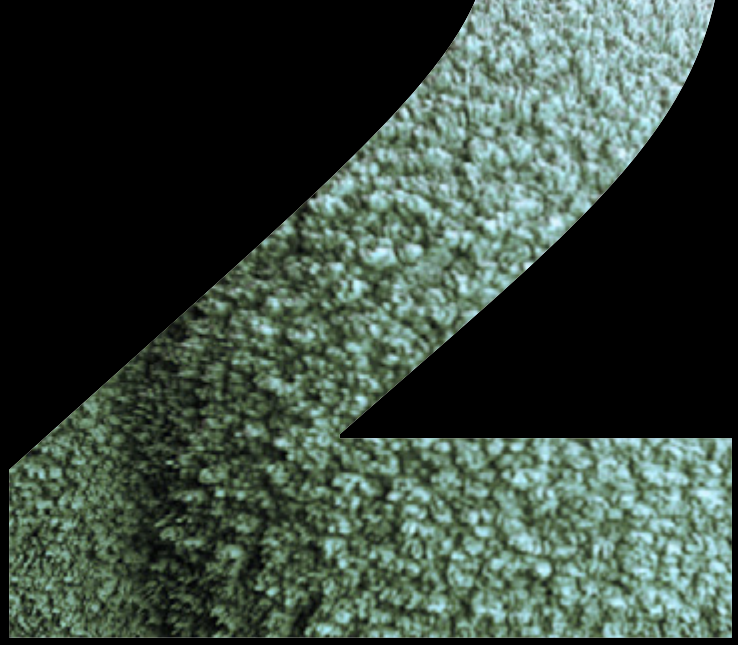
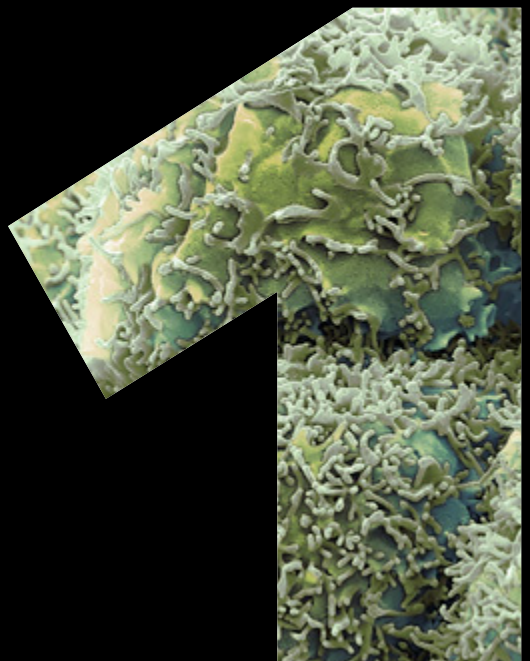


Annual Report

For a medicine of tomorrow

BIONTECH



1

Magazine

Precision medicine

52

57

Investing in innovations from development to delivery of novel medicines

60

Democratizing access to novel medicines

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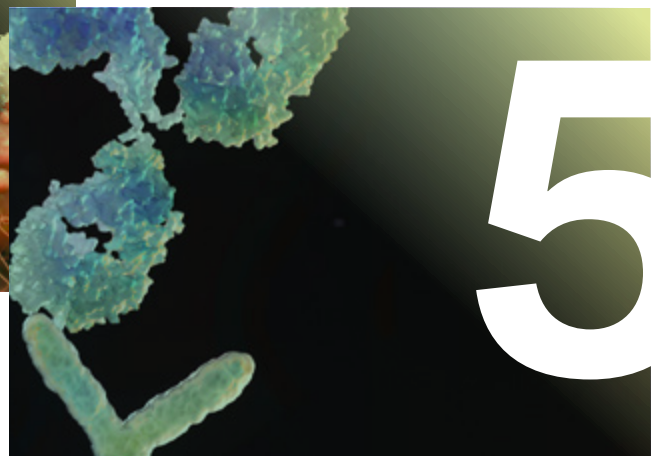

For quick navigation, use the buttons in the upper left corner

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For a medicine of tomorrow

This scanning electron microscope image shows **DENDRITIC CELLS, PSEUDOCOLORED IN GREEN, INTERACTING WITH T CELLS**, pseudo-colored in pink. The dendritic cells internalize the particles, process the antigens, and present peptides to T cells to direct immune responses.

Photo: CDC, unsplash

Our pioneers for BioNTech – the Management and Supervisory Board. As well as ...

>3,000

team members

2021 was an extraordinarily successful year for BioNTech. We achieved all goals we set for ourselves.

COVID-19

This is true of our significant contribution to the **containment of the COVID-19 pandemic, by producing billions of doses of vaccines** to support vaccine campaigns worldwide and prevent millions of hospitalizations and casualties.

SCIENCE

It also applies to **oncology, where we worked on improving the medicine of the future**, with a focus on areas with high unmet medical need. Four of the trials underway are randomized clinical Phase 2 studies. In five other trials, our vaccine candidates were administered to humans for the first time.

CORPORATE

We have experienced strong growth and international expansion. This puts us in an even better position to face the challenges of tomorrow. We established four new locations and opened two new research sites in the U.S.A. and in Austria. We expanded our Management Board, grew our global team and recorded EUR 19 billion in revenues. Additionally, we have initiated a share repurchase program of up to 1.5 billion US-Dollars and will propose a special cash dividend of 2 Euros per share at the Annual General Meeting 2022. This puts us in a strong position to finance the development of the medicine of the future.

In 2022, we want to continue on this successful path. We aim to further expand and develop our pipeline to strengthen our position as a 21st century immunotherapy powerhouse.

Our goals for 2022:

1

We aspire to maintain **our leading position in developing COVID-19 vaccines** through several product launches and expansions, including new formulations and potentially variant-based vaccines.

2

In **oncology, we plan to advance clinical trials** in a range of indications, including several studies relevant for authorization.

3

We plan to advance **four mRNA vaccines against infectious diseases in clinical trials by the end of the year.** In addition, the influenza vaccine we are advancing with Pfizer is already in clinical trials.

4

We aim to **improve global access to mRNA vaccines** by, among other things, bringing the first BioNTainers to Africa in the second half of the year as turnkey manufacturing facilities to support the sustainable development of local production capacities.

5

We want to continuously invest in our platforms to develop **therapeutic innovations in areas such as autoimmune diseases, regenerative medicine and cardiovascular diseases.**

Our vision

We aim to usher in a new era of immunotherapies and to develop innovative approaches for the treatment of cancer, infectious diseases as well as other severe diseases and also to advance regenerative medicine. Scientific rigor and operational excellence are the principles that guide us on our mission.

Since our inception in 2008, our vision and mission have remained unchanged.

Our mission

We want to improve the health of people worldwide by harnessing the full potential of the immune system and expanding access to innovative medicine. We believe in scientific rigor, innovation and passion as driving forces. Our basis is our biotechnological innovations, which we use to develop new solutions to problems that in some cases have remained unsolved for decades.

Photo: V2osk, unsplash

BioNTech by the numbers

We are pioneering the medicine of the future.

1 approved product (indication COVID-19)

>30 product candidates in a diversified pipeline

INFECTIOUS DISEASES
1 approved product
1 Phase-1 candidate
>10 pre-clinical program

ONCOLOGY
16 product candidates in
20 clinical studies,
5 of which are in Phase 2

>200 IP portfolio patent families

5 scientific publications in peer reviewed journals in 2021

All figures as of December 31, 2021.

Our company is built on passion, innovation and collaboration.

>3,000 employees

R&D team expanded by 40% to >850 people

>60 nationalities

female employees in the total workforce

51 %

females in top management positions

43 %

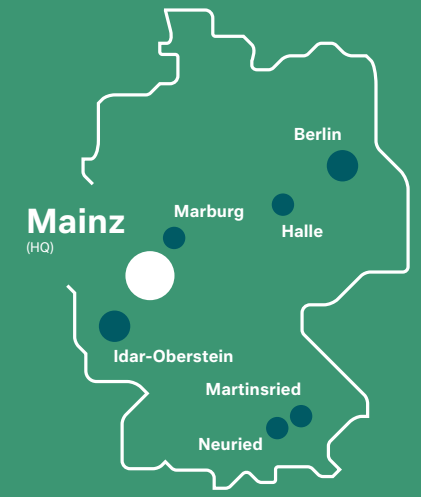
From our roots in Mainz, we have a global footprint.

Vienna (Austria), Cambridge (USA), Gaithersburg (USA), Singapore, Shanghai (China), Istanbul (Turkey), Reading (UK)

In **2021**, we delivered approximately **2.6 billion doses** of our COVID-19 vaccine to more than **165 countries and regions worldwide**; more than one billion doses were shipped to low- and middle-income countries.

We are committed to provide more than **2 billion doses** to low- and middle-income countries **by the end of 2022**.

4 manufacturing facilities



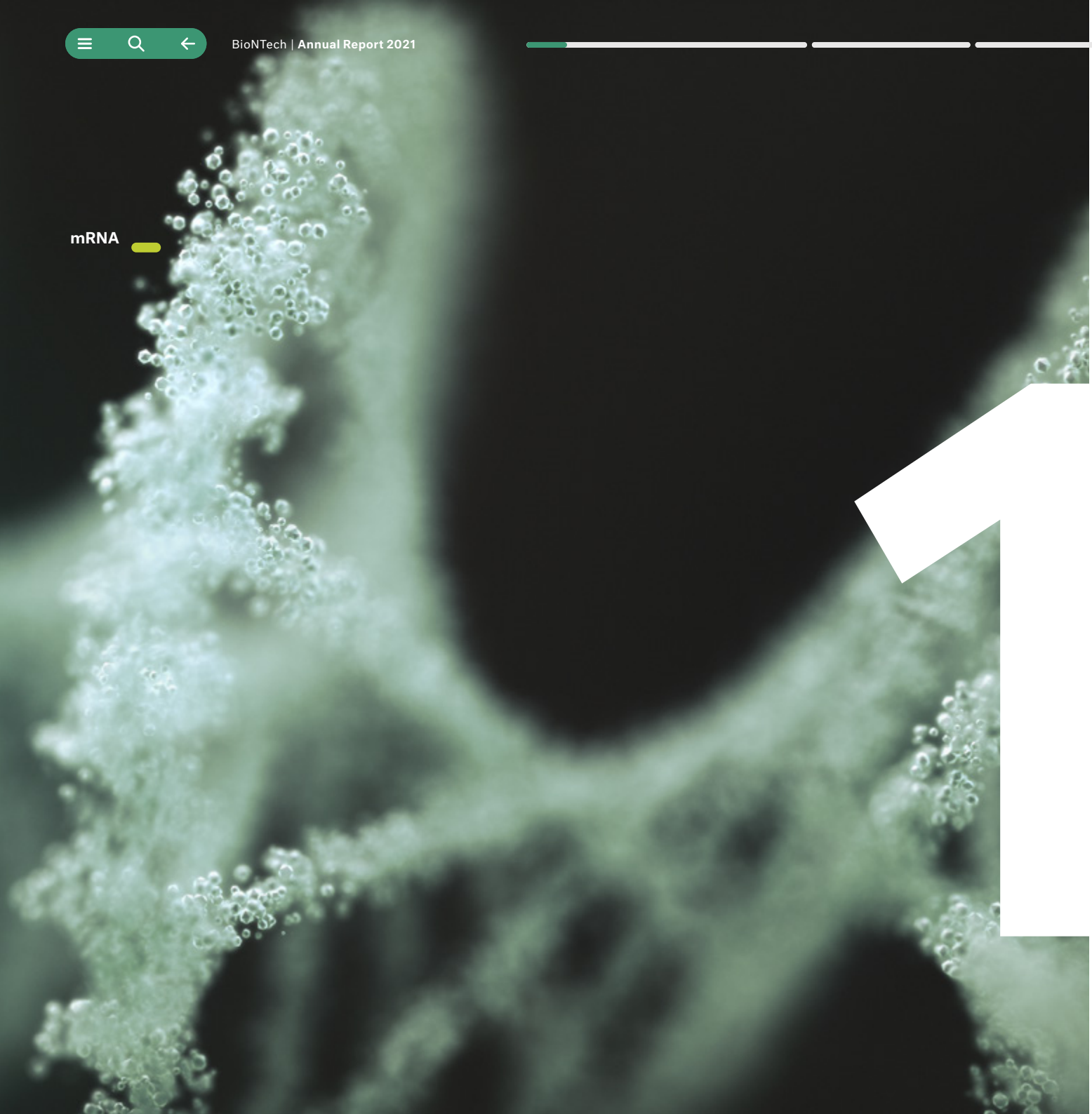
Our precision medicine toolkit

1 mRNA

2 Cell therapies

3 Antibodies

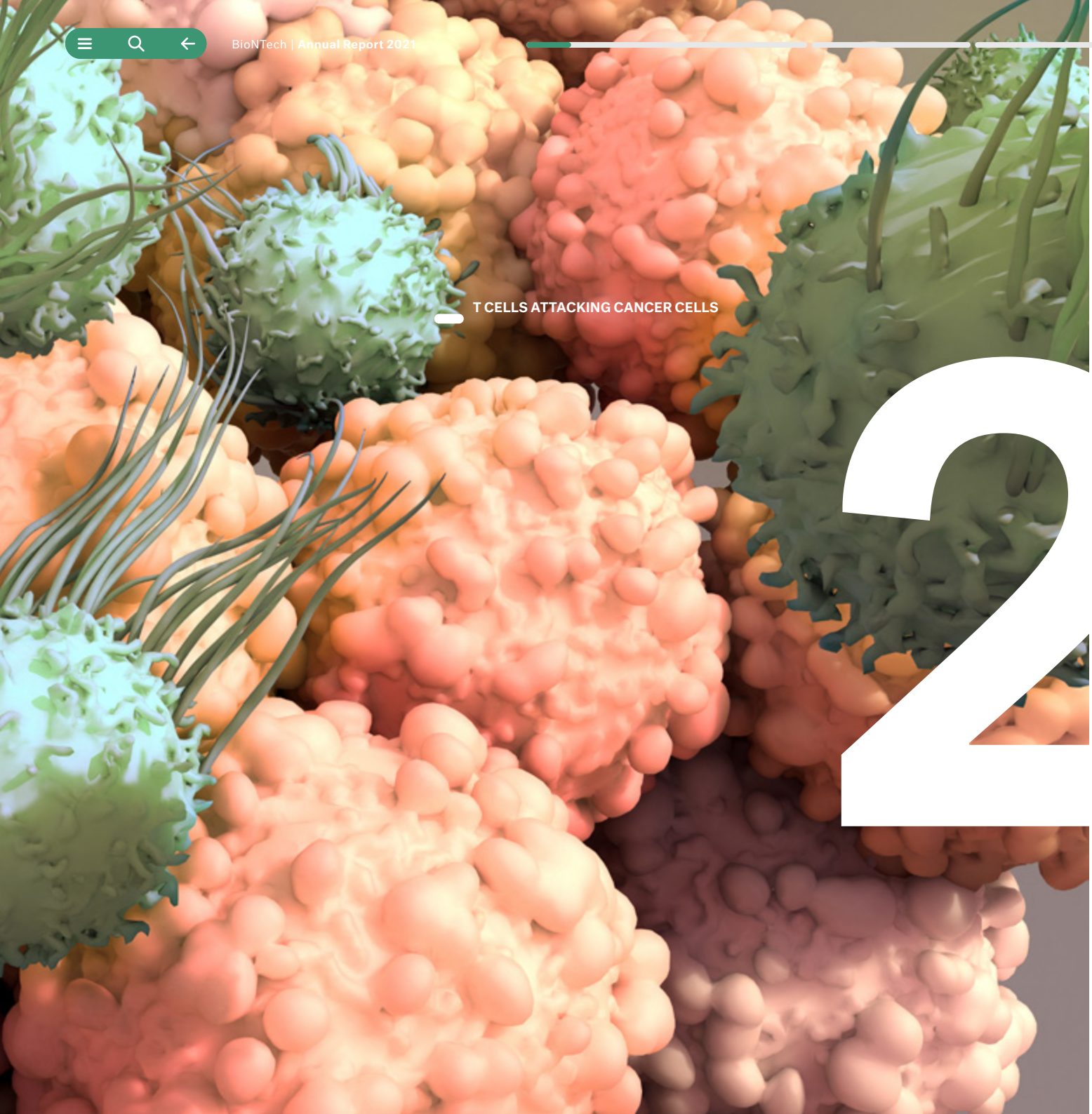
4 Small Molecule Immuno-modulators



mRNA

We are utilizing messenger ribonucleic acid, or mRNA, to deliver genetic information to cells, where it is used to express proteins for therapeutic effect. In infectious disease, we are leveraging our mRNA technology to develop prophylactic infectious disease vaccines. In oncology, we are developing a portfolio of immunotherapies that utilize four different mRNA formats and three different formulations. Based on this we derived five distinct platforms for the treatment of cancer which have all entered clinical trials:

- our off-the-shelf shared antigen immunotherapy, or FixVac, fully owned by BioNTech
- our individualized neoantigen specific immunotherapy, or iNeST with a selection of antigens tailored to the patient, which we are developing in collaboration with Genentech
- our mRNA-based intratumoral immunotherapy, which we are developing in collaboration with Sanofi
- our mRNA encoding for specific cytokines, or RiboCytokines, fully owned by BioNTech
- our mRNA-encoded antibodies, or RiboMabs, fully owned by BioNTech



T CELLS ATTACKING CANCER CELLS

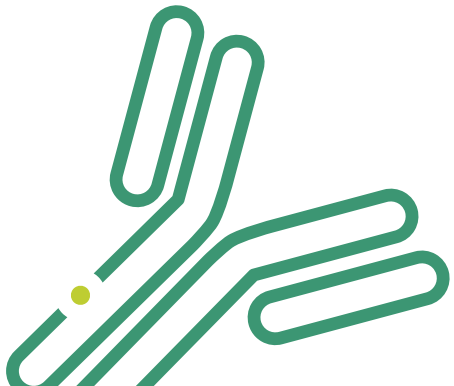
2 Cell therapies

We are developing a range of cell therapies, including chimeric antigen receptor T cells (CAR-T), neoantigen-based T cell therapies and T cell receptor (TCR) therapies, in which the patient's T cells are modified or primed to target cancer-specific antigens. We are also combining our mRNA lipoplex technology with our first CAR-T product candidates to enhance the persistence of CAR-T cells *in vivo*.

3

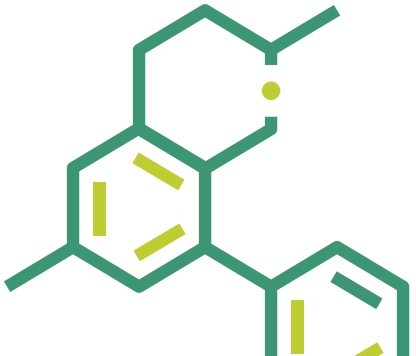
Antibodies

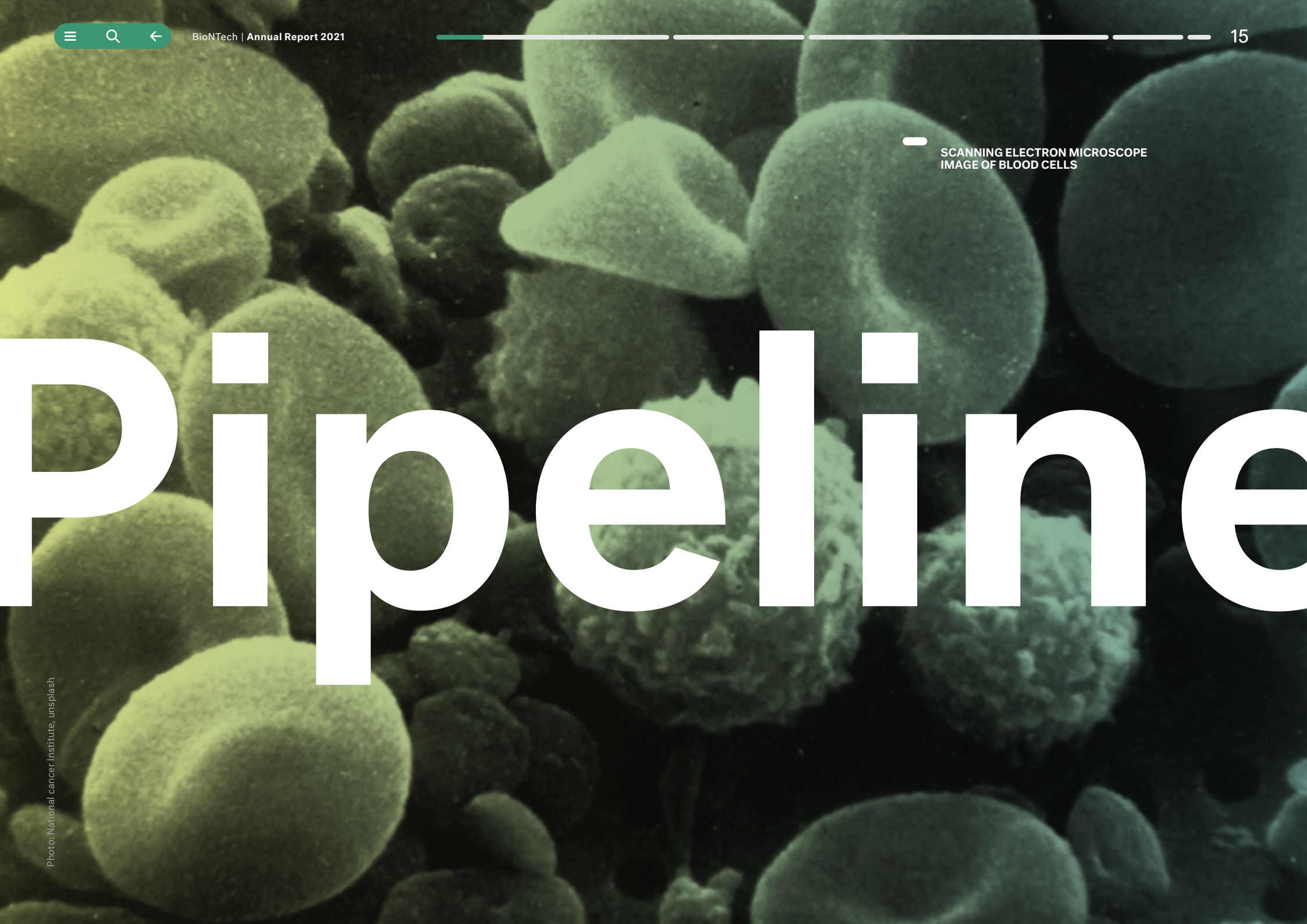
In collaboration with Genmab, we are developing next-generation bispecific antibodies that are designed to target immune checkpoints that modulate the patient's immune response to cancer. We are also exploring additional targeted cancer antibody approaches utilizing our in-house capabilities.



4 Small Molecule Immuno-modulators

We use small molecules to augment the activity of other drug classes by inducing specific and discrete patterns of immunomodulation.





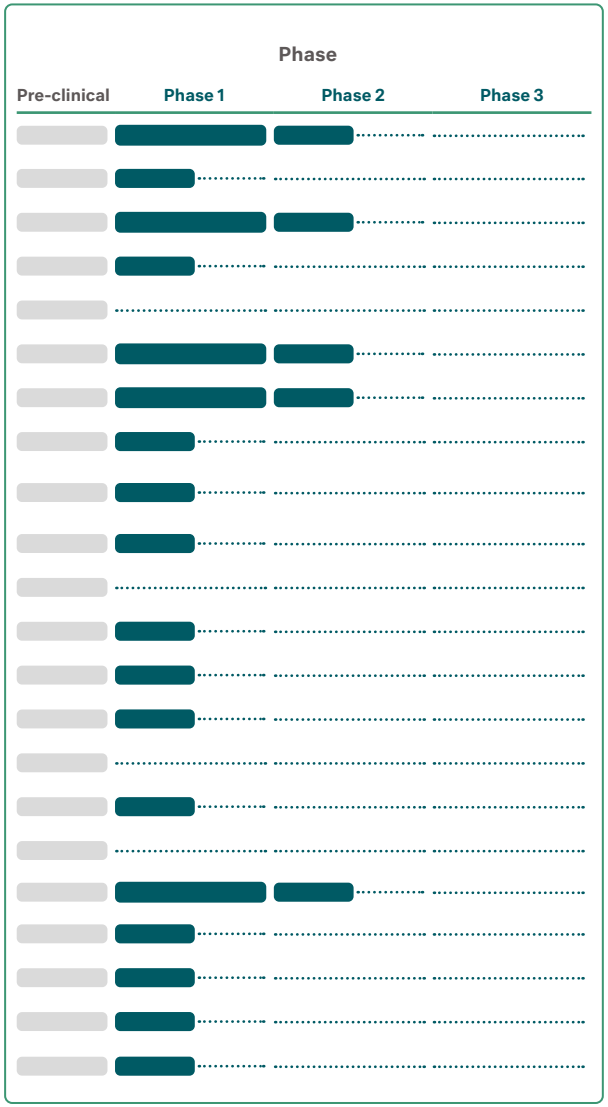
SCANNING ELECTRON MICROSCOPE IMAGE OF BLOOD CELLS

Pipeline

Photo: National cancer Institute, unsplash

Oncology

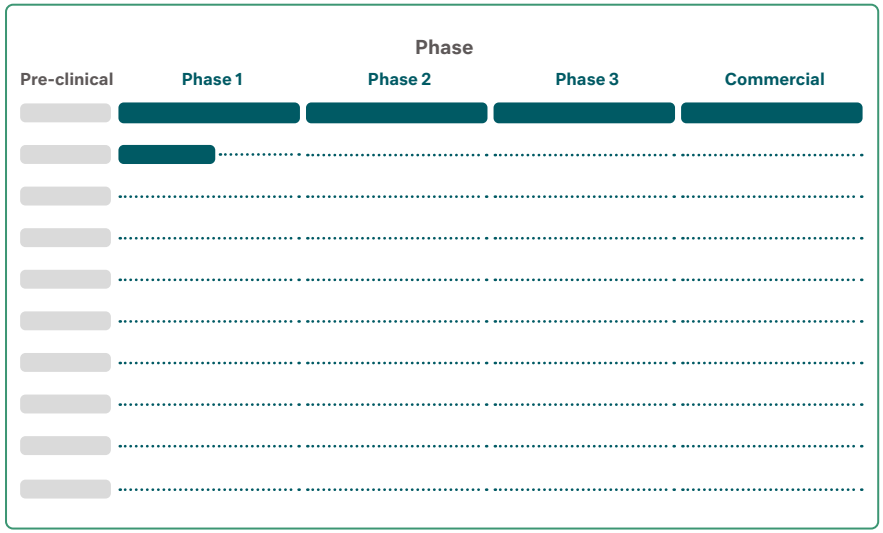
Drug Class	Platform	Product Candidate	Indication (Targets)	Rights/Collaborator
mRNA	FixVac (fixed combination of shared cancer antigens)	BNT111	Advanced melanoma (Adjuvant & Metastatic)	Fully-owned
		BNT112	Prostate cancer	
		BNT113	HPV16+ head and neck cancer	
		BNT115	Ovarian cancer[3]	
		BNT116	NSCLC	
	iNeST (patient specific cancer antigen therapy)	Autogene cevumeran (BNT122)	1L melanoma	Genentech (global 50:50 profit/loss share)
			Adjuvant colorectal cancer	
			Solid tumors	
	Intratumoral Immunotherapy	SAR441000 (BNT131)	Solid tumors (IL-12sc, IL-15sushi, GM-CSF, IFN)	Sanofi (global profit/ loss share)
	RiboMabs (mRNA-encoded antibodies)	BNT141	Multiple solid tumors (CLDN18.2)	Fully-owned
		BNT142	Multiple solid tumors (CD3+CLDN6)	
	RiboCytokines (mRNA-encoded cytokines)	BNT151	Multiple solid tumors (Optimized IL-2)	Fully-owned
		BNT152, BNT153	Multiple solid tumors (IL-7, IL-2)	
Cell Therapies	CAR-T Cells	BNT211	Multiple solid tumors (CLDN6)	Fully-owned
		BNT212	Pancreatic, other cancers (CLDN18.2)	
	Neoantigen-based T cell therapy	BNT221 (NEO-PTC-01)	Multiple solid tumors	
	TCRs	To be selected	All tumors	
	Next-Gen CP Immunomodulators	GEN1046 (BNT311)	Metatstatic NSCLC (PD-L1×4-1BB)	Genmab (global 50:50 profit/loss share)
		GEN1046 (BNT311)	Multiple solid tumors (PD-L1×4-1BB)	
		GEN1042 (BNT312)	Multiple solid tumors (CD40×4-1BB)	
Antibodies	Targeted Cancer Antibodies	BNT321 (MVT-5873)	Pancreatic cancer (sLea)	Fully-owned
SMIM	Toll-Like Receptor Binding	BNT411	Solid tumors (TLR7)	Fully-owned



(1) Collaboration with Bill & Melinda Gates Foundation. BioNTech holds worldwide distribution rights except developing countries where BMGF holds distribution rights
(2) University of Pennsylvania collaboration
(3) Investigator-initiated Phase 1 trial
FPD, First Patient Dosed; mod, modified; sa, self amplifying; CP, Checkpoint inhibitor; SMIM, Small Molecule Immunomodulators

Infectious Diseases

Drug Class	Product Candidate	Indication (Targets)	Rights/Collaborator
	BNT162b2	COVID-19	Fosun Pharma (China), Pfizer (global, excl. China)
	BNT161	Influenza (mod mRNA)	Pfizer
	Un-named program	Influenza (sa mRNA)	Pfizer
	Un-named program	Shingles	Pfizer
	Un-named program	Malaria	Fully-owned
	BNT164	Tuberculosis[1]	Bill & Melinda Gates Foundation
	Un-named program	HSV 2	Fully-owned
	Un-named program	HIV[1]	Bill & Melinda Gates Foundation
	Un-named program	Additional mRNA vaccine programs[2]	Fully-owned
mRNA	Un-named program	Precision antibacterials	Fully-owned

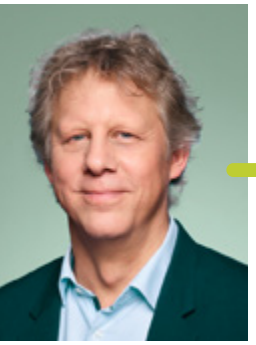


(1) Collaboration with Bill & Melinda Gates Foundation. BioNTech holds worldwide distribution rights except developing countries where BMGF holds distribution rights
(2) University of Pennsylvania collaboration
FPD, First Patient Dosed; mod, modified; sa, self amplifying; CP, Checkpoint inhibitor; SMIM, Small Molecule Immunomodulators

From a start-up to a global immunotherapy powerhouse

Dear shareholders,

BioNTech made a historic impact on human health and the economy around the globe in 2021. Our COVID-19 vaccine, BNT162b2, was the first-ever mRNA product to be approved.

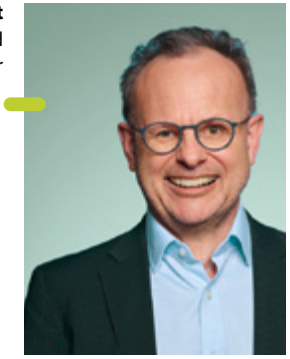


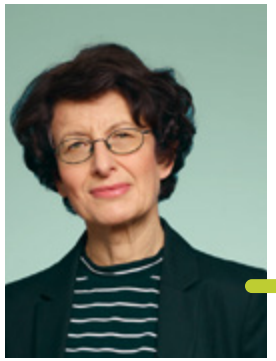
Sierk Poetting
Chief Operating Officer

Ugur Sahin
Chief Executive Officer

BioNTech Management Board

Sean Marett
Chief Business Officer and
Chief Commercial Officer





Özlem Türeci
Chief Medical Officer

Jens Holstein
Chief Financial Officer

Ryan Richardson
Chief Strategy Officer

The development of BNT162b2 was the fastest vaccine development ever and one of the most successful pharmaceutical launches in history – without taking shortcuts. We are incredibly proud of our colleagues who made this possible despite various challenges and exceptional circumstances. Last year, we and our partner Pfizer shipped 2.6 billion doses globally and accomplished our goal to ship more than one billion doses to low- and middle-income countries. Our vaccine significantly contributed to preventing millions of hospitalizations and deaths around the globe.

At the same time, we successfully completed the next step in the development of our company. In 2021, we advanced key programs in our robust and diversified pipeline of novel therapies, initiating four randomized phase 2 trials and five first-in-human studies in oncology. We onboarded more than 1,000 employees to our international team, and we expanded our global presence organically and with multiple new acquisitions and collaborations. BioNTech is now a fully integrated biopharmaceutical company with specialized manufacturing and commercial capabilities.

This sets the stage for another impactful year in 2022. As we enter a new phase of growth for BioNTech, our core vision remains unchanged: to harness the power of the immune system to improve the health and lives of billions of people worldwide.

2021: A YEAR IN REVIEW

1. COVID-19 Vaccine

Our efforts in COVID-19 resulted in more than one billion people in more than 165 countries and territories being vaccinated with the Pfizer-BioNTech COVID-19 vaccine by the end of 2021, making it one of the most widely administered vaccines worldwide in record time. At the same time, we have been carefully analyzing the evolution of the pandemic and responding accordingly during the year, resulting in a number of strategic initiatives:

- **Preparedness for relevant COVID-19 variants:**
  Preliminary results from laboratory testing show that three doses of our vaccine neutralize the Omicron variant (B.1.1.529), whereas two doses of the vaccine have significantly lower neutralization titers. We reacted quickly and began the development of an Omicron-based vaccine shortly after the sequence became available. In addition to our studies for COVID-19 variants, we have conducted extensive studies for a booster vaccination that have led to regulatory approvals for adult populations. We believe that our mRNA technology is well suited to target potentially emerging COVID-19 variants, as it allows for rapid and flexible adaption.

An important factor in our growth was our Marburg site in Germany, which has become one of the largest mRNA vaccine manufacturing sites worldwide.

We are incredibly proud of our colleagues who made this possible despite various challenges and exceptional circumstances.

Ugur Sahin,
Chief Executive Officer

- **Vaccines for children and adolescents:**
  Our clinical data demonstrated a favorable safety profile and high efficacy of the vaccine in children, which formed the basis for regulatory approvals in the U.S. and the EU. Our vaccine has now been approved for children from five years old in the EU and the U.S., and we have already initiated a rolling submission seeking to amend the Emergency Use Authorization in the U.S to include children six months to less than five years of age. With the approvals for children five years of age and older, we have reached another milestone in our ongoing efforts to protect families and communities.

- **Scaled-up commercial production and global presence:**
  In 2021, we increased our mRNA production to an industrial scale. An important factor in this growth was our Marburg site in Germany, which has become one of the largest mRNA vaccine manufacturing sites worldwide. Last year, it supplied mRNA for more than one billion doses of our COVID-19 vaccine, following an accelerated qualification program resulting in rapid approval of the site by the German and European regulatory authorities. We believe Marburg is exceptional, as it encompasses a manufacturing center for state-of-the-art, large-scale vaccine production as well as an innovation center for novel manufacturing solutions. To strengthen the site's position as our manufacturing innovation center, we plan to further invest and create up to 250 additional jobs in 2022 in Marburg. In addition to our facility in Marburg, we further expanded globally during the year through the acquisition of Kite's neoantigen TCR cell therapy platform and manufacturing facility in Gaithersburg in the United States, as well as recently established offices in Austria, China, Singapore, and Turkey.

- **Vaccine supply and production plans for Africa:**
  We commenced work on sustainable end-to-end vaccine manufacturing solutions for the African continent. In February 2022, we announced our turnkey manufacturing solution, named "BioNTainer", which is designed to allow for mRNA vaccine preparation in bulk and will be equipped to manufacture a range of mRNA-based vaccines targeted to address local population needs. We announced plans to initiate the construction

Drove advancement in oncology

Five randomized Phase 2 trials:

2 FixVac programs

2 iNeST programs

1 Bispecific Immunomodulator

of the first state-of-the-art manufacturing facility for mRNA-based vaccines in Africa by mid-2022 in partnership with local governments and supported by national organizations.

2. Cancer Therapies and Other Infectious Disease Vaccines

The past year was transformative for our immunooncology pipeline. We have five ongoing randomized phase 2 trials across a range of solid tumor indications. This includes our FixVac, iNeST and bispecific antibody programs. We also advanced four new platforms into first-in-human studies of our mRNA encoded RiboCytokines and RiboMabs, our next generation CAR-T cell therapy and our NEOSTIM *ex vivo* T cell therapy.

In October 2021, the first colorectal cancer patient was treated in a randomized Phase 2 clinical trial with our individualized mRNA cancer vaccine candidate **BNT122.** As the second most common cancer worldwide, the medical need for novel therapies to treat colorectal cancer remains high. This study is an important milestone toward our vision to provide individualized immunotherapies to patients.

We also made progress in developing **BNT111**, a cancer immunotherapy for the treatment of advanced melanoma.

BioNTech also presented new clinical data from the first-in-human Phase 1/2 trial evaluating the company's novel CAR-T cell therapy candidate, **BNT211**. The candidate targets Claudin-6, a novel tumor-specific antigen that we believe is well-suited for CAR-T therapy in solid tumors and represents a differentiated pathway for the treatment of solid tumors.

We brought in multiple assets and forged collaborations to complement our existing technologies and capabilities. This includes the cell therapy facility we acquired from Kite, as well as a Medigene asset acquisition and discovery collaboration that further expanded our TCR pipeline.

Medicines against various infectious diseases are a long-term growth pillar for BioNTech. Our objective is to develop mRNA vaccines against infectious diseases that have a major impact on global population health. In infectious diseases, we plan to initiate clinical trials for four infectious disease programs in 2022: herpes simplex virus-2, tuberculosis, malaria, which are all wholly owned and shingles, which is partnered with Pfizer. In addition, our preclinical infectious disease portfolio includes more than ten other mRNA vaccine programs and precision anti-bacterials.

3. Financials
Our efforts to help bring the pandemic under control are also reflected in our financial figures. In 2021, we delivered strong financial performance, enabling us to accelerate our vision to transform medicine in cancer, infectious diseases, and other areas by reinvesting COVID-19 vaccine proceeds into our business and advancing our broad pipeline of immunotherapies for patients around the world. Our ability to provide vaccines to so many people in 2021 was the direct result of our early efforts in basic and translational science made over many years, as well as our decision to scale up production at risk.

We estimate that as of December 2021, BNT162b2 held an estimated 74% market share in the U.S. and approximately an estimated 80% market share in Europe. Our COVID-19 vaccine deliveries and revenues exceeded our expectations. After such an extraordinary year, we would like our shareholders to participate in our success. Consequently, we initiated a share repurchase program of ADSs in the amount of up to 1.5 billion U.S. Dollars over the next two years. In addition, we will propose a special cash dividend of 2 Euros per ordinary share, which is subject to approval at our upcoming Annual General Meeting.

OUTLOOK FOR 2022 AND BEYOND

We have proven to the world that our science and innovation is game-changing. Based on our technologies and expertise in immunology, we believe our pipeline has the potential to deliver multiple additional products to the market in the coming years. We have a unique opportunity to transform medicine to benefit patients and society, as well as our shareholders. In 2022, we will continue to work on addressing health challenges through scientific, medical, and technological innovations.

Tackling COVID-19 variants
Controlling variants of SARs-CoV-2 will be a critical step to keep the virus at bay in 2022 and beyond. Our vaccine continues to provide strong protection against severe disease caused by Omicron. However, new data suggests that the vaccine-induced protection against infection and mild-to-moderate disease is declining faster than with previous variants. Therefore, we are conducting clinical studies with our partner Pfizer to evaluate the safety, tolerability, and immunogenicity of an Omicron-adapted vaccine candidate in healthy adults aged 18 to less than 56 years of age. This study is part of our science-based approach to developing a variant-based vaccine that achieves a similar level of protection against Omicron as against previous variants but with longer duration of protection.

Continue COVID-19 vaccine leadership

Execute in oncology

Advance into new therapeutic areas

Expand in infectious diseases

Vaccine supply in Africa
Another key objective for 2022 is contributing to an improved vaccine supply locally on the African continent. We have presented our approach to building scalable vaccine production by developing and delivering turnkey mRNA manufacturing facilities based on a containerized solution: our BioNTainers. Together with governments, international organizations, the World Health Organization, and the Africa Centres for Disease Control and Prevention, we discussed on the infrastructural, regulatory and technological requirements to establish end-to-end manufacturing network for mRNA-based vaccines in Africa. As a consequence, the shipment of the first BioNTainer to the African Union is planned by the end of 2022. Once fully operational, we believe this facility will become a key pillar in what is to become a decentralized and robust African end-to-end manufacturing network.

