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, 2023

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	\boxtimes	Form 40-F	
Indicate by check mark if the registrant is submitting the Form 6-K in pape		submitting the Form 6-K in paper as	permitted by Regulation S	-T Rule 101(b)(1):
	Yes		No	\boxtimes
Indicate by ch	eck mark if the registrant is s	submitting the Form 6-K in paper as	permitted by Regulation S	-T Rule 101(b)(7):
	Yes		No	\boxtimes

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, 2023 and for the three and six month periods ended June 30, 2023 and 2022; and (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, 2023 and for the six month periods ended June 30, 2023 and 2022.

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/Alexander Zehnder

Chief Executive Officer

Date: August 17, 2023

EXHIBIT INDEX

EXHIBIT NO.	DESCRIPTION
99.1	Unaudited Interim Condensed Consolidated Financial Statements as of June 30, 2023 and for three and six months
	ended June 30, 2023 and 2022
99.2	Management's Discussion and Analysis of Financial Condition and Results of Operations



Unaudited Interim Condensed Consolidated Financial Statements

As of June 30, 2023 and December 31, 2022 and for the three and six months ended June 30, 2023 and 2022

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

	Note	Three months ended June 30, 2022 2023		Six months er 2022	<u>1ded June 30,</u> 2023
(in thousands of EUR, except per share amounts)	11010	(unaudited)		(unaudite	
Revenue	3.1	20,146	7,579	44,519	14,708
Cost of sales	3.2	(42,681)	(25,854)	(79,913)	(46,489)
Selling and distribution expenses	3.3	(548)	(1,408)	(819)	(2,232)
Research and development expenses	3.4	(11,635)	(30,868)	(22,422)	(55,118)
General and administrative expenses	3.5	(27,112)	(22,245)	(51,678)	(45,532)
Other operating income	3.6	1,771	1,442	35,207	3,448
Other operating expenses		(238)	(447)	(461)	(942)
Operating loss		(60,298)	(71,801)	(75,567)	(132,157)
Finance income		3,322	6,197	5,343	10,085
Finance expenses		(594)	(1,783)	(2,535)	(2,734)
Loss before income tax		(57,570)	(67,387)	(72,759)	(124,806)
Income tax benefit/ (expense)	13	(14)	(26)	82	(27)
Net loss for the period		(57,584)	(67,414)	(72,677)	(124,833)
Other comprehensive income (loss):					
Foreign currency adjustments		(158)	(3)	(212)	16
Total comprehensive loss for the period		(57,742)	(67,416)	(72,889)	(124,816)
Net loss per share (basic and diluted)	15	(0.31)	(0.30)	(0.39)	(0.57)

Interim Condensed Consolidated Statements of Financial Position

	Note	December 31, 2022	June 30, 2023
(in thousands of EUR)			(unaudited)
Assets			
Non-current assets	C 1	21 770	21 700
Intangible assets and goodwill	6.1	31,778	31,700
Property, plant and equipment	6.2	197,941	219,539
Right-of-use assets		43,761	42,031
Other assets		1,666	1,704
Deferred tax assets		1,297	1,296
Total non-current assets		276,443	296,270
Current assets	_		
Assets held for sale	7	10,467	9,954
Inventories	8	23,989	22,194
Trade receivables	3.1	6,295	6,443
Contract assets	3.1	2,707	119
Other financial assets	10	4,487	5,354
Prepaid expenses and other assets	9	40,287	21,221
Cash and cash equivalents	10	495,797	537,925
Total current assets		584,029	603,210
Total assets		860,472	899,480
Equity and liabilities			
Equity	4		
Issued capital		23,400	26,866
Capital reserve		1,817,287	2,052,951
Treasury Shares		(1,481)	—
Accumulated deficit		(1,305,814)	(1,430,647)
Other comprehensive income		(139)	(123)
Total equity		533,253	649,047
Non-current liabilities			
Lease liabilities		37,106	35,276
Contract liabilities	3.1	72,549	58,862
Provisions	12	61,320	
Other liabilities		19	19
Total non-current liabilities		170,994	94,157
Current liabilities			
Lease liabilities		4,980	5,205
Trade and other payables	11	73,463	13,419
Provisions	12	1,922	61,608
Other liabilities	12	40,491	35,514
Income taxes payable		610	629
Contract liabilities	3.1	34,759	39,901
Total current liabilities		156,225	156,276
Total liabilities		327,219	250,433
Total equity and liabilities		860,472	899,480
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Interim Condensed Consolidated Statements of Changes in Shareholders' Equity for the six months ended June 30, 2023 and 2022

(in thousands of EUR) Balance as of January 1, 2022	Issued capital 22,454	Capital reserve 1,728,658	Treasury Shares (5,817)	Accumulated deficit (1,056,785)	Currency translation reserve (34)	Total equity 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

(in thousands of EUR) Balance as of January 1, 2023	Issued capital 23,400	Capital reserve 1,817,287	Treasury Shares (1,481)	Accumulated deficit (1,305,814)	Currency translation <u>reserve</u> (139)	Total equity 533,253
	20,400	1,017,207	(1,401)		(100)	
Net loss	_		_	(124,833)		(124,833)
Other comprehensive income (loss)					16	16
Total comprehensive income (loss)	_	_	_	(124,833)	16	(124,816)
Share-based payments		4,572	_			4,572
Issuance of share capital (net of transaction costs)	3,453	232,387	—			235,840
Settlement of share-based payment awards	13	(1,295)	1,481			199
Balance as of June 30, 2023 (unaudited)	26,866	2,052,951		(1,430,647)	(123)	649,047

Interim Condensed Consolidated Statements of Cash Flows

	For the six months ender	
(in thousands of EUR)	<u> </u>	2023
Operating activities	(unuunted)	
Loss before income tax	(72,759)	(124,806)
Adjustments to reconcile loss before tax to net cash flows		())
Finance income	(5,343)	(10,085)
Finance expense	2,536	2,734
Depreciation and impairment of property, plant and equipment and right-of-use assets	16,651	11,489
Loss on disposal of fixed assets		694
Impairment of inventory and prepayments	25,687	6,879
Share-based payment expense	3,597	4,572
Non-cash income from release of provisions	(47,242)	(1,634)
		())
Working capital changes		
Decrease / (increase) in assets held for sale	_	513
Decrease / (increase) in trade receivables and contract assets	5,164	2,440
Decrease / (increase) in inventory	16,367	(5,084)
Decrease / (increase) in other assets	(14,051)	18,751
(Decrease) / increase in trade and other payables, other liabilities and contract liabilities	(129,038)	(76,002)
Decrease / (increase) in deferred taxes	(10)	(25)
Income taxes paid	(126)	18
Interest received		6,838
Interest paid	(2,608)	(994)
Net cash flow (used in) operating activities	(201,175)	(163,702)
Investing activities		
Purchase of property, plant and equipment	(43,507)	(27,222)
Purchase of intangible assets	(1,208)	(147)
Net cash flow (used in) investing activities	(44,715)	(27,369)
Financing activities		
Payments on lease obligations	(1,943)	(2,526)
Proceeds from the issuance of Shares (net of transaction costs)	4,721	235,840
Payment on / proceeds from treasury shares/exercise of options	631	199
Net cash flow provided by financing activities	3,409	233,513
Net increase (decrease) in cash and cash equivalents	(242,481)	42,442
Currency translation gains (losses) on cash and cash equivalents	4,583	(314)
Cash and cash equivalents, beginning of period	811,464	495,797
	573,566	537,925
Cash and cash equivalents, end of period	070,000	557,523

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 77798031. 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. 37 - 46 % 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 three and six months ended June 30, 2023, 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, 2022. The interim condensed consolidated financial statements were authorized by the Management Board for presentation to the Supervisory Board on August 16, 2023. 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. Due to rounding, differences may arise when individual amounts or percentages are added together.

