VALNEVA SE CONSOLIDATED FINANCIAL STATEMENTS

As at December 31, 2022

VALNEVA SE
A European Company (Societas Europaea) with a Management and a Supervisory Board

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Nantes Companies Register: (RCS) No. 422 497 560

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valneva

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1. CONSOLIDATED STATEMENTS OF INCOME (LOSS) AND COMPREHENSIVE INCOME (LOSS)

1.1 Consolidated Statements of Income (Loss)

(In € thousand) (Except per share amounts)	Note	Year ended December 31,		
		2022	2021	2020
Product sales	5.4/5.5	114,797	62,984	65,938
Other revenues	5.4/5.5	246,506	285,101	44,383
REVENUES		**361,303**	**348,086**	**110,321**
Cost of goods and services	5.4/5.6	(324,441)	(187,920)	(54,302)
Research and development expenses	5.4/5.6	(104,922)	(173,283)	(84,454)
Marketing and distribution expenses	5.4/5.6	(23,509)	(23,643)	(18,264)
General and administrative expenses	5.4/5.6	(34,073)	(47,606)	(27,539)
Other income and expenses, net	5.4/5.8	12,199	22,976	19,117
OPERATING LOSS		**(113,443)**	**(61,390)**	**(55,120)**
Finance income	5.9	260	249	516
Finance expenses	5.9	(19,054)	(16,964)	(10,738)
Foreign exchange gain/(loss), net	5.9	(12,587)	8,130	173
Result from investments in associates	5.16	9	(5)	(133)
LOSS BEFORE INCOME TAX		**(144,815)**	**(69,979)**	**(65,302)**
Income tax benefit/(expense)	5.10	1,536	(3,446)	909
LOSS FOR THE PERIOD		**(143,279)**	**(73,425)**	**(64,393)**
Losses per share for loss for the period attributable to the equity holders of the Company (expressed in € per share)	5.11			
Basic		**(1.24)**	**(0.75)**	**(0.71)**
Diluted		**(1.24)**	**(0.75)**	**(0.71)**

The accompanying Notes form an integral part of these financial statements.

“Foreign exchange gain/(loss), net” was reclassified from the categories “Finance income” and "Finance expenses" for period starting January 1, 2022. The comparable periods were adjusted accordingly to maintain the comparability.

1.2 Comprehensive Income (Loss)

€ in thousand	Note	Year ended December 31,		
		2022	2021	2020
Loss for the period		**(143,279)**	**(73,425)**	**(64,393)**
Other comprehensive income/(loss)				
Items that may be reclassified to profit or loss				
Currency translation differences	5.22.1	(73)	(2,877)	2,438
Items that will not be reclassified to profit or loss				
Defined benefit plan actuarial gains/(losses)	5.30.1	178	205	(78)
Other comprehensive income/(loss) for the year, net of tax		**105**	**(2,672)**	**2,360**
TOTAL COMPREHENSIVE LOSS FOR THE YEAR ATTRIBUTABLE TO THE OWNERS OF THE COMPANY		**(143,174)**	**(76,097)**	**(62,033)**

The accompanying Notes form an integral part of these financial statements.

2 CONSOLIDATED BALANCE SHEETS

(In € thousand)	Note	As at December 31,	
		2022	2021
ASSETS			
Non-current assets		**196,685**	**231,520**
Intangible assets	5.12	28,711	32,700
Right of use assets	5.13	41,603	48,285
Property, plant and equipment	5.14	112,435	125,545
Investments in associates	5.16	—	2,124
Deferred tax assets	5.10.2	5,637	3,582
Other non-current assets	5.20	8,299	19,282
Current assets		**424,660**	**585,832**
Inventories	5.18	35,104	124,098
Trade receivables	5.19	23,912	44,013
Other current assets	5.20	74,079	71,036
Cash and cash equivalents	5.21	289,430	346,686
Assets classified as held for sale	5.16	2,134	—
TOTAL ASSETS		**621,344**	**817,352**
EQUITY			
Capital and reserves attributable to the Company's equity holders		**219,797**	**170,581**
Share capital	5.22	20,755	15,786
Share premium	5.22	594,043	409,258
Other reserves	5.22.1	55,252	52,512
Retained earnings/(Accumulated deficit)	5.22	(306,974)	(233,549)
Loss for the period		(143,279)	(73,425)
LIABILITIES			
Non-current liabilities		**124,156**	**277,791**
Borrowings	5.24	87,227	50,726
Lease liabilities	5.13/5.27	28,163	53,687
Contract liabilities	5.28	—	4,741
Refund liabilities	5.29	6,635	158,970
Provisions	5.30	1,320	8,308
Deferred tax liabilities	5.10.2	694	1,290
Other liabilities	5.31	116	69
Current liabilities		**277,392**	**368,979**
Borrowings	5.24	11,580	7,107
Trade payables and accruals	5.25	41,491	68,119
Income tax liability		532	83
Tax and Employee-related liabilities	5.26	15,738	17,249
Lease liabilities	5.13/5.27	25,411	3,135
Contract liabilities	5.28	9,411	124,017
Refund liabilities	5.29	136,450	95,611
Provisions	5.30	31,257	48,708
Other liabilities	5.31	5,523	4,950
TOTAL LIABILITIES		**401,547**	**646,771**
TOTAL EQUITY AND LIABILITIES		**621,344**	**817,352**

The accompanying Notes form an integral part of these financial statements.

3 CONSOLIDATED STATEMENTS OF CASH FLOWS

€ in thousand	Note	Year ended December 31,		
		2022	2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES				
Loss for the year		(143,279)	(73,425)	(64,393)
Adjustments for non-cash transactions	5.32	44,070	56,476	37,941
Changes in non-current operating assets and liabilities	5.32	(147,713)	59,353	88,472
Changes in working capital	5.32	1,732	36,127	77,740
Cash generated from operations	5.32	**(245,189)**	**78,532**	**139,759**
Income tax paid		(154)	(1,631)	(2,021)
NET CASH GENERATED FROM OPERATING ACTIVITIES		**(245,343)**	**76,901**	**137,738**
CASH FLOWS FROM INVESTING ACTIVITIES				
Purchases of property, plant and equipment	5.14	(29,246)	(92,229)	(18,936)
Proceeds from sale of property, plant and equipment	5.32	8	—	—
Purchases of intangible assets	5.12	(76)	(942)	(535)
Proceeds from sale of intangible assets	5.32	—	—	24
Interest received		260	54	107
NET CASH USED IN INVESTING ACTIVITIES		**(29,054)**	**(93,116)**	**(19,340)**
CASH FLOWS FROM FINANCING ACTIVITIES				
Proceeds from issuance of common stock, net of costs of equity transactions	5.23	189,837	166,614	75
Disposal of treasury shares	5.22.1	—	209	215
Proceeds from borrowings, net of transaction costs	5.24/5.32.2	39,331	859	50,266
Repayment of borrowings	5.24/5.32.2	(1,793)	(1,956)	(21,995)
Payment of lease liabilities	5.13/5.27	(3,048)	(2,805)	(2,111)
Interest paid		(9,211)	(8,417)	(4,711)
NET CASH GENERATED FROM/(USED IN) FINANCING ACTIVITIES		**215,116**	**154,504**	**21,740**
NET CHANGE IN CASH AND CASH EQUIVALENTS		**(59,282)**	**138,288**	**140,138**
Cash and cash equivalents at beginning of the year		346,642	204,394	64,439
Exchange gains/(losses) on cash		(828)	3,960	(183)
Restricted cash	5.21	2,898	44	41
CASH AND CASH EQUIVALENTS AT END OF THE YEAR		**289,430**	**346,686**	**204,435**

The accompanying Notes form an integral part of these financial statements.

4 CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(In € thousand) (except number of shares)	Note	Number of shares issued	Share capital	Share premium	Other reserves	Retained earnings/ (Accumulated deficit)	Profit/ (loss) for the period	Total equity
BALANCE AS AT JANUARY 1, 2020		**90,943,812**	**13,642**	**244,912**	**45,756**	**(167,412)**	**(1,744)**	**135,153**
Total comprehensive income/(loss)		—	—	—	2,360	—	(64,393)	(62,033)
Income appropriation		—	—	—	—	(1,744)	1,744	—
Share-based compensation expense:	5.23							
Value of services		—	—	—	4,012	—	—	4,012
Exercises		*26,750*	4	71	—	—	—	75
Treasury shares		—	—	—	215	—	—	215
BALANCE AS AT DECEMBER 31, 2020		**90,970,562**	**13,646**	**244,984**	**52,342**	**(169,156)**	**(64,393)**	**77,422**
BALANCE AS AT JANUARY 1, 2021		**90,970,562**	**13,646**	**244,984**	**52,342**	**(169,156)**	**(64,393)**	**77,422**
Total comprehensive income/(loss)		—	—	—	(2,672)	—	(73,425)	(76,097)
Income appropriation		—	—	—	—	(64,393)	64,393	—
Share-based compensation expense:	5.23							
Value of services		—	—	—	2,632	—	—	2,632
Exercises		952,372	143	2,114	—	—	—	2,257
Treasury shares	5.22	(4,025)	(1)	—	209	—	—	209
Issuance of ordinary shares, May 2021	5.22	8,145,176	1,222	88,375	—	—	—	89,597
Issuance of ordinary shares, November 2021	5.22	5,175,000	776	87,199	—	—	—	87,975
Cost of equity transactions, net of tax	5.22	—	—	(13,414)	—	—	—	(13,414)
BALANCE AS AT DECEMBER 31, 2021		**105,239,085**	**15,786**	**409,258**	**52,512**	**(233,549)**	**(73,425)**	**170,581**

(In € thousand) (except number of shares)	Note	Number of shares issued	Share capital	Share premium	Other reserves	Retained earnings/ (Accumulated deficit)	Profit/ (loss) for the period	Total equity
BALANCE AS AT JANUARY 1, 2022		**105,239,085**	**15,786**	**409,258**	**52,512**	**(233,549)**	**(73,425)**	**170,581**
Total comprehensive income/(loss)		—	—	—	105	—	(143,279)	(143,174)
Income appropriation		—	—	—	—	(73,425)	73,425	—
Share-based compensation expense:	5.23							
Value of services		—	—	—	2,635	—	—	2,635
Exercises		2,578,636	387	3,371	—	—	—	3,758
Treasury shares	5.22	—	—	—	—	—	—	—
Issuance of ordinary shares, June 2022	5.22	9,549,761	1,432	89,195	—	—	—	90,627
Issuance of ordinary shares, October 2022	5.22	21,000,000	3,150	99,750	—	—	—	102,900
Cost of equity transactions, net of tax	5.22	—	—	(7,531)	—	—	—	(7,531)
BALANCE AS AT DECEMBER 31, 2022		**138,367,482**	**20,755**	**594,043**	**55,252**	**(306,974)**	**(143,279)**	**219,797**

The accompanying Notes form an integral part of these financial statements.

5 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

5.1 General information and significant events of the period

Valneva SE ("the Company") together with its subsidiaries (the "Group" or "Valneva") is a company focused on the development and commercialization of prophylactic vaccines for infectious diseases with significant unmet medical needs. The Company takes a highly specialized and targeted approach to vaccine development and then applies its deep understanding of vaccine science to develop prophylactic vaccines addressing these diseases. Valneva has leveraged its expertise and capabilities both to successfully commercialize three vaccines and to rapidly advance a broad range of vaccine candidates into and through the clinic, including candidates against chikungunya virus and Lyme disease.

The Group's portfolio includes three commercial vaccines:

- IXIARO (also marketed as JESPECT), indicated for the prevention of Japanese encephalitis;
- DUKORAL, indicated for the prevention of cholera, and, in some countries, prevention of diarrhea caused by enterotoxigenic Escherichia coli; and
- VLA2001, the only inactivated whole-virus COVID-19 vaccine approved in Europe.

Valneva has operations in Austria, Sweden, the United Kingdom, France, Canada and the United States and over 700 employees.

Valneva SE is a public company listed on the Euronext Paris (symbol: VLA) and on the Nasdaq Global Select Market (symbol: VALN) since May 2021.

List of direct or indirect interests held by the Company:

Name	Country of incorporation	Consolidation method	Interest held as at December 31,	
			2022	2021
BliNK Biomedical SAS[1]	FR	Equity method[2]	48.9%	48.9%
Vaccines Holdings Sweden AB	SE	Consolidation	100%	100%
Valneva Austria GmbH	AT	Consolidation	100%	100%
Valneva Canada Inc.	CA	Consolidation	100%	100%
Valneva France SAS	FR	Consolidation	100%	100%
Valneva Scotland Ltd.	UK	Consolidation	100%	100%
Valneva Sweden AB	SE	Consolidation	100%	100%
Valneva UK Ltd.	UK	Consolidation	100%	100%
Valneva USA, Inc.	US	Consolidation	100%	100%

[1] See Note 5.16
[2] The investment in BliNK Biomedical SAS was reclassified from “Investments in associates” to “Assets classified as held for sale” as at June 30, 2022.

The closing date for the consolidated financial statements is December 31st of each year.

The Company is registered at 6 rue Alain Bombard, 44800 Saint-Herblain, France.

The Company’s site in Saint-Herblain (Nantes, France) includes general and administrative functions and research and development (R&D) facilities. The Valneva SE site in Lyon operates commercial activities.

Vaccines Holdings Sweden AB is the holding company of Valneva Sweden AB.

Valneva Austria GmbH (Vienna, Austria) focuses on pre-clinical and clinical development activities of vaccines. The facilities accommodate departments for pre-clinical R&D, technical/clinical product development, quality and regulatory affairs, general and administrative as well as commercial functions. Valneva Austria GmbH commercializes IXIARO, DUKORAL, VLA2001 and third-party products such as FLUCELVAX TETRA, FLUAD, Moskito Guard, RABIPUR and ENCEPUR.

Valneva Canada Inc. (Montreal, Quebec) commercializes IXIARO, DUKORAL and third-party products such as KAMRAB and RABIPUR .

Valneva France SAS (Lyon, France) commercializes IXIARO, DUKORAL and third-party products such as RABIPUR and ENCEPUR.

Valneva Scotland Ltd. (Livingston, Scotland) is primarily involved in the production of IXIARO and Valneva's chikungunya vaccine candidate VLA1553, which is currently in the development phase. Valneva Scotland Ltd. was also involved in the production of VLA2001 prior to suspension of its manufacturing.

Valneva Sweden AB (Solna, Sweden) manufactures DUKORAL and commercializes DUKORAL, IXIARO and third-party products such as Moskito Guard and other vaccines in the Nordic countries. In addition, Valneva Sweden AB provided R&D services and filling services for VLA2001.

Valneva UK Ltd. (based nearby London, United Kingdom) commercializes DUKORAL, IXIARO and third-party products such as RABIPUR in the United Kingdom.

Valneva USA, Inc. focuses on the commercialization of IXIARO to the U.S. military and the U.S. private market.

SIGNIFICANT EVENTS OF THE PERIOD

Impact of COVID-19

The Group has been and could continue to be materially adversely affected by the current COVID-19 pandemic in regions where Valneva has significant manufacturing facilities, concentrations of clinical trial sites, or other business operations. COVID-19 adversely impacted sales of travel vaccines, with travel to endemic areas significantly reduced compared to 2019 (pre-pandemic). DUKORAL and IXIARO are aimed at diseases that primarily threaten travelers to particular regions (e.g. Asia). As a result, sales of these vaccines decreased significantly in 2020 and 2021, adversely impacting the Group's financial results. Throughout 2022, the COVID emergency rules were relaxed in most parts of the world, resulting in a significant resumption of international travel, albeit not reaching pre-COVID levels. This trend of growing international travel is expected to continue in the new year. The Group's product sales will continue to be affected by the amount of international travel, and Valneva may not be able to complete the development of its vaccine candidates without additional financing if the travel industry does not recover as expected. Valneva continues to closely monitor how the pandemic and related response measures are affecting the Company's business. Valneva reported cash and cash equivalents of €289.4 million as at December 31, 2022. Although it is difficult to predict future liquidity requirements, the Group's management considered that the existing cash and cash equivalents as at December 31, 2022 will be sufficient to fund its operations for at least the next 12 months from the authorization of publication of these consolidated financial statements. For details on liquidity risk, see Note 5.2.5.

Impact from COVID-19, including the COVID segment (VLA2001 vaccine development), is described in the following Notes as at December 31, 2022 and for the year ended December 31, 2022:

Impact from COVID-19	Note	
COVID segment	5.1/5.28/5.29	The Company developed VLA2001, a vaccine against the SARS-CoV-2 virus causing COVID-19, which was approved with Emergency Use Authorization from Bahrain in February 2022, with Conditional Marketing Authorization from UK MHRA and received a full Marketing Authorization by EMA in June 2022. Valneva sold 1.25 million doses of VLA2001 to certain countries in the European Commission. In 2022, Valneva sold 0.5 million doses of VLA2001 to the Kingdom of Bahrain and will sell 0.5 million doses in 2023. For further information, see Note 5.5. Capital investments for the manufacturing of VLA2001 were made. Due to the reduced demand for VLA2001, related equipment of €11.9 million, right of use assets of €1.0 million, leasehold improvements of €1.9 million and remaining inventory of €176.9 million were written off as at December 31, 2022. Of the impaired VLA2001 inventory, €159.4 million was written off in 2022. All other COVID equipment will be used within other segments from 2022 onwards. From 2022 onward COVID is no longer a CGU for the purpose of the impairment test. For more information see Note 5.15.
Revenues from contracts with customers	5.5	Valneva's total product sales reached €114.8 million in 2022 compared to €63.0 million in 2021, an increase of 82.3%. This was driven by a continued recovery of travel vaccine sales that surpassed expectations, complemented by COVID-19 vaccine sales in Europe and Bahrain (€29.6 million). IXIARO/JESPECT sales were €41.4 million in 2022 compared to €45.1 million in 2021, a decrease of 8.4%, driven by lower sales to the U.S. Department of Defense. This decrease was partly offset by the significant recovery of the private travel markets, with IXIARO/JESPECT private sales reaching €28.8 million in 2022 compared to €7.1 million in 2021. DUKORAL sales were €17.3 million in 2022 compared to €2.4 million in 2021, an increase of 610.3%, also benefitting from the significant recovery in the private travel markets. Third Party product sales grew to €26.5 million in 2022 compared to €15.4 million in 2021, an increase of 72.1%.
Inventories	5.18	While the write-down for IXIARO and DUKORAL which is expected not to be sold before the expiry date was reduced to €2.9 million, COVID-related inventory of €176.9 million was written down as of December 31, 2022.
Trade receivables	5.19	An assessment of expected credit loss resulted in only a minor impact on the Group's figures.

Effects of climate change on the consolidated financial statements

In preparing the consolidated financial statements, Valneva's management has considered the impact of climate change. These considerations did not have a material impact on the financial reporting judgements and estimates in 2022, 2021 and 2020.

Significant agreements signed in the periods presented

COVID-19

Authorizations and Emergency Use granted by Health Authorities for Valneva's inactivated, adjuvanted COVID-19 vaccine, VLA2001 in 2022

In February 2022, the National Health Regulatory Authority (NHRA) of the Kingdom of Bahrain granted an Emergency Use Authorization for VLA2001.

In April 2022, Valneva announced that the Medicines and Healthcare products Regulatory Agency (MHRA) of the United Kingdom (UK) had granted a Conditional Marketing Authorization for VLA2001, for primary immunization in adults 18 to 50 years of age.

In May 2022, Valneva announced that the United Arab Emirates had granted Emergency Use Authorization for VLA2001.

In June 2022, Valneva announced that the European Commission (EC) had granted a marketing authorization for VLA2001 in Europe, for use as primary vaccination in people from 18 to 50 years of age. With this approval, VLA2001 became the first COVID-19 vaccine to receive a standard marketing authorization in Europe. The marketing authorization covers all 28 European Union Member States as well as Iceland, Liechtenstein, and Norway.

Vaccine Supply Agreement with the UK Authority from 2020, its termination in 2021 and Settlement Agreement of 2022

In September 2020, Valneva entered into a supply agreement (the UK Supply Agreement), with the Secretary of State for Business, Energy and Industrial Strategy of the United Kingdom (the UK Authority), pursuant to which Valneva was obligated to develop, manufacture and supply SARS-CoV-2 vaccines to the UK Authority in the United Kingdom of Great Britain and Northern Ireland, including an obligation for Valneva to upgrade its manufacturing facilities in Scotland.

In September 2021, Valneva received notice of the UK Authority's decision to terminate the UK Supply Agreement, and the termination became effective in October 2021.

In June 2022, Valneva and the UK Authority signed a settlement agreement. The settlement agreement resolves certain matters relating to the obligations of the Company and UK Authority following the termination of the UK Supply Agreement and in relation to the separate agreement relating to clinical trials of VLA2001 in the UK, which remains in place. The Company continues to have certain other obligations pursuant to provisions of the UK Supply Agreement that survive its termination. For more information see Note 5.29.