We are hopeful to build BioNTainers for our partner countries Rwanda, Senegal and potentially South Africa. The BioNTainers will be equipped to manufacture a range of mRNA-based vaccines targeted to the needs of the African Union member states.

Digitization and automation
BioNTech is committed to harnessing the potential of digitization and automation to further improve the health of people worldwide. We have developed and are using advanced artificial intelligence-based solutions for analytical and therapeutic applications, including biomarker research, target discovery, and drug design. Together with our partner InstaDeep, we have developed an early warning system (“EWS”) that predicts high-risk variants of SARS-CoV-2 based on sequencing data. WHO-designated variants Alpha, Beta, Gamma, Theta, Eta and Omicron were detected by the EWS in the same week their sequence was first uploaded. The Omicron variant was ranked as a high-risk variant the same day its sequence became available. Early flagging of potential high-risk variants could be an effective tool to alert researchers, vaccine developers, health authorities and policy makers, thereby providing more time to respond to new variants of concern.

Strategic Priorities in Research & Development
We expect 2022 to be a year of further expansion and maturation of our pipeline as we scale up our investment in research and development. Our strategic priorities for 2022 can be summarized in four areas:

€19.0 Bn
Total 2021 Revenues[1]

€39.63
Diluted EPS[1]

1. We will continue to address the evolving challenge of COVID-19 around the world. We are developing next-generation COVID-19 vaccines and are continuing to focus on label and geographic expansion building on our global leadership position. In parallel, we have several innovative initiatives underway for pandemic preparedness.

2. In the oncology space, in 2022 we will continue to accelerate our programs towards seeking marketing approval. We have started preparation for registrational studies for our mid-stage programs. 2022 is expected to bring our first readout from a randomized Phase 2 trial in oncology. In addition, we plan to provide additional data for our CAR-T cell therapy in solid tumors. We aspire to overcome CAR-T cell therapy limitations in patients with solid tumors with our product first CAR-T cell therapy candidate BNT211.

3. We believe that medicines against infectious diseases are a long-term growth pillar for BioNTech. Our objective is to develop mRNA vaccines against infectious diseases that have a major impact on global population health. We plan to initiate clinical trials for four infectious disease programs in 2022: herpes simplex virus-2, mycobacterium tuberculosis, malaria (these three all wholly owned), and shingles (partnered with Pfizer). In addition, our preclinical infectious disease portfolio includes more than 10 other mRNA vaccine programs and precision anti-bacterials.

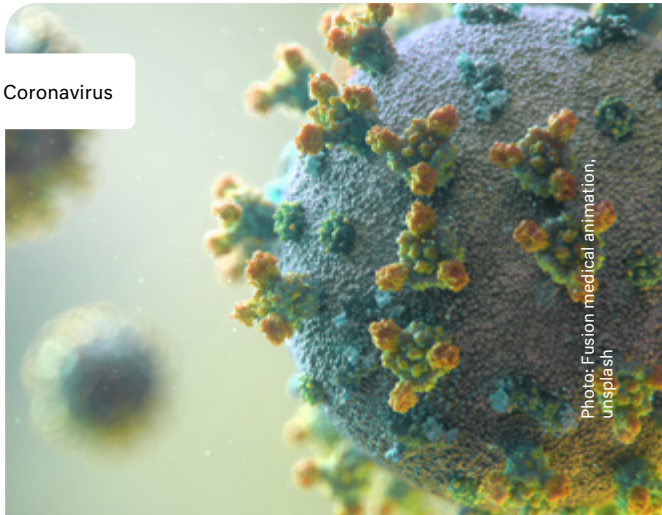
4. We intend to invest heavily in regenerative medicine and autoimmune diseases with the aim to develop further therapeutic innovations addressing high unmet medical need.

Financial Guidance and Corporate Social Responsibility

For 2022, we expect continued strong vaccine demand and estimate COVID-19 vaccine-related revenues in the range of 13 to 17 billion Euros. We aim to continue our global leadership in COVID-19 vaccines with several label expansions, including the introduction of new formulations and pediatric dosage forms, together with the development of variant-based and next-generation vaccines.

While developing novel treatments to address diseases with a high unmet medical need, we are committed to responsible governance, environmental and climate protection, as well as respect for human rights.

- We set climate protection targets that fulfill the requirements of the Science Based Targets Initiative (the “SBTi”). We are targeting an absolute reduction of 42% in our scope 1 & 2 greenhouse gas emissions by 2030 against base year 2021.
- We strive to adhere to ethical business practices, including good corporate governance, social responsibility, and sustainability. We have signed the United Nations Global Compact, which outlines sustainable and socially responsible policies for businesses.
- We are committed to continuous strengthening of employee recruiting and development. Our team is diverse, with employees from more than 60 countries.



Coronavirus

Photo: Fusion medical animation, unsplash

(1) Estimated figures based on preliminary data shared between Pfizer and BioNTech as further described in our Annual Report on Form 20-F for the year ending December 31, 2021

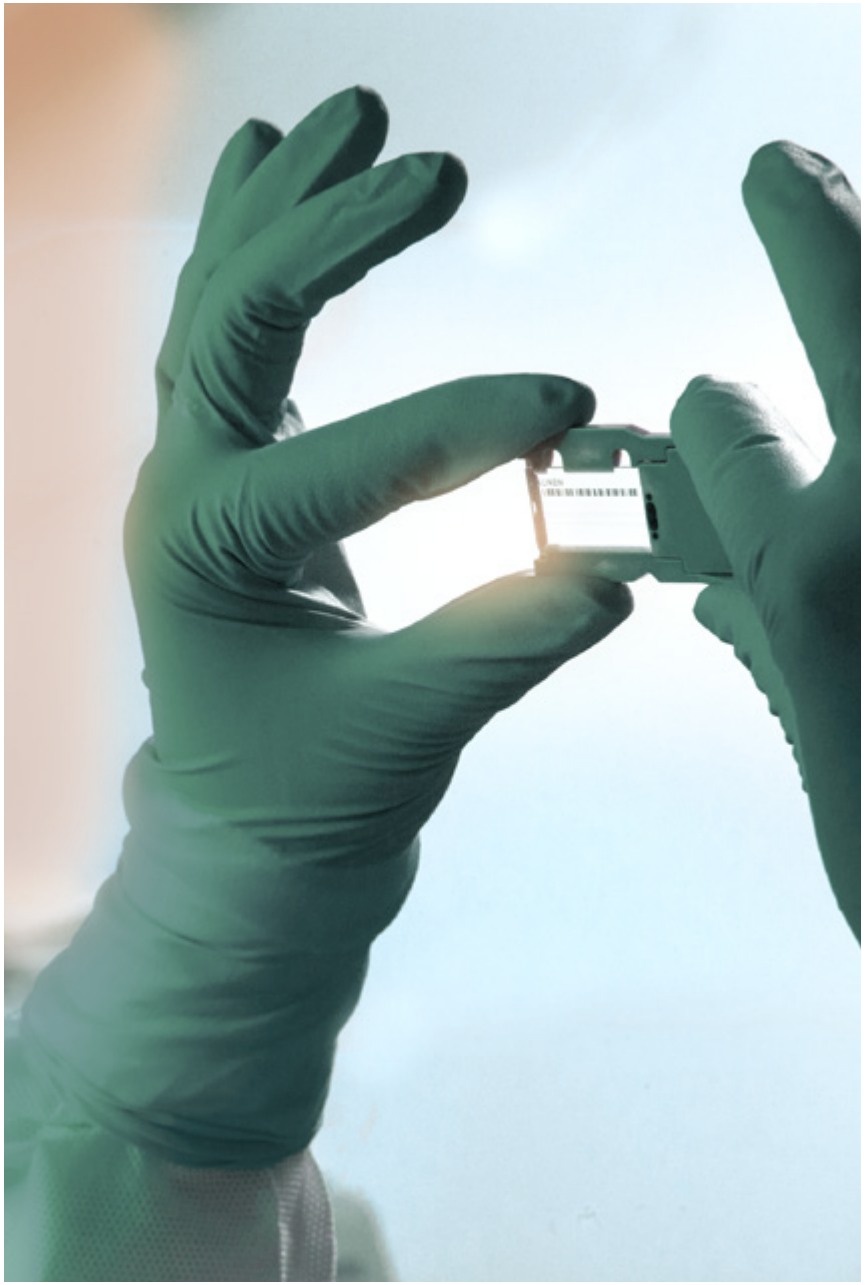


Photo: Fcdc, unsplash

Preparing for Long-Term Success
We have significantly diversified and advanced our R&D pipeline and are driving several waves of innovative medicines toward the market.

The first wave of innovation is based on product candidates that are currently in Phase 2 clinical trials or will soon be entering a later-staged development phase. We aim to conduct pivotal trials and launch several new first-in-class immunotherapies over the next years.

The second wave of innovation is expected to occur in the medium term through the advancement of our diversified pipeline of mRNA vaccines and immunotherapies, particularly in the fields of oncology and infectious diseases.

Third, we are working on future technologies that we believe will become even more important in the next decade and beyond. These include therapies in the areas of autoimmune diseases, cardiovascular diseases and regenerative medicine. In doing so, we are pursuing the vision we have had since the founding of BioNTech: to usher in a new era of immunotherapies and to develop innovative approaches against cancer, infectious and other diseases.

We, the Management Board, would like to express our sincere gratitude to our employees from more than 60 nations. They are the driving force behind our diversified pipeline and our overall success. We also would like to thank you, our shareholders. We appreciate your trust and support during these special times and look forward to working with you as we take the next steps in delivering our strategy and achieving our shared mission.

Your Management Board,

Prof. Ugur Sahin, M.D.
Chief Executive Officer

Jens Holstein
Chief Financial Officer

Sean Marett
Chief Business Officer und Chief Commercial Officer

Dr. Sierk Poetting
Chief Operating Officer

Prof. Özlem Türeci, M.D.
Chief Medical Officer

Ryan Richardson
Chief Strategy Officer

Report of the Supervisory Board on the 2021 financial year

The COVID-19 pandemic defined the year 2021, bringing uncertainty for national economies, for companies, but also for every individual. This makes sustainable solutions to address the COVID-19 pandemic all the more important. And that means, first and foremost, vaccinations. Leveraging its skills and technologies, BioNTech's team has made an essential contribution to address the pandemic and protect lives.

With this contribution, the Company entered a new phase of growth last year. BioNTech has further diversified and strengthened its pipeline, expanded manufacturing and commercial capabilities, and hired many new and highly skilled employees. All of this boosts BioNTech's mission to harness the power of the immune system to improve the health of people worldwide.

We would also like our investors to participate in the Company's exceptional development in the 2021 financial year. Therefore, the Management Board and Supervisory Board will propose a special cash dividend of 2 Euros per ordinary share to our shareholders (including shares held in the form of American Depositary Shares, or ADS), corresponding to a total amount of approximately 486.0 million Euros based on the shares outstanding on March 30, 2022. In addition, we expect to authorize an ADS repurchase program pursuant to which the Company may purchase ADS in the amount of up to 1.5 billion US-Dollars over the next two years to create value for our investors and to satisfy upcoming settlement obligations under our share-based payment arrangements.

Throughout the 2021 financial year, the Supervisory Board, under my Chairmanship, performed its duties and obligations in accordance with the law and the Articles of Association as well as its Rules of Procedure.

The development of BioNTech can hardly be compared to any other company, especially with regards to the development in the last two years and the rapid change that the Company, the business activities and the team at BioNTech have experienced and shaped.

Helmut Jeggle
Chairman of the
Supervisory Board

CONTROL AND MONITORING FUNCTION OF THE SUPERVISORY BOARD TOWARDS THE MANAGEMENT BOARD

The Supervisory Board continuously monitored the Management Board in its management of the Company, regularly advised it and dealt with the strategic development of the Company.

The development of BioNTech can hardly be compared to any other company, especially with regards to the development in the last two years and the rapid change that the Company, the business activities and the team at BioNTech have experienced and shaped. As the Supervisory Board, we are applying our know-how, our entrepreneurial focus, and our approach of agile control to this journey. Among other things, the Management Board regularly informed us, the Supervisory Board, about current business activities and future business planning (including financial, investment and personnel planning). In addition, we regularly consulted with the Management Board on the risk situation, risk management and compliance in the Company. As Chairman of the Supervisory Board, I was also in regular contact with the Management Board beyond the Supervisory Board meetings and was routinely informed about all matters relating to the Company, its legal and business relations with affiliated companies, and all significant business transactions and matters at these companies affiliated with the Company.

On the basis of reporting by the Management Board, which was prepared in cooperation with the respective specialist departments, we discussed business developments and events of importance to the Company in detail. Where necessary, the Supervisory Board was supported in this by the respective responsible committees. The rapid development of BioNTech requires we, as the Supervisory Board, maintain an active dialogue, quickly review decisions made by the Management Board, taking into account the opportunities and risks, and always keep in mind the vision of harnessing the power of the immune system to improve the health of people worldwide. The Supervisory Board was directly involved at an early stage in all decisions of fundamental importance to the Company. Where the law, the Articles of Association or the Rules of Procedure required the approval of the Supervisory Board for individual measures, a corresponding resolution was passed. The Supervisory Board approved the respective resolutions proposed by the Management Board after thorough examination and discussion.

The cooperation with the Management Board was characterized by responsible and goal-oriented action in every respect. The Management Board

fulfilled its reporting obligations to the Supervisory Board fully, both verbally and in writing, so that the Supervisory Board was always able to assure itself as to the legality and regularity, appropriateness, and economic efficiency of the management of the Company.

FOCUS TOPICS AND MEETINGS OF THE SUPERVISORY BOARD

A total of seven ordinary meetings were held in the 2021 financial year, on March 24, April 12, May 20, July 27, August 13, September 16, and December 17, 2021, at which the strategic development of the Company was discussed together with the Management Board. In addition, two strategy workshops were held during the 2021 financial year, in which the entire Management Board and Supervisory Board participated. All members of the Supervisory Board attended the individual meetings. Only Dr. Sierk Poetting from the Management Board attended the meeting on April 12, and only Jens Holstein from the Management Board attended the meetings on July 27 and August 13. All other meetings were attended by all members of the Management Board. Within the framework of the meetings and outside the meetings, the Supervisory Board also met and discussed regularly without the Management Board. Due to the COVID-19 pandemic and the associated contact restrictions, most of the meetings took place as telephone and video conferences.

The focus of the ordinary meetings in the 2021 financial year was on deliberations regarding the continued development of the Company's business related to our developed COVID-19 vaccine and the associated strategic decisions with regard to the production, supply, delivery and distribution of the vaccine worldwide. In addition to the increased research and development in the areas of oncology and immunology, and the continued development in the area of mRNA vaccines and the issues associated with the completion of many new strategic collaborations, the Supervisory Board was concerned with strengthening and expanding the corporate, manufacturing, commercialization and distribution strategies that had been developed. Part of these strategies were the issues related to the expansion of pipeline development, manufacturing and laboratory capabilities, which the Company addressed by entering into several collaborations, expanding the corporate structure and entering into various investment agreements.

In addition to the focus topic of the COVID-19 vaccine program, the Supervisory Board addressed the following topics during the 2021 financial year:

- Review of production, commercialization, network development, creation of a development plan adapted to changing population health needs worldwide, and national and international distribution of COVID-19 vaccine;
- Review of the expansion of distribution and commercialization of COVID-19 vaccine and support of global vaccine supply to populations by entering into supply agreements as well as collaboration agreements with multiple companies and countries worldwide;
- Review of the advancement of the diversified portfolio of oncology product candidates and the achievement of clinical trial milestones in the oncology and immunology areas, and development of IT processes to support clinical development;
- Review of strategy, structure and process development in the areas of commercialization, communication, digitization and cooperations at the respective sites;
- Review of the expansion of laboratory and production capacity and office space, as well as the development of new manufacturing facilities to expand production and distribution capacity worldwide;
- Review of the Company's global growth and related measures such as site expansion in the U.S. or the development of new offices in Shanghai and Singapore;
- Monitoring the Company's financing activities:
  - Completion of several collaboration, investment and licensing agreements;
  - At-the-market offering program, which was launched in November 2020 and under which ADSs, equivalent to one ordinary share each, were sold in May 2021;
- Review of the established terms and parameters for determining the restricted stock units, or RSUs, to be issued in December 2021 under the BioNTech Employee 2020 Long-Term Equity Plan for employees outside the United States;
- Setting the agenda and review of the draft resolutions for the 2021 Annual General Meeting and, in particular, drawing up a draft resolution for a new compensation system for the Management Board and Supervisory Board;
- Review and appraisal of the compensation granted and owed in the 2021 financial year and of the compensation system applied as part of the compensation report pursuant to Section 162 of the German Stock Corporation Act (AktG);
- Review and monitor the achievement of the Company's 2021 goals and the setting of the budget for the 2022 financial year;
- Review and discussion of the effectiveness of the internal control system and the results of the annual auditor's review;
- Consideration of all corporate governance issues and review of compliance with the recommendations of the Corporate Governance Code both in and after the 2021 financial year;
- Discussion, review and approval of the submitted non-financial report published in the follow-up for the 2021 financial year;
- Revision of the rules of procedure of the Management Board including the schedule of responsibilities after Jens Holstein took up his duties as the new CFO and;
- Conduct of a self-assessment together with an external consultant after expiration and for the 2021 financial year.

We as members of the Supervisory Board regularly participated in training and education initiatives during the 2021 financial year. Some of these trainings were organized by the Company, such as a trainings on the rights and duties of the Supervisory Board, on the requirements for the Supervisory Board by the Financial Market Integrity Strengthening Act (FISG), and on reform efforts and challenges for 2022, which took place in December 2021.

COMMITTEES

To implement its monitoring and advisory function, the Supervisory Board has formed three committees: an Audit Committee, a Compensation, Nomination and Governance Committee, and a Capital Markets Committee. The above-mentioned key topics were prepared by the committees, including the associated resolutions and issues, for subsequent consideration by the full Supervisory Board.

The **Audit Committee consisted** of Dr. Ulrich Wandschneider, Michael Motschmann and Prof. Christoph Huber, M.D. throughout the 2021 financial year. Dr. Ulrich Wandschneider is the Chairman of the Audit Committee. The Audit Committee deals in particular with the monitoring of accounting, the monitoring of the establishment and effective functioning of internal controls over financial reporting, the monitoring of compliance with SOX regulations (Sarbanes-Oxley Act Section 404), and the monitoring of the establishment and effective functioning of the risk and compliance management system. For the quarterly financial statements as of March 31, June 30, and September 30, 2020, and the annual financial statements as of December 31, 2020, the Audit Committee held discussions with the auditors and representatives of the accounting department, discussed the key points of the audit, and discussed the publications in detail with the Management Board. The Audit Committee prepared the resolutions of the Supervisory Board for the reports to be approved by the Supervisory Board. The committee met ten times in the 2021 financial year.

All members of the Audit Committee qualify as “independent directors” within the meaning of Rule 10A-3 under the Exchange Act and Nasdaq Rule 5605. In addition, Dr. Ulrich Wandschneider qualifies as an “Audit Committee financial expert” as defined under the Exchange Act. In addition, as Chairman of the Audit Committee, he has the special knowledge and experience required by the German Corporate Governance Code. In addition, both Dr. Ulrich Wandschneider and Michael Motschmann have expertise in the field of accounting and expertise in the field of auditing.

The **Compensation, Nominating and Corporate Governance Committee** consists of Michael Motschmann, Prof. Christoph Huber, M.D. and Dr. Ulrich Wandschneider. Mr. Motschmann is the Chairman of the Committee. The Compensation Committee deals with fundamental issues relating to the compensation and determination of the salaries of the Management Board and with the compensation of the Supervisory Board as well as the employee stock option programs. In the 2021 financial year it dealt in particular with the formulation of a compensation system for our Management Board members, which was presented and adopted at the Annual General Meeting. In connection with this, the Compensation, Nomination and Corporate Governance Committee dealt with implementation in new Management Board contracts. The actual application of this compensation system in the 2021 financial year was assessed in the form of the compensation report in accordance with Section 162 AktG. In the case of new appointments to corporate bodies, the committee generally makes proposals in this regard to the full Supervisory Board. Jens Holstein was appointed to the Management Board as Chief Financial Officer effective July 1, 2021. In advance to this appointment, the committee met with Jens Holstein to discuss and define his challenges and tasks in the first 90 days of his term of office. The targets for appointments to the Management Board and Supervisory Board resolved on May 4, 2020 will be taken into account when making appointments. In advance of the appointment of Jens Holstein, extensive selection processes took place with several female and male candidates. As a result, Jens Holstein was appointed on the basis of his expertise, his many years of experience and his profile, as he was the most suitable candidate for the position of Chief Financial Officer compared with all the other male and female candidates and was the best fit for the Company. The Supervisory Board is working on the target values set with respect to diversity on the Management Board and will continue to take these into account in the future. In addition, during the 2021 financial year the committee addressed the creation of new Management Board positions and the associated key topics and held discussions on ESG issues. In addition, the committee is addressing the development of a corporate governance standard for the Company that meets the requirements of both Nasdaq Global Select Markets and the German Corporate Governance Code. The committee met eleven times during the 2021 financial year and also held regular conference calls to discuss current topics.

The **Capital Markets Committee** consists of me, Helmut Jeggle, and Michael Motschmann. I act as Chairman of the committee. The Capital Markets Committee advises the Supervisory Board on capital measures, which during the 2021 financial year took place in the form of our sales agreement, as well as takeover, merger and acquisition activities. During the 2021 financial year, the committee dealt, among other things, with the analysis of BioNTech's investor structure, investors' expectations of BioNTech, recommendations from a wide range of banks, and feedback from investors. The Committee also held discussions on ESG bonds and has also started a discussion on a share buyback program. Furthermore, the committee held discussions on individual targets of potential M&A transactions, regularly discussed updates on planned or ongoing transactions, engaged in and conducted communications discussions. In addition, the committee regularly discussed at-the-market offering programs, addressed ongoing stock option programs, and discussed an M&A and in-licensing strategy. The committee met seven times during the 2021 financial year.

CORPORATE GOVERNANCE

Together with the Management Board, we have dealt in detail with the recommendations of the Corporate Governance Code. BioNTech follows the recommendations of the Corporate Governance Code with the exception of the provisions explicitly listed in the Declaration of Conformity

pursuant to Section 161 of the German Stock Corporation Act (AktG) dated March 29, 2022, and for which an explanation is provided as to why these are not complied with. We will continue to support the Management Board in its efforts to comply with the recommendations of the German Corporate Governance Code in full to a large extent in the future.

CONFLICTS OF INTEREST ON THE SUPERVISORY BOARD AND MANAGEMENT BOARD, SELF-ASSESSMENT AND COMPETENCE PROFILE

Conflicts of interest of Supervisory Board and Management Board members that may arise, for example, as a result of a consultancy or board function with customers, suppliers, lenders or other third parties are disclosed in the interests of good corporate governance. To avoid the appearance of potential conflicts of interest arising from specific situations, members of the Supervisory Board and the Management Board refrained from participating in the discussion of individual agenda items and from voting on the relevant resolutions during the 2021 financial year.

For the 2021 financial year, we conducted a self-assessment together with an external consultant, which is currently still being evaluated. It covered all key aspects of our work, including committee work, and will take place with all members in the form of virtual interviews. The results of the self-assessment will subsequently be presented by the external consultant and evaluated, discussed and debated together with us with respect to possible suggestions for improvement. This reiterates the professional, very good cooperation within the Supervisory Board and with the Management Board, which is characterized by a high level of trust.

In addition, the Supervisory Board has developed a competence profile for the entire body, which covers various specialist areas. We ensure that the competence profile is fulfilled by our members. In addition, the Supervisory Board always endeavors to fill this competence profile when appointing members to the full body.

ANNUAL AND CONSOLIDATED FINANCIAL STATEMENTS AUDIT

In accordance with the resolution of the Annual General Meeting on June 22, 2021, the Supervisory Board has commissioned Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft to audit the annual financial statements for the 2021 financial year.

The audit includes:

- the annual financial statements of BioNTech SE in accordance with HGB;
- the report on relations with affiliated companies pursuant to Section 313 para. 1 of the German Stock Corporation Act (AktG), the so-called dependency report;
- the consolidated financial statements prepared in accordance with Section 315e para. 3 in conjunction with Section 315e para. 1 HGB on the basis of International Financial Reporting Standards (IFRS) as adopted by the EU;
- the consolidated financial statements, which have been prepared in accordance with IFRS as issued by the International Accounting Standards Board (IASB) and filed on Form 20-F with the U.S. Securities Exchange Commission after our approval;
- the management report of the Group and the Company;
- the compensation report in accordance with Section 162 AktG;
- as well as the audit of the internal control system.

The financial statements prepared by the Management Board on March 29, 2022, i.e. the annual financial statements and the dependent Company report of BioNTech SE, the consolidated financial statements and the management report for the Group and the Company for the 2021 financial year, were submitted to all members of the Supervisory Board.

Together with the Management Board, we have prepared a compensation report for the first time for the 2021 financial year in accordance with Section 162 of the German Stock Corporation Act (AktG), which was adopted on March 29, 2022, and disclosed as a separate report.

We also received the auditors' reports on the accounting records, the annual financial statements, the dependency report, the consolidated financial statements, the management report on the Group and the Company, and the compensation report, each of which was issued with an unqualified opinion on March 30, 2022. The auditors' report was discussed by the Audit Committee with the Management Board and the auditors. The Audit Committee dealt in particular with the key audit matters described in the auditors' report, including the audit procedures performed. This was followed by a discussion in the Supervisory Board.

For our part, we have audited the annual financial statements, the dependency report, the consolidated financial statements and the management report for the Group and the Company for the 2021 financial year.

Based on the final results of our audit, we have no objections to raise; we believe that the auditors' assessment of the annual financial statements is appropriate. We approve the annual financial statements and the consolidated financial statements prepared by the Management Board. The former is thus adopted. The Supervisory Board also concurs with the management report on the Group and the Company. Based on the final results of its examination, the Supervisory Board also has no objections to the declaration by the Management Board on relations with affiliated companies in the dependent Company report.

DIVIDEND AND SHARE REPURCHASE

The Supervisory Board has examined the Management Board's proposal for the appropriation of net income. Taking into account the long-term focus of the Company and the objective of maintaining our sustainable liquidity position, the Supervisory Board endorses the Management Board's proposal to the Annual General Meeting. The Management Board and Supervisory Board

The Management Board and Supervisory Board will propose a special cash dividend of 2 Euros per share and expect to authorize a program to repurchase ADSs in the amount of up to 1.5 billion US-Dollars over the next two years.

Helmut Jeggle
Chairman of the
Supervisory Board

will propose a special cash dividend of 2 Euros per share (including shares held in the form of American depositary shares, "ADS") from the unappropriated net income for the 2021 financial year, which corresponds to a total amount of approximately 486.0 million Euros based on shares outstanding on March 30, 2022. The proposal is subject to the approval of the Annual General Meeting of shareholders to be held in June 2022, which is to serve as the dividend record date. Pursuant to Section 19 para. 1 of the Articles of Association of BioNTech SE, 50% of the net profit for the year will be allocated to retained earnings and the remaining amount will be carried forward. In calculating the portion of the net income to be allocated to retained earnings, allocations to the legal reserve and loss carryforwards are included in advance in accordance with Section 19 para. 2 of the Articles of Association of BioNTech SE.

In addition, together with the Management Board, we expect to authorize a program to repurchase ADSs, pursuant to which the Company may purchase ADSs in the amount of up to 1.5 billion US-Dollars over the next two years. We expect to use all or a portion of the ADSs to satisfy upcoming settlement obligations under our share-based payment arrangements.

EXPRESSION OF GRATITUDE OF THE SUPERVISORY BOARD

BioNTech has developed very successfully over the past year and has equipped itself for the future. For example, BioNTech plans to advance research in the areas of oncology and infectious diseases as well as to invest in new areas of research. Already today, the Company has more than 30 product candidates in a diverse pipeline in the areas of oncology and infectious diseases. Thus, with the newly acquired funds, the Company is well-positioned to realize its vision to fight cancer and other diseases.

The Supervisory Board would like to thank the investors for their trust, the members of the Management Board and all employees across the globe for their passionate commitment in the past year, and the employee representatives for their constructive cooperation with the Company's corporate bodies.

Munich, March 30, 2022
BioNTech SE

Helmut Jeggle
Chairman of the Supervisory Board

Milestones 2021

NEURON

JAN

SCIENCE

BioNTech publishes **data on a novel mRNA vaccine approach to treat autoimmune diseases** in peer-reviewed journal *Science.*

CORPORATE

BioNTech establishes a subsidiary in **Istanbul, Turkey**.

MAR

Photo: Dimitry Kropachev, unsplash

CORPORATE

BioNTech announces to establish **regional headquarters for South East Asia and the first mRNA manufacturing facility in Singapore**.

MAY

COVID-19

Pfizer and BioNTech **receive the first emergency use authorizations of their COVID-19 vaccine in adolescents aged 12 to 15 years** in the United States of America and in the European Union.

CORPORATE

BioNTech **expands its Management Board by appointing Jens Holstein**. He takes over the CFO role from Dr. Sierk Poetting who fully focuses on his tasks as Chief Operating Officer (COO).

JUN

SCIENCE

The **first patient is dosed in a Phase 2 clinical trial of mRNA-based cancer vaccine candidate BNT111 in patients with advanced melanoma.**

JUL

CORPORATE

BioNTech establishes a subsidiary in **Shanghai, China**.

CORPORATE

BioNTech **acquires Kite's Neoantigen TCR Cell Therapy R&D Platform and manufacturing facility in Gaithersburg, United States of America**.
The transaction is closed on August 4.

SCIENCE

BioNTech announces the **development of the first mRNA-based vaccine candidate for malaria prevention**; the initiation of a clinical trial is planned for the end of 2022.

Photo: Mat napo, unsplash

SEP

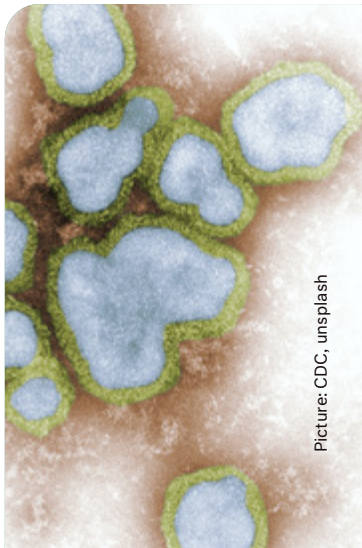
COVID-19

Pfizer and BioNTech **receive the first U.S. FDA Emergency Use Authorization of a COVID-19 vaccine booster** for individuals 65 years of age and older, and individuals ages 18 to 64 within certain high-risk groups.

SCIENCE

The **first participants were dosed in a Phase 1 clinical trial** to evaluate the safety, tolerability and immunogenicity **of a single dose quadrivalent mRNA vaccine candidate (BNT161) against influenza** in healthy adults 65 to 85 years of age.

Microscopic image of Influenza A virions



Picture: CDC, unsplash

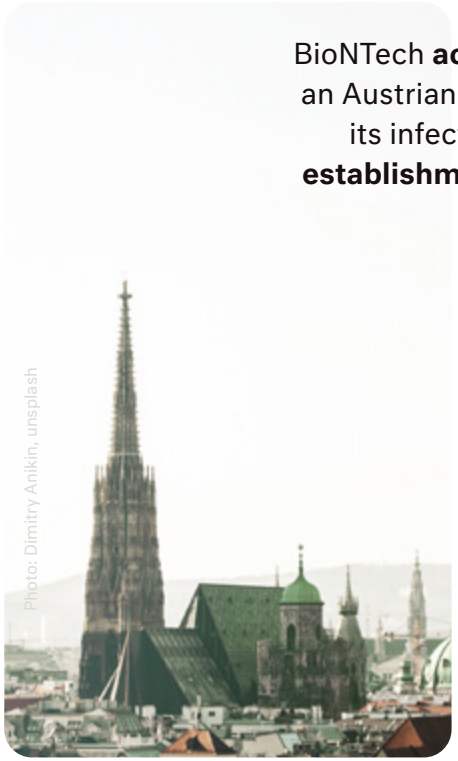


Photo: Dimitry Anikin, unsplash

OCT

CORPORATE

BioNTech **acquires PhagoMed Biopharma GmbH**, an Austrian biotechnology company; expansion of its infectious disease portfolio capabilities and **establishment of a subsidiary in Vienna, Austria**.

SCIENCE

The **first colorectal cancer patient was treated with the individualized mRNA cancer vaccine candidate BNT122** in a Phase 2 clinical trial.

CORPORATE

BioNTech announces plans to **initiate the construction of the first state-of-the-art manufacturing site for mRNA-based vaccines in the African Union in mid-2022**.

COVID-19

Pfizer and BioNTech receive the first **U.S. FDA Emergency Use Authorization** of a COVID-19 vaccine in **children aged five to 11 years**.

SCIENCE

BioNTech presents **seven updates (from six oncology programs) with positive clinical and preclinical data supporting the company's oncology pipeline** at the Society for Immunotherapy of Cancer's Annual Meeting.

NOV

SCIENCE

BioNTech receives **FDA fast track designation for its FixVac candidate BNT111** in advanced melanoma.

COVID-19

Preliminary laboratory studies demonstrate that **three doses of the Pfizer-BioNTech COVID-19 vaccine neutralize the Omicron variant (B.1.1.529 lineage)**, while two doses show significantly reduced neutralization titers.

DEC

Interview

Ugur Sahin

Helmut Jeggle

Interview

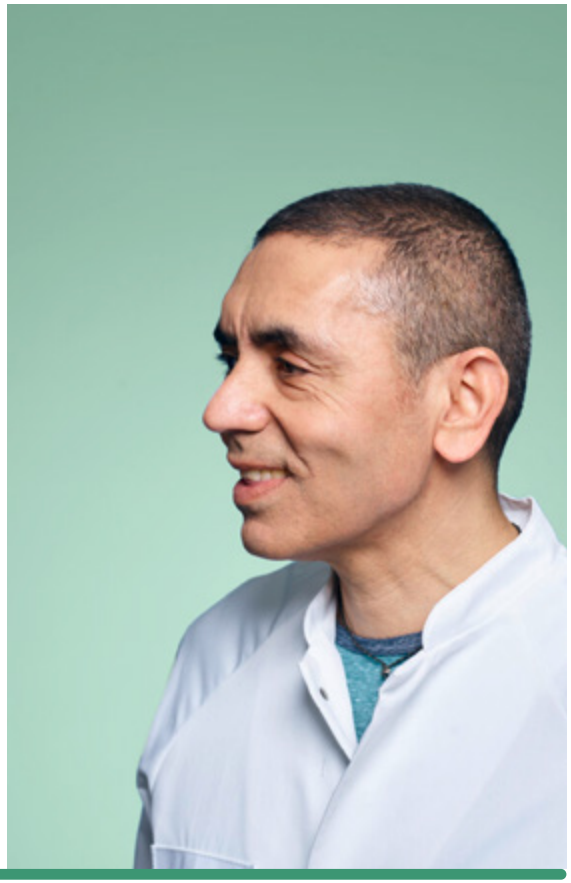
Interview with Chairman Helmut Jeggle and CEO Prof. Ugur Sahin, M.D.

BioNTech had an eventful year with many changes. What do you think were the key milestones in 2021?

Ugur Sahin– Having successfully developed the first authorized COVID-19 vaccine in 2020, the challenge in 2021 was to scale up our manufacturing capacities. Initially, we planned for 1.3 billion doses in 2021, but quickly realized that the need was much greater. Together with our partner Pfizer, we managed to expand our manufacturing capacities and increased our manufacturing target to 3 billion doses.

A key factor in achieving this goal was our manufacturing site in Marburg, which became one of the largest mRNA manufacturing facilities in the world just a few months after the technology transfer. We have now produced mRNA for more than one billion vaccine doses at this site. Other important milestones were label expansions for our COVID-19 vaccine to include children over the age of five, as well as booster doses for adults.

In addition to this mammoth task, we continued to successfully advance our oncology pipeline: We now have product candidates in five ongoing randomized phase 2 trials across a range of solid tumor indications. In addition, five phase 1 trials were initiated last year. We have strategically strengthened our research and development infrastructure through acquisitions and licensing deals.



Our goal is clear: To discover and develop innovations in medicine and deliver them to patients worldwide.

Ugur Sahin

Helmut Jeggle – The Company and the Management Board recognized the situation at an early stage and reacted in an entrepreneurial manner: Up to Christmas 2020, BioNTech was a research company. Now, we are looking at a company that is positioning itself broadly across the whole value chain –be it in procurement, logistics, research and development, or production. BioNTech has learned a lot in the past two years and has positioned itself commercially in such a way that the Company is perceived as a reliable partner by important players such as the European Union Commission. These are decisive factors for a market leadership in the countries where BioNTech is responsible for supply.

What do you expect in 2022?

BioNTech is fully funded to the next product launch. For me, the Company is now entering a decisive phase.

Helmut Jeggle

The precision medicine which Ugur, Özlem and their team have developed over the past 20 years can now showcase its potential. For the Supervisory Board, it is important that the Management Board uses newly generated financial resources where innovation can emerge and reveal its potential.

BioNTech as a company has moved to a higher league in the past two years. To address this new level of complexity, management has created new departments and has hired many team members. They continue to strengthen the organization in all areas and further expand its resources, capabilities and processes.

Ugur Sahin – Our vision is to build a biotechnology company that addresses the medical needs of people in the 21st century. Our strategic goals for 2022 and the years ahead focus on three core areas:

First, we want to continue our COVID-19 vaccine leadership by developing variant-based vaccines and next-generation COVID-19 vaccines.

Second, we want to expand our pipeline with additional candidates to improve and broaden the access to innovative medicine. This includes expanding our activities in infectious diseases across several indications. This year, we plan to start four clinical trials for our vaccine candidates against malaria, tuberculosis, herpes simplex and shingles. In the second half of 2022, we aim to deliver the first BioNTainer, thus laying the foundation to enable the production of mRNA-based vaccines in Africa.

We believe that the most sustainable form of rapid access to innovative medicines is to ensure that innovative therapies can be produced locally.

Ugur Sahin

Our third goal is to accelerate the development of our candidates in cancer immunotherapy. These include mRNA-based therapies as well as other precision medicines such as cell therapies and bispecific antibodies. We are working to advance clinical product candidates into registrational trials. At the same time, we are diversifying our pipeline and working on expanding it towards additional indications outside oncology, such as cardiovascular and autoimmune diseases, as well as regenerative medicine.

What is special about BioNTech?

Helmut Jeggle – For me, BioNTech signifies agility. The Management Board and the Supervisory Board meet much more frequently than is usual at many other companies. For me, it is important that the members of the Management Board and their teams drive projects forward in a focused approach so that they achieve relevant results quickly. From my perspective, this works well. Also, it is equally important that we are not confronted with problems only when they occur. As Supervisory Board, we provide guidance on situation analyses and solutions at an early stage. This process is the result of years of collaboration.

Ugur Sahin – I share this observation. At BioNTech, this approach applies to business decisions as well as to our activities in research and development. Our technological toolkit allows us to respond swiftly to external influences and to deliver appropriate results.

How important is that?

Helmut Jeggle – Enormously important. BioNTech observes what is to the left and to the right in order to learn, but not to imitate. The Company has found its sweet spot between a start-up and a big pharmaceutical company. Strong in decision-making and excellent in executing.

To what extent has the work between the Supervisory Board and the Management Board changed since 2020?

Helmut Jeggle – Of course, we could not meet in the usual way due to the pandemic. Virtual meetings were part of everyday life for us, too. That made our 'walks and talks' all the more important. Meeting face-to-face is incredibly important to me, especially with deep tech companies. This gives me a better feeling and overview of which topics are highly relevant at the moment. This is also why I went to Mainz regularly during this time and met Ugur for a walk along the river Rhine, even at freezing temperatures.

We, as the Supervisory Board, want to stay close to things so that we can discuss and assess the Management Board's decisions firmly.

Helmut Jeggle

Ugur Sahin – The Supervisory Board was analyzing each current topic with great detail as a regulating entity. There was a transparent and clearly structured process to which everyone contributed in their respective functions. We thus remain agile and can act in a fashion that is both effective as well as relevant to the situation. This is especially important in a dynamic environment. It is a strength to work in this manner.

The success of 2020 and 2021 was certainly worked on for longer. What was decisive from your point of view?

Helmut Jeggle – Since founding the Company including the seed financing, great care has been taken not to build a start-up or biotech company in the classical sense, but to financially set up BioNTech so that it can turn a great vision into reality.

Interview

It is important that BioNTech always generates multiple options for different milestones so we are not dependent on a single path. For example, this applies to both the development of various technologies with synergistic potential, through to appropriate funding options.