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, 2022. The new and amended standards and interpretations applied for the first time as of January 1, 2023, as disclosed in the notes to the consolidated financial statements as of December 31, 2022, had no impact on the interim condensed consolidated financial statements of the Group as of and for the three and six months ended June 30, 2023. 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 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 the Group's laboratory and production operations.

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 patent 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 Statements of Operations

3.1 Revenue from contract with customers

The Group recognized the following revenues:

	Three months ended June 30,		Six months en	ded June 30,
	2022 2023		2022	2023
	EUR k	EUR k	EUR k	EUR k
Belgium				
GSK	19,295	6,283	43,041	12,756
Switzerland				
CRISPR	406	844	586	1,053
Netherlands				
Genmab	445	452	892	899
Total	20,146	7,579	44,519	14,708

Of these revenues, all of which were recognized over time as part of collaboration agreements, during the six months ended June 30, 2023 EUR 8,545k (June 30, 2022: EUR 31,818k) related to (i) delivery of research services combined with an IP license (recognized from the upfront payments and achievement of certain milestones as further illustrated in the table below), (ii) EUR 903k (June 30, 2022: EUR 431k) related to delivery of products and (iii) EUR 5,260k (June 30, 2022: EUR 12,270k) were recognized from research and development services that are considered distinct from other performance obligations in the agreements.

Of the total revenues recognized, in the six months ended June 30, 2023, EUR 12,756k 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, 2023, also includes recognition of EUR 755k of the milestone amount (June 30, 2022: EUR 5,321k). The remaining EUR 2,989k of the milestone amount is deferred as contract liability and will be recognized into revenue through the latest expected submission to authorities, 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, 2022, revenue consisted of EUR 43,041k primarily recognized from the upfront payments under both collaboration agreements 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 and milestone payments	Upfront and milestones payments included in contract liabilities at December 31, 2022 (EUR k)	Upfront and milestones payments included in contract liabilities at June 30, 2023 (EUR k)
	EUR 205,000k (EUR	(EOK K)	(EUK K)
	10,000k milestone payment		
GSK	included)	102,804	95,307
	USD 3,000k (EUR		
CRISPR	2,524k)*	929	775
	USD 10,000k (EUR		
Genmab	8,937k)*	3,575	2,681
Total		107,308	98,763

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

	Revenue recognized from upfront and milestones payments for three months ended for six months ended			
	Jun			e 30,
Customer	2022	2023	2022	2023
	(EUR k)	(EUR k)	(EUR k)	(EUR k)
GSK	13,051	3,873	30,769	7,496
CRISPR	77	77	155	155
Genmab	447	447	894	894
Total	13,575	8,545		

Contract balances:

	December 31, 2022 EUR k	June 30, 2023 EUR k
Trade receivables	6,295	6,443
Contract assets	2,707	119
Contract liabilities	107,308	98,763

3.2 Cost of sales

The cost of sales consists of the following:

	Three months e	ended June 30,	Six months en	ded June 30,
	2022	2022 2023		2023
	EUR k	EUR k	EUR k	EUR k
Personnel	(5,933)	(9,371)	(13,869)	(17,559)
Materials	(14,055)	(8,096)	(36,883)	(12,630)
Third-party services	(18,552)	(6,386)	(19,516)	(11,839)
Maintenance and lease	(919)	(534)	(1,150)	(1,115)
Amortization and depreciation	(3,158)	(1,049)	(8,326)	(2,219)
Other	(64)	(418)	(169)	(1,127)
Total	(42,681)	(25,854)	(79,913)	(46,489)

For the six months ended June 30, 2023, cost of sales decreased in comparison to corresponding period in 2022. This decline was primarily attributable to higher material costs in the prior year, which were driven by write-offs of raw materials originally procured for the manufacturing of products intended to be sold to GSK. However, these raw materials were no longer expected to be sold to them. Personnel expenses increased mainly due to increased workforce in the manufacturing organization.

3.3 Selling and distribution expenses

Selling and distribution expenses consist of the following:

	Three months ended June 30,		Six months ended June	
	2022	2023	2022	2023
	EUR k	EUR k	EUR k	EUR k
Personnel	(363)	(1,314)	(560)	(2,030)
Amortization and depreciation	(16)	(6)	(32)	(6)
Other	(169)	(88)	(227)	(196)
Total	(548)	(1,408)	(819)	(2,232)

3.4 Research and development expenses

R&D expenses consists of the following:

Three months ended June 30,		Six months ended June 3	
2022	2023	2022	2023
EUR k	EUR k	EUR k	EUR k
(6,131)	(5,728)	(23,419)	(9,217)
(7,795)	(12,533)	(14,849)	(23,570)
(1,106)	(1,783)	(2,119)	(3,508)
502	(1,191)	(1,354)	(2,048)
4,252	(7,081)	21,053	(11,773)
(428)	(1,827)	(464)	(3,593)
(929)	(727)	(1,270)	(1,410)
(11,635)	(30,868)	(22,422)	(55,118)
	2022 EUR k (6,131) (7,795) (1,106) 502 4,252 (428) (929)	2022 2023 EUR k EUR k (6,131) (5,728) (7,795) (12,533) (1,106) (1,783) 502 (1,191) 4,252 (7,081) (428) (1,827) (929) (727)	$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$

During the six months ended June 30, 2023, research and development expenses increased in comparison to the same period of 2022, as the prior year period was largely impacted by the reversal of provision for onerous contracts in the amount of EUR 21,303k as a result of more participants leaving the clinical trials, prior to completion, than originally estimated and of renegotiations of contracts with CROs. Additionally in 2022, GSK took over the Group's committed capacity at Novartis (see Note 3.6 for additional information) which resulted in a reduction in the estimated contract termination provisions in the amount of EUR 25,059k. The net effect of these two events resulted in an overall gain within the Third-party services category.

Personnel expenses increased mainly due to increased workforce and the acquisition of Frame Pharmaceuticals. Additionally, sharebased payment expense was higher compared to prior year period (refer to Note 5 for further details).

As of June 30, 2023, the Group had no development expenditures which met the requirements for capitalization and thus none have been capitalized.