Advance Purchase Agreement with the European Commission in 2021 and amendment in 2022

In November 2021, Valneva signed an Advance Purchase Agreement (APA) with the European Commission (the EC) to supply up to 60 million doses of VLA2001 over two years. Under the terms of the APA, Valneva was to deliver 24.3 million doses in 2022 (starting in April 2022), subject to approval of VLA2001 by the European Medicines Agency (EMA). The EC had an option to purchase a further 35.7 million doses for delivery in 2023. During 2021, no revenue was recognized, as the deliveries were to start in the second quarter of 2022. Advanced payments of €116.9 million were included as contract liabilities as at December 31, 2021.

In May 2022, Valneva received a notice from the EC of its intent to terminate the APA on the basis of a right to terminate the APA if VLA2001 had not received a marketing authorization from the EMA by April 30, 2022. Based on the terms of the APA, Valneva had 30 days from May 13, 2022, to obtain a marketing authorization, which Valneva did not obtain within this period. Valneva did, however, obtain a marketing authorization in June 2022. Following the receipt of the EC's notice to terminate the APA, both parties entered into negotiations for a

remediation plan. In July 2022, the EC and the Company signed an amendment to the APA. Under this amendment the order quantity was reduced to 1.25 million doses of VLA2001 in 2022, with the option to purchase an equivalent quantity later in 2022. In 2022, 1.25 million doses were delivered. Under the terms of the APA, the pre-payments received in connection with the original order volume are not required to be reimbursed. Of the total amount of pre-payments, Valneva recognized €110.8 million as other revenue in 2022.

Kingdom of Bahrain and supply of VLA2001

In November 2021, Valneva and the Kingdom of Bahrain signed an APA for the supply of one million doses of VLA2001. In 2022, 0.5 million doses of VLA2001 were sold and €9.5 million of product sales revenue were recognized accordingly. As at December 31, 2022, accounts receivable and contract liabilities related to this agreement comprised €3.4 million and €3.8 million, respectively (December 31, 2021: accounts receivable: €3.8 million and contract liabilities: €3.8 million).

IDT Biologika GmbH (IDT) – Collaboration for the production of VLA2001

In November 2021, Valneva and IDT Biologika GmbH (IDT) announced their collaboration for the production of VLA2001. Under the collaboration, IDT was to produce VLA2001's drug substance at its Biosafety Level 3 facilities in Dessau-Roßlau, Germany, in addition to production taking place at Valneva's manufacturing site in Livingston, Scotland.

In September 2022, Valneva announced the decision to suspend manufacturing of the vaccine and wind-down of VLA2001-related activities in light of the reduced EC order.

In September 2022, Valneva Austria GmbH, Valneva SE (together referred to as Valneva) and IDT agreed to sign a settlement agreement under which they agreed to terminate their VLA2001 collaboration following the delivery of bulk vaccines to Valneva and taking into consideration existing order levels and inventories. Valneva agreed to pay IDT compensation in cash and in kind, in the form of specified equipment purchased by Valneva. As at December 31, 2022, a provision of €0.1 million related to the agreement with IDT (December 31, 2021: advance payments related to the agreement: €16.4 million).

LYME

In April 2020, Valneva signed an agreement with Pfizer (the Collaboration and License Agreement) to co-develop and commercialize the Group's Lyme disease vaccine candidate (VLA15). This is classified as an agreement with a customer as defined by IFRS 15 guidance on revenue contracts with customers, and accordingly, amounts received or payable by Valneva under the Collaboration and License Agreement are accounted for in the Group's revenues. The Collaboration and License Agreement included a €116.9 million ($130 million) upfront payment to Valneva received in June 2020. Valneva is obligated to reimburse certain development costs incurred by Pfizer, through completion of the development program, which is expected to finish in 2024. The transaction price according to IFRS 15 was determined taking into consideration Valneva's expected refund obligation relating to its share of the development costs. The agreement includes research and development and service performance obligations for which revenue is recognized over time as well as a license performance obligation for which revenue is recognized at a point in time when Pfizer can benefit and use the license without Valneva's further involvement. The upfront payments, net of estimated refunds have been allocated to the performance obligations in proportion to their standalone selling prices. In addition, Valneva is entitled to receive partial reimbursement of research and development and service costs incurred. In the year ended December 31, 2021, €14.3 million was recognized as other revenues and was primarily related to the services performed. Additionally, as at December 31, 2021, €3.0 million of costs to obtain a contract was included in other non-current assets, and €79.6 million was recognized as discounted refund liabilities.

In June 2022 and in November 2022, Valneva and Pfizer updated the terms of their Collaboration and License Agreement. From May 1, 2022 onward, Valneva will fund 40% of the remaining shared development costs compared to 30% in the initial agreement. Pfizer will pay Valneva tiered royalties ranging from 14% to 22%, compared to royalties starting at 19% in the initial agreement. In addition, Valneva is eligible for up to

$100 million on the achievement of cumulative sales targets. The payment terms of the development cost reimbursements were also amended. Other future development and early commercialization milestones are $168 million. A development milestone due upon Pfizer's initiation of the Phase 3 study of $25 million was paid to Valneva in October 2022. In the year ended December 31, 2022, a reversal of €45.9 million was recognized as other revenues and primarily reflects the impact of the reduction in the highly probable portion of the transaction price. As at December 31, 2022, the discounted refund liability amounted to €135.5 million (December 31, 2021: €79.6 million), of which nil (December 31, 2021: €75.2 million) was recognized as a non-current refund liability. €3.7 million of costs to obtain a contract were included in other non-current assets as at December 31, 2022 (December 31, 2021: €3.0 million). For more details, see Note 5.5.2 and Note 5.29.

IXIARO

US Department of Defense (DoD)

In September 2020, the U.S. Department of Defense (DoD) awarded Valneva a new contract for the supply of IXIARO. The terms of the agreement, as subsequently amended in September 2021, included an initial base year followed by two option years, each with a range of minimum and maximum potential orders. The base year had a minimum value of approximately $53 million for 370,000 doses, and the first option year, which the DoD exercised in September 2021, had a minimum value of approximately $28.8 million for 200,000 doses. Valneva also agreed to provide additional inventory to the DoD after September 2023 to mitigate the potential impact of unused stock that may expire. This replacement inventory will be provided free of charge and resulted in a contract liability of $5.2 million (€4.9 million) recognized as at December 31, 2022 (December 31, 2021: $5.4 million; €4.7 million). In August 2022, Valneva announced that DoD had decided not to exercise the second option year of the contract, as DoD considered its existing IXIARO supply adequate to meet current needs.

CHIKUNGUNYA

Coalition for Epidemic Preparedness Innovations (CEPI)

In July 2019, Valneva and Coalition for Epidemic Preparedness Innovations (CEPI) announced a new partnering agreement pursuant to which CEPI will provide Valneva up to $23.4 million for vaccine manufacturing and late-stage clinical development of Valneva's single-dose, live-attenuated vaccine (VLA1553) against chikungunya. In the fourth quarter of 2022, CEPI awarded Valneva an additional amount of $1.2 million.

In January 2021, Valneva and Instituto Butantan, a producer of immunobiological products, announced the signing of definitive agreements for the development, manufacturing and marketing of Valneva's single-shot chikungunya vaccine candidate, VLA1553, in Low- and Middle-Income Countries (LMICs). This finalization follows the signing of a binding term sheet in May 2020. The collaboration falls within the framework of the $23.4 million funding agreement Valneva signed with CEPI in July 2019. Under the collaboration, Valneva transferred its chikungunya vaccine technology to Instituto Butantan, who will develop, manufacture, and commercialize the vaccine in LMICs. In addition, Instituto Butantan will provide certain clinical and Phase 4 observational studies that Valneva will use to meet regulatory requirements. The agreement includes small upfront and technology transfer milestones. As at December 31, 2022, €3.9 million was recognized as other revenues and €0.7 million was included in contract liabilities (December 31, 2021: €0.8 million included in contract liabilities, and €2.1 million recognised in other revenues in 2021).

FINANCING

In February 2022, Valneva announced that its subsidiary Valneva Scotland was awarded research and development funding of up to £20 million by Scottish Enterprise, Scotland's national economic development agency. The investment is comprised of two grants which build on the agency's longstanding engagement with Valneva and will benefit the Company's manufacturing site in Livingston. The grants were expected to be received over the next three years. In 2022, Valneva received €5.1 million (£4.3 million) under the first grant of

up to £12.5 million, which would support development related to the manufacture of Valneva's COVID-19 vaccine. Valneva did not receive any payments in 2022 relating to the second grant of up to £7.5 million, which will support development connected to Valneva's manufacturing processes for other vaccines. The funds received were classified as current liabilities as at December 31, 2022. Pursuant to the terms of the grants, Valneva could have to repay the funds received if it fails to comply with certain conditions, including conditions relating to employees at the Livingston site. Additionally, in 2020 Scottish Enterprise awarded Valneva Scotland funding of up to £0.9 million for development of the chikungunya vaccine. Of this total amount, €0.5 million (£0.4 million) was received in 2022. The funds received have been classified as current liabilities as at December 31, 2022.

In April 2022, Valneva signed an amendment to increase the principal amount of its existing €54.1 million ($60 million) debt financing agreement with funds managed by leading U.S.-based healthcare investment firms Deerfield and OrbiMed. The original loan agreement was signed in February 2020. The April 2022 amendment provided Valneva immediate access to €18.2 million ($20 million), with an additional $20 million available upon potential approval of VLA2001 by the EMA. This additional $20 million was drawn in September 2022 in the amount of €19.9 million. The increased funding will be used to further invest in research and development projects, including market access preparations for VLA1553. The loan interest rate remains unchanged at 9.95% (equivalent to 10.09% on an annual basis). The interest-only period was extended from the second quarter of 2023 to the third quarter of 2024, and the loan will now mature in the first quarter of 2027 instead of the first quarter of 2026. As at December 31, 2022, €92.3 million ($100.0 million) was drawn down and the carrying amount was €89.2 million ($95.0 million). As at December 31, 2021, €54.1 million ($60.0 million) was drawn down and the carrying amount was €49.7 million ($56.3 million). The loan is secured by substantially all of Valneva's assets, including its intellectual property, and is guaranteed by Valneva SE and certain of its subsidiaries.

In June 2022, Valneva signed an Equity Subscription Agreement with Pfizer. Pursuant to the Equity Subscription Agreement, Pfizer invested €90.6 million ($95 million) in Valneva, representing 8.1% of Valneva's then-existing share capital at a price of €9.49 per share. The per share purchase price was determined based on the average closing price of the Company's shares on Euronext Paris during the 10 trading days preceding the date of the Equity Subscription Agreement. The equity investment closed on June 22, 2022.

In October 2022, Valneva announced the closing of a global offering to specified categories of investors of an aggregate of 21,000,000 new ordinary shares. The net proceeds from the global offering amounted to €95.5 million.

5.2 Summary of significant accounting policies

The principal accounting policies applied in preparing these consolidated financial statements are outlined below. These policies have been consistently applied to all years presented.

5.2.1 Basis of preparation

These 2022 Consolidated Financial Statements have been prepared in accordance with the International financial reporting standards, which comprise IFRS (International Financial Reporting Standards), IAS (International Accounting Standard) and their interpretations, SIC (Standards Interpretations Committee) and IFRIC (International Financial Reporting Interpretations Committee), as issued by the International Accounting Standards Board ("IASB").

The preparation of financial statements in conformity with IFRS as issued by the IASB requires the use of certain critical accounting estimates. It also requires the Group's management to exercise its judgement in applying the Group's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 5.3.

For ease of presentation, numbers have been rounded and, where indicated, are presented in thousands of Euros. Calculations, however, are based on exact figures. Therefore, the sum of the numbers in a column of a table may not conform to the total figure displayed in the column.

These consolidated financial statements were approved by the Management Board on March 21, 2023 and authorized for issuance by the Supervisory Board on March 22, 2023.

5.2.2 Impact of new, revised or amended Standards and Interpretations

(a) ***New and amended standards adopted by the Group***

Standard - Interpretation – Amendment		Effective Date	Effects
Amendments to IFRS 3, IAS 16, and IAS 37	Reference to the Conceptual Framework, Proceeds before Intended use and Onerous Contracts - Cost of Fulfilling a Contract	January 1, 2022	None
Amendments to IFRS1, IFRS 9, IFRS 16 and IAS 41	Annual Improvements to IFRSs 2018-2020 Cycle	January 1, 2022	None

No IFRS Interpretations Committee's agenda decisions had any material impact on the amounts recognized in prior periods and are not expected to significantly affect the current or future periods.

(b) ***New standards, amendments and interpretations issued but not effective for the financial year beginning January 1, 2022, and not early adopted.***

The Group did not elect for early application of the following new standards, amendments and interpretations which were issued by the IASB but not mandatory as at January 1, 2022:

- IFRS 17 including Amendments to IFRS 17 – Insurance contracts
- Amendments to IAS 1 and IFRS Practice Statement 2 – Disclosure of Accounting Policies
- Amendments to IAS 8 – Definition of Accounting Policies
- Amendments to IAS 12 – Deferred Tax related to Assets and Liabilities arising from a Single Transaction

These standards and amendments are not expected to have a material impact on the entity in the current reporting periods and on foreseeable future transactions.

5.2.3 Consolidation

Subsidiaries

Subsidiaries are entities over which the Company has control. The Company controls an entity when the Company is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Company. They are deconsolidated from the date that control ceases.

The Group uses the acquisition method of accounting to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair value of assets transferred, the liabilities incurred, and the equity interests issued by the Company. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Acquisition-related costs, other than those associated with the issue of debt or equity securities, are expensed as incurred. Identifiable assets acquired, liabilities, and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The excess of the consideration transferred over the fair value of the Company's share of the identifiable net assets acquired is recorded as goodwill. If the fair value of the net assets of the acquired subsidiary exceeds the consideration, the difference is recognized directly in the income statement as a bargain purchase gain. Intercompany transactions, balances and unrealized gains on transactions between Group companies are eliminated.

Associates

Associates are entities over which the Company has significant influence.

5.2.4 Foreign currency translation

(a) ***Functional and presentation currency***

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The consolidated financial statements are presented in Euros which is Valneva SE's functional and presentation currency.

(b) ***Transactions and balances***

Foreign currency transactions are converted into the functional currency using exchange rates applicable on the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at year-end exchange rates are recognized in the income statement.

(c) ***Subsidiaries***

The results and financial position of all subsidiaries (none of which having the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are converted into the presentation currency as follows:

- assets and liabilities presented for each balance sheet are converted according to the exchange rate valid on the balance sheet date;
- from 2021 onward, income and expenses for each income statement are converted at monthly average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are converted on the dates of the transactions). In 2020, income and expenses for each income statement were converted using exchange rates applicable on the dates of the transactions); and
- all resulting exchange differences are recognized as other comprehensive income and are shown as other reserves.

When a foreign operation is partially disposed of or sold, exchange differences that had been recorded in equity are recognized in the income statement as part of the gain or loss on sale.

5.2.5 Financial risk management

The Group's activities expose it to a variety of financial risks: market risk (including currency risk and interest rate risk), credit risk, and liquidity risk. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the Group's financial performance.

Financial risk management is carried out under the CFO's responsibility and is closely supervised by the Management Board. The Group's risk management systems identify, evaluate and manage financial risks. The Management Board submits regular reports on its risk management systems, including the management of financial risks, to the Audit Committee of the Supervisory Board.

(a) ***Market risk***

Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risks arising from various currencies, primarily with respect to the British Pound (GBP), the Canadian Dollar (CAD), the Swedish Krona (SEK) and the US Dollar ($). The foreign exchange risks from the exposure to other currencies, including the Danish Krone,

the Swiss Franc and the Norwegian Krone, are relatively limited. Foreign exchange risks arise from future commercial transactions, recognized assets and liabilities, and net investments in foreign operations.

The objective of the Group is to limit the potential negative impact of the foreign exchange rate changes, for example by currency conversion of cash and cash equivalents denominated in foreign currency and by using foreign currency options.

The Group has certain investments in foreign operations, the net assets of which are exposed to foreign currency translation risk.

The following table details the Group's sensitivity to a 10% increase and decrease in currency units against the relevant foreign currencies. 10% is the sensitivity rate used when reporting foreign currency risk internally to key management personnel and represents management's assessment of the reasonably possible change in foreign exchange rates. The sensitivity analysis includes only outstanding foreign currency denominated monetary items and adjusts their translation at the year-end for a 10% change in foreign currency rates. The sensitivity analysis includes external loans as well as loans to foreign operations within the Group where the denomination of the loan is in a currency other than the currency of the lender or the borrower. A positive number below indicates an increase in pre-tax profit or a reduction in pre-tax loss. With all other variables held constant, the impact from changes in exchange rates on the pre-tax result would be as follows:

	Year ended December 31,	
(In € thousand)	**2022**	**2021**
EUR/$ +10%	13,873	6,818
EUR/$ -10%	(16,956)	(8,334)
EUR/GBP +10%	(6,605)	(11,986)
EUR/GBP -10%	8,073	14,650
EUR/SEK +10%	(2,761)	(2,884)
EUR/SEK -10%	3,374	3,525
EUR/CAD +10%	(616)	(557)
EUR/CAD -10%	753	681

As at December 31, 2022, the increase in the foreign currency exchange risk in $ were mainly caused by a significant increase in intercompany (IC) receivables denominated in $ in Valneva Austria GmbH.

As at December 31, 2022, the decrease in the foreign currency exchange risk in GBP was caused by lower refund liabilities denominated in GBP in Valneva Austria GmbH relating to the COVID-19 vaccine program (see Note 5.1).

As at December 31, 2022, there are no material changes in the foreign currency exchange risk in SEK, which is in line with the stable level of IC receivables within the group denominated in SEK.

While the Group utilized a hedging strategy to lower its exposure to non-Euro currencies, there is a business need to keep a certain level of non-Euro funds available in its accounts at any time in order to cover payment obligations denominated in GBP or $. In addition, revaluation of certain non-Euro cash balances is offset by revaluation of non-Euro denominated refund liabilities on the Group's balance sheet (see Note 5.29).

Interest rate risks

The Group is exposed to market risks in connection with hedging both its liquid assets and its medium and long-term indebtedness and borrowings subject to variable interest rates.

Borrowings issued at variable rates expose the Group to cash flow interest rate risks, which are offset by cash and financial assets held at variable rates. During 2022, as well as 2021 and 2020, the Group's investments at variable rates, as well as the borrowings at variable rates, were denominated in €, SEK, $, CAD and GBP.

The Group analyzes its interest rate exposure on a dynamic basis. Based on this analysis, the Group calculates the impact on profit and loss of a defined interest rate change. The same interest rate change is used for all currencies. The calculation only includes investments in financial instruments and cash in banks that represent major interest-bearing positions. As at December 31, 2022 and December 31, 2021, no material interest risk was identified. In case of increasing interest rates the positive effect from cash in banks will be higher than the negative effect from variable interest-bearing liabilities; in case of decreasing interest rates there will be no material negative impact.

(b) ***Credit risks***

The Group is exposed to credit risk. Valneva holds bank accounts, cash balances, and securities at sound financial institutions with high credit ratings. To monitor the credit quality of its counterparts, the Group relies on credit ratings as published by specialized rating agencies such as Standard & Poor's, Moody's, and Fitch. The Group has policies that limit the amount of credit exposure to any single financial institution. The Group is also exposed to credit risks from its trade debtors, as its income from product sales, collaborations, licensing and services arises from a small number of transactions. The Group has policies in place to enter into such transactions only with highly reputable, financially sound counterparts. If customers are independently rated, these ratings are used. Otherwise, when there is no independent rating, a risk assessment of the credit quality of the customer is performed, taking into account its financial position, past payment experience and other relevant factors. Individual credit limits are set based on internal or external ratings in accordance with signature authority limits as set by the Management Board. Most of the trade receivables are receivables from governmental institutions with high credit rating (AAA-country or AA-country). The credit quality of financial assets is described in Note 5.17.3.

(c) ***Liquidity risks***

The Group is exposed to liquidity risk due to the maturity of its financial liabilities and the fluctuations of its operating cash-flow, and the potential implementation of early repayment clauses in loan or grant agreements. Furthermore, fluctuations in the Group's operating cash flow during accounting periods also generate liquidity risks. Prudent liquidity risk management therefore implies maintaining sufficient cash resources, cash equivalents and short-term deposits in order to satisfy ongoing operating requirements and the ability to close out market positions. Extraordinary conditions on the financial markets may, however, temporarily restrict the possibility to liquidate certain financial assets.