Helmut Jeggle

In retrospect, it was crucial that the founders deployed BioNTech's financial resources effectively in research and development from the very beginning. The team of experts spent 20 years researching mRNA and other technologies. This focus turned BioNTech into what it is today. It also constitutes the basis for the significant revenues that the Company is now reinvesting into the research and development of new drugs. The success is also the reason for the share buyback program and the special cash dividend for 2021, which will be proposed at the upcoming Annual General Meeting.

The COVID-19 vaccine is the first commercial breakthrough and an important milestone, but it is no reason to lean back. Let me put it this way: BioNTech has made it into the Champions League. Now it is about establishing itself there sustainably.

Ugur Sahin – And just like in soccer, the reasons for victory are manifold and the result of a well-coordinated team. For me, BioNTech's strengths are like a mosaic that is made up of different stones forming a bigger picture. On the one hand, BioNTech gathers many highly competent people under the same roof. They have believed in the vision from the very beginning and have always driven it with great personal commitment. As a result, we have been able to attract a range of like-minded people across all areas – be it in research, in the clinic or in business functions. We are carefully preserving this DNA while the Company expands. For example, when we plan acquisitions, we only take companies into consideration which have a similar culture.

Helmut has already mentioned a second building block: It takes a special mindset. We do not rest on our success but perceive it as an important milestone on our way towards fulfilling our vision.

At BioNTech, what do you plan to turn this vision into reality?

Ugur Sahin– Our most important investment for the coming years is the expansion and further development of our technologies and our pipeline. We plan to invest in Phase 2 and registrational trials. This year, the focus will be to lay the ground accordingly, for example by expanding our clinical department to gain the necessary traction.

Helmut Jeggle – We appreciate the Management Board's plans to grow and further specialize the workforce and the planned investments to adapt the company's processes and infrastructure.

Let's take a look at the current situation. The emergence of new variants has added further momentum to the COVID-19 pandemic. How will the pandemic develop and what does this mean for BioNTech as a vaccine manufacturer?

Ugur Sahin – We expect the pandemic to stick with us for some time. The virus continues to spread globally, evolving at an unchanged rate with new variants emerging. Our strategy for vaccine development continues to be driven by data and science. Thanks to new clinical data and real-world observations, we gain a better understanding of how immunity towards the virus evolves and how it is influenced by vaccinations, booster doses and natural infection.

How can we identify new variants earlier in the future and react more quickly if necessary?

Ugur Sahin – As an example: Together with InstaDeep, we have developed an Early Warning System to detect potential high-risk variants. Extensive testing has shown that the Early Warning System is able to analyze new variants and identify variants of concern with the help of Artificial Intelligence.

We have also been using various forms of Artificial Intelligence in oncology for years. This is particularly important for the identification of targets for personalized and individualized cancer immunotherapies. What's special about AI solutions is that approaches can often be adapted to address different issues.

When do you expect mRNA to also be used for the treatment of cancer?

Ugur Sahin – In our clinical studies we have observed mRNA vaccines to induce strong immune responses leading to tumor regression. We see this for example for our individualized approaches, where we published first key results in *Nature* ⊖ in 2017, as well as for candidates of our off-the-shelf therapy FixVac, where we also published data in *Nature* ⊖ in 2020.

In *April 2022* ⊖, we published initial clinical data for a third approach, our candidate BNT211, where we are combining an mRNA vaccine with cell therapy. CAR-T cell therapies work well in hematologic indications, but so far, it was not possible to leverage their potential also for the treatment of solid tumors. Solid tumors, however, account for more than 85% of all cancers. Here, for the first time, we have presented very encouraging - albeit early - data for the treatment of solid tumors with a cell therapy approach. We expect additional data from the Phase 1/2 trial in the second half of this year and are preparing a randomized efficacy trial.

We continue to advance our technology platform and have also strengthened our position in this area with acquisitions and collaborations: for example, we started a collaboration with Medigene in February 2022 to develop so-called T-cell receptors (TCRs) directed against certain cancer targets. In summer 2021, we acquired Kite's neoantigen TCR cell therapy platform. Both collaborations are complementary and synergistic to our own approaches. We are well positioned to enter this field - not only with CAR-T cell therapies, but also with T-cell receptor-based immunotherapies.

Helmut Jeggle – The Management Board's decision to invest into the field of cell therapies was exactly right. The latest results indicate that cell therapies for solid tumors could become an important, pioneering field in oncology. Cell therapies have advanced tremendously in recent years through a number of important innovations, both in manufacturing and improvement of efficacy. I see great potential for BioNTech to make this form of therapy available to a broader group of patients.

Mr. Sahin, you estimate that one third of all pharmaceuticals approved in the future could be mRNA-based. Which drugs could this be?

Ugur Sahin – We have been researching mRNA for over 20 years and have established multiple mRNA drug technologies. This is not just about vaccines to prevent infectious diseases or treat cancers. We believe we can use our mRNA technologies to develop drug candidates to treat autoimmune diseases, cardiovascular diseases or neurological age-related diseases.

It's always about combining biological mechanisms and technological expertise.

If we know that we can influence a biologically relevant mechanism and have the necessary resources, I see no reason to assume that there is a limit.

Ugur Sahin

However, we should also not assume that everything will work all by itself. We need to combine different fields of science, invest for the long term, and we need to be patient. We can speed up processes in the future, but certainly not as much as we did with the development of the COVID-19-vaccines. Drug development usually takes decades.

Where are you headed in the next decades? What can we expect from BioNTech in the future?

Helmut Jeggle – If you want to build a sustainable company, it's not enough to get regulatory approvals for a few products.

BioNTech wants to redefine the idea of next generation medicine in more than one aspect.

Helmut Jeggle

This is why the Supervisory Board endorsed the acquisition of PhagoMed in October 2021 that enabled BioNTech to expand into a new field and provided the necessary resources to work on the problem of increasing resistance to approved antibiotics.

Ugur Sahin – We know exactly what we need to do to realize the added value from the projects we initiated years ago. However, we also know that in the long term it is crucial for the Company to continue working on the medicine of tomorrow.

That is why our strategy is divided into three waves of innovation. The first wave of innovation relates to product candidates that are currently in, or will soon enter, Phase 2 clinical trials. We aim to advance these into pivotal trials and prepare for market launches within the next few years.

The second wave of innovation will come in the medium term by an expansion of the pipeline, particularly with therapeutics in the areas of oncology and infectious diseases. Here, we aim to provide various products to patients worldwide, in the case of successful development and regulatory approval. This also includes the lysine technology we obtained through the acquisition of PhagoMed, which we intend to transform into an mRNA-based technology platform for precision antibiotics for the efficient and targeted control of hard-to-treat pathogens. Third, we are preparing for what's to come in the future. We are working on pioneering technologies that we believe will become even more relevant over the next decade and beyond. These include therapies in autoimmune diseases, cardiovascular diseases and regenerative medicine. Our work in this area has already begun. Tangible results will become visible in the third wave of innovation, which still requires years for basic research and clinical development. With this approach, we aim to achieve our mission of improving the health and lives of billions of people worldwide.

The interview was conducted by Sina-Kim Diehlmann and Jasmina Alatovic.

How we strive to turn our vision into reality

PRECISION MEDICINE

2021 was a year of historic impact that BioNTech's COVID-19 vaccine has made on global human health and the economy. In addition to this massive undertaking, we successfully advanced our pipeline. We have ushered into a new era of medicine which needs to be shaped now with scientific rigor. To this end, we focus our research and development efforts on next generation of immunotherapies with improved treatment success rates and on highly effective and well-tolerated infectious disease vaccines.

INVESTING IN INNOVATIONS FROM DEVELOPMENT TO DELIVERY OF NOVEL MEDICINES

We plan to continue actively driving the company's development. We aim to complement and expand our expertise through synergistic acquisitions and collaborations, thus leveraging the full potential of our technologies, our platforms, and our digital capabilities.

DEMOCRATIZE ACCESS TO NOVEL MEDICINE

We aim to broaden the access to our vaccines and therapies to improve the health and care of people worldwide. To do this, we use state-of-the-art technologies designed to make sustainable solutions affordable, globally implementable and scalable.

Precision medicine

2021 was a year of historic impact that BioNTech has made on human health and the economy around the globe where we drove pipeline advancements to the next level. We were able to generate a robust oncology pipeline of clinical stage drug candidates with currently more than 16 clinical stage product candidates spanning ten different modalities in 20 clinical trials.

It is a historically unique moment to advance the next frontierofimmunologytoshapethemedicineoftomorrow. Therefore, we focus our strategy on the following key areas:

COVID-19 VACCINE LEADERSHIP

Together with our partner Pfizer, we have delivered **approximately 2.6 billion doses of our COVID-19 vaccines to more than 165 countries and territories** as of the end of 2021. The global deployment of our vaccine has likely saved millions of lives and is helping people all over the world find their way back to a more normal way of living.

In 2021, we achieved several **label expansions for our COVID-19 vaccine**, such as approvals for booster doses for different age groups as well as an update of the product information to include the use of the vaccine during pregnancy and breastfeeding. In total, our COVID-19 vaccine held an estimated 74% market share in the United States and approximately an 80% market share in Europe at the end of 2021.

Additionally, we continue to closely monitor the **impact of the Omicron variant and other new variants of concern**. To address these, we have a comprehensive development program for variant-adapted vaccines in place. Additionally, as part of our preventive approach, we are collaborating with InstaDeep on the further development of an Early Warning System ("EWS") for new variants of concern. The approach is based on a new computational method that analyzes globally available sequencing data and predicts high-risk variants of SARS-CoV-2. Trials have validated that the EWS is capable of evaluating new variants and performing near real-time risk assessment of variant lineages. It is also fully scalable and allows for the recording and analysis of new variant data as soon as the sequences become available in databases.

In 2022, we will continue to address the evolving challenge of COVID-19 around the world. **We are developing next-generation COVID-19 vaccines and further continuing to focus on label and geographic expansion**. In parallel, we have several innovation initiatives underway for pandemic preparedness. This is also supported by a solid financial foundation backed by a strong order book for 2022, which already includes 2.4 billion doses signed as of end of March 2022.

ONCOLOGY PIPELINE

During 2021 and 2022 to date, we **expanded and advanced our clinical pipeline extensively** with multiple novel oncology platforms entering the clinic. In total, we have five ongoing randomized phase 2 trials for immunotherapies addressing a range of solid tumor indications, including programs from FixVac, iNeST and bispecific antibodies. Additionally, we have advanced four new platforms into first-in-human studies, including our mRNA-encoded RiboCytokines and RiboMabs, CAR-T cell therapy and NEOSTIM *ex vivo* T cell therapy.

In 2021, we **made significant progress in advancing and expanding our clinical programs**, with four randomized Phase 2 trial starts, and five Phase 1 trial starts in our pipeline.

- We started Phase 2 trials for FixVac in melanoma and HPV16+ head and neck cancer and iNeST in adjuvant colorectral cancer.
- We dosed the first patient in a randomized Phase 2 clinical trial of our bispecific antibody BNT311 in non-small cell lung cancer, a patient population with significant need for new treatment options.
- The first product candidate of our RiboMab platform, BNT141, entered clinical testing with the first patient dosed in January 2022.

We believe we are entering an important new era of growth for our oncology pipeline, which is poised to continue to advance and expand in 2022: We will continue to accelerate our programs towards seeking marketing approval. We have started preparation for registrational studies for our mid-stage programs. 2022 is expected to bring our first readout from a randomized Phase 2 trial in oncology. In addition, we published encouraging preliminary data for our CAR-T cell therapy (BNT211) in solid tumors. BNT211 is the first CAR-T cell therapy candidate to treat solid tumors – if successfully developed, this would mean a medical breakthrough in cancer therapy.

INFECTIOUS DISEASES PIPELINE

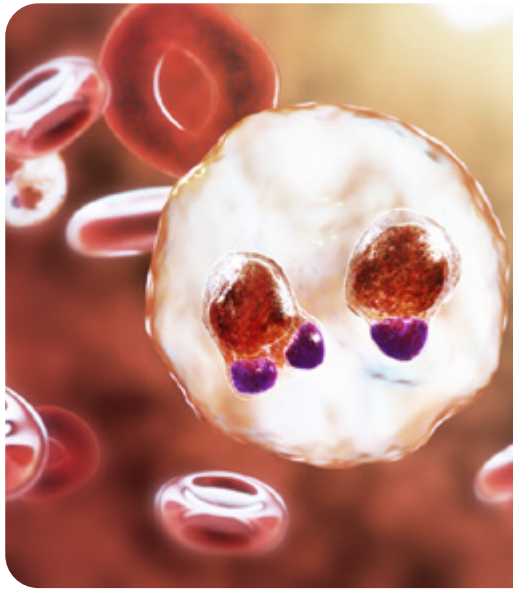
Medicines against various infectious diseases are a long-term growth pillar for BioNTech. Our objective is to **develop mRNA vaccines against infectious diseases that have a major impact on global population health**. In collaboration with Pfizer, we are developing an influenza vaccine based on our suite of mRNA platforms. Our candidate BNT161 is already in Phase 1 clinical trials.

We plan to initiate clinical trials for four infectious disease programs in 2022:

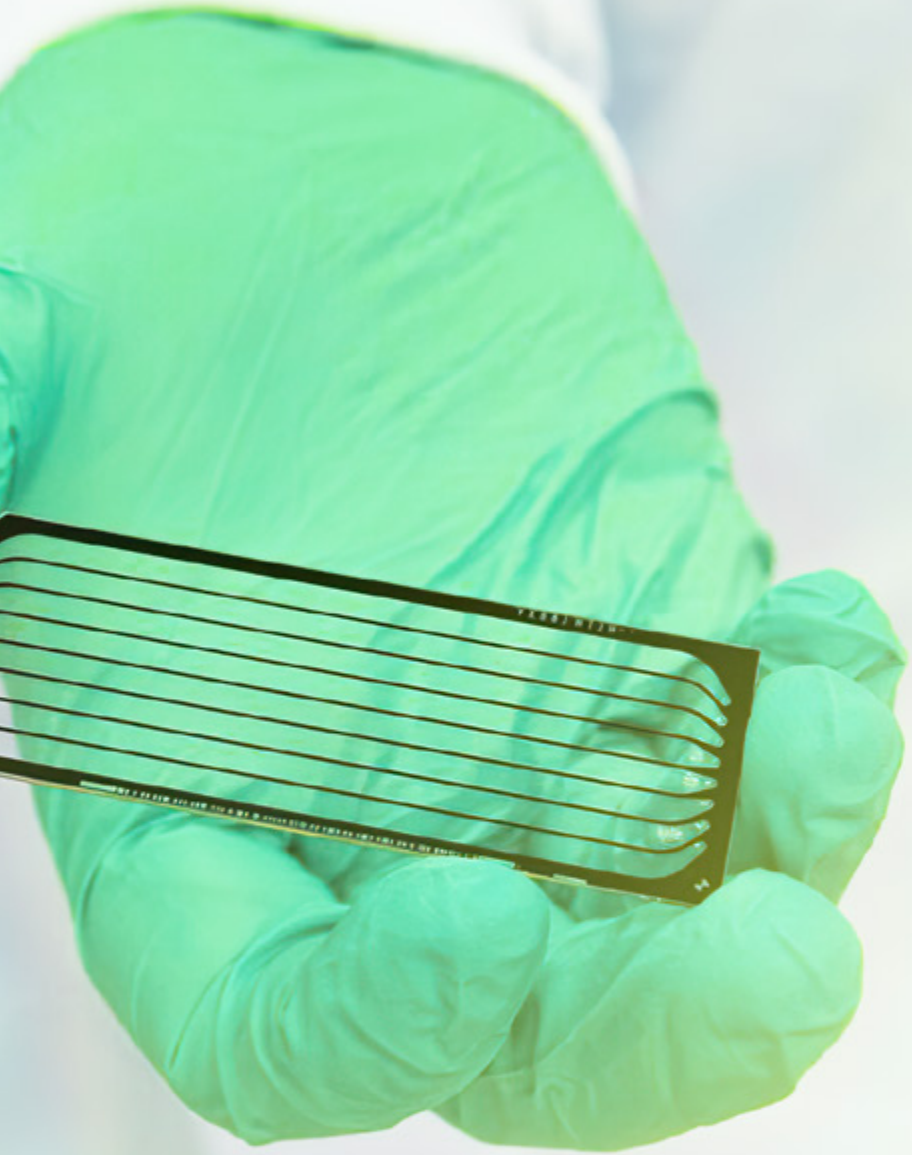
- Herpes simplex-virus 2
- Tuberculosis
- Malaria
- Shingles (in collaboration with Pfizer)

In addition, our preclinical infectious disease portfolio includes more than ten other mRNA vaccine programs and precision anti-bacterials.

Red blood cell infected with a Malaria-causing parasite



Investing in innovations from development to delivery of novel medicines



2021 set the stage for us, and enabled by our success last year, we feel more optimistic than ever about the future. 2022 will be a year of tremendous expansion and maturation of our pipeline. **We continue to drive our growth and transformation by reinvesting in the foundation of BioNTech. We plan to invest 1.4 billion to 1.5 billion Euros in the development of our company and the pipeline,** which represents an increase of about 50% compared to 2021, and we intend to accelerate those investments in the years to come. Our objective is clear: position the Company for long-term success.

ADVANCE INTO NEW THERAPEUTIC AREAS

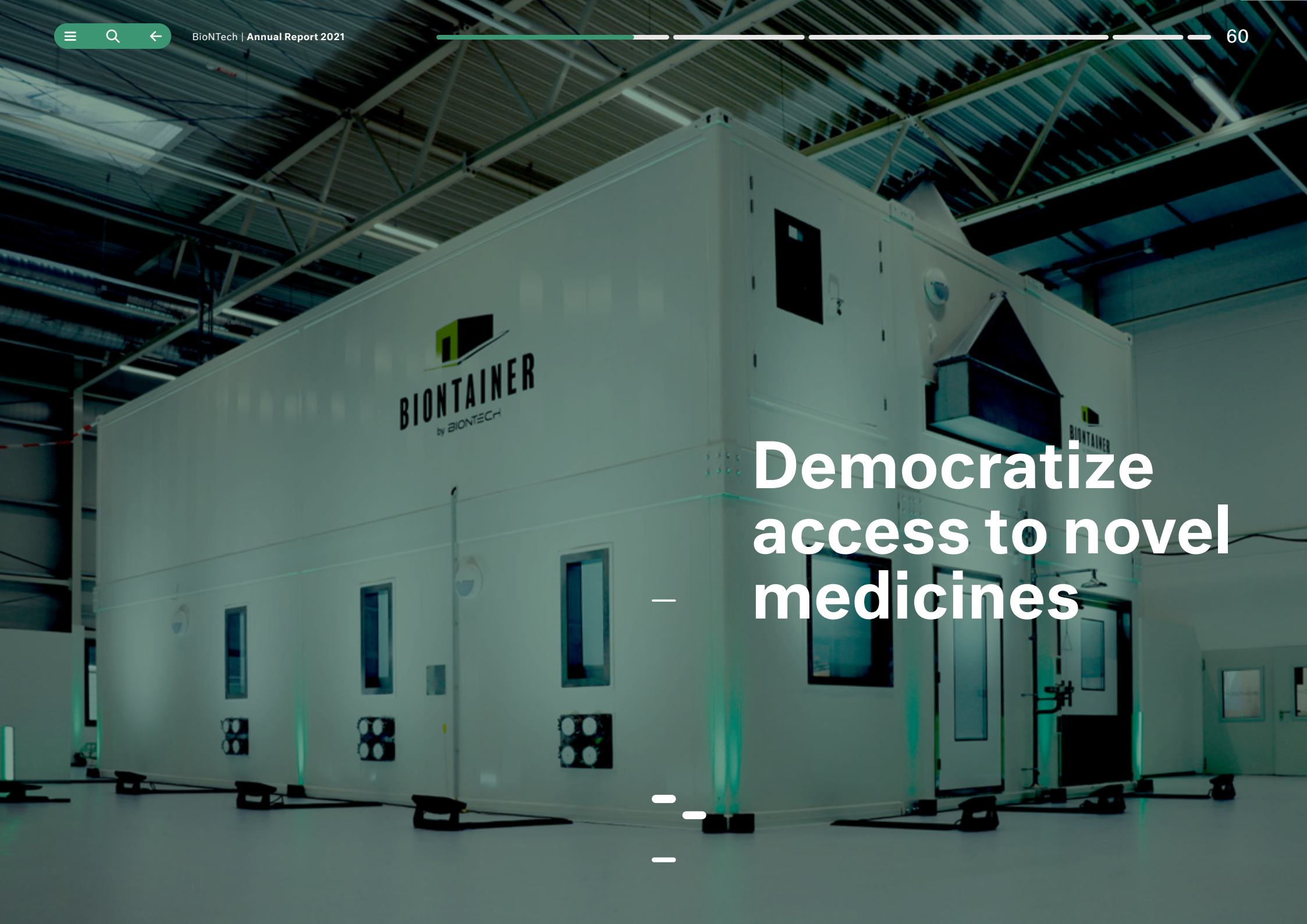
While we at BioNTech initially focused our efforts on oncology and infectious diseases, we continue to see tremendous potential for mRNA to reach beyond these therapeutic areas. **We believe mRNA therapeutics could also help treat inflammatory diseases, cardiovascular and neurodegenerative diseases and have potential applications in regenerative medicine.** Encouraging early preclinical research results from a program to potentially treat multiples scleroses with mRNA were published in *Science* ⓘ at the beginning of 2021. With all of these new fields for applications in mind, we believe that in 15 years, one-third of all newly approved drugs will be mRNA based.

ENHANCE SCIENTIFIC CAPABILITIES

We have proven to the world that our science is game changing, and we aspire that our innovations have an even broader impact on people's health. Therefore, we intend to further accelerate our R&D capabilities through investment in organic growth as well as new partnerships, M&A, and in-licensing deals. In early 2022, we announced a diverse set of new collaborations with Pfizer, Regeneron, Medigene, and Crescendo Biologics. We successfully brought in multiple assets and forged collaborations to complement our existing technologies and capabilities. This includes a Medigene asset acquisition and discovery collaboration in 2022 that will further expand our TCR pipeline. With Crescendo Biologics, we gain access to technology and know-how that strengthens our capabilities in the field of engineered cell therapies and multi-targeted antibodies. The acquisition of Austrian-based PhagoMed provides us the opportunity to develop lysin based precision anti-bacterials – a powerful new drug class that could overcome the challenges posed by multi-drug resistant bacteria.

FURTHER STRENGTHEN TECHNOLOGY PLATFORMS AND DIGITAL CAPABILITIES

We believe that we can improve the discovery and development of new treatments and medicines for people all over the world by combining the deep knowledge of the human immune system with a data-driven development approach based on cutting-edge digital technologies. This is why we want to further strengthen our digital, AI and machine capabilities and technologies. **By employing the latest advances in robotics and autonomous decision-making algorithms, we aim to deliver higher efficiencies in drug manufacturing, logistics and supply chain processes.** For example, we already successfully optimized our iNeST production process, reducing turnaround time from over three months to less than six weeks. This improvement was essential to the production of several vaccine candidates to be tested against COVID-19 as well as the commercial up-scale.



Democratize access to novel medicines

The COVID-19 pandemic has shown us that the world needs to better prepare for the major challenges of a pandemic. It has also taught us that science, innovation, and trustful international collaboration can make a difference, save lives, and provide solutions that were previously deemed impossible.

Photo: Barbara Verde, unsplash

Since the founding of BioNTech, our aim has been to sustainably improve the quality of life of people around the world by harnessing advancements in technology. If a solution is technically feasible, it should be realized to turn our vision into reality. To do this, we use state-of-the-art technologies designed to make sustainable solutions affordable, globally implementable, and scalable. We focus our efforts on democratizing access to novel medicines in two essential areas:

TACKLING MAJOR HEALTH CHALLENGES WITH TECHNOLOGY AND COOPERATION

1 **Our infectious diseases pipeline:** Precision medicine is important in the field of infectious diseases which continue to have a major impact on global health due to the high unmet medical need. With our infectious disease candidates, we want to leverage the potential of our mRNA technology portfolio and develop highly effective and well-tolerated vaccines.

2 **Our BioNTainer as a technological innovation:** We have launched a mobile vaccine production facility called “BioNTainer” as a solution to enable access to novel medicines. In the past 12 months, we made crucial progress to help provide access to manufacturing capacities around the world, starting in Africa.

Modular, scalable vaccine production to address the needs of tomorrow

After our mRNA-based COVID-19 vaccine was approved in December 2020, we asked ourselves: How can we broaden the access to mRNA-manufacturing sites in a scalable, safe and flexible way? As there was no existing solution to this problem, our manufacturing experts decided to develop one – BioNTech style. By creating a modular approach to drug manufacturing, BioNTech aspires to transform medicine production around the world.

The solution is 12 meters long and 2.4 meters tall. Six of them make up what we call a BioNTainer. They are designed as a turnkey mRNA manufacturing facility based on a modular ISO-sized container solution. The BioNTainers are shipping containers built as clean rooms and designed and equipped for mRNA production. The BioNTainers are a standardized concept that is replicable, and the set-up as a container allows us to ship them by truck, ship or plane, to all continents.

“
This could be the future of manufacturing, not just in Africa, but worldwide.
”

Ugur Sahin,
Chief Executive Officer

Each BioNTainer is designed to produce the active ingredient, i.e. the mRNA itself, or take over the formulation of the mRNA by mixing mRNA with lipids. Each module consists of six ISO-sized containers. The BioNTainers will be equipped to produce a range of mRNA-based vaccines targeted towards the needs of African Union member states. This may include Pfizer-BioNTech’s COVID-19 vaccine and BioNTech’s malaria and tuberculosis vaccines currently undergoing clinical trials, if they are successfully developed, licensed or approved by regulatory authorities.

Sierk Poetting, COO BioNTech

We presented the BioNTainer concept in February 2022 at a high-level meeting in Marburg, where a prototype has been developed together with colleagues from Mainz over the past 14 months. Our new site in Marburg will maintain an innovation center to continuously enhance the manufacturing concept. If new technical, digital or automation solutions need to be tested and implemented, we will do this in our BioNTainers in Marburg and roll it out afterwards.

From left: Ugur Sahin, CEO BioNTech; Özlem Türeci, CMO BioNTech

We are in discussion regarding the distribution of BioNTainers with South Africa, Rwanda and Senegal and expect to ship the first containers by the end of 2022. We are working with our partners at the World Health Organization (WHO), the Africa Centers for Disease Control and Prevention (Africa CDC), the Africa Medicine Agency (AMA) and the European Commission on this solution, with the goal of establishing an end-to-end production network for mRNA-based vaccines in Africa. Our African partners will support the development of the necessary regulatory framework and infrastructure to bring the solution to their respective destinations in Rwanda, Senegal and potentially South Africa.

John N. Nkengasong, Director Africa CDC

From left: Nana Akufo-Addo, President of the Republic of Ghana; Svenja Schulze, German Minister for Economic Cooperation and Development; Tedros Adhanom Ghebreyesus, Director General WHO

The challenge

Establishing GMP production for mRNA-based vaccines is complex and time-consuming.

Technical solutions for manufacturing sites must comply with internationally harmonized GMP standards.

Complex mRNA manufacturing encompassing 50,000 steps that have highest quality standards, including about 40 quality control tests for each manufactured vaccine batch to ensure safety and efficacy.

Transferring process and keeping the systems up-to-date and employing highly qualified personnel.

The solution

Turnkey package that includes modular production units, GMP-compliant set-up and personnel training.

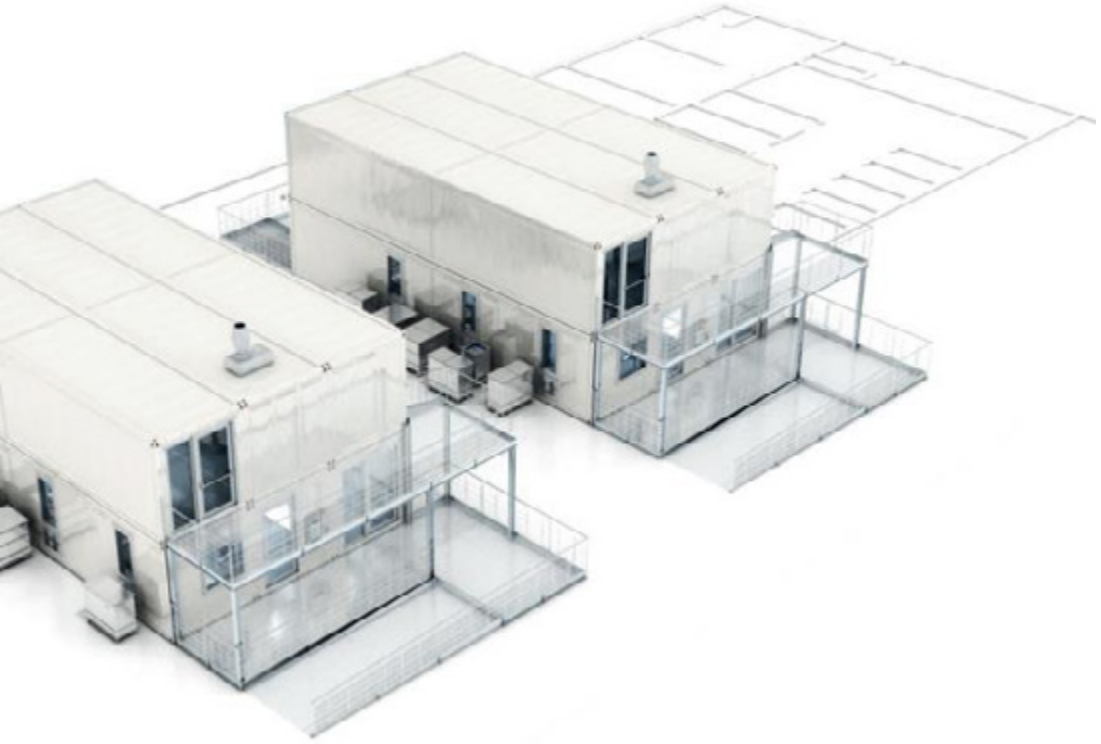
Container-based “Plug & Play” approach with modular design, standardized equipment and software components to support rapid set-up of fully functional mRNA manufacturing facility.

The GMP process implementation and maintenance will be facilitated by validation packages, automation, digital solutions, as well as local and global quality control.

BioNTech will initially staff the BioNTainers and train local employees.

As a decentralized solution, BioNTainers aim to offer greater independence and faster vaccine supply within the African Union and support the development of talent as well as an emerging biotechnology industry.

BioNTainers as a solution to promote sustainable local vaccine production in the African Union



Scope	12 containers
Structure	6 containers = 1 module >1 drug substance (DS) module >1 drug product (DP) module
Container size	ISO sized (2.6 m x 2.4 m x 12 m)
Shipment	Shipped via freighter, truck and train
Production volume	E.g. approx. 50 million doses of the Pfizer BioNTech COVID-19 vaccine
Production	BioNTech jointly with local support
Quality control	BioNTech jointly with local support
Local infrastructure	E.g. logistics, quality control labs, quality assurance set-up, warehousing, cold and frozen storage
Technical autonomy	Fully self sufficient
Value offering	Single to multi-drug production & clinical trials

Environmental, Social and Governance (ESG)

BioNTech's core responsibility: Democratizing access to novel medicine and technological innovation in healthcare.

A few weeks after the publication of our first Sustainability Report in 2020, we received a "Prime" ESG (environment, social and governance) rating and are ranked in the top 10% of the industry by the global ESG rating agency ISS ESG. 20% of variable compensation (STI) of BioNTech's Management Board and other executives is now linked to the achievement of ESG targets, including maintaining a prime rating from the ISS ESG rating. The second *Sustainability Report for 2021* ⊖ focuses on three core topics with regard to our corporate social responsibility.

Democratize access to novel medicines
We fulfill our core business responsibility by democratizing access to novel medicines and technological innovations in healthcare. To this end, we are aiming to deliver two billion doses of our COVID-19 vaccine to low- and middle-income countries with one billion doses each in 2021 and 2022. For 2021, we fulfilled our pledge to deliver 40% of doses provided by us and our partner Pfizer to low- and middle-income countries.

The establishment of our first mRNA manufacturing facility in the African Union is expected to start in mid-2022. The first BioNTainer – a scalable and turnkey mRNA-manufacturing container solution – is projected to arrive in Africa in the second half of 2022.This effort is a part of providing a foundation for addressing diseases with high unmet medical need, such as malaria, tuberculosis, HSV-2, and HIV. In addition, we strive to develop affordable cancer treatments.

Climate protection targets on 1.5° C pathway
Our climate targets are based on the criteria of the Science Based Target Initiative (SBTi): We plan to submit our near-term Scope 1 & 2 targets, an absolute reduction of 42% in our GHG emissions for 2030 compared to 2021, and our supplier engagement target for Scope 3, as soon as possible to the SBTi.

Diversified employee base from 60+ countries
More than 3,000 employees from over 60 countries are working towards these goals. 51% of our employees are female. The share of women at the highest management level below the Management Board is 43%; at the level below that, it is 52%.

Combined Management Report 2021

1. General Information

Pursuant to Section 315 para. 5 of the German Commercial Code (HGB) in conjunction with Section 298 para. 2 HGB, this combined management report comprises both the group management report of BioNTech SE and its group companies (together "BioNTech" or the "Group") and the management report of BioNTech SE (also "the Company"), hereinafter also referred to as "BioNTech," the "Group," "we" or "us". The combined management report has been prepared in accordance with the Regulation on the Statute for a European Company (SE) in conjunction with the German Stock Corporation Act (*AktG*). The comments on the Group have been prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union; the comments on BioNTech SE have been prepared in accordance with the German Commercial Code (HGB). Unless otherwise stated, the statements in the combined management report relate to both the Group and BioNTech SE. In addition to the reporting on the Group, the development of BioNTech SE is explained in Section 3.

We prepare and publish our combined management report in euros and round figures to the nearest thousand or million euros. Accordingly, the figures presented as totals in some tables may not be exact arithmetic aggregates of the figures preceding them and the figures presented in the notes may not add up to the rounded arithmetic aggregates. The rounding applied may differ from that published in previous years in other units.

1.1 Business Model

BioNTech is a next-generation immunotherapy company pioneering the development of therapies for cancer and other serious diseases. We combine a variety of advanced therapeutic platforms and bioinformatics tools to rapidly advance the development of novel biopharmaceuticals. The diversified portfolio of oncology product candidates includes individualized therapies as well as potential so-called "off-the-shelf" mRNA-based drugs, innovative chimeric antigen receptor (CAR)-T cells, bispecific checkpoint immunomodulators, targeted cancer antibodies and small molecules. The breadth of immunotherapy technologies and expertise has led to the development of potential therapies for a range of rare diseases and infectious diseases, and the development of the COVID-19 vaccine, a first product to combat the COVID-19 pandemic.

A deep understanding of the human immune system is at the core of our innovations and has resulted in the discovery of four complementary drug classes:

- mRNA therapies
- Programmable cell therapies
- Next generation antibodies
- Small molecule immunomodulators

In addition to research and development, our expertise also encompasses the field of bioinformatics, which is crucial for the production of individualized therapies. Here, we have developed a validated patient-centric bioinformatics process that enables the application of complex algorithms to patient data in the context of drug manufacturing.

Our business model is to develop, manufacture and market proprietary immunotherapies, either independently or in collaboration with partners, following regulatory approval. Under our COVID-19 vaccine program, we have entered into two strategic collaborations with major pharmaceutical companies, Pfizer Inc. of New York, United States, or Pfizer, and Fosun Pharmaceutical Industrial Development Co. Ltd. of Shanghai, China, or Fosun Pharma, which we continued to advance during the 2021 financial year. In selected cases, collaboration agreements are entered into with third parties for joint product development and joint product commercialization opportunities. This is an approach that may be applied to additional product candidates in the future. BioNTech maintains a culture of scientific excellence, publishes scientific achievements, findings and results in peer-reviewed publications and has a broad patent portfolio. BioNTech's intellectual property strategy also includes licenses from third parties in addition to its own patent portfolio.

Our consolidated revenues during the 2021 financial year includes commercial COVID-19 vaccine revenues in particular, in addition to research and development revenues from collaborations.

1.2 Legal and Organizational Structure

Legal Structure
BioNTech SE was founded in 2008 as a spin-off from Johannes Gutenberg University Mainz. The underlying broad technology and patent portfolio was built up over a period of more than 20 years.

BioNTech SE is the parent company of the BioNTech Group and is responsible for the management and development of the Group. BioNTech SE has its registered office in Mainz, Germany (An der Goldgrube 12, 55131 Mainz). In addition, as of the end of the 2021 financial year, the BioNTech Group included 27 group companies at six different locations in Germany, one location each in Austria, China, Singapore, Turkey, the United Kingdom and the United States.

The following changes in the Group structure occurred during the 2021 financial year:

- In March 2021, BioNTech Turkey Tıbbi Ürünler Ve Klinik Araştirma Ticaret Anonim Şirketi, which translates into English as BioNTech Turkey Pharmaceutical Products and Clinical Trials Trading JSC, Istanbul, Turkey, was founded and is a wholly owned consolidated subsidiary of BioNTech SE.
- In June 2021, BioNTech Austria Beteiligungen GmbH, Vienna, Austria, was liquidated.
- In June 2021, the merger agreement between BioNTech RNA Pharmaceuticals GmbH, Mainz, Germany, and BioNTech SE was registered within the commercial register (Handelsregister) of BioNTech SE under BioNTech RNA Pharmaceuticals GmbH was effectively merged onto BioNTech SE.
- In July 2021, BioNTech (Shanghai) Pharmaceuticals Co. Ltd., Shanghai, China, was founded and is a wholly owned subsidiary of BioNTech Pharmaceuticals Asia Pacific Pte. Ltd., a wholly owned consolidated subsidiary of BioNTech SE.
- In September 2021, BioNTech Services Marburg GmbH, Marburg, Germany, was founded and is a wholly owned consolidated subsidiary of BioNTech SE. In December 2021, the entity was renamed to BioNTech Innovation and Services Marburg GmbH.
- In October 2021, BioNTech SE acquired PhagoMed Biopharma GmbH, Vienna, Austria (subsequently renamed to BioNTech R&D (Austria) GmbH).
- In October 2021, BioNTech Real Estate an der Goldgrube 12 GmbH & Co. KG, Holzkirchen, Germany, was founded and is wholly owned by its limited partner BioNTech Real Estate Holding GmbH, a wholly owned consolidated subsidiary of BioNTech SE.
- In November 2021, BioNTech Innovation GmbH i.G. (in establishment), Mainz, Germany, was founded and is a wholly owned consolidated subsidiary of BioNTech SE.

All entities listed above are included in our consolidated financial statements.

The shares of BioNTech SE are publicly traded as American Depositary Shares (ADS) on the Nasdaq Global Select Market.

Organizational Structure
BioNTech SE, as the parent company of the BioNTech Group, has a dual management system: The Management Board, as the managing body, currently has six members and is appointed and monitored by the Supervisory Board. The Supervisory Board is elected by the Annual General Meeting and currently consists of four members. As of the reporting date December 31, 2021, there were 3,138 employees, of which 1,378 were employed by BioNTech SE (December 31, 2020: 2,047, of which 623 were employed by BioNTech SE) and an annual average of 2,694 employees, of which 1,181 were employed by BioNTech SE (previous year: 1,624, of which 536 were employed by BioNTech SE).

1.3 Commercialization

Our COVID-19 vaccine is based on our proprietary mRNA technology and has been fully licensed, granted conditional marketing approval, or approved or licensed for emergency or temporary use in more than 100 countries and regions worldwide.

The COVID-19 vaccine development program was launched in late January 2020 in response to the COVID-19 pandemic. Under this program, two strategic collaborations with major pharmaceutical companies, Pfizer and Fosun Pharma, were completed and led to the first marketing approvals in December 2020. Clinical development continued during the 2021 financial year to obtain approvals for a broad population across many age groups. Since then, our COVID-19 vaccine has been approved in over 100 countries and regions and has been delivered to over 165 countries and regions.

We hold marketing authorization in the European Union (EU) and emergency or equivalent marketing authorizations in the United States, the United Kingdom, Canada and other countries in advance of a planned application for full marketing authorization in those countries. Pfizer holds marketing and distribution rights worldwide, except in Germany, China and Turkey. We hold the marketing and distribution rights in Germany and Turkey. Fosun Pharma has marketing and distribution rights in mainland China, Hong Kong special administrative region, or SAR, Macau SAR and the region of Taiwan. The mRNA-based COVID-19 vaccine is marketed under the brand name COMIRNATY® in the EU, where we have received the relevant conditional marketing authorization.

We and Pfizer have continuously expanded global vaccine manufacturing capabilities, structures and networks during the 2021 financial year to produce and distribute large volumes of the vaccine in high quality in a timely manner. Thus, expertise from both companies is synergistically leveraged. We contribute significantly with the mRNA manufacturing expertise acquired over nearly a decade, as well as through the continued expansion of our own manufacturing capacity for the joint manufacturing and distribution of the COVID-19 vaccine. Important among other things was the acquisition of our production facility in Marburg, Germany, which is now one of the largest mRNA vaccine production facilities in the world.

1.4 Research and Development

The BioNTech Approach
We are developing next-generation immunotherapies. Our diversified portfolio of oncology product candidates includes individualized therapies as well as potential "off-the-shelf" drugs based on four complementary drug classes:

- mRNA therapies
- Programmable cell therapies
- Next generation antibodies
- Small molecule immunomodulators

Based on our extensive expertise in mRNA vaccine development and in-house manufacturing capabilities, we are developing various mRNA vaccine candidates for a range of infectious diseases, including with collaboration partners, in addition to our diverse oncology pipeline.

mRNA therapies
We use messenger ribonucleic acid (mRNA) to transport genetic information into cells, where it is used to express proteins for therapeutic effect. Currently, we are developing a portfolio of immunotherapy approaches

consisting of four different mRNA formats and three different formulations to derive five different platforms for the treatment of cancer. Four of these platforms are currently in human trials: (i) standard shared antigen immunotherapy (FixVac), (ii) individualized neoantigen-specific immunotherapy (iNeST) in collaboration with Genentech Inc., or Genentech, (iii) intratumoral immunotherapy in collaboration with Sanofi, S.A., or Sanofi and (iv) mRNA encoding specific cytokines (RiboCytokines). In addition, we are developing another platform using mRNA to express specific antibodies, RiboMabs, directly in the patient. Furthermore, our proprietary mRNA technology is also used to treat COVID-19, influenza and other infectious diseases and rare diseases. Since December 2020, our COVID-19 vaccine has been fully licensed, granted conditional marketing approval, or approved or licensed for emergency or temporary use in more than 100 countries and regions worldwide.

Programmable cell therapies
We are developing a range of cell therapies to modify the patient's T cells to target cancer-specific antigens – including chimeric antigen receptor or CAR-T cells, neoantigen-based T cell therapies and T cell receptor or TCR therapies. In addition, the mRNA-based FixVac platform will be applied in combination with the first CAR-T product candidate to improve the persistence of CAR-T cells in vivo. The first CARVac product candidate entered clinical trials in solid tumors in February 2021.

Next generation antibodies
In collaboration with Genmab A/S, Copenhagen, Denmark, or Genmab, we are developing next-generation bispecific antibodies that target immune checkpoints and modulate the patient's immune response to cancer. In addition, BioNTech is exploring further targeted approaches for cancer antibodies using its own patents and research focus. The first two product candidates from this collaboration are in clinical trials.

Small molecule immunomodulators
We are researching small molecule drugs to induce specific immunomodulation profiles. The goal is to enhance the activity of other drug classes by inducing specific and discrete patterns of immunomodulation. We currently have a small molecule Toll-like receptor 7 or TLR7 immunomodulator in clinical trials for the treatment of solid tumors.

Pipeline of Preclinical Programs and Clinical Product Candidates
Our diversified portfolio consists of more than 20 product candidates from four drug classes focused on the treatment of cancer and infectious diseases. 16 oncology product candidates are currently being investigated in 20 clinical trials, five of which are in clinical Phase 2. To date, more than 800 patients with more than 20 solid tumor types have been treated in the oncology therapy programs. In addition, five further preclinical product candidates are being developed and we expect these to enter clinical testing in 2022. Clinical data for key programs have been published in recent years. In Phase 1 studies with product candidate BNT111, antigen-specific immune responses were observed in over 90% of patients with advanced melanoma treated with the lead FixVac product candidate as a single agent. In addition, antigen-specific immune responses were observed in patients treated with the autogenous cevumeran precursor (BNT122), the iNeST product candidate. In both studies, durable objective response (tumor volume reduction) was observed in both the monotherapy and checkpoint combination settings.

Collaborations
In addition to the strategic collaborations with Pfizer and Fosun Pharma entered into as part of the COVID-19 vaccine development program during the 2020 financial year and described above, as well as the ongoing academic collaboration with the University Hospital Mainz and Translational Oncology at the University Medical Center of the Johannes Gutenberg University Mainz gemeinnützige GmbH, or TRON, we have further developed the following collaborations with pharmaceutical and technology companies.

- Genentech: development of individualized neo-epitope-specific mRNA immunotherapies for the treatment of various cancers within our iNeST platform.
- Pfizer: development of an mRNA-based influenza vaccine and an mRNA-based herpes zoster virus vaccine.
- Genmab: development of novel bispecific checkpoint immunomodulators.
- Sanofi: development of mRNA-based intratumoral immunotherapies containing a mixture of synthetic mRNAs.
- Genevant Sciences GmbH: development of mRNA-based protein replacement therapies for five rare disease indications.

Research and Development Employees and Expenses

As of the reporting date December 31, 2021, 1,179 employees, 870 of them at BioNTech SE (December 31, 2020: 789, 329 of them at BioNTech SE), were engaged in research and development. At BioNTech SE, in addition to new hires, the increase mainly results from the reclassification of employment relationships in the context of the merger of BioNTech RNA Pharmaceuticals GmbH into BioNTech SE. Research and development costs amounted to €949.2 million during the 2021 financial year (previous year: €645.0 million). The increase is mainly due to increased research and development activities in our COVID-19 vaccine program. Research and development costs include the portion of costs attributable to us under the terms of the Pfizer collaboration agreement. Development costs are shared between us and Pfizer. The amount of shared development costs originally incurred by Pfizer and subsequently recharged to us was recorded in research and development expenses as purchased services, and Pfizer's reimbursement of the research and development costs originally incurred by us was recorded as a reduction of research and development expenses.

2. Analysis of Business Development

2.1 Macroeconomic and Sector Specific Conditions

Despite the ongoing COVID-19 pandemic, the German economy recovered slightly in 2021, increasing by 2.9%(1) after a decline of 4.9% in 2020. Global economic growth increased by around 5.9%(2) in 2021. Economic activity in Germany remained subdued at the start of 2022. The improvement in Germany originally forecast for later in 2022, as well as the global economic growth of 4.9% initially expected by the International Monetary Fund, or IMF, has already had to be corrected to 4.4% due to the ongoing COVID-19 pandemic, high inflation and supply chain issues.(3)

With the development and advancement of the COVID-19 vaccine against diverse COVID-19 variants, as well as an early warning system designed to detect SARS-CoV2 risk variants more quickly, we are working with other companies, research institutes and governments to continue to contribute to the worldwide effort to overcome the global COVID-19 pandemic and protect against COVID-19. Our goal remains to make the vaccine available to a broad population worldwide.

Therapeutics in Immunotherapy
The global market for therapeutics in oncology continues to grow. The world's largest pharmaceutical companies generated sales of €202.6 billion in 2021, an increase of 14.6%.(4) Cancer drugs will account for a share of just under 18% of the global pharmaceutical market in 2022. In the future, the share of cancer drugs of the pharmaceutical market is expected to increase even further to about 22% by 2025, according to estimates by Statista Health Market Outlook.(5) The volume of the mRNA vaccine market is expected to increase to $46.7 billion by 2026.(6)

Market approval, pricing, and reimbursement are highly regulated in healthcare. On the one hand, governments' strategy is to provide patients with highly effective and safe medicines in a timely manner. On the other hand, cost pressure on global healthcare systems has been increasing for years. Therefore, drug manufacturers not only need to demonstrate the efficacy and safety of their products to gain approval, but also need to demonstrate the cost-effectiveness of their new drug against the respective standard of care to gain reimbursability. The rapid development of the COVID-19 vaccine, based on BioNTech's proprietary mRNA technology, has demonstrated the potential of immunotherapies. The rapid, efficient and safe development was driven by BioNTech's decades of expertise in the research and development of mRNA-based vaccines. BioNTech's mRNA vaccine technology allows for faster development as well as shorter production cycles than would be possible with more traditional methods of vaccine production. This is critical in bringing a COVID-19 vaccine to market and meeting urgent medical needs.

(1) Source: https://www.destatis.de/DE/Themen/Wirtschaft/Volkswirtschaftliche-Gesamtrechnungen-Inlandsprodukt/Tabellen/bip-bubbles.html
(2) Source: https://www.imf.org/en/Publications/WEO/Issues/2022/01/25/world-economic-outlook-update-january-2022#Overview
(3) Source: https://www.tagesschau.de/wirtschaft/weltwirtschaft/iwf-prognose-wachstum-inflation-101.htm
(4) Source: https://www.ey.com/de_de/news/2021/06/ey-pharma-bilanzen-2021
(5) Source: https://de.statista.com/infografik/26720/geschaetzter-umsatz-mit-krebsmedikamenten-und-marktanteil-an-allen-therapiegebieten-weltweit/
(6) Source: https://www.bccresearch.com/market-research/biotechnology/mrna-vaccines-and-therapeutics-market.html

2.2 Net Assets and Financial Position of the Group

2.2.1 Results of Profit or Loss

Revenues
Our revenues, in addition to research and development revenues from collaborations, mainly include commercial COVID-19 vaccine revenues. Revenues from contracts with customers increased by €18,494.4 million from €482.3 million during the 2020 financial year to €18,976.7 million during the 2021 financial year, as our COVID-19 vaccine has been fully approved, granted conditional marketing authorization, or approved or authorized for emergency or temporary use in over 100 countries and regions worldwide since December 2020.

Research and development revenues from collaborations decreased by €76.1 million from €178.8 million during the 2020 financial year to €102.7 million during the 2021 financial year. The decrease was largely due to our COVID-19 vaccine collaboration with Pfizer, which had generated significant research and development revenues in during the 2020 financial year, and moved into the commercial phase.

Commercial sales increased by €18,570.5 million from €303.5 million during the 2020 financial year to €18,874.0 million during the 2021 financial year due to strong demand for our COVID-19 vaccine.

Whenever responsibilities in the manufacturing and supply process of the COVID-19 vaccine shift and the COVID-19 vaccine is transferred, the vaccine is sold from one partner to the other. During the 2021 financial year, revenues increased by €909.5 million from €61.4 million to €970.9 million compared to the previous year from selling drug product batches manufactured by us to collaboration partners.

The allocation of marketing and distribution rights defines territories in which the collaboration partners act as a principal. Revenues from direct COVID-19 vaccine sales in our territories, Germany and Turkey, increased by €2,986.6 million from €20.6 million to €3,007.2 million during the 2021 financial year, compared to the previous year. The share of gross profit received by Pfizer as a collaboration partner based on our sales is recognized as cost of sales.

Based on Pfizer's and Fosun Pharma's COVID-19 vaccine sales in the collaborator territories, we are entitled to a share of the respective gross profit on sales, which represents a net amount and is recognized as collaboration revenues during the commercial phase. Compared to the previous year, revenues in this context increased by €14,640.2 million from €188.5 million to €14,828.7 million during the 2021 financial year. To determine this amount, we used certain information from our collaboration partners, some of which is based on preliminary data shared between the partners and might vary once final data is available so there could be material differences once the final data is available.

Cost of Sales
Cost of sales increased by €2,852.2 million from €59.3 million during the 2020 financial year to €2,911.5 million during the 2021 financial year. The increase was mainly due to recognizing cost of sales related to the sale of COVID-19 vaccines and includes Pfizer's share of our gross profit on sales from transactions in which we act as principal.

Research and Development Expenses
Research and development expenses increased by €304.2 million from €645.0 million during the 2020 financial year to €949.2 million during the 2021 financial year.

The increase resulted primarily from an increase in development costs from clinical trials under the COVID-19 vaccine program that were initiated launched and conducted during the 2021 financial year, and include the share of costs allocated to us under the terms of the Pfizer collaboration agreement. Under the collaboration agreement, development costs are shared and charged accordingly between the partners. Other reasons for the increase were higher wages, salaries and social security expenses resulting from an increased headcount, recording expenses incurred under our share-based-payment arrangements as well as from recognizing inventor remuneration expenses.

Sales and Marketing Expenses
Sales and marketing expenses increased by €35.9 million from €14.5 million during the 2020 financial year to €50.4 million during the 2021 financial year.

The increase resulted in particular from an increase in purchased services, which were incurred in connection with progressing our commercial activities with respect to our COVID-19 vaccine.

General and Administrative Expenses
General and administrative expenses increased by €191.8 million from €94.0 million during the 2020 financial year to €285.8 million during the 2021 financial year.

The increase resulted in particular from higher wages, salaries and social security contributions stemming from increased employee numbers and higher expenses from our share-based payments, higher purchased management and legal advisory services, and higher insurance premiums.

Other Operating Income and Expenses
Other comprehensive income increased by €255.9 million from €248.1 million during the 2020 financial year to €504.0 million during the 2021 financial year.

The increase is mainly attributable to foreign currency differences from the measurement of operating balance sheet items (€446.3 million during the 2021 financial year compared to nil in the previous year). The increase reflects the change in foreign exchange rate and relates to our U.S. dollar denominated trade receivables which were mainly incurred under our COVID-19 collaboration with Pfizer, U.S. dollar denominated trade payables as well as U.S. dollar denominated other financial liabilities which mainly relate to obligations incurred from our license agreements. The amounts were partly offset by recording the change in fair value of foreign exchange forward contracts that were entered into during the 2021 financial year to manage some of our transaction exposures but not classified as hedging instruments (€86.3 million losses and €5.7 million gains during the 2021 financial year compared to nil in the previous year). In addition, other operating income included the share of government grants for the 2021 financial year which were issued during the 2020 financial year under an initiative of the German Federal Ministry of Education and Research, or BMBF, to support the research and development expenses of the COVID-19 vaccine program (€137.2 million during the 2021 financial year compared to €239.0 million in the previous year).

Financial Income and Expenses
Net financial income represents net financial expenses in both the 2021 financial year and the previous year and decreased by €174.0 million from €63.4 million during the 2020 financial year to €237.4 million during the 2021 financial year.

Financial expenses during the 2021 financial year included €277.8 million fair value measurement adjustments of the derivative embedded in the mandatory convertible bond. The change in fair value was primarily based on the change in our share price. In addition, €66.2 million in foreign exchange gains were recognized on financial items such as our U.S. dollar bank accounts during the 2021 financial year compared to €42.6 million in foreign exchange losses in the previous year.

Income Taxes
From tax income of €161.0 million in the previous year, our income taxes increased by €4,914.9 million to €4,753.9 million in tax expenses during the 2021 financial year. Income taxes comprise actual taxes of €4,535.0 million (previous year: nil) and deferred taxes of €218.9 million (previous year: deferred tax income of €161.0 million). Current income taxes include corporate income taxes and trade taxes of our German income tax group and are based on the calculated taxable income. For the 2020 financial year, losses were incurred in total at the level of the German tax group, so that no income taxes were due for the German tax group.

Until the 2020 financial year, no deferred tax assets on tax losses were capitalized as, in accordance with IAS 12, it was not sufficiently probable that future taxable profits would be available against which the unused tax losses could be utilized. As of December 31, 2020, it was considered highly probable that future taxable income would be available for the German income tax group against which the tax losses could be utilized. Based on this, we had recognized net deferred tax assets and liabilities of €161.0 million related to the tax loss carryforwards and temporary differences of the German tax group identified as of December 31, 2020. During the 2021 financial year, the deferred tax assets on the tax loss carryforwards were utilized. The change in deferred taxes was also supplemented by deferred taxes on temporary differences. As of December 31, 2021, we do not recognize deferred tax assets on the losses of our U.S. tax group, our other companies outside Germany and the German companies that are not part of the tax group.

Annual Result
During the 2021 financial year, a profit of €10,292.5 million (previous year: €15.2 million) was generated.

2.2.2 Financial Position

The objective of the BioNTech Group's financial management is to provide liquidity for the growth of its companies. Until December 2020, we financed our activities mainly through our equity investors, since then, proceeds from commercial sales of our COVID-19 vaccine have become an important source of liquidity. Scenario and cash flow planning are used to determine liquidity needs.

Capital Structure
There was no change in subscribed capital during the 2021 financial year. As of December 31, 2021, our subscribed capital comprised 246,310,081 voting bearer shares, of which 3,788,592 (previous year: 4,789,016) were held as treasury shares. The par value of our shares is €1.00 and confers one voting right per share at the Annual General Meeting. The financing of ongoing clinical trials, as well as the development, build-up of production capacity and acceleration of the commercialization of our COVID-19 vaccine was primarily funded from cash flow from operating activities.

In November 2020, we entered into a sales agreement, or the Sales Agreement, with Jefferies LLC and SVB Leerink LLC, as sales agents, to establish an at-the-market offering program. Through this program, we may, in due course, sell ADSs embodying ordinary shares for aggregate gross proceeds of up to $500.0 million. During the 2021 financial year, we sold 995,890 ADSs, each representing one ordinary share previously held as treasury shares, under the Sales Agreement for aggregate gross proceeds of $200.0 million (€163.6 million). As of December 31, 2021, the remaining capacity under the sale agreement was $207.1 million. Under the at-the-market offering program, the ADSs will be sold through the stock exchange, so shareholders' preemptive rights will not be affected. The new issuance of the 995,890 ordinary shares was recorded as a reduction of treasury stock of €1.0 million. In addition, additional paid-in capital increased by €162.6 million during the 2021 financial year as a result of the transaction, while offsetting costs of €2.7 million were recognized in equity as a deduction from additional paid-in capital.

Capital Expenditures
During the 2021 financial year, investments were made in particular in property, plant and equipment in the amount of €127.5 million (previous year: €66.0 million). The investments were mainly made in connection with new buildings, particularly of BioNTech Innovative Manufacturing Services GmbH and our plant acquisition in Gaithersburg, USA. During the 2021 financial year, only €0.2 million (previous year: €85.6 million) was invested in property, plant and equipment in connection with company acquisitions (previous year: acquisition of the new subsidiary BioNTech Manufacturing Marburg GmbH). Investments in intangible assets amounted to €10.1 million during the 2021 financial year (previous year: €8.6 million). In addition, €43.3 million was invested in intangible assets in connection with company acquisitions, mainly in connection with the acquisition of the new subsidiary BioNTech R&D (Austria) GmbH (previous year: acquisition of the new subsidiary BioNTech US Inc. €93.3 million, thereof €57.5 million in goodwill).

Scheduled depreciation of property, plant and equipment amounted to €29.4 million during the 2021 financial year (previous year: €15.9 million). Amortization of intangible assets amounted to €16.8 million (previous year: €16.6 million).

Liquidity
As of December 31, 2021, our cash and cash equivalents amounted to €1,692.7 million compared to €1,210.2 million as of December 31, 2020. Primarily, the significant increase in cash inflow during the 2021 financial year is due to payments received from commercial sales of our COVID-19 vaccine and our share of gross profit from commercial sales of our partner Pfizer's COVID-19 vaccine included therein. We receive a large portion of these payments in U.S. dollars, which exposes us to significant currency risks. Operating activities, which mainly include the share of gross profit received, as well as payments in connection with research and development activities, generated a positive cash flow from operating activities of €889.7 million (previous year: negative cash flow of €13.5 million).

For investing activities, which include the investments described above, we spent €566.1 million during the 2021 financial year (previous year: €144.8 million).

2.2.3 Net Assets

As of December 31, 2021, total assets amounted to €15,830.8 million, compared to €2,318.6 million as of December 31, 2020. The increase mainly resulted from increased receivables from our COVID-19 collaboration with Pfizer and the following developments:

Current and Non-Current Assets
Compared to December 31, 2020, non-current assets increased by €106.8 million, from €651.7 million to €758.5 million as of December 31, 2021. The increase resulted primarily from investments in property, plant and equipment, rights of use and intangible assets, including from company acquisitions, which were partly offset by depreciation and amortization.

The increase in current assets by €13,405.4 million, from €1,666.9 million as of December 31, 2020, to €15,072.3 million as of December 31, 2021, resulted mainly from the increase in cash and cash equivalents, as well as increased receivables from our COVID-19 collaboration with Pfizer and receivables from our customers that we supply directly in our territory.

Equity
Compared to December 31, 2020, equity increased by €10,521.9 million, from €1,371.8 million to €11,893.7 million as of December 31, 2021. The increase mainly resulted from the profit during the 2021 financial year. The equity ratio increased by 15.9 percentage points to 75.1% (previous year: 59.2%).

Liabilities
Compared with December 31, 2020, liabilities increased by €2,990.3 million, from €946.8 million to €3,937.1 million as of December 31, 2021. The increase mainly resulted from income tax liabilities, increases in obligations arising from our license agreements, and the revaluation of the derivative embedded in our convertible note.

2.3 Performance Indicators of the Group and BioNTech SE

2.3.1 Non-Financial Performance Indicators of the Group and BioNTech SE

Innovation was classified as a material non-financial performance indicator during the 2021 financial year in line with the materiality analysis on sustainability carried out in 2020 and the qualitative review of this analysis and the GAS 20 criteria, and is used for internal management.

We develop individualized immunotherapies using state-of-the-art technologies in the fight against cancer, infectious diseases and rare diseases. We support the United Nations Sustainable Development Goals (SDGs). In this context, research makes a relevant contribution to supporting the third United Nations Sustainable Development Goal (SDG 3): Ensure healthy lives and promote well-being for all people at all ages. Progress in research achievements, such as the development and commercialization of the COVID-19 vaccine, is a key performance indicator. We are working to clinically demonstrate the benefits of additional treatment approaches and are continuously expanding collaborations and manufacturing capabilities to offer innovative treatments to patients around the world.

2.3.2 Financial Performance Indicators of the Group and BioNTech SE

Based on our historical development, in which we financed ourselves until December 2020 mainly through the issuance of our ordinary shares, proceeds from our collaboration agreements, secured bank loans and the issuance of a convertible bond, cash flow planning compliance continues to serve as a financial performance indicator. Our liquidity requirements are monitored and managed on the basis of a liquidity management system. This liquidity management includes the specification of expenditure budgets, planning of financing requirements and ensuring sufficient liquidity holdings. During the 2021 financial year, our Controlling Committee regularly reviewed the Group's existing liquidity balances, focusing on total cash and cash equivalents, cash outflows and currency-related changes in cash and cash equivalents. Since December 2020, our COVID-19 vaccine has been fully approved, granted conditional marketing authorization, or approved or authorized for emergency or temporary use in over 100 countries and regions worldwide. Since then, revenues and expense measures have also been the focus of our management as financial performance indicators.

These include revenues based on sales of our COVID-19 vaccine, research and development costs, selling, general and administrative expenses, and our investments in property, plant and equipment and intangible assets.

Our COVID-19 vaccine revenues primarily include our share of gross profit from the sales of our collaboration partners and the revenues we generate from direct COVID-19 vaccine sales in our territories allocated based on marketing and distribution rights, Germany and Turkey. In addition, our revenues include revenues from COVID-19 vaccine sales to our partners. Revenues are strongly influenced by the volumes available under the collaboration and the agreed upon purchase volumes and serve as a performance indicator of our current commercial profitability. We aim to generate long-term sustainable revenues from the COVID-19 vaccine program by expanding access to the vaccine through supply expansion, broader distribution with a well-known brand, and continuous optimization. In addition, our future earnings potential is highly dependent on the development of the clinical pipeline and the responsible use of the financial resources generated. We are monitoring the build-up of our pipeline in oncology and infectious diseases based on the research and development expenses spent in this context. The build-up of internal administrative and coordinative functional areas such as Finance, Human Resources or Business Development, which is related to the significant increase in business volume and the expansion of research and development, is also monitored in terms of the corresponding expenditures. In addition, investments in property, plant and equipment and intangible assets are considered, which are made in order to further promote the growth of the Company as a whole. The availability of production capacities as well as a powerful IT infrastructure that supports digitalization are critical to the success of BioNTech's further growth.

2.4 Overall Statement on the Business Development and Position of the Group and BioNTech SE

Our immunotherapy technologies and expertise have led to the development of the COVID-19 vaccine, the first mRNA drug in history to combat the COVID-19 pandemic. We are pursuing the goal of developing new therapies against various diseases with high unmet medical needs. These activities still require high investments at this stage. Therefore, in addition to financial metrics, we continue to measure our business success primarily by our research performance, and in particular by the achievement of the targets we have set. Together with collaboration partners, we have developed a pipeline of more than 20 product candidates in oncology. Currently, 16 product candidates are in 20 clinical trials. We have initiated a total of four Phase 2 and five Phase 1 clinical trials during the 2021 financial year. In this respect, we have further developed collaborations and made positive pipeline progress in oncology during the 2021 financial year, which is in line with expectations and planning.

3. Management Report of BioNTech SE

3.1 Supplementary Notes According to HGB

BioNTech SE is the parent company of the BioNTech Group and is headquartered in Mainz, Germany. In addition, at the end of the 2021 financial year, the BioNTech Group included 27 group companies at six different locations in Germany, one location each in Austria, China, Singapore, Turkey, the United Kingdom and the United States. Key management functions for the Group, such as corporate strategy, risk management, investment management tasks, executive and financial management, as well as communication with important target groups of the Group, are the responsibility of the Management Board of BioNTech SE. With its operating activities, in particular in connection with the two collaboration agreements with Pfizer and Fosun Pharma, which were concluded by BioNTech SE in the context of the COVID-19 vaccine program, BioNTech SE generated the major part of the Group's revenues.

BioNTech RNA Pharmaceuticals GmbH, Mainz, as the transferring legal entity, entered into a merger agreement with BioNTech SE as the acquiring legal entity on April 15, 2021. The merger became effective under commercial law with retroactive effect as of January 1, 2021, upon entry in the commercial register of BioNTech SE (Mainz Local Court, HRB 48720) on June 22, 2021. As a result of the registration of the merger, BioNTech SE became the universal successor of BioNTech RNA Pharmaceuticals GmbH. As part of the universal succession, all employees and contractual agreements, such as collaboration agreements with our partners Genentech Inc. and Sanofi S.A., were transferred. The transfer was made at book value. There was no effect on income from the merger.

BioNTech SE is not managed separately using its own performance indicators, as the Company is integrated into the Group management system. The explanations given for the Group apply. The economic framework conditions of BioNTech SE essentially correspond to those of the BioNTech Group and are described in detail in Section 2.

3.2 Net Assets, Financial Position and Results of Profit or Loss of BioNTech SE

3.2.1 Results of Profit or Loss

	Year ended December 31,	
(in millions)	2021	2020
Revenues	€14,933.8	€362.8
Cost of sales	€(1,642.0)	€(15.6)
Gross profit	**€13,291.8**	**€347.2**
Research and development expenses	€(816.2)	€(405.3)
Selling expenses	€(12.8)	€(3.8)
General and administrative expenses	€(226.4)	€(107.8)
Other operating income	€638.9	€242.0
Other operating expenses	€(118.0)	€(42.1)
Operating result	**€12,757.3**	**€30.2**
Income from profit transfer	€2,691.6	€0.9
Other interest and similar income	€6.0	€5.7
Interest and similar expenses	€(19.1)	€(2.7)
Expenses from loss transfer	€(52.2)	€(163.0)
Profit / (loss) before taxes	**€15,383.6**	**€(128.9)**
Income taxes	€(4,606.0)	€—
Net income / (loss)	**€10,777.6**	**€(128.9)**

Revenues
Revenues increased by €14,571.0 million, from €362.8 million during the 2020 financial year to €14,933.8 million during the 2021 financial year. Commercial revenues increased due to high demand for our COVID-19 vaccine and are largely attributable to revenues recognition under the two collaboration agreements with Pfizer and Fosun Pharma, to which BioNTech SE is a party.

Cost of Goods Sold and Services Rendered to Generate Revenues
Cost of goods sold and services rendered to generate revenues increased by €1,626.4 million, from €15.6 million during the 2020 financial year to €1,642.0 million during the 2021 financial year. Cost of goods sold and services rendered to generate revenues primarily include the share of our gross profit that Pfizer receives as a collaboration partner based on our sales. In addition, sales-related licensing costs for third-party intellectual property contribute to the increase in cost of goods sold and services rendered to generate revenues.

Research and Development Expenses
Research and development expenses increased by €410.9 million, from €405.3 million during the 2020 financial year to €816.2 million during the 2021 financial year. The increase resulted primarily from an increase in development costs from clinical trials under the COVID-19 vaccine program, which were launched and conducted during the 2021 financial year and include the share of costs allocated to us under the terms of the Pfizer collaboration agreement. Other reasons for the increase were higher wages, salaries and social security expenses resulting from an increased headcount, recording expenses incurred under our share-based-payment arrangements as well as from recognizing inventor remuneration expenses.

General and Administrative Expenses
General and administrative expenses increased by €118.6 million, from €107.8 million during the 2020 financial year to €226.4 million during the 2021 financial year. The increase resulted in particular from higher wages, salaries and social security contributions stemming from increased employee numbers and higher expenses from our share-based payments, higher insurance contributions and higher intercompany recharges.

Other Operating Income
Other operating income increased by €396.9 million, from €242.0 million during the 2020 financial year to €638.9 million during the 2021 financial year. Other operating income during the 2021 financial year mainly included foreign currency gains from the translation of our U.S. dollar denominated trade receivables, which mainly arose from our COVID-19 collaboration with Pfizer. This was slightly offset by a decrease in government grants recognized as income, which were issued during the 2020 financial year as part of a BMBF initiative to support the research and development expenses of the COVID-19 vaccine program.

Financial Result
The financial result, comprising the effects of profit and loss transfer and interest income and expenses, increased by €2,785.4 million compared to the previous year, from €159.1 million financial expenses to €2,626.3 million in financial income during the 2021 financial year. The increase resulted in particular from the sharp rise in income from the profit transfer from affiliated companies (net profit transfer of €2,639.4 million; previous year: net loss transfer of €162.1 million). The net interest expense included in the financial result deteriorated by €16.1 million compared with the previous year, from €3.0 million in interest income to €13.1 million in interest expense during the 2021 financial year.

Taxes on Income and Earnings
Income taxes amounted to €4,606.0 million during the 2021 financial year (previous year: nil). The increase is due to increased revenues and income recognition related to our COVID-19 vaccine sales and includes corporate income taxes and trade taxes of our German income tax group and is based on calculated taxable income.

Annual Result
Net income of €10,777.6 million was reported during the 2021 financial year (previous year: net loss of €128.9 million).

3.2.2 Financial Position

The objective of the financial management of BioNTech SE is essentially identical to that of the Group and involves providing liquidity for the growth of the Group companies.

Capital Structure
There was no change in subscribed capital during the 2021 financial year. As of December 31, 2021, our subscribed capital comprised 246,310,081 bearer shares with voting rights, of which 3,788,592 were held as treasury shares. The par value of our shares is €1.00 and each certifies one voting right at the Annual General Meeting. During the 2021 financial year, we sold 995,890 ADSs, corresponding to one ordinary share each, previously held as treasury shares, for total gross proceeds of $200.0 million (€163.6 million) under the Sales Agreement. As of December 31, 2021, the remaining capacity under the sale agreement was $207.1 million. Under the at-the-market offering program, the ADSs will be sold through the stock exchange, so shareholders' preemptive rights will not be affected. The new issue of the 995,890 ordinary shares was recorded as a reduction of treasury shares of €1.0 million. As a result, the capital reserve increased by €162.6 million during the 2021 financial year. In addition, the capital reserve changed by €75.3 million in connection with share-based payments. The change also includes the effects from commitments for share-based payments for employees of subsidiaries that are fulfilled by BioNTech SE.

Investments
Total investments of €352.9 million (previous year: €467.0 million) were made during the 2021 financial year. In addition, the merger resulted in a reduction in fixed assets in the amount of €163.2 million, which, in addition to the additions to intangible assets and property, plant and equipment resulting from the merger, mainly resulted from the disposal of the loan to BioNTech RNA Pharmaceuticals GmbH due to the merger. The amount consisted of investments in property, plant and equipment amounting to €26.9 million (previous year: €20.2 million), plus €7.1 million from the merger and investments in intangible assets €6.7 million (previous year: €6.2 million), plus €46.7 million from the merger, and investments in shares, loans to affiliated companies and shareholdings amounting to €319.3 million (previous year: €440.6 million), offset by a negative merger effect of €217.0 million. Scheduled depreciation of property, plant and equipment amounted to €10.6 million in 2021 (previous year: €5.0 million). Amortization of intangible assets amounted to €9.7 million (previous year: €3.5 million).

Liquidity
As of December 31, 2021, BioNTech SE had cash and cash equivalents of €1,396.8 million compared to €976.3 million as of December 31, 2020. Essentially, the significant increase on the inflow of cash and cash equivalents during the 2021 financial year is due to the payments received from commercial sales of our COVID-19 vaccine and our share of the gross profit of commercial sales of the COVID-19 vaccine of our partner Pfizer included therein. We receive a large portion of these payments in U.S. dollars, which exposes us to significant currency risks. Operating activities, which mainly include the share of gross profit received as well as payments in connection with research and development activities, generated a positive cash flow from operating activities of €854.8 million (previous year: €222.9 million).

3.2.3 Net Assets

(in millions)	December 31, 2021	December 31, 2020
Assets		
Fixed assets		
Intangible assets	€52.8	€11.2
Property, plant and equipment	47.0	25.0
Financial assets	755.6	734.3
Total fixed assets	**€855.4**	**€770.5**
Current assets		
Inventories	1.6	0.7
Receivables and other assets	13,114.9	182.4
Cash on hand and bank balances	1,396.8	976.3
Total current assets	**€14,513.3**	**€1,159.4**
Prepaid expenses	24.5	26.4
Total assets	**€15,393.2**	**€1,956.3**

(in millions)	December 31, 2021	December 31, 2020
Liabilities and shareholders' equity		
Equity		
Subscribed capital	246.3	246.3
Capital reserve	1,883.8	1,645.9
Treasury shares	(3.8)	(4.8)
Retained earnings	5,132.4	—
Accumulated profit / (accumulated loss)	5,132.3	(512.9)
Total equity	**€12,391.0**	**€1,374.5**
Provisions		
Tax provisions	1,573.3	—
Other provisions	1,096.2	63.2
Total provisions	**€2,669.5**	**€63.2**
Liabilities		
Bonds	100.4	100.4
Liabilities to banks	—	50.0
Trade accounts payable	55.1	42.5
Liabilities to affiliated companies	71.6	230.3
Other liabilities	13.4	95.4
Total liabilities	**€240.5**	**€518.6**
Deferred income	19.9	—
Deferred tax liabilities	72.3	—
Total liabilities	**€15,393.2**	**€1,956.3**

As of December 31, 2021, total assets amounted to €15,393.20 million, compared to €1,956.3 million as of December 31, 2020. The increase was mainly the result of increased receivables from our collaboration partner Pfizer.

Fixed Assets and Current Assets
Compared with December 31, 2020, non-current assets increased by €84.9 million, from €770.5 million to €855.4 million as of December 31, 2021. In addition to additions in intangible assets and property, plant and equipment, the increase in financial assets is attributable to a reclassification.

Compared to December 31, 2020, current assets increased by €13,353.9 million, from €1,159.4 million as of December 31, 2020, to €14,513.3 million as of December 31, 2021. The increase mainly resulted from the increased level of receivables from Pfizer.

Equity
Compared with December 31, 2020, equity increased by €11,016.5 million, from €1,374.5 million to €12,391.0 million as of December 31, 2021. The increase resulted primarily from the net profit generated during the 2021 financial year. The equity ratio increased by 10.2 percentage points to 80.5% (2020: 70.3%).

Provisions and Liabilities
Compared to December 31, 2020, provisions and liabilities increased by €2,328.2 million from €581.8 million to €2,910.0 million as of December 31, 2021. The increase mainly resulted from increased tax provisions and other provisions, which mainly include provisions for outstanding invoices, which mainly include obligations under license agreements arising in connection with the sale of our COVID-19 vaccine in our territories and the territories of our collaboration partners where we and our partners use third-party intellectual property.

3.3 Forecast, Opportunity and Risk Report

The business development of BioNTech SE is essentially subject to the same risks and opportunities as the BioNTech Group, as BioNTech SE participates in the risks of the Group companies via its investments. As a result of the central financial management of the BioNTech Group, all financing transactions are essentially conducted via BioNTech SE. As the parent company of the BioNTech Group, BioNTech SE is integrated into our Group-wide risk management.

3.4 Relationships with Affiliated Companies

Final declaration of the Management Board of BioNTech SE on the report on relationships with affiliated companies for the 2021 financial year (dependent company report pursuant to Section 312 para. 3 sentence 3 AktG):

"According to the circumstances known to us at the time when the legal transactions were carried out or the measures were taken, BioNTech SE received appropriate consideration for each legal transaction and measure listed and has not been disadvantaged by the fact that measures were taken or not taken."

4. Forecast, Opportunity and Risk Report

4.1 Forecast

We are part of the pharmaceutical and biotechnology industry, which stands out nationally and internationally for its innovative strength. Global demographic change and medical progress offer the industry solid growth prospects. Based on the Company's proprietary mRNA technology, we succeeded in becoming the first company worldwide to develop a highly effective and safe vaccine against COVID-19 in compliance with scientific standards within one year and to successfully market it globally in 2021. This demonstrates our ability to develop and market medicines and therapies based on innovative technologies that add great value for patients and society.

The original plans for the 2021 financial year were significantly exceeded by actual developments. The forecast for the 2021 financial year was continuously adjusted due to new and expanded supply contracts. Based on originally expected sales revenues of approximately €9.8 billion, a total of €19.0 billion in sales revenues was finally achieved during the 2021 financial year, of which €18.8 billion is attributable to commercial COVID-19 vaccine sales.

For the 2022 financial year, Pfizer and we have already signed supply agreements for 2.4 billion doses of COVID-19 vaccine. We expect commercial COVID-19 vaccine sales of between €13 billion and €17 billion for the 2022 financial year, as follows:

- expected revenues related to our share of gross profit from sales by our collaboration partners in territories allocated to them based on marketing and distribution rights;
- expected revenues from direct COVID-19 vaccine sales to customers in our territories;
- and expected revenues from sales to our collaboration partners of products produced by us.

We plan to deliver at least 2 billion doses of COVID-19 vaccine to middle- and low-income countries by the end of 2022. Since 2021 until the beginning of March 2022, approximately 1.3 billion of these COVID-19 vaccine doses have already been delivered.

Revenues are strongly influenced by the volumes available under the collaboration and the agreed purchase quantities. Against this backdrop, we are monitoring and planning corresponding production capacities. We intend to further expand these during the 2022 financial year. For the 2022 financial year, Pfizer and we anticipate a production capacity of up to 4 billion COVID-19 vaccine doses. In addition to the further expansion of our mRNA production facilities in Marburg, we plan to build our own fully integrated mRNA production sites in Asia and Africa and also plan to deploy turnkey mRNA production facilities based on a container solution called "BioNTainer" in Africa.

We aim to generate long-term sustainable revenues from the COVID-19 vaccine program by expanding access to the vaccine through broadening supply, broader branded distribution and continued optimization of the vaccine. We are currently working with Pfizer to create the conditions to flexibly adapt the vaccine to the Omicron variant or other potential future mutations if necessary, to optimize the formulations and to make the product accessible to additional patient groups through indication extensions.

With the successful production and commercialization of our COVID-19 vaccine, we have built up a lot of expertise and a global network to develop, produce and market future products worldwide. Based on the success of the COVID-19 vaccine, we expect increased uptake of other mRNA-based vaccines in the immunotherapy field. Our future earnings potential is highly dependent on the development of the clinical pipeline and the responsible use of the financial resources generated. We intend to reinvest the proceeds from the sale of our COVID-19 vaccine and continuously expand the clinical pipeline in both oncology and infectious diseases. During the 2022 financial year, we expect to make significant progress in several clinical trials as well

as data updates in numerous development programs. In connection with the expansion of the product pipeline in the areas of oncology and infectious diseases and the expansion into new areas such as autoimmune diseases, regenerative medicine and allergies, we expect our research and development costs to continue to increase. In this context, we expect expenses of €1.4 billion to €1.5 billion for the 2022 financial year.

For the internal administrative and coordinate functional areas related to the expansion of research and development, such as finance, human resources or business development, costs are also expected to increase. For the 2022 financial year, we expect selling and general administrative expenses in the range of €450 million to €550 million.

Lastly, investments in property, plant and equipment and intangible assets will also increase. In this context, we expect capital expenditures of €450 million to €550 million for the 2022 financial year. This includes expenditures for the expansion and improvement of our research and development as well as the manufacturing facilities described above and investments in a state-of-the-art IT infrastructure to support the Company in all digitalization projects.

The extent to which the COVID-19 pandemic continues to impact our operations and what protective measures remain necessary depends on future developments regarding new variants, which are highly uncertain and cannot be predicted with certainty. We will continue to evaluate potential impacts and provide updates accordingly.

During the 2021 financial year, BioNTech completed the transformation from a research company to a fully integrated biotechnology company with sales revenues in the billion-euro range. The 2022 financial year will follow on seamlessly from this, with the aim of establishing ourselves as a leading company in the field of 21st century immunotherapies with a multi-platform strategy and a diversified product pipeline.

4.2 Risk Report

Assessment of the Overall Risk Situation by the Management Board
The assessment of the overall risk situation is the result of the consolidated consideration of all significant risk categories and individual risks.

From today's perspective, the Management Board of BioNTech SE does not consider the Company's continued existence to be at risk. At the time the management report was prepared, there were no risks to the continued existence of BioNTech SE and its affiliated subsidiaries.

BioNTech SE is convinced that we will be able to master challenges and take advantage of opportunities in the future without taking unjustifiably high risks. In doing so, we strive for a balanced relationship between opportunities and risks. Our aim is to increase the added value for our stakeholders by analyzing and seizing new opportunities.

Risk Management System
As a next-generation immunotherapy company, we are exposed to numerous uncertainties and changes. In order to operate successfully in this volatile environment, we need to anticipate potential developments at an early stage and systematically identify, assess and manage any resulting risks. It is equally important to recognize and exploit opportunities. A functioning risk management system is therefore a central element of value-oriented corporate management for us.

Our company-wide risk management system records strategic, operational, financial and reputational risks as well as the corresponding opportunities.

Opportunities and risks are not offset against each other.

Risk Reporting
The aim is to identify, monitor and manage these risks at an early stage. Risks and their impact on the Company are presented transparently in order to enable effective management of these risks. We use internal and external sources of information for this purpose.

Central risk management prepares an overall risk report for the Management Board twice a year. The Management Board informs the Audit Committee at least twice a year. The Audit Committee deals with this report in its

meetings. If unexpected risks arise – in addition to the regular reporting of significant risks – these are reported directly to the Management Board. The Audit Committee of our Supervisory Board reviews the effectiveness of the risk management system.

The development of the risk management system was again the focus of the Management Board and Supervisory Board during the 2021 financial year, and methods and processes are continuously being refined.

Risk Identification and Assessment
Building on the risks recorded in the previous period, these were reassessed during the 2021 financial year. New risks were recorded and analyzed in the same way as in the previous year. Existing risks were reviewed, sharpened and, if necessary, adjusted with regard to their content and assessment.

The individual risks are assigned to so-called risk owners who are responsible for the management of these risks and who have the necessary competences and responsibility for this. The risk owners evaluate the individual risks by determining the probability of occurrence and the expected impact on the value of the Company. In addition, the risks are expanded to include the dimensions of "reputational damage" and "relevance under criminal law" and assessed verbally.

The risk survey process is generally carried out twice a year (in the first and third quarter). Ad hoc risks are continuously recorded and assessed.

Since the 2021 financial year, the risk survey has been supported by a risk management tool. Within the tool, risks are aggregated via a Monte Carlo simulation, evaluated via a value-at-risk approach and then managed according to the defined risk-bearing capacity.

For critical risks, risk mitigation measures are identified and controlled by the risk owners.

Risk Assessment
Risks are assessed according to "probability of occurrence" and "damage potential".

However, risks with a currently low estimated damage potential may have a greater impact in the future than currently assessed and are therefore continuously further monitored by the central risk management.

Risks with the Greatest Impact
Risks from Strategic Transformation and Integration
We are in a constant process of strategic adjustments. If we cannot implement these plans as expected, we are exposed to certain risks. For example, the benefits of the measures may be less than originally estimated, they may have a later impact than anticipated, or they may not have any effect at all. Any of these factors – alone or in combination – could have a negative impact on our business, assets, financial position and earnings. The transformation is being addressed through various strategic initiatives, including in particular the expansion of existing departments and cross-disciplinary teams as well as the expansion of our tool support and the underlying process landscape. The risk is assessed as high.

Employees
Our workforce plays a crucial role in our transformation. The skills of our employees are an important factor for our business success. If we are unable to attract or retain sufficient experts, this would have a negative impact on our business in the future. New processes and capacities are being developed and built up in order to ensure that the bottleneck caused by the generally high market demand for the recruitment of new employees and relevant specialist staff is met. The risk is assessed as medium.

Research & Development
With currently seventeen product candidates in clinical development, our main activity continues to be research and development and the supervision of clinical trials. Naturally, this also involves the greatest risks. For scientific, procedural or regulatory reasons, product candidates may not be developed to market maturity, or only with a delay. Likewise, despite optimal preparation, unforeseeable complications or side effects may occur in the course of clinical trials, which in the worst case could lead to legal disputes and compensation payments.

The increasing number of candidates in our product pipeline also has a growing impact on the Company's risk situation. We constantly monitor the development of our industry and the market in order to address uncertain factors during the research and development of our candidates in oncology and infectious diseases (e.g. clinical care costs, the number of treatable patients, possible additional costs due to delays in clinical trials or a more difficult patient search due to the pandemic). The risk is considered high.

Our COVID-19 vaccine is our first commercial product on the market and is an effective component in the fight against the COVID-19 pandemic. Sales projected by assumptions are subject to fluctuations and may thus fall short of our own expectations. These fluctuations can be caused, for example, by an incorrect assessment of market size or unforeseen changes in market demand. Changes in the requirements for our vaccine, a missed or delayed adaptation to new virus variants or even superior products from competitors could also have an aggravating effect. Internal capacities are being built and expanded to address the complex landscape of emergency approvals, temporary approvals or conditional approvals. We continuously monitor and analyze market and industry developments in order to identify market entry barriers, growing competition or changes in health legislation at an early stage. In addition, we are in active exchange with government representatives, health insurance companies or other payers. The risk is classified as high.

The various contracts with our collaboration partners and the associated profit share are subject to certain expectations on our side. Despite various reconciliations and our own assessment, actual results may fall short of our expectations, e.g. due to lower sales or market shares in our partners' regions as well as increased costs on our partners' side. In order to be able to better assess the developments, we are in intensive and constant exchange with our partners. Our Management Board classifies the risk as high.

In connection with the continuation of clinical trials, we are in close contact with the clinical centers located in the countries affected by the COVID-19 pandemic and are continuously assessing the impact of the COVID-19 pandemic on clinical trials, expected timelines and costs. The pandemic has affected our ability to recruit patients for clinical trials. This led to delays in the relevant trials. We are constantly monitoring the development of our industry and the market in order to be able to take appropriate countermeasures. The availability and performance of suppliers, licensors and Contract Research Organizations (CROs) due to the impact of COVID-19 was only marginally affected.

Finance
On the finance and liquidity side, we face the possibility of delayed or non-payment from our business partners. Currently, our counterparties consist mainly of customers in the biopharma/biotech industry operating in the U.S. or Germany, and governments of the territories allocated to us under the COVID-19 collaboration agreements on a marketing and distribution rights basis. An impending insolvency of a government thus threatens our revenues. Management considers the risk of delayed or non-payment by individual counterparties to be low and applies specific guidelines to constantly monitor the credit risks of our customers.

A large part of the incoming payments are in U.S. dollars. Consequently, we incur an exchange rate risk for the funds required in euros. With the aim of preserving capital, liquidity surpluses are invested carefully. Possible interest rate risks can lead to opportunities due to a short-term rise in interest rates. We also identify exchange rate risks with regard to foreign currency investments. Exchange rate and interest rate fluctuations can reduce the value of our financial positions. We limit the effects of the identified risks with the help of a coordinated and consistently implemented risk strategy. As a matter of principle, forward exchange transactions are concluded as hedging instruments. In addition, our risk strategy takes into account natural hedging relationships. In addition, developments on the financial markets are continuously monitored in order to be able to react to extraordinary events at short notice.

Compliance and regulation
The rapid growth of recent years favors the risk of a delay in quarterly or annual financial statements. Increased media attention and regulatory requirements also have an impact on timelines, as does the interaction between internal departments and external collaboration partners as sources of information. The necessary processes and systems are being developed. The risk has a high impact on our reputation.

An internal customs department is currently being set up to avoid unintentionally incorrectly issued customs declarations. The risk is assessed as low, but has a high relevance in terms of criminal tax law.

The withholding and deduction of taxes on remuneration for the transfer of the use or the permission to use rights, in particular copyrights and industrial property rights, is actively monitored by our tax department. The risk is assessed as low, but has a high relevance in terms of criminal tax law.

In the area of compliance, the focus is on combating insider trading. Employees could disclose relevant and confidential information to the public and thus, willingly or not, have an impact on the share price. Due to established processes and training, the risk is considered low, but high reputational damage is possible.

Another focus is placed on avoiding bribery and corruption. Due to established processes and training, the risk is rated as low, but medium reputational damage is possible.

Processes and responsibilities need to grow and adapt with rapid growth. It may not be possible to adequately meet the requirements of the Sarbanes-Oxley Act (U.S. federal law designed to improve reporting by companies using the U.S. public capital market). The confidence of the market or individual investors could be damaged. To counteract this, the internal control system is constantly being expanded and further developed. There is a low risk, but high reputational damage is possible.

Legal and IP
Legal risks can be grouped into two categories. On the one hand, there are the contractual risks and, on the other hand, patent-relevant risks.

On the contractual side, BioNTech is confronted with possible breaches of contracts. Different interpretations of the contracts, the claims regulated in them and the distribution of sales and costs could lead to disputes. Provisions are made to counter this risk. A medium residual risk remains.

In addition, in the normal course of business, we may from time to time be involved in discussions with third parties concerning, for example, the use of and compensation for the use of the intellectual property of such third parties. Unintentional infringement of protected intellectual property of others is one of the patent-related risks and is countered by continuous monitoring of patent applications. In addition, in such cases, we continuously assess whether the related circumstances will change in the future, including whether it may be necessary to recognize a provision and whether there are potential indemnification claims against such allegations. A certain residual risk remains.

Intentional or unintentional infringement of our intellectual property by third parties is classified as a low risk, but would have mainly long-term effects.

The rapid growth of recent years shows a looming gap in insurance management, possibly not all events or different events are fully insured. Constant growth makes it difficult for insurance service providers to assess, coverage amounts and related premiums may be set too high or too low. We are in continuous exchange with insurance companies to find an acceptable solution regarding conditions and costs, a central insurance management is being established and several insurance brokers are already engaged. Until the measures taken are fully implemented, the management classifies the risk as medium.

Security
Due to the growing media attention and rapid growth, we are confronted with an increased threat situation. This includes both physical security and the security of digital systems.

Physical security includes unauthorized access to our buildings, theft, vandalism, harassment of our employees and impact on our supply chains. The risk is assessed as medium to high and will be considered in a focused manner over the coming months.

The protection of our data and the security of our information also includes unauthorized access from outside and inside and is already addressed through various measures, for example against different types of extortionist or denial-of-service attacks as well as theft of intellectual property. The risk is rated as medium to high.

Pandemic response
During the 2021 financial year, we continued to face various pandemic-related challenges at different locations. In response to the spread of COVID-19, business practices were changed, including limiting employee travel, developing social distancing plans for employees and cancelling physical attendance at meetings, events and conferences. This has helped to prevent prolonged illness or absenteeism. The safety of our staff is paramount. We have developed a two-step plan for this. In addition to the legal

requirements, we also reduced our present laboratory staff to 50% and office staff to 20%. Flexible scheduling and mobile working further facilitate these requirements. The management estimates an operational delay to be low.

Internal Control System
Our internal control system aims to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our financial statements for external reporting purposes in accordance with International Financial Reporting Standards (IFRS). By listing our share on the Nasdaq Global Select Market, we have established our internal control system based on SOX regulations (Sarbanes-Oxley Act Section 404).

Based on the COSO model (Committee of Sponsoring Organizations of the Treadway Commission), our internal control system for financial reporting is divided into five components: control environment, risk assessment, control activities, information and communication, and monitoring of the internal control system.

The effectiveness of internal control over financial reporting is regularly reviewed and assessed against the COSO components in accordance with Section 404 SOX. As of December 31, 2021, the control system over financial reporting was assessed as effective by our Management Board.

Given the limitations inherent in the system, the design of the internal control over financial reporting and the diligence of the control implementation do not lead to absolute certainty that the financial reporting objectives will be achieved and misstatements will always be prevented or detected.

4.3 Opportunity Report

In pursuit of our vision, we are focused on transforming the treatment of cancer and infectious diseases and creating long-term value for patients, society and our shareholders through innovative and personalized medicines and therapies that harness the full potential of the human immune system. Based on the key building blocks listed below, we believe we are well positioned to provide people around the world with access to our therapies and medicines and to ensure that they benefit from them.

Pipeline of Preclinical Programs and Clinical Product Candidates
Underpinning our vision is our understanding and long experience in mRNA, synthetic biology and other innovative technologies. We are working with a broad range of tools across multiple technology platforms, including a wide spectrum of potentially first-in-class therapeutic approaches, to provide individually tailored therapies for diverse disease forms and manifestations. We also use bioinformatics processes and algorithms to do this. Our platform is composed of patent-protected technologies in the drug classes mRNA therapies, programmable cell therapies, next-generation antibodies and small molecule immunomodulators. The acquisition of BioNTech Austria in October 2021 also opens up the possibility for us to enter more deeply into the field of synthetic lysines.

Our diversified product portfolio represents a large repertoire of potential future market-ready products, which at the same time enables us to reduce the impact of product candidates that do not make it to market on the overall development of the Company.

The rapid development, successful commercialization and delivery of our COVID-19 vaccine, based on our proprietary mRNA technology, has demonstrated the potential of immunotherapies. The speed and success of developing a vaccine based on mRNA technology has also demonstrated that not only highly effective and safe vaccines can be produced based on this technology, but that mRNA technology also enables faster product development and shorter production cycles than conventional vaccine technologies. The ongoing development of the COVID-19 vaccine with respect to the omicron variant and potential future viral variants provides us with the opportunity to continue to be the leading provider of COVID-19 vaccines, together with our partner Pfizer.

We believe we are well positioned to develop the next generation of immunotherapies, which have the potential to change treatment paradigms for therapies for cancer, infectious diseases and other serious conditions, and significantly improve clinical outcomes for patients.

In oncology, we are exploring and exploiting novel targets and target combinations. Our goal is to extend the benefits of cancer immunotherapies to patient populations that cannot currently benefit from effective therapies. To increase the potential efficacy of our immunotherapies, we develop drug candidates that are precisely targeted. By combining compounds with synergistic mechanisms of action, such as the combination of our FixVac immunotherapy (CARVac) with our novel CAR-T therapies, we aim to increase drug activity and counteract resistance mechanisms.

Production

For the production of the COVID-19 vaccine, BioNTech has established a global supply chain and production network in 2020 and 2021, in addition to expanding internal production capacities, in particular through the acquisition of the manufacturing site in Marburg. In 2022 and the following years, we will build or lease the laboratories, production facilities and office space necessary for the Company's further expansion, as well as further expanding the partner network.

We plan to build our own fully integrated mRNA production sites in Asia and Africa with capacity to produce hundreds of millions of doses of various mRNA-based vaccines. Our plans in Asia include building a fully integrated mRNA manufacturing facility in Singapore and our first regional headquarters for Southeast Asia. We anticipate that the Singapore facility could be operational in 2023. Using a novel approach, we have also designed and manufactured turnkey mRNA production facilities based on a container solution called "BioNTainer", which are designed to enable scalable mRNA vaccine production in bulk. The establishment of the first mRNA manufacturing facility in the African Union is expected to start in mid-2022 and the first BioNTainer is expected to arrive in Africa in the second half of 2022.

Our global COVID-19 vaccine supply chain and manufacturing network includes 20 production sites on four continents. This gives us the opportunity to provide people around the world with fast and easy access to state-of-the-art medicines and therapies. In addition, the increasing digitalization and automation of business processes, supported by effective process management, creates opportunities for us to create additional value and increase efficiency.

Commercialization

Last year, we transformed from a pharmaceutical start-up to a global, profitable and fully integrated biotechnology company thanks to the successful production and commercialization of our COVID-19 vaccine. The financial resources gained in 2021 and expected in 2022 put us in a good position to accelerate the expansion of our portfolio in the field of oncology and to open up further therapeutic areas and sales markets. In this way, we want to succeed in assuming a leading role in the rapidly growing market for immunotherapies in the coming years. With the commercial team created in 2020 and the establishment of two sales companies in Germany and Turkey, we have created the necessary conditions to also be able to market future products worldwide on our own and thus significantly reduce our dependency on partners.

We are also building a digital commercial ecosystem to enable even better interaction with the Company's stakeholders, including a personalized customer journey, a sales performance program and a smart learning platform.

In the future, we will continue to use the opportunity to expand our own know-how with promising complementary technologies and strengthen production capacities with targeted acquisitions and investments in other companies. In this context, the increased attention on our company due to the successful development and production of a COVID-19 vaccine as well as its commercialization also offers the opportunity to enter into new partnerships with leading global companies, foundations and academic research institutions for the development and distribution of further products.

Team and Corporate Culture

Standing behind the great successes of the past two years are our now more than 3,000 employees. In addition, we have a management team consisting of renowned scientists, experienced entrepreneurs and the biotechnology investors who support us. In order to be able to continue our successful development, it is of great importance for us to continue to attract the best minds for the Company in the future.

Both the Management Board and the Supervisory Board see the maintenance of our corporate culture, exemplified by "Project Lightspeed", which has led to the rapid and successful development of our COVID-19 vaccine, as a fundamental part of our strategy to manage our expected future organizational growth. A "Culture Campus" we created brings together employees from a wide range of disciplines to work together to develop the culture based on the founding team's vision.

The Group has identified key factors of our corporate culture based on a data-driven process: a strong sense of purpose, a focus on fostering contribution and responsiveness. Scientific rigor, innovation and passion drive us. We foster self-confidence in our staff, give them the ambition they need to be pioneers and push boundaries, and also take the time to celebrate our own successes. Cohesion is an important part of our culture, which focuses on collaboration, teamwork and a learning culture that sees both successes and failures as opportunities for growth. Despite our significant growth, we strive to remain adaptable, which is critical for innovation, efficiency and identifying opportunities and possibilities. Finally, we remain responsible, acting with integrity and making decisions based on sustainability, our values and scientific data.

We enjoy a high profile in Germany and worldwide and have a corporate culture that current and potential employees can identify with. This gives the Company the opportunity to become a globally attractive employer for the best talent in both the scientific and administrative fields.

5. Corporate Governance Statement Pursuant to Section 315d in Conjunction with Section 289f HGB

5.1 Declaration on the Corporate Governance Code Pursuant to Section 161 AktG

The German Stock Corporation Act (AktG) requires that the Management Board and Supervisory Board of German companies listed on a stock exchange regulated and supervised by a state-recognized body issue an annual declaration either (i) stating that the recommendations of the Corporate Governance Code, or "Code" have been complied with or (ii) listing the recommendations with which the Company has not complied and explaining the reasons for the deviation from the recommendations of the Corporate Governance Code (Declaration of Compliance). There is no obligation to comply with the recommendations or suggestions of the Corporate Governance Code. A company listed in this sense is obliged to further indicate in this annual declaration whether it intends to comply with the recommendations or to list the recommendations it does not intend to comply with in the future. This statement shall be made publicly available online.

If the Company changes its policy with regard to certain recommendations between these annual statements, it must disclose this fact and explain the reasons for the deviation from the recommendations. Non-compliance with the suggestions also contained in the Corporate Governance Code in addition to the recommendations does not have to be disclosed.

Our Management Board and Supervisory Board have dealt in detail with the recommendations of the Corporate Governance Code and on March 29, 2022, issued the following Declaration of Conformity pursuant to Section 161 para. 1 AktG, which, in accordance with the Code, is issued in connection with the Corporate Governance Declaration pursuant to Section 315d in conjunction with Section 289f HGB.

BioNTech SE has complied and will continue to comply with all recommendations of the German Corporate Governance Code as amended on December 16, 2019, with the exception of the points listed below.

- According to Item B.1 of the Code, the Supervisory Board shall pay attention to diversity in the composition of the Management Board. On May 4, 2020, the Supervisory Board of the Company set targets for the proportion of women on the Management Board at 25%. Mr. Jens Holstein was appointed to the Management Board as Chief Financial Officer on July 1, 2021. Prior to the appointment of Mr. Holstein, an extensive selection process took place with several female and male candidates. Mr. Holstein was appointed on the basis of his expertise, his many years of experience and his profile as Chief Financial Officer, and he was considered to be the most suitable candidate for the position of Chief Financial Officer and the best fit for the Company compared to all other candidates. The Supervisory Board is working on the target values with regard to diversity on the Management Board and will continue to take these into account in the future.

- According to Item B.3 of the Code, the initial appointment of Management Board members shall be for a period of no more than three years. In deviation from this, the Management Board member Mr. Holstein was appointed on July 1, 2021 for a period of four years. With regard to Mr. Holstein's many years of experience and individual qualifications, the Company considers an initial appointment of four years to be necessary and appropriate. Furthermore, the Company considers the initial appointment for a four-year period to be in the best interest of the Company in order to be able to implement long-term strategic corporate goals and decisions.

- According to Item C.7 of the Code, it is recommended that more than half of the members of the Supervisory Board be independent of the Company and its Management Board. Accordingly, a Supervisory Board member is independent of the Company and its Management Board if he or she has no personal or business relationship with the Company or its Management Board that could constitute a material and not merely temporary conflict of interest. In assessing independence, the length of service on the Supervisory Board is to be taken into account, among other factors. Despite the fact that three out of four members of the Supervisory Board have exceeded the period of membership recommended in the Code, all members of the Supervisory Board are considered to be independent. The Supervisory Board considers it advantageous and essential for the Company to maintain the knowledge and experience currently available on the Supervisory Board. This includes many years of knowledge of the Company and its industry as well as comprehensive professional knowledge in the areas of finance, economics, science and the capital markets, which is particularly important in view of the current steady global growth and change of the Company. Due to the longstanding relationship with the Company and the existing economic independence from the Company, as well as the lack of other concerns that could cause possible conflicts of interest, the length of service of the three nominated Supervisory Board members does not prevent them from being independent (see Item C.8 of the Code).

- The variable remuneration for the Management Board is only payable if defined stringent performance criteria are met. If necessary, the Supervisory Board is authorized to reduce the remuneration pursuant to Section 87 para. 2 of the German Stock Corporation Act (AktG). With the implementation of the new remuneration system within the framework adopted by the Annual General Meeting on June 22, 2021, it was determined that, in the future, service contracts of Management Board members that are to be newly concluded or extended should contain so-called malus and clawback provisions that entitle the Company to withhold or reclaim variable remuneration components in whole or in part in the event that the Management Board member in question violates internal Company conduct guidelines or legal obligations. Furthermore, service contracts of Management Board members to be newly concluded or extended will in future contain a provision which requires Management Board members to repay variable remuneration already paid out if it turns out that the basis for calculating the amount paid out was incorrect. Currently, these new regulations only affect some of the Management Board members. For the remaining Management Board members, it is planned to amend the employment contracts accordingly during the 2022 financial year (see Item G.11 of the Code).

5.2 Composition and Working Practices of the Management Board, Supervisory Board and Committees

Two-Tiered Board Structure

We are a European public company with limited liability (*Societas Europaea* or SE) (also referred to as European stock corporation, and in the official terminology of the European legislation referred to as European public limited-liability company), having its seat in Germany. We have chosen to have a two-tiered SE structure. Hence, our corporate bodies are the Management Board (*Vorstand*), the Supervisory Board (*Aufsichtsrat*) and the shareholders' meeting (*Hauptversammlung*). Our Management and Supervisory Boards are entirely separate, and, as a rule, no individual may simultaneously be a member of both boards.

Our Management Board is responsible for the day-to-day management of our business in accordance with applicable laws, our Articles of Association and the Management Board's internal rules of procedure (*Geschäftsordnung*). Our Management Board represents us in our dealings with third parties.

The principal function of our Supervisory Board is to supervise our Management Board. The Supervisory Board is also responsible for appointing and removing the members of our Management Board, representing us in connection with transactions between a current or former member of the Management Board and us, and granting approvals for certain significant matters.

Our Management Board and our Supervisory Board are solely responsible for, and manage, their own areas of competency (*Kompetenztrennung*); therefore, neither board may make decisions that, pursuant to applicable law, our Articles of Association or the internal rules of procedure are the responsibility of the other board. Members of both boards owe a duty of loyalty and care to us. In carrying out their duties, they are required to

exercise the standard of care of a prudent and diligent businessperson. If they fail to observe the appropriate standard of care, they may become liable to us.

In carrying out their duties, the members of both boards must take into account a broad range of considerations when making decisions, including our interests and the interests of our shareholders, employees, creditors and, to a limited extent, the general public, while respecting the rights of our shareholders to be treated on equal terms. Additionally, the Management Board is responsible for implementing an internal monitoring system for risk management purposes.

Our Supervisory Board has comprehensive monitoring responsibilities. To ensure that our Supervisory Board can carry out these functions properly, our Management Board must, among other duties, regularly report to our Supervisory Board regarding our current business operations and future business planning (including financial, investment and personnel planning). In addition, our Supervisory Board, or any of its members, is entitled to request special reports from the Management Board on all matters regarding the Company, our legal and business relations with affiliated companies and any business transactions and matters at such affiliated companies that may have a significant impact on our position at any time.

Under German law, our shareholders have, as a general rule, no direct recourse against the members of our Management Board or the members of our Supervisory Board in the event that they are believed to have breached their duty of loyalty and care to us. Apart from when we are unable to fulfill our third party obligations, tortious conduct to board members or other special circumstances, only we have the right to claim damages against the members of our two boards.

We may waive these claims to damages or settle these claims only if at least three years have passed since a claim associated with any violation of a duty has arisen and only if our shareholders approve the waiver or settlement at a shareholders' meeting with a simple majority of the votes cast, provided that no shareholders who in the aggregate hold one-tenth or more of our share capital oppose the waiver or settlement and have their opposition formally recorded in the meeting's minutes.

5.2.1 Supervisory Board

Under German law, the Supervisory Board must consist of at least three members, although a company's articles of association may provide for a higher number. The Supervisory Board currently consists of four members. Since BioNTech is not subject to co-determination, the members of the Supervisory Board are elected by the General Meeting in accordance with the provisions of the SE Regulation and the German Stock Corporation Act.

The following table sets forth the names and functions of the current members of our Supervisory Board, their ages as of December 31, 2021, their terms (which expire on the date of the relevant year's general shareholders' meeting) and their principal occupations outside of our Company:

Name (Function)	Age	Expiry of mandate	Main occupation (other relevant Supervisory Board mandates)
Helmut Jeggle (Chairman of the Supervisory Board)	51	2023	Managing partner and entrepreneurial venture capital investor of Salvia GmbH (Supervisory Board member 4SC AG, AiCuris AG, AFFiRiS AG, APK AG and Tonies SE)
Michael Motschmann (Supervisory Board member)	64	2023	Member of the Management Board and Head of Investments of MIG Capital AG (Member of the Supervisory Boards of AFFiRiS AG, APK AG, HMW-Emissionshaus AG and HMW-Innovations AG)
Prof. Christoph Huber, M.D. (Supervisory Board member)	77	2023	Professor Emeritus of the Johannes Gutenberg University Mainz (Deputy Chairman of the Supervisory Board Tirol Kliniken GmbH)
Dr. Ulrich Wandschneider (Deputy Chairman of the Supervisory Board)	60	2023	Managing Director of beebusy capital GmbH and independent consultant for companies in the life science and healthcare sector (Member of the Supervisory Board Vanguard AG from January 1 to December 31, 2021)

The business address of the members of the Supervisory Board is the same as the business address of BioNTech: An der Goldgrube 12, 55131 Mainz, Germany.

German law requires that the Supervisory Board consists of at least three members, while a company's articles of association may stipulate a certain higher number. Our Supervisory Board currently consists of four members.

As we are not subject to co-determination, the members of our Supervisory Board are all elected by the shareholders' meeting in accordance with the provisions of the SE Regulation and the AktG. German law does not require the majority of our Supervisory Board members to be independent and neither our Articles of Association (Satzung) nor the rules of procedure for our Supervisory Board provide otherwise. As per our Supervisory Board's assessment, an appropriate number of shareholder representatives on the Supervisory Board (i.e. the entire Supervisory Board) are independent if the Supervisory Board has two independent members. In addition to Dr. Ulrich Wandschneider, the Supervisory Board considers Helmut Jeggle, Michael Motschmann and Prof. Christoph Huber, M.D. to be independent irrespective of the fact that they will soon have been members of the Supervisory Board for a period of more than 13 years. As stated in the declaration to the German Corporate Governance Code, or the Corporate Governance Code, (Entsprechenserklärung) published by the Company on March 29, 2022, pursuant to Section 161 para. 1 of the German Stock Corporation Act (Aktiengesetz), which in accordance with the Corporate Governance Code is issued in connection with the Declaration pursuant to Section 315d in conjunction with Section 289f of the German Commercial Code (HGB), the length of membership does not give rise to any fears of material conflicts of interest on the part of the members of the Supervisory Board and therefore does not stand in the way of their independence. However, the rules of procedure for our Supervisory Board provide that the Supervisory Board should have an independent member with expertise in the field of accounting, internal control processes and auditing. Dr. Ulrich Wandschneider fulfills this role.

Under European law, a member of a Supervisory Board of an SE may be elected for a maximum term to be specified in the articles of association, which must not exceed six years. Re-election, including repeated re-election, is permissible. The shareholders' meeting may specify a term of office for individual members or all of the members of our Supervisory Board which is shorter than the standard term of office and, subject to statutory limits, may set different start and end dates for the terms of members of our Supervisory Board. Our Articles of Association provide for a term of approximately five years, depending on the date of the annual general shareholders' meeting in the year in which the term of the relevant member is to expire.

The shareholders' meeting may, at the same time as it elects the members of the Supervisory Board, elect one or more substitute members. The substitute members replace members who cease to be members of our Supervisory Board and take their place for the remainder of their respective terms of office. Currently, no substitute members have been elected or have been proposed to be elected.

Members of our Supervisory Board may be dismissed at any time during their term of office by a resolution of the shareholders' meeting adopted by at least a simple majority of the votes cast. In addition, any member of our Supervisory Board may resign at any time by giving one month's written notice – or, in the event of cause, giving written notice with immediate effect – of his or her resignation to the Management Board.

Our Supervisory Board elects a chairperson and a deputy chairperson from its members. The deputy chairperson exercises the chairperson's rights and obligations whenever the chairperson is unable to do so. The members of our Supervisory Board have elected Mr. Helmut Jeggle as chairperson and Dr. Ulrich Wandschneider as deputy chairperson, each for the term of their respective membership on our Supervisory Board.

The Supervisory Board meets at least twice every six months. Our Articles of Association provide that a quorum of the Supervisory Board members is present if at least three of its members participate in the vote. Members of our Supervisory Board are deemed present if they attend the meeting via telephone or other (electronic) means of communication (including via video conference) or submit their written vote through another member. Additionally, our Articles of Association allow for resolutions to be taken via telephone or other (electronic) means of communications (including via video conference).

Resolutions of our Supervisory Board are passed by the vote of a simple majority of the votes cast unless otherwise required by law, our Articles of Association or the rules of procedure of our Supervisory Board. In the event of a tie, the chairperson of the Supervisory Board has the casting vote. Our Supervisory Board is not permitted to make management decisions, but in accordance with European and German law and in addition to its statutory responsibilities, it has determined that certain matters require its prior consent, including:

- entering into certain large transactions;
- creating or holding any interest in businesses (except wholly owned subsidiaries) or disposing of shares in businesses (except for a sale of JPT);
- issuing shares from authorized capital, unless the shares are issued pursuant to a redemption of stock appreciation rights; and
- acquiring treasury shares in return for valuable consideration.

The remuneration of the members of the Supervisory Board is described in the remuneration report, which will be prepared for the first time for the 2021 financial year in accordance with the requirements of Section 162 AktG and published on the website.

Each member of the Supervisory Board shall disclose any conflicts of interest to the Supervisory Board, especially those that may arise from providing advice or holding any offices or board positions at customers, suppliers, creditors or other third parties. Material conflicts of interest that are not merely temporary and that are specific to a particular Supervisory Board member shall result in this particular member leaving office. Our Supervisory Board also puts in place adequate measures to limit, prevent or resolve conflicts of interest in accordance with applicable legal requirements and the Company's Conflicts of Interest Policy.

Our Supervisory Board conducted a self-assessment together with an external consultant for the 2021 financial year. It covered all key aspects of the Supervisory Board's work, including its committees, and was conducted with all members in the form of virtual interviews. The results of the self-assessment were subsequently presented to the Supervisory Board by the external consultant and evaluated, discussed and possible suggestions for improvement discussed together with the Supervisory Board. This confirmed the professional, very good cooperation within the Supervisory Board and with the Management Board, which is characterized by a high level of trust. No fundamental need for change was identified.

Supervisory Board Practices

Decisions are generally made by our Supervisory Board as a whole, however decisions on certain matters may be delegated to committees of our Supervisory Board to the extent permitted by law. The chairperson, or if he or she is prevented from doing so, the deputy chairperson, chairs the meetings of the Supervisory Board and determines the order in which the agenda items are discussed, the method and order of voting, as well as any adjournment of the discussion and passing of resolutions on individual agenda items after a due assessment of the circumstances. Our Supervisory Board may designate further types of actions as requiring its approval.

In addition, each member of the Supervisory Board is obliged to carry out his or her duties and responsibilities personally, and such duties and responsibilities cannot be generally and permanently delegated to third parties. However, the Supervisory Board and its committees have the right to appoint independent experts for the review and analysis of specific circumstances in accordance with its control and supervision duties under applicable European and German law. We would bear the costs of any such independent experts that are retained by the Supervisory Board or any of its committees.

Pursuant to Section 107 para. 3 of the AktG, the Supervisory Board may form committees from among its members and charge them with the performance of specific tasks. The committees' tasks, authorizations and processes are determined by the Supervisory Board. Where permissible by law, important powers of the Supervisory Board may also be transferred to committees.

By resolution, the Supervisory Board has established an Audit Committee, a Compensation, Nominating and Governance Committee and a Capital Markets Committee. Set forth in the table below are the current members of the Audit Committee, the Compensation, Nominating and Corporate Governance Committee and the Capital Markets Committee.

Name of Committee	Current Members
Audit Committee	Dr. Ulrich Wandschneider (Deputy Chairman Supervisory Board), Michael Motschmann (Supervisory Board member) and Prof. Christoph Huber, M.D. (Supervisory Board member)
Remuneration, Nomination and Corporate Governance Committee	Michael Motschmann (Supervisory Board member), Prof. Christoph Huber, M.D. (Supervisory Board member) and Dr. Ulrich Wandschneider (Deputy Chairman Supervisory Board)
Capital Markets Committee	Helmut Jeggle (Chairman Supervisory Board) and Michael Motschmann (Supervisory Board member)

Audit Committee

Our Audit Committee consists of Dr. Ulrich Wandschneider, Michael Motschmann and Prof. Christoph Huber. Dr. Ulrich Wandschneider is the chair of the Audit Committee. The Audit Committee assists the Supervisory Board in overseeing the accuracy and integrity of our financial statements, our accounting and financial reporting processes and audits of our financial statements, the effective functioning of our internal control system, our risk management system, our compliance with legal and regulatory requirements, our independent auditor's qualifications and independence, the performance of the independent auditor and the effective functioning of our internal audit functions, and, subject to certain limitations, adopts and implements pertinent decisions on behalf of the Supervisory Board. The Audit Committee's duties and responsibilities to carry out its purpose, include, among others:

- making a recommendation of the audit committee to the Supervisory Board with respect to the proposal for the appointment of the auditors
- considering the commissioning of the audit engagement, as well as the compensation, retention and oversight of the independent auditor;
- evaluating the qualifications, independence and quality of performance of the independent auditor;
- reviewing and pre-approving the audit and non-audit services to be performed by the independent auditor;
- reviewing and discussing the annual audit plan, as well as critical accounting policies and practices to be used with the independent auditor and management;
- discussing and determining additional areas of audit focus, as appropriate;
- reviewing and discussing the adequacy and effectiveness of our internal accounting controls and critical accounting policies with the independent auditor and management;
- reviewing and discussing the results of our annual audit with the independent auditor and management;
- reviewing of non-financial reporting;
- reviewing the effectiveness of the compliance management system;
- reviewing and discussing any quarterly or annual earnings announcements with the independent auditor and management;
- reviewing any related party transactions and reviewing and monitoring potential conflict of interest situations on an ongoing basis for compliance with our policies and procedures; and
- overseeing procedures for the receipt, retention and treatment of complaints received regarding accounting, internal accounting controls or auditing matters.

Within the limits of applicable European and German law, the Audit Committee shall have the resources and authority appropriate to discharge its duties and responsibilities, including the authority to select, retain, terminate, and approve the fees and other engagement terms of special or independent counsel, accountants or other experts and advisors, as it deems necessary or appropriate for so discharging its duties and responsibilities, without seeking approval of the Management Board or Supervisory Board.

As Chairman of the Audit Committee, Dr. Ulrich Wandschneider has the special knowledge and experience in accordance with the requirements of the German Corporate Governance Code. In addition, both Dr. Ulrich Wandschneider and Michael Motschmann have expertise in the field of accounting and expertise in the field of auditing.

Compensation, Nomination and Corporate Governance Committee
Our Compensation, Nominating and Corporate Governance Committee consists of Michael Motschmann, Prof. Christoph Huber, M.D. and Dr. Ulrich Wandschneider. Mr. Motschmann is the chair of the committee. The Compensation, Nominating and Corporate Governance Committee's duties and responsibilities to carry out its purpose include, among others:

- preparing and discussing policies relating to the remuneration of the members of our Management Board with management;
- reviewing and supervising corporate goals and objectives for the remuneration of the members of the Management Board, including evaluation of the performance of the members of the Management Board in light of these goals and proposals to the Supervisory Board for remuneration based on such evaluations;
- reviewing all equity-based compensation plans and arrangements and making recommendations to the Supervisory Board regarding such plans;
- assisting with identifying and recruiting candidates to fill positions on the Management Board and the Supervisory Board;
- considering any corporate governance issue that arises and developing appropriate recommendations for the Supervisory Board; and
- overseeing the evaluation of the Supervisory Board and reporting on its performance and effectiveness.

Capital Market Committee
Our Capital Markets Committee consists of Helmut Jeggle and Michael Motschmann. Mr. Jeggle is the chair of the committee. The Capital Markets Committee advises and makes recommendations to the Supervisory Board on issues in connection with capital measures and takeover, merger and acquisition activities. Its responsibilities include the following tasks:

- overseeing the activities of the Company relating to its capital structure and capital raising, including preparation for and implementation of public offerings and share issuances; and
- overseeing the activities of the Company relating to takeovers, mergers and acquisitions.

5.2.2 Management Board

Our Management Board consists of at least two members. Our Supervisory Board determines the exact number of members of our Management Board. Pursuant to the Articles of Association, the Supervisory Board may also appoint a chairperson or a spokesman of the Management Board. Prof. Ugur Sahin, M.D. has been appointed the chair of the Management Board.

Name	Age	Expiry of mandate	Position (main responsibilities)
Prof. Ugur Sahin, M.D.	56	2022	Chief Executive Officer (Research and Development, Scientific Collaborations, Patent Filings, Quality Assurance and Project Management)
Sean Marett	56	2022	Chief Business Officer and Chief Commercial Officer (Business Development, Alliance Management, Marketing and Sales, Legal and Intellectual Property)
Dr. Sierk Poetting	48	2026	Chief Operating Officer (Production, IT, Laboratories and Infrastructure, and Internal Communications)
Prof. Özlem Türeci, M.D.	54	2025[1]	Chief Medical Officer (Clinical Development, Regulatory and Medical Affairs)
Ryan Richardson	42	2022	Chief Strategy Officer (Corporate Strategy, Capital Market Responsibility and Investor Relations)
Jens Holstein	58	2025	Chief Financial Officer (Finance, Human Resources, Risk Management and Purchasing)

(1) Initial term until May 31, 2022 (renewed as from March 1, 2022, until May 31, 2025).

The appointment of Jens Holstein to the Management Board became effective on July 1, 2021.

The members of our Management Board are appointed by our Supervisory Board for a term of up to five years. They are eligible for reappointment or extension, including repeated re-appointment and extension, after the completion of their term in office, in each case again for up to an additional five years. Under certain circumstances, such as a serious breach of duty or a vote of no confidence by the shareholders in a shareholders' meeting, a member of the Management Board may be removed from office by our Supervisory Board prior to the expiration of his or her term.

The members of our Management Board conduct the daily business of the Company in accordance with applicable laws, our Articles of Association and the rules of procedure for the Management Board adopted by our Supervisory Board. They are generally responsible for the management of our company and for handling our daily business relations with third parties, the internal organization of our business and communications with our shareholders.

A member of the management board of an SE governed by German law may not deal with or vote on matters relating to proposals, arrangements or contractual agreements between himself or herself and the company, and a member of our Management Board may be liable to us if he or she has a material interest in any contractual agreement between the Company and a third party which is not disclosed to and approved by our Supervisory Board.

The rules of procedure for our Management Board provide that certain matters require a resolution of the entire Management Board, in addition to transactions for which a resolution adopted by the entire Management Board is required by law or required by our Articles of Association. In particular, the entire Management Board shall decide on, among others:

- the budget plan for the following year, which is to be presented by the Management Board to the Supervisory Board by December 20 of each year;
- reporting to the Supervisory Board;
- all measures and transactions that require the Supervisory Board's approval;
- all measures and transactions relating to a business area that is of extraordinary importance to us or involving an extraordinary economic risk;
- taking on new lines of business or discontinuing existing lines of business;
- acquisitions or sales of interests or holdings; and
- certain large transactions.

The remuneration of the members of the Management Board is described in the remuneration report, which will be prepared for the first time for the 2021 financial year in accordance with the requirements of Section 162 AktG and published on the website.

5.3 Objectives for the Composition of the Management Board Pursuant to Section 76 para. 4 AktG and the Supervisory Board Pursuant to Section 111 para. 5 AktG and Diversity Concept

Our social aspirations in our core business are complemented by good corporate governance. In this context, the staffing of the Management Board and Supervisory Board as well as long-term succession planning must be appropriately adapted to the needs of the Company. In addition to the professional and personal qualifications of the members of the Management Board and the Supervisory Board, we take diversity and the appropriate participation of women into account in the composition of both bodies. Furthermore, we pay attention to a balanced age structure to ensure long-term succession planning and have set the maximum age of Management Board members at 70 years and Supervisory Board members at 80 years. The Management Board and the Supervisory Board are of the opinion that the current composition takes full account of the objectives thus defined for the composition of these bodies.

On May 4, 2020, the Supervisory Board set the target for the proportion of women on the Management Board at 25% and on the Supervisory Board at 25% in accordance with Section 111 para. 5 AktG. The deadline by which this target is to be achieved was set at December 31, 2022.

In addition, the Supervisory Board has developed a competence profile for the entire Board. The competence profile takes into account the following areas: Lifescience experience, Lifescience Sales and Marketing, Accounting, Annual Audit, Controlling (incl. operational controlling, strategic controlling, cash management, risk management), HR, international experience/relevant markets and gender. When filling the entire board, the Supervisory Board always strives to fill out this competence profile.

In our Management Board, which currently consists of six members, Prof. Özlem Türeci, M.D., assumes the function of Chief Medical Officer. Thus, the current female quota of the Management Board is 17%.

In accordance with Section 76 para. 4 of AktG, the Management Board also decided on April 29, 2020, on the target number of women in management positions. The share of women in members of the top management level below the Management Board and the second top management level below the Management Board shall each be at least 30%. The respective target figure is to be reached by December 31, 2022, at the latest.

As of December 31, 2021, a total of 43% (previous year: 45%) of the members of the top management level below the BioNTech Management Board are women. At the second highest management level below the Management Board, 52% (previous year: 45%) of the positions at BioNTech are held by women as of December 31, 2021. The targets were therefore achieved in both, the 2020 and the 2021 financial year.

5.4 Integrity and Ethics

Compliance & Business Ethics
BioNTech has implemented a fully-fledged compliance and ethics program consisting of three typical compliance program elements: prevention, detection and response.

Prevention
The Compliance & Business Ethics team makes all applicable policies and guidelines, as well as a number of relevant tools, available to employees through the BioNTech Best Practices (BxP) Hub platform. The BxP Hub is also used for digital training (e-learnings, online videos, etc.). Furthermore, employees can use this platform to register potential conflicts of interest and gifts and invitations from external parties, both received and given. The Compliance & Business Ethics Team ensures the prevention of compliance risks by proactively communicating with employees and advising on all risky business relationships.

Detection
Through continuous monitoring and audits, risks are identified at an early stage and addressed by the Compliance & Business Ethics team. Monitoring and audits therefore not only mean looking for errors and violations, but also checking holistically in which areas the compliance processes can be improved. Of course, the Compliance & Business Ethics team also offers employees the opportunity to report violations and risks of any kind through the "Contact Point for Ethics Protection" in the BxP Hub – anonymously and without negative consequences.

Response
In cases of suspicion, the Compliance & Business Ethics team conducts internal investigations. If breaches of rules are identified, they are analyzed for any procedural weaknesses in order to remedy them. Disciplinary measures are initiated in the event of serious violations.

The resources for the further development and implementation of the compliance program were significantly increased in 2021. For example, the number of employees in the Compliance & Business Ethics team has increased fourfold in 2021. This is to ensure that the Compliance & Business Ethics Team is able to cope with the growing organization and to adequately address any new risks that may arise. Overall responsibility for the compliance program lies with the Management Board. The Audit Committee receives regular reports on the functioning of the compliance program.

In addition to the core tasks carried out by the Compliance & Business Ethics Team, the Company has established a Compliance Advisory Committee (CAC) composed of senior staff from various functions such as Quality Assurance, Legal, Finance, Controlling and Operations to address potential compliance risks in a concerted and cross-functional manner. The CAC reviews and discusses all new policies to ensure cross-functional alignment

Code of Business Conduct & Ethics
To strengthen good corporate governance, the Code of Business Conduct & Ethics was revised in 2019. This code of conduct applies to all members of the Supervisory Board, members of the Management Board, managing directors of the group companies and employees of BioNTech. The code can be accessed online at www.biontech.de. It is considered to be the fundamental basis for conduct when performing activities for/on behalf of BioNTech. It provides an overview of the general requirements that reflect compliance with laws, regulations and BioNTech internal policies. It covers, among others, human rights and international labor standards, anti-discrimination, patient safety, data protection, occupational safety,

anti-corruption and fair competition. The code is communicated to every BioNTech employee and all employees are required to sign to understand and comply. In addition, compliance with the code has become part of BioNTech's employment contracts from April 2021. If an employee violates the Code of Business Conduct & Ethics, this may result in a number of disciplinary consequences, up to and including termination of employment.

Conflict of Interest Policy
BioNTech has adopted a Conflict of Interest Policy that sets out the procedures by which the Company manages potential and actual conflicts of interest. According to the Conflicts of Interest Policy, which applies to all Supervisory Board members, Management Board members, managing directors of BioNTech's group companies and employees of the Company, any actual, potential or perceived conflict of interest must be disclosed in the BxP Hub mentioned above. If the conflict is of a transactional nature and involves a member of the Management Board or the Supervisory Board, the Management Board or the Supervisory Board, respectively, decides whether to approve the transaction with the abstention of the conflicted member.

Anti-Bribery and Anti-Corruption (ABAC) Policy
BioNTech is committed to eliminating all forms of corruption, including extortion and bribery. BioNTech underlined these principles by signing the UN Global Compact in March 2020.

The Company has an Anti-Bribery and Anti-Corruption Policy (ABAC), which is subject to an annual review (latest version dated November 2020). According to this, BioNTech has a zero tolerance policy towards corruption and bribery and prohibits any form of bribery (passive or active; indirect or direct). Every employee and consultant who provides services to the Company on a longer-term basis is required to receive training on the ABAC policy and to sign it. In addition, the ABAC clauses are part of every contract entered into with high risk business partners (sales intermediaries, third parties acting on behalf of BioNTech). For BioNTech, the following applies: Bribery – no matter by whom, at which level, in which organization – is never acceptable.

In addition, the company has implemented a due diligence process for third parties that addresses potential ABAC risks. Based on certain criteria, high-risk third parties are screened for potential risks. Once the third party due diligence process has been utilized, the Legal Department includes ABAC provisions in the relevant contracts as a standard measure to mitigate ABAC risk from third parties acting on behalf of BioNTech.

Donation Policy
A donation policy was developed by the Corporate Social Responsibility (CSR) team and approved directly by the Management Board. A donation policy was approved and implemented by the Management Board on November 1, 2020. The policy defines donations and the approval process for donations made by BioNTech. Donations must be within the defined donation strategy and policy and are reviewed and approved individually by the Compliance Advisory Committee.

All donations are reviewed against the following basic requirements:

- The donation is made to a charitable or non-profit organization and not to an individual or for-profit company. Donations are not made to health care organizations.
- There are no parallel (business) relationships between BioNTech and the organization receiving the donation.
- BioNTech may not receive parallel benefits from the receiving organization, including affiliated organizations
- The donation does not serve the personal interests of any individual
- The donation does not directly/specifically serve the commercial interests of BioNTech.
- The receiving organization is duly registered or accredited under applicable local laws to receive donations.

6. Remuneration Report

The remuneration report for the 2021 financial year is prepared for the first time in accordance with the requirements of Section 162 AktG and published on the website at www.biontech.de

7. Non-Financial Report

Since our founding, we have focused on our vision of harnessing the power of the immune system to combat human disease and major health burdens for which there are currently no or inadequate medical therapies. This approach has led to a robust and diversified product pipeline in oncology and infectious diseases. Our COVID-19 vaccine, the first mRNA therapy ever approved and our first commercial product, emerged from our product pipeline that includes over 17 clinical-stage product candidates and more than 30 research programs.

We support the United Nations Sustainable Development Goals (SDGs). Our research and development work makes an important contribution to supporting the United Nations' third Sustainable Development Goal (SDG 3): To ensure healthy lives and promote well-being at all ages. This is in line with our core commitment to global social responsibility. At the heart of our business practices is the goal that people around the globe benefit from our research and innovations. As part of this effort, we continue to focus on urgent medical needs and fair and equitable access to new medicines.

Climate Strategy

These efforts only make sense in the long term in a healthy world where planetary boundaries are respected. If humanity does not succeed in limiting global warming to 1.5 °C compared to pre-industrial levels, severe consequences for people and nature all over the world are to be expected. We therefore support the legally binding global agreement on climate change, or Paris Agreement adopted at the 21st United Nations Climate Change Conference, or COP 21 at the end of 2015 and the UN's 13th Sustainable Development Goal (SDG 13) to take immediate action to address the climate crisis and its impacts.

Against this background, we are contributing to climate protection and reducing greenhouse gas (GHG) emissions massively and directly. During the 2021 financial year, a comprehensive climate strategy was developed with the involvement of relevant parts of the company and several Management Board members.

We are addressing the climate crisis by minimizing the impact of our operations and reducing GHG emissions in operations and throughout the value chain. Based on the best practice standard of the Science Based Target Initiative (SBTi) and in line with the definitions of the scientific community, our 2030 climate neutrality target will be aligned with science-based mitigation targets for both operations and our value chain.

Based on the analyses and preliminary work carried out during the 2021 financial year and after consultation with the Supervisory Board, the Management Board set emission reduction targets in line with the Science Based Targets Initiative during the first quarter of 2022. These, as well as further information on our emissions and reduction measures, will be presented in the Sustainability Report 2021 and published on the homepage at www.biontech.de. To achieve these short-term Science Based Targets, we plan to integrate GHG emission reduction targets into expansion and investment planning, supply and value chain management and operations, and recognize additional CapEx, OpEx and RTD requirements.

From a risk perspective, we are also aware of the impact of climate change on our business. To mitigate climate risks, we will increase our focus on change and physical climate risks and opportunities in 2022 and 2023. Within the next two years, we aim to report on climate-related risks and opportunities in line with the recommendations of the TCFD (Task Force on Climate-related Financial Disclosures), including potential climate risks in the supply chain.

ESG Ratings

Our efforts were recognized by Institutional Shareholder Services' responsible investment arm, ISS ESG (Environmental, Social, Governance) in 2021: ISS ESG awarded BioNTech a "Prime" ESG rating (top 10% of the industry) following the publication of the first sustainability report for the 2020 financial year.

The S&P Global Corporate Sustainability Assessment (S&P CSA) gave us an overall score of 20 out of 100 as a non-participating company in 2021 (S&P Global ESG Score). These are companies that are only rated based on publicly available information and do not actively participate in the CSA. The rating was last updated on November 12, 2021 and is updated annually or in response to significant developments.[7]

CSR Management

Our CSR management, including the fields of action, the material CSR topics as well as the CSR program, will be presented in detail in the separate Sustainability Report 2021 and made available online at www.biontech.de.

With the publication of relevant and material non-financial information, we address all stakeholders and especially investors with high expectations regarding the performance of companies in the areas of environmental, social and governance (ESG).

(7) Source: https://www.spglobal.com/esg/scores/results?cid=5164480

8. Events after the Reporting Period

A detailed description of the events after the reporting period can be found in the notes to the consolidated financial statements and the financial statements of BioNTech SE.

Mainz, March 29, 2022

BioNTech SE

Prof. Ugur Sahin, M.D.
Chief Executive Officer, CEO

Jens Holstein
Chief Financial Officer, CFO

Sean Marett
Chief Business Officer, CBO and Chief Commercial Officer, CCO

Dr. Sierk Poetting
Chief Operating Officer, COO

Prof. Özlem Türeci, M.D.
Chief Medical Officer, CMO

Ryan Richardson
Chief Strategy Officer, CSO

Group Report 2021

Consolidated Statements of Profit or Loss

		Years ended December 31,		
(in millions, except per share data)	Note	2021	2020	2019
Revenues				
Research & development revenues	6	€102.7	€178.8	€84.4
Commercial revenues	6	18,874.0	303.5	24.2
Total revenues		**€18,976.7**	**€482.3**	**€108.6**
Cost of sales	7.1	(2,911.5)	(59.3)	(17.4)
Research and development expenses	7.2	(949.2)	(645.0)	(226.5)
Sales and marketing expenses	7.3	(50.4)	(14.5)	(2.7)
General and administrative expenses	7.4	(285.8)	(94.0)	(45.5)
Other operating expenses	7.5	(94.4)	(2.4)	(0.7)
Other operating income	7.6	598.4	250.5	2.7
Operating income / (loss)		**€15,283.8**	**€(82.4)**	**€(181.5)**
Finance income	7.7	67.7	1.6	4.1
Finance expenses[1]	7.8	(305.1)	(65.0)	(2.0)
Profit / (loss) before tax		**€15,046.4**	**€(145.8)**	**€(179.4)**
Income taxes	8	(4,753.9)	161.0	0.2
Profit / (loss) for the period		**€10,292.5**	**€15.2**	**€(179.2)**
Attributable to:				
Equity holders of the parent		10,292.5	15.2	(179.1)
Non-controlling interests		—	—	(0.1)
Profit / (loss) for the period		**€10,292.5**	**€15.2**	**€(179.2)**
Earnings per share[2]				
Basic profit / (loss) for the period per share		€42.18	€0.06	€(0.85)
Diluted profit / (loss) for the period per share		€39.63	€0.06	€(0.85)

(1) Finance expenses disclosed separately in prior periods have been condensed. Please refer to *Note 7.8* for further details on finance expenses.

(2) Capital increase due to 1:18 share split occurred on September 18, 2019. Retroactive effect is reflected in number of shares which relate to the period before the share split.

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

Consolidated Statements of Comprehensive Income / (Loss)

		Years ended December 31,		
(in millions)	Note	2021	2020	2019
Profit / (loss) for the period		**€10,292.5**	**€15.2**	**€(179.2)**
Other comprehensive income / (loss)				
Other comprehensive income / (loss) that may be reclassified to profit or loss in subsequent periods, net of tax				
Exchange differences on translation of foreign operations		8.4	(11.1)	0.1
Net other comprehensive income / (loss) that may be reclassified to profit or loss in subsequent periods		**€8.4**	**€(11.1)**	**€0.1**
Other comprehensive loss that will not be reclassified to profit or loss in subsequent periods, net of tax				
Remeasurement income / (loss) on defined benefit plans		0.3	(0.3)	—
Net other comprehensive income / (loss) that will not be reclassified to profit or loss in subsequent periods		**€0.3**	**€(0.3)**	**€—**
Other comprehensive income / (loss) for the period, net of tax		**€8.7**	**€(11.4)**	**€0.1**
Comprehensive income / (loss) for the period, net of tax		**€10,301.2**	**€3.8**	**€(179.1)**
Attributable to:				
Equity holders of the parent		10,301.2	3.8	(179.0)
Non-controlling interests		—	—	(0.1)
Comprehensive income / (loss) for the period, net of tax		**€10,301.2**	**€3.8**	**€(179.1)**

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

Consolidated Statements of Financial Position

(in millions)

Assets	Note	December 31, 2021	December 31, 2020
Non-current assets			
Intangible assets	11	€202.4	€163.5
Property, plant and equipment	10	322.5	227.0
Right-of-use assets	20	197.9	99.0
Other financial assets	12	21.3	—
Other assets	14	0.8	1.0
Deferred expenses	15	13.6	—
Deferred tax assets	8	—	161.2
Total non-current assets		**€758.5**	**€651.7**
Current assets			
Inventories	13	502.5	64.1
Trade and other receivables	12	12,381.7	165.5
Other financial assets	12	381.6	137.2
Other assets	14	64.9	61.0
Income tax assets	8	0.4	0.9
Deferred expenses	15	48.5	28.0
Cash and cash equivalents	12	1,692.7	1,210.2
Total current assets		**€15,072.3**	**€1,666.9**
Total assets		**€15,830.8**	**€2,318.6**

Continued on next page

Consolidated Statements of Financial Position

Equity and liabilities	Note	December 31, 2021	December 31, 2020
Equity			
Share capital	16	246.3	246.3
Capital reserve	16	1,674.4	1,514.5
Treasury shares	16	(3.8)	(4.8)
Retained earnings / (accumulated losses)		9,882.9	(409.6)
Other reserves	17	93.9	25.4
Total equity		**€11,893.7**	**€1,371.8**
Non-current liabilities			
Loans and borrowings	12	171.6	231.0
Other financial liabilities	12	6.1	31.5
Income tax liabilities	8	4.4	—
Provisions	18	184.9	5.5
Contract liabilities	6	9.0	71.9
Other liabilities	19	12.8	0.7
Deferred tax liabilities	8	66.7	0.2
Total non-current liabilities		**€455.5**	**€340.8**
Current liabilities			
Loans and borrowings	12	129.9	9.1
Trade payables	12	160.0	102.3
Other financial liabilities	12	1,190.4	74.1
Government grants	7.5	3.0	92.0
Refund liabilities	6	90.0	—
Income tax liabilities	8	1,568.9	—
Provisions	18	110.2	0.9
Contract liabilities	6	186.1	299.6
Other liabilities	19	43.1	28.0
Total current liabilities		**€3,481.6**	**€606.0**
Total liabilities		**€3,937.1**	**€946.8**
Total equity and liabilities		**€15,830.8**	**€2,318.6**

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

Consolidated Statements of Changes in Stockholders' Equity

		Equity attributable to equity holders of the parent							
(in millions)	Note	Share capital[1]	Capital reserve[1]	Treasury shares[1]	Retained earnings / (accumulated losses)	Other reserves [2]	Total	Non-controlling interest	Total equity
As of January 1, 2019		**€193.3**	**€344.1**	**€—**	**€(245.7)**	**€(25.5)**	**€266.2**	**€0.8**	**€267.0**
Loss for the period		—	—	—	(179.1)	—	(179.1)	(0.1)	€(179.2)
Other comprehensive income		—	—	—	—	0.1	0.1	—	€0.1
Total comprehensive profit / (loss)		**€—**	**€—**	**€—**	**€(179.1)**	**€0.1**	**€(179.0)**	**€(0.1)**	**€(179.1)**
Issuance of share capital		8.1	41.8	—	—	—	49.9	—	€49.9
Capital increase Series B	*16*	18.0	186.4	(5.5)	—	—	198.9	—	€198.9
Capital increase initial public offering (referred to as IPO)	*16*	10.5	132.7	—	—	—	143.2	—	€143.2
Acquisition of non-controlling interest	*16*	2.4	(1.7)	—	—	—	0.7	(0.7)	€—
Transaction costs	*16*	—	(16.6)	—	—	—	(16.6)	—	€(16.6)
Share-based payments	*17*	—	—	—	—	30.2	30.2	—	€30.2
As of December 31, 2019		**€232.3**	**€686.7**	**€(5.5)**	**€(424.8)**	**€4.8**	**€493.5**	**€—**	**€493.5**
Profit for the period		—	—	—	15.2	—	15.2	—	€15.2
Other comprehensive loss		—	—	—	—	(11.4)	(11.4)	—	€(11.4)
Total comprehensive profit / (loss)		**—**	**—**	**—**	**15.2**	**(11.4)**	**3.8**	**—**	**€3.8**
Issuance of share capital and treasury shares	*16*	14.0	861.0	0.7	—	—	875.7	—	€875.7
Transaction costs	*16*	—	(33.2)	—	—	—	(33.2)	—	€(33.2)
Share-based payments	*17*	—	—	—	—	32.0	32.0	—	€32.0
As of December 31, 2020		**€246.3**	**€1,514.5**	**€(4.8)**	**€(409.6)**	**€25.4**	**€1,371.8**	**€—**	**€1,371.8**
Profit for the period		—	—	—	10,292.5	—	10,292.5	—	€10,292.5
Other comprehensive income		—	—	—	—	8.7	8.7	—	€8.7
Total comprehensive income		**€—**	**€—**	**€—**	**€10,292.5**	**€8.7**	**€10,301.2**	**€—**	**€10,301.2**
Issuance of treasury shares	*16*	—	162.6	1.0	—	—	163.6	—	€163.6
Transaction costs	*16*	—	(2.7)	—	—	—	(2.7)	—	€(2.7)
Share-based payments	*17*	—	—	—	—	59.8	59.8	—	€59.8
As of December 31, 2021		**€246.3**	**€1,674.4**	**€(3.8)**	**€9,882.9**	**€93.9**	**€11,893.7**	**€—**	**€11,893.7**

(1) Capital increase due to 1:18 share split occurred on September 18, 2019. Retroactive effect is reflected in number of shares which relate to the period before the share split.

(2) Includes foreign currency translation reserve which was presented separately in prior periods.

Consolidated Statements of Cash Flows

	Years ended December 31,		
(in millions)	2021	2020	2019
Operating activities			
Profit / (loss) for the period	€10,292.5	€15.2	€(179.2)
Income taxes	4,753.9	(161.0)	(0.2)
Profit / (loss) before tax	**€15,046.4**	**€(145.8)**	**€(179.4)**
Adjustments to reconcile profit / (loss) before tax to net cash flows:			
Depreciation and amortization of property, plant, equipment, intangible assets and right-of-use assets	75.2	38.7	33.9
Share-based payment expense	80.5	32.1	30.2
Net foreign exchange differences	(387.5)	41.3	0.1
Gain on disposal of property, plant and equipment	4.6	0.6	0.5
Finance income	(1.5)	(1.6)	(1.8)
Finance expense	305.2	22.3	2.0
Movements in government grants	(89.0)	92.0	—
Other non-cash income	(2.2)	1.7	—
Net loss on derivative instruments at fair value through profit or loss	57.3	—	—
Working capital adjustments:			
Decrease / (Increase) in trade and other receivables, contract assets and other assets	(11,808.1)	(247.9)	2.9
Increase in inventories	(438.4)	(49.8)	(5.8)
(Decrease) / Increase in trade payables, other financial liabilities, other liabilities, contract liabilities, refund liabilities and provisions	1,516.1	204.6	(80.6)
Interest received	1.2	1.4	1.3
Interest paid	(12.2)	(3.6)	(2.0)
Income tax received / (paid), net	(3,457.9)	0.5	0.2
Net cash flows from / (used in) operating activities	**€889.7**	**€(13.5)**	**€(198.5)**

Continued on next page

Consolidated Statements of Cash Flows

	Years ended December 31,		
(in millions)	2021	2020	2019
Investing activities			
Purchase of property, plant and equipment	(127.5)	(66.0)	(38.6)
Proceeds from sale of property, plant and equipment	3.4	1.2	—
Purchase of intangibles assets and right-of-use assets	(26.5)	(19.4)	(32.5)
Acquisition of subsidiaries and businesses, net of cash acquired	(20.8)	(60.6)	(6.1)
Investment into equity instruments designated at fair value through OCI	(19.5)	—	—
Investment into cash deposit with an original term of six months	(375.2)	—	—
Net cash flows used in investing activities	**€(566.1)**	**€(144.8)**	**€(77.2)**
Financing activities			
Proceeds from issuance of share capital and treasury shares, net of costs	160.9	753.0	375.4
Proceeds from loans and borrowings	—	156.0	11.0
Repayment of loans and borrowings	(52.6)	(1.6)	—
Payments related to lease liabilities	(14.1)	(12.7)	(3.1)
Net cash flows from / (used in) financing activities	**€94.2**	**€894.7**	**€383.3**
Net increase / (decrease) in cash and cash equivalents	417.8	736.4	107.6
Change in cash and cash equivalents resulting from exchange rate differences	64.7	(45.3)	—
Cash and cash equivalents at the beginning of the period	1,210.2	519.1	411.5
Cash and cash equivalents at December 31	**€1,692.7**	**€1,210.2**	**€519.1**

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

Notes to Consolidated Financial Statements

1. Corporate Information

BioNTech SE is a limited company incorporated and domiciled in Germany. American Depositary Shares (ADS) representing BioNTech SE's ordinary shares have been publicly traded on Nasdaq Global Select Market since October 10, 2019. The registered office is located in Mainz, Germany (An der Goldgrube 12, 55131 Mainz). BioNTech SE is registered in the commercial register B of the Mainz Local Court under the number HRB 48720. These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as endorsed by the European Union (EU), and give a true and fair view of the financial position and results of operations of the Group in accordance with International Financial Reporting Standards (IFRS) and the results of operation of BioNTech SE and its subsidiaries, hereinafter also referred to as "BioNTech," the "Group," "we" or "us".

During the year ended December 31, 2021, the following changes to the Group structure occurred:

- In March 2021, BioNTech Turkey Tıbbi Ürünler Ve Klinik Araştirma Ticaret Anonim Şirketi, which translates into English as BioNTech Turkey Pharmaceutical Products and Clinical Trials Trading JSC, Istanbul, Turkey, was founded and is a wholly owned consolidated subsidiary of BioNTech SE.
- In June 2021, BioNTech Austria Beteiligungen GmbH, Vienna, Austria, was liquidated.
- In June 2021, the merger agreement between BioNTech RNA Pharmaceuticals GmbH, Mainz, Germany, and BioNTech SE was registered within the commercial register *(Handelsregister)* of BioNTech SE under BioNTech RNA Pharmaceuticals GmbH was effectively merged onto BioNTech SE.
- In July 2021, BioNTech (Shanghai) Pharmaceuticals Co. Ltd., Shanghai, China, was founded and is a wholly owned subsidiary of BioNTech Pharmaceuticals Asia Pacific Pte. Ltd., a wholly owned consolidated subsidiary of BioNTech SE.
- In September 2021, BioNTech Services Marburg GmbH, Marburg, Germany, was founded and is a wholly owned consolidated subsidiary of BioNTech SE. In December 2021, the entity was renamed to BioNTech Innovation and Services Marburg GmbH.
- In October 2021, BioNTech SE acquired PhagoMed Biopharma GmbH, Vienna, Austria (subsequently renamed to BioNTech R&D (Austria) GmbH).
- In October 2021, BioNTech Real Estate an der Goldgrube 12 GmbH & Co. KG, Holzkirchen, Germany, was founded and is wholly owned by its limited partner BioNTech Real Estate Holding GmbH, a wholly owned consolidated subsidiary of BioNTech SE.
- In November 2021, BioNTech Innovation GmbH i.G. (in establishment), Mainz, Germany, was founded and is a wholly owned consolidated subsidiary of BioNTech SE.

All entities listed above are included in our consolidated financial statements.

During the year ended December 31, 2020, two entities were acquired: Neon Therapeutics, Inc. (subsequently renamed BioNTech US Inc.) and Novartis Manufacturing GmbH (subsequently renamed BioNTech Manufacturing Marburg GmbH). Additionally, BioNTech UK Limited., BioNTech Pharmaceuticals Asia Pacific Pte. Ltd, BioNTech Real Estate Haus Vier GmbH & Co. KG, BioNTech Real Estate An der Goldgrube GmbH & Co. KG and BioNTech Real Estate Adam Opel Straße GmbH & Co. KG were established.

Information on the Group's structure is provided in *Note 4* ⊕.

Our consolidated financial statements for fiscal year 2021 were prepared by the Management Board on March 30, 2022.

2. Significant Accounting Policies

2.1 Basis of Preparation

General
The consolidated financial statements have been prepared on a going concern basis in accordance with the IFRS as issued by the International Accounting Standards Board (IASB) as endorsed by the European Union and applied on a mandatory basis, and with the supplementary requirements of German commercial law pursuant to Section 315e of the German Commercial Code (*HGB*).

We prepare and publish our consolidated financial statements in Euros and round numbers to thousands or millions of Euros, respectively. Accordingly, numerical figures shown as totals in some tables may not be exact arithmetic aggregations of the figures that preceded them and figures presented in the explanatory notes may not add up to the rounded arithmetic aggregations. Rounding applied may differ from rounding published in different units in the previous years.

Segment Information
Decisions with respect to business operations and resource allocations are made by our Management Board, as the chief operating decision maker (CODM) based on BioNTech as a whole. Accordingly, we operate and make decisions as a single operating segment, which is also our reporting segment.

2.2 Basis of Consolidation

The consolidated financial statements comprise the financial statements of BioNTech SE and its controlled investees (subsidiaries).

The Group controls an investee if, and only if, the Group has

- power over the investee (*i.e.*, existing rights that give it the current ability to direct the relevant activities of the investee);
- exposure, or rights, to variable returns from its involvement with the investee; and
- the ability to use its power over the investee to affect its returns.

Generally, there is a presumption that a majority of voting rights results in control.

Whether an investee is controlled is re-assessed if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when control is obtained over the subsidiary and ceases when control of the subsidiary is lost.

The profit / (loss) and each component of other comprehensive income / (loss) for the period are attributed to the equity holders of the parent of the Group and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. When necessary, adjustments are made to the consolidated financial statements of subsidiaries to bring their accounting policies in line with the Group's accounting policies. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated on consolidation.

A change in the ownership interest of a subsidiary, without a loss of control, is accounted for as an equity transaction.

If control over a subsidiary is lost, the related assets (including goodwill), liabilities, non-controlling interests and other components of equity are derecognized, while any resultant gain or loss is recognized in the consolidated statements of profit or loss. Any investment retained is recognized at fair value.

2.3 Summary of Significant Accounting Policies

2.3.1 Business Combinations and Goodwill

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, which is measured at acquisition date fair value, and the amount of any non-controlling interests in the acquiree.

Goodwill is initially measured at cost as the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interests and any previous interest held over the net identifiable assets acquired and liabilities assumed.

After initial recognition, goodwill is tested at least annually or when there is an indication for impairment. See *Note 2.3.13* ⊕. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the cash-generating units that are expected to benefit from the combination, irrespective of whether other assets or liabilities of the acquiree are assigned to those units.

Where goodwill has been allocated to a cash-generating unit (CGU) and part of the operation within that unit is disposed of, the goodwill associated with the disposed operation is included in the carrying amount of the operation when determining the gain or loss on disposal. Goodwill disposed in these circumstances is measured based on the relative values of the disposed operation and the portion of the cash-generating unit retained.

2.3.2 Current versus Non-Current Classifications

Assets and liabilities in the consolidated statements of financial position are presented based on current or non-current classification.

An asset is current when it is either: (i) expected to be realized or intended to be sold or consumed in the normal operating cycle, (ii) held primarily for the purpose of trading, (iii) expected to be realized within twelve months after the reporting period or (iv) cash or cash equivalents, unless it is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period. All other assets are classified as non-current.

A liability is current when it is either: (i) expected to be settled in the normal operating cycle, (ii) held primarily for the purpose of trading, (iii) due to be settled within twelve months after the reporting period, or (iv) there is no unconditional right to defer the settlement of the liability for at least twelve months after the reporting period. The terms of the liability that could, at the option of the counterparty, result in its settlement by the issue of equity instruments do not affect its classification. The Group classifies all other liabilities as non-current.

Deferred tax assets and liabilities are classified as non-current assets and liabilities, respectively.

2.3.3 Fair Value Measurement

Fair value is a market-based measurement. For some assets and liabilities, observable market transactions or market information is available. For other assets and liabilities, observable market transactions or market information might not be available. When a price for an identical asset or liability is not observable, another valuation technique is used. To increase consistency and comparability in fair value measurements, there are three levels of the fair value hierarchy:

- Level 1 contains the use of quoted prices in active markets for identical assets or liabilities.
- Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability either directly or indirectly.
- Level 3 inputs are unobservable.

Within this hierarchy, estimated values are made by management based on reasonable assumptions, including other fair value methods.

For assets and liabilities that are recognized in the financial statements at fair value on a recurring basis, we determine whether transfers have occurred between levels in the fair value hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

For the purpose of fair value disclosures, classes of assets and liabilities have been determined on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy, as explained above.

2.3.4 Revenue from Contracts with Customers

Revenue Recognition
We generate revenues from collaboration and license agreements, which contain multiple elements, including licenses to use, research, develop, manufacture and commercialize candidates and products, research and development services as well as obligations to develop and manufacture preclinical and clinical material and products. We determined that those collaboration and license agreements qualify as contracts with customers. If the grant of a license is bundled together with the rendering of services, it is assessed whether these agreements are comprised of more than one performance obligation. A performance obligation is only accounted for as the grant of a license if the grant of a license is the sole or the predominant promise of the performance obligation.

If the consideration in an agreement includes a variable amount, we estimate the amount of consideration to which we will be entitled in exchange for transferring the goods to the customer. At contract inception, the variable consideration is estimated based on the most likely amount of consideration expected from the transaction and constrained until it is highly probable that a significant revenue reversal in the amount of cumulative revenue recognized will not occur when the associated uncertainty with respect to the variable consideration is subsequently resolved. The estimated revenue is updated at each reporting date to reflect the current facts and circumstances.

If a contract with a customer contains more than one performance obligation, the transaction price is allocated to each performance obligation based on relative standalone selling prices.

For each separate performance obligation, it is evaluated whether control is transferred either at a point in time or over time. For performance obligations that are satisfied over time, revenue is recognized based on a measure of progress, which depicts the performance in transferring control to the customer. Under the terms of our licensing arrangements, we provide the licensee with a research and development license, which represents a right to access our intellectual property as it exists throughout the license period (as our intellectual property is still subject to further research). Therefore, the promise to grant a license is accounted for as a performance obligation satisfied over time as our customer simultaneously receives and consumes the benefits from our performance.

Earnings based on the collaboration partners' gross profit, which is shared under the respective collaboration agreements are recognized based on the sales-based or usage-based royalty exemption; i.e. when, or as, the underlying sales occur, which is when the performance obligation has been satisfied. As described further in *Note 3* ⓘ, we use certain information from our collaboration partners, some of which is based on preliminary data shared between the partners and might vary once final data is available.

Revenue arrangements that involve two or more partners who contribute to the provision of a specific good or service to a customer are assessed in terms of principal-agent considerations in order to determine the appropriate treatment for the transactions between us and the collaborator and the transactions between us and other third parties. The classification of transactions under such arrangements is determined based on the nature and contractual terms of the arrangement along with the nature of the operations of the participants. Any consideration related to activities in which we are considered the principal, which includes being in control of the good or service before such good or service is transferred to the customer, are accounted for as gross revenue. Any consideration related to activities in which we are considered the agent, are accounted for as net revenue.

Revenue from the sale of pharmaceutical and medical products (*e.g.* COVID-19 vaccine sales and other sales of peptides and retroviral vectors for clinical supply) is recognized when we transfer control of the product to the customer. Control of the product normally transfers when the customer gains physical possession and we have not retained any significant risks of ownership or future obligations with respect to the product. A receivable is recognized, as the consideration is unconditional and only the passage of time is required before payment is due. The transaction price is quoted in the relevant price lists in force at the date of customer placing the respective order for such products. In general, payments from customers are due within 30 days after invoice. However, with respect to our collaboration with Pfizer Inc., or Pfizer, a significant time span between when revenues are recognized and the payments are received exists. The contractual settlement

of the gross profit share has a temporal offset of more than one calendar quarter. As Pfizer's fiscal quarter for subsidiaries outside the United States differs from ours, it creates an additional time lag between the recognition of revenues and the payment receipt.

Contract Balances

Contract Assets

A contract asset is the right to consideration in exchange for goods or services transferred to the customer. If we transfer goods or services to a customer before the customer pays the respective consideration or before payment is due, a contract asset is recognized for the earned consideration that is conditional.

Trade Receivables

A receivable represents our right to an amount of consideration that is unconditional (*i.e.*, only the passage of time is required before payment of the consideration is due).

Contract Liabilities

A contract liability is the obligation to transfer goods or services to a customer for which we have received consideration (or an amount of consideration is due) from the customer. If a customer pays consideration before we transfer goods or services to the customer, a contract liability is recognized when the payment is made or when the payment is due (whichever is earlier). Contract liabilities are recognized as revenue when we perform our performance obligations under the contract.

Refund Liabilities

A refund liability is a consideration which has been received but which will need to be refunded to the customer in the future as it represents an amount to which we are ultimately not entitled to under the contract. A refund liability is measured at the amount of consideration received (or receivable) for which we do not expect to be entitled (i.e., amounts not included in the transaction price). We update our estimates of refund liabilities (and the corresponding change in the transaction price) at the end of each reporting period.

2.3.5 Government Grants

Government grants are recognized where there is reasonable assurance that the grant will be received and all attached conditions will be complied with. When the grant relates to an expense item, it is recognized as other income on a systematic basis over the periods that the related costs, for which the grant is intended to compensate, are expensed. When the grant relates to an asset, it is recognized as deferred income within the consolidated statements of financial position. Other income is subsequently recognized in profit or loss over the useful live of the underlying asset subject to funding.

2.3.6 Taxes

Current Income Tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Group operates and generates taxable income.

In addition, current income taxes presented for the period include adjustments for uncertain tax payments or tax refunds for periods not yet finally assessed by tax authorities, excluding interest expenses and penalties on the underpayment of taxes. In the event that amounts included in the tax return are considered unlikely to be accepted by the tax authorities (uncertain tax positions), a provision for income taxes is recognized.

Management periodically evaluates positions taken in the tax returns with respect to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate.

Deferred Tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities are recognized for all taxable temporary differences, except:

- when the deferred tax liability arises from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; or
- in respect of taxable temporary differences associated with investments in subsidiaries, associates and interests in joint arrangements, when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. Deferred tax assets are recognized to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, the carry forward of unused tax credits and unused tax losses can be utilized, except:

- when the deferred tax asset relating to the deductible temporary difference arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss; or
- in respect of deductible temporary differences associated with investments in subsidiaries, associates and interests in joint arrangements, deferred tax assets are recognized only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year in which the asset is realized, or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Unrecognized deferred tax assets are re-assessed at each reporting date and are recognized to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Recognition of Taxes
Current and deferred tax items are recognized similar to the underlying transaction either in profit or loss, other comprehensive income or directly in equity.

Current tax assets and current tax liabilities are offset if, and only if, we have a legally enforceable right to set off the recognized amounts and intends either to settle on a net basis, or to realize the asset and settle the liability simultaneously. Deferred tax assets and deferred tax liabilities are only offset when we have a legally enforceable right to set off current tax assets and current tax liabilities and the deferred tax assets and deferred tax liabilities relate to income taxes levied by the same taxation authority on either (i) the same taxable entity or (ii) different taxable entities, which intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

Sales Tax
Expenses and assets are recognized net of sales tax, except when the sales tax incurred on a purchase of assets or services is not recoverable from the taxation authority.

The net amount of sales tax recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the consolidated statements of financial position.

2.3.7 Foreign Currencies

Our consolidated financial statements are presented in Euros, which is also our functional currency. For each entity, the Group determines the functional currency, and items included in the consolidated financial statements of such entities are measured using that functional currency. We use the direct method of consolidation and on disposal of a foreign operation, the gain or loss that is reclassified to the consolidated statements of profit or loss reflects the amount that arises from using this method.

Transactions and Balances
Transactions in foreign currencies are initially recorded by the Group's entities at their respective functional currency spot rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates at the dates of the initial transactions.

In determining the spot exchange rate to use on initial recognition of the related asset, expense or income (or part of it) on the derecognition of a non-monetary asset or non-monetary liability relating to advance consideration, the date of the transaction is the date on which the Group initially recognizes the non-monetary asset or non-monetary liability arising from the advance consideration. If there are multiple payments or receipts in advance, the Group determines the transaction date for each payment or receipt of advance consideration.

Foreign Currency Translation
Foreign currency translation effects from the translation of operating activities include foreign exchange differences arising on operating items such as trade receivables and trade payables and are either shown as other operating income or expenses on a cumulative basis. Foreign currency translation effects presented within finance income and expenses include foreign exchange differences arising on financing items such as loans and borrowings as well as foreign exchange differences arising on cash and cash equivalents and are either shown as finance income or expenses on a cumulative basis.

Foreign Currency Translation on Consolidation
Upon consolidation, the assets and liabilities of foreign operations are translated into Euros at the rate of exchange prevailing at the reporting date and the transactions recorded in their consolidated statements of profit or loss are translated at exchange rates prevailing at the dates of the transactions.

The exchange differences arising on translation for consolidation are recognized in other comprehensive income. On disposal of a foreign operation, the component of other comprehensive income relating to that particular foreign operation is reclassified to profit or loss.

Any goodwill arising on the acquisition of a foreign operation and any fair value adjustments to the carrying amounts of assets and liabilities arising upon the acquisition are treated as assets and liabilities of the foreign operation and translated at the spot rate of exchange at the reporting date.

2.3.8 Property, Plant and Equipment

Construction in progress is stated at cost. Property, plant and equipment are stated at cost, net of accumulated depreciation and accumulated impairment losses, if any. Such cost includes the cost of replacing part of the property, plant and equipment if the recognition criteria are met. All other repair and maintenance costs are expensed as incurred.

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets, as follows:

Property, plant and equipment	Useful life (years)
Buildings	10-33
Equipment, tools and installations	1-18

An item of property, plant and equipment initially recognized is derecognized upon disposal (*i.e.*, at the date the recipient obtains control) or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the consolidated statements of profit or loss when the asset is derecognized.

The residual values, useful lives and methods of depreciation of property, plant and equipment are reviewed at each financial year-end and adjusted prospectively, if appropriate.

2.3.9 Leases

At the inception of a contract, we assess whether the contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, we assess whether:

- the contract involves the use of an identified asset—this may be specified explicitly or implicitly and should be physically distinct or represent substantially all of the capacity of a physically distinct asset. If the supplier has a substantive substitution right, then the asset is not identified;
- we have the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use; and
- we have the right to direct the use of the asset. We possess this right when we hold the decision-making rights that are most relevant to changing how and for what purpose the asset is used. In rare cases where the decision about how and for what purpose the asset is used is predetermined, the Group has the right to direct the use of the asset if either:
  - we have the right to operate the asset; or
  - we designed the asset in a way that predetermines how and for what purpose it will be used.

At inception or on reassessment of a contract that contains a lease component, the consideration in the contract is allocated to each lease component on the basis of their relative standalone prices. However, for the leases of land and buildings in which it is a lessee, we have elected not to separate non-lease components, and instead accounts for the lease and non-lease components as a single lease component.

We recognize a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of the costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received by the Group.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset and the end of the lease term. The estimated useful lives of right-of-use assets are determined on the same basis as those of property and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the incremental borrowing interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate. Generally, the incremental borrowing rate is used as the discount rate.

Lease payments included in the measurement of the lease liability comprise the following:

- fixed payments, including in-substance fixed payments;
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as of the commencement date;
- amounts expected to be payable under a residual value guarantee; and
- the exercise price under a purchase option that is reasonably certain to be exercised, lease payments in an optional renewal period if it is reasonably certain that the extension option is exercised, and penalties for early termination of a lease unless it is reasonably certain that the contract is not terminate early.

The lease liability is subsequently measured at amortized cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the estimate of the amount expected to be payable under a residual value guarantee, or if we change our assessment of whether we will exercise a purchase, extension or termination option. When the lease liability is remeasured, a corresponding adjustment is made to the carrying

amount of the right-of-use asset or is recorded in the consolidated statements of profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

Right-of-use assets are presented separately and lease liabilities are presented in "'Financial Liabilities" in the consolidated statements of financial position.

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets or shorter lease term, as follows:

Right-of-use assets	Useful life or shorter lease term (years)
Buildings	2-25
Equipment, tools and installations	2-5
Production facilities	2-3
Automobiles	3-4

Short-Term Leases and Leases of Low-Value Assets
We have elected not to recognize right-of-use assets and lease liabilities for short-term leases of machinery that have a lease term of 12 months or less or leases of low-value assets. We recognize the lease payments associated with these leases as an expense in the consolidated statements of profit or loss on a straight-line basis over the lease term.

2.3.10 Intangible Assets

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is their fair value at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and accumulated impairment losses.

The useful lives of intangible assets are assessed as either finite or indefinite.

Intangible assets with finite lives are amortized generally on a straight-line basis over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life are at least reviewed at the end of each reporting period. The amortization expense on intangible assets with finite lives is recognized in the consolidated statements of profit or loss in the expense category that is consistent with the function of the intangible assets.

A summary of the useful lives applied to the Group's intangible assets is as follows:

Intangible assets	Useful life (years)
Intellectual property rights	8-20
Licenses	3-20
Software	3-8

Intangible assets with indefinite useful lives are not amortized, but are tested for impairment at least annually, or when there is an indication for impairment, either individually or at the level of a cash-generating unit (see Note *2.3.13* ⊕ for further details). The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable. If not, the change in useful life from indefinite to finite is made on a prospective basis.

We have classified advanced payments on intangible assets as intangible assets, which are not yet ready for use. Advanced payments on intangible assets are tested for impairment on an annual basis.

An intangible asset is derecognized upon disposal (*i.e.*, at the date the recipient obtains control) or when no future economic benefits are expected from its use or disposal. Any gain or loss arising upon derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the consolidated statements of profit or loss.

Research and Development Costs
Research costs are expensed as incurred. Development expenditures on an individual project are recognized as an intangible asset if, and only if, all of the following six criteria can be demonstrated:

- the technical feasibility of completing the intangible asset so that the asset will be available for use or sale;
- its intention to complete the project;
- the ability and intention to use or sell the asset;
- how the asset will generate future economic benefits;
- the availability of resources to complete the asset; and
- the ability to reliably measure the expenditure during development.

Due to the inherent risk of failure in pharmaceutical development and the uncertainty of approval, management has determined that these criteria are not met in the biotech sector until regulatory approval has been obtained. The related expenditure is reflected in the consolidated statements of profit or loss in the period in which the expenditure is incurred.

Following initial recognition of the development expenditure as an asset, the asset is carried at cost less any accumulated amortization and accumulated impairment losses. Amortization of the asset begins when development is complete and the asset is available for use. It is amortized over the period of expected future benefit. Amortization is recorded in cost of sales. During the period of development, the asset is tested for impairment annually.

2.3.11 Financial Instruments – Initial Recognition and Subsequent Measurement

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

i) Financial Assets
Initial Recognition and Measurement
Financial assets mainly include trade receivables, cash and cash equivalents, cash deposits with an original term of six months recognized as other financial assets as well as equity investments. Financial assets are initially measured at fair value and – depending on their classification – subsequently measured at amortized cost, fair value through other comprehensive income (OCI) or fair value through profit or loss.

Subsequent Measurement
The measurement of financial assets depends on their classification, as described below.

Trade and Other Receivables
With respect to trade receivable, we applied the practical expedient which means that they are measured at the transaction price determined under IFRS 15. Refer to the accounting policies in *Note 2.3.4* ⊖. Other financial assets are measured at amortized costs since they are held to collect contractual cash flows, which are solely payments of principal and interest. Gains and losses are recognized in profit or loss when the financial asset is derecognized, modified or impaired.

Financial Assets designated at Fair Value through OCI (Equity Instruments)
Upon initial recognition, we can irrevocably elect to classify equity investments as equity instruments designated at fair value through OCI when they meet the definition of equity under IAS 32 and are not held for trading. The classification is determined on an instrument-by-instrument basis. Gains and losses on these financial assets are never recycled to profit or loss. Dividends are recognized as other income in the statement of profit or loss when the right of payment has been established. Equity instruments designated at fair value through OCI are not subject to impairment assessment. We elected to irrevocably classify our non-listed equity investments under this category.

Derecognition
A financial asset (or, where applicable, a part of a financial asset or part of a group of similar financial assets) is primarily derecognized (i.e., removed from the consolidated statements of financial position) when the rights to receive cash flows from the asset have expired or have been transferred in terms of fulfilling the derecognition criteria.

Impairment of Financial Assets
An allowance for expected credit losses (ECLs) is considered for all debt instruments of the Group. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all of the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

For trade receivables and contract assets, the Group applies a simplified approach in calculating ECLs. Therefore, the Group does not track changes in credit risk, but instead recognizes a loss allowance based on lifetime ECLs at each reporting date. We have established a provision matrix that is based on our historical credit loss experience, which implies that expected credit losses are only recorded as far as actual historical credit losses have incurred, adjusted for forward-looking factors specific to the debtors and the economic environment and differentiates between customer groups and geographic regions.

ii) Financial Liabilities
Initial Recognition and Measurement
Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss, loans and borrowings or as payables.

All financial liabilities are recognized initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs.

Financial liabilities include trade payables and other financial liabilities.

Subsequent Measurement
The measurement of financial liabilities depends on their classification, as described below.

Financial Liabilities at Fair Value through Profit or Loss
Financial liabilities at fair value through profit or loss include the embedded derivative, which was bifurcated from the convertible note, as host contract, and is recognized as a separate financial instrument until it is extinguished upon conversion. Furthermore, foreign exchange forward contracts not designated as hedging instruments are recognized as derivatives at fair value through profit or loss. Financial liabilities at fair value further include contingent considerations resulting from business combinations.

Gains or losses arising from fair value measurement adjustments of the embedded derivative, the derivatives not designated as hedging instruments and the contingent consideration are recognized in profit and loss within the consolidated statements of profit or loss.

Loans, Borrowings, Trade Payables and Other Financial Liabilities
After initial recognition, loans and borrowings, trade payables and other financial liabilities are subsequently measured at amortized cost using the effective interest rate (EIR) method. Gains and losses are recognized in the consolidated statements of profit or loss when the liabilities are derecognized as well as through the EIR amortization process.

Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included as finance costs in the consolidated statements of profit or loss.

This category generally applies to loans and borrowings.

Derecognition
A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the derecognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the consolidated statements of profit or loss.

2.3.12 Inventories

Inventories are valued at the lower of cost and net realizable value.

Costs incurred in bringing each product to its present location and condition are accounted for as follows:

- raw materials and supplies: purchase cost on a first-in / first-out basis; or
- unfinished goods and finished goods: cost of direct materials and labor, including both internal manufacturing and third-party contract manufacturing organizations, or CMOs, and a proportion of manufacturing overheads based on the normal operating capacity, but excluding borrowing costs.

Net realizable value is the estimated selling price in the ordinary course of business less estimated costs of completion and the estimated costs necessary to make the sale. Write-offs are recorded if inventories do not fulfill the specification defined by our quality standards or if its shelf-life has expired.

2.3.13 Impairment of Non-Financial Assets

At each reporting date, we assess whether there is an indication that a non-financial asset may be impaired. Goodwill is tested for impairment at least annually as of October 1. Impairment is determined for goodwill by assessing the recoverable amount of each cash generating unit (or group of CGUs) to which the goodwill relates. If any indication exists, or when annual impairment testing is performed, we estimate the asset's or CGU's recoverable amount. The recoverable amount is the higher of an asset's or CGU's fair value less costs of disposal and its value in use. The recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. In case the asset is not generating independent cash inflows the impairment test is performed for the smallest group of assets that generate largely independent cash inflows from other assets (CGU). When the carrying amount of an asset or cash generating unit exceeds its recoverable amount, the asset or the non-current assets of the CGU are considered impaired and written down to their recoverable amount.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, recent market transactions and our market capitalization are taken into account.

If a value in use is determined it is based on detailed budgets and forecast calculations, which are prepared separately for each of our cash generating units to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of at least five years. A long-term growth rate is calculated and applied to project future cash flows after the last year of the detailed planning period.

Impairment losses are recognized in the consolidated statements of profit or loss in expense categories consistent with the function of the impaired asset.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognized impairment losses no longer exist or have decreased. If such indication exists, the asset's or cash generating unit's recoverable amount is estimated. A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years. Such reversal is recognized in the consolidated statements of profit or loss unless the asset is carried at a revalued amount, in which case, the reversal is treated as a revaluation increase.

2.3.14 Cash and Cash Equivalents

Cash and cash equivalents comprise cash at banks and on hand and short-term highly liquid deposits with an original maturity of three months or less, that are readily convertible to a known amount of cash and subject to an insignificant risk of changes in value. Deposits with an original maturity of more than three months are recognized as other financial assets.

2.3.15 Provisions

Provisions are recognized when there is a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. When we expect some or all of a provision to be reimbursed, for example, under an insurance contract, the reimbursement is recognized as a separate asset, but only when the reimbursement is virtually certain. The expense relating to a provision is presented in the consolidated statements of profit or loss net of any reimbursement.

2.3.16 Share-Based Payments

Employees (and others providing similar services) receive remuneration in the form of share-based payments, which are settled in equity instruments (equity-settled transactions) or in cash (cash-settled transactions).

The cost of equity-settled transactions is determined by the fair value at the date when the grant is made using an appropriate valuation model, further details of which are given in *Note 17* ⓘ. The cost of cash-settled transactions is determined by the fair value that is remeasured until settlement date.

These costs are recognized in cost of sales, research and development expenses, sales and marketing expenses or general and administrative-expenses, together with a corresponding increase in equity (other reserves) or other liabilities, over the period in which the service is provided (the vesting period). The cumulative expense recognized for cash- and equity-settled transactions at each reporting date until the vesting date reflects the extent to which the vesting period has expired. With respect to equity-settled transactions it also reflects the best estimate of the number of equity instruments that will ultimately vest.

2.4 Standards Applied for the First Time

In 2021, the following potentially relevant new and amended standards and interpretations became effective, but did not have an impact on our consolidated financial statements:

Standards / Interpretations	Date of application
Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16: Interest Rate Benchmark Reform – Phase 2	January 1, 2021
Amendment to IFRS 16 Leases: Covid 19-Related Rent Concessions beyond 30 June 2021	April 1, 2021

2.5 Standard Issued but Not Yet Effective

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the financial statements and that might have an impact on our financial statements are disclosed below. We have not early adopted any standards and intend to adopt these new and amended standards and interpretations, if applicable, when they become effective.

Standards / Interpretations	Date of application
Amendments to IFRS 3 Business Combinations: Reference to the Conceptual Framework	January 1, 2022
Amendments to IAS 37 Provisions, Contingent Liabilities and Contingent Assets: Onerous Contracts – Cost of Fulfilling a Contract Amendments to IAS 37	January 1, 2022
Amendments to IAS 16 Property, Plant and Equipment: Proceeds before Intended Use	January 1, 2022
Annual Improvements to IFRS Standards 2018-2020	January 1, 2022
IFRS 17 Insurance Contracts (issued on May 18, 2017)	January 1, 2023
Amendments to IFRS 17 Insurance Contracts[1]	January 1, 2023
Amendments to IAS 1 Presentation of Financial Statements: Classification of Liabilities as Current or Non-Current[1]	January 1, 2023
Amendments to IAS 1 and IFRS Practice Statement 2: Disclosure of Accounting Policies	January 1, 2023
Amendments to IAS 8 Accounting policy changes: Definition of Accounting Estimates	January 1, 2023
Amendments to IAS 12 Income Taxes: Deferred Tax related to Assets and Liabilities arising from a Single Transaction [1]	January 1, 2023

(1) Standards had not yet been endorsed in the European Union at the time of publication.

We do not expect a significant impact of the application of any of these amendments.

3. Significant Accounting Judgments, Estimates and Assumptions

The preparation of the consolidated financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, the accompanying disclosures and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Significant accounting judgement as well as key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are described below. We based our assumptions and estimates on parameters available when the consolidated financial statements were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

Revenue from Contracts with Customers
We applied the following judgments, estimates and assumptions that significantly affect the determination of the amount and timing of revenue from contracts with customers:

Identification and Determination of Performance Obligations
We generate revenues from collaboration and license agreements, which contain multiple elements, including licenses to use, research, develop, manufacture and commercialize candidates and products, research and development services as well as obligations to develop and manufacture preclinical and clinical material and products. We determined that those collaboration and license agreements qualify as contracts with customers. At inception of each agreement, we apply judgment when determining which promises represent distinct performance obligations. If promises are not distinct, they are combined until the bundle of promised goods and services is distinct. For some agreements, this results in accounting for goods and services promised in a collaboration and license agreement as a single performance obligation with a single measure of progress. For these combined performance obligations, we assess which of these promises is the predominant promise to determine the nature of the performance obligation. When licenses are granted, we determined that the grant of the license is the predominant promise within the combined performance obligations. It is assessed that we grant our customers a right to access or a right to use our intellectual property due to the collaboration and license agreements.

Measurement of the Transaction Price
Our collaboration and license agreements often include variable considerations, which are contingent on the occurrence or non-occurrence of a future event *(i.e.*, reaching a certain milestone). When determining deferred revenues of a collaboration and license agreement, we need to estimate the amount of consideration to which we will be entitled in exchange for transferring the promised goods or services to our customers.

As there are usually only two possible outcomes (*i.e.*, milestone is reached or not), we have assessed that the method of the most likely amount is the best method to predict the amount of consideration to which we will be entitled. At contract inception, the most likely amount for milestone payments is estimated to be zero. We have assessed that the likelihood of achieving the respective milestone decreases depending on how far

the expected date of achieving the milestone lies in the future. At each reporting date, we use judgment to determine when to include variable consideration in the transaction price, such that it is highly probable that a significant revenue reversal in the amount of cumulative revenue recognized will not occur when the associated uncertainty with respect to the variable consideration is subsequently resolved. We have concluded that future milestone payments are fully constrained at the end of the current fiscal year.

Future milestone payments would become unconstrained at the satisfaction of the milestone event, specifically a development event, a regulatory approval or achievement of a sales milestone.

Allocation of the Transaction Price to Performance Obligations and Revenue Recognition as Performance Obligations are Satisfied
We allocate the transaction price to performance obligations based on their relative standalone selling prices, which are generally based on our best estimates and interpretations of facts and circumstances of each contractual agreement and may require significant judgment to determine appropriate allocation.

Upfront payments and reimbursement for expenses are initially deferred on our consolidated statements of financial position. We assessed that no significant financing component exists within our collaboration agreements since the overall business purpose of advanced payments is to support the payment structure other than to provide a significant benefit of financing. For performance obligations in which the costs vary based on progress, an input-based measure considering cost incurred depicts most reliably the progress of the related research activities. In other cases, revenue recognition on a straight-line basis may most reliably depict our performance toward complete satisfaction. If the contractual activities progress, the achievement of development milestones will be used to measure the progress toward complete satisfaction. We evaluate the measure of progress each reporting period and, if necessary, adjust the measure of performance and related revenue recognition. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenues and net loss in the period of adjustment.

Upon successfully commercializing a pharmaceutical product, the collaboration and license agreements also provide for additional profit-sharing or tiered royalties earned when customers recognize net sales of licensed products as well as sales milestone payments. Revenue is recognized based on the sales-based or usage-based royalty exemption; *i.e.* when, or as, the underlying sales occur, which is when the performance obligation has been satisfied.

Principal-Agent Considerations
Collaboration agreements that involve two or more partners who contribute to the provision of a specific good or service to a customer are assessed in terms of principal-agent considerations. Under our current collaboration agreements, the allocation of marketing and distribution rights defines territories in which the collaboration partner acts as a principal respectively. We recognize revenue net based on the collaboration partners' gross profit in territories where the partner is responsible for supply and on a gross basis when directly supplying our customers in our territories when control has been transferred. Amounts paid to collaboration partners for their share of our profits earned where we are the principal in the transaction are recorded as cost of sales.

Pfizer Agreement Characteristics
With respect to our collaboration with Pfizer, commercial revenue is recognized based on our collaboration partners' gross profit from COVID-19 vaccine sales, which is shared under the respective collaboration agreement. In determining commercial revenue pursuant to this collaboration agreement, we are reliant on our collaboration partner for detail regarding its gross profit for the period at hand. Certain of the information which our collaboration partner provides us with to identify the gross profit are, by necessity, preliminary and subject to change. This is mainly due to the fact that our partner's financial reporting cycle differs from ours. Pfizer's subsidiaries outside the United States have a fiscal year-end of November 30; hence the Pfizer Quarter is equal to the Calendar Quarter with respect to the U.S. territory but is deferred by one month with respect to the territories outside the United States. This implies that the details on sales are required by us in advance of Pfizer closing the respective reporting periods. As a result, our determination of our share of such gross profit especially for this last month of the calendar cycle needs to be estimated for the purposes of recognizing revenues and is subject to the risk that amounts reported might vary from actual amounts reported once our collaboration partner's final financial results are available.

Pfizer's gross profit shares are calculated based on sales and include consideration of transfer prices. The latter includes manufacturing and shipping costs, which represent standard prices and include mark-ups on manufacturing costs as specified by the terms of the agreement. Manufacturing and shipping cost variances were considered as far as those have been identified. Nevertheless, those input parameters may be adjusted once actual costs are determined. The sales as reported by Pfizer for the Pfizer quarter, as well as sales preliminary reported for last month of the calendar quarter and territories outside the United States have been used to estimate license obligations in terms of royalties and sales milestones. Sales milestones and royalties are recognized as they are earned by the partners. Sales milestones are shared equally, while royalty payments are shared on the basis of revenue in the territories for which the partners are responsible. The estimated royalty fees applied to net sales reflect the license obligations to the extent currently identified from third party contractual arrangements. Changes in estimates are accounted for prospectively, when determined.

These estimated figures are likely to change prospectively in future periods as we receive final data from Pfizer. Those changes in our share of the collaboration partner's gross profit will be recognized prospectively as changes to our commercial revenues. To the extent that Pfizer does not provide such preliminary information in the future, our provisional sales figures for territories outside of the United States will be subject to a greater level of estimation and judgment.

Historically, adjustments to these estimates to reflect actual results or updated expectations, have not been material to our overall business. The adjustment to the estimated amounts as of December 31, 2020, which was recorded during the three months ended March 31, 2021 was 5% of revenues and the extent of the adjustments decreased throughout the year ended December 31, 2021 (i.e., adjustments were between 1% and 3% of revenues with respect to the first three quarters during 2021).

Pfizer's determination of manufacturing and shipping costs also affects the transfer prices that have been charged to COVID-19 vaccine supplies that it manufactures and supplies to us and may be subject to adjustment whenever manufacturing and shipping cost variances are identified. Likewise, our own cost of sales and the respective gross profit share owed to our partner may be adjusted prospectively, when changes are determined.

For the carrying amounts of the revenue recognition-related contract balances, see *Note 6* ⊕.

Research and Development Expenses

The nature of our business and primary focus of our activities, including development of our platforms and manufacturing technologies, generate a significant amount of research and development expenses. Research costs are expensed as incurred. Development expenditures on an individual project are recognized as an intangible asset if, and only if, the capitalization criteria are met. We have entered into agreements under which third parties grant licenses to us. If those licenses grant access to technologies, both parties jointly perform research or development activities and both are exposed to significant risks and rewards of the activities, costs incurred with the agreements are not treated differently from costs related to own product candidates. If the agreements grant us rights to use certain patents and technologies that meet the definition of an identifiable assets, they are treated as acquired intangible assets. Due to the inherent risk of failure in pharmaceutical development and the uncertainty of approval, management has determined that these criteria are not met before regulatory approval is achieved. The related expenditure is reflected in the consolidated statements of profit or loss in the period in which the expenditure is incurred. Sales-based milestone or royalty payments incurred under license agreements relating to self-developed intangibles after the approval date of the respective pharmaceutical product are recognized as expenses as incurred. Prior to initial regulatory approval, costs relating to production of pre-launch products are expensed as research and development expenses in the period incurred. If pre-launch products are sold, the respective product gross margin may be higher compared to the expected recurring margin as the underlying costs will not be included in cost of sales.

Business Combinations

The allocation of the purchase price for business acquisitions to the identifiable assets acquired and liabilities assumed based on their respective fair values, requires use of accounting estimates and judgment. Acquired intangible assets are valued using valuation models such as the Multi Period Excess Earnings Method under which fair values are derived from future net cash flows, which are discounted to the acquisition date using an appropriate discount factor. We have estimated fair values of assets acquired, liabilities assumed and contingent considerations based on reasonable assumptions. We continue to collect information and reevaluate these provisional

estimates and assumptions in accordance with IFRS 3. Any adjustments to these provisional estimates and assumptions are recorded against goodwill provided they arise within the measurement period. Upon the conclusion of the measurement period or final determination of the fair value of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to the consolidated statements of profit or loss.

For further disclosures relating to business combinations, see *Note 5* ⊕.

Share-Based Payments
Determining the fair value of share-based payment transactions requires the most appropriate valuation for the specific program, which depends on the underlying terms and conditions. We used valuation models like a binomial or Monte-Carlo simulation model for the measurement of the cash- and equity-settled transactions' fair value considering certain assumption relating to, *e.g.*, the volatility of stock price, the determination of an appropriate risk-free interest rate, expected dividends and the probability of reaching a minimum hurdle to exercise the relevant options. For awards which were granted prior to the initial public offering, at a time where no quoted market prices existed, the valuation model assumptions included the option's underlying share price. For awards which were granted post the initial public offering, the grant date's share prices on the Nasdaq Global Select Market were included in the valuation.

For further disclosures relating to share-based payments, see *Note 17* ⊕.

Embedded Derivatives
Defining the fair value of the embedded derivative which was bifurcated from the convertible note, as host contract, requires significant judgment. We used the Cox-Rubinstein binomial tree model when determining the fair value of the conversion right, the embedded derivative which was bifurcated from the convertible note, as host contract. The primary inputs used in the model include stock price volatility, credit spreads, risk-free interest rate and foreign exchange forward rates. Stock price volatility is based on our implied volatility, credit risk is model implied and adjusted for movement in credit spreads for B-rated corporates at each valuation date, the risk-free interest rate is based on currency specific time congruent IBOR and swap rates whereas the foreign exchange forward rates are based on observable market data.

For further disclosures relating to financial instruments, see *Note 12* ⊕.

Income Taxes
We are subject to income taxes in more than one tax jurisdictions. Due to the increasing complexity of tax laws and the corresponding uncertainty regarding the legal interpretation by the fiscal authorities, tax calculations are generally subject to an elevated amount of uncertainty. To the extent necessary, possible tax risks are taken into account in form of provisions.

We do not recognize or impair deferred tax assets when it is unlikely that a corresponding amount of future taxable profit will be available against which the deductible temporary differences, tax loss carry forwards and tax credits can be utilized. When determining whether sufficient future taxable profit will be available against which the deductible temporary differences, tax loss carry forwards and tax credits can be utilized, significant management judgment is required. This includes management's assessment on the character and amounts of taxable future profits, the periods in which those profits are expected to occur, and the availability of tax planning opportunities. As a matter of policy, convincing evidence supporting the recognition of deferred tax assets is required if an entity has suffered a loss in either the current or the preceding periods.

As of December 31, 2021, our management continued to determine that deferred tax assets on tax losses carried forward that relate to subsidiaries which have a loss making history cannot be recognized. This includes the assessment that those subsidiaries neither have any taxable temporary difference nor any tax planning opportunities available that could support the recognition of deferred tax assets.

For further disclosures relating to deferred taxes, see *Note 8* ⊕.

4. Group Information

Information about Subsidiaries
The consolidated financial statements include the following subsidiaries:

			% equity interest	
Name	**Country of incorporation**	**Registered office**	**December 31, 2021**	**December 31, 2020**
BioNTech Cell & Gene Therapies GmbH	Germany	Mainz[1]	100 %	100 %
BioNTech Delivery Technologies GmbH	Germany	Halle[1]	100 %	100 %
BioNTech Diagnostics GmbH	Germany	Mainz[1]	100 %	100 %
BioNTech Europe GmbH	Germany	Mainz[1]	100 %	100 %
BioNTech Innovation GmbH (in establishment)	Germany	Mainz[1]	100 %	n/a
BioNTech Innovative Manufacturing Services GmbH	Germany	Idar-Oberstein[1]	100 %	100 %
BioNTech Manufacturing GmbH	Germany	Mainz[1]	100 %	100 %
BioNTech Manufacturing Marburg GmbH	Germany	Marburg[1]	100 %	100 %
BioNTech RNA Pharmaceuticals GmbH	Germany	Mainz	n/a[2]	100 %
BioNTech Innovation and Services Marburg GmbH (previously BioNTech Services Marburg GmbH)	Germany	Marburg[1]	100 %	n/a
JPT Peptide Technologies GmbH	Germany	Berlin[1]	100 %	100 %
reSano GmbH	Germany	Mainz[1]	100 %	100 %
BioNTech Real Estate Holding GmbH	Germany	Holzkirchen[1]	100 %	100 %
BioNTech Real Estate Verwaltungs GmbH	Germany	Holzkirchen[1]	100 %	100 %
BioNTech Real Estate GmbH & Co. KG	Germany	Holzkirchen[1]	100 %	100 %
BioNTech Real Estate An der Goldgrube GmbH & Co. KG	Germany	Holzkirchen[1]	100 %	100 %
BioNTech Real Estate Haus Vier GmbH & Co. KG	Germany	Holzkirchen[1]	100 %	100 %
BioNTech Real Estate Adam Opel Straße GmbH & Co. KG	Germany	Holzkirchen[1]	100 %	100 %

Continued on next page

Group Information

Name	Country of incorporation	Registered office	% equity interest December 31, 2021	% equity interest December 31, 2020
BioNTech Real Estate an der Goldgrube 12 GmbH & Co. KG	Germany	Holzkirchen[1]	100 %	n/a
BioNTech Austria Beteiligungen GmbH	Austria	Vienna	n/a[3]	100 %
BioNTech R&D (Austria) GmbH (previously PhagoMed Biopharma GmbH)	Austria	Vienna	100 %	n/a
BioNTech (Shanghai) Pharmaceuticals Co. Ltd.	China	Shanghai	100 %	n/a
BioNTech Pharmaceuticals Asia Pacific Pte. Ltd.	Singapore	Singapore	100 %	100 %
BioNTech Turkey Tıbbi Ürünler Ve Klinik Araştirma Ticaret Anonim Şirketi	Turkey	Istanbul	100 %	n/a
BioNTech UK Limited	United Kingdom	Reading	100 %	100 %
BioNTech Research and Development, Inc.	United States	Cambridge	100 %	100 %
BioNTech USA Holding, LLC	United States	Cambridge	100 %	100 %
BioNTech US Inc.	United States	Cambridge	100 %	100 %
JPT Peptide Technologies Inc.	United States	Cambridge	100 %	100 %

(1) Subsidiary makes use of the exemption of Sections 264 para. 3 and 264b HGB for the 2021 financial year.

(2) BioNTech RNA Pharmaceuticals GmbH was merged onto BioNTech SE.

(3) BioNTech Austria Beteiligungen GmbH was liquidated in June 2021.

Parent Company

ATHOS KG, Holzkirchen, Germany is the sole shareholder of AT Impf GmbH, Munich, Germany and beneficial owner of the following percentage of ordinary shares in BioNTech at the dates as indicated. ATHOS KG via AT Impf GmbH has de facto control over BioNTech based on its substantial shareholding, which enabled it to exercise the majority of voting rights to pass resolutions at our Annual General Meeting, or AGM.

			Ownership of ordinary shares in BioNTech (in %)	
Name	**Country of incorporation**	**Registered office**	**December 31, 2021**	**December 31, 2020**
AT Impf GmbH	Germany	Munich	43.75 %	47.37 %

Entity with significant Influence over the Group

Medine GmbH, Mainz owned the following percentage of ordinary shares in BioNTech at the following dates as indicated:

			Ownership of ordinary shares in BioNTech (in %)	
Name	**Country of incorporation**	**Registered office**	**December 31, 2021**	**December 31, 2020**
Medine GmbH	Germany	Mainz	17.11 %	17.25 %

5. Business Combinations

Business Combinations during the year ended December 31, 2021
BioNTech R&D (Austria) GmbH, or BioNTech Austria (previously PhagoMed Biopharma GmbH)

On October 1, 2021, BioNTech Austria, an Austrian biotechnology company, specialized in the development of a new class of antibacterials, was fully acquired to expanded our infectious disease portfolio capabilities.

The total consideration comprised an upfront consideration of €50.0 million (less acquired debt) of which €23.2 million are considered remuneration and will be recognized as personnel expense over a three-year period in which services are to be provided. An additional consideration of maximum €100.0 million is dependent the achievement of certain clinical development milestones. At the acquisition date, the contingent consideration was recognized with its fair value of €5.5 million and is presented as non-current financial liabilities in the consolidated statements of financial position (see *Note 12* ⊖).

The acquisition of PhagoMed was accounted for as a business combination using the acquisition method of accounting.

The final fair values and values in accordance with IFRS 3 of the identifiable net assets of BioNTech Austria as at the date of acquisition were as follows:

(in millions)	**Fair value recognized on acquisition** BioNTech R&D (Austria) GmbH
Assets	
Intangible assets	€43.3
Other assets non-current and current	1.5
Total assets	**€44.8**
Liabilities	
Other liabilities non-current and current	15.4
Total liabilities	**€15.4**
Total identifiable net assets at fair value	**€29.4**
Bargain purchase	(2.2)
Consideration transferred	**€27.2**
Consideration	
Cash paid	21.7
Contingent consideration liability	5.5
Total consideration	**€27.2**

(in millions)	BioNTech R&D (Austria) GmbH
Transaction costs of the acquisition (included in cash flows from operating activities)	€(0.5)
Net cash acquired (included in cash flows used in investing)	0.9
Cash paid (included in cash flow used in investing activities)	(21.7)
Net cash flow on acquisition	**€(21.3)**

The intangible assets comprise a pre-clinical candidate, PM-477 as well as a platform.

A bargain purchase of €2.2 million was recognized in other operating income.

The consolidated statements of profit or loss include the results of BioNTech Austria since the acquisition date. From the date of acquisition through December 31, 2021, BioNTech Austria did not have any significant impact onto the operating income or the revenues of the Group. The same applies if the transaction had occurred at the beginning of the reporting period.

Business Combinations during the year ended December 31, 2020
During the year ended December 31, 2020, the following material business combinations occurred.

BioNTech US Inc. (previously Neon Therapeutics, Inc., or Neon)
On May 6, 2020, we acquired Neon, a biotechnology company developing novel neoantigen-based T-cell therapies, to leverage Neon's expertise in the development of neoantigen therapies, with both vaccine and T cell capabilities.

Based on the acquisition date share price, the aggregate value of the merger consideration was €89.9 million ($97.1 million) financed by issuing 1,935,488 American Depositary Shares representing our ordinary shares as a stock transaction and including a de minimis cash consideration which was paid to settle Neon's outstanding stock options.

The fair values and values in accordance with IFRS 3 of the identifiable net assets of BioNTech US Inc. as at the date of acquisition were as follows:

(in millions)	Fair value recognized on acquisition BioNTech US Inc.
Assets	
Intangible assets	€29.9
Property, plant and equipment	5.6
Right-of-use assets	6.9
Other assets non-current and current	2.7
Cash and cash equivalents	7.7
Total assets	**€52.8**
Liabilities	
Trade payables	1.7
Other liabilities non-current and current	17.8
Total liabilities	**€19.5**
Total identifiable net assets at fair value	**€33.3**
Goodwill from the acquisition	56.6
Consideration transferred	**€89.9**
Consideration	
Shares issued, at fair value	€89.5
Cash paid	€0.4
Total consideration	**€89.9**

The intangible assets comprise two neoantigen targeted therapies, BNT221 (NEO-PTC-01) and BNT222 (NEO-STC-01), which were identified and recorded as in-process R&D.

Deferred tax liabilities relating to temporary differences of the assets acquired in the business combination were recognized at an amount of €8.0 million. To the extent of those deferred tax liabilities assumed, deferred tax assets relating to temporary differences and tax loss carryforwards which existed as of the acquisition date were recognized. Since the conditions to offset were fulfilled, the deferred tax assets and liabilities were offset.

The consolidated statements of profit or loss included the results of BioNTech US since the acquisition date. From the date of acquisition through December 31, 2020, BioNTech US contributed €28.5 million operating loss to our respective result. If the transaction had occurred at the beginning of the reporting period, €59.8 million would have contributed to the operating loss. This amount includes expenses resulting from the merger and should not necessarily be considered representative of the future consolidated results of profit or loss or financial condition on a consolidated basis. From the date of acquisition, BioNTech US did not generate any revenue and no revenue would have been generated if the transaction had occurred at the beginning of the reporting period.

Goodwill recognized is primarily attributable to the expected synergies and other benefits from combining two organizations with a common culture of pioneering translational science and a shared vision for the future of cancer immunotherapy as described above. The goodwill resulting from the BioNTech US acquisition during the year ended December 31, 2020, was allocated to the CGU immunotherapies.

Transaction costs of €1.1 million relating to the acquisition were expensed and included in the general and administrative expenses in the consolidated statements of profit or loss. In the consolidated statements of cash flows they were included in cash flows used in operating activities. The attributable costs of the issuance of the shares of €1.3 million were recorded in equity as a deduction from the capital reserve and are included in cash flows from financing activities in the consolidated statements of cash flows.

BioNTech Manufacturing Marburg GmbH (previously Novartis Manufacturing GmbH)

On October 31, 2020, Novartis Manufacturing GmbH was acquired, a manufacturing facility in Marburg. Through the acquisition, we planned to produce our COVID-19 vaccine for global supply.

The fair values and values in accordance with IFRS 3 of the identifiable net assets of BioNTech Manufacturing Marburg GmbH, or BioNTech Marburg, as at the date of acquisition were as follows:

(in millions)	Fair value recognized on acquisition BioNTech Manufacturing Marburg GmbH
Assets	
Property, plant and equipment	€79.8
Right-of-use assets	28.5
Inventories	2.4
Other assets non-current and current	4.3
Cash and cash equivalents	16.5
Total assets	**€131.5**
Liabilities	
Provisions non-current and current	5.1
Trade payables	8.1
Other liabilities non-current and current	33.4
Total liabilities	**€46.6**
Total identifiable net assets at fair value	**€84.9**
Bargain purchase	(7.0)
Consideration transferred	**€77.9**
Consideration	
Cash paid	€77.9
Total consideration	**€77.9**

The consolidated statements of profit or loss included the results of BioNTech Marburg since the acquisition date. From the date of acquisition, the transition into a GMP certified manufacturing facility for our COVID-19 vaccine was initiated rapidly. During this time, no revenues had been recognized and set-up, retooling and prepping expenses led to a €6.7 million operating loss, which contributed to our respective result. Projecting the revenues and result of the acquired company as if the acquisition had occurred at the beginning of the reporting period is impracticable, since BioNTech intends to use the facility for manufacturing its COVID-19 vaccine. Information about revenues and net income generated by BioNTech Marburg before the acquisition were considered not to be useful as they are not representative of the future consolidated results of profit or loss or financial condition on a consolidated basis.

The contracting parties shared the understanding that the manufacturing facility is well-equipped to make an important contribution in our effort to develop and manufacture a COVID-19 vaccine. The possibility of acquiring a GMP certified manufacturing facility with well-established biotechnology drug substance and drug product manufacturing equipment as well as an experienced team was a very good opportunity for us to accelerate its efforts to scale-up the commercial manufacturing capacity for our COVID-19 vaccine production. The fact that the offer to sell and the need to acquire the facility overlapped at a convenient time, the underlying opportunities ultimately resulted in a bargain purchase of €7.0 million which was recognized in other operating income.

Transaction costs of €1.4 million relating to the acquisition were expensed and included in the general and administrative expenses in the consolidated statements of profit or loss and were included in cash flows used in operating activities in the consolidated statements of cash flows.

6. Revenues from Contracts with Customers

6.1 Disaggregated Revenue Information

Set out below is the disaggregation of the Group's revenues from contracts with customers:

	Years ended December 31,		
(in millions)	2021	2020	2019
Research & development revenues from collaborations	**€102.7**	**€178.8**	**€84.4**
Genentech Inc.	45.9	49.2	64.0
Pfizer Inc.	43.4	121.6	14.3
Shanghai Fosun Pharmaceutical (Group) Co., Ltd	7.4	5.1	—
Other	6.0	2.9	6.1
Commercial revenues	**€18,874.0**	**€303.5**	**€24.2**
COVID-19 vaccine revenues	18,806.8	270.5	—
Sales to collaboration partners[1]	970.9	61.4	—
Direct product sales to customers	3,007.2	20.6	—
Share of collaboration partners' gross profit and sales milestones	14,828.7	188.5	—
Other sales	67.2	33.0	24.2
Total	**€18,976.7**	**€482.3**	**€108.6**

1) Represents sales to our collaboration partner of products manufactured by us.

Since December 2020, our COVID-19 vaccine has been fully approved, granted conditional marketing authorization, or approved or authorized for emergency or temporary use in over 100 countries and regions worldwide, which resulted in recognition of revenues from the commercial sale of pharmaceutical products for the first time. Consequently, we have progressed from earning revenues primarily from research and development to earning revenues from commercial sales during the year ended December 31, 2021.

During the year ended December 31, 2021, revenues recognized from Pfizer Inc., or Pfizer (€15,500.0 million) and the German Federal Ministry of Health (€1,945.6 million), each account for more than 10% of total revenues. During the year ended December 31, 2020, revenues recognized from Pfizer (€371.5 million) and Genentech Inc., or Genentech (€49.2 million), each account for more than 10% of total revenues. During the year ended December 31, 2019, revenues recognized from Genentech (€64.0 million) and Pfizer (€14.3 million), accounted for more than 10% of total revenues. During the year ended December 31, 2021, based on the geographic region in which our customers and collaboration partners are located we mainly recognized revenues in the United States (€14,636.5 million) and Germany (€2,241.9 million). During the year ended December 31, 2020, the main geographic regions were United States (€381.9 million), Belgium (€56.2 million) and Germany (€31.7 million). During the year ended December 31, 2019, the main geographic regions were United States (€87.6 million) and Germany (€11.7 million).

Research and Development Revenues from Collaborations

During the year ended December 31, 2021, our collaborations with Genentech, Pfizer, Shanghai Fosun Pharmaceutical (Group) Co., Ltd, or Fosun Pharma, and other collaboration partners were progressed and respective research and development revenues were derived from deferred upfront payments as well as upon achieving development and regulatory milestones.

During the year ended December 31, 2021, our Influenza collaboration with Pfizer was progressed and research and development revenues of €43.4 million were derived from deferred upfront payments based on progress incurred and upon meeting certain development milestones. In comparison, during the year ended December 31, 2020, research and development revenues were mainly related to a non-refundable upfront cash payment of €66.3 million and a regulatory milestone payment of €51.7 million that

became due based on our COVID-19 vaccine collaboration with Pfizer which was progressed to the commercial phase as well as €3.6 million incurred with respect to our Influenza collaboration with Pfizer.

As part of our BNT162 vaccine program against COVID-19, we are collaborating with Fosun Pharma to develop a COVID-19 vaccine in China. Upon receiving the authorization for emergency use and launching our COVID-19 vaccine in Hong Kong, development and regulatory milestones of €7.4 million have been achieved and recognized as research and development revenues during the year ended December 31, 2021. In comparison, during the year ended December 31, 2020, Fosun Pharma has paid a non-refundable upfront cash payment of €0.9 million and development milestones of €4.2 million that were recognized as revenues.

Other collaboration programs have been progressed during the year ended December 31, 2021, and revenues of €45.9 million under our collaboration with Genentech and €6.0 million under other collaborations have been derived from deferred upfront payments measured based on the costs incurred under the respective research programs. In comparison, during the year ended December 31, 2020, revenues of €49.2 million under our collaboration with Genentech and €2.9 million under other collaborations had been recognized.

The revenues recorded during the year ended December 31, 2019, mainly included revenues resulting from collaboration and license agreements processed in the research and development phase. The amounts were mainly derived from deferred upfront fees received under the Genentech, Pfizer (Influenza) and Sanofi collaboration. The amounts were recognized as revenues as we performed under the agreement and measured progress based on the costs or time incurred under the respective research programs.

Commercial Revenues

During the year ended December 31, 2021, commercial revenues increased due to the high demand for our COVID-19 vaccine. We are the marketing authorization holder in the United States, the European Union, the United Kingdom, Canada and other countries, and holder of emergency use authorizations or equivalents in the United States (jointly with Pfizer) and other countries, submissions to pursue regulatory approvals on those countries where emergency use authorizations or equivalent were initially granted are ongoing. Pfizer has marketing and distribution rights worldwide with the exception of China, Germany and Turkey. Fosun Pharma has marketing and distribution rights in China, Hong Kong special administrative region, or SAR, Macau SAR and the region of Taiwan. The allocation of marketing and distribution rights defines territories in which the collaboration partners act as a principal.

Whenever responsibilities in the manufacturing and supply process of the COVID-19 vaccine shift and the COVID-19 vaccine is transferred, the vaccine is sold from one partner to the other. During the years ended December 31, 2021 and 2020, we recognized €970.9 million and €61.4 million of revenues, respectively, from selling drug product batches manufactured by us to our partners.

By supplying our territories during the years ended December 31, 2021 and 2020, we recognized €3,007.2 million and €20.6 million of revenues, respectively, from direct COVID-19 vaccine sales in Germany and Turkey. The share of gross profit that we owe our collaboration partner Pfizer based on our sales is recognized as cost of sales.

Based on COVID-19 vaccine sales in the collaboration partners' territories, we are eligible to receive a share of their gross profit which represents a net figure and is recognized as collaboration revenues during the commercial phase together with sales milestones that are recorded once the underlying thresholds are met. During the year ended December 31, 2021, €14,352.1 million gross profit share and €476.6 million of sales milestones have been recognized as revenues. During the year ended December 31, 2020, €188.5 million gross profit share has been recognized as revenues. In order to determine our share of our collaboration partners' gross profits, we used certain information from our collaboration partners, some of which is based on preliminary data shared between the partners and might vary once final data is available. The true-up recognized prospectively during the year ended December 31, 2021, with respect to the prior year was not material.

The revenues from contracts with customers disclosed above were recognized as follows:

	Years ended December 31,		
(in millions)	2021	2020	2019
Timing of revenue recognition			
Goods and services transferred at a point in time	€4,034.3	€108.8	€17.0
Goods and services transferred over time	14,942.4	373.5	91.6
Total	**€18,976.7**	**€482.3**	**€108.6**

6.2 Contract Balances

(in millions)	December 31, 2021	December 31, 2020
Trade and other receivables	€12,381.7	€165.5
Contract liabilities	195.1	371.5
Refund liabilities	90.0	—

Trade and other receivables significantly increased mainly due to the trade receivables from our COVID-19 collaboration with Pfizer as well as our own sales. The contractual settlement of the gross profit share has a temporal offset of more than one calendar quarter. As Pfizer's fiscal quarter for subsidiaries outside the United States differs from ours, it creates an additional time lag between the recognition of revenues and the payment receipt. Consequently, as of December 31, 2021, our trade receivables included in addition to the profit share for the fourth quarter of 2021, trade receivables which related to the gross profit share for the third quarter of 2021. The payment settling our gross profit share for the third quarter of 2021 (as defined by the contract) was received from our collaboration partner subsequent to the end of the reporting period in January 2022. From our trade receivables outstanding as of December 31, 2021, we had already collected €4,693.6 million in cash by January 16, 2022.

Contract liabilities mainly include upfront fees received from our major collaboration and license agreements as well as advance payments received for future COVID-19 vaccine sales and other sales. The contract liabilities from collaboration and commercial supply agreements as of December 31, 2021, comprise €61.9 million remaining upfront fees from collaboration agreements, €131.9 million of advance payments for future COVID-19 vaccine sales, which had been received during the year ended December 31, 2021, or for which an unconditional right of consideration exists (as of December 31, 2020: €131.7 million of remaining upfront fees from collaborations as well as €235.9 million of advance payments for future COVID-19 vaccine sales).

During the year ended December 31, 2021, the contract liabilities decreased as revenues were recognized from contract liabilities outstanding at the beginning of the year by fulfilling commercial performance obligations and progressing our research and development collaboration agreements (during the year ended December 31, 2020: increase in contract liabilities since payments received exceeded revenues recognized from contract liabilities recorded at the beginning of the year).

The refund liabilities relate to our collaboration with Fosun and represent consideration which has been received but which will need to be refunded to the collaboration partner.

Set out below is the amount of revenue recognized for the periods indicated:

	Years ended December 31,		
(in millions)	2021	2020	2019
Amounts included in contract liabilities at the beginning of the year	€73.7	€58.9	€84.1

6.3 Performance Obligations

The contract liabilities allocated to the remaining performance obligations from collaboration or commercial supply agreements (unsatisfied or partially unsatisfied) as at year-end are as follows:

(in millions)	December 31, 2021	December 31, 2020
Within one year	€186.1	€299.6
More than one year	9.0	71.9
Total	**€195.1**	**€371.5**

7. Income and Expenses

7.1 Costs of Sales

	Years ended December 31,		
(in millions)	2021	2020	2019
Cost of sales related to COVID-19 vaccine revenues	€2,855.6	€35.6	€—
Cost related to other sales	55.9	23.7	17.4
Total	**€2,911.5**	**€59.3**	**€17.4**

During the year ended December 31, 2021, cost of sales increased compared to the year ended December 31, 2020, mainly due to recognizing cost of sales from our COVID-19 vaccine sales, which included the share of gross profit that we owe our collaboration partner Pfizer based on our sales.

7.2 Research and Development Expenses

	Years ended December 31,		
(in millions)	2021	2020	2019
Purchased services	€572.6	€359.9	€65.6
Wages, benefits and social security expense	233.1	126.3	83.2
Laboratory supplies	53.8	107.8	37.2
Depreciation and amortization	32.9	30.2	27.5
Other	56.8	20.8	13.0
Total	**€949.2**	**€645.0**	**€226.5**

During the year ended December 31, 2021, research and development expenses increased compared to the year ended December 31, 2020, mainly due to increased research and development expenses from the BNT162 clinical trials launched and conducted in the year ended December 31, 2021, recorded as purchased services with respect to those expenses, which are initially incurred by Pfizer and subsequently charged to us under the collaboration agreement. The increase was further driven by an increase in wages, benefits and social security expenses resulting from an increase in headcount, recording expenses incurred under our share-based-payment arrangements as well as from recognizing inventor remuneration expenses.

During the year ended December 31, 2020, research and development expenses increased compared to the year ended December 31, 2019, mainly due to an increase in research and development expenses from our BNT162 program.

7.3 Sales and Marketing Expenses

	Years ended December 31,		
(in millions)	2021	2020	2019
Purchased services	€26.5	€10.9	€0.2
Wages, benefits and social security expense	4.3	1.6	1.9
Other	19.6	2.0	0.6
Total	**€50.4**	**€14.5**	**€2.7**

During the year ended December 31, 2021, sales and marketing expenses increased compared to the year ended December 31, 2020, mainly due to an increase in purchased service which we incurred in connection with progressing our commercial activities with respect to our COVID-19 vaccine.

7.4 General and Administrative Expenses

	Years ended December 31,		
(in millions)	2021	2020	2019
Wages, benefits and social security expense	€90.5	€33.0	€19.1
Purchased services	70.2	26.0	6.4
Insurance premiums	30.4	4.8	1.1
IT and office equipment	25.1	7.4	4.6
Depreciation and amortization	7.3	5.1	4.9
Other	62.3	17.7	9.4
Total	**€285.8**	**€94.0**	**€45.5**

During the year ended December 31, 2021, general and administrative expenses increased compared to the year ended December 31, 2020, mainly due to an increase in wages, benefits and social security expenses resulting from an increase in headcount and expenses incurred under the share-based-payment arrangements, increased expenses for purchased management consulting and legal services as well as higher insurance premiums caused by the increased business volume. Our M&A as well as our business development transactions also contributed to the increase in general and administrative expenses.

During the year ended December 31, 2020, general and administrative expenses increased compared to the year ended December 31, 2019, mainly influenced by higher expenses for purchased management consulting and legal services as well as an increase in headcount leading to higher wages, benefits and social security expenses and higher insurance premiums.

7.5 Other Operating Expenses

	Years ended December 31,		
(in millions)	2021	2020	2019
Loss on derivative instruments at fair value through profit or loss	€86.3	€—	€—
Other	8.1	2.4	0.7
Total	**€94.4**	**€2.4**	**€0.7**

During the year ended December 31, 2021, the other expenses increased compared to the year ended December 31, 2020, mainly from recording the change in fair value of foreign exchange forward contracts that were entered into during the year ended December 31, 2021, to manage some of our foreign exchange exposures but were not designated as hedging instruments under IFRS.

7.6 Other Operating Income

	Years ended December 31,		
(in millions)	2021	2020	2019
Foreign exchange differences, net	€446.3	€—	€—
Government grants	137.2	239.0	1.5
Income from derivative instruments at fair value through profit and loss	5.7	—	—
Bargain purchase	2.2	7.0	—
Other	7.0	4.5	1.2
Total	**€598.4**	**€250.5**	**€2.7**

During the year ended December 31, 2021, the other income increased compared to the year ended December 31, 2020, which was mainly due from recognizing foreign exchange differences and government grant funding. The foreign exchange differences included in operating income primarily arose from valuing our U.S. dollar denominated trade receivables which were mainly incurred under our COVID-19 collaboration with Pfizer, U.S. dollar denominated trade payables as well as U.S. dollar denominated other financial liabilities which mainly relate to obligations incurred from our license agreements.

The other operating income derived from government grants mainly relates to the government grant for which we became eligible during the year ended December 31, 2020, as part of an initiative by the German Federal Ministry of Education (*Bundesministerium für Bildung und Forschung*, or the *BMBF*) to support our COVID-19 vaccine program, BNT162. The BMBF funding was granted to accelerate our vaccine development, to upscale manufacturing capabilities in Germany and compensate costs that incurred while continuing to test the COVID-19 vaccine in clinical trials. During the year ended December 31, 2021, the final drawdowns were made. Overall, during the years ended December 31, 2021 and 2020, €48.1 million and €326.9 million, respectively, were received in cash. The proportion of the grant that related to expenses incurred during the years ended December 31, 2021 and 2020, was recognized as other operating income with an amount of €136.1 million and €238.9 million, respectively.

The following table illustrates the changes regarding the government grants, including the government grant initiated by the BMBF:

	Years ended December 31,		
(in millions)	2021	2020	2019
As of January 1	**€92.0**	**€—**	**€—**
Received during the year	48.2	331.0	1.5
Released to the consolidated statements of profit or loss	(137.2)	(239.0)	(1.5)
As of December 31	**€3.0**	**€92.0**	**€—**
Total current	3.0	92.0	—
Total non-current	—	—	—

The income from derivative instruments at fair value through profit and loss resulted from foreign exchange forward contracts that were entered into during the year ended December 31, 2021, to manage parts of our transactions' foreign exchange exposures but were not designated as hedging instruments under IFRS.

7.7 Finance Income

	Years ended December 31,		
(in millions)	2021	2020	2019
Foreign exchange differences, net	€66.2	€—	€2.3
Interest income	1.5	1.6	1.8
Total	**€67.7**	**€1.6**	**€4.1**

During the year ended December 31, 2021, our finance income included €66.2 million foreign exchange gains. Foreign exchange differences on a cumulative basis, are either shown as finance income or expenses.

7.8 Finance Expenses

	Years ended December 31,		
(in millions)	2021	2020	2019
Fair value adjustments of financial instruments measured at fair value	€277.8	€17.3	€—
Amortization of financial instruments	21.9	3.1	0.3
Interest expenses related to lease liabilities	2.9	2.0	1.7
Interest expenses related to financial assets	2.5	—	—
Foreign exchange differences, net	—	42.6	—
Total	**€305.1**	**€65.0**	**€2.0**

During the year ended December 31, 2021, the finance expenses increased compared to the year ended December 31, 2020, mainly due to increased expenses arising from fair value measurement adjustments of the derivative embedded within the convertible note from €17.3 million in 2020 to €277.8 million in 2021. The change in fair value was mainly driven by the increase in our share price and was recognized as finance expenses in our consolidated statements of profit or loss.

During the year ended December 31, 2021, finance expenses included €21.9 million amortization of financial instruments compared to €3.1 million in the prior year mainly due to the effective interest rate effect during the year ended December 31, 2021, derived from adjusting estimated future cash flows of our convertible note which will be redeemed early as of March 1, 2022. For further disclosures, see *Note 12* ⊕.

7.9 Employee Benefits Expense

	Years ended December 31,		
(in millions)	2021	2020	2019
Wages and salaries	€345.9	€160.7	€98.7
Social security costs	31.7	17.9	12.3
Pension costs	1.2	0.8	0.5
Total	**€378.8**	**€179.4**	**€111.5**

Wages and salaries include, among other things, expenses for share-based payments.

8. Income Tax

Income tax for the years ended December 31, 2021, December 31, 2020, and December 31, 2019, comprised current income taxes, other taxes and deferred taxes. We are subject to corporate taxes, the solidarity surcharge and trade taxes. Our corporate tax rate in the reporting year remained unchanged (15.0%) as did the solidarity surcharge (5.5%) whereas the average trade tax rate changed resulting in a combined income tax rate of 30.72% in the year ended December 31, 2021 (during the years ended December 31, 2020 and 2019: 30.79% and 30.78%, respectively). Deferred taxes are calculated at a rate of 27.2% taking decreasing average trade tax rates in Mainz, Marburg and Idar-Oberstein from 2022 onwards into consideration. Deferred taxes for Austria are calculated at a corporate tax rate of 25%. Austria's decrease of its corporate tax rate down to 23% in 2024 will be recognized from 2023 onwards. BioNTech USA Holding, LLC is subject to Federal Corporate Income Tax (21.0%) as well as State Income Tax in various state jurisdictions (average rate of 7.4%).

The following table illustrates the current and deferred taxes for the periods indicated:

	Years ended December 31,		
(in millions)	2021	2020	2019
Current income taxes	€4,535.0	€—	€(0.2)
Deferred taxes	218.9	(161.0)	—
Income taxes	**€4,753.9**	**€(161.0)**	**€(0.2)**

The following table reconciles the expected income taxes to the actual current income taxes and deferred taxes as presented in the table above. The expected income taxes were calculated using the combined income tax rates of BioNTech SE applicable to the Group and mentioned above which was applied to profit before taxes to calculate the expected income taxes.

	Years ended December 31,		
(in millions)	2021	2020[1]	2019[1]
Profit / (Loss) before tax	**€15,046.4**	**€(145.8)**	**€(179.4)**
Expected tax credit / (benefit)	€4,622.5	€(44.9)	€(55.2)
Effects			
Deviation due to local tax basis	9.1	0.6	0.1
Deviation due to deviating income tax rate (Germany and foreign countries)	9.4	1.3	0.1
Change in valuation allowance	3.0	(26.2)	(0.2)
Effects from tax losses	19.5	(90.4)	51.2
Change in deferred taxes due to tax rate change	(7.5)	—	—
Non-deductible expenses	90.5	0.8	0.1
Tax-free income	(0.3)	—	—
Non tax-effective share-based payment expenses	15.5	9.8	9.3
Tax-effective equity transaction costs	(1.2)	(10.2)	(5.1)
Adjustment prior year taxes	(2.9)	0.3	(0.3)
Non-tax effective bargain purchase	(0.7)	(2.2)	—
Other effects	(3.0)	0.1	(0.2)
Income taxes	**€4,753.9**	**€(161.0)**	**€(0.2)**
Effective tax rate	**31.6%**	**n.m.[2]**	**n.m.[2]**

(1) Certain amounts have been combined in the prior period to conform with the current period presentation.

(2) The information is not meaningful due to the loss before tax in the respective periods.

Deferred Taxes

Deferred taxes for the periods indicated relate to the following:

Year ended December 31, 2021 (in millions)	**January 1, 2021**	**Recognized in P&L**	**Recognized in OCI**	**Acquisition of subsidiaries and businesses**	**December 31, 2021**
Fixed assets	€5.6	€(1.3)	€—	€(10.8)	€(6.5)
Right-of-use assets[1]	(30.0)	(17.5)	—	—	(47.5)
Inventories	1.0	0.8	—	—	1.8
Trade and other receivables	(3.0)	(92.6)	—	—	(95.6)
Lease liabilities[1]	25.4	23.3	—	—	48.7
Contract liabilities	23.4	(12.8)	—	—	10.6
Loans and borrowings	0.5	22.6	—	—	23.1
Net employee defined benefit liabilities	0.8	0.1	—	—	0.9
Other provisions	1.5	4.8	—	—	6.3
Other (incl. deferred expenses)	10.6	(9.0)	—	—	1.6
Tax losses / tax credits	175.7	(106.8)	—	2.0	70.9
Deferred tax assets / (liabilities), net (before valuation adjustment)	**€211.5**	**€(188.4)**	**€—**	**€(8.8)**	**€14.3**
Valuation adjustment	(50.5)	(30.5)	—	—	(81.0)
Deferred tax assets / (liabilities), net (after valuation adjustment)	**€161.0**	**€(218.9)**	**€—**	**€(8.8)**	**€(66.7)**

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Year ended December 31, 2020 (in millions)	**January 1, 2020**	**Recognized in P&L[2]**	**Recognized in OCI**	**Acquisition of subsidiaries and businesses**	**December 31, 2020**
Fixed assets	€(0.7)	€(2.4)	€—	€8.7	€5.6
Right-of-use assets[1]	(16.9)	(3.4)	—	(9.7)	(30.0)
Inventories	0.6	—	—	0.4	1.0
Trade and other receivables	—	(3.0)	—	—	(3.0)
Lease liabilities[1]	17.4	(1.7)	—	9.7	25.4
Loans and borrowings	—	0.3	—	0.2	0.5
Contract liabilities	23.5	(0.1)	—	—	23.4
Net employee defined benefit liabilities	—	0.2	(0.1)	0.7	0.8
Other provisions	0.2	0.9	—	0.4	1.5
Other (incl. deferred expenses)	2.1	8.3	—	0.2	10.6
Tax losses / tax credits	109.8	41.6	—	24.3	175.7
Deferred tax assets net (before valuation adjustment)	**€136.0**	**€40.7**	**€(0.1)**	**€34.9**	**€211.5**
Valuation adjustment	(136.0)	120.3	—	(34.8)	(50.5)
Deferred tax assets net (after valuation adjustment)	**€—**	**€161.0**	**€(0.1)**	**€0.1**	**€161.0**

(1) Presentation has been adjusted to present right-of-use assets and lease liabilities as well as trade and other receivables separately.

(2) Includes all changes in deferred taxes related to U.S. tax group other than those acquired in business combination.

As of December 31, 2021, our accumulated tax losses comprised tax losses of German entities not within the tax group (as of December 31, 2021: BioNTech Innovation and Services Marburg GmbH, BioNTech Innovation GmbH i.G., BioNTech Real Estate Verwaltungs GmbH and the Real Estate partnerships; as of December 31, 2020: reSano GmbH, BioNTech Manufacturing Marburg GmbH, BioNTech Real Estate Verwaltungs GmbH and the Real Estate partnerships) and U.S. tax group. Up until the year ended December 31, 2020, our accumulated tax losses comprised also those of the German tax group. Our accumulated tax losses for the periods indicated amounted to the following:

	Years ended December 31,		
(in millions)	2021	2020	2019
Corporate tax	€272.0	€596.4	€356.0
Trade tax	170.6	513.6	352.3

	Years ended December 31,		
(in millions)	2021	2020	2019
Federal tax credits	€4.0	€0.8	€—
State tax credits	1.6	0.3	—

Up until the year ended December 31, 2020, deferred tax assets on tax losses had not been recognized as there was not sufficient probability in terms of IAS 12 that there would have been future taxable profits available against which the unused tax losses could have been utilized.

Since December 2020, our COVID-19 vaccine has been fully approved, granted conditional marketing authorization, or approved or authorized for emergency or temporary use in over 100 countries and regions worldwide, which resulted in recognition of revenues from the commercial sale of pharmaceutical products for the first time. Therefore as of December 31, 2020, it was considered highly probable that taxable profits for the German tax group would be available against which the tax losses could be utilized. On this basis, we had recognized deferred tax assets and liabilities with a net amount of €161.0 million for the cumulative tax losses and temporary differences determined for the German tax group as of December 31, 2020.

During the year ended December 31, 2021, deferred tax assets on tax losses which had been recognized for the losses incurred by the German tax group were fully utilized (as per the end of each quarter during the year ended December 31, 2021, a proportionate amount of the deferred tax assets related to the tax loss carryforward was utilized). The change in deferred taxes was also supplemented by deferred taxes on temporary differences.

As of December 31, 2021, we have not recognized deferred tax asset for unused tax losses and temporary differences at amount of €81.0 million (December 31, 2020: €50.5 million, December 31, 2019: €136.0 million) as there is not sufficient probability in terms of IAS 12 that there will be future taxable income available against which the unused tax losses and temporary differences can be utilized.

These amounts included tax losses at an amount of €238.1 million US federal tax losses and €147.4 million US state tax losses (December 31, 2020: €136.8 million US federal tax losses and €60.9 million US state tax losses, December 31, 2019: nil) related to the US tax group, thereof €20.9 million US federal losses that begin to expire at various dates beginning in 2033. All other unused tax losses and temporary differences can be carried forward indefinitely.

9. Earnings per Share

Basic earnings per share (EPS) is calculated by dividing the profit / (loss) for the year attributable to ordinary equity holders of the parent by the weighted average number of ordinary shares outstanding during the year.

Diluted EPS is calculated by dividing the profit / (loss) attributable to ordinary equity holders of the parent by the weighted average number of ordinary shares outstanding during the year plus the weighted average number of ordinary shares that would be issued on conversion of all the dilutive potential ordinary shares into ordinary shares.

On September 18, 2019, we effected a 1:18 share split by issuing 206,595,492 shares by way of a capital increase from our own funds; thus, no outside proceeds were received. This capital increase came into effect upon registration with the commercial register (*Handelsregister*). The accompanying financial statements and notes to the financial statements including the EPS information below which relate to the period before September 18, 2019, give retroactive effect to the share split.

The following table reflects the income and share data used in the basic and diluted EPS calculations:

	Years ended December 31,		
(in millions)	2021	2020	2019
Profit / (loss) attributable to ordinary equity holders of the parent for basic earnings	**€10,292.5**	**€15.2**	**€(179.1)**
Weighted average number of ordinary shares for basic EPS	**244.0**	**235.4**	**211.5**
Effects of dilution from share options	15.7	13.1	—
Weighted average number of ordinary shares adjusted for the effect of dilution	**259.7**	**248.5**	**211.5**
Earnings per share(1)			
Basic profit / (loss) for the period per share	€42.18	€0.06	€(0.85)
Diluted profit / (loss) for the period per share	€39.63	€0.06	€(0.85)

(1) Capital increase due to 1:18 share split occurred on September 18, 2019. Retroactive effect is reflected in number of shares which relate to the period before the share split.

In January 2022, we announced a new research, development and commercialization collaboration with Pfizer to develop a potential first mRNA-based vaccine for the prevention of shingles (herpes zoster virus, or HZV). Under the terms of the agreement, we issued 497,727 ordinary shares with the nominal amount of €0.5 million to Pfizer which were registered with the commercial register (*Handelsregister*) on March 24, 2022.

Share options were not included in the calculation of diluted EPS for periods in which they were antidilutive; i.e., for the periods in which a loss was incurred.

10. Property, Plant and Equipment

(in millions)	Land and buildings	Equipment, tools and installations	Construction in progress and advance payments	Total
Acquisition and production costs				
As of January 1, 2020	**€29.4**	**€83.2**	**€29.7**	**€142.3**
Additions	14.9	10.1	41.0	66.0
Disposals	—	(6.9)	(1.0)	(7.9)
Reclassifications	8.6	1.8	(10.4)	—
Currency differences	—	(0.7)	—	(0.7)
Acquisition of subsidiaries and businesses	8.4	54.9	22.3	85.6
As of December 31, 2020	**€61.3**	**€142.4**	**€81.6**	**€285.3**
As of January 1, 2021	**€61.3**	**€142.4**	**€81.6**	**€285.3**
Additions	20.0	44.3	63.2	127.5
Disposals	(0.8)	(15.1)	(1.7)	(17.6)
Reclassifications	23.1	25.8	(48.9)	—
Currency differences	0.5	0.7	0.1	1.3
Acquisition of subsidiaries and businesses	—	0.2	—	0.2
As of December 31, 2021	**€104.1**	**€198.3**	**€94.3**	**€396.7**

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Property, Plant and Equipment

(in millions)	Land and buildings	Equipment, tools and installations	Construction in progress and advance payments	Total
Cumulative depreciation and impairment charges				
As of January 1, 2020	**€8.3**	**€41.0**	**€—**	**€49.3**
Depreciation	2.1	13.8	—	15.9
Disposals	—	(6.7)	—	(6.7)
Currency differences	—	(0.2)	—	(0.2)
As of December 31, 2020	**€10.4**	**€47.9**	**€—**	**€58.3**
As of January 1, 2021	10.4	47.9	—	58.3
Depreciation	4.4	25.0	—	29.4
Disposals	(0.6)	(13.1)	—	(13.7)
Currency differences	—	0.2	—	0.2
As of December 31, 2021	**€14.2**	**€60.0**	**€—**	**€74.2**

(in millions)	Land and buildings	Equipment, tools and installations	Construction in progress and advance payments	Total
Carrying amount				
As of December 31, 2020	**50.9**	**94.5**	**81.6**	**227.0**
As of December 31, 2021	**€89.9**	**€138.3**	**€94.3**	**€322.5**

11. Intangible Assets

(in millions)	Goodwill	Concessions, licenses, inprocess R&D and similar rights	Advance payments	Total
Acquisition costs				
As of January 1, 2020	**€3.0**	**€116.3**	**€2.4**	**€121.7**
Additions	—	4.2	4.4	8.6
Disposals	—	(5.4)	(0.6)	(6.0)
Reclassifications	—	0.2	(0.2)	—
Currency differences	(6.8)	(3.9)	—	(10.7)
Acquisition of subsidiaries and businesses	57.5	35.8	—	93.3
As of December 31, 2020	**€53.7**	**€147.2**	**€6.0**	**€206.9**
As of January 1, 2021	53.7	147.2	6.0	206.9
Additions	—	5.9	4.2	10.1
Disposals	—	(8.5)	(1.2)	(9.7)
Reclassifications	—	1.2	(1.2)	—
Currency differences	4.1	2.5	—	6.6
Acquisition of subsidiaries and businesses	—	43.3	—	43.3
As of December 31, 2021	**€57.8**	**€191.6**	**€7.8**	**€257.2**

Continued on next page

Intangible Assets

(in millions)	Goodwill	Concessions, licenses, inprocess R&D and similar rights	Advance payments	Total
Cumulative amortization and impairment charges				
As of January 1, 2020	**€—**	**€32.3**	**€—**	**€32.3**
Amortization	—	16.6	—	16.6
Disposals	—	(5.4)	—	(5.4)
Currency differences	—	(0.1)	—	(0.1)
As of December 31, 2020	**€—**	**€43.4**	**€—**	**€43.4**
As of January 1, 2021	—	43.4	—	43.4
Amortization	—	16.8	—	16.8
Disposals	—	(5.5)	—	(5.5)
Currency differences	—	0.1	—	0.1
As of December 31, 2021	**€—**	**€54.8**	**€—**	**€54.8**

(in millions)	Goodwill	Concessions, licenses, inprocess R&D and similar rights	Advance payments	Total
Carrying amount				
As of December 31, 2020	**53.7**	**103.8**	**6.0**	**163.5**
As of December 31, 2021	**€57.8**	**€136.8**	**€7.8**	**€202.4**

Goodwill and Intangible Assets with Indefinite Useful Lives

	CGU Immunotherapies		External Product Sales of JPT		Total	
(in millions)	As of December 31, 2021	As of December 31, 2020	As of December 31, 2021	As of December 31, 2020	As of December 31, 2021	As of December 31, 2020
Goodwill	€57.3	€53.2	€0.5	€0.5	€57.8	€53.7

For the year ended December 31, 2021, we have total Goodwill of €57.3 million, which relates almost completely to the CGU immunotherapies. The CGU immunotherapies focus on the development of therapies to address a range of rare and infectious diseases and include our broad pipeline that includes mRNA-based immune activators, antigen-targeting T cells and antibodies, and defined immunomodulators of various immune cell mechanisms.

The recoverable amount of the CGU immunotherapies has been determined based on a fair value less cost of disposal (FVLCD) derived from our market capitalization as observable input parameter. As a result of the analysis, management did not identify an impairment for this CGU.

We concluded that no reasonable possible change of the recoverable amount would cause the carrying amount of the CGU Immunotherapies to exceed its recoverable amount.

Non-Current Assets by Region

As of December 31, 2021, non-current assets comprised €139.7 million intangible assets, property, plant and equipment, right-of-use assets and other assets of our subsidiaries incorporated in the United States (as of December 31, 2020: €89.2 million). The remaining non-current assets relate to subsidiaries incorporated in Germany.

12. Financial Assets and Financial Liabilities

12.1 Capital Risk Management

Our capital management objectives are designed primarily to finance our growth strategy.

Our controlling committee reviews the total amount of cash on a regular basis. As part of this review, the committee considers the total cash and cash equivalents, the cash outflow, currency translation differences and refinancing activities. We monitor cash using a burn rate. The cash burn rate is defined as the average monthly net cash flow from operating and investing activities during a financial year.

(in millions)	December 31, 2021	December 31, 2020
Cash and cash equivalents at banks and on hand	€1,692.7	€1,210.2
Total	**€1,692.7**	**€1,210.2**

When analyzing our liquidity, we anticipate certain significant balance sheet items that are expected to improve our cash and cash equivalents balance subsequent to the end of the reporting period. Please refer to *Note 12.2* ⊕ for details on cash deposits which were returned to cash and cash equivalents and *Note 6.2* ⊕ explains the settlement payments received under our COVID-19 collaboration with Pfizer.

In general, the aim is to maximize the financial resources available for further research and development projects.

As of December 1, 2021, an investment and asset management policy became effective which confirmed our previous objectives, policies and processes for managing cash which requires that our investment portfolio shall be maintained in a manner that minimizes risk of the invested capital. These risks include mainly credit risk and concentration risk. The portfolio must provide liquidity in a timely manner to accommodate operational and capital needs. The portfolio is managed efficiently by the Treasury department.

We are not subject to externally imposed capital requirements. Our capital management objectives were achieved in the reporting year.

12.2 Categories of Financial Instruments

Financial Assets: Financial Assets at Amortized Cost and at Fair Value through Profit or Loss
Set out below, is an overview of financial assets at amortized cost and at fair value through profit or loss, other than cash and cash equivalents, held by the Group as of the dates indicated:

Financial assets *(in millions)*	**December 31, 2021**	**December 31, 2020**
Derivatives not designated as hedging instrument		
Foreign exchange forward contracts	€5.7	€—
Equity instruments designated at fair value through OCI		
InstaDeep Ltd.	19.5	—
Financial assets at amortized cost		
Trade and other receivables	12,381.7	165.5
Cash deposit with an original term of six months	375.2	—
Other financial assets	2.5	137.2
Total	**€12,784.6**	**€302.7**
Total current	12,763.3	302.7
Total non-current	21.3	—

Equity Instruments Designated at Fair Value through OCI
In December 2021, we acquired 5.3% of the shares (fully diluted as of closing) of InstaDeep Ltd., a provider of artificial intelligence-powered decision-making systems headquartered in London, United Kingdom. The equity investment complements the already established commercial cooperation based on the field of artificial intelligence and machine learning in the context of computational design of new precision immunotherapies. In accordance with IFRS 9 we elected to present gains and losses on this equity investment in OCI to avoid fluctuation to be disclosed in our consolidated financial statements of profit or loss. Since the acquisition date, no material gains and losses on this equity investment have occurred.

Financial Assets at Amortized Cost
Trade and other receivables significantly increased and remained outstanding as of December 31, 2021, mainly due to the contractual settlement of the gross profit share under our COVID-19 collaboration with Pfizer as described in *Note 6.2* ⊕. as well as from our direct product sales to customers in our territory.

Cash deposits with an original term of six months are presented as other financial assets. Within our interim condensed consolidated financial statements as of, and for the three and nine months ended, September 30, 2021, cash deposits in an amount of €367.0 million with a term of six months at inception had been classified as cash and cash equivalents. The presentation as other financial assets in our consolidated statements of financial position and cash flow used in investing activities in our consolidated statements of cash flows was corrected as of and for the year ended December 31, 2021. As of December 31, 2021, the remaining term until maturity for the investments made was on average less than one month and the cash deposits in the amount of €375.2 million, were returned to cash and cash equivalents during January and February 2022.

Financial Liabilities: Financial Liabilities at Amortized /Cost (including Loans and Borrowings and Other Financial Liabilities)

Set out below, is an overview of financial liabilities, other financial liabilities and trade payables held by the Group as of the dates indicated:

Loans and borrowings *(in millions)*	**Maturity**	**December 31, 2021**	**December 31, 2020**
Lease liabilities		€181.6	€84.2
Convertible note – host contract	8/28/2024	99.7	87.5
3.5% €50,000,000 bank loan	(1)	—	47.2
2.2% €10,000,000 secured bank loan	12/30/2027(2)	7.7	9.0
2.1% €9,450,000 secured bank loan	9/30/2028(2)	7.8	8.7
1.9% €3,528,892 secured bank loan	6/30/2027	3.4	3.5
0.8% €1,305,167 loan	5/30/2039	1.3	—
Total		**€301.5**	**€240.1**
Total current		129.9	9.1
Total non-current		171.6	231.0

(1) The loan was fully repaid during December 2021.

(2) The loans were fully repaid in February 2022.

Other financial liabilities *(in millions)*	**December 31, 2021**	**December 31, 2020**
Derivatives not designated as hedging instrument		
Convertible note – embedded derivative	€308.7	€30.9
Foreign exchange forward contracts	63.0	—
Financial liabilities at fair value through profit or loss		
Contingent consideration	6.1	0.6
Total financial liabilities at fair value	**€377.8**	**€31.5**
Trade payables and other financial liabilities at amortized cost, other than loans and borrowings		
Trade payables	160.0	102.3
Other financial liabilities	818.7	74.1
Total trade payables and other financial liabilities at amortized cost, other than loans and borrowings	**€978.7**	**€176.4**
Total other financial liabilities	**€1,356.5**	**€207.9**
Total current	1,350.4	176.4
Total non-current	6.1	31.5

Total financial liabilities *(in millions)*	**December 31, 2021**	**December 31, 2020**
Loans and borrowings	€301.5	€240.1
Other financial liabilities	1,356.5	207.9
Total	**€1,658.0**	**€448.0**
Total current	1,480.3	185.5
Total non-current	177.7	262.5

Loans and Borrowings

2.2% and 2.1% Secured Bank Loan

We maintain two secured loans with Deutsche Bank AG, or Deutsche Bank, a €9.5 million secured credit facility at a rate of 2.1% and maturing on September 30, 2028 to finance the buildouts of our JPT Peptide Technologies GmbH facility and a €10.0 million secured credit facility at a rate of 2.2% and maturing on December 30, 2027, of Innovative Manufacturing Services GmbH facility, respectively. As of December 31, 2021, the full amounts under these facilities were drawn down and were started to be repaid. Each of these facilities is secured by liens over our property. Subsequent to the end of the reporting period, we agreed to repay both Deutsche Bank loans as of February 25, 2022.

EIB Manufacturing Financing – 3.5% Secured Bank Loan

A financing arrangement which was entered with the European Investment Bank, or the EIB, in June 2020 to partially support the development of BNT162 and fund expansion of our manufacturing capacity to provide worldwide supply of BNT162 in response to the COVID-19 pandemic comprised a €100.0 million credit facility. Under this arrangement, €50.0 million (Credit A) at a cash interest fixed rate of 1.0% per annum payable quarterly in arrears, plus deferred interest at fixed rate of 2.5% per annum had been drawn down but was effectively repaid during the year ended December 31, 2021. The additional €50.0 million (Credit B) was cancelled effectively during the year ended December 31, 2021. The guarantee agreements securing the financing arrangement were effectively released by fulfilling all payment obligations derived from and fully repaying the amounts drawn under the arrangements.

June 2020 Private Placement – Convertible Note

A fund associated with Temasek Capital Management Pte. Ltd., or Temasek, and another accredited investor participated in a private investment which we refer to as the June 2020 Private Placement. The private placement includes an investment in a four years mandatory convertible note and an investment in ordinary shares and closed as of August 28, 2020, following the satisfaction of customary closing conditions. The private placement includes an investment in ordinary shares (see *Note 16* ⊕) and a €100.0 million investment in a four years mandatory convertible note with a coupon of 4.5% per annum and a conversion premium of 20% above its reference price. As of closing, the convertible note has been classified as a financial liability according to IAS 32 because the conversion features of the note lead to a conversion into a variable number of shares and is measured at amortized costs since the fair value option was not applied. On initial recognition, the financial liability was measured at the present value of the contractually determined future cash flows discounted at the effective interest rate of 9.0%. The financial liability is subsequently measured at amortized cost by using the effective interest rate method, reflecting actual and revised estimated contractual cash flows until extinguished upon conversion. In February 2022, we gave notice to Temasek that we will exercise our early redemption option and fully redeem the convertible note on March 1, 2022, the redemption date. The early redemption will be fulfilled by issuing the number of our ordinary shares calculated pursuant to the early redemption provisions of the convertible note, plus paying any fractional share and accrued but unpaid interest up to (but excluding) the redemption date. The early redemption was already expected and reflected in the presentation of the financial liability and our estimates for future cash flows and conversion effects under the convertible note as of December 31, 2021. The conversion features provided for in the contract were identified as a combined embedded derivative since they share the same risk exposure and are interdependent. The embedded derivative was bifurcated from