3.5 General and administrative expenses

General and administrative expenses consist of the following:

Three months ended June 30,		Six months en	ded June 30,
2022	2023	2022	2023
EUR k	EUR k	EUR k	EUR k
(9,190)	(6,644)	(18,971)	(15,742)
(1,404)	(1,614)	(2,704)	(2,915)
(7,514)	(5,871)	(12,796)	(12,873)
(2,995)	(4,446)	(5,320)	(6,074)
(3,152)	(2,965)	(6,091)	(6,071)
(2,857)	(705)	(5,796)	(1,857)
(27,112)	(22,245)	(51,678)	(45,532)
	2022 EUR k (9,190) (1,404) (7,514) (2,995) (3,152) (2,857)	2022 2023 EUR k EUR k (9,190) (6,644) (1,404) (1,614) (7,514) (5,871) (2,995) (4,446) (3,152) (2,965) (2,857) (705)	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

Personnel expenses decreased due to lower workforce in the corporate service functions.

Others include mainly expenses for D&O insurance and allocations.

3.6 Other operating income

	Three months ended June 30,		Six months e	ended June 30,
	2022	2023	2022	2023
	EUR k	EUR k	EUR k	EUR k
Compensation for CMO/Material transfer	949	259	33,961	1,803
Reimbursement Claim	610	—	610	—
Sale of equipment	—	176	310	484
Grants and other cost reimbursements from government				
agencies and similar bodies	35	237	104	239
Other	177	770	222	922
Total	1,771	1,442	35,207	3,448

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 (see Note 3.4).

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, 2023, 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, the Company 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 it may sell, from time to time, ordinary shares for aggregate gross proceeds of up to USD 600.0 million. In the first quarter of 2023, 1,748,218 shares were issued under the ATM program, raising USD 17.5 million in net proceeds; related offering expenses were recorded against the proceeds in equity. Following these issuances, the remaining value authorized for sale under the at-the-market program amounts to \$497.5 million.

In February 2023, the Group completed a follow-on public offering whereby it sold 27,027,028 common shares at a price of USD 9.25 per share. The aggregate proceeds, net of underwriting discounts, received by the Group from these transactions were EUR 219,832k. Additional offering costs for legal, accounting, printing and registration fees of EUR 14,580k were recognized as reduction to capital reserve against the proceeds from the offering.

The number of shares issued and outstanding developed as follows:

Common shares issued and outstanding at December 31, 2022	194,997,091
At-the-market offering program issuances	1,748,218
Share issuances as part of the public offering	27,027,028
Share issuances for exercises between Jan to Mar 2023	112,089
Treasury shares	(32,913)
Common shares issued and outstanding at March 31, 2023	223,851,513
Share issuances for exercises between Apr to Jun 2023	41,524
Treasury shares	(9,953)
Common shares issued and outstanding at June 30, 2023	223,883,084

5. Share-based payments

During the six months ended June 30, 2023 and 2022, the Group recognized share-based payment expenses of EUR 4,572k and EUR 3,597k, respectively, as follows:

	Three months ended June 30,		Six months en	ded June 30,
	2022	2023	2022	2023
	EUR k	EUR k	EUR k	EUR k
Cost of sales	—	147		147
Selling and distribution expenses	(6)	112	61	153
Research and development expenses	(100)	609	90	761
General and administrative expenses	1,380	1,891	3,359	3,221
Other operating expenses	50	235	87	291
Total	1,324	2,994	3,597	4,572

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

	Three months ended June 30,		Six months ended June 30	
Program	2022	2023	2022	2023
	EUR k	EUR k	EUR k	EUR k
LTIP Stock Options	1,254	1,362	3,078	2,337
RSU Supervisory Board	50	235	87	291
New VSOP	(185)	(12)	(82)	45
Prior VSOP	(75)	30	17	(21)
LTIP RSUs	281	1,379	497	1,920
Total	1,324	2,994	3,597	4,572

On November 16, 2020, CureVac granted 266,155 options to the former Chief Scientific Officer (CSO). Furthermore, on December 1, 2020, CureVac granted 266,156 options (in 3 tranches) to the Group's Chief Business Officer (CBO) and Chief Commercial Officer (CCO). All grants were made 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. As of June 30, 2023, none of the options granted to the CBO/CCO under the LTIP were exercised. The CSO exercised 6,303 options during the six months ended June 30, 2022.

On July 1, 2021, CureVac granted 20,000 options to the Chief Operations Officer (COO). This grant was made 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, 2023, none of the options granted to the COO were exercised.

On March 1, 2021, CureVac granted 2,000 options to a key employee and on January 1, 2022, CureVac granted 9,500 options to a key employee. All grants were made 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, 2023, none of the options were exercised.

On March 1, 2022, CureVac granted 130,000 options to the Executive Board. All grants were made 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, 2023, none of the options were exercised.

On April 1, 2022, CureVac granted 700 options to a key employee. All grants were made 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, 2023, none of the options were exercised.

On April 1, 2023, CureVac granted 144,379 options to the newly appointed CEO. All grants were made 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, 2023, none of the options were exercised.

The expenses recognized for employee services received under the LTIP Stock Options during the three and six months ended June 30, 2023, is in the amount of EUR 1,362k and EUR 2,337k, respectively (2022: EUR 1,254k and EUR 3,078k, respectively) and is included in general and administrative expenses and selling and distribution 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. Up to June 30, 2023, 47,424 RSUs were settled. The related RSU expense is recorded in the functional cost category to which the award recipient's costs are classified.

On January 1, 2022, CureVac awarded 36,000 RSUs to the Chief Executive Officer (CEO). The related RSU expense is included in general and administrative expenses. For the three and six months ended June 30, 2023, all RSUs were settled.

On January 31, 2022, CureVac awarded 5,000 RSUs to the Chief Operations Officer (COO) and 30,000 RSUs to the Chief Business Officer (CBO). The related RSU expense is included in general and administrative expenses. Up to June 30, 2023, none of these RSUs were settled.

On June 22, 2022, the Group awarded 36,902 RSUs to Supervisory Board members and 188,986 RSUs to the Executive Board and various key employees. On November 30, 2022, the Group awarded further 7,633 RSU awards to key employees who joined the Group during fiscal 2022. The related RSU expense is recorded in the functional cost category to which the award recipient's costs are classified. Up to June 30, 2023, 73,056 RSUs were settled.

Effective July 1, 2022, CureVac N.V. acquired all shares of Frame Pharmaceuticals B.V., Amsterdam, Netherlands (formerly Frame Pharmaceuticals), now CureVac Netherlands B.V. On July 1, 2022, CureVac awarded 89,655 RSUs to the former Frame employees. The related RSU expense is recorded in the functional cost category to which the award recipients' costs are classified. Up to June 30, 2023, 29,881 RSUs were settled.

On March 31, 2023, the Group awarded 92,701 RSUs to the Supervisory Board members and 646,914 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. Up to June 30, 2023, no RSUs were settled.

The expenses recognized for employee services received under the LTIP RSUs during the three and six months ended June 30, 2023, is in an amount of EUR 1,379k and EUR 1,920k, respectively (2022: EUR 281k and EUR 497k, respectively) and is included in research and development expenses, general and administrative expenses and selling and distribution expenses.

As the former CEO has left the Group as of March 31, 2023, all remaining unvested awards are subject to accelerated vesting.

As a Supervisory Board member has left the Group as of June 19, 2023, all remaining unvested awards are subject to accelerated vesting.