Although it is difficult to predict future liquidity requirements, the Group considers that the existing cash and cash equivalents as at December 31, 2022 will be sufficient to fund the operations for at least the 12 months from the date of authorization for issuance of these consolidated financial statements. For the existing loan agreement with covenants, amendments were agreed to reduce the minimum liquidity covenant and the minimum revenue covenant to prevent a breach of the covenants (see Note 5.24.1).

The table below analyzes the Group's financial liabilities into relevant maturity groupings based on the remaining period from the balance sheet date to the contractual maturity date. The amounts disclosed in the table are the contractual undiscounted cash flows.

AS AT 31 DECEMBER, 2021 (In € thousand)	Less than 1 year	Between 1 and 3 years	Between 3 and 5 years	Between 5 and 10 years	Between 10 and 15 years	Over 15 years	Total
Borrowings	7,121	48,560	20,534	1,765	—	—	77,980
Lease liabilities	4,060	29,011	5,761	12,798	9,928	1,905	63,464
Refund liabilities	101,070	132,355	55,000	12,720	—	—	301,145
Trade payables and accruals	68,119	—	—	—	—	—	68,119
Tax and employee-related liabilities[3]	10,101	—	—	—	—	—	10,101
Other liabilities	27	25	—	—	—	—	52
	190,499	**209,952**	**81,295**	**27,282**	**9,928**	**1,905**	**520,861**

[3]Social security and other tax payables are excluded from the tax and employee-related liabilities balance, as this analysis is required for financial instruments only.

AS AT 31 DECEMBER, 2022 (In € thousand)	Less than 1 year	Between 1 and 3 years	Between 3 and 5 years	Between 5 and 10 years	Between 10 and 15 years	Over 15 years	Total
Borrowings	11,629	74,815	44,859	939	—	—	132,242
Lease liabilities	26,674	5,915	5,706	11,620	9,568	80	59,563
Refund liabilities	140,098	—	7,000	—	—	—	147,098
Trade payables and accruals	41,491	—	—	—	—	—	41,491
Tax and employee-related liabilities[3]	10,778	—	—	—	—	—	10,778
Other liabilities	87	—	—	—	—	—	87
	230,756	**80,731**	**57,565**	**12,559**	**9,568**	**80**	**391,260**

[3]Social security and other tax payables are excluded from the tax and employee-related liabilities balance, as this analysis is required for financial instruments only.

The fair values as well as the book values of the Group's borrowings are disclosed in Note 5.24. To manage liquidity risk, the Group holds sufficient cash, cash equivalents and short-term deposit balances.

5.2.6 Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide benefits for shareholders and for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. The Group actively manages its funds to primarily ensure liquidity and principal preservation while seeking to maximize returns. The Group's cash and short-term deposits are located at several different banks. In order to maintain or adjust the capital structure, the Group may issue new shares or sell assets to reduce debt.

In order to pursue its business strategy to grow into a major, self-sustainable vaccine company through organic growth and opportunistic mergers & acquisitions, the Group may rely on additional equity and debt financing. Capital consists of “Equity” as shown in the consolidated balance sheet.

5.2.7 Fair value estimation

The carrying value less impairment provision of trade receivables and payables are assumed to approximate their fair values due to the relatively short maturity of the respective instruments.

5.3 Critical accounting judgements and key sources of estimation uncertainty

In applying the Group’s accounting policies, which are described in Note 5.2: Summary of significant accounting policies, management is required to make judgements (other than those involving estimations) that have a significant impact on the amounts recognised and to make estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

5.3.1 Critical judgements in applying the Group’s accounting policies

The following are the critical judgements, apart from those involving estimations (which are presented separately below), that management has made in the process of applying the Group’s accounting policies and that have the most significant effect on the amounts recognised in financial statements:

- Note 5.5.2 and Note 5.29: Revenue recognition of other revenues/refund liabilities: management’s judgement is required to determine the identification and separation of performance obligations (especially when determining whether the license is distinct, which is the case when the customer can benefit from the license without further involvement), the determination of the transaction price (including the judgement of payables to customers), and allocation of the transaction price to the performance obligations on relative standalone selling price. The standalone selling price is sometimes not available or is based on hard-to-value intangible assets, so various valuation techniques are used. In addition, management’s judgement is required regarding whether revenue from collaborations, licensing and service agreements is recognized over time or at a point in time. Revenue is only recognized when it is highly likely that it will not reverse in future, and this is a judgement required from management. In particular, Note 5.5.2 underlines the judgements made in applying accounting policies for the first three items in the context of the terminations of:
  - the UK Supply Agreement;
  - the EC APA;
  - the strategic alliance agreements (SAA) with GlaxoSmithKline (GSK) terminated in 2019; and
  - the Research Collaboration and License Agreement with Pfizer and several amendments thereto;
- Notes 5.8 and 5.31: Other income/Other liabilities: The Group receives funding from CEPI, which includes performance obligations and refund obligations. Management’s judgement is required to determine whether such components of an agreement are revenues from customers or fall within the standard of accounting for government grants. CEPI is a global partnership between public, private, philanthropic, and civil society organizations. Because CEPI is a non-governmental organization and acts in the way a government organization would, it was accounted for under IAS 20 (Accounting for Government Grants and Disclosure of Government Assistance). In addition, the valuation of the various components required Management’s judgement;

- Note 5.13: Lease term: When determining lease terms, the Group makes judgements regarding whether it is reasonably certain that it will exercise renewal or early termination options.

5.3.2 Key sources of estimation uncertainty

The key assumptions concerning the future, and other key sources of estimation uncertainty in the reporting period that may have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are discussed below:

- Note 5.5.1: Revenue recognition of product sales: estimate of expected returns and replacements, and supply of products free of charge;
- Note 5.5.2: Other revenues: likelihoods for refund liabilities and for revenue recognition in accordance with the actual costs compared to the budget;
- Notes 5.8 and 5.31: Other income/other liabilities: estimates of income recognized and repayments from grants, measured according to cost incurred compared to the budget;
- Note 5.10: Recognition of deferred tax assets: availability of future taxable profit against which deductible temporary differences and tax losses carried forward can be utilized and whether sufficient evidence is provided for entities;
- Note 5.12: Intangible assets: Amortization period of development expenditures and acquired technologies. The most significant criteria considered for the determination of the useful life include the patent life as well as the estimated period when Valneva can benefit from this intangible asset. These assumptions are considered to be a key source of estimation uncertainty as relatively small changes in the assumptions used may have a significant effect on the Group's financial statements within the next year;
- Note 5.14: Property, plant and equipment: Depreciation period - assessment of useful life;
- Note 5.15 Impairment test of intangible, tangible assets and right of use assets: key assumptions underlying recoverable amounts. Budgets comprise forecasts of revenue, staff costs and overheads based on current and anticipated market conditions that have been considered and approved by the Management Board. The revenue projections are inherently uncertain due to the short-term nature of the business and unstable market conditions. If the Group does not successfully develop vaccine candidates and receive regulatory approval, or if Valneva fails to successfully manufacture or commercialize vaccine candidates if approved, an impairment may be required. For the main estimates and sensitivities related to the impairment test regarding the CGU, see Note 5.15;
- Note 5.18: Write-down analysis for inventories: For the assessment of write-down of raw material the current production plans have been taken into account. Raw material which will not be used before expiry date was written down. For this assessment the status of the expiry dates as of the balance sheet date was used. For the assessment of write-downs of work in progress, finished goods and purchased goods, the forecasted sales plans for 2023 and a minimum shelf life at the time of the most current sales expectation have been taken into account. In addition, those inventories have been assessed on the likelihood of the release of those products. Given the significant changes to the ordered volumes of VLA2001 and the expected future demand, the related inventory which is not expected to be used before expiry date was written off;
- Note 5.23: Share-based payments and related expected employer contribution costs: assumption for fair value determination as well as the determination of accelerated vesting in the event of a change of control (as considered remotely);
- Note 5.29: Refund liabilities: (1) As at December 31, 2022, for the royalty obligation under the UK Supply Agreement, the likelihood for this future obligation was assessed as remote. (2) As at December 31, 2022, management has assessed the likelihood of the repayment obligation under the UK Supply Agreement from the UK Authority for funding of certain capital expenditures as remote. (3) In 2022, the recognition and classification of the refund obligation related to Pfizer following the amendments of the

Research Collaboration and License Agreement were reassessed. (4) As at December 31, 2022, management has assessed the likelihood of the repayment of advance payments received under the Advance Purchase Agreement with the European Commission as remote;

- Notes 5.30 and 5.33: Recognition and measurement of provisions and contingencies: key assumptions about the likelihood and magnitude of an outflow of resources. In estimating the provision for onerous contracts, management made assumptions regarding the likelihood of termination costs for certain agreements.

5.3.3 Measurements of fair values

A number of the Group's accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities.

When measuring the fair value of an asset or a liability, the Group uses observable market data as far as possible. Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

If the inputs used to measure the fair value of an asset or a liability fall into different levels of the fair value hierarchy, then the fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement.

The Group recognizes transfers between levels of the fair value hierarchy at the end of the reporting period during which the change has occurred.

Further information about the assumptions made in measuring fair values is included in the following Notes:

- Note 5.17: financial instruments; and
- Note 5.23: share-based payment arrangements.

5.4 Segment information

The Company's Management Board, as its chief operating decision maker, considers the operational business from a product rather than geographic perspective and has identified four reportable segments. Key performance indicators include revenue and operating profitability.

The individual segments consist of the following:

- "Commercialized products" (marketed vaccines, currently the Group's vaccines IXIARO and DUKORAL as well as third-party products)
- "COVID" (development, manufacturing, and distribution related to VLA2001)
- "Vaccine candidates" (proprietary research and development programs aiming to generate new products in order to generate future cash flows from product sales or from commercialization through partnering with pharmaceutical companies, excluding the COVID-19 vaccine candidate, which is presented separately). With the transfer of the license of Valneva's Lyme vaccine candidate VLA15 to Pfizer in December 2020, all related revenues and costs were moved from the "Vaccine candidates" segment to the "Technologies and services" segment.
- "Technologies and services" (services and inventions at the commercialization stage, i.e. revenue generated through collaborations, service, and licensing agreements). With the transfer of the license of

Valneva's VLA15 Lyme vaccine candidate to Pfizer in December 2020, all related revenues and costs were moved from the "Vaccine candidates" segment to the "Technologies and services" segment.

5.4.1 Income statement by segment

Income statement by segment for the year ended December 31, 2020

(In € thousand)	Commer-cialized products	COVID	Vaccine candidates	Techno-logies and services	Corporate Overhead	Total
Product sales	65,938	—	—	—	—	65,938
Other revenues	1	—	31,604	12,779	—	44,383
REVENUES	**65,939**	**—**	**31,604**	**12,779**	**—**	**110,321**
Cost of goods and services	(41,830)	—	(3,305)	(9,167)	—	(54,302)
Research and development expenses	(2,711)	(18,962)	(62,140)	(640)	—	(84,454)
Marketing and distribution expenses	(17,554)	—	(638)	(72)	—	(18,264)
General and administrative expenses	(13,412)	(2,374)	(7,781)	(2,274)	(1,697)	(27,539)
Other income and expenses, net	1,101	1,578	14,073	117	2,248	19,117
OPERATING PROFIT/(LOSS)	**(8,466)**	**(19,759)**	**(28,189)**	**743**	**551**	**(55,120)**

Income statement by segment for the year ended December 31, 2021

(In € thousand)	Commer-cialized products	COVID	Vaccine candidates	Techno-logies and services	Corporate Overhead	Total
Product sales	62,984	—	—	—	—	62,984
Other revenues	18	253,314	3,257	28,512	—	285,101
REVENUES	**63,002**	**253,314**	**3,257**	**28,512**	**—**	**348,086**
Cost of goods and services	(40,017)	(122,843)	—	(25,061)	—	(187,920)
Research and development expenses	(2,094)	(113,907)	(53,181)	(4,101)	—	(173,283)
Marketing and distribution expenses	(18,455)	(1,182)	(3,811)	(194)	—	(23,643)
General and administrative expenses	(6,102)	(23,003)	(8,323)	(5,495)	(4,684)	(47,606)
Other income and expenses, net	2,196	11,546	7,033	2,458	(257)	22,976
OPERATING PROFIT/(LOSS)	**(1,469)**	**3,927**	**(55,025)**	**(3,881)**	**(4,941)**	**(61,390)**

Income statement by segment for the year ended December 31, 2022

(In € thousand)	Commer-cialized products	COVID	Vaccine candidates	Techno-logies and services	Corporate Overhead	Total
Product sales	85,228	29,568	—	—	—	114,797
Other revenues	23	280,010	5,565	(39,091)	—	246,506
REVENUES	**85,251**	**309,578**	**5,565**	**(39,091)**	**—**	**361,303**
Cost of goods and services	(46,475)	(267,113)	(1,112)	(9,742)	—	(324,441)
Research and development expenses	(1,067)	(72,762)	(29,907)	(1,186)	—	(104,922)
Marketing and distribution expenses	(13,107)	(2,773)	(7,334)	(57)	(238)	(23,509)
General and administrative expenses	(5,137)	(19,392)	(3,910)	(1,919)	(3,715)	(34,073)
Other income and expenses, net	105	9,625	4,811	1,111	(3,454)	12,199
OPERATING PROFIT/(LOSS)	**19,570**	**(42,836)**	**(31,888)**	**(50,884)**	**(7,406)**	**(113,443)**

5.4.2 Geographical segments

In presenting information on the basis of geographical segments, segment revenue is based on the final location where Valneva's distribution partner sells the product or where the customer/partner is located. Segment assets are based on the geographical location of the assets.

Product sales per geographical segment

(In € thousand)	Year ended December 31,		
	2022	2021	2020
United States	21,992	40,339	36,414
Canada	18,904	4,226	8,965
Austria	13,749	9,341	3,333
United Kingdom	10,901	2,707	1,847
Nordics	8,560	2,436	2,866
Germany	20,341	726	7,060
France	2,625	999	734
Other Europe	6,245	2,076	1,334
Rest of World	11,480	134	3,384
PRODUCT SALES	**114,797**	**62,984**	**65,938**

Nordics includes Finland, Denmark, Norway and Sweden.

Non-current operating assets per geographical segment

(In € thousand)	As at December 31,	
	2022	2021
United States	64	66
Canada	183	239
Austria	52,199	61,237
Nordics	40,250	53,020
United Kingdom	84,843	87,387
Other Europe	5,211	4,582
NON-CURRENT ASSETS	**182,749**	**206,531**

Non-current operating assets for this purpose consist of intangible assets, right of use assets and property, plant and equipment. The main non-current operating assets are allocated to sites where production and research and development activities take place. Sales activities by distribution sites do not require major non-current operating assets. Revenues are structured according to the location of the final customer. In some countries there are customers, but no assets.

5.4.3 Information about major customers

Product sales to the largest customer amounted to €16.0 million in 2022 (2021: €41.8 million, 2020: €33.8 million). Other revenues from the largest customer amounted to €169.2 million in 2022 (2021: €253.3 million, 2020: two largest customers with revenues €31.6 million and €7.5 million). There were no further customers with a contribution exceeding 10% of the annual revenue.

5.5 Revenues from contracts with customers

Within the Group the following revenue streams were identified:

a. Product Sales

b. Other revenues

5.5.1 Product sales

The Group's product sales contracts generally include one nature of performance obligation. Revenue is recognized at the point in time when the identified performance obligation is transferred to the customer, so when the customer obtains control over the goods at the time of shipment or when the product is received by the customer, depending on the terms of the agreement, which generally happen within few days. Sales contracts with retailers and with the Department of Defense (DoD) in the United States are shown as "direct product sales", whereas sales to distributors are reported as "indirect sales - sales through distributors".

Sales channels

Commercialized products (without VLA2001 product sales) are sold via the following sales channels:

(In € thousand)	Year ended December 31,		
	2022	2021	2020
Direct product sales	75,968	60,325	54,160
Indirect product sales (Sales through distributors)	9,260	2,678	11,778
TOTAL PRODUCT SALES	**85,228**	**63,002**	**65,938**

Some of the Group's product sales agreements include retrospective rebates, charge-back clauses, discounts and under certain conditions return rights which give rise to variable consideration under IFRS 15. The constraint on variable consideration (expected rebates, discounts and considerations for product returns) are

taken into account and recognized on an accrual basis and reported as refund liabilities or as contract liabilities (for replacement doses) in the consolidated balance sheet.

In most cases, Valneva sells the products through retailers. When more than one party is involved in providing or distributing goods or services, the standard requires an entity to determine whether itself and its retailers are principals or agents in these transactions by evaluating the nature of its promises to the customer. An entity is a principal if it controls a promised good or service before transferring that good or service to the customer. An entity is an agent if its role is to arrange for another entity to provide the goods or services. Indicators that control has been transferred are that a) the retailer is primarily responsible for fulfilling the promise to its customers, b) the retailer has inventory risk, and c) the retailer has discretion in establishing the price for the sale to its customers. One of Valneva's retailers has extensive rights to return and consequently no inventory risk and does not have the power to establish the price for the sales to its customers. Therefore, this retailer acts as agent rather than as principal. All of Valneva's other retailers act as principal. While revenues to principals are recognized when the control is transferred to the principals, revenue from product sales to agents are recognized when the control is transferred to the final customer, when the goods are delivered to the final customer. Distribution costs and other amounts payable to customers are deducted from revenue for principals, and costs paid to agents are recognized as "Marketing and distribution expenses".

Valneva also sells products acquired from third parties. Valneva considers that it is acting as principal given that it controls products before transferring them to the final customer. More specifically, Valneva has an inventory risk before the goods have been transferred to customers and has discretion in establishing the prices. Revenue is recognized when the product is delivered to the customers. Products purchased from third parties are recognized as "inventory" in the balance sheets and when sold as "cost of goods" in the statements of income.

5.5.2 Other revenues

The Group generates other revenues for its product candidates and proprietary technologies. The contracts in place often include several different promised goods or services such as research licenses, commercial licenses and further R&D services. The terms of such agreements include license fees received as initial fees, annual license maintenance fees and fees to be paid upon achievement of milestones, as well as license option fees and fees for the performance of research services. In addition, the Group's licensing arrangements generally provide for royalties payable on the licensee's future sales of products developed within the scope of the license agreement. Revenue recognized due to the termination of agreements is recognized in other revenues.

The Group's license contracts in place provide distinct right to use licenses, and therefore the revenue is recognized at the point in time at which the licensee is able to direct the use of and benefit from the license. The consideration for licensing contracts may consist of fixed and variable parts. In case of right-to-use licenses, the fixed part of the consideration is recognized at the point in time when the licensee is able to direct the use and benefit from the license. For any variable consideration, revenue is recognized at the point in time when the variable consideration constraint is removed.

Revenue for research and development services within the Group's contracts currently in place is recognized over time. The progress is measured on an input basis (costs incurred related to total costs expected). This input method is considered an appropriate measure of the progress towards complete satisfaction of these performance obligations under IFRS 15.

Variable considerations are included in revenues only to the extent that it is highly probable that a significant reversal in the amount of the cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. At the end of each reporting period, the Group updates the estimated transaction price and its assessment of whether an estimate of variable consideration is constrained. Amounts allocated to a satisfied performance obligation are recognized as revenue, or as a reduction of revenue, in the period in which a change in estimate of variable consideration occurs. Revenues from license royalties are recognized when the underlying product sales occur.

Vaccine Supply Agreement with the UK Authority

The UK Supply Agreement required the UK Authority to pay non-refundable advance payments to fund certain manufacturing-related expenses over the life of the project, and as at December 31, 2021, Valneva had received an aggregate of £369.7 million (€420.6 million) under the UK Supply Agreement. Valneva received no additional funds from the UK Authority in 2022.

For more information, see Note 5.1.

As at December 31, 2021, the impact of the termination of the UK Supply Agreement was assessed. Payments received, where the likelihood of repayment is remote, totaled €253.3 million and were recognized as revenue in 2021. For amounts with uncertainties and a repayment likelihood which was more than remote, a refund liability of €166.9 million was recognized for the royalty on sales and certain other obligations which survive the termination of the UK Supply Agreement.

In June 2022, Valneva and the UK Authority signed a settlement agreement (refer to Note 5.1).

As at December 31, 2022,Valneva's repayment obligations to the UK Authority were assessed to be remote. Therefore, no refund liability was accounted for as at December 31, 2022, and other revenue in the amount of €169.2 million (of which €80.0 million related to the capex obligation and €89.2 million related to the royalty obligation) was recognized in 2022. Revenue was reported as other Revenues as it was due to the termination of the agreements.

Valneva will update this estimate of the refund liability in accordance with IFRS 15.55 on every balance sheet date going forward.

For more detailed information, see Notes 5.30.2 and 5.18.

Advance Purchase Agreement with the European Commission

The EC APA was amended in July 2022 to reduce the amount of doses of VLA2001 ordered. For more information, refer to Note 5.1. At the time of the amendment, Valneva had received advance payments for the original order volume. Per the terms of the EC APA, Valneva is not obligated to repay any amount of such advance payments that had already been spent or committed. As of December 31, 2022, Valneva had fulfilled its remaining performance obligations under the contract and assessed that the risk of reimbursement of the advance payments was remote. Accordingly, the contract liability was released in full to revenue, including €6.0 million attributed to product sales (as partial advance payment for delivery of 1.25 million doses of VLA2001) and €110.8 million attributed to other revenue from contracts with customers. Therefore, product sales present the part directly related to vaccines sale with the original dose price according to the agreement.

Lyme - Pfizer Collaboration and License Agreement

In April 2020, Valneva signed the Collaboration and License Agreement with Pfizer to co-develop and commercialize the Group's Lyme disease vaccine candidate (VLA15). For more information, refer to Note 5.1. This is classified as an agreement with a customer as defined by IFRS 15 guidance on revenue contracts with customers, and accordingly, amounts received or payable by Valneva under the Collaboration and License Agreement are accounted for in the Group's revenues.

In 2020 the performance obligations (PO) in the agreement were identified and the constrained transaction price (highly probable consideration amount) was estimated and allocated to the PO. The identified three PO's were: a) License (including normal tech-transfer), b) Equipment, c) R&D works (for Phase 2 and additional Phase 2 studies) and additional support services. The upfront payment received, net of initial estimate of refunds, representing €34.1 million was allocated to those three PO in the proportion of 73.8%, 0.5% and 25.8%, respectively, in line with their stand-alone selling prices. Whereas the first two PO have been recognized as point in time, the R&D works and additional services is recognized over time. Valneva is entitled to receive partial reimbursement of research and development and support service costs incurred. These reimbursements are recognized as service revenue as research and development and support services work is performed. In 2021 and 2022 several amendments to the transaction price were made via amendments to the Collaboration and License Agreement as described in Note 5.1 and resulted in a reduction to the constrained (i.e. highly

probable) transaction price, reflecting an increase in expected payments to customer related to Valneva's contribution to Pfizer's future development costs. The resulting reduction in transaction price was again allocated to the three PO's mentioned above and allocated in the same percentages as above.

In addition, Valneva considered the constraint to determine if it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur. Valneva considered that it is no longer highly probable that it will be entitled to the consideration as payments to customers might further increase in the future. Therefore, the remaining cumulated revenue as of December 31, 2022 was reversed.

The following table summarizes revenue recognized on the Pfizer agreements:

(In € thousand)	2020	2021	2022	Total since inception
License incl. normal tech-transfer	25,173	(1,613)	(40,060)	(16,500)
Equipment for large scale	—	177	(277)	(100)
R&D work (for Phase 2 and additional phase 2 studies) and additional support services - including reimbursements received related directly to this PO	6,431	15,701	(5,532)	16,600
TOTAL revenue recognized	**31,604**	**14,265**	**(45,869)**	**—**

The revenue reversal of €45.9 million in 2022 is primarily caused by a change in transaction price, reflecting an increase in Valneva's expected contributions to funding of development costs to be incurred by Pfizer.

While the License and Equipment PO's were fulfilled in prior periods, the R&D works and additional services are ongoing until 2024 and will satisfy the performance obligation over time. During this period Valneva will fund 40% of the remaining shared development costs. Items not included in the transaction price as of December 31, 2022 are (i) $143 million of early commercialization milestones, (ii) royalties, ranging from 14% to 22%, and (iii) $100 million of sales milestones which will be recognized when they occur.

As at December 31, 2022, the discounted refund liability amounted to €135.5 million (December 31, 2021: €79.6 million), of which nil (December 31, 2021: €75.2 million) was recognized as a non-current refund liability. €3.7 million of costs to obtain a contract were included in other non-current assets as at December 31, 2022 (December 31, 2021: €3.0 million). For more details, see Note 5.29.

5.5.3 Disaggregated revenue information

Revenues as presented in the Consolidated Income Statement and in the Segment Reporting (see Note 5.4) include both revenues from contracts with customers and other revenues (mainly subleases), which are out of scope from IFRS 15:

YEAR ENDED DECEMBER 31, 2020 (In € thousand)	Commercialized products	COVID	Vaccine candidates	Technologies and services	Total
Product sales	65,938	—	—	—	65,938
Other revenue from contract with customers	—	—	31,604	11,814	43,419
Other non-IFRS 15 revenue	—	—	—	965	965
REVENUES	**65,938**	**—**	**31,604**	**12,779**	**110,321**

YEAR ENDED DECEMBER 31, 2021 (In € thousand)	Commercialized products	COVID	Vaccine candidates	Technologies and services	Total
Product sales	62,984	—	—	—	62,984
Other revenue from contract with customers	18	253,314	3,257	27,613	284,202
Other non-IFRS 15 revenue	—	—	—	899	899
REVENUES	**63,002**	**253,314**	**3,257**	**28,512**	**348,086**

YEAR ENDED DECEMBER 31, 2022 (In € thousand)	Commercialized products	COVID	Vaccine candidates	Technologies and services	Total
Product sales	85,228	29,568	—	—	114,797
Other revenue from contract with customers	23	280,010	5,565	(39,888)	245,709
Other non-IFRS 15 revenue	—	—	—	797	797
REVENUES	**85,251**	**309,578**	**5,565**	**(39,091)**	**361,303**

The Group's revenues from contracts with customers are disaggregated as follows:

Type of goods or service

YEAR ENDED DECEMBER 31, 2020 (In € thousand)	Commercialized products	COVID	Vaccine candidates	Technologies and services	Total
IXIARO®	48,480	—	—	—	48,480
DUKORAL®	13,300	—	—	—	13,300
Third party products	4,158	—	—	—	4,158
Lyme VLA15	—	—	31,604	—	31,604
Services related to clinical trial material	—	—	—	7,997	7,997
Others	—	—	—	3,817	3,817
REVENUES FROM CONTRACTS WITH CUSTOMERS	**65,939**	**—**	**31,604**	**11,814**	**109,357**

YEAR ENDED DECEMBER 31, 2021 (In € thousand)	Commercialized products	COVID	Vaccine candidates	Technologies and services	Total
IXIARO®	45,118	—	—	—	45,118
DUKORAL®	2,444	—	—	—	2,444
Third party products	15,440	—	—	—	15,440
COVID VLA2001	—	253,314	—	—	253,314
Chikungunya VLA1553	—	—	3,257	—	3,257
Lyme VLA15	—	—	—	14,265	14,265
Services related to clinical trial material	—	—	—	10,001	10,001
Others	—	—	—	3,346	3,346
REVENUES FROM CONTRACTS WITH CUSTOMERS	**63,002**	**253,314**	**3,257**	**27,613**	**347,186**

YEAR ENDED DECEMBER 31, 2022 (In € thousand)	Commercialized products	COVID	Vaccine candidates	Technologies and services	Total
IXIARO®	41,371	—	—	—	41,371
DUKORAL®	17,335	—	—	—	17,335
Third party products	26,545	—	—	—	26,545
COVID VLA2001	—	309,578	—	—	309,578
Chikungunya VLA1553	—	—	5,565	—	5,565
Lyme VLA15	—	—	—	(45,869)	(45,869)
Services related to clinical trial material	—	—	—	3,205	3,205
Others	—	—	—	2,776	2,776
REVENUES FROM CONTRACTS WITH CUSTOMERS	**85,251**	**309,578**	**5,565**	**(39,888)**	**360,506**

The revenues within the vaccine candidates segment in 2020 related to the Lyme vaccine candidate and amounted to €31.6 million, whereas in 2021 the revenues amounted to €3.3 million related to the newly signed chikungunya vaccine collaboration with Instituto Butantan. As the Lyme vaccine candidate was outlicensed to Pfizer by the end of 2020, revenue from this vaccine candidate is included in the Technologies and Services segment from 2021 onward.

In 2021 revenues in the COVID segment of €253.3 million are related to the termination of the UK agreement. For more detail see further above within this Note. Revenues from technologies and services amounted to €27.6 million, compared to €11.8 million in 2020. In 2021 this revenue included €14.3 million from the collaboration with Pfizer related to the Lyme vaccine candidate.

In 2022, revenues in the COVID segment were €309.6 million. Thereof €29.6 million related to VLA2001 product sales, €169.2 million related to the termination of the UK agreement and €110.8 million related to the termination of the EC APA agreement. For more detail see further above within this Note. Negative revenues from technologies and services amounted to €39.9 million and included a reversal of revenue of €45.9 million from amendments of the Collaboration and License Agreement with Pfizer. For more details see Note 5.5.2.

Geographical markets

YEAR ENDED DECEMBER 31, 2020 (In € thousand)	Commercialized products	COVID	Vaccine candidates	Technologies and services	Total
United States	36,414	—	31,604	341	68,359
Canada	8,965	—	—	—	8,965
Austria	3,333	—	—	6,928	10,261
United Kingdom	1,848	—	—	1,038	2,886
Nordics	2,866	—	—	5	2,871
Germany	7,060	—	—	200	7,260
France	712	—	—	907	1,620
Other Europe	1,356	—	—	1,465	2,821
Rest of World	3,384	—	—	930	4,314
REVENUES FROM CONTRACTS WITH CUSTOMERS	**65,939**	**—**	**31,604**	**11,814**	**109,357**

YEAR ENDED DECEMBER 31, 2021 (In € thousand)	Commercialized products	COVID	Vaccine candidates	Technologies and services	Total
United States	40,339	—	—	14,452	54,791
Canada	4,226	—	—	—	4,226
Austria	9,341	—	—	8,376	17,718
United Kingdom	2,721	253,314	—	40	256,075
Nordics	2,440	—	—	—	2,440
Germany	726	—	—	240	966
France	999	—	—	280	1,279
Other Europe	2,076	—	—	2,930	5,006
Rest of World	134	—	3,257	1,294	4,684
REVENUES FROM CONTRACTS WITH CUSTOMERS	**63,002**	**253,314**	**3,257**	**27,613**	**347,186**

YEAR ENDED DECEMBER 31, 2022 (In € thousand)	Commercialized products	COVID	Vaccine candidates	Technologies and services	Total
United States	21,992	—	—	(45,795)	(23,803)
Canada	18,904	—	—	—	18,904
Austria	11,330	7,347	—	2,433	21,109
United Kingdom	10,901	169,188	—	1,040	181,129
Nordics	7,096	4,916	—	—	12,012
Germany	4,328	64,031	—	170	68,529
France	2,644	42,617	—	1,263	46,525
Other Europe	6,084	11,923	—	733	18,740
Rest of World	1,972	9,556	5,565	268	17,360
REVENUES FROM CONTRACTS WITH CUSTOMERS	**85,251**	**309,578**	**5,565**	**(39,888)**	**360,506**

5.5.4 Assets and liabilities related to contracts with customers

See Note 5.19 for details on trade receivables, Note 5.20 for details on costs to obtain a contract, Note 5.28 for details of contract liabilities and Note 5.29 for details of refund liabilities.

5.6 Expenses by nature

The consolidated income statement line items cost of goods and services, research and development expenses, marketing and distribution expenses and general and administrative expenses include the following items by nature of cost:

€ in thousand	**Notes**	**Year ended December 31,**		
		2022	**2021**	**2020**
Consulting and other purchased services		141,631	169,158	65,212
Cost of services and change in inventory		190,086	105,648	10,778
Employee benefit expense other than share-based compensation	5.7	56,393	85,334	58,264
Share-based compensation expense	5.7	(5,215)	14,678	6,328
Raw materials and consumables used		12,723	14,676	12,434
Depreciation and amortization and impairment	5.12/5.13/ 5.14	44,285	14,281	9,939
Building and energy costs		14,696	10,960	8,140
Supply, office and IT costs		11,739	7,409	3,333
License fees and royalties		6,830	4,865	4,384
Advertising costs		7,343	2,176	2,496
Warehousing and distribution costs		1,898	1,419	1,898
Travel and transportation costs		2,208	538	529
Other expenses		2,329	1,309	822
OPERATING EXPENSES		**486,945**	**432,452**	**184,558**

The increase in operating expenses of €54.5 million in 2022 compared to 2021 primarily resulted from the write-down of COVID-19 vaccine inventory as well as increased depreciation charges of fixed assets including the impairment of idle manufacturing equipment. This was partially offset by a reduction of employee-related expenses including non-cash income from the revaluation of share-based compensation programs resulting from a year-over-year reduction of Valneva's share price (see Note 5.5.2).

Principal Accountant Fees and Services:

€ in thousand	Year ended December 31,							
	PricewaterhouseCoopers				Deloitte & Associés			
	2022	%	2021	%	2022	%	2021	%
Audit fees	**1,891**	**99 %**	**1,122**	**91 %**	**1,678**	**99 %**	**1,113**	**93 %**
provided by the statutory auditor	1,386	—	937	—	1,376	—	939	—
provided by the statutory auditor's network	505	—	185	—	302	—	174	—
Audit-related Fees	**0**	**—**	**90**	**7 %**	**13**	**1 %**	**85**	**7 %**
provided by the statutory auditor	0	—	85	—	13	—	85	—
provided by the statutory auditor's network	0	—	5	—	0	—	0	—
Tax Fees	**25**	**1 %**	**25**	**2 %**	**0**	**—**	**0**	**—**
provided by the statutory auditor's network	25	—	25	—	0	—	0	—
All Other Fees	**0**	**—**	**0**	**—**	**0**	**—**	**0**	**—**
Total	**1,916**	**100 %**	**1,238**	**100 %**	**1,691**	**100 %**	**1,199**	**100 %**

In 2022 and 2021 audit-related fees comprised mainly the aggregate fees billed for assurance and related services that are reasonably related to the performance of the audit and are not reported under Audit Fees.

5.7 Employee benefit expense

Employee benefit expenses include the following:

(In € thousand)	Year ended December 31,		
	2022	2021	2020
Salaries	57,272	47,717	38,515
Social security contributions	(3,035)	35,923	18,555
Share-based compensation expense	(5,215)	14,678	6,328
Training and education	840	603	351
Other employee benefits	1,317	1,091	842
TOTAL EMPLOYEE BENEFIT EXPENSE	**51,178**	**100,012**	**64,592**

The social security contributions included an income of €23.2 million resulting from the release of the provision of employer contribution charges on share-based payment programs due to the reduction in the share price. This provision changed from €26.5 million (2020: €7.4 million) for the year ended December 31, 2021 to €3.3 million for the year ended December 31, 2022.

During 2022, the Group had an average of 778 employees (2021: 722 employees, 2020: 532 employees).

5.8 Other income/(expenses), net

Other income and expenses, net include the following:

€ in thousand	Year ended December 31,		
	2022	2021	2020
Research and development tax credit	15,348	21,949	9,937
Grant income	191	1,684	7,680
Profit/(loss) on disposal of fixed assets and intangible assets, net	(38)	(42)	(10)
Profit/(loss) from revaluation of lease agreements	(32)	—	1,584
Taxes, duties, fees, charges, other than income tax	(217)	(212)	(168)
Miscellaneous income/(expenses), net	(3,054)	(403)	95
OTHER INCOME AND EXPENSES, NET	**12,199**	**22,976**	**19,117**

With regards to miscellaneous income/(expenses), net, see Note 5.30.2.

5.8.1 Grants

Grants from governmental agencies and non-governmental organizations are recognized where there is reasonable assurance that the grant will be received and the Group will comply with all conditions.

Grant monies received as reimbursement of approved research and development expenses are recognized as other income when the respective expenses have been incurred and there is reasonable assurance that funds will be received. Advance payments received under such grants are deferred and recognized when these conditions have been met. Advanced payments received which need to be repaid are recognized as borrowings (see Note 5.24.1).

Government grant monies received to support the purchase of property, plant and equipment are included in non-current liabilities as deferred government grants and are credited to the income statement on a straight-line basis over the expected lives of the related assets.

In 2019 the Group signed a funding agreement with CEPI. Valneva will receive up to $24.6 million for vaccine manufacturing and late-stage clinical development of a single-dose, live attenuated vaccine against chikungunya (VLA1553). In line with CEPI's commitment to equitable access, the funding will underwrite a partnership effort to accelerate regulatory approval of Valneva's chikungunya vaccine for use in regions where outbreaks occur and support World Health Organization prequalification to facilitate broader access in lower- and middle-income countries. Valneva has to pay back part of the consideration upon achievement of certain milestones. The refundable consideration is accounted for as a loan and measured in accordance with IFRS 9 (see Note 5.24.1). The difference between the proceeds from CEPI and the carrying amount of the loan is treated under IAS 20 and presented as "Borrowings". The amount from the CEPI grant which benefits Instituto Butantan is recognized as revenue (see Note 5.1). In 2022, €0.2 million of grant income related to CEPI (2021: negative €0.9 million, due to a change in estimate of the likelihood of repayment milestones) and €3.9 million of other revenue was related to CEPI. For more information see Note 5.24.

5.8.2 Research and development tax credits

Research and development tax credits granted by tax authorities are accounted for as grants under IAS 20. As a consequence, the portion of the research tax credit covering operating expenses is recognized in the income statement in "Other income and expenses, net" and the portion covering capitalized development expenditures under "Intangible assets" is recorded as deduction from the assets relating to fixed assets.

5.9 Finance income/(expenses), net

Interest income is recognized on a time-proportion basis using the effective interest method.

(In € thousand)	Year ended December 31,		
	2022	2021	2020
FINANCE INCOME			
Interest income from other parties	260	249	119
Fair value gains on derivative financial instruments	—	—	397
TOTAL FINANCE INCOME	**260**	**249**	**516**
FINANCE EXPENSES			
Interest expense on loans	(8,238)	(7,273)	(6,162)
Interest expense on refund liabilities	(9,597)	(8,478)	(3,640)
Interest expenses on lease liabilities	(955)	(903)	(907)
Other interest expense	(264)	(309)	(30)
Fair value losses on derivative financial instruments	—	—	—
TOTAL FINANCE EXPENSES	**(19,054)**	**(16,964)**	**(10,738)**
FOREIGN EXCHANGE GAIN/(LOSSES), NET	**(12,587)**	**8,130**	**173**
FINANCE INCOME/(EXPENSES), NET	**(31,381)**	**(8,584)**	**(10,049)**

In 2022, the net finance result amounted to minus €31.4 million compared to minus €8.6 million in 2021 and minus €10.0 million in 2020. The foreign exchange gain/(losses), net are primarily driven by non-cash revaluation results of non-Euro denominated balance sheet positions.

In 2021, the decrease in net finance expense was mainly due to positive net foreign exchange gains which were partially offset by increased interest expenses on non-current refund liabilities. In 2020, the increase in net finance expenses was mainly due to higher borrowings and the increase in non-current refund liabilities.

5.10 Income tax benefit/(expense)

The tax expense for the period comprises current and deferred tax. Tax is recognized in the income statement, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case, the tax is also recognized in other comprehensive income or directly in equity, respectively. The current Income tax income/(expense) is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the Group's subsidiaries operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions, where appropriate, based on amounts expected to be paid to the tax authorities.

Deferred income tax is provided in full, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the balance sheet date and are expected to apply when the related deferred income tax asset is realized or the deferred income tax liability is settled.

Deferred income tax assets are recognized to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilized.

Deferred income tax is provided on temporary differences arising on investments in subsidiaries and associates, except where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not be reversed within the foreseeable future.

5.10.1 Current income tax

Income tax income/(expense) is comprised of current and deferred tax.

€ in thousand	**Year ended December 31,**		
	2022	**2021**	**2020**
CURRENT TAX			
Current income tax charge	(1,029)	(32)	(69)
Adjustments in respect of current income tax of previous year	97	(19)	109
DEFERRED TAX			
Relating to origination and reversal of temporary differences	2,468	(3,395)	869
INCOME TAX BENEFIT/(EXPENSE)	**1,536**	**(3,446)**	**909**

The individual entities' reconciliations – prepared on the basis of the tax rates applicable in each country while taking consolidation procedures into account – have been summarized in the reconciliation below. The estimated tax charge is reconciled to the effective tax charge disclosed.

The tax on the Group's loss before tax differs from the theoretical amount that would arise using the weighted average tax rate applicable to profits of the consolidated companies as follows:

€ in thousand	**Year ended December 31,**		
	2022	**2021**	**2020**
Loss before tax	(144,815)	(69,979)	(65,302)
Tax calculated at domestic tax rates applicable to profits in the respective countries	37,203	18,824	16,675
Income not subject to tax (mainly R&D tax credit)	7,435	10,739	2,612
Expenses not deductible for tax purposes	(26)	(2,509)	(1,789)
Deferred tax asset not recognized	(45,955)	(26,902)	(15,852)
Utilization of previously unrecognized tax losses	2,628	—	—
Income tax credit/withholding tax/other adjustments	101	(459)	109
Effect of change in applicable tax rate	586	(3,291)	(771)
Exchange differences	(526)	296	(105)
Income tax of prior years	90	(64)	170
Minimum income tax	(2)	(80)	(141)
INCOME TAX BENEFIT/(EXPENSE)	**1,536**	**(3,446)**	**909**
Effective income tax rate	—	—	—

Although the Group operates at a loss overall, there are profitable jurisdictions.

5.10.2 Deferred tax

As at December 31, 2022, the deferred tax assets of €199.5 million (December 31, 2021: €153.8 million) were not recognized as there was not sufficient evidence that adequate taxable profit will be available against which the unused tax losses can be utilized in the foreseeable future. Deferred tax assets were only recognized for entities where sufficient evidence has been provided that adequate taxable profit will be available against which the unused tax losses can be utilized in the foreseeable future.

As at December 31, 2022, the Group had tax losses carried forward of €821.6 million (December 31, 2021: €628.3 million), of which €272.1 million related to Valneva SE (December 31, 2021: €234.9 million), €521.7 million related to Valneva Austria GmbH (December 31, 2021: €380.0 million), €0.0 million related to Valneva USA, Inc. (December 31, 2021: €0.4 million), €19.6 million related to Valneva Scotland, Ltd. (December 31, 2021: €0.8 million) and €8.2 million related to Valneva Sweden AB (December 31, 2021: €12.6 million).

Tax losses carried forward in France, Austria, United Kingdom and Sweden have no expiry date.

The gross movement on the deferred income tax account was as follows:

(In € thousand)	**2022**	**2021**	**2020**
Beginning of year	2,292	5,158	4,988
Exchange differences	171	529	(699)
Income statement charge / (credit)	2,480	(3,395)	869
END OF THE YEAR,	**4,943**	**2,292**	**5,158**

The deferred tax assets and liabilities are allocable to the various balance sheet items as follows:

€ in thousand	**As at December 31,**	
	2022	**2021**
DEFERRED TAX ASSET FROM		
Tax losses carried forward	203,852	156,470
Fixed assets	3,541	2,007
Inventory	3,306	1,837
Borrowings and accrued interest	1,526	1,284
Provision	1,659	1,611
Other items	2,502	2,891
Non-recognition of deferred tax assets	(199,493)	(153,836)
TOTAL DEFERRED TAX ASSETS	**16,893**	**12,264**
DEFERRED TAX LIABILITY FROM		
Fixed assets	(4,789)	(2,359)
Intangible assets	(6,229)	(6,855)
Other items	(932)	(758)
TOTAL DEFERRED TAX LIABILITY	**(11,950)**	**(9,972)**
DEFERRED TAX, NET	**4,943**	**2,292**

The corporate income tax rate in the United Kingdom was 19% and will be increased to 25% in 2023.

The corporate income tax rate in France was 26.5% in 2021 and was reduced to 25% from 2022 onward.

The deferred tax assets and liabilities presented above as at December 31, 2022 and December 31, 2021 have been adjusted for these changes in tax rates.

5.11 Earnings (Losses) per share

(a) Basic

Basic earnings (losses) per share are calculated by dividing the profit attributable to equity holders of the Company by the weighted average number of outstanding shares during the year, excluding shares purchased by the Company and held as treasury shares (see Notes 5.22 and 5.23).

	Year ended December 31,		
	2022	**2021**	**2020**
Net profit (loss) from continuing operations attributable to equity holders of the Company (in € thousand)	(143,279)	(73,425)	(64,393)
Weighted average number of outstanding shares	115,473,914	97,619,320	90,757,173
BASIC EARNINGS (LOSSES) FROM CONTINUING OPERATIONS PER SHARE (€ per share)	**(1.24)**	**(0.75)**	**(0.71)**

(b) Diluted

Diluted earnings per share are calculated by adjusting the weighted average number of ordinary outstanding shares to assume conversion of all dilutive potential ordinary shares. The Company has share options as dilutive potential ordinary shares. For the share options, a calculation is done to determine the number of shares that could have been acquired at fair value (determined as the average annual market share price of the Company's shares) based on the monetary value of the subscription rights attached to outstanding share options. The number of shares calculated as above is compared with the number of shares that would have been issued assuming the exercise of the share options.

	Year ended December 31,		
	2022	**2021**	**2020**
Profit used to determine diluted earnings per share (in € thousand)	(143,279)	(73,425)	(64,393)
Weighted average number of outstanding shares for diluted earnings (losses) per share[4]	115,473,914	97,619,320	90,757,173
DILUTED EARNINGS/(LOSSES) FROM CONTINUING OPERATIONS PER SHARE (€ per share)	**(1.24)**	**(0.75)**	**(0.71)**

[4]Potentially dilutive securities (2022: 1,504,892 diluted shares; 2021: 5,846,267; 2020: 5,481,763 diluted shares have been excluded from the computation of diluted weighted-average shares outstanding because such securities had an antidilutive impact due to the losses reported.

5.12 Intangible assets

Computer software

Acquired computer software licenses are capitalized on the basis of the costs incurred to acquire and implement the specific software. These costs are amortized on a straight-line basis over their estimated useful lives, generally three to six years.

Costs associated with developing or maintaining computer software programs are recognized as expenses when they were incurred.

The costs of computer software subject to a software as a service agreement (SaaS) are recognized as expenses when they are incurred.

Acquired research and development technology and projects

Acquired research and development technology projects are capitalized. Amortization of the intangible asset over its useful life starts when the product has been fully developed and is ready for use. These costs are amortized on a straight-line basis over their useful lives. This useful life is determined on a case-by-case basis

according to the nature and characteristics of the items included under this heading. The main current acquired research and development technology project is amortized over periods of 24 years, which is based on the patent life and technological replacement of a newer vaccine generation.

Development costs

Research expenses are recognized as expenses when incurred. Development expenses incurred on clinical projects (related to the design and testing of new or significantly improved products) are recognized as intangible assets when the following criteria have been fulfilled:

- it is technically feasible to complete the intangible asset so that it will be available for use or sale;
- management intends to complete the intangible asset and to utilize or sell it;
- there is an ability to utilize or sell the intangible asset;
- it can be demonstrated how the intangible asset will generate probable future economic benefits;
- adequate technical, financial, and/or other resources to complete the development and to utilize or sell the intangible asset are available; and
- the expenditure attributable to the intangible asset during its development can be reliably measured.

Other development expenditures that do not meet these criteria are recognized as expenses when they are incurred. Development costs previously recognized as an expense are not recognized as an asset in a subsequent period. Capitalized development costs are recorded as intangible assets and amortized from the point at which the asset is ready for use on a straight-line basis over its useful life, generally 10-15 years. In 2022 and 2021, no development costs have been capitalized.

Amortization

Amortization of intangible assets is calculated using the straight-line method to allocate their cost amounts to their residual values over their estimated useful lives, as follows:

- Software 3-6 years
- Acquired R&D technology and projects 1-15 years
- Development costs 1-24 years

The useful life is determined on a case-by-case basis according to the nature and characteristics of the items included under this heading. The main current acquired research and development technology project is amortized over periods of 24 years (with a remaining useful life period of 10 years) which is based on estimated period where Valneva benefits from the patent.

(In € thousand)	Software	Acquired R&D technology and projects	Development costs	Intangible assets in the course of construction	Total
YEAR ENDED 31 DECEMBER, 2021					
Opening net book value	1,112	32,423	1,737	137	35,409
Additions	802	140	—	—	942
Amortization charge	(719)	(2,919)	(178)	—	(3,816)
Disposals	—	—	—	—	—
Exchange rate differences	22	123	21	(2)	165
CLOSING NET BOOK VALUE	**1,217**	**29,768**	**1,581**	**134**	**32,700**
AS AT DECEMBER 31, 2021					
Cost	6,254	80,724	9,895	134	97,007

Accumulated amortization and impairment	(5,037)	(50,956)	(8,314)	—	(64,307)
CLOSING NET BOOK VALUE	**1,217**	**29,768**	**1,581**	**134**	**32,700**

(In € thousand)	Software	Acquired R&D technology and projects	Development costs	Intangible assets in the course of construction	Total
YEAR ENDED 31 DECEMBER, 2022					
Opening net book value	1,217	29,768	1,581	134	32,700
Additions	201	1	—	—	201
Amortization charge	(792)	(2,957)	(171)	—	(3,920)
Impairment charge	—	—	—	—	—
Disposals	—	—	(2)	(125)	(127)
Exchange rate differences	(41)	(80)	(14)	(9)	(144)
CLOSING NET BOOK VALUE	**585**	**26,731**	**1,394**	**—**	**28,711**
AS AT DECEMBER 31, 2022					
Cost	6,240	80,514	7,304	—	94,058
Accumulated amortization and impairment	(5,655)	(53,783)	(5,910)	—	(65,347)
CLOSING NET BOOK VALUE	**585**	**26,731**	**1,394**	**—**	**28,711**

As at December 31, 2022 and December 31, 2021, there were no acquired research and development technology project assets with a definite useful life which are not yet amortized.

Significant intangible assets (included in acquired R&D technology and projects as well as in development costs) with definite useful life are comprised primarily of the already commercialized vaccine against Japanese encephalitis (IXIARO) with acquisition costs amounting to €78.7 million (December 31, 2021: €79.0 million) and a net book value amounting to €27.7 million (December 31, 2021: €30.6 million).

For impairment test, see Note 5.15.

5.13 Leases (right of use assets and lease liabilities)

The Group leases various premises, equipment, and vehicles. Rental contracts are typically made for fixed periods ranging from a few months to five years. The rental contracts for the premises in Sweden (10 and 20 years) and Austria (15 years) include a significantly longer fixed period. Generally, the rental contracts do not include an option for early termination or prolongation of the rental period. The rental contracts for the premises in Solna, Sweden include options to terminate the agreements earlier. The notice period is between one and six years. At the commencement date, it was not reasonably certain that these early termination options were to be exercised, so they were not included in the valuation of the lease liabilities and right of use assets.

Contracts may contain both lease and non-lease components. The Group allocates the consideration in the contract to the lease and non-lease components based on their relative stand-alone prices.

Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. The lease agreements do not impose any covenants other than the security interests in the leased assets that are held by the lessor. Leased assets may not be used as security for borrowing purposes.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted by using the rate implicit in the lease. If this rate cannot be readily determined, which is generally the case for leases in the Group, the Group uses its incremental borrowing rate. The incremental borrowing rate depends on the term, currency and start date of the lease and is determined based on a series of inputs including: the risk-free rate based on government bond rates; a country-specific risk

adjustment; a credit risk adjustment based on bond yields; and an entity-specific adjustment when the risk profile of the entity that enters into the lease is different than that of the Group and the lease does not benefit from a guarantee from the Group. Valneva uses incremental borrowing rates between 0.013% and 6.523%, depending on the currency and the remaining term until maturity. For the rental contracts for the premises in Sweden interest rates of 2.493% and 3.401% were determined following significant increases in right of use assets in Sweden.

The Group is exposed to potential future increases in variable lease payments based on an index or rate, which are not included in the lease liability until they take effect. When adjustments to lease payments based on an index or rate take effect, the lease liability is reassessed and adjusted against the right-of-use asset. This includes also the major contracts for the premises in Austria and Sweden, which contain variable payments based on inflation rates or on published interest rates.

Lease payments are allocated between principal and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

Right-of-use assets are generally depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. If the Group is reasonably certain to exercise a purchase option, the right-of-use asset is depreciated over the underlying asset's useful life.

Payments associated with short-term leases of equipment and vehicles and all leases of low-value assets (below €5,000) are recognized on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less and for which there is no option for the lessee to prolong the contract to more than 12 months or there is no reasonable certainty that such an option will be exercised. Low-value assets comprise mainly IT equipment and small items of office furniture.

The Group does not have residual value guarantees in the rental contracts.

5.13.1 Development of right-of-use assets and lease liabilities

€ in thousand	**Right-of-use assets**				
	Land, buildings and leasehold improvements	**Manufacturing and laboratory equipment**	**Furniture, fittings and other**	**Total assets**	**Lease Liabilities**
YEAR ENDED 31 DECEMBER, 2021					
Opening net book value	43,121	37	216	43,374	52,088
Additions	7,642	—	231	7,874	7,873
Amortization	(2,628)	(22)	(135)	(2,784)	—
Revaluation due to variable payments	199	—	3	202	202
Termination of contracts	—	—	(41)	(41)	(44)
Lease payments	—	—	—	—	(3,601)
Interest expenses	—	—	—	—	802
Exchange rate differences	(341)	—	3	(339)	(496)
CLOSING NET BOOK VALUE	**47,993**	**15**	**278**	**48,285**	**56,822**

(In € thousand)	Right-of-use assets				
	Land, buildings and leasehold improvements	Manufacturing and laboratory equipment	Furniture, fittings and other	Total assets	Lease Liabilities
YEAR ENDED 31 DECEMBER, 2022					
Opening net book value	47,993	15	278	48,285	56,822
Additions	1,482	—	147	1,629	1,629
Amortization	(2,944)	(15)	(145)	(3,103)	—
Impairment charge	(4,178)	—	—	(4,178)	—
Revaluation due to variable payments	859	—	—	859	859
Termination of contracts	—	—	(32)	(32)	—
Lease payments	—	—	—	—	(3,900)
Interest expenses	—	—	—	—	833
Exchange rate differences	(1,847)	—	(10)	(1,857)	(2,669)
CLOSING NET BOOK VALUE	**41,365**	**—**	**238**	**41,603**	**53,574**

Revaluation of right-of-use (RoU) assets for land, buildings and leasehold improvements and lease liabilities in 2020 mainly refers to the partial early termination of the rental contract in Sweden.

For impairment test, see Note 5.15.

As at December 31, 2022, RoU assets decreased to €41.6 million from €48.3 million as at December 31, 2021, mainly due to amortization, impairment charges, and exchange rate differences, but partly offset by a new lease contract for office space in France which amounted to €1.0 million. Major lease agreements were for the premises in Austria (December 31, 2022: €23.1 million, December 31, 2021: €24.0 million) and Sweden (December 31, 2022: €16.3 million, December 31, 2021: € 22.1 million).

For more details on lease liabilities, see Note 5.27. For more details on the impairment charge, see Note 5.15.

5.13.2 Other amounts recognized in the consolidated income statement

Expense relating to short-term leases and leases of low-value assets as well as expenses relating to termination of lease contracts have not been material in 2022, 2021 and 2020. Income relating to revaluation of lease liabilities was €1.6 million in 2020 related to the partial early termination of the rental contract in Sweden, while there have been no substantive revaluations in 2022 and 2021.

5.14 Property, plant and equipment

Property, plant and equipment mainly comprise a manufacturing facility and leasehold improvements in rented office and laboratory space. All Property, plant and equipment are stated at historical cost less depreciation and less impairment losses when necessary. Historical cost includes expenditure that is directly attributable to the acquisition of the items.

Subsequent costs are included in the asset's carrying amount or are recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and that the cost of the item can be measured reliably. All other repairs and maintenance are charged to the income statement during the financial period in which they incur.

Property, plant and equipment include machinery, for which validation is required to bring the asset to its working condition. The costs of such validation activities are capitalized together with the cost of the asset. Validation costs beyond the normal validation costs, which are usually required to bring an asset to its working

condition, are expensed immediately. The usual validation costs are capitalized on the asset and depreciated over the remaining life of the asset or the shorter period until the next validation is usually required.

Depreciation of assets is calculated using the straight-line method to allocate their cost amounts to their residual values over their estimated useful lives, as follows:

- Buildings, leasehold improvements 5 - 40 years
- Machinery, laboratory equipment 1 - 15 years
- Furniture, fittings and office equipment 4 - 10 years
- Hardware 3 - 5 years

Leasehold improvements are depreciated over the shorter of their useful life or the lease term, unless the entity expects to use the assets beyond the lease term.

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date.

An asset's carrying amount is immediately written down to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

Gains and losses on disposals are determined by comparing proceeds with the carrying amount. These gains and losses are included in the income statement "other income and expenses, net" (see Note 5.8).

€ in thousand	Land, buildings and leasehold improvements	Manufacturing and laboratory equipment	Computer hardware	Furniture, fittings and other	Assets in the course of construction	Total
YEAR ENDED DECEMBER 31, 2021						
Opening net book value	10,651	12,041	726	257	11,105	34,779
Additions	664	14,360	912	16	79,897	95,848
Depreciation charge	(1,160)	(6,129)	(333)	(59)	—	(7,681)
Impairment charge	—	—	—	—	—	—
Disposals	—	(19)	(2)	(21)	(4)	(46)
Exchange rate differences	129	813	32	9	1,662	2,645
CLOSING NET BOOK VALUE	**10,284**	**21,066**	**1,335**	**202**	**92,659**	**125,545**
AS AT DECEMBER 31, 2021						
Cost	25,554	44,127	3,204	1,454	92,659	166,999
Accumulated depreciation and impairment	(15,269)	(23,062)	(1,870)	(1,252)	—	(41,453)
CLOSING NET BOOK VALUE	**10,284**	**21,066**	**1,335**	**202**	**92,659**	**125,545**

€ in thousand	Land, buildings and leasehold improvements	Manufacturing and laboratory equipment	Computer hardware	Furniture, fittings and other	Assets in the course of construction	Total
YEAR ENDED DECEMBER 31, 2022						
Opening net book value	10,284	21,066	1,335	202	92,659	125,545
Reclassification	45,082	16,576	—	—	(61,658)	—
Additions	30,902	24,484	281	552	(29,043)	27,176
Depreciation charge	(3,091)	(10,424)	(432)	(64)	—	(14,012)
Impairment charge	(4,453)	(14,618)	—	—	—	(19,071)
Disposals	—	(43)	(2)	—	—	(45)
Exchange rate differences	(4,230)	(2,497)	(42)	(14)	(375)	(7,158)
CLOSING NET BOOK VALUE	**74,493**	**34,544**	**1,140**	**675**	**1,583**	**112,435**
AS AT DECEMBER 31, 2022						
Cost	96,528	76,315	3,245	1,912	1,583	179,583
Accumulated depreciation and impairment	(22,035)	(41,770)	(2,105)	(1,238)	—	(67,148)
CLOSING NET BOOK VALUE	**74,493**	**34,544**	**1,140**	**675**	**1,583**	**112,435**

Additions in 2022 and 2021 mainly referred to investments in Scotland and Sweden and related to the production of VLA2001. Reclassification in 2022 mainly related to assets in Scotland for which final construction took place in 2022.

From the total of €44.3 million (2021: €14.3 million; 2020: €9.9 million) of depreciation, amortization and impairment expenses, €39.5 million (2021: €8.9 million, 2020: €5.0 million) were charged to cost of goods and services, €3.6 million (2021: €4.7 million, 2020: €4.1 million) were charged to research and development expenses, €0.7 million (2021: €0.4 million, 2020: €0.5 million) were charged to marketing and distribution expenses and €0.6 million (2021: €0.3 million, 2020: €0.3 million) were charged to general and administrative expenses. The increase in depreciation and amortization charged to costs of goods and services was caused by investments in Scotland and Sweden in 2022 and 2021.

With regards to impairment charges recognized in 2022, see Note 5.15.

5.15 Impairment testing

At the end of each reporting period Valneva assesses whether there is any indication that an asset may be impaired. Indicators for the necessity of an impairment test are, among others, actual or expected declines in sales or margins and significant changes in the economic environment with an adverse effect on Valneva's business. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less selling costs and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). The cash-generating units correspond with the specific vaccine products and vaccine candidates. Non-financial assets, other than goodwill, that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

As at December 31, 2022, impairment tests were adapted to the changes resulting in de-recognition of COVID as a CGU as no material future cash-flows are expected to be generated by this CGU following the Company's decision to wind down the COVID-19 program, and utilization of dedicated and shared assets was reviewed. In addition, future cash flows generated by the chikungunya vaccine candidate were taken into account as fixed

assets originally expected to be utilized by COVID are now expected to be used across the IXIARO, DUKORAL and Chikungunya CGUs. A triggering event was identified in December 2022 for the CGUs impacted by suspending manufacturing of VLA 2001 and impairment tests were performed as at December 31, 2022.

During 2021 and 2022, the Company invested in manufacturing facilities in both Scotland and Sweden in order to fulfill COVID-19 vaccine demand from contracts with the UK Government, the EC and the Kingdom of Bahrain. Given the significant changes to the volumes ordered under the EC APA and the assumed lack of future demand for VLA2001, no future COVID-19 cash-flows were considered in impairment tests as of December 31, 2022 for all assets acquired for the manufacturing of VLA2001.

- The new Almeida manufacturing facility in Scotland is ready for operations. However, to date no manufacturing of VLA2001 or other vaccines has taken place in this facility. Management intends to utilize the facility in future for manufacturing of IXIARO and the chikungunya vaccine. Future cash flows generated by utilizing this facility have been considered in calculating the value in use.
- As a result of suspending filling and packaging of VLA2001 in Sweden, the impairment test considered future cash flows from the utilization of the equipment for manufacturing of DUKORAL only.

Impairment testing procedures have been performed solely on the utilization of the established capacity through the Group's existing and future commercial stage vaccines.

An impairment test was also performed on the Clinical Trial Materials (CTM) Unit in Sweden, which is dedicated to small scale manufacturing of trial materials for customers. The CTM unit was operated as a separate CGU for several years and was primarily engaged in manufacturing of clinical trial materials for third party customers and more recently also provided services within the Valneva Group. A triggering event was identified as currently no active customer contracts are in place.

Impairment of manufacturing equipment:

During the year ended December 31, 2022, impairment charges amounting to €23.2 million were recorded that related to manufacturing equipment dedicated to the manufacturing of the Company's COVID vaccine VLA2001, which became idle after suspension of manufacturing of VLA2001. Estimates were made on future utilization of installed capacities including transfer of manufacturing processes taking expected future product sales from the Company's long-range business plan into consideration.

Almeida Manufacturing facility in Scotland:

The new manufacturing facility in Scotland is available for manufacturing operations. As at December 31, 2022, the total carrying value of all assets including right of use assets amounted to €83.2 million. The Company's long-range business model for IXIARO and the chikungunya vaccine candidate includes assumptions on market size/market share, product sales and resulting profitability over a five-year period as well as a terminal value for the period beyond 5 years. This business model has been used as a basis to calculate the value in use.

Cash flows are expected to be generated after transfer of manufacturing activities in 2024. Considerable value in use is expected to be generated over the planning horizon of five years as well as through the terminal value for the period beyond the 5-year planning horizon. In total, the value in use far exceeded the current carrying value of €83.7 million. The calculation uses post-tax risk-adjusted cash flow projections and a discount rate of 8.3% for IXIARO and 8.3% for chikungunya.

The discount rate of 8.3% for IXIARO was based on 2.2% risk-free rate, 7.8% market risk premium, minus 0.6% country risk premium, 0.3% currency risk, a levered beta of 1.20 and a peer group related equity-capital ratio.

The discount rate of 8.3% for chikungunya was based on 2.2% risk-free rate, 7.7% market risk premium, minus 0.6% country risk premium, 0.1% currency risk, a levered beta of 1.20 and a peer group related equity-capital ratio.

For the impairment tests for the manufacturing facility in Scotland all future cash flows from utilization of the facility by both the IXIARO and the chikungunya CGUs were considered in calculating the value in use. This

also included utilization of the newly built facility by these CGUs. The impairment test has resulted in no impairment losses.

Manufacturing equipment and a right of use asset have been determined to have no further utilization after the expected transfer of manufacturing activities into the Almeida facility. An impairment charge amounting to €11.5 million was posted in December 2022, which is addition to the impairment charges taken on manufacturing equipment at a CMO in the amount of €3.3 million in June 2022 resulted in total impairment charges for 2022 of €14.8 million.

Filling and Packaging facility and CTM unit in Sweden:

Manufacturing of VLA2001 has been suspended in the new filling and packaging facility in Sweden. The facility will be prepared for utilization within the DUKORAL manufacturing process. As at December 31, 2022, the carrying value of the related property, plant and equipment as well as right of use assets amounted to €48.6 million. The Company's long-range business model for DUKORAL includes assumptions on market size/market share, product sales and resulting profitability over a five-year period as well as a terminal value for the period beyond five years. Scenarios have been developed, and the impairment test used a weighted average across two scenarios for calculation of a value in use.

For the impairment test of the manufacturing facility in Sweden certain assets and liabilities that were not directly attributable to a specific CGU were allocated between the DUKORAL and CTM Unit Sweden CGUs on a basis that reasonably reflects the actual utilization of assets by specific CGU with space occupation and headcount being the main indicators applied.

For DUKORAL the carrying value exceeded the value in use by €8.3 million and an impairment charge for the same amount has been posted in December 2022 and resulted in an impairment loss amounting to €5.2 million related to property, plant & equipment and to €3.2 million related to right of use assets.

The impairment test for the CTM unit resulted in no impairment charges.

The calculation uses post-tax risk-adjusted cash flow projections and a discount rate of 8.3% for DUKORAL and 9.5% for the CTM Unit Sweden.

The discount rate of 8.3% for DUKORAL was based on 2.2% risk-free rate, 7.8% market risk premium, minus 0.7% country risk premium, 0.3% currency risk, a levered beta of 1.06 and a peer group related equity-capital ratio.

The discount rate of 9.5% for the CTM Unit Sweden was based on 2.2% risk-free rate, 9.1% market risk premium, minus 0.6% country risk premium, 0.7% currency risk, a levered beta of 1.21 and a peer group related equity-capital ratio.

Sensitivity to changes in assumptions

The net present value calculations are most sensitive to the following assumptions:

- discount rate
- reduction of expected revenues

The net present value calculation uses a discount rate of 8.3% for DUKORAL (2021: 7.2%), 8.3% for IXIARO (2021: 7.5%), 8.3% for Chikungunya and 9.5% for the CTM unit. The recoverable amounts of these CGUs would equal its carrying amount if the key assumptions were to change as follows: increase in the discount rate from 8.3% to 56.3% would trigger an impairment loss for IXIARO (2021: 4,560 basis points from 7.5% to 53.1%), increase by 100 basis points from 8.3% to 9.3% would trigger an impairment loss for DUKORAL of

€5.1 million (2021: increase of 590 basis points from 7.2% to 13.1% acceptable without triggering an impairment loss). Increase in the discount rate from 9.5% to 15.0% would trigger an impairment loss for the CTM unit.

	2022				2021	
Sensitivity analysis	IXIARO	DUKORAL	Chikungunya	CTM	IXIARO	DUKORAL
WACC	8.3%	8.3%	8.3%	9.5%	7.5%	7.2%
Break-even WACC	56.3%	7.6%	113.6%	15.0%	53.1%	13.1%
Impairment if WACC increases by 1%	NO	5.1	NO	NO	NO	NO
Impairment if sales reduce by 10%	NO	4.0	NO	0.9	NO	NO

The net present value calculations are based upon assumptions regarding market size, expected sales volumes resulting in sales value expectations, expected royalty income or expected milestone payments. A reduction in IXIARO, chikungunya and DUKORAL revenues of 10% would result in no impairment loss for IXIARO and chikungunya and an impairment loss of €4.0 million for DUKORAL (no impairment loss in 2021 and 2020). A reduction in revenues of the CTM unit of 10% would trigger an impairment loss of €0.9 million.

As at December 31, 2022 impairment charges amounted €23.1 million, of which €8.3 million related to DUKORAL assets (thereof €3.2 million right of use assets, €2.5 million of leasehold improvements and €2.7 million of manufacturing equipment) and €14.8 million related to COVID assets (of which €1.0 million right of use assets, €1.9 million leasehold improvements and €11.9 million manufacturing equipment) (see Note 5.13 and 5.14).

For the year ended December 31, 2021 no impairment charges were recorded.

For the year ended December 31, 2020, impairment charges amounted to €0.1 million and related to assets in the course of construction (see Note 5.14).

5.16 Investments in associates/Asset classified as held for sale

An associate is an entity over which the Company has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

The results and assets and liabilities of associates are incorporated in these consolidated financial statements using the equity method of accounting, except when the investment, or a portion thereof, is classified as held for sale, in which case it is accounted for in accordance with IFRS 5. Under the equity method, an investment in an associate is initially recognized in the consolidated statement of financial position at cost and adjusted thereafter to recognize the Company's share of the profit or loss and other comprehensive income of the associate. When the Company's share of losses of an associate exceeds the Company's interest in that associate (which includes any long-term interests that, in substance, form part of the Company's net investment in the associate), the Company discontinues recognizing its share of further losses. Additional losses are recognized only to the extent that the Company has incurred legal or constructive obligations or made payments on behalf of the associate.

The requirements of IAS 28 are applied to determine whether there is any objective evidence that its net investment in the associate is impaired after the initial recognition of the net investment (a "loss event"). When, and only when, there is a loss event existing and the impact on the estimated future cash flows from the net investment can be reliably estimated, the entire carrying amount of the investment is tested for impairment in accordance with IAS 36 as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs of disposal) with its carrying amount. Any impairment loss recognized forms part of the carrying

amount of the investment. Any reversal of that impairment loss is recognized in accordance with IAS 36 to the extent that the recoverable amount of the investment subsequently increases.

As at December 31, 2022, the investment in associate (BliNK) was reclassified to an asset held for sale in accordance with IFRS 5, whereas as at December 31, 2021 this investment was recognized as an investment in associates and accounted for by using the equity method in accordance with IAS 28. Management's intent to sell the equity interest by June 30, 2023 triggered the change in the classification. The book value of the investment amounted to €2.1 million as at December 31, 2021, and was increased by €9 thousand for the period ended June 30, 2022. There was no impact on the consolidated statement of income (loss) for the second semester of 2022, and no impairment indicators were identified during 2022.

Details of the Group's material associate are as follows:

Name of associate	Place of business	Measurement method	% of ownership interest as at December 3	
			2022	2021
BliNK Biomedical SAS	FR	2021: Equity method 2022: lower of carrying amount and fair value less costs to sell	48.9%	48.9%

In January 2015, the Company and the UK Company BliNK Therapeutics Ltd founded BliNK Biomedical SAS ("BliNK"), a private company specialized in the discovery of innovative monoclonal antibodies. The Company contributed assets and liabilities in conjunction with the VIVA│Screen® technology. From 2018 onward BliNK reduced its research activities and has licensed out its technology.

BliNK is a private company and its shares are not listed on a stock exchange.

In 2022, the Company recorded a loss of €0.0 million related to its share of equity in BliNK (2021: loss of 0.0). The total equity of BliNK amounted to €4.6 million as at December 31, 2022 (December 31, 2021: €4.3 million), see Note 5.16.1.

5.16.1 Summarized financial information

The summarized financial information below represents amounts shown in the associate's financial statements prepared in accordance with IFRS (adjusted by the Group for equity accounting purposes).

€ in thousand	As at December 31,	
	2022	2021
BLINK BIOMEDICAL SAS		
Non-current assets	1	2
Current assets	4,903	4,782
Non-current liabilities	209	209
Current liabilities	28	93
Revenue	266	267
Profit/(Loss) from continuing operations	212	(16)
TOTAL COMPREHENSIVE INCOME/(LOSS)	212	(16)

5.16.2 Reconciliation to the carrying amount

€ in thousand	As at December 31,	
	2022	2021
Net assets of associate	4,557	4,344
Proportion of the Company's ownership interest in BliNK Biomedical SAS	48.9 %	48.9 %
BALANCE	**2,228**	**2,121**

5.17 Financial instruments

Derivatives are initially recognized at fair value on the date a derivative contract is entered into and are subsequently re-measured at their fair value at each balance sheet date.

The valuation techniques utilized for measuring the fair values of assets and liabilities are based on observable and unobservable inputs. Observable inputs reflect readily obtainable data from independent sources, while unobservable inputs reflect management's market assumptions.

The fair value of instruments that are quoted in active markets are determined using the quoted prices where they represent those at which regularly and recently occurring transactions take place. Furthermore, the Group uses valuation techniques to establish the fair value of instruments where prices, quoted in active markets, are not available.

5.17.1 Financial instruments by category

AS AT DECEMBER 31, 2021 (In € thousand)	Assets at fair value through profit and loss	Assets at amortized costs	Total
ASSETS AS PER BALANCE SHEET			
Trade receivables	—	44,013	44,013
Other assets[5]	—	11,522	11,522
Cash and cash equivalents	—	346,686	346,686
ASSETS	**—**	**402,221**	**402,221**

[5]Prepayments and tax receivables and other non-financial assets are excluded from the other assets balances, as this analysis is required only for financial instruments.

AS AT DECEMBER 31, 2021 (In € thousand)	Liabilities at fair value through profit and loss	Liabilities at amortized cost	Total
LIABILITIES AS PER BALANCE SHEET			
Borrowings	—	57,834	57,834
Trade payables and accruals	—	68,119	68,119
Tax and employee-related liabilities[6]	—	10,101	10,101
Lease liabilities	—	56,822	56,822
Refund liabilities	—	254,581	254,581
Other liabilities[7]	—	44	44
LIABILITIES	**—**	**447,502**	**447,502**

[6]Social security and other tax payables are excluded from the tax and employee-related liabilities balance, as this analysis is required only for financial instruments.
[7]Deferred income is excluded from the other liabilities balance, as this analysis is required only for financial instruments.

AS AT DECEMBER 31, 2022 (In € thousand)	Assets at fair value through profit and loss	Assets at amortized costs	Total
ASSETS AS PER BALANCE SHEET			
Trade receivables	—	23,912	23,912
Other assets[5]	—	11,988	11,988
Cash and cash equivalents	—	289,430	289,430
ASSETS	**—**	**325,330**	**325,330**

[5]Prepayments and tax receivables and other non-financial assets are excluded from the other assets balances, as this analysis is required only for financial instruments.

AS AT DECEMBER 31, 2022 (In € thousand)	Liabilities at fair value through profit and loss	Liabilities at amortized cost	Total
LIABILITIES AS PER BALANCE SHEET			
Borrowings	—	98,806	98,806
Trade payables and accruals	—	41,491	41,491
Tax and employee-related liabilities[6]	—	10,778	10,778
Lease liabilities	—	53,574	53,574
Refund liabilities	—	143,085	143,085
Other liabilities[7]	—	32	32
LIABILITIES	**—**	**347,767**	**347,767**

[6]Social security and other tax payables are excluded from the tax and employee-related liabilities balance, as this analysis is required only for financial instruments.
[7]Deferred income is excluded from the other liabilities balance, as this analysis is required only for financial instruments.

5.17.2 Fair value measurements

As at December 31, 2022 and December 31, 2021, the Company did not have assets and liabilities measured though profit and loss.

In 2020, the Group entered into various foreign currency option and forward contracts to limit the risk of foreign currency losses on expected future cash flows. The underlying currency amount and the duration of the options depend on the amount and timing of the expected future cash flows.

As at December 31, 2022 and December 31, 2021, the Company did not have open foreign currency options nor foreign currency forwards.

5.17.3 Credit quality of financial assets

The credit quality of financial assets that are not impaired can be assessed by reference to external credit ratings (if available) or to historical information about counterparty default rates as follows:

(In € thousand)	As at December 31,	
	2022	2021
TRADE RECEIVABLES		
Receivables from governmental institutions (AAA-country)	757	289
Receivables from governmental institutions (AA-country)	3,620	23,086
Receivables from governmental institutions (A-country)	—	606
AA	—	2
A	4,861	3,442
Counterparties without external credit rating or rating below A	14,674	16,589
TRADE RECEIVABLES	**23,912**	**44,013**
OTHER ASSETS		
A	11,296	11,296
Assets from governmental institutions (AA-country)	151	199
Counterparties without external credit rating or rating below A	541	27
OTHER ASSETS	**11,988**	**11,522**
CASH AND CASH EQUIVALENTS		
AA	11,557	3,457
A	272,719	332,361
Counterparties without external credit rating or rating below A	5,154	10,868
CASH AND CASH EQUIVALENTS	**289,430**	**346,686**

The rating information refers to long-term credit ratings as published by Standard & Poor's or another rating organization (equivalent to the Standard & Poor's rating).

The maximum exposure to credit risk at the reporting date is the fair value of the financial assets.

5.17.4 Impairment of financial assets

Trade receivables

According to IFRS 9.5.5.15, the simplified approach (measure the loss allowance at an amount equal to lifetime expected credit losses) has to be used for trade receivables, which do not contain a significant financing component. This is the case for the Group, as all trade receivables are short term with a maturity lasting less than 12 months.

Loss allowances have to be established for each trade receivable based on the expected credit losses. Accordingly, at the end of each reporting period, trade receivables were adjusted through a loss allowance in accordance with the revised expected outcome.

According to IFRS 9.5.5.17 default probabilities are to be determined on the basis of historical data, but must be adjusted on the balance sheet date on the basis of up-to-date information and forward looking information. The analysis of the historical data showed as at December 31, 2022 and December 31, 2021 that losses incurred were immaterial, taking further into account the limited number of customers as well as credit checks mentioned in Note 5.2.5. Therefore, loss allowance was considered immaterial as at December 31, 2022 and December 31, 2021.

Other assets and cash and cash equivalents

Historically, no losses have been incurred on other assets measured at amortized costs and on cash and cash equivalents. As at December 31, 2022 and December 31, 2021, the expected credit loss was calculated using the cumulative expected default rate based on the counterparties' ratings and was immaterial.

5.18 Inventories

Inventories are stated at the lower of cost and net realizable value. The cost of finished goods and work in progress comprises raw materials, direct labor, other direct costs and related production overheads (based on normal operating capacity) at standard costs. The variances between the actual costs and the standard costs are calculated monthly and allocated to the inventory, so there is no difference between actual and standard costs. Inventories exclude borrowing costs. Provisions for batches which fail to meet quality requirements and may not be sold (failed batches) are deducted from the value of inventories.

(In € thousand)	As at December 31,	
	2022	2021
Raw materials	86,452	102,082
Work in progress	114,218	55,681
Finished goods	11,783	8,135
Purchased goods (third party products)	3,518	7,362
GROSS AMOUNT OF INVENTORIES BEFORE WRITE-DOWN	**215,970**	**173,260**
Less: write-down provision	(180,866)	(49,162)
INVENTORIES	**35,104**	**124,098**

The increase in gross amounts of work in progress and finished goods is primarily related to the production of VLA2001. Of the write-down provision on inventory of €180.9 million as of December 31, 2022 (December 31, 2021: €49.2 million), €176.9 million related to VLA2001 inventory (December 31, 2021: €41.6 million).

Inventory write-downs as a result of excess, obsolescence, scrap or other reasons are recorded as a component of Cost of goods and services in our consolidated statement of income.

In 2022, inventory-related COGS were €257.8 million (2021: €145.3 million), of which €157.7 million (2021: €127.1 million) related to inventory which cannot be used, failed batches which were written down and product which is not expected to be sold. In 2022, €159.4 million (2021: €121.4 million) of these expenses related to VLA2001 and stem from write-downs for materials which cannot be used, failed batches and batches at risk of failure as well as product which is not expected to be sold. The valuation of commercialized products (excluding VLA2001) resulted in a reversal of write-downs from prior periods of €2.8 million due to higher sales expectations. In 2021, €5.7 million of these expenses related to commercialized products and stem from write-downs due to lower sales expectations and limited shelf life of the products, In addition, in 2022, €66.6 million of COGS related to onerous agreements provision and settlement costs.

Write-down provisions related to the inventory categories as follows:

(In € thousand)	As at December 31,	
	2022	2021
Raw materials	79,939	29,751
Work in progress	99,089	15,096
Finished goods	1,417	3,974
Purchased goods (third party products)	421	342
TOTAL WRITE-DOWN PROVISION	**180,866**	**49,162**

In 2022, Valneva suspended the manufacturing of VLA2001. As a result, raw material acquired to produce VLA2001 which could not be repurposed and used for other products was written down. Work in progress related to VLA2001 was written down due to the reduced expected sales volumes. As at December 31, 2022, €176.9 million of the inventory reserve related to VLA2001 (December 31, 2021: €41.6 million), of which €78.8 million was attributable to the raw materials (December 31, 2021: €29.8) and €98.1 million to work in progress (December 31, 2021: €11.8 million). In 2021 the write-down provision was related to faulty product or product with short expiry dates.

As at December 31, 2022, the remaining write-down provision related to Valneva's commercialized vaccines IXIARO and DUKORAL and to third-party products which are not expected to be sold. Commercial inventories not carrying a minimum residual shelf-life at the expected time of sale on the basis of the most current sales expectations have been written down. These write-downs totaled €2.9 million as at December 31, 2022 (December 31, 2021: €7.6 million), of which €1.4 million (December 31, 2021: €4.0 million) related to finished goods, €1.0 million (December 31, 2021: €3.3 million) related to work in progress and €0.4 million (December 31, 2021: €0.3 million) related to purchased goods.

5.19 Trade receivables

Trade receivables and other assets are initially recognized at fair value.

The carrying amount of trade receivables is reduced through an allowance for doubtful account. When a trade receivable is considered uncollectible, it is written off against this allowance account. Subsequent recoveries of amounts previously written off are credited against the allowance account. Changes in the carrying amount of the allowance account are recognized in the profit or loss.

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They arise when the Group provides money, goods, or services directly to a debtor with no intention of trading the receivable.

They are included in current assets, except those with maturities beyond 12 months after the balance sheet date. These are classified as non-current assets. Loans and receivables are classified as “trade receivables and other assets” in the balance sheet.

Trade receivables include the following:

€ in thousand	As at December 31,	
	2022	2021
Trade receivables	23,997	44,030
Less: loss allowance of receivables	(84)	(17)
TRADE RECEIVABLES, NET	**23,912**	**44,013**

In 2022 and 2021, no material impairment losses were recognized. As at December 31, 2022, the amount of trade receivables past due amounted to €4.4 million (2021: €21.2 million). The trade receivables past due in 2021 mainly related to accounts receivable due from governmental authorities (with credit ratings of A+), mainly related to the APA with the EC.

In the month of January 2023 this amount of trade receivables past due of €4.4 million was lowered by €2.7 million due to payments received that month.

Due to the short-term nature of the current receivables, their carrying amount is considered to be the same as their fair value.

As at December 31, 2022, trade receivables included €23.9 million (December 31, 2021: €40.9 million) of receivables from contracts with customers.

5.20 Other assets

Other assets include the following:

€ in thousand	As at December 31,	
	2022	2021
R&D tax credit receivables	49,174	35,390
Advance payments	1,672	27,375
Tax receivables	9,066	6,145
Prepaid expenses	4,939	5,131
Contract costs	3,710	3,010
Consumables and supplies on stock	1,380	1,722
Miscellaneous current assets	451	23
OTHER NON-FINANCIAL ASSETS	70,391	78,796
Deposits	11,822	11,339
Miscellaneous financial assets	165	183
OTHER FINANCIAL ASSETS	11,988	11,522
OTHER ASSETS	**82,378**	**90,318**
Less non-current portion	(8,299)	(19,282)
CURRENT PORTION	**74,079**	**71,036**

Due to the short-term nature of the financial instruments included in other assets, their carrying amount is considered to be the same as their fair value.

The increase in R&D tax credit receivables is mainly related to increased research and development expenditures primarily in connection with the COVID-19, chikungunya and Lyme vaccine candidates.

As at December 31, 2022, the deposits mainly related to a deposit associated with a lease agreement, which was reclassified from the non-current portion to the current portion due to the expiration of the agreement within one year compared to 2021.

As at December 31, 2021, advance payments amounting to €16.4 million related to the agreement with IDT Biologika to produce the COVID-19 vaccine. Advance payments amounting to €7.2 million related to the collaboration agreement with Dynavax, concluded for the supply of Dynavax's CpG 1018 adjuvant for use in VLA2001. These advance payments from 2021 were released in 2022 due to the wind-down of COVID activities.

Contract costs mainly relate to the collaboration with Pfizer (see Note 5.1) and refer to costs to obtain a contract. It will be amortized in line with the pattern of revenue recognition.

5.21 Cash and cash equivalents

Cash includes cash-at-bank, cash in hand, and deposits held at call with banks. Cash equivalents include short-term bank deposits and medium-term notes that can be assigned or sold on very short notice and are subject to insignificant risk of changes in value in response to fluctuations in interest rates with a maximum maturity of three months.

€ in thousand	**As at December 31,**	
	2022	**2021**
Cash in hand	3	3
Cash at bank	286,530	346,639
Short-term bank deposits (maximum maturity of 3 months)	—	—
Restricted cash	2,898	44
CASH AND CASH EQUIVALENTS	**289,430**	**346,686**

As at December 31, 2022, the restricted cash mainly consisted of a locked bank account for a bank guarantee provided to IDT as security for a payment relating to the settlement agreement announced in September 2022. As a result of a payment made in February 2023, this restriction has been removed. As at December 31, 2021, the restricted cash was a Certificate of Deposit with restricted limited access to secure the credit limit for the Company's commercial card. In 2021 and for part of 2022, the minimum liquidity requirement for the Group according to the debt financing agreement with U.S. healthcare funds Deerfield and OrbiMed (see Note 5.24.1) was €50.0 million. Following an amendment to this agreement in April 2022, the minimum liquidity requirement is €35.0 million.

5.22 Equity

The ordinary shares and convertible preferred shares are classified as equity.

Number of shares	**As at December 31,**	
	2022	**2021**
Ordinary shares issued (€0.15 par value per share)	138,346,968	105,190,223
Convertible preferred shares registered	20,514	48,862
TOTAL SHARES ISSUED	**138,367,482**	**105,239,085**
Less Treasury shares	(124,322)	(124,322)
OUTSTANDING SHARES	**138,243,160**	**105,114,763**

Incremental costs directly attributable to the issue of new shares are shown in equity as a deduction, net of tax, if any, from the proceeds.

When the Company purchases its own equity share capital (treasury shares), the consideration paid, including any directly attributable incremental costs (net of income taxes, if any) is deducted from equity attributable to the Company's equity holders until the shares are cancelled, reissued or otherwise disposed of. In cases where such shares are subsequently sold or reissued, any consideration received, net of any directly attributable

incremental transaction costs and related income tax effects is included in equity attributable to the Company's equity holders.

The profit or loss for the year is fully included in net result, while other comprehensive income solely affects retained earnings and other reserves.

The Company has issued stock options to employees under various employee stock option plans (ESOPs) established in 2013, 2015, and 2016. In total, 1,114,963 employee stock options (of which 615,918 were granted from ESOP 2013, 478,845 from ESOP 2015 and 20,200 from ESOP 2016) were exercised in the exercise period opened in January 2022, which resulted in an increase of 1,176,391 ordinary shares. Additionally, 28,348 preferred shares for the Group's Executive Managers from the free convertible preferred share (FCPS) plan 2017-2021 were converted into 772,070 ordinary shares. 636,648 free ordinary shares for the benefit of Management Board and Management Committee members from the free share plan 2019-2023 were fully vested and transferred to their beneficiaries on March 25, 2022.

In June 2022, Pfizer invested €90.6 ($95) million net representing 9,549,761 shares at a price of €9.49 per share through a reserved capital increase. The cost of equity transactions in the amount of €0.1 million, which were directly attributable to the issue of new shares, are shown in equity as a deduction, net of tax, from the proceeds. For more details see to Note 5.1.

In October 2022, the Company announced the closing of its global offering (the Global Offering) to specified categories of investors of an aggregate of 21,000,000 new ordinary shares, consisting of a public offering of 375,000 American Depositary Shares (ADSs), each representing two ordinary shares, in the United States at an offering price of $9.51 per ADS, and a concurrent private placement of 20,250,000 ordinary shares in Europe (including in France) and other countries outside of the United States at the corresponding offering price of €4.90 per ordinary share. Aggregate gross proceeds of the Global Offering, before deducting underwriting commissions and estimated expenses payable by the Company, were approximately €102.9 million ($99.9 million). The cost of equity transactions in the amount of €7.4 million, which were directly attributable to the issue of new shares, are shown in equity as a deduction, net of tax, if any, from the proceeds.

Conditional and authorized capital

As at December 31, 2022, the Company had 7,267,281 shares of conditional capital in connection with (see Note 5.23):

- the possible exercise of existing stock options;
- the possible exercise of existing equity warrants (BSAs);
- the possible final grant of existing Free Ordinary Shares;
- the possible final grant and conversion of existing Free Convertible Preferred Shares;

Pursuant to resolution No. 28 of the Combined General Meeting held on June 23, 2022, the maximum aggregate amount of capital increases that may be carried out, with immediate effect or in the future, under resolutions 20 to 27 of said Meeting, may not exceed €5,175,000, it being specified that to this maximum aggregate amount will be added the additional nominal amount of shares or securities to be issued in accordance with applicable legal or regulatory provisions and, if applicable, with contractual provisions providing for other forms of adjustment, in order to preserve the rights of the holders of securities or other rights giving immediate and/or future access to the capital of the Company.

5.22.1 Other reserves

(In € thousand)	Other regulated reserves	Other comprehensive income	Treasury shares	Capital from Share-based compensation	Other revenue reserves	Total
BALANCE AS AT JANUARY 1, 2021	**52,820**	**(2,474)**	**(898)**	**12,368**	**(9,474)**	**52,342**
Currency translation differences	—	(2,877)	—	—	—	(2,877)
Defined benefit plan actuarial losses	—	205	—	—	—	205
Share-based compensation expense:						
Value of services	—	—	—	2,632	—	2,632
Purchase/sale of treasury shares	—	—	253	—	(43)	209
BALANCE AS AT DECEMBER 31, 2021	**52,820**	**(5,146)**	**(645)**	**15,000**	**(9,517)**	**52,512**

(In € thousand)	Other regulated reserves	Other comprehensive income	Treasury shares	Capital from Share-based compensation	Other revenue reserves	Total
BALANCE AS AT JANUARY 1, 2022	**52,820**	**(5,146)**	**(645)**	**15,000**	**(9,517)**	**52,512**
Currency translation differences	—	(73)	—	—	—	(73)
Defined benefit plan actuarial gains	—	178	—	—	—	178
Share-based compensation expense:						
Value of services	—	—	—	2,635	—	2,635
Purchase/sale of treasury shares	—	—	—	—	—	—
BALANCE AS AT DECEMBER 31, 2022	**52,820**	**(5,041)**	**(645)**	**17,636**	**(9,517)**	**55,252**

Regulated non-distributable reserve relates to a mandatory legal reserve from the merger with Intercell AG.

The Company did not obtain a dividend from its subsidiaries or associates nor paid a dividend to its shareholders in 2022 and 2021.

5.23 Share-based compensation

The Company operates various share-based compensation plans, both equity-settled and cash-settled plans. The profit and loss statement includes the following expenses arising from share-based payments:

(In € thousand)	Year ended December 31,		
	2022	**2021**	**2020**
Stock option plans	1,916	646	1,182
Free convertible preferred share plans	—	652	1,266
Free ordinary shares program	719	1,334	1,563
Equity warrants	—	—	—
Phantom shares	(11,291)	11,877	2,317
SHARE-BASED COMPENSATION EXPENSE /(INCOME)	**(8,656)**	**14,509**	**6,328**

5.23.1 Stock option plans

The fair value of such share-based compensation is recognized as an expense for employee services received in exchange for the grant of the options. The total amount to be expensed over the vesting period is determined by reference to the fair value of the options granted, excluding the impact of any non-market vesting conditions. Non-market vesting conditions are included in assumptions about the number of options that are expected to become exercisable. Annually, the Group revises its estimates of the number of options that are expected to become exercisable. It recognizes the impact of the revision of original estimates, if any, in the income statement and makes a corresponding adjustment to equity.

The proceeds received net of any directly attributable transaction costs are credited to nominal capital (nominal value) and share premium (amount exceeding nominal value) when the options are exercised.

Beginning in 2013, the Company granted stock options to employees and management pursuant to six successive plans.

Stock options granted from 2013 to 2017 are exercisable in two equal portions after being held for two and for four years (the vesting periods), while stock options granted from 2019 onwards are exercisable in three equal portions after being held for one year, two years and three years. Stock options granted in 2019 are subject to performance conditions.

All options expire no later than ten years after being granted. Stock options are not transferable or negotiable and unvested options lapse without compensation upon termination of employment with the Group (forfeiture). Stock options granted from 2013 onwards vest with the effectiveness of the takeover of more than 50% of the outstanding voting rights of the Group. As this change of control event was considered remote, it has not been considered in the determination of the vesting period.

Changes in the number of stock options outstanding and their related weighted average exercise prices are as follows:

	2022			2021		
	Number of options	**Number of shares available**	**Average exercise price (in € per share)**	**Number of options**	**Number of shares available**	**Average exercise price (in € per share)**
Outstanding as at January 1	3,933,385	3,996,588	3.11	4,911,410	4,975,831	3.06
Granted	3,152,751	3,152,751	6.47	—	—	—
Forfeited	(196,834)	(196,834)	3.05	(187,950)	(189,168)	3.07
Exercised	(1,114,963)	(1,176,391)	3.32	(790,075)	(790,075)	2.79
OUTSTANDING AT YEAR END	**5,774,339**	**5,776,114**	**4.90**	**3,933,385**	**3,996,588**	**3.11**
Exercisable at year end	2,621,588	2,623,363	3.02	3,203,817	3,267,020	3.12

1,114,963 employee stock options (of which 615,918 were granted from ESOP 2013, 478,845 from ESOP 2015 and 20,200 were granted from ESOP 2016) were exercised in January 2022, whereas 790,075 employee stock

options (of which 363,050 were granted from ESOP 2016 and 427,025 from ESOP 2017) were exercised in January 2021.

Stock options outstanding at the end of the period have the following expiry dates and exercise prices:

	Exercise price	Number of options as at December 31, (presentation as number of convertible shares)	
Expiry date	**(in € per share)**	**2022**	**2021**
2023	2.92	19,557	696,903
2025	3.92	43,655	522,500
2026	2.71	14,500	36,200
2027	2.85	551,475	552,725
2029	3.05	1,994,176	2,188,260
2032	6.47	3,152,751	—
OUTSTANDING AT YEAR END		**5,776,114**	**3,996,588**

In 2022, 3,152,751 stock options were granted (2021: none).The weighted average grant date fair value of options granted during the year of 2022 was €3.77. The fair value of the granted options was determined using the Black Scholes valuation model.

The significant inputs into the models were:

	As at Oct 10, 2022
Expected volatility (%)	70.36
Risk-free interest rate (%)	1.70– 1.75

5.23.2 Free ordinary shares

In 2022, Company's Management Board granted free ordinary shares for the benefit of Management Board and Management Committee members. The purpose of this free share plan 2022-2025 is to provide a long-term incentive program for the Company's senior management. In addition 27,521 free shares have been granted to one of the Management Board member, which will vest on December 6, 2024. No free ordinary shares were granted in 2021 and 2020.

In 2022, the number of free ordinary shares granted was as follows:

	Number of free ordinary shares granted
Management Board	196,855
Senior Leadership Group	205,056
FREE ORDINARY SHARES GRANTED	**401,911**

In accordance with the foregoing, changes in the outstanding free ordinary shares are as follows:

	Number of free shares	
	2022	**2021**
Outstanding as at January 1	1,842,404	1,842,404
Granted	401,911	—
Forfeited	(120,000)	—
Exercised	(636,648)	—
OUTSTANDING AT YEAR END	**1,487,667**	**1,842,404**

Subject to vesting conditions (service conditions), the free share granted to a participant will vest in and be delivered to that participant ("seront définitivement attribuées") in three tranches. Each tranche will amount to one third of the total individual allocation. If one third is not a whole number, the number of free shares will be rounded down for the first two tranches and rounded up for the third tranche.

The first and the second tranche will vest on October 10, 2024, and the third tranche will vest on October 10, 2025.

Following the vesting of the free shares, no compulsory holding period will apply to the vested shares.

The plan further provides for accelerated vesting of the free shares in the event of a Change of Control (as defined in the applicable terms & conditions) occurring no earlier than October 10, 2024. As management considered the chance of a Change of Control remote at the grant date, this was not included in the determination of the vesting period. In addition, the plan provides for the possibility to remain entitled to a prorated number of shares, for any unvested tranche, in case of retirement of a beneficiary before complete vesting. However, this is subject to meeting the performance conditions defined for the plan. Finally, the terms and conditions applicable to the free share plan state that if a Change of Control takes place before October 10, 2024, and section III of Article L. 225-197-1 of the French Commercial Code does not apply, the plan will be canceled and the Company will indemnify the participants for the loss of unvested free shares, and, for the Management Board members, to getting all required shareholder approvals. The gross amount of this indemnity will be calculated as though such free shares had been vested upon the Change of Control. The conditions and limitations set forth in the applicable terms and conditions of the plan will apply to this calculation, mutatis mutandis.

In accordance with section II (4th paragraph) of Article L. 225-197-1 of the French Commercial Code, the Supervisory Board decided on November 21, 2019, that the Management Board members should keep no less than 20% of the vested free shares of each tranche until termination of their office as Management Board member or corporate officer.

5.23.3 Free convertible preferred share plan

In 2017, the FCPS Program 2017-2021, a long-term incentive plan for the Group's Executive Managers was implemented. As a prerequisite to the possibility of participating in the program, each potential beneficiary was required to make a cash investment in the Company, by purchasing the Company's ordinary shares.

The "Final Share Price" (volume-weighted average stock market price of the Company's ordinary shares over a period of six months immediately preceding the Conversion Date, as rounded to the second decimal place) was €18.21.

In 2022, 28,348 FCPS were converted into 772,070 Company's ordinary shares.

5.23.4 Phantom shares

In 2017 and 2019, phantom share plans were issued for employees who are US citizens, with the same conditions as the stock options program (see above) but which will not be settled in equity, but in cash. Therefore, it is considered as a cash settled plan. The liability for the phantom shares is measured (initially and at the end of each reporting period until settled) at the fair value of the share options rights, by applying an option pricing model taking into account the terms and conditions on which the phantom rights were granted and the extent to which the employees have rendered services to date.

In 2021 and 2022, no new phantom shares were granted, but in 2022 a change from one phantom share program to another for one employee was agreed.

In accordance with the foregoing, changes in the outstanding free ordinary shares are as follows:

	Number of free shares	
	2022	**2021**
Outstanding as at January 1	841,450	932,200
Granted	117,000	—
Forfeited	(67,001)	(65,750)
Exercised	(220,949)	(25,000)
OUTSTANDING AT YEAR END	**670,500**	**841,450**

The carrying amount of the liability relating to the phantom shares as at December 31, 2022 was €3.0 million (December 31, 2021: €14.3 million). The fair values of the granted options were determined on the balance sheet dates using the Black Scholes valuation model.

Phantom shares outstanding at the end of the period have the following expiry dates and exercise prices:

	Exercise price	Number of phantom shares as at December 31,	
Expiry date	**in € per share**	**2022**	**2021**
2023	2.92	—	4,950
2025	3.92	—	6,000
2026	2.71	—	—
2027	2.85	6,250	6,250
2029	3.05	244,250	134,250
2030	—	420,000	690,000
OUTSTANDING AT YEAR END		**670,500**	**841,450**

The significant inputs into the models were:

	As at December 31,	
	2022	**2021**
Expected volatility (in %)	51.07 -86.95	72.97
Expected vesting period (term in years)	0.25 - 0.93	0.25 – 4.39
Risk-free interest rate (in %)	1.32 -2.37	(0.78) – (0.64)

5.23.5 Equity warrants

In 2017, the Company granted equity warrants to members of the Supervisory Board. The warrants granted in 2017 (BSA 27) were exercisable in four equal portions after 12, 24, 36 and 48 months. The subscription price for one new ordinary share under the 2017 plan (BSA 27) amounted to €2.574.

Changes in the equity warrants outstanding are as follows:

	Number of equity warrants	
	2022	**2021**
Outstanding as at January 1	21,875	43,750
Granted	—	—
Exercised	(21,875)	(21,875)
Forfeited	—	—
OUTSTANDING AT YEAR END	**—**	**21,875**

5.24 Borrowings

Borrowings are initially recognized at fair value if determinable, net of transaction costs incurred. Borrowings are subsequently stated at amortized cost. Any difference between the proceeds (net of transaction costs) and the redemption value is recognized in the income statement over the period of the borrowings using the effective interest method.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the balance sheet date.

Borrowings of the Group at year-end include the following:

€ in thousand	**As at December 31,**	
	2022	**2021**
NON-CURRENT		
Other loans	87,227	50,726
NON-CURRENT BORROWINGS	**87,227**	**50,726**
CURRENT		
Other loans	11,580	7,107
CURRENT BORROWINGS	**11,580**	**7,107**
TOTAL BORROWINGS	**98,806**	**57,834**

The maturity of non-current borrowings is as follows:

(In € thousand)	**As at December 31,**	
	2022	**2021**
Between 1 and 2 years	29,452	21,102
Between 2 and 3 years	28,386	15,502
Between 3 and 4 years	23,377	12,306
Between 4 and 5 years	5,388	674
Over 5 years	624	1,143
NON-CURRENT BORROWINGS	**87,227**	**50,726**
Current borrowings	11,580	7,107
TOTAL BORROWINGS	**98,806**	**57,834**

The carrying amounts of the Group's borrowings are denominated in the following currencies:

(In € thousand)	As at December 31,	
	2022	2021
Borrowings denominated in EUR	4,433	4,708
Borrowings denominated in USD	94,373	53,126
TOTAL BORROWINGS	**98,806**	**57,834**

5.24.1 Other loans

In April 2022, Valneva signed an amendment to increase the principal amount of its existing €54.1 million ($60 million) debt financing agreement with funds managed by leading U.S.-based healthcare investment firms Deerfield and OrbiMed. The original loan agreement was signed in February 2020. The April 2022 amendment provided Valneva immediate access to €18.2 million ($20 million), with an additional $20 million available upon potential approval of VLA2001 by the European Medicines Agency. This additional $20 million was drawn in September 2022 in the amount of €19.9 million. The increased funding will be used to further invest in research and development projects, including market access preparations for VLA1553. The loan interest rate remains unchanged at 9.95% (equivalent to 10.09% on an annual basis). The interest-only period was extended from the second quarter of 2023 to the third quarter of 2024, and the loan will now mature in the first quarter of 2027 instead of the first quarter of 2026. As at December 31, 2022, €92.3 million ($100.0 million) was drawn down and the carrying amount was €89.2 million ($95.0 million). As at December 31, 2021, €54.1 million ($60.0 million) was drawn down and the carrying amount was €49.7 million. The loan is secured by substantially all of Valneva's assets, including its intellectual property, and is guaranteed by Valneva SE and certain of its subsidiaries.

Noting the COVID-19 pandemic's impact on the travel industry and following a temporary waiver of the revenue covenant for the second half of 2020, Valneva, Deerfield and OrbiMed agreed to modify this covenant for 2021 and 2022, replacing the twelve-month rolling €115 million minimum revenue requirement with quarterly minimum revenue requirements representing an annual total of €64 million in 2021 and €103.75 million in 2022. The parties also agreed to modify the minimum cash requirement to €50 million for 2021 and 2022. Following an amendment to this agreement in April 2022, the minimum liquidity requirement is €35.0 million.

The Group does not expect these limitations to affect its ability to meet its cash obligations. As at December 31, 2022, the Group's consolidated liquidity or net revenues did not fall below the covenant minimum values.

If the Group's consolidated liquidity or net revenues were to fall below the covenant minimum values, Valneva would not be able to comply with the financial covenants in the loan agreement, which could result in additional costs (up to additional 10%-points of interest over the duration of the default) and an early repayment obligation (payment of the principal increased by 5% and of an indemnity representing the interests expected until December 2023). The Group does not expect these limitations to affect its ability to meet its cash obligations.

The loan was included in the balance sheet item “Borrowings”.

(In € thousand)	2022	2021
BALANCE AS AT JANUARY 1	**49,671**	**46,190**
Proceeds of issue	38,502	—
Transaction costs	(255)	—
Accrued interest	7,521	6,167
Payment of interest	(7,685)	(6,459)
Exchange rate difference	1,429	3,774
BALANCE AS AT DECEMBER 31	**89,182**	**49,671**
Less: non-current portion	(79,709)	(44,360)
CURRENT PORTION	**9,473**	**5,311**

As at December 31, 2022, Other loans also included borrowings related to financing of research and development expenses and CIR (R&D tax credit in France) of €4.4 million (December 31, 2021: €4.7 million) as well as an amount related to CEPI of €5.2 million December 31, 2021: €3.5 million), representing payments received which are expected to be paid back in the future. For detailed information see Note 5.8.1.

5.24.2 Borrowings and other loans secured

As at December 31, 2022, €93.6 million (December 31, 2021: €54.4 million) of the outstanding borrowings and other loans were guaranteed, secured or pledged. These borrowings and other loans related to financing of research and development expenses, fixed assets and CIR (R&D tax credit in France) and have various conditions (interest rates) and terms (maturities).

5.24.3 Fair value of borrowings and other loans

For the majority of the borrowings and other loans, the fair values are not materially different from their carrying amounts, since the interest payable on those borrowings is either close to current market rates or the borrowings are of a short-term nature.

As at December 31, 2022, material differences were identified only for guaranteed other loans. Based on an estimated arms’ length interest rate of 9.82%, the fair value is €3.9 million (carrying amounts is €4.4 million).

5.25 Trade payables and accruals

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Accounts payable are classified as current liabilities if payment is due within one year or less. Trade payables are recognized initially at fair value. Short-term trade payables are subsequently measured at the repayment amount.

Trade payables and accruals include the following:

In € thousand	As at December 31,	
	2022	2021
Trade payables	14,505	16,035
Accrued expenses	26,986	52,084
BALANCE AS AT DECEMBER 31	**41,491**	**68,119**
Less non-current portion	—	—
CURRENT PORTION	**41,491**	**68,119**

The carrying amounts of trade and other payables are considered to be the same as their fair values, due to their short-term nature.

5.26 Tax and employee-related liabilities

The Group recognizes a liability and an expense for bonuses. The Group recognizes a liability when it has assumed a contractual obligation or when there is a past practice that has created a constructive obligation.

€ in thousand	As at December 31,	
	2022	2021
Employee-related liabilities	10,778	10,101
Social security and other taxes	4,960	7,148
BALANCE AS AT DECEMBER 31	**15,738**	**17,249**
Less non-current portion	—	—
CURRENT PORTION	**15,738**	**17,249**

5.27 Lease liabilities

Lease liabilities are effectively secured as the rights to the leased assets revert to the lessor in the event of default.

The development of lease liabilities is described in Note 5.13.

The maturity of non-current lease liabilities is as follows:

€ in thousand	As at December 31,	
	2022	2021
Between 1 and 2 years	2,341	25,301
Between 2 and 3 years	2,232	2,150
Between 3 and 4 years	2,286	2,214
Between 4 and 5 years	2,322	2,289
Between 5 and 10 years	9,905	10,733
Between 10 and 15 years	8,998	9,114
Over 15 years	80	1,886
NON-CURRENT LEASE LIABILITIES	**28,163**	**53,687**
Current lease liabilities	25,411	3,135
TOTAL LEASE LIABILITIES	**53,574**	**56,822**

The carrying amounts of the Group's lease liabilities are denominated in the following currencies:

€ in thousand	As at December 31,	
	2022	2021
EUR	24,694	24,650
SEK	27,314	30,657
Other	1,566	1,515
TOTAL LEASE LIABILITIES	**53,574**	**56,822**

5.28 Contract liabilities

A contract liability has to be recognized, when the customer already provided the consideration or part of the consideration, before an entity has fulfilled its performance obligation (agreed goods or services which should be delivered or provided), resulting from the "contract".

Development of contract liabilities is presented in the table below:

€ in thousand	2022	2021
BALANCE AS AT JANUARY 1	128,758	89,636
Revenue recognition	(130,678)	(89,364)
Exchange rate differences	498	7
Addition	10,833	128,479
BALANCE AS AT DECEMBER 31	**9,411**	**128,758**
Less non-current portion	—	(4,741)
CURRENT PORTION	**9,411**	**124,017**

In 2022, revenue recognized in the amount of €116.8 million related to the APA with the European Commission (see Note 5.1), €2.3 million related to the APA with the Kingdom of Bahrain, €2.0 million related to the agreement with Instituto Butantan and €5.9 million related to the Collaboration and License Agreement with Pfizer.

In 2022, additions (amounts received for future performance obligations) amounting to €4.2 million related to the Collaboration and License Agreement with Pfizer, €2.0 million related to Instituto Butantan, and €3.8 million related to the APA with the Kingdom of Bahrain.

With regards to additions in 2021, €116.9 million were related to the APA with the European Commission to supply up to 60 million doses of VLA2001, €3.8 million were related to the APA with the Kingdom of Bahrain, and €4.7 million were related to a payment received from the DoD for IXIARO. Of the changes to the position because of revenue recognized in 2021, €87.0 million related to the UK Supply Agreement (see Note 5.1).

5.29 Refund liabilities

A refund liability has to be recognized when the customer already provided a consideration which is expected to be refunded partially or totally. It is measured at the amount the Company has an obligation to repay or amounts which did not meet the criteria for revenue recognition in the past, but there are no remaining goods and services to be provided in future.

Development of refund liabilities:

(In € thousand)	2022	2021
BALANCE AS AT JANUARY 1	254,581	111,426
Additions	52,012	159,179
Payments	(2,626)	(18,022)
Other releases	(879)	(15,198)
Revenue recognition	(169,242)	—
Interest expense capitalized	9,597	8,478
Exchange rate difference	(357)	8,718
BALANCE AS AT DECEMBER 31	**143,085**	**254,581**
Less non-current portion	(6,635)	(158,970)
CURRENT PORTION	**136,450**	**95,611**

As at December 31, 2022, €135.5 million (of which €135.5 million is current) related to the collaboration with Pfizer (see Note 5.1) and €6.6 million (of which €6.6 million is non-current) related to the expected payment to GSK related to the termination of the SAA in 2019. Revenue recognized in 2022 related primarily to the de-recognition of the previously included royalty obligation towards the UK Authority in the amount of €89.2 million and the de-recognition of the previously included CAPEX obligation towards the UK Authority in the amount of €80.0 (£70.8) million. Additions included the milestone of $25 million (€24.5 million) related to the Collaboration and License Agreement with Pfizer as well as other payments received where we have a repayment obligation.

As at December 31, 2021, €79.6 million of which €75.2 million is non-current) related to the collaboration with Pfizer (see Note 5.1), €166.9 million (of which €77.3 million is non-current) related to the UK Supply Agreement (see Note 5.5.2), €6.4 million (of which €6.3 million non-current) related to the expected payment to GSK related to the termination of the SAA in 2019. Other releases related to reductions in refund liabilities in the wake of revaluations that increased contract liabilities.

Expected cash outflows for refund liabilities are disclosed under Note 5.2.5.

5.30 Provisions

5.30.1 Provisions for employee commitments

€ in thousand	As at December 31,	
	2022	2021
Employer contribution costs on share-based compensation plans	3,330	26,520
Phantom shares	2,976	14,267
Retirement termination benefits	330	422
Leaving indemnities	267	—
BALANCE AS AT DECEMBER 31	**6,903**	**41,210**
Less non-current portion	1,320	8,308
CURRENT PORTION	**5,583**	**32,901**

(a) Share-based provisions

Employer contribution costs on share-based compensation plans and phantom shares are calculated at the balance sheet date using the share price of Valneva as at December 31, 2022: €6.22 (December 31, 2021: €24.5).

(b) Retirement termination benefits

Some Group companies provide retirement termination benefits to their retirees.

For defined benefit plans, retirement costs are determined once a year:

- Up to December 31, 2020, using the projected unit credit method where each period of service gave rise to an additional unit of benefit entitlement and where each unit was measured separately to determine the final obligation.
- From December 31, 2021 onward, under the new calculation method proposed by the IFRS IC and according to the updated recommendation of the ANC n 2013-02 as at December 31, 2021: under this method, when the plan provides for the payment of an indemnity to the employee, if he or she is present at the date of retirement, the amount of which depends on seniority and is capped at a certain years of service, the commitment must be calculated solely on the basis of the years of service prior to the retirement date.

The final obligation is then discounted. These calculations mainly use the following assumptions:

- a discount rate;
- a salary increase rate;
- an employee turnover rate.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise.

For basic schemes and defined contribution plans, the Group recognizes the contributions as expenses when payable, as it has no obligations over and above the amount of contributions paid.

Assumptions used

	As at December 31,	
	2022	2021
Discount rate	3.60 %	1.00 %
Salary increase rate	2.50 %	2.00 %
Turnover rate	0% - 21.35%	0%- 21.35%
Social security rate	43.00% - 47.00%	43.00% - 47.00%
Average remaining lifespan of employees (in years)	20	22

Changes in defined benefit obligation

Present value of obligation development:

(In € thousand)	2022	2021
BALANCE AS AT JANUARY 1	**422**	**550**
Current service cost	86	77
Actuarial losses/(gains)	(178)	(205)
BALANCE AS AT DECEMBER 31	**330**	**422**

5.30.2 Other provisions

€ in thousand	As at December 31,	
	2022	2021
Non-current	960	—
Current	24,714	15,806
PROVISIONS	**25,674**	**15,806**

As at December 31, 2022, €18.8 million of the provision related mainly to onerous purchase agreements related to the wind-down of COVID activities (December 31, 2021: €13.5 million). Secondly, the position comprised €5.2 million from a provision for expected legal and settlement costs under a court proceeding related to the Intercell AG/Vivalis SA merger (December 31, 2021: €2.1 million).

5.31 Other liabilities

€ in thousand	As at December 31,	
	2022	2021
Deferred income	5,519	4,966
Other financial liabilities	32	44
Miscellaneous liabilities	88	8
OTHER LIABILITIES	**5,639**	**5,019**
Less non-current portion	(116)	(69)
CURRENT PORTION	**5,523**	**4,950**

As at December 31, 2022 deferred income mainly included conditional advances from government enterprise grants in Scotland, whereas as at December 31, 2021 deferred income mainly included a conditional advance payment from CEPI (see Note 5.8).

5.32 Cash flow information

5.32.1 Cash generated from operations

The following table shows the adjustments to reconcile net loss to net cash generated from operations:

€ in thousand	Note	Year ended December 31,		
		2022	2021	2020
LOSS FOR THE YEAR		(143,279)	(73,425)	(64,393)
Adjustments for :				
Depreciation and amortization	5.12/5.13/5.14	21,036	14,281	9,799
Write-off/impairment fixed assets/intangibles	5.12/5.13/5.14	23,249	—	140
Share-based compensation expense	5.23	(8,656)	14,509	6,328
Income tax expense/(income)	5.10	(1,536)	3,446	(909)
Dividends received from associated companies	5.16	—	—	—
(Profit)/loss from disposal of property, plant, equipment and intangible assets	5.8	38	46	10
Share of (profit)/loss from associates	5.16	(9)	5	133
Fair value losses on derivative financial instruments		—	—	—
Provision for employer contribution costs on share-based compensation plans	5.30.1	(22,933)	19,079	7,351
Other non-cash (income)/expense		14,088	(11,604)	4,470
Interest income	5.9	(260)	(249)	(119)
Interest expense	5.9	19,054	16,964	10,738
Changes in non-current operating assets and liabilities (excluding the effects of acquisition and consolidation) :				
Other non-current assets		10,981	194	(2,303)
Long term contract liabilities	5.28	(5,241)	4,662	(674)
Long term refund liabilities	5.29	(154,833)	54,501	90,653
Other non-current liabilities and provisions		1,379	(3)	795
Changes in working capital (excluding the effects of acquisition and exchange rate differences on consolidation):				
Inventory		84,224	(92,373)	(4,196)
Trade and other receivables		12,401	(21,349)	(24,023)
Contract liabilities	5.28	(114,603)	34,453	88,801
Refund liabilities	5.29	33,764	80,160	10,614
Trade and other payables and provisions		(14,053)	35,236	6,544
CASH GENERATED FROM OPERATIONS		(245,189)	78,532	139,759

In 2022, other non-cash (income)/expense mainly related to net foreign exchange losses. In 2021, other non-cash (income)/expense mainly related to net foreign exchange gains.

In 2020, other non-cash (income)/expense included €3.3 million of expenses from disposal of VLA15 (see Notes 5.1 and 5.12), €1.6 million of income from a revaluation of lease liabilities and right of use assets and €2.6 million of net foreign exchange losses.

The following table shows the adjustments to reconcile profit/loss from the disposal of property, plant, equipment and intangible assets to proceeds from the disposal of fixed assets:

€ in thousand	Year ended December 31,		
	2022	2021	2020
Net book value	46	46	34
Loss on disposal of fixed assets	(38)	(46)	(10)
PROCEEDS FROM DISPOSAL OF PROPERTY, PLANT, EQUIPMENT AND INTANGIBLE ASSETS	**8**	**—**	**24**

5.32.2 Reconciliation of liabilities arising from financing activities

The table below details changes in the Group's liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flows were (or future cash flows will be) classified in the Group's consolidated statement of cash flows as cash flows from financing activities. For development of lease liabilities, see Note 5.13.

(In € thousand)	Bank borrowings	Other loans	Total
BALANCE AS AT JANUARY 1, 2021	**—**	**53,363**	**53,363**
Repayments	—	(1,956)	(1,956)
Additions, net of transaction costs	—	859	859
Foreign exchange movements	—	3,998	3,998
Other changes[8]	—	1,570	1,570
BALANCE AS AT DECEMBER 31, 2021	**—**	**57,834**	**57,834**
BALANCE AS AT JANUARY 1, 2022	**—**	**57,834**	**57,834**
Repayments	—	(1,793)	(1,793)
Additions, net of transaction costs	—	39,331	39,331
Foreign exchange movements	—	2,073	2,073
Other changes[8]	—	1,362	1,362
BALANCE AS AT DECEMBER 31, 2022	**—**	**98,806**	**98,806**

[8]Other changes include interest accruals and payments.

5.33 Commitments and contingencies

As at December 31, 2022, there were €9.9 million of capital expenditure contracted, mainly related to manufacturing sites for the COVID-19 vaccine candidate (December 31, 2021: €23.6 million).

5.33.1 Other commitments, pledges and guarantees

The other commitments relate to minimum payments consist of:

€ in thousand	As at December 31,	
	2022	2021
Loans and grants	49	143
Royalties	8,262	8,941
OTHER COMMITMENTS	**8,311**	**9,084**

The pledges consist of:

€ in thousand	As at December 31,	
	2022	2021
Pledges on consolidated investments	28,247	19,901
Pledges on bank accounts	284,889	292,257
Pledges on receivable	219,494	344,519
GUARANTEES AND PLEDGES	**532,630**	**656,677**

5.33.2 Contingencies and litigations

Following the merger between the companies Vivalis SA and Intercell AG in 2013, certain former Intercell shareholders initiated legal proceedings before the Commercial Court of Vienna to request a revision of either the cash compensation paid to departing shareholders or the exchange ratio between Intercell and Valneva shares used in the merger. In October 2021, a court-appointed expert recommended an increase in the cash compensation as well as further valuation work on the exchange ratio. In April 2022, this expert presented the result of its work on the exchange ratio; however, the final outcome will depend on the court's position on a couple of legal points. The Company therefore assessed the probability of several scenarios and decided to hold a provision of €5.2 million to cover the reassessed risk and potential legal costs (December 31, 2021: €2.1 million). €3.1 million of additional expenses related to this litigation was included in "other expenses" in the period ended December 31, 2022.

In July 2016, a claim for additional payment was raised and litigation was filed in December 2016, in connection with the 2009 acquisition of Humalys SAS, from which the Company had acquired a technology, which was later combined with other antibody discovery technologies and spun off to BliNK Biomedical SAS in early 2015. Former shareholders of Humalys claimed additional consideration as a result of the spin-off transaction. A first instance decision in the Humalys case is expected in the third quarter of 2023. After consultation with its external advisors the Company believes that this claim is unsubstantiated, and the filed litigation is not likely to succeed in court. Detailed information on the potential specific financial consequences, which might result from a successful claim could adversely affect the Company's ability to defend its interests in this case and therefore is not provided, in accordance with IAS 37.92.

5.34 Related-party transactions

5.34.1 Rendering of services

In € thousand	Year ended December 31,		
	2022	2021	2020
Provision of services:			
Operating activities	1,200	231	187
Financing activities	8	—	—
PROVISION OF SERVICES	**1,208**	**231**	**187**

Services provided by Valneva to Groupe Grimaud La Corbière SAS, a significant shareholder of Valneva, are considered related party transactions and consist of services within a collaboration and research license agreement and of the provision of premises and equipment and sale of patents and cells.

Operating activities amounting to €1.2 million included Valneva's agreement with Vital Meat SAS (an affiliate of Group Grimaud La Corbière SAS) according to which Valneva transferred certain assets (patent and cell lines) to Vital Meat SAS for a consideration of €1.0 million.

From June 2022 onward, Bpifrance qualifies as related party, as Bpifrance is a shareholder of Valneva with significant influence through membership on the Company's Supervisory Board. A financing of receivables from the French Tax Authorities relating to the Research Tax Credit 2021, previously domiciled and assigned to Bpifrance, amounting to 80% of the amount of the assigned receivables, was granted in November 2022 until July 31, 2023. The amount borrowed is €1.4 million. A commitment fee of 0.5% as well as interest at the EURIBOR one month average rate of the previous month (the rate mentioned is a variable rate deducted at —% if it were to be negative) plus 1.7% per annum were charged for an amount of €8,000 at December 31, 2022.

5.34.2 Key management compensation

The aggregate compensation of the members of the Company's Management Board included the following:

€ in thousand	Year ended December 31,		
	2022	2021	2020
Salaries and other short-term employee benefits[9]	2,821	1,930	2,950
Other long-term benefits	45	24	18
Share-based payments (expense of the year)	722	856	1,786
KEY MANAGEMENT COMPENSATION	**3,588**	**2,809**	**4,755**

[9]In 2020 leaving indemnities of 0.9 million have been included.

5.34.3 Supervisory Board compensation

In 2022, the aggregate compensation of the members of the Company's Supervisory Board amounted to €0.4 million (2021: €0.3 million, 2020: €0.2 million). In the year 2017, the Company granted equity warrants to members of the Supervisory Board, which were fully exercised in 2022. For more information, see Note 5.23.

5.35 Events after the reporting period

No events that are expected to have a material effect on the financial statements occurred after the reporting period.