responsible for further development and commercialization. In the six months ended June 30, 2021, revenue primarily consisted of EUR 29,335k recognized from the upfront payments under the collaboration with GSK.

The Group has received upfront payments which were initially deferred and are subsequently recognized as revenue as the Group renders services over the performance period. Below is a summary of such payments and the related revenues recognized:

Customer	Upfront payments June 30, 2022	Upfront and milestones payments included in contract liabilities at December 31, 2021	Upfront and milestones payments included in contract liabilities at June 30, 2022	Revenue recognized from upfront and milestones payments for six months ended June 30,	
				2021	2022
		(EUR k)	(EUR k)	(EUR k)	
GSK	EUR 205,000k (EUR 10,000k milestone payment included)	135,494	114,725	24,631	30,769
CRISPR	USD 3,000k (EUR 2,524k)*	1,239	1,084	155	155
Boehringer Ingelheim	EUR 30,000k	—	—	2,051	—
Genmab	USD 10,000k (EUR 8,937k)*	5,362	4,469	894	894
Total		**142,095**	**120,278**	**27,731**	**31,818**

* Translated at the currency exchange rate prevailing on the transaction date.

Contract balances:

	December 31, 2021 EUR k	June 30, 2022 EUR k
Trade receivables	18,504	13,341
Contract liabilities	142,095	120,278

Trade receivables are non-interest bearing and are generally settled within 30 to 45 days. The contract liabilities contain upfront payments and milestone payments from Collaboration agreements.

3.2 Cost of sales

The cost of sales consists of the following:

	Six months ended June 30,	
	2021 EUR k	2022 EUR k
Personnel	(9,390)	(13,869)
Materials	(2,912)	(36,883)
Third-party services	(31,388)	(19,516)
Maintenance and lease	(2,543)	(1,150)
Amortization and depreciation	(1,594)	(8,326)
Other	(5,329)	(169)
Total	**(53,156)**	**(79,913)**

During the six months ended June 30, 2022, cost of sales mainly increased compared to the same period of 2021 due to increased write-offs for raw materials amounting to EUR 34,640k, which were procured for manufacture into products to sell to GSK are now no longer expected to be purchased. The prior year Third Party Services have been higher due to last year's set-up activities for production process for CVnCoV.

3.3 Selling and distribution expenses

Selling and distribution expenses consist of the following:

	Six months ended June 30,	
	2021 EUR k	2022 EUR k
Personnel	(664)	(560)
Amortization and depreciation	(43)	(32)
Other	(322)	(227)
Total	**(1,029)**	**(819)**

Personnel expenses mainly include salary and salary-related expenses, during the six months ended June 30, 2022 of EUR 499k (June 30, 2021: 543) and share-based payment expense of EUR 61k (June 30, 2021: 121k).

3.4 Research and development expenses

R&D expenses consists of the following:

	Six months ended June 30,	
	2021	2022
	EUR k	EUR k
Materials	(5,928)	(23,419)
Personnel	(15,219)	(14,849)
Amortization and depreciation	(1,795)	(2,119)
Patents and fees to register a legal right	(1,413)	(1,354)
Third-party services	(210,590)	21,053
Maintenance and lease	(142)	(464)
Other	(1,180)	(1,270)
Total	**(236,267)**	**(22,422)**

During the six months ended June 30, 2022, research and development expenses decreased significantly in comparison to the same period of 2021, as the prior period was largely impacted by the Group´s CVnCoV program in 2021. In the prior year, these expenses consist primarily of cost incurred to CROs involved in the CVnCoV development as well as materials used in the administration of clinical trials. As a result of more participants leaving the clinical trials, prior to completion, than originally estimated and of renegotiations of contracts with CROs, in the six months ended June 30, 2022, the estimated outstanding costs for the CVnCoV studies decreased resulting in reversal of provision for onerous contracts in the amount of EUR 21,303k. Additionally, a net gain for a change of estimate in the contract termination provisions resulted primarily from GSK taking over, from the Group, committed capacity at Novartis (see Note 3.6 for additional information). The net effect of these two events resulted in an overall gain within the Third-party services category.

Further, in the six months ended on June 30, 2022 the balance was impacted by further consumption of inventory. As of June 30, 2022, the Group had no development expenditures which met the requirements for capitalization and thus none have been capitalized. In 2021, according to the terms and conditions of the grant from BMBF, the Group earned income (recognized in other operating income) for certain eligible expenses incurred for the COVID-19 vaccine development; refer to Note 3.6 for more information on amounts recognized from this grant in the six months ended June 30, 2021.

Personnel expenses mainly include salary and salary-related expenses, during the six months ended June 30, 2022 of EUR 14,759k (June 30, 2021: EUR 14,849k) and share-based payment expense of EUR 90k (June 30, 2021: 370k).

3.5 General and administrative expenses

General and administrative expenses consist of the following:

	Six months ended June 30,	
	2021	2022
	EUR k	EUR k
Personnel	(19,362)	(18,971)
Maintenance and lease	(1,230)	(2,704)
Third-party services	(18,785)	(12,796)
Legal and other professional services	(3,491)	(5,320)
Amortization and depreciation	(3,325)	(6,091)
Other	(4,458)	(5,796)
Total	**(50,651)**	**(51,678)**

Personnel expenses mainly include salary and salary-related expenses, during the six months ended June 30, 2022, of EUR 15,525k (June 30, 2021: EUR 11,642k) and share-based payment expense of EUR 3,446k (June 30, 2021: EUR 7,720k). During the six months ended June 30, 2022, third-party services expenses decreased, compared to the same period of 2021, mainly due to less consulting services. The increase in “Other” mainly result from additional insurance costs of EUR 2,769k, mainly related to the D&O insurance (June 30, 2021: EUR 2,343k).

3.6 Other operating income

	Six months ended June 30,	
	2021	2022
	EUR k	EUR k
Compensation for CMO transfer	—	33,961
Reimbursement claim	—	610
Sale of equipment	—	310
Grants and other cost reimbursements from government agencies and similar bodies	45,110	104
Other	124	222
Total	**45,234**	**35,207**

In March 2022, CureVac AG and GlaxoSmithKline Biologicals SA amended and restated the 2020 GSK agreement and the GSK COVID Agreement in connection with GSK entering into a direct agreement with Novartis for use of Novartis as a CMO at the same time as CureVac exits its CMO agreement with Novartis. Additionally, under the restated agreement, CureVac is entitled to further compensation by GSK. The compensations mainly consist of a consideration for set-up activities undertaken by CureVac (EUR 20,500k) and for reimbursement of prepayments (EUR 12,000k), which were recognized in other operating income in the six months ended June 30, 2022. As an additional result of this agreement, certain reserved capacity at Novartis was also taken over from the Group by GSK, which resulted in the reversal of provisions of EUR 25,059k which had been recognized as of December 31, 2021, and the recognition of a corresponding gain in research and development expenses in the six months ended June 30, 2022.

During the six months ended June 30, 2022 and 2021, income from grants with government agencies and similar bodies resulted from the following:

German Federal Ministry of Education and Research (BMBF)

In 2020, the Company received a grant from BMBF to support the development of its COVID-19 vaccine candidate for which it was determined that the arrangement contained two components: a grant component (in the scope of IAS 20) and a supply component (in the scope of IFRS 15). The grant terminated in 2021. With regard to the grant component, during the six months ended June 30, 2021, the Group has recognized grant income in the amount of EUR 44,090k (June 30, 2022: EUR 0).

Coalition for Epidemic Preparedness Innovations (CEPI)

In January 2020, CureVac and CEPI entered into a collaboration to develop a vaccine against the new coronavirus SARS-CoV-2. The aim of the cooperation is to safely advance vaccine candidates into clinical testing as quickly as possible. The agreement builds upon the existing partnership between CureVac and CEPI to develop a rapid-response vaccine platform and included additional initial funding of up to USD 8,300k. In May 2020, CEPI increased its grant award to the Group for SARS-CoV-2 vaccine development to up to USD 15,300k.

For the six months ended June 30, 2022, CureVac recognized the reimbursement by CEPI of approved expenses of EUR 8k (June 30, 2021: EUR 23k) as “other operating income”. As of June 30, 2022, EUR 1,281k in grant funds received have been deferred and are presented within other liabilities (December 31, 2021: EUR 1,288k).

Bill & Melinda Gates Foundation (BMGF)

For the six months ended June 30, 2022, CureVac recognized EUR 96k (June 30, 2021: EUR 211k) from the amortization of the grants on a straight-line basis into other operating income. As of June 30, 2022, EUR 1,782k in grant funds received have been deferred and presented within other liabilities (December 31, 2021: EUR 1,879k).

4. Issued Capital and Reserves

According to the Company’s articles of association, the Company’s authorized shares are divided into 386,250,000 common shares and 386,250,000 preferred shares, each having a nominal value of EUR 0.12.

As of June 30, 2022, no preferred shares had been issued and all issued common shares issued and outstanding were fully paid.

All payments received from shareholders in excess of the nominal value of the shares issued and net of transaction costs are recognized in capital reserves. Capital reserves also consists of recognition of share-based payments and the equity components of convertible loans. The Company may only make distributions, whether a distribution of profits or of freely distributable reserves, to shareholders to the extent shareholders' equity exceeds the sum of the paid-in and called-up share capital plus any reserves required by Dutch law or by the Company's articles of association.

In September 2021, we entered into a sales agreement, the Open Sale Agreement, with Jefferies LLC and SVB Leerink LLC, as sales agents, to establish an at-the-market (ATM) offering program, pursuant to which we may sell, from time to time, ordinary shares for aggregate gross proceeds of up to $600.0 million. In June 2022, 340,015 shares were issued under the ATM program, raising USD 4.8 million in net proceeds; related offering expenses were recorded against the proceeds in equity.

The number of shares issued and outstanding developed as follows:

Common shares issued and outstanding at December 31, 2021	**187,120,728**
Share option exercises between Jan and March 2022	78,732
Treasury shares	(78,732)
Common shares issued and outstanding at March 31, 2022	**187,120,728**
At-the-market offering program issuances	340,015
Share issuances for exercises between Apr to June 2022	6,211
Share option exercises between Apr and June 2022	39,418
Treasury shares	(39,418)
Common shares issued and outstanding at June 30, 2022	**187,466,954**

5. Share-based payments

During the six months ended June 30, 2022 and 2021, the Group recognized share-based based payments expenses of EUR 3,597k and EUR 8,212k, respectively, as follows:

Six months period ended June 30,

	2021	2022
	EUR k	EUR k
Research and development expenses	370	90
Sales and marketing expenses	122	61
General and administrative expenses	7,720	3,446
Total	**8,212**	**3,597**

Expense recognized for the equity-settled programs was as follows:

Six months ended June 30:

Program	2021	2022
	EUR k	EUR k
LTIP	7,331	3,078
RSU	250	87
New VSOP	323	(82)
Prior VSOP	308	17
RSU for key employees	—	497
Total	**8,212**	**3,597**

On November 16, 2020, CureVac granted 266,155 options to the Chief Scientific Officer (CSO). Furthermore, on December 1, 2020, CureVac granted 266,156 options (in 3 tranches) to the company`s Chief Business Officer (CBO) and Chief Commercial Officer (CCO). All grants were made at no cost under the terms of a new long-term incentive plan (LTIP) put in place by Curevac N.V. Options will be settled in shares of Curevac N.V. On June 30, 2022, none of the options granted to the CBO/CCO under the LTIP were exercised at that date. The CSO exercised 6,303 of his options in May 2022.

On July 1, 2021, CureVac granted 20,000 options to the Chief Operations Officer (COO). Furthermore, on August 1, 2021, CureVac granted 30,000 options to the Chief Development Officer (CDO). All grants were made at no cost under the terms of the new long-term incentive plan (LTIP) put in place by Curevac N.V. Options will be settled in shares of Curevac N.V. As of June 30, 2022, none of the options granted to the COO under the LTIP were vested and hence, were not exercisable at that date. On June 30, 2022, none of the options granted to the CDO under the LTIP were vested and hence, were not exercisable at the date. As the CDO left CureVac in June all his options forfeited. All expenses recognized up to him leaving were reversed.

On March 1, 2022, CureVac granted 11,500 options to two key employees. All grants were made at no cost under the terms of the new long-term incentive plan (LTIP) put in place by Curevac N.V. Options will be settled in shares of Curevac N.V. As of June 30, 2022, none of the options granted to the COO and CDO under the LTIP were vested and hence, were not exercisable at that date.

On June 22, 2022, CureVac granted 130,000 options to the executive board. All grants were made at no cost under the terms of the new long-term incentive plan (LTIP) put in place by Curevac N.V. Options will be settled in shares of Curevac N.V. As of June 30, 2022, none of the options granted to the executive board under the LTIP were vested and hence, were not exercisable at that date.

The expenses recognized for employee services received under the LTIP during the six months ended June 30, 2022, is in an amount of EUR 3,078k (2021; EUR 7,331k) and is included in general and administrative expenses and sales and marketing expenses.

In 2021, as part of the LTIP program, the group awarded RSUs (restricted stock units) to senior executives as well as supervisory board members. On June 24, 2021, the group awarded 10,956 RSUs to supervisory board members and on December 23, 2021, the group awarded 63,095 RSUs to the executive board and various key employees. Within the first half of 2022, 10,238 RSU's were settled. The related RSU expense is recorded in the functional cost category to which the award recipient's costs are classified.

On February 10, 2022, CureVac awarded 5,000 options to the Chief Operations Officer (COO). The related RSU expense is included in general and administrative expenses.

On June 22, 2022, the group awarded 37,868 RSUs to supervisory board members and 193,340 RSUs to the executive board and various key employees. The related RSU expense is recorded in the functional cost category to which the award recipient's costs are classified.

On June 22, 2022, CureVac awarded 36,000 options to the Chief Executive Officer (CEO). The related RSU expense is included in general and administrative expenses.

The remaining expense results from additional grants under the New VSOP and continued vesting of grants under the Prior VSOP.

Exercise of share-based payments

For the New VSOP plan, the IPO was a triggering event, by which all vested options, under the plan, became exercisable; 101,609 options were exercised within the first and second quarter of 2022 at a weighted average share price of USD 19.24.

6. Fixed Assets

6.1 Intangible assets

During the six months ended June 30, 2022, the Group acquired intangible assets of EUR 1,207k (six months ended June 30, 2021: EUR 3,966k). The acquisitions during the six months ended June 30, 2022 and 2021 mainly related to licenses, software and prepayments made to acquire those.

6.2 Property, plant and equipment

During the six months ended June 30, 2022, the increase in property, plant and equipment was due primarily to the purchase of technical equipment and machines and other equipment of EUR 3,034k (June 30, 2021: EUR 6,302k) as well as additional amounts recognized as construction in progress of EUR 39,386k for Company-owned GMP IV facility (EUR 29,552k) and equipment physically located at the CMO facilities (EUR 3,657k) and the remaining amount mainly for Company's GMP facilities. The increase was partially offset by EUR 5,854k impairment of equipment located at a CMO facility, which was recognized in cost of sales.

7. Assets held for sale

In the second quarter 2022, CureVac signed a sales agreement with a global pharmaceutical contract development and manufacturing organizations for the sale of Ultra-Low Temperature freezers for a total price of EUR 865k. The actual sale of the assets occurred in July 2022.

The Group classifies non-current assets as held for sale if their carrying amounts will be recovered principally through a sale transaction rather than through continuing use. Non-current assets classified as held for sale are measured at the lower of their carrying amount and fair value less costs to sell. Costs to sell are the incremental costs directly attributable to the disposal of an asset, excluding finance costs and income tax expense.

The criteria for held for sale classification is regarded as met only when the sale is highly probable, and the asset is available for immediate sale in its present condition. Actions required to complete the sale should indicate that it is unlikely that significant changes to the sale will be made or that the decision to sell will be withdrawn. Management must be committed to the plan to sell the asset and the sale expected to be completed within one year from the date of the classification.

Property, plant and equipment and intangible assets are not depreciated or amortized once classified as held for sale.

Assets and liabilities classified as held for sale are presented separately as current items in the statement of financial position.

8. Inventories

The inventories include only raw materials. During the six months ended June 30, 2022, the decrease in inventory of EUR 42,918k is due primarily to transfer of inventory EUR 9,8 million (net value) to GSK in connection with an agreement into which it entered with Novartis (see Note 3.6 for additional information) and due to further write-offs of EUR 34,640k as certain raw materials, which had been procured for manufacture into products to sell to GSK, but which are now no longer expected to be purchased.

9. Prepaid expenses and other assets (current)

Prepaid expenses and other current assets as of June 30, 2022 amounted to EUR 70,968k (December 31, 2021: 49,244k) and mainly include receivables for the GSK compensation of EUR 45,801k (December 31, 2021; EUR 0k). For more details we refer to note 3.6. In addition, other assets include further prepayments for material in the amount of EUR 4,653k (December 31, 2021:EUR 5,724k) and tax claims against the tax authorities of EUR 15,160k (December 31, 2021: EUR 35,234k). These net amounts of VAT refund claims and VAT payables do not bear interest and are reported to the tax authorities on a monthly basis.

10. Financial assets and financial liabilities

Fair values of cash and cash equivalents, trade receivables, trade payables, and other current liabilities approximate their carrying amounts largely due to the short-term maturities of these instruments.

There were no transfers between Level 1 and Level 2 fair value measurements and no transfers into or out of Level 3 fair value measurements during the six months ended June 30, 2022 and 2021.

11. Trade and other payables

During the six months ended June 30, 2022, the decrease of EUR 79,207k in trade and other payables was primarily due to less payables to suppliers as the CVnCoV project was stopped in FY 2021 Q4.

12. Other liabilities

During the six months ended June 30, 2022, the decrease of EUR 77,314k in other liabilities was primarily due to a net decrease of contract termination provisions, due to a reversal of a portion of the provision for onerous contracts relating to CRO arrangements due to a change in estimate, due to a consumption of the CRO accrual for onerous losses and due to lower accruals for outstanding invoices. The change in estimate of the contract termination provisions resulted primarily from the Company now being able to avoid an outflow of resources since GSK took over from the Group reserved capacity at Novartis (see Note 3.4 and 3.6 for additional information).

13. Loans

As of June 30, 2021, CureVac had drawn the first of the three tranches of the EIB loan received in December 2020 and, thus, EUR 25 million (plus accrued interest of EUR 1,726k) was outstanding on the loan as of that date.

During the year ended December 31, 2021, CureVac decided to early terminate the EIB loan for a total cash consideration of EUR 26,633k, which comprises of EUR 25,000k repayment of the loan and 1,633k interest and fees. As of December 31, 2021, the EIB loan was fully repaid.

14. Income tax

The Group booked the expected tax benefits or expenses based on a best estimate for a period of six months ended June, 2022.

For the six months ended June 30, 2022 and 2021, the Group recorded a consolidated income tax benefit (June 30, 2021: tax expense) EUR 82k (June 30, 2021: EUR -1,329k), respectively. The consolidated income tax benefit (June 30, 2021: income tax expense) for the six months ended June 30, 2022, resulted from income tax benefit from CureVac Corporate Service of EUR 96k for current tax and tax expenses of EUR 12k for releasing deferred tax benefit on loss carryforwards. CureVac Swiss AG has a current tax expense of EUR 2k (June 30, 2021: expenses from CureVac Inc. of EUR 146k and deferred tax expense on taxable temporary differences of EUR 1,286k as well as a recognition of a deferred tax benefit on tax loss carryforwards of EUR 103k).

15. Disclosure of financial instruments and risk management

As the Group requires significant liquid funds available for the financing of its COVID-19 and influenza research and development activities, during the six months ended June 30, 2022, it has maintained funds as cash and cash equivalents and not in less liquid financial instruments. The Group has distributed the cash amongst several banks and amongst the legal entities in the Group in order to reduce negative interest penalties.

Refer to note 15 to the consolidated financial statements as of December 31, 2021 for additional information on the Group's risk management activities. As of June 30, 2022, the Group held cash and cash equivalents of USD 62,863k and CHF 110k, which are exposed to foreign currency exchange risk. The Group intends to settle expenses arising in US dollars using these US dollar funds.

16. Earnings per share

Earnings per share is calculated pursuant to *IAS 33 Earnings per Share* by dividing the consolidated net loss in CureVac N.V. by the average weighted number of shares outstanding in the fiscal period.

The weighted number of shares outstanding for the six months ended June 30, 2022 was 187,041,805 (June 30, 2021: 185,062,052). This has led to a basic loss per share for the six months ended June 30, 2022 and 2021 of EUR 0.39 and EUR 1.44, respectively. Since the conversion of options to ordinary shares would decrease loss per share, they are considered antidilutive. Therefore, the diluted earnings per share equals basic earnings per share for the six months ended June 30, 2022 and 2021.

17. Related party disclosures

Dietmar Hopp

During fiscal 2019, Dietmar Hopp, principal of dievini Hopp BioTech holding GmbH & Co. KG (dievini), the largest shareholder of the Group, granted two convertible loans to the Group, which were repaid in 2020. Additionally, in August 2020, DH-LT Investments GmbH, a company beneficially owned by Dietmar Hopp, managing director of dievini, the Group's largest shareholder, purchased EUR 100,000k of the Group's common shares at a price of USD 16.00 per share.

Antony Blanc

In 2020, a consulting agreement between CureVac AG and Clarentis SRL was made. Clarentis SRL is a wholly owned consulting company of Antony Blanc, PhD, the CBO of CureVac. After the transition of Antony Blanc to the Management Board in February 2021, the contract was no longer active, and no new orders were placed. In Q3 2021, a milestone payment, which related to the submission of the EMA dossier for CVnCoV and amounts to EUR 100k was made to fulfil a contractual obligation from the consulting agreement in place before Antony Blanc joined the Management Board. In addition to his Management Board position at CureVac NV, Antony also took over the role as Management Director at CureVac Belgium SA. This function he executes by using Clarentis SRL. Related to these services CureVac paid until June 2022 an amount of EUR 34k. The amounts invoiced for this function/services will be offset/deducted from his base compensation for his function on the Board of Management of CureVac N.V.

BePharBel Manufacturing S.A.

In December 2020, CureVac Real Estate GmbH and BePharBel Manufacturing S.A., entered into a commercial supply agreement to develop and manufacture the diluent that was expected to be used to dilute the Group's first concentrated COVID-19 vaccine candidate, CVnCoV, to the amount specified by each dose level. Pursuant to the terms of the agreement, it was intended that BePharBel

Manufacturing would manufacture and deliver to CureVac Real Estate GmbH a low seven figure amount of commercial batches of diluent per year, in 2021 and 2022. Following the withdrawal of the CVnCoV in October 2021 due to COVID-19 virus drift, WHO COVID vaccine efficiency recommendation and market expectations, CureVac Real Estate GmbH terminated the commercial and supply agreement with BePahrBel and entered into negotiations on a structured and rapid wind-down of the ordered production. The Parties agreed on a settlement in May 2022 of all claims resulting from the commercial and supply agreement for an amount of €3.9 million, which had been already recognized in provisions, based on an estimate, as of December 31, 2021. Baron Jean Stéphenne, our supervisory board member, holds directly and indirectly 15.61% of BePharBel Manufacturing's equity and is a director of BePharBel Manufacturing, and Baron Jean Stéphenne's son, Vincent Stéphenne, holds 1.43% of BePharBel Manufacturing's equity and is a managing director of BePharBel Manufacturing.

18. Subsequent events

Frame Acquisition

Effective July 1, 2022 ('closing date'), CureVac N.V. acquired all shares of Frame Pharmaceuticals B.V., Amsterdam, Netherlands ('Frame Pharmaceuticals'). Frame Pharmaceuticals focuses on the development of a proprietary platform enabling to identify structural changes within the cancer genome and has strong competencies in antigen discovery as well as validation for personalized cancer vaccines. CureVac's management and supervisory board expect that the acquisition will contribute several key elements for the required end-to-end building blocks for CureVac's broader oncology strategy.

In the purchase price agreement ('SPA') dated June 8, 2022, a total purchase price of up to EUR 32.0 million payable mainly in shares of CureVac N.V. (total of 1,783,460), as well as a certain amount of cash, was agreed. Additionally, a net amount of EUR 0.66 million for discharging contractual obligations for outstanding advisory agreements with former shareholders was also agreed to. The shares were valued in the SPA at an average share price of €16.44.

At closing, CureVac paid 50% of the agreed purchase price, i.e. 810,242 shares were issued and cash in the amount of EUR 0.25 million was paid. Further shares worth EUR 0.66 million were issued to pay certain liabilities towards former shareholders of Frame Pharmaceuticals. In addition, restricted stock units (RSUs) were issued to certain employees to replace existing share-based payment awards of the target. This element of the transaction will be accounted for as a separate share-based transaction.

Payment of the remaining 50% of the purchase price is contingent upon achieving two milestones. A further 194.647 shares (representing 10% of the purchase price) will be issued upon the achievement of the successful investigational new drug application filing and further 778.588 shares (representing 40% of the purchase price) will be issued upon successful proof of mechanism in humans. The fair value of these contingent payments will be determined considering the likelihood of the events occurring.

Since the transaction occurred only shortly after the reporting date, it is not practicable for the Company to provide information in relation to the initial accounting for the acquisition, in particular regarding the identification and measurement of identifiable assets and liabilities, including any goodwill, and the consideration transferred.

For purposes of the Purchase Price Allocation, the shares to be issued in exchange for Frame Pharmaceuticals shares will be based on the share price at closing, i.e. €13.64.

Cash in the amount of EUR 308k was acquired. Transactions costs in relation to the acquisition amounting to total EUR 0.4 million have been expensed within administrative expenses.

Patent Infringement Lawsuit

In Germany on June 29, 2022, CureVac brought an infringement lawsuit under three utility models and one patent against BioNTech on the basis that the manufacture and sale of Comirnaty infringes CureVac's intellectual property rights.

In the US on July 25, 2022, BioNTech and Pfizer jointly brought an action seeking a declaration that the manufacture and sale of Comirnaty does not infringe three CureVac US patents.

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 provides information that we believe to be relevant to an assessment and understanding of our results of operations and financial condition for the periods described. This discussion should be read in conjunction with our unaudited interim condensed consolidated financial statements and the notes to the financial statements, which are included in this Report of Foreign Private Issuer on Form 6-K. In addition, this information should also be read in conjunction with the information contained in our Annual Report on Form 20-F for the year ended December 31, 2021, filed with the Securities and Exchange Commission on April 28, 2022, or the Annual Report, including the consolidated annual financial statements as of and for the year ended December 31, 2021 and their accompanying notes included therein.

Forward-Looking Statements

This Report of Foreign Private Issuer on Form 6-K contains historical information and forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995 with respect to the business, financial condition and results of operations of CureVac N.V. The words "anticipate," "believe," "could," "expect," "should," "plan," "intend," "estimate" and "potential," and similar expressions are intended to identify forward-looking statements. Such statements reflect the current views, assumptions and expectations of CureVac N.V. with respect to future events and are subject to risks and uncertainties. Many factors could cause the actual results, performance or achievements of CureVac N.V. to be materially different from any future results, performance or achievements that may be expressed or implied by such forward-looking statements, or financial information, including, among others, our ability to obtain funding for our operations necessary to complete further development and commercialization of our product candidates, the initiation, timing, progress, results, and cost of our research and development programs and our current and future preclinical studies and clinical trials, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available and our research and development programs, the timing of and our ability to obtain and maintain regulatory approval for our product candidates, the ability and willingness of our third-party collaborators to continue research and development activities relating to our product candidates and cost associated with cancellation of manufacture and supply agreements in the event of termination of our research and development programs, the exercise by the Bill & Melinda Gates Foundation of withdrawal rights, our and our collaborators' ability to obtain, maintain, defend and enforce our intellectual property protection for our proprietary and collaborative product candidates, and the scope of such protection, the rate and degree of market acceptance of our products, our ability to commercialize our product candidates, if approved, our ability and the potential to successfully manufacture our drug substances and delivery vehicles for preclinical use, for clinical trials and on a larger scale for commercial use, if approved, general economic, political, demographic and business conditions in the United States and Europe, fluctuations in inflation and exchange rates in Europe, our ability to implement our growth strategy, our ability to compete and conduct our business in the future, our ability to enroll patients for our clinical trials, the availability of qualified personnel and the ability to retain such personnel, regulatory developments and changes in the United States, Europe and countries outside of Europe including tax matters, our ability to overcome the challenges posed by the COVID-19 pandemic to the conduct of our business and other various other factors, whether referenced or not referenced in this Report of Foreign Private Issuer on Form 6-K, that may affect our financial condition, liquidity and results of operations. Various other risks and uncertainties may affect CureVac and its results of operations, as described in reports filed by CureVac with the Securities and Exchange Commission from time to time, including its Annual Report. CureVac does not assume any obligation to update these forward-looking statements.

Unless otherwise indicated or the context otherwise requires, all references in this Report of Foreign Private Issuer on Form 6-K to "CureVac" or the "Company," "we," "our," "ours," "ourselves," "us" or similar terms refer to CureVac N.V. together with its subsidiaries.

Overview

We are a global biopharmaceutical company developing a new class of transformative medicines based on messenger ribonucleic acid that has the potential to improve the lives of people. Our vision is to revolutionize medicine and open new avenues for developing therapies by enabling the body to make its own drugs. Messenger ribonucleic acid, or mRNA, plays a central role in cellular biology in the production of proteins in every living cell. We are the pioneers in successfully harnessing mRNAs designed to prevent infections and to treat diseases by mimicking human biology to synthesize the desired proteins. Our technology platform is based on a targeted approach to optimize mRNA constructs that encode functional proteins that either induce a desired immune response or replace defective or missing proteins using the cell's intrinsic translation machinery. Our current product portfolio includes clinical and preclinical candidates across multiple disease indications in prophylactic vaccines, oncology and molecular therapy.

In prophylactic vaccines, we are advancing our second-generation mRNA program against coronavirus (SARS-CoV-2) and a range of infectious diseases including influenza in collaboration with GlaxoSmithKline Biologicals SA, or GSK.

The collaboration on second-generation COVID-19 vaccine candidates with GSK was initiated in April 2021, and aims to research, develop and manufacture next-generation mRNA vaccines targeting the original SARS-CoV-2 strain as well as emerging variants. The collaboration extends the initial partnership we started with GSK in July 2020, which focuses on the development of new products based on our second-generation mRNA backbone for different targets in the field of infectious diseases of which influenza was disclosed as the first indication. The improved second-generation mRNA backbone that is being used in this collaboration features targeted optimizations designed to improve intracellular mRNA stability and translation for increased and extended protein expression. These optimizations potentially allow for strong and early immune responses at low doses, which is intended to also support the development of multivalent vaccines to target rapidly spreading COVID-19 variants as well as combination vaccines against different viral diseases.

CV2CoV was introduced as the first representative of our joint second-generation COVID-19 vaccine program. The vaccine candidate is a non-chemically modified mRNA, encoding the prefusion stabilized full-length spike protein of the original SARS-CoV-2 virus, formulated within Lipid Nanoparticles, or LNPs. On May 13, 2021, we announced that CV2CoV is able to induce high levels of antigen production in an in vitro setup as well as strong and dose-dependent immune responses in a preclinical study in rats. These data were complemented in June 2021, by preclinical data published in Nature Communications demonstrating full protection by CV2CoV and our first-generation vaccine candidate CVnCoV, from lethal infection caused by SARS-CoV-2 ancestral strain BavPat1 or the Beta variant (B.1.351) in a transgenic mouse model, expressing the human ACE2 receptor. In a preprint manuscript announced on August 16, 2021, and a subsequent Nature publication issued on November 18, 2021, we further presented preclinical data investigating immune responses as well as the protective efficacy of CV2CoV in comparison to CVnCoV, against SARS-CoV-2 challenge in non-human primates. The study, conducted in collaboration with Dan Barouch, MD, Ph.D., of Beth Israel Deaconess Medical Center, assessed cynomolgus macaques vaccinated with 12µg of either the first or second-generation vaccine candidate. Better activation of innate and adaptive immune responses was achieved with CV2CoV, resulting in faster response onset, higher titers of antibodies and stronger memory B and T cell activation as compared to our first-generation candidate, CVnCoV. Higher antibody neutralizing capacity was observed with CV2CoV across a broad range of variants, including the Beta, Delta and Lambda variants. During challenge with the original SARS-CoV-2 virus, animals vaccinated with CV2CoV were found to be better protected compared to CVnCoV based on effective clearance of the virus in the lungs and nasal passages. A direct comparison of CV2CoV with a licensed mRNA vaccine in non-human primates was able to show that neutralizing antibody levels measured following full vaccination of animals with either 12µg of CV2CoV or a 30µg standard dose of the licensed mRNA vaccine were highly comparable. Following these preclinical data, we announced the start of a Phase 1 clinical trial with CV2CoV on March 30, 2022. The Phase 1 dose-escalation study is being conducted at clinical sites in the U.S. and is expected to enroll up to 210 healthy adults to evaluate the safety, reactogenicity and immunogenicity of CV2CoV in the dose range of 2µg to 20µg.

Within the joint vaccine program with GSK, we also extended our technology platform to chemically modified mRNA constructs to allow for data-driven selection of the best candidate. We announced the start of a Phase 1 clinical trial with a chemically modified second-generation COVID-19 mRNA vaccine candidate, CV0501, on August 18, 2022. CV0501 specifically targets the Omicron variant. The study will be conducted at clinical sites in the U.S., the UK, Australia, and the Philippines and is expected to enroll up to 180 healthy, COVID-19-vaccinated adults to evaluate the safety, reactogenicity and immunogenicity of a single booster dose of CV0501 in the dose range of 12µg to 50µg. Additional dose levels below 12µg and above 50µg may be evaluated if supported by safety and immunogenicity data at these dose levels. Based on the results of both Phase 1 studies, selection of the best performing candidate for a subsequent pivotal study for advanced clinical development will be made in the fourth quarter of 2022. The pivotal trial may be initiated in the first quarter of 2023, contingent on discussion with regulatory authorities. Candidates further addressing relevant COVID-19 variants featuring the same second-generation mRNA backbone are currently in preclinical testing. On April 21, 2022, the preclinical data for the second-generation mRNA backbone was extended by a study conducted in collaboration with the Friedrich-Loeffler-Institut, comparing immune responses and protective efficacy of monovalent and bivalent mRNA vaccines encoding Beta and/or Delta variants, primarily in a transgenic mouse model and a Wistar rat model.

On October 12, 2021, we announced the strategic decision to withdraw our first-generation COVID-19 vaccine candidate, CVnCoV, from the approval process with the European Medicines Agency, or EMA, and to focus our COVID-19 vaccine program on the development of second-generation mRNA vaccine candidates in collaboration with GSK. The decision was aligned with the evolving dynamics of the pandemic response toward greater need for more differentiated vaccines. The rolling submission with the EMA was originally initiated in February 2021 to assess CVnCoV's compliance with standards for vaccine efficacy, safety and pharmaceutical quality as a prerequisite for a formal market authorization application. Later in 2021, the EMA informed us that it would not start reviewing the provided CVnCoV data packages before 2022. As a result, we estimated that the earliest possible approval of CVnCoV would come in the second quarter of 2022. By this time, we expected candidates from the second-generation vaccine program to be progressing through clinical development. Consequently, CVnCoV was also withdrawn from a rolling submission with Swissmedic, Switzerland's authority responsible for the authorization and supervision of therapeutic products, initiated in April 2021, to review the safety, efficacy and pharmaceutical quality of CVnCoV as a prerequisite for market authorization.

All clinical studies with first-generation candidate, CVnCoV, have completed the scheduled safety follow-up times for all trial participants as per the respective trial protocols, i.e., the Phase 2b/3 (HERALD) study in Europe and Latin America (initiated in December 2020) and a Phase 3 study in healthcare workers in Germany (initiated in December 2020). Both studies are under final data analysis. Primary data of the Phase 2b/3 (HERALD) trial was published in The Lancet Infectious Diseases on November 23, 2021.

For a Phase 1 study in Germany (initiated in June 2020), a Phase 2a study in Peru and Panama (initiated in September 2020), and a Phase 3 study in participants with comorbidities in Belgium (initiated in April 2021) all subject follow-up times have been completed as per the respective trial protocols. Data of an interim analysis of the Phase 1 trial in Germany was published in Wiener klinische Wochenschrift on August 10, 2021. Safety and immunogenicity data of the Phase 2a clinical trial in Peru and Panama was uploaded to the SSRN preprint server on December 10, 2021 and published in Vaccine: X on July 1, 2022. Neutralizing antibody data against the ancestral strain and the beta variant after a third dose of CVnCoV in the same trial were posted on the MedRxiv preprint server on February 24, 2022 and published in Vaccines on March 25, 2022.

Previously announced studies to be initiated with CVnCoV, including a Phase 2 clinical trial, focusing on immunogenicity in older adults above the age of 65 years old compared to younger adults and a flu-co-administration study, planned to be initiated together with Bayer AG to assess compatibility with established seasonal vaccines in an older population, were cancelled.

To assess the benefit of booster vaccinations, CVnCoV was also included in the Cov-Boost trial sponsored by the University of Southampton, UK, which is evaluating several COVID-19 vaccines and vaccine candidates as booster vaccines. Each participant in the Cov-Boost trial received one booster vaccine 84 or 70 days respectively after they completed their primary vaccination with two doses of either Comirnaty or Vaxzervia. The Cov-Boost trial started in June 2021 across 18 sites in the United Kingdom and dosed overall 2,878 participants with a third dose vaccine. Initial results from the Cov-Boost trial were published in The Lancet on December 2, 2021.

Our pivotal Phase 2b/3 trial for CVnCoV, which included approximately 40,000 participants, reported interim analysis outcomes following a first interim analysis on May 28, 2021, based on 59 adjudicated COVID-19 cases and a second interim analysis on June 16, 2021, based on 134 adjudicated COVID-19 cases in the unprecedented context of at least 13 variants circulating within the assessed study population subset. Primary data of the study was published in The Lancet Infectious Diseases on November 23, 2021. Overall, CVnCoV demonstrated a vaccine efficacy of 48% against COVID-19 disease of any severity. In the highly dynamic variant environment, the HERALD trial met the prespecified success criteria for efficacy against symptomatic COVID-19 of any severity and for efficacy against moderate-to-severe COVID-19, as defined in the protocol. The primary efficacy analysis included 12,851 participants in the CVnCoV group and 12,211 in the placebo group. The mean observation period, starting 15 days after administration of the second dose, was 48.2 days. Vaccine efficacy against COVID-19 of any severity was 48.2% in the overall primary efficacy analysis set of SARS-CoV-2-naive participants, and 52.5% in those aged 18–60 years. Vaccine efficacy against moderate-to-severe COVID-19 was 70.7% overall and 77.2% in participants aged 18–60 years. There were too few participants aged 61 years or older who developed COVID-19 to allow a meaningful estimate of efficacy in this age group.

HERALD was conducted in an unprecedented evolving landscape that reflects the changing reality of the global COVID-19 pandemic, with an increasing number of SARS-CoV-2 variants adding additional challenges to the assessment of COVID-19 vaccine candidates. Sequence data were available for 184 of 207 adjudicated cases in people aged 18–60 years. About 50% of cases of COVID-19 in our trial were caused by variants of concern, 35% were caused by variants of interest, as classified by WHO in September 2021, and about 3% were caused by wild-type, with the remaining 11% caused by other variants. Although we were only able to evaluate vaccine efficacy against these variants in participants aged 18–60 years, the results indicate that the vaccine had similar efficacies against Alpha, Gamma, and Lambda variants. Many newly emerged strains have shown increased transmissibility, and differences in neutralizing antibody activity against these strains might alter vaccine efficacy.

The first non-COVID-19 vaccine candidate within the broader second-generation infectious disease program we are developing in collaboration with GSK is the influenza candidate, CVSQIV, a differentiated multivalent vaccine candidate featuring multiple non-chemically modified mRNA constructs to induce immune responses against relevant targets of four different influenza strains. On February 10, 2022, we announced the start of a Phase 1 dose-escalation study in Panama evaluating the safety, reactogenicity and immunogenicity of CVSQIV in up to 240 healthy adult participants in the dose range of 3µg to 28µg. In line with the mRNA development strategy to also test chemically modified mRNA and similar to the setup of the COVID-19 vaccine program, CureVac and GSK have also announced the start of a Phase 1 dose-escalation study with a chemically modified influenza vaccine candidate, Flu SV mRNA. The candidate is a monovalent candidate. The Phase 1 dose-escalation study will be conducted in Canada, Spain, and Belgium, and is expected to enroll up to 198 healthy adult participants to evaluate the safety, reactogenicity and immunogenicity of FLU SV mRNA in the dose range of 2µg to 54µg. Later stage clinical development is expected to evaluate a multivalent form of the candidate, which could range in dose up to 200µg – the upper limit of the dose range in the complementary study of the modified COVID-19 candidate, CV0501.

Beyond the GSK COVID-19 and general infectious disease collaboration, our next advanced prophylactic vaccine program, CV7202, is being developed for prophylactic vaccination against rabies. CV7202 is an mRNA based on our first-generation backbone that encodes the rabies virus glycoprotein, RABV-G, formulated with Lipid Nanoparticles. Safety, reactogenicity, and immunogenicity of CV7202 was investigated in a Phase 1 clinical trial that has completed the scheduled follow-up time for all trial participants as per trial protocol. In January 2021, we published data from our Phase 1 trial of CV7202 in rabies. CV7202 induced adaptive immune response as shown by rabies-specific virus-neutralizing antibodies above the World Health Organization thresholds considered to be protective, after the second dose in all subjects, at the lowest 1µg and 2µg dose levels. We also showed that the lowest dose levels (1µg and 2µg mRNA) were generally well tolerated. We are currently assessing the path forward for advancing CV7202.

In oncology, we plan to build a meaningful portfolio and create long-term value to accelerate growth beyond the recent progress in prophylactic vaccines. Developing new oncology candidates is characterized by similar medical challenges as in infectious diseases, including selection and accessibility of disease-relevant antigens, enhancing antigen-induced immune activation, and triggering immune responses led by a strong induction of tumor-killing T cells. Taking advantage of recent technology platform advances, particularly our second-generation mRNA backbone in COVID-19 and infectious diseases, we are evaluating targeted expansions of our unique mRNA approaches for the development of cancer vaccines based on three strategic pillars:

1. Validation and optimization of our broad mRNA technology approach for T cell mediated tumor control
2. Build-up of a pipeline of cancer vaccine candidates targeting antigens predicted to be immunogenic and presented on tumors in cancer patients
3. Addition of complementary platform technologies for improved antigen discovery, validation and optimization of vaccine design focusing on T cell activation

To deliver on this strategy, we are exploring a range of potential approaches, including intratumoral therapy and novel cancer vaccines targeting neoantigens and tumor associated antigens.

Our lead oncology candidate, CV8102, is a complex of single-stranded non-coding RNA, which has been optimized to maximize activation of cellular receptors that normally detect viral pathogens entering the cells (such as toll-like receptor 7, or TLR7, toll-like receptor 8, or TLR8, and retinoic acid inducible gene I, or RIG-I pathways), mimicking a viral infection of the tumor. CV8102 is designed to recruit and activate antigen-presenting cells at the site of injection to present tumor antigens released from tumor cells to T cells in the draining lymph node. This potentially leads to activation of tumor-specific T cells, which can kill tumor cells at the injected site, but also at distant non-injected tumor lesions or metastases. CV8102 is currently being evaluated in a Phase 1 clinical trial as a single agent and in combination with anti-PD-1 antibodies for the treatment of four types of solid tumors - cutaneous melanoma, adenoidcystic carcinoma, squamous cell carcinoma of skin, and squamous cell carcinoma of head and neck, or HNSCC. Details of safety and efficacy observed in the dose-escalation portion of the trial were reported at ESMO 2021. As of June 21, 2021, 58 patients were enrolled in the dose escalation part, 33 in the single-agent cohort and 25 in the combination cohort with anti-PD-1 antibodies. As of the same cutoff date, in the single-agent CV8102 dose escalation cohort, we observed one patient with a complete response and two patients with a partial response according to RECIST 1.1. In addition, twelve patients experienced a best response of stable disease. In the PD-1 dose escalation combination cohort, one PD-1 refractory melanoma patient experienced a partial response according to RECIST 1.1. In addition, three patients experienced a best response of stable disease.

On November 10, 2021, at the Society for Immunotherapy of Cancer, or the SITC conference, we further extended the ESMO update with an extensive analysis of immune cell activation to better understand the mobilization of the immune system against CV8102-injected as well as non-injected tumors. The data showed efficient stimulation of the immune system characterized by the induction of interferon alpha and interferon gamma. Serial tumor biopsies from individual patients demonstrated increased infiltration of tumor-fighting T cells in the micro-environment of injected as well as non-injected tumors. Both observations support the hypothesis that local injection of the RNA immuno-modulator into a single tumor lesion can induce a systemic response leading to immune attack against both injected and non-injected tumors.

In February 2021, we initiated the expansion of our Phase 1 study to confirm the safety, tolerability and efficacy of CV8102 at a 600µg dose, the selected dose to be potentially advanced in a Phase 2 clinical trial. The expansion part of the Phase 1 trial completed enrollment in October 2021 and involves 40 trial participants, with 10 patients in the single-agent cohort and 30 patients in the combination cohort with anti-PD-1. Comprehensive data from the expansion part of the study is expected in the fourth quarter of 2022.

Within our oncology strategy to build a meaningful portfolio of new cancer vaccine candidates, we follow two approaches. The first approach assesses tumor antigens shared by different cancer patients for the development of off-the-shelf cancer vaccines. The second approach is tailored to the individual tumor setup of a patient for personalized therapy. To advance both approaches, in June 2022, CureVac acquired Frame Cancer Therapeutics, a private company focused on advanced genomics and bioinformatics, to identify both shared and unique neoantigens across different cancer types. The acquisition complements existing inhouse expertise to identify and validate promising neoantigens for mRNA cancer vaccine candidates. The former Frame Cancer Therapeutics site was inaugurated as CureVac Amsterdam and will further develop the proprietary FramePro platform, which has the potential to identify a broad panel of neoantigens that go beyond conventional neoantigens and could strongly increase the likelihood of developing highly effective cancer vaccines that activate the human immune system against cancer, both in a personalized and off-the-shelf manner.

The acquisition of Frame Cancer Therapeutics follows a strategic oncology partnership with Belgium-based company myNEO, announced on May 25, 2022. Under the agreement, both companies aim to identify specific antigens found on the surface of tumors for the development of novel mRNA immunotherapies. myNEO utilizes a broad range of underlying genomic alterations to identify constantly emerging, novel classes of antigens of defined tumor types. Incorporating new ranking methodologies based on tumor cell antigen processing and presentation is expected to allow for selection of antigens with the highest confidence of success for potential clinical testing.

The highly synergistic technologies of Frame Cancer Therapeutics and myNEO are expected to accelerate CureVac's oncology strategy by accessing novel classes of tumor antigens and making targeted selections of antigens with the highest confidence of success for potential clinical testing. In this context, we are committed to drive innovation in oncology by leveraging The RNA Printer®, CureVac's automated end-to-end manufacturing solution for GMP-grade mRNA vaccines and therapeutics. The highly standardized system is expected to allow for rapid and highly flexible availability of mRNA to screen new targets and transition promising mRNA product candidates more efficiently into the clinic. Designed for small-scale quantities, the automated GMP-grade output of The RNA Printer® is designed to open avenues for personalized mRNA-based cancer therapies.

On June 16, 2021, Boehringer Ingelheim expressed its intention to terminate the 2014 collaboration agreement on BI1361849 (previously CV9202). The termination became effective on November 17, 2021. The legacy program, targeting specific immune responses against tumor-associated antigens frequently overexpressed in patients with non-small cell lung cancer, or NSCLC, applies an older protamine formulation technology, which reflected the state of the technology development at the time. A Phase 1/2 clinical trial in NSCLC applying BI1361849 as a combination therapy is ongoing. Both companies are currently assessing options to continue a collaboration on our RNA technology platform based on state-of-the-art LNP-based formulations.

In molecular therapies, we published preclinical mouse data in liver fibrosis in the Journal of Hepatology in August 2021. Progression of liver fibrosis is associated with the gradual decrease of hepatocyte nuclear factor 4 alpha, or HNF4 alpha, an important regulator and key factor in liver metabolism. In the published study, four independent mouse models of the disease were treated with mRNA encoding HNF4A. The treatment was able to restore HNF4A levels and thereby significantly reduced liver injury. The study was conducted in collaboration with the REBIRTH-Research Center for Translational Regenerative Medicine and Department of Gastroenterology, Hepatology and Endocrinology at the Hannover Medical School, Hannover (Germany). It provides the first preclinical data demonstrating the therapeutic applicability of mRNA encoded HNF4A in the treatment of liver fibrosis and cirrhosis.

We further expect to publish data from our collaboration with the Schepens Eye Research Institute.

Key Factors Affecting Our Results of Operations

We believe that the most significant factors affecting our results of operations include:

Research and Development Expenses

Our ability to successfully pioneer a robust mRNA technology platform and develop innovative product candidates will be the primary factor affecting our future growth and development. Our approach to the discovery and development of product candidates based on mRNA technology is still being demonstrated. As such, we do not know whether we will be able to successfully develop any products. Developing novel product candidates requires a significant investment of resources over a prolonged period of time, and a core part of our strategy is to continue making sustained investments in this area. We have chosen to leverage our platform to initially focus on advancing our product candidates in the areas of prophylactic vaccines, oncology and molecular therapy.

All of the product candidates are still in development, and we have incurred and will continue to incur significant research and development costs for preclinical studies and clinical trials. We expect that our research and development expenses will constitute the most substantial part of our expenses in future periods in line with the advance and expansion of the development of our product candidates. Due to our accelerated efforts to develop our first-generation COVID-19 vaccine candidate, CVnCoV, we incurred research and development expenses that significantly exceeded our historical levels of research and developments expenses. Additionally, our October 2021 notification to the European Commission of the withdrawal of our regulatory approval application for CVnCoV resulted in our recognition of several expenses, which have contributed to our increased expense levels, but which we do not expect to recur in future periods. In April 2021, we entered into a collaboration agreement with GSK for the development of a broad second-generation COVID-19 vaccine program. CV2CoV, a non-chemically modified mRNA, encoding the prefusion stabilized full-length spike protein of the SARS-CoV-2 virus, and formulated within LNPs, is the first representative of our second-generation COVID-19 vaccine program and presently in the Phase 1 clinical trial, as announced on March 30, 2022. Within the second-generation COVID-19 vaccine program, we plan to extend our technology platform also to chemically modified mRNA constructs to allow for data-driven selection of the best candidate. We expect to incur significant expenses related to such second-generation vaccine candidates. But, as we and GSK agreed to equally share the development costs for GSK COVID products, our current level of research and development expenses will not continue to increase in the level as it did from 2020 to 2021. Once we conclude our research and development efforts related to a selected second-generation vaccine candidate, we expect that our research and development expenses shall be consistent with our past trends before the COVID-19 pandemic, but we may find it necessary to continue such current trend with respect to our research and developments expenses or we may continue to increase further our research and development expenses. For example, we may continue to increase our research and development expenses for future research and development related to the next generation of our COVID-19 vaccine candidates, such as for our second-generation COVID-19 vaccine candidates or may pursue new indications with our technology platform.

We have historically funded the research and development expenses primarily through public offerings of our common stock, private placements of equity securities, convertible loans, grants from government agencies and similar bodies and payments for collaborative research and development services with strategic partners. In addition, we signed an advance purchase agreement, or APA, with the EC that provided substantial support for our efforts to advance our first-generation vaccine candidate, CVnCoV. In October 2021, we notified the European Commission of the withdrawal of our regulatory approval application for CVnCoV, which automatically terminated the APA.

Our and Our Collaborators' Ability to Commercialize Our Product Candidates

Our ability to generate revenue from our product candidates depends on our and our collaborators' ability to successfully advance clinical trials for our product candidates and receive regulatory approval, particularly in the United States, Europe, and other major markets.

We believe that our broad portfolio of product candidates with both novel and validated targets enhances the likelihood that our research and development efforts will yield successful product candidates. Nonetheless, we cannot be certain if any of our product candidates will receive regulatory approvals. Even if such approvals are granted, we will thereafter need to maintain manufacturing and supply arrangements and engage in extensive marketing prior to generating any revenue from such products, and the ultimate commercial success of our products will depend on their acceptance by patients, the medical community and third-party payors and their ability to compete effectively with other therapies on the market.

The competitive environment is also an important factor with the commercial success of our product candidates, and our ability to successfully commercialize a product candidate will depend on whether there are competing product candidates being developed or already marketed by other companies.

We currently do not have any product candidates that have received regulatory approval. As such, we have not incurred any material commercialization expenses in connection with an approved product candidate. In February 2021, we initiated a rolling submission for our first generation COVID-19 vaccine candidate, CVnCoV, with the EMA, which was designed to allow the EMA to assess CVnCoV's compliance with standards for vaccine efficacy, safety and pharmaceutical quality as a prerequisite for a formal market authorization application. Later in 2021, EMA informed us that the EMA would not start reviewing our submission for CVnCoV before the beginning of 2022. As a result, we estimated that the earliest possible approval of CVnCoV would come in the second quarter of 2022. Data on the efficacy of CVnCoV was generated and published in June 2021. This efficacy data did not live up to our pre-trial expectations and fell behind the efficacy of competing COVID-19 vaccine products. The application for the marketing authorization for CVnCoV was withdrawn in early October 2021, as a necessary reaction to the efficacy data as well as the concerns and uncertainties resulting from such data on the granting of a marketing authorization and the expected concerns of prescribers and patients to use a COVID-19 vaccine with a lower efficacy compared to the vaccines already available on the market. After the withdrawal of the application for a marketing authorization for CVnCoV, we have focused our efforts on second-generation mRNA vaccines. The decision is aligned with the evolving dynamics of the pandemic response toward greater need for differentiated vaccines with the gradual transition from an acute pandemic to an endemic SARS-CoV-2 environment. In connection with the regulatory approval process, and in preparation for the commercialization of a second-generation COVID-19 vaccine, we expect our expenses related to commercialization to significantly decrease in the short-term due to our past commercialization efforts for CVnCoV. However, we expect that our expenses related to commercialization will significantly increase in the long-term if a second-generation COVID-19 vaccine candidate reaches late clinical stages, but we expect that this increase in expenses will be mitigated by the GSK COVID Agreement, as described below. As part of the commercialization process of CVnCoV, we also entered into strategic partnerships with Bayer for the development, production and distribution of CVnCoV. In addition, pursuant to a preliminary agreement regarding the secondary manufacturing of CVnCoV we entered into with GSK, GSK would have supported the secondary manufacturing of up to 100 million doses of CVnCoV in 2021. Additionally, we also partnered with Fareva, Rentschler Biopharma SE, and Novartis AG, among others, to develop an integrated European manufacturing network. Due to our decision to withdraw CVnCoV from the regulatory approval process and focus our efforts on second-generation mRNA vaccine, separate agreements with Celonic and Wacker were terminated.

Our Collaborations, Related License Agreements and Advance Purchase Agreements

Our results of operations have been, and we expect them to continue to be, affected by our contractual collaborations with third parties for the development and commercialization of certain of our product candidates. In addition, our future results of operation may be affected by future advance purchase agreements for our COVID-19 vaccine candidates. To date, our revenues have been recognized pursuant to license and collaboration agreements, which include up-front payments for licenses or options to obtain licenses, milestone payments, payments for product sales and payments for research and development services. Grants from government agencies or similar bodies are recognized as other operating income or as a reduction to depreciation and amortization expense recognized from assets purchased under the associated arrangements.

We have entered into strategic collaborations and license agreements with third parties. In addition, on November 30, 2020, we entered into an advance purchase agreement, or APA, with the European Commission, or EC, which provided for the advance purchase by the commission of our first-generation vaccine candidate, CVnCoV. In October 2021, we notified the EC of the withdrawal of our regulatory approval application for CVnCoV, which automatically terminated the APA. As part of our business development strategy, we aim to increase the number of our strategic collaborations in order to derive further value from our platform and more fully exploit the potential of our collaborations and license agreements.

Certain key terms of our current material collaboration and license agreements, as well as our advance purchase agreement with the EC are summarized below.

Research and Option Agreement with myNEO

On May 12, 2022, we entered into a Research and Option Agreement ("R&O") with myNEO NV ("myNEO"), pursuant to which we will both collaborate in research to identify specific antigens found on the surface of tumors for the development of novel mRNA immunotherapies. To achieve this goal, myNEO will leverage its biological datasets, its integrated machine learning and bioinformatics platform to identify and validate specific antigen targets predicted to elicit a strong immune response. Under the R&O, we aim to develop and commercialize at least two new medicinal products for the treatment of non-small cell lung cancer, melanoma and potentially other indications. Under the R&O, we have an obligation to pay myNEO an up-front one-time technology access fee of €138,000 and myNEO is eligible to receive up to €17.5 million in research and development milestone payments and €37.5 million in commercial milestone payments.

GlaxoSmithKline

In July 2020, we entered into a Collaboration and License Agreement with GSK, which we refer to as the 2020 GSK Agreement, pursuant to which we are collaborating with GSK to research, develop and commercialize prophylactic and therapeutic non-replicating mRNA-based vaccines and antibodies targeting infectious disease pathogens. The 2020 GSK Agreement was amended and restated in April 2021, September 2021, February 2022 and March 2022.

GSK paid us an up-front payment of €120 million and is required to pay us a manufacturing capacity reservation fee of €30 million following a certain regulatory milestone event, which is creditable against future milestone payments. We are eligible to receive up to between €28 million to €45 million in development milestone payments, €32 million to €35 million in regulatory milestone payments and €70 million to €100 million in commercial milestone payments, depending on the product. Under the 2020 GSK Agreement, we granted GSK an exclusive option to add additional products in the field of infectious diseases to the license granted under the 2020 GSK Agreement and upon each exercise of such option, and GSK is required to compensate us for certain development costs and pay any accrued milestone payments. GSK additionally has the right to replace products licensed under the 2020 GSK Agreement and if the replacement product was already under development by us, GSK must compensate us for certain development costs and pay any accrued milestone payments. We are additionally eligible to receive tiered royalty payments ranging from a single-digit percentage to a low teens percentage on net sales, subject to certain customary reductions. GSK is required to compensate us for certain development and regulatory costs we may incur in connection with our performance of our obligations under the 2020 GSK Agreement, and we are eligible to receive up to €20,000 in reimbursements for expenses incurred recording or registering the licenses granted under the 2020 GSK Agreement. We retain the right to commercialize products developed under the 2020 GSK Agreement in Germany, Austria and Switzerland, as GSK's exclusive distributor in these markets. Under any such distribution agreement to be entered into between us and GSK, we will be required to purchase supply from GSK and pay GSK a low thirties percentage royalty on net sales. Pursuant to the amendment in September 2021, we and GSK are required to complete certain development activities set forth in updated development plans. We and GSK agree to decide whether the products required for clinical studies will be manufactured by us, GSK or jointly.

Additionally, in April 2021, we entered into a new collaboration agreement with GSK, which we refer to as the GSK COVID Agreement, pursuant to which we are collaborating with GSK to research, develop and manufacture next-generation mRNA vaccines targeting the original SARS-CoV-2 strain as well as emerging variants, including multivalent and monovalent approaches, such as our second-generation COVID-19 vaccine candidate, CV2CoV. These vaccine candidates may either be used to protect unvaccinated individuals or to serve as boosters in the event that SARS-CoV-2 immunity gained from an initial vaccination reduces over time. The GSK COVID Agreement was amended and restated in September 2021 and March 2022. Pursuant to the amendment in September 2021, we and GSK are required to complete certain development activities with respect to the GSK COVID Products set forth in updated development plans. We and GSK agree to decide whether the GSK COVID Products required for clinical studies will be manufactured by us, GSK or jointly.

Under the GSK COVID Agreement, GSK has paid us an up-front payment of €75 million. We and GSK agreed to equally share all development costs for GSK COVID Products, subject to certain exceptions. We and GSK will share all net profits generated from sales of GSK COVID Products, other than Combination Products, under profit sharing arrangements that in certain cases vary depending upon the GSK COVID Product in question, the time of sale, the number of doses sold and the party to whom the sale is made. We are eligible to receive tiered royalty payments ranging from a sub-teen percentage to a mid-teen percentage on net sales of Combination Products, subject to certain customary reductions. Under the GSK COVID Agreement we have the right to commercialize GSK COVID Products in Austria, Germany and Switzerland and if we exercise such right, our sales of GSK COVID Products, other than Combination Products will be subject to the profit share and we will be required to pay GSK a high-teen percentage royalty on net sales of all Combination Products in such countries.

Genmab

In December 2019, we entered into a Collaboration and License Agreement, which we refer to as the Genmab Agreement, with Genmab to research and develop up to four potential differentiated mRNA-based antibody products, to be selected by Genmab, based on the combination of our proprietary RNAntibody technology with Genmab's proprietary antibody technology for the treatment of human diseases. We will collaborate on research to identify an initial product candidate designed to express a certain Genmab proprietary antibody, and we will contribute a portion of the overall costs for the development of such product candidate, until submission of an IND. Genmab will thereafter be responsible for the development and commercialization of the product candidate. Under the Genmab Agreement, we further grant Genmab a license for the preclinical development of up to four additional mRNA antibody product concepts and options to obtain commercial licenses under our mRNA technology to develop, manufacture and commercialize product candidates for up to three of such product concepts.

Under the terms of the Genmab Agreement, Genmab paid us a $10 million up-front fee and made a €20 million equity investment in March 2020. Genmab will be obligated to pay us a $0.5 million reservation fee upon the selection of each additional product concept for development under the Genmab Agreement and $5 million upon selection of a product targeting Genmab's proprietary antibody for further development and commercialization. Genmab is additionally required to pay us up to $30 million in option exercise fees. If Genmab exercises any of its options to obtain commercial licenses for the additional mRNA antibody concepts, Genmab would fund all research and would develop and commercialize any resulting product candidates. We are additionally eligible to receive up to between $25 million and $43 million in development milestone payments, $100 million and $125 million in regulatory milestone payments and $150 million and $200 million in commercial milestone payments for each product, depending on the specific product concept. In addition, we are eligible to receive a mid single-digit to low teens percentage tiered royalty on aggregate net sales of licensed products, on a per-product basis and subject to certain customary reductions. If Genmab grants a sublicense to the initial product candidate developed under the Genmab Agreement before a certain milestone event, Genmab must pay us a one-time $10 million payment. We are responsible for any payments to third parties related to the LNP technology we license to Genmab for use in relation to the initial product candidate developed under the Genmab Agreement and a portion of such payments with respect to LNP technology used in the additional product concepts. We retain an option to participate in development and commercialization of one of the potential additional mRNA antibody product concepts under predefined terms and conditions. In the event we exercise such right, we must pay Genmab a one-time payment of $3 million and refund any option fee paid by Genmab with respect to such product. As of June 30, 2022, we have received $1.0 million in development cost reimbursements and we have not received any reservation, product selection, option exercise or sublicense fees or milestone or royalty payments.

Arcturus

In January 2018, we entered into a Development and Option Agreement, which we refer to as the Arcturus Agreement, with Arcturus, which provides us with access to Arcturus LNP formulation technology which we use in combination with our mRNA technology. We paid Arcturus an up-front fee of $5 million and must pay an extension fee of $1 million if we exercise our option to extend the initial term of the Arcturus Agreement beyond July 2023. We are required to reimburse Arcturus for certain costs incurred in connection with development activities and provide certain FTE funding. We are additionally required to pay up to an aggregate of $5 million in connection with our acceptance of the irrevocable offer to obtain licenses for further development and commercialization of selected targets. As of June 30, 2022, we have not accepted any such irrevocable offer. Under each license agreement to be entered into in connection with our acceptance of the irrevocable offer, to the extent applicable, we will additionally be required to make certain royalty payments, which are not in excess of 10% on net sales of licensed products, and pay Arcturus up to $6 million in development milestone payments, $9 million in regulatory milestone payments and $8 million in commercial milestone payments. As of June 30, 2022, we have made payments totaling $5.5 million to Arcturus reimbursing Arcturus for development costs and in connection with our FTE funding obligations, and we have not accepted the irrevocable offer with respect to any target and therefore have not paid any acceptance fees or made any milestone or royalty payments to Arcturus.

Acuitas

In April 2016, we entered into a Development and Option Agreement, which as amended we refer to as the Acuitas Agreement, with Acuitas, which provides us with access to Acuitas LNP formulation technology that we use in combination with our mRNA technology. We are required to pay Acuitas annual target reservation and maintenance fees of up to $1.4 million if we reserve the maximum number of targets permitted under the Acuitas Agreement and to reimburse Acuitas for certain costs incurred in connection with development activities and certain FTE costs. We are additionally required to pay an option exercise fee ranging from $50,000 to $2 million upon each exercise of our option to obtain a license for further development and commercialization with respect to a selected target, subject to certain additional fees ranging from $10,000 to $200,000 for the exercise of our option for certain other vaccine targets. We paid Acuitas a $5 million up-front fee in connection with an amendment to the Acuitas Agreement dated July 2020 and, upon each exercise of our option to exchange a vaccine target licensed under any non-exclusive license, we are required to pay an exchange fee of $3 million. We additionally paid Acuitas a $3 million up-front fee in connection with an amendment to the Acuitas Agreement dated December 2020 and are required to pay an additional $250,000 in April 2022 and April 2023 for each of certain options not yet exercised. Under each license agreement in connection with our exercise of our option, we will additionally be required to make low single-digit percentage tiered royalty payments and must pay up to between $1.1 million and $9 million in development milestone payments, $1.3 million and $7 million in regulatory milestone payments and $1.3 million and $7 million in commercial milestone payments, depending on whether the license is exclusive or non-exclusive and the number of options exercised to date. As of June 30, 2022, we have exercised our option to obtain a non-exclusive license to sixteen targets, subject to customary closing conditions. As of June 30, 2022, we have paid Acuitas $3.7 million in reservation and option exercise fees and have made payments totaling $8.6 million reimbursing Acuitas for development costs and LNP batches and in connection with our FTE funding obligations.

For each option that we have exercised under the Acuitas Agreement, we have entered into a non-exclusive license agreement with Acuitas with respect to such optioned target, all based on the same form agreement, which we refer to as the Acuitas License Agreements. We are required to pay Acuitas up to between $1.1 million and $1.6 million in development milestone payments, $1.3 million and $1.8 million in regulatory milestone payments and $1.3 million and $1.8 million in commercial milestone payments under each Acuitas License Agreement, and we must pay Acuitas annual fees ranging from $5,000 to $10,000 for any additional protein targeted by a vaccine product licensed under each Acuitas License Agreement after a certain milestone event. We additionally are obligated to pay Acuitas a low single-digit percentage royalty on net sales of licensed products. As of June 30, 2022, we have made $100,000 in development milestone payments to Acuitas with respect to the license agreement relating to Rabies RAV-G, we have made $1.4 million in development milestone payments (Phase I, Phase II and Phase III milestone payments) to Acuitas with respect to the license agreement relating to the SARS-CoV-2 Spike protein S, and we have made $100,000 in development milestone payments to Acuitas with respect to the license agreement relating to the Influenza hemagglutinin (HA) antigen, and have not made any royalty payments.

CRISPR Therapeutics

In November 2017, we entered into a Development and License Agreement, which, as amended by an amendment entered into in June 2020, we refer to as the CRISPR Therapeutics Agreement, with CRISPR Therapeutics, pursuant to which we will develop novel Cas9 mRNA constructs for use in gene editing therapeutics. Under the CRISPR Therapeutics Agreement, we granted CRISPR Therapeutics an exclusive worldwide license to use our improved Cas9 constructs for the development and commercialization of three of its in vivo gene-editing programs for certain diseases.

CRISPR Therapeutics has paid us an up-front one-time technology access fee of $3 million and we are eligible to receive up to $13 million in development milestone payments, $33 million in regulatory milestone payments and $133 million in commercial milestone payments, as well as mid-single-digit percentage royalties from CRISPR Therapeutics on the net sales of licensed products on a product-by-product and country-by-country basis, subject to certain potential customary reductions. Additionally, CRISPR Therapeutics will make payments to us for services provided by us in conjunction with research programs under the CRISPR Therapeutics Agreement. In the event CRISPR Therapeutics exercises its right to sublicense under the agreement, CRISPR Therapeutics must pay us a low teens to mid-twenties percentage of any non-royalty sublicense income, depending on the timing of the sublicense and whether the sublicense is granted through an affiliate of CRISPR Therapeutics. As of June 30, 2022, we have received €3.6 million in payments and we have invoiced €0.6 million for the supply of materials and FTE cost, development reimbursements and up-front one-time technology access fee and no milestone, royalty or sublicense fee payments.

Boehringer Ingelheim

In August 2014, we entered into an Exclusive Collaboration and License Agreement, which we refer to as the Boehringer Agreement, with Boehringer Ingelheim GmbH, or Boehringer Ingelheim, whereby we granted Boehringer Ingelheim exclusive global rights for development and commercialization of our investigational therapeutic mRNA vaccine BI 1361849 (formerly CV9202) formulated with our protamine technology. We received an up-front payment of €30 million, as well as, an option fee payment of €5 million and an additional €7 million in development milestone payments and as of June 30, 2022, we received €7.6 million for the supply of materials and reimbursing us for development costs. In June 2021, Boehringer Ingelheim provided notice of its intention to terminate the Boehringer Agreement. The termination became effective on November 17, 2021. Upon termination of the Boehringer Agreement, the rights and licenses granted by us to Boehringer Ingelheim reverted back to us, provided that Boehringer Ingelheim has the right to sell off existing inventory of BI 1361849 (formerly CV9202) for a certain period. In addition, Boehringer Ingelheim must assign to us all regulatory approvals or applications and grant us a non-exclusive, cost-free, perpetual and worldwide license to intellectual property held by Boehringer Ingelheim that has been used in the development, manufacture or commercialization of BI 1361849 (formerly CV9202) or any other product developed under the Boehringer Agreement. We and Boehringer Ingelheim are currently assessing options to continue a collaboration based on state-of-the-art LNP-based formulations.

Bill & Melinda Gates Foundation

In May 2014, we were awarded a grant from the Bill & Melinda Gates Foundation for the development of a vaccine for rotaviruses, as amended in November 2020, for up to $2.8 million in funding. As of June 30, 2022, we have received $3.0 million in funding under the agreement. In March 2015, the Bill & Melinda Gates Foundation made an equity investment of $40 million to support continued development of our RNA technology platform and the construction of an industrial-scale cGMP production facility. We entered into a Global Access Commitments Agreement with the Bill & Melinda Gates Foundation in February 2015 pursuant to which we are required to take certain actions to support the Bill & Melinda Gates Foundation mission. In connection with the investment by the Bill & Melinda Gates Foundation, we are required to conduct development activities for up to three concurrent projects to be proposed by the Bill & Melinda Gates Foundation. The costs of such projects will be allocated on a project-by-project basis in proportion to the allocation of the expected benefits.

In November 2016, in connection with the Global Access Commitments Agreement, we were awarded a grant for up to $0.9 million in funding from the Bill & Melinda Gates Foundation for the development of a vaccine for picornaviruses. As of June 30, 2022, we have received $0.7 million in funding under the picornaviruses grant agreement. In November 2017, we were awarded two additional grants each for up to $1.9 million and $1.5 million in funding from the Bill & Melinda Gates Foundation for the development of a universal influenza and a malaria vaccine, respectively. By an amendment entered into November 2020, our grant for the development of a malaria vaccine was increased by an additional $0.8 million. As of June 30, 2022, we have received $1.9 million and $2.2 million, respectively, in funding under each grant agreement.

Coalition for Epidemic Preparedness Innovations

In February 2019, we entered into a framework partnership agreement, which as amended we refer to as the CEPI Agreement, with the Coalition for Epidemic Preparedness, or CEPI, to develop our RNA Printer using certain intellectual property controlled by us covering the development and manufacture of mRNA products, as well as certain additional intellectual property licensed to us. In connection with the CEPI Agreement we have entered into work orders for the preclinical development of a Lassa virus vaccine, a yellow fever vaccine and our rabies virus vaccine. In addition, we entered into a work package for the preclinical development and a Phase 1 clinical trial for our first-generation COVID-19 vaccine candidate, CVnCoV. The CEPI Agreement terminated in Feburary 2022, except with respect to certain ongoing projects, which are contemplated to be completed in March 2023. CEPI agreed to contribute up to $34 million in funding for projects undertaken under the CEPI Agreement and an additional $15.3 million in connection with development of CVnCoV. As of June 30, 2022, we have received €27.1 million in funding for projects undertaken under the CEPI Agreement.

Tesla Automation

In November 2015, we entered into a development and intellectual property agreement, which we refer to as the Tesla Automation Agreement, with Tesla Automation, formerly trading under the name of Tesla Grohmann Automation, pursuant to which Tesla Automation agreed to design, develop and manufacture certain automated manufacturing machines on our behalf. We are obligated to pay Tesla Automation a fee for each machine delivered by Tesla Automation and up to $50 million to $60 million in commercial milestone payments as well as certain development costs under each associated work order. As of June 30, 2022, we have paid Tesla Automation €16 million to €17 million in development costs under various work orders, and we have not paid any fees for machines provided under the Tesla Automation Agreement or made any milestone payments.

Advance Purchase Agreement for our First-Generation COVID-19 Vaccine Candidate

On November 30, 2020, we entered into an APA with the EC, acting on behalf and in the name of all Member States of the European Union, which provided for the advance purchase by the Member States of 225 million doses of the vaccine to be allocated among the Member States and the option to purchase up to an additional 180 million doses. Pursuant to the APA, we received an up-front payment of €450 million. Such up-front payment had to be used solely for the development and commercial supply of CVnCoV. We are required to return any unspent amounts of the up-front payment if, among others, we fail to successfully develop CVnCoV or if we successfully develop CVnCoV, but we do not receive EU marketing authorization or fail to supply any doses of CVnCoV to any of the Member States by late 2021, unless we and the EC mutually agree to a later date. In October 2021, we notified the EC of the withdrawal of our regulatory approval application for CVnCoV, which notification automatically terminated the APA. According to the APA, in such case of termination, CureVac would only return the unspent amount of the up-front payment. In the context of the APA, “spent” means either costs incurred or commitments made in connection with the purposes set forth in the APA. On March 8, 2022, we received a letter signed by the EC acknowledging and outlining that we will not be required to return any portion of the up-front payment. Due to the termination of the APA, we will not receive any further payments related to the APA.

In other respects, upon the EC’s request, we will transfer any raw materials and/or primary components paid for with the up-front payment that were not used as of the termination date. Additionally, should the EC request, or should we successfully sell, any raw materials and/or primary components, then an applicable portion of such raw materials, primary components or proceeds, as the case may be, will be remitted to the EC. This repayment agreement expires at the end of 2022.

Acquisition of Frame Pharmaceuticals

On June 8, 2022, we entered into a Share Purchase Agreement ("SPA"), to acquire all of the issued and outstanding shares of Frame Pharmaceuticals B.V., domiciled in Amsterdam, the Netherlands, a private company with limited liability (*besloten vennootschap met beperkte aansprakelijkheid*), organized and existing under the laws of the Netherlands, focused on advanced genomics and bioinformatics to identify both unique and shared neoantigens across different cancer types. Under the SPA, the total consideration for the purchase was €34 million, conditioned on certain development milestone payments, as described therein. This acquisition serves to complement and strengthen our discovery capabilities to identify and validate promising neoantigens for our mRNA cancer vaccine programs and could strongly increase the likelihood of developing highly effective cancer vaccines for patients.

Financial Operations Overview

Revenue

To date, our revenues have consisted of up-front licensing payments, milestone payments, product sales and compensation for research and development services, all of which relate to our license and collaboration agreements. Certain of these payments are initially recorded on our statement of financial position and are subsequently recognized as revenue in accordance with our accounting policy as described further in note 3 to our audited consolidated financial statements included in the Annual Report.

Cost of Sales

Cost of sales consists primarily of personnel costs, costs for materials and third party services, including any relating to written-off inventory, as well as maintenance and lease costs, and depreciation and amortization. Costs of sales includes costs of product sales, idle production costs and costs from set-up and quality assurance activities for our production processes, including those relating to pharmaceutical products which are under development in our collaboration agreements and for which we have not yet generated revenues. See "Research and Development Expenses" below for additional information on recognition of costs relating to pre-launch products.

Selling and Distribution Expenses

Selling and distribution expenses primarily consist of personnel expenses which include salary and salary-related expenses and expenses from share-based compensation.

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for our research and preclinical and clinical development activities, including our product discovery efforts and certain activities relating to the design of GMP-manufacturing facilities. Research and development expenses contain wages and salaries, share-based compensation, fringe benefits and other personnel costs, the costs of clinical testing and the associated clinical production costs, research material production costs, fees for contractual partners, consultants and other third parties, fees to register legal rights, amortization of licensed software and intellectual property as well as costs for plant and facilities. Research and development expenses contain costs for independent research and development work as well as work carried out in the context of collaboration and licensing agreements; such expenses include all costs related to research and development services delivered under our collaboration arrangements. Additionally, prior to initial regulatory approval, if any, costs relating to production of products are expensed as research and development expenses in the period incurred. If pre-launch products are sold, the respective product gross margin may be higher compared to the expected recurring margin, as the underlying costs will not be included in cost of sales as they will have been recognized in research and development expense in the period incurred.

We expense research and development expenses as incurred. We recognize costs for certain development activities, such as preclinical studies and clinical trials, based on an evaluation of the progress to completion of specific tasks. We use information provided to us by our vendors such as patient enrollment or clinical site activations for services received and efforts expended. We expect to incur significant expenses related to such second-generation vaccine candidates. But, as we and GSK agreed to equally share the development costs for GSK COVID products, our current level of research and development expenses will not continue to increase in the level as it did from 2020 to 2021. Once we conclude our research and development efforts related to a selected second-generation vaccine candidate, we expect that our research and development expenses shall be consistent with our past trends before the COVID-19 pandemic, but we may find it necessary to continue such current trend with respect to our research and developments expenses or we may continue to increase further our research and development expenses. For example, we may continue to increase our research and development expenses for future research and development related to the next generations of our COVID-19 vaccine candidates, such as for our second-generation COVID-19 vaccine candidates or may pursue new indications with our technology platform.

General and Administrative Expenses

General and administrative expenses generally include wages and salaries, share-based compensation, fringe benefits and other personnel costs of our senior management and administrative personnel, costs for professional services, including legal, audit and consulting services and costs of facilities and office expenses.

Results of Operations

Comparison of the Six Months Ended June 30, 2021 to the Six Months Ended June 30, 2022

We have based the following discussion of our financial condition and results of operations on our unaudited interim condensed consolidated financial statements for the six months ended June 30, 2021 and 2022 and the notes thereto, included elsewhere in this Report of Foreign Private Issuer on Form 6-K.

Our historical results for the six months ended June 30, 2021 and 2022 are not necessarily indicative of results to be expected for a full year or any other interim period.

The following table summarizes our consolidated results of operations for the six months ended June 30, 2021 and 2022:

	For the Six Months Ended June 30,	
	2021	2022
(in thousands of euros, except per share data)	(unaudited)	
Statement of Operations and Comprehensive Income (Loss) Data:		
Revenue	32,425	44,519
Cost of sales	(53,156)	(79,913)
Selling and distribution expenses	(1,029)	(819)
Research and development expenses	(236,267)	(22,422)
General and administrative expenses	(50,651)	(51,678)
Other operating income	45,234	35,207
Other operating expenses	(214)	(461)
Operating loss	**(263,658)**	**(75,567)**
Finance income	7,296	5,343
Finance expenses	(8,065)	(2,535)
Loss before income tax	**(264,427)**	**(72,759)**
Income tax benefit (expense)	(1,329)	82
Net loss	**(265,756)**	**(72,677)**
Other comprehensive income/loss:		
Items that may be subsequently reclassified to profit or loss		
Foreign currency adjustments	(30)	(212)
Total comprehensive loss	**(265,786)**	**(72,889)**
Net loss per share (basic and diluted)	**(1.44)**	**(0.39)**

Revenue

Revenue was €44.5 million for the six months ended June 30, 2022, representing an increase of €12.1 million, or 37%, from €32.4 million for the six months June 30, 2021. The increase was primarily driven by increased revenues from our collaborations with GSK including €5.3 million from recognition of a development milestone for advancing our seasonal influenza mRNA vaccine candidate into clinical trials. In total, for both the 2020 GSK agreement and the GSK COVID Agreement, revenue of €43.0 million was recognized for the six months ended June 30, 2022.

Cost of Sales

Cost of sales was €79.9 million for the six months ended June 30, 2022, representing an increase of €26.7 million, or 50%, from €53.2 million for the six months ended June 30, 2021. The increase was primarily attributable to increased write-off for raw materials which were procured for manufacturing products to sell to GSK, that are now no longer expected to be used due to a decline in production planning following the transfer of reserved production capacity to a CMO to GSK (as described in the "Other Operating Income" section below).

	For the Six Months Ended June 30,	
	2021	2022
(in thousands of euros)	(unaudited)	
Personnel	(9,390)	(13,869)
Materials	(2,912)	(36,883)
Third party services	(31,388)	(19,516)
Maintenance and lease	(2,543)	(1,150)
Amortization, depreciation and derecognition	(1,594)	(8,326)
Other	(5,329)	(169)
Total	**(53,156)**	**(79,913)**

Selling and Distribution Expenses

Selling and distribution expenses were €0.8 million for the six months ended June 30, 2022 and were relatively unchanged compared to the six months ended June 30, 2021.

	For the Six Months Ended June 30,	
	2021	2022
(in thousands of euros)	(unaudited)	
Personnel	(664)	(560)
Amortization and depreciation	(43)	(32)
Other	(322)	(227)
Total	**(1,029)**	**(819)**

Research and Development Expenses

Research and development costs were €22.4 million for the six months ended June 30, 2022, representing a decrease of €214.0 million, or 91%, from €236.4 million for the six months ended June 30, 2021. The decrease was primarily attributable to significantly lower research and development costs. 2021 was highly impacted from the start of our Phase 2/3 clinical trial for CVnCoV. As of December 2021, we recognized a provision for all remaining costs related to the CVnCoV clinical trials. During the first six months of 2022, thereafter, more participants exited the trials earlier than originally estimated and in addition, we were able to renegotiate the

existing contracts. As a result of these changes, our estimated remaining costs decreased and, thus, we recognized a gain from the reversal of €21.3 million of the provision.

(in thousands of euros)	For the Six Months Ended June 30, 2021 (unaudited)	2022 (unaudited)
Materials	(5,928)	(23,419)
Personnel	(15,219)	(14,849)
Amortization and depreciation	(1,795)	(2,119)
Patents and fees to register a legal right	(1,413)	(1,354)
Third party services	(210,590)	21,053
Maintenance and lease	(142)	(464)
Other	(1,180)	(1,270)
Total	**(236,267)**	**(22,422)**

The following table reflects our research and development costs for each of our programs for the six months ended June 30, 2021 and 2022:

(in thousands of euros)	For the Six Months Ended June 30, 2021 (unaudited)	2022 (unaudited)
Key Programs (CV8102, CV7202, CV2CoV and CVnCoV)		
CV8102	(3,051)	(1,414)
CV7202	(145)	(120)
CV2CoV	(2,752)	(10,990)
CVnCoV	(206,933)	18,300
Other Research and Development Programs	(2,116)	(3,215)
Unallocated costs(1)	(21,270)	(24,983)
Total	**(236,267)**	**(22,422)**

(1) Unallocated costs primarily consist of costs associated with personnel expenses, patents and fees to register a legal right, amortization and depreciation, maintenance and lease expenses, certain third party service expenses and certain material expenses.

We expect that our research and development expenses will constitute the most substantial part of our expenses in future periods in line with the advance and expansion of the development of our product candidates.

Due to our accelerated efforts in 2021 to develop our first-generation COVID-19 vaccine candidate, CVnCoV, we incurred research and development expenses that significantly exceeded our historical levels of research and developments expenses. Additionally, our October 2021 notification to the European Commission of the withdrawal of our regulatory approval application for CVnCoV resulted in our recognition of several expenses, which have contributed to our increased expense levels, but which we do not expect to recur in future periods. In April 2021, we entered into a collaboration agreement with GSK for the development of a broad second-generation COVID-19 vaccine program. CV2CoV, a non-chemically modified mRNA, encoding the prefusion stabilized full-length spike protein of the SARS-CoV-2 virus, and formulated within LNPs, is the first representative of our second-generation COVID-19 vaccine program presently at a preclinical development stage. Within the second-generation COVID-19 vaccine program, we plan to extend our technology platform also to chemically modified mRNA constructs to allow for data-driven selection of the best candidate. We expect to incur significant expenses related to such second-generation vaccine candidates. But, as we and GSK agreed to equally share the development costs for GSK COVID products, our current level of research and development expenses will not continue to increase in the level as it did from 2020 to 2021.

Considering that, our research and development expenses primarily relate to the following key programs:

- Our second-generation mRNA vaccine program, CV2CoV against SARS-CoV-2, which is being co-developed with GSK. On March 30, 2022, we announced the start of the Phase 1 clinical trial for CV2CoV, with a study of modified mRNA expected to follow.

- Our lead oncology program, CV8102, which is currently in a Phase 1 dose escalating clinical trial for four types of solid tumors as a monotherapy and in combination with anti-PD-1 and an expansion of the Phase 1 study to confirm the safety, tolerability and efficacy of CV8102 at a 600µg dose, the selected dose to be advanced in a Phase 2 clinical trial.

- Our vaccine program, CV7202, which is currently in a Phase 1 clinical trial as a vaccine candidate for rabies.

General and Administrative Expenses

General and administrative expenses were €51.7 million for the six months ended June 30, 2022, representing an increase of €1.0 million, or 2%, from €50.7 million. The increase was primarily attributable to increases in amortization and depreciation and legal and other professional services partially offset by less third-party services.

	For the Six Months Ended June 30,	
	2021	2022
(in thousands of euros)	(unaudited)	
Personnel	(19,362)	(18,971)
Maintenance and lease costs	(1,230)	(2,704)
Third party services	(18,785)	(12,796)
Legal and other professional services	(3,491)	(5,320)
Amortization and depreciation	(3,325)	(6,091)
Other	(4,458)	(5,796)
Total	**(50,651)**	**(51,678)**

Other Operating Income

Other operating income was €35.2 million for the six months ended June 30, 2022, representing a decrease of €10.0 million, or 22%, from €45.2 million for the six months ended June 30, 2021.

In March 2022, CureVac AG and GlaxoSmithKline Biologicals SA amended and restated the 2020 GSK Agreement and the GSK COVID Agreement in connection with GSK entering into a direct Agreement with Novartis relating to the use of the Novartis as CMO at the same time as CureVac exits its CMO agreement with Novartis and is released from its pre-existing capacity commitments under the agreement. As a result, the Company will avoid an outflow of resources. Additionally, under the restated agreement, CureVac was entitled to further compensation by GSK. The compensation mainly consists of consideration for set-up activities undertaken by CureVac (€20.5 million) and for reimbursement of prepayments (€12.0 million). In 2021 the other income was primarily attributable to amounts recognized from grants from government agencies and similar bodies, primarily the German Federal Ministry of Education and Research, or BMBF.

Other Operating Expense

Other operating expense was €0.5 million for the six months ended June 30, 2022, relatively unchanged compared to the six months ended June 30, 2021.

Finance Income

Finance income was €5.3 million for the six months ended June 30, 2022, representing a decrease of €2.0 million, or 27%, from €7.3 million for the six months ended June 30, 2021. The decrease was attributable to lower foreign exchange gains.

Finance Expenses

Finance expenses were €2.5 million for the six months ended June 30, 2022, representing a decrease of €5.6 million, or 69%, from €8.1 million for the six months ended June 30, 2021. The decrease was mainly attributable to less negative interest on cash, which is being held in liquid funds available for use for CV2CoV development and other manufacturing activities.

Income Tax Benefit (Expense)

An income tax benefit of €0.1 million was generated for the six months ended June 30, 2022, representing a decrease of €1.4 million, from an income tax expense of €1.3 million generated for the six months ended June 30, 2021. The decrease to a benefit was primarily attributable to deferred tax income on temporary differences.

Liquidity and Capital Resources

Our financial condition and liquidity is and will continue to be influenced by a variety of factors, including:

- our ability to generate cash flows from our operations;
- future indebtedness and the interest we are obligated to pay on this indebtedness;
- the availability of public and private debt and equity financing;
- changes in exchange rates which will impact our generation of cash flows from operations when measured in euros; and
- our capital expenditure requirements.

Overview

Since inception, we have incurred significant operating losses. For the six months ended June 30, 2021 and 2022, we incurred net losses of €265.8 million and €72.7 million, respectively. To date, we have financed our operations primarily through the IPO in August 2020, the public offering in February 2021, private placements of equity securities, issuance of convertible debt, grants from government agencies and similar bodies and payments for collaborative research and development services. Our cash and cash equivalents as of June 30, 2022 were €573.6 million. Our primary cash needs are to fund our non-clinical and clinical development programs, for working capital requirements and for capital expenditures. We believe our existing cash, cash equivalents, borrowings available to us, receipts from grants and short-term investments will enable us to fund our operating expenses and capital expenditure requirements at least through the end of 2023. We have based this estimate on assumptions that may prove to be wrong, and we could exhaust our available capital resources sooner than we expect.

In September 2021, we entered into a sales agreement, the Open Sale Agreement, with Jefferies LLC and SVB Securities LLC, as sales agents, to establish an at-the-market offering program ("ATM Program"), pursuant to which we may sell, from time to time, ordinary shares for aggregate gross proceeds of up to $600.0 million. In June 2022, 340,015 shares were issued for the ATM and expenses in connection with the ATM were booked against equity.

Comparative Cash Flows

Comparison of the six months ended June 30, 2021 and 2022

The following table summarizes our cash flows from operating, investing and financing activities for the periods indicated:

	For the Six Months Ended June 30,	
	2021	2022
	(in thousands of euros) (unaudited)	
Net cash flow from (used in):		
Operating activities	(274,898)	(201,175)
Investing activities	(73,717)	(44,715)
Financing activities	378,845	3,409
Effect of currency translation gains on cash and cash equivalents	2,989	4,583
Overall cash inflow	**33,219**	**(237,898)**

Operating Activities

Net cash used in operating activities for the six months ended June 30, 2022 was €201.2 million as compared to net cash used in operating activities of €274.9 million for the six months ended June 30, 2021. The decrease in net cash in operating activities was primarily attributable to less prepayments for service agreements with Contract Research Organizations and Contract Manufacturing Organizations.

Investing Activities

Net cash used in investing activities for the six months ended June 30, 2022 was €44.7 million as compared to net cash used in investing activities of €73.7 million for the six months ended June 30, 2021. The change in cash flows from investing activities was primarily attributable to decreased purchases of property, plant and equipment for manufacturing facilities and intangible assets.

Financing Activities

Net cash used by financing activities was €3.4 million for the six months ended June 30, 2022 as compared to cash provided by financing activities of €378.8 million for the six months ended June 30, 2021. The decrease in cash flow provided by financing activities was mainly attributable to the raising of cash in the follow-on public offering, which closed in February 2021.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources, except for those noncancellable contractual obligations from certain of our arrangements with contract manufacturing organizations disclosed in "Liquidity and Capital Resources" and "Contractual Obligations and Commitments."

Safe Harbor

See "Forward-Looking Statements."

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with International Financial Reporting Standards, or the IFRS, as issued by the International Accounting Standards Board, or IASB. Some of the accounting methods and policies used in preparing the financial statements under IFRS are based on complex and subjective assessments by our management or on estimates based on past experience and assumptions deemed realistic and reasonable based on the circumstances concerned. The actual value of our assets, liabilities and shareholders' equity and of our earnings could differ from the value derived from these estimates if conditions changed and these changes had an impact on the assumptions adopted.

Our significant accounting policies that we believe to be critical to the judgments and estimates used in the preparation of our financial statements are included in "note 3 — Basis of preparation" to our audited consolidated financial statements included in the Annual Report.

Recent Accounting Pronouncements

We have applied, in our audited consolidated financial statements for the year ended December 31, 2021, new standards and amendments as issued by IASB and that are mandatory as of January 1, 2021. See note 2 to our audited consolidated financial statements included in the Annual Report.

We have applied, in our unaudited interim condensed consolidated financial statements for the six months ended June 30, 2022, new standards and amendments as issued by IASB and as issued by IASB and that are mandatory as of January 1, 2021. See note 2 to our unaudited interim condensed consolidated financial statements included elsewhere in this Report of Foreign Private Issuer on Form 6-K for further information on these new standards and amendments.