As the CSO has left the Group as of July 14, 2023, all remaining unvested awards are subject to accelerated vesting.

Exercise of options

Under the New VSOP plan, 11,643 and 48,159 options were exercised within the three and six months ended June 30, 2023, respectively, at a weighted average share price of USD 7.90 and USD 9.81, respectively.

6. Fixed Assets

6.1 Intangible assets

During the six months ended June 30, 2023, the Group acquired intangible assets of EUR 2,567k (six months ended June 30, 2022: EUR 1,207k). Acquired intangibles mainly related to licenses, software and prepayments made to acquire those.

6.2 Property, plant and equipment

During the six months ended June 30, 2023, the increase in property, plant and equipment was attributable to the purchase of technical equipment and machines and other equipment of EUR 5,940k (June 30, 2022: EUR 3,034k) as well as additional amounts recognized as construction in progress of EUR 22,421k (June 30, 2022: EUR 39,386k) primarily related to the Company-owned GMP IV facility EUR 20,666k.

7. Assets held for sale

In 2022, Management decided to dispose of certain equipment which had been procured for CMO activities (CMO Equipment) but that was no longer planned to be used by the Company. An external service-provider was appointed on June 14, 2022 to organize the sale of the CMO Equipment. As of December 31, 2022, the CMO-Equipment identified for sale had a gross book value of EUR 29,531k and was written down by EUR 19,064k (with the corresponding expense recognized in cost of sales) to EUR 10,467k, the fair value less anticipated costs to sell. Criteria for the determination of the fair value were defined based on certain sales scenarios considering different sales campaigns. All sales activities are scheduled for 2023 and as of June 30, 2023 Assets held for sale with a net book value of EUR 513k were sold through an external service provider.

8. Inventories

The inventories include only raw materials and supplies amounting to EUR 22,194k (December 31, 2022: EUR 23,989k), which are recoverable under the Company's agreements with its collaboration partners. During the six months ended June 30, 2023, the decrease in inventory of EUR 1,795k is due primarily to further write-offs and the usage of raw material for R&D purposes, partially compensated by purchases of raw material.

9. Prepaid expenses and other assets (current)

Prepaid expenses and other current assets as of June 30, 2023 amounted to EUR 21,221k (December 31, 2022: 40,287k) and include receivables for the GSK compensation of EUR 1,491k (December 31, 2022; EUR 5,595k). In addition, other assets include tax claims against the tax authorities of EUR 7,852k (December 31, 2022: EUR 24,840k). 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. Cash and cash equivalents compromise cash at banks and term deposits.

Cash and cash equivalents compromise cash at banks and term deposits. 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, 2023 and 2022.

11. Trade and other payables

Trade and other payables are all due within one year amounting to EUR 13,419k (December 31, 2022: EUR 73,463k). During the six months ended June 30, 2023, the decrease of EUR 60,043k in trade and other payables was primarily due payments to raw material suppliers for invoices received before December 31, 2022.

12. Other liabilities and provisions

During the six months ended June 30, 2023, the decrease of EUR 4,977k in other liabilities was primarily due to lower accruals for outstanding invoices.

As of June 30, 2023 the contract terminations provisions of EUR 61,320k which are reflecting amounts which the Company expects to pay out to settle its obligations under certain CMO contracts which it has terminated, were reclassed from Provisions (non-current) into Provisions (current) due to an expected maturity within one year. In addition, during the six months ended June 30, 2023, the decrease of EUR 1,932k in Provisions (current) was primarily due to a consumption of the CRO provision for onerous losses.

13. Income tax

The increase in expense was primarily attributable to the income tax expense of CureVac Swiss AG and CureVac Belgium S.A.

14. 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, 2023, 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 16 to the consolidated financial statements as of December 31, 2022 for additional information on the Group's risk management activities. As of June 30, 2023, the Group held cash and cash equivalents of USD 73,600k and CHF 132k, which are exposed to foreign currency exchange risk. The Group intends to settle expenses arising in US dollars using these US dollar funds.

15. 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 three and six months ended June 30, 2023 was 223,883,084 and 217,698,351, respectively (2022: 187,089,253 and 187,041,805, respectively). This has led to a basic loss per share for the three and six months ended June 30, 2023 of EUR 0.30 and EUR 0.57, respectively (2022: EUR 0.31 and EUR 0.39, 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 three and six months ended June 30, 2023 and 2022.

16. 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 which amounted to EUR 100k was made to fulfill 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 N.V., Antony also took over the role as Management Director at CureVac Belgium SA. He executes this function by using Clarentis SRL. As it relates to these services, CureVac paid in 2023 until June 2023 an amount of EUR 42k. 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 EUR 3,900k, which had been already recognized in provisions, based on an estimate, as of December 31, 2021. In total an amount of EUR 4,016k was paid. Baron Jean Stéphenne, Chairman of our Supervisory Board, 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.

Franz-Werner Haas

In Q1 2023, a consulting agreement between CureVac SE and Franz-Werner Haas was entered into. For the six-month period ended June 30, 2023 no costs have been paid under this agreement.

Alexander Zehnder

In Q1 2023, a first addendum to the future service agreement was entered into to ensure a smooth transition from CEO Franz-Werner Haas to the new CEO Alexander Zehnder. Total compensation amounted to EUR 51k during the month of March.

Barker BioMedical GmbH

In Q1 2023, a consulting agreement between CureVac SE and Barker BioMedical GmbH was entered into. Barker BioMedical GmBH is a wholly-owned consulting company of Debra Barker, Supervisory Board member of CureVac N.V.. For the six-month period ended June 30, 2023 total costs incurred under this agreement amount to EUR 14k.

Craig Tooman

In Q1 2023, a consulting agreement was entered into between CureVac SE and Craig Tooman. For the six-month period ended June 30, 2023, no costs have been incurred under this agreement.

17. Subsequent events

As of July 14, 2023, Dr. Igor Splawski, CureVac's Chief Scientific Officer (CSO), stepped down from his role as CSO. During the search for a successor, CureVac's Chief Development Officer, Dr. Myriam Mendila, will head the advancement of CureVac's mRNA technology platform and its integration with the clinical development of novel mRNA vaccines and therapeutics.

CureVac filed a patent infringement lawsuit in Germany against BioNTech regarding four of its intellectual property rights in June 2022. The patent litigation was strengthened by the addition of a fifth intellectual property right as announced in May 2023. In July 2023, CureVac announced that it has extended these five intellectual property rights by three more recent intellectual property rights. In total, the patent litigation in Germany now covers eight intellectual property rights. A first public hearing on this lawsuit took place on August 15, 2023, before the Regional Court Düsseldorf. A nullity action covering one of the patents at issue was filed by Pfizer/BioNTech in September 2022. A preliminary opinion issued in April 2023 by the German Federal Patent Court supports the validity of the CureVac patent. In the U.S., Pfizer/BioNTech filed a case in late July 2022, asking for confirmation that Comirnaty® does not infringe three CureVac patents. In May 2023, CureVac filed a counterclaim in the U.S. that alleges infringement of nine U.S. patents, expanding the scope of the case beyond the three patents originally named by Pfizer/BioNTech. These nine patents have been extended by a tenth patent as announced in July 2023.

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, 2022, filed with the Securities and Exchange Commission on April 25, 2023, or the Annual Report, including the consolidated annual financial statements as of and for the year ended December 31, 2022 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 the 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, the impact of unstable market and economic conditions such as rising inflation and interest rates and the conflict involving Russia and Ukraine on our business, 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 pandemics (such as COVID-19), 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 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 backbone against coronavirus (SARS-CoV-2) and a range of infectious diseases, including influenza, in collaboration with GlaxoSmithKline Biologicals SA ("GSK").

COVID-19 Program (second-generation mRNA backbone)

The collaboration on COVID-19 vaccine candidates with GSK, initiated in April 2021, aims to research, develop and manufacture mRNA vaccines targeting the original SARS-CoV-2 strain as well as emerging variants.

CV2CoV was introduced as the first representative of our joint COVID-19 vaccine program based on our second-generation backbone. 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 June 30, 2021, we published preclinical data 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. On August 4, 2022, we further published in the journal Vaccines data from a preclinical study in rats, showing 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 vivo. In 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. 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. On March 30, 2022, we announced the start of a Phase 1 clinical trial with CV2CoV. The Phase 1 dose-escalation study is being conducted at clinical sites in the United States and evaluates the safety, reactogenicity and immunogenicity of a single booster dose of CV2CoV in the dose range of 2µg to 20µg. On April 21, 2022, the preclinical data for CV2CoV and the second-generation mRNA backbone was extended by a study conducted in collaboration with the Friedrich-Loeffler-Institute, 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.

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 COVID-19 mRNA vaccine candidate based on our second-generation backbone, CV0501, on August 18, 2022. CV0501 specifically targets the Omicron BA.1 variant. The study is being conducted at clinical sites in the United States, Australia, and the Philippines and evaluates the safety, reactogenicity and immunogenicity of a single booster dose of CV0501 in the dose range of 3µg to 200µg.

On January 6, 2023, we announced that the second-generation mRNA backbone using modified mRNA was selected as the preferred technology for further clinical development in the COVID-19 program. In January and April 2023, we also announced positive preliminary data from the CV0501 Phase 1 trial. The data are based on cohort sizes of up to 20 participants in the younger adults age group (age 18-64) and 10 participants in the older adults age group (age \geq 65). Reported safety data cover the fully recruited dose groups of 3, 6, 12, 25, 50, 100 and 200µg in the younger adult age group and 12, 25, 50, 100 and 200µg in the older adult age group. CV0501 was shown to be generally well tolerated. Immunogenicity data in both age groups showed relevant titers of neutralizing antibodies beginning at the lowest tested dose. On day 29 at the 12µg dose level, CV0501 generated a ratio of post-boost to pre-boost serum neutralizing titers against the Omicron BA.1 variant of 8.1. in younger adults and 13.3 in older adults. The data read-out for both age groups are currently being finalized. A Phase 2 clinical study, initiated on August 1, 2023, will assess monovalent and/or bivalent vaccine candidates designed to target clinically relevant variants. A pivotal Phase 3 trial may be initiated in 2024, contingent on discussion with regulatory authorities.

Seasonal Flu Program (second-generation mRNA backbone)

Influenza was disclosed as the first indication from the initial collaboration we started with GSK in July 2020, which focuses on the development of new products for different targets in the field of infectious diseases.

The first non-COVID-19 vaccine candidate within the broader infectious disease program applying our second-generation backbone we tested 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 the dose range of 3µg to 28µg. Preliminary safety data reported on April 28, 2022, showed a benign reactogenicity profile across the tested dose groups.

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 announced the start of a Phase 1 dose-escalation study with a chemically modified influenza vaccine candidate, Flu-SV-mRNA, on August 18, 2022. The candidate is a monovalent candidate. The Phase 1 dose-escalation study is being conducted in Canada, Spain and Belgium to evaluate the safety, reactogenicity and immunogenicity of Flu-SV-mRNA.

On January 6, 2023, the second-generation mRNA backbone using modified mRNA was selected as the preferred technology for further clinical development in the seasonal flu vaccine program. In the Phase 1 study of the monovalent Flu-SV-mRNA, expressing an H1N1 hemagglutinin antigen (subtype of influenza A), five doses ranging from 2 to 54µg with up to 25 subjects per dose cohort were evaluated in younger adults (age 18-45). In this age group, preliminary safety and reactogenicity data showed that the monovalent Flu-SV-mRNA candidate was generally well tolerated with no safety concerns observed to date across all tested dose levels. A single dose of Flu-SV-mRNA (dose level undisclosed) was assessed for safety and reactogenicity in older adults (age 60-80) and was also observed to be safe and well tolerated with no grade 3 adverse events in the 32 subjects who were administered the mRNA construct. Immunogenicity of the monovalent Flu-SV-mRNA was assessed in parallel with a licensed seasonal flu vaccine comparator in both age groups. In younger adults, adjusted geometric mean hemagglutinin inhibition antibody titers elicited by the licensed flu vaccine comparator in younger adults. In older adults, adjusted geometric mean hemagglutinin inhibition antibody titers elicited by the licensed flu vaccine comparator. In the same age group, the percentage of subjects achieving seroconversion was 89.7% for Flu-SV-mRNA and 56.2% for the licensed flu vaccine comparator.

The vaccine candidate for future clinical development is expected to target all four strains recommended by the World Health Organization (WHO) for influenza vaccines. Dosing of the first participant in a Phase 1/2 study for multivalent vaccine candidates was announced on May 8, 2023.

COVID-19 candidate CVnCoV (first-generation mRNA backbone)

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. These include a Phase 1 study in Germany (initiated in June 2020), a Phase 2a study in Peru and Panama (initiated in September 2020), the Phase 2b/3 (HERALD) study in Europe and Latin America (initiated in December 2020), a Phase 3 study in healthcare workers in Germany (initiated in December 2020), and a Phase 3 study in participants with comorbidities in Belgium (initiated in April 2021).

Data analyses of the Phase 2b/3 (HERALD) study and Phase 3 study in healthcare workers in Germany have been finalized. Primary data of the Phase 2b/3 (HERALD) trial was published in The Lancet Infectious Diseases ("The Lancet") on November 23, 2021. 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 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 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. 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 on May 28, 2021, and on June 16, 2021. 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. 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 with an increasing number of SARS-CoV-2 variants adding additional challenges to the assessment of COVID-19 vaccine candidates. 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.

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. 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.

Oncology

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 flu, we are evaluating targeted expansions of our unique mRNA approaches for the development of cancer vaccines. This targeted expansion is 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.

A key component to deliver on this strategy is the build-up of a powerful antigen discovery engine. To gain access to state-of-the-art antigen discovery technologies we announced a partnership with Belgium-based company myNEO NV ("myNEO") on May 25, 2022, and the acquisition of Netherlands-based Frame Cancer Therapeutics ("Frame") on June 8, 2022.

Together with immunotherapy company myNEO, we 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.

With the acquisition of Frame Cancer Therapeutics, a private company focused on advanced genomics and bioinformatics, to identify both shared and unique neoantigens across different cancer types, we complement existing in-house expertise to identify and validate promising antigens for mRNA cancer vaccine candidates. The former Frame Cancer Therapeutics site was inaugurated as CureVac Netherlands and will further develop the proprietary technology platform, which has the potential to identify a broad panel of neoantigens and tumor-associated antigens that go beyond conventional approaches and could strongly increase the likelihood of developing highly effective cancer vaccines that activate the human immune system against cancer.

The field of immuno-therapy has advanced with the progression of available technologies to extract data from patient samples, such as next-generation sequencing. Conventional approaches have so far focused on the exome, the protein-coding part of the genome, which represents only about 1.5% of the total genetic information. More recently, breakthrough developments in sequencing capacity have enabled the extraction of vastly larger amounts of data that allows us to utilize the remaining 98.5% of genetic information. The technologies brought in house with the acquisition of Frame Cancer Therapeutics are based on whole-genome-sequencing for every patient sample combined with short as well as long-range RNA sequencing to map the full inventory of genomic changes. More specifically, downstream of the sequencing, a software package integrates all the data to retrieve the exact changes in the DNA of the tumor cells compared to healthy cells. Correlation of this data with changes in the RNA transcription of the tumor results in entirely new and potentially antigenic tumor antigens that we plan to test as targets for a portfolio of new cancer vaccine candidates. These new antigens are not only entirely foreign to the body but are also uniquely expressed in the tumor and not in healthy tissue. In their foreignness, these constructs are expected to raise stronger immune responses than antigens derived from exome-based conventional approaches.

The highly synergistic antigen discovery technologies of Frame Cancer Therapeutics and myNEO are expected to significantly accelerate CureVac's oncology strategy to build a meaningful portfolio of new cancer vaccine candidates. Within this strategy, 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. We plan to advance new antigens for both approaches based on our second-generation mRNA backbone. To assess the safety and immunogenicity of our second-generation backbone in an oncology setting, we initiated a proof-of-principle study in the second quarter of 2023, assessing an mRNA construct encoding eight epitopes from tumor associated antigens in patients with surgically resected Glioblastoma Multiforme.

In our oncology strategy, we are committed to drive innovation by also leveraging The RNA Printer®, CureVac's automated end-toend 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. The system is currently undergoing regulatory approval processes to obtain its first manufacturing licenses.

Our clinical 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. Clinical data support the hypothesis that CV8102 is able 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. The trial consists of two parts. The first dose-escalating part assesses CV8102 in 58 patients with solid tumors, namely cutaneous melanoma, adenoid cystic carcinoma, squamous cell carcinoma of skin, and squamous cell carcinoma of head and neck, or HNSCC. As of June 21, 2021, in the single-agent cohort, we observed one patient with a complete response and two patients with a partial response according to Response Evaluation Criteria In Solid Tumors, RECIST, 1.1. In addition, twelve patients experienced a best response of stable disease. In the PD 1 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, we added an extensive analysis of immune cell activation. 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 T cells in the micro-environment of injected as well as non-injected tumors.

In February 2021, we initiated an expansion of our Phase 1 study to confirm the safety, tolerability and efficacy of CV8102 at a 600µg dose in 40 patients with advanced melanoma. On November 11, 2022, we presented preliminary data from the expansion study. As of August 30, 2022, preliminary efficacy was observed in the cohort of 30 patients treated in combination with anti-PD-1 antibodies, 40% of whom were pretreated with anti-CTLA-4 antibodies. In this anti-PD-1 combination cohort, five out of 30 patients (17%) experienced a partial response according to RECIST 1.1. Responses appeared durable for up to one year from the start of treatment. No objective responses were observed in the 10 patients of the single-agent cohort, 50% of whom were pretreated with anti-CTLA-4 antibodies. Analysis of immune cell activation confirmed that CV8102 single agent or combination treatment, after the first dose, activated systemic pathways of immune response. Preliminary analysis of the tumor microenvironment in a subgroup of patients showed the positive outcome of increased infiltration of T cells, following intra-tumoral injection in 4 out of 8 (single agent cohort) and 10 out of 18 (anti- PD1 combination cohort) analyzed paired biopsy samples.

Final study results are expected to be submitted for publication in a peer reviewed journal in the first half of 2023. A scientific paper assessing the mode of action and efficacy of CV8102 for local immunotherapy in preclinical models was published on November 2, 2022, in Cancer Immunology, Immunotherapy.

In the context of our strategic focus on antigen discovery and hence the development of mRNA-based cancer vaccine candidates that target tumor-specific antigens, the clinically validated immuno-modulatory characteristics of CV8102 represent a potentially complementary technology. We would therefore only consider a potential further clinical development of CV8102 based on an integration into our cancer vaccine developments, for example, as a potential immuno-modulatory adjunct to a defined mRNA cancer vaccine candidate.

Molecular Therapies

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 backbone 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, or EC, 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 COVID-19 vaccine program based on our second-generation backbone. 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 COVID-19 vaccine program based on the second-generation backbone and presently in the Phase 1 clinical trial, as announced on March 30, 2022. Within this 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 backbone 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 backbone 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 backbone for our COVID-19 vaccine candidates, such as for our secondgeneration backbone 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 backbone 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 about using 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, 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 collaboration and license agreements. Relatedly, on April 8, 2022, we received a letter from the Federal Republic of Germany's counsel confirming that the CureVac-GSK Consortium (as defined below), was awarded with the Pandemic Preparedness Agreement (as defined below).

Certain key terms of our current material collaboration and license agreements, our advance purchase agreement with the EC, the CureVac-GSK Consortium and the Pandemic Preparedness Agreement ("PPA") are summarized below.

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 upfront 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, GSK is required to compensate us for certain development costs and pay any accrued milestone payments. Additionally, GSK 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 single-digit to low-teens percentages 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 performing our obligations under the 2020 GSK Agreement, and we are eligible to receive up to €20,000 in reimbursements for expenses incurred by 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, February 2022 and March 2022, and further amended to update the research and development plan in August 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 paid us an upfront 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 (as defined therein), 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 sub-teen to mid-teen percentages 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. 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, 2023, we have received \$1 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 did not exercise such option to extend the Arcturus Agreement beyond July 2023. We did not exercise such option to extend 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, 2023, we have not exercised our option to extend and 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 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 upfront 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 upfront fee in connection with an amendment to the Acuitas Agreement dated December 2020 and are required to pay an additional \$250,000 per option for 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, 2023, we have exercised our option to obtain a non-exclusive license to 18 targets, subject to customary closing conditions. As of June 30, 2023, we have paid Acuitas \$8.0 million in reservation and option exercise fees and \$1.25 million for certain options not yet exercised and have made payments totaling \$8.9 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 between \$1.3 million and \$1.8 million in commercial milestone payments under each Acuitas License Agreement. 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. Additionally, we are obligated to pay Acuitas a low single-digit percentage royalty on net sales of licensed products. As of June 30, 2023, we have made \$100,000 in development milestone payments to Acuitas with respect to the license agreement relating to Rabies RAV-G, \$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, \$100,000 in development milestone payments.

CRISPR Therapeutics

In November 2017, we entered into a Development and License Agreement with CRISPR Therapeutics, which, as amended by an amendment entered into in June 2020, we refer to as the CRISPR Therapeutics Agreement, 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 CRISPR Therapeutics 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, 2023, we have received €5.5 million in payments and we have invoiced €2.7 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.

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, 2023, 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, 2023, we have received \$0.7 million in funding under the picornaviruses grant agreement. The term of the picornavirus grant expired in June 2022; however, our global access commitments survive. 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, 2023, we have received \$1.9 million and \$2.2 million, respectively, in funding under each grant agreement. The malaria grant agreement expired in December 2022 and the universal influenza grant agreement expired in March 2022. We and the Bill & Melinda Gates Foundation are currently assessing options to continue the influenza 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 February 2022, except with respect to certain ongoing projects, which are contemplated to be completed in December 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, 2023, we have received ξ 27.1 million in funding for projects undertaken under the CEPI requested a partial reimbursement of \$1.0 million for unspent funds.

Tesla Automation

In November 2015, we entered into a development and intellectual property agreement with Tesla Automation, formerly trading under the name of Tesla Grohmann Automation, which we refer to as the Tesla Automation Agreement, 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, 2023, we have paid Tesla Automation &21 million to &22 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.

Research and Option Agreement with myNEO

On May 12, 2022, we entered into a Research and Option Agreement ("R&O") with myNEO, pursuant to which we will both collaborate 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 and melanoma (the "Main Indications") and potentially other indications. We are required to use commercially reasonable efforts to develop at least one product for each of the Main Indications, to file marketing approval applications for such products and commercialize such products in at least one of certain countries. Under the R&O, myNEO will own all intellectual property rights generated solely by myNEO or jointly with us during the first three phases of the R&D plan (the "R&D Project IP"). We receive a non-exclusive, royalty-free, non-assignable, sublicensable, worldwide license under certain patents and know-how owned by myNEO and R&D Project IP to the extent required to perform our research and development obligations under the agreement until the completion of a certain phase of the R&D plan. We were also granted an exclusive option to acquire all of myNEO's rights under certain R&D Project IP relating to certain target lists, which we exercised on April 12, 2023. myNEO receives a non-exclusive, royalty-free, perpetual license back to such IP to make, use or sell certain targets in the field of patient-specific vaccines. Under the R&O, myNEO agrees to work exclusively with us to develop and validate shared antigens for the Main Indications until the earlier of the date of the first phase I clinical trial for either Main Indication or 24 months after we exercised our option.

Under the R&O, we paid myNEO an upfront one-time technology access fee of \pounds 138,000 and myNEO is eligible to receive up to \pounds 175.5 million in research and development milestone payments with respect to the Main Indications, up to \pounds 175,000 in research and development milestone payments with respect to indications other than the Main Indications, up to \pounds 30 million in commercial milestone payments with respect to the Main Indications and up to \pounds 7.5 million in commercial milestone payments with respect to indications other than the Main Indications, as well as low single-digit percentage royalties on the net sales of licensed products in the Main Indications. Our royalty obligations continue on a product-by-product and country-by-country basis until the earlier of the date when there are no valid patent claims covering such licensed product in such country and 10 years following the date of first commercial sale of such licensed product in such country.

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 upfront 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 expired at the end of 2022 and an amount of \notin 4.1 million is accrued as of June 30, 2023, for the related amount due to be remitted to the EC.

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 development expenses. For example, we may continue to increase our 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, 2022 to the Six Months Ended June 30, 2023

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, 2022 and 2023 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, 2022 and 2023 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, 2022 and 2023:

	For the Six M June	
	2022	2023
(in thousands of euros, except per share data)	(unau	lited)
Statement of Operations and Comprehensive Income (Loss) Data:		
Revenue	44,519	14,708
Cost of sales	(79,913)	(46,489)
Selling and distribution expenses	(819)	(2,232)
Research and development expenses	(22,422)	(55,118)
General and administrative expenses	(51,678)	(45,532)
Other operating income	35,207	3,448
Other operating expenses	(461)	(942)
Operating loss	(75,567)	(132,157)
Finance income	5,343	10,085
Finance expenses	(2,535)	(2,734)
Loss before income tax	(72,759)	(124,806)
Income tax benefit (expense)	82	(27)
Net loss	(72,677)	(124,833)
Other comprehensive income/loss:		
Items that may be subsequently reclassified to profit or loss		
Foreign currency adjustments	(212)	16
Total comprehensive loss	(72,889)	(124,816)
Net loss per share (basic and diluted)	(0.39)	(0.57)

Revenue

Revenue was €14.7 million for the six months ended June 30, 2023, representing a decrease of €29.8 million, or 67%, from €44.5 million for the six months June 30, 2022. The decrease was primarily driven by lower sales to GSK due to changes in the timeline of certain projects. In total, for both the 2020 GSK agreement and the GSK COVID Agreement, revenue of €12.8 million was recognized for the six months ended June 30, 2023.

Cost of Sales

Cost of sales was \in 46.5 million for the six months ended June 30, 2023, representing a decrease of \in 33.4 million, or 42%, from \in 79.9 million for the six months ended June 30, 2022. The decrease was primarily attributable to a decrease in write-offs of raw materials, which were in prior periods procured for manufacturing products to sell to GSK. Personnel expenses increased mainly due to increased workforce.

	For the Six Months Ended June 30,	
	2022	2023
(in thousands of euros)	(unaud	ited)
Personnel	(13,869)	(17,559)
Materials	(36,883)	(12,630)
Third party services	(19,516)	(11,839)
Maintenance and lease	(1,150)	(1,115)
Amortization, depreciation and derecognition	(8,326)	(2,219)
Other	(169)	(1,127)
Total	(79,913)	(46,489)

Selling and Distribution Expenses

Selling and distribution expenses were \notin 2.2 million for the six months ended June 30, 2023, representing an increase of \notin 1.4 million, or 175%, from \notin 0.8 million for the six months ended June 30, 2022. The increase was primarily attributable to higher personnel expenses due to an increased business development workforce.

	For the Six Months Ended June 30,	
	2022	2023
(in thousands of euros)	(unaud	lited)
Personnel	(560)	(2,030)
Amortization and depreciation	(32)	(6)
Other	(227)	(196)
Total	(819)	(2,232)

Research and Development Expenses

Research and development costs were \notin 55.1 million for the six months ended June 30, 2023, representing an increase of \notin 32.7 million, or 146%, from \notin 22.4 million for the six months ended June 30, 2022. The increase was primarily attributable to prior year impacts caused by (i) the reversal of provision for onerous contracts in the amount of \notin 21.3 million as a result of more participants leaving the clinical trials, prior to completion, than originally estimated; and (ii) renegotiations of contracts with CROs. 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 CMO. Personnel expenses increased mainly due to increased workforce and the acquisition of Frame Pharmaceuticals. Additionally, share-based payment expense was higher compared to prior year period.

	For the Six Me June	
	2022	2023
(in thousands of euros)	(unaud	lited)
Materials	(23,419)	(9,217)
Personnel	(14,849)	(23,570)
Amortization and depreciation	(2,119)	(3,508)
Patents and fees to register a legal right	(1,354)	(2,048)
Third party services	21,053	(11,773)
Maintenance and lease	(464)	(3,593)
Other	(1,270)	(1,410)
Total	(22,422)	(55,118)

The following table reflects our research and development costs for each of our programs for the six months ended June 30, 2022 and 2023:

	For the Six Months Ended June 30,	
	2022	2023
(in thousands of euros) Key Programs (CV8102, CV7202, CV2CoV and CVnCoV)	(unaud	itea)
CV8102	(1,414)	(1.120)
		(1,120)
CVGBM	(815)	(2,354)
CV7202	(120)	(17)
Second Generation Covid (CV2CoV and CV0501)	(10,990)	(10,180)
CVnCoV	18,300	3,600
Other Research and Development Programs	(2,399)	(9,467)
Unallocated costs(1)	(24,983)	(35,581)
Total	(22,422)	(55,118)

(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.

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

- For SARS-CoV-2, our modified mRNA vaccine candidate, CV0501 is a monovalent construct developed in collaboration with GSK. A Phase 1 study was initiated in August 2022. We reported positive preliminary data in early 2023. A Phase 2 clinical study, initiated on August 1, 2023, assesses a monovalent (CV0601) and bivalent (CV0701) vaccine candidate designed to target the Omicron BA.4-5 variant or a combination of the Omicron BA.4-5 variant and the original SARS-CoV-2 strain. In our oncology therapeutic area, we work on novel cancer vaccine candidates based on differentiated antigen discovery technologies and bioinformatics to target antigens that are overexpressed in tumor tissues with no or little expression on healthy tissues. Within this strategy, we follow two approaches. The first approach assesses tumor antigens shared across different cancer indications 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. We plan to advance new antigens for both approaches based on our second-generation mRNA backbone.
- Our oncology program, CVGBM, a single mRNA construct encoding eight epitopes from known tumor associated antigens
 with demonstrated relevance in glioblastoma, is currently in a Phase 1 study to assess the safety and immunogenicity of our
 second-generation backbone in an oncology setting. The study evaluates the safety and tolerability of CVGBM as a
 monotherapy in patients with newly diagnosed and surgically resected MGMT-unmethylated glioblastoma or astrocytoma with
 a molecular signature of glioblastoma. The study consists of two parts, a dose-escalation part (Part A) and a dose-expansion part
 (Part B). In currently ongoing Part A, patients receive a total of seven intramuscular administrations of CVGBM at escalating
 doses in the range of 12µg to 100µg.
- Our oncology program, CV8102, has completed 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 has completed a Phase 1 clinical trial as a vaccine candidate for rabies.

General and Administrative Expenses

General and administrative expenses were &45.5 million for the six months ended June 30, 2023, representing a decrease of &6.2 million, or 12%, from &51.7 million for the six months ended June 30, 2022. The decrease was primarily attributable to less personnel expenses due to lower workforce in the corporate service functions and to less other expenses due to the allocation of costs to research and development expenses.

	For the Six Months Ended June 30,	
	2022	2023
(in thousands of euros)	(unaudited)	
Personnel	(18,971)	(15,742)
Maintenance and lease costs	(2,704)	(2,915)
Third party services	(12,796)	(12,873)
Legal and other professional services	(5,320)	(6,074)
Amortization and depreciation	(6,091)	(6,071)
Other	(5,796)	(1,857)
Total	(51,678)	(45,532)

Other Operating Income

Other operating income was $\notin 3.4$ million for the six months ended June 30, 2023, representing a decrease of $\notin 31.8$ million, or 90%, from $\notin 35.2$ million for the six months ended June 30, 2022. The decrease was primarily attributable to the impacts of the amendments to the 2020 GSK Agreement and the GSK Covid Agreement, under which CureVac was entitled to further compensation by GSK for set-up activities undertaken by CureVac ($\notin 20.5$ million) and for reimbursement of prepayments ($\notin 12.0$ million) in prior year period.

Other Operating Expense

Other operating expense was $\notin 0.9$ million for the six months ended June 30, 2023, representing an increase of $\notin 0.4$ million, or 80%, from $\notin 0.5$ million for the six months ended June 30, 2022. Other operating expense related primarily to compensation expense of our Supervisory Board.

Finance Income

Finance income was €10.1 million for the six months ended June 30, 2023, representing an increase of €4.8 million, or 91%, from €5.3 million for the six months ended June 30, 2022. The increase was primarily attributable to positive interest on cash investments.

Finance Expenses

Finance expenses were $\notin 2.7$ million for the six months ended June 30, 2023, representing an increase of $\notin 0.2$ million, or 8%, from $\notin 2.5$ million for the six months ended June 30, 2022 and were relatively unchanged compared to prior year period.

Income Tax (Expense)

An income tax expense of \notin 27.0 thousand was generated for the six months ended June 30, 2023, representing an increase of \notin 108.9 thousand, from an income tax benefit of \notin 81.9 thousand generated for the six months ended June 30, 2022. The increase to an expense was primarily attributable to the income tax expense of CureVac Swiss AG and CureVac Belgium S.A.

Liquidity and Capital Resources

Our financial condition and liquidity are 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, 2022 and 2023, we incurred net losses of \pounds 72.7 million and \pounds 124.8 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, 2023 were \pounds 537.9 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 middle of 2025. 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 February 2023, we sold an additional 27,027,028 common shares in an underwritten public offering at an offering price of \$9.25 per share raising \$234.2 million in net proceeds, after deducting underwriting discounts and commissions and offering expenses payable by us.

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. For the six months ended June 30, 2023, we issued 1,748,218 common shares through the ATM program and the remaining value authorized for sale under the at-the-market program is \$497.5 million.

Comparative Cash Flows

Comparison of the six months ended June 30, 2022 and 2023

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

	For the Six Months Ended June 30,	
	2022 2023 (in thousands of euros) (unaudited)	
Net cash flow from (used in):		
Operating activities	(201,175)	(163,702)
Investing activities	(44,715)	(27,369)
Financing activities	3,409	233,513
Effect of currency translation gains on cash and cash equivalents	4,583	(314)
Overall cash inflow	(237,898)	42,128

Operating Activities

Net cash used in operating activities for the six months ended June 30, 2023 was $\in 163.7$ million as compared to net cash used in operating activities of $\in 201.2$ million for the six months ended June 30, 2022. The decrease in net cash in operating activities was primarily attributable to less payments 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, 2023 was \in 27.4 million as compared to net cash used in investing activities of \in 44.7 million for the six months ended June 30, 2022. 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 provided by financing activities was &233.5 million for the six months ended June 30, 2023 as compared to cash provided by financing activities of &3.4 million for the six months ended June 30, 2022. The increase in cash flow provided by financing activities was mainly attributable to the raising of cash in the follow-on underwritten public offering conducted in February 2023.

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 2 — Significant accounting policies" and "note 10 — Share-based payments" to our 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, 2022, new standards and amendments as issued by IASB and that are mandatory as of January 1, 2022. 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, 2023, new standards and amendments as issued by IASB and as issued by IASB and that are mandatory as of January 1, 2022. 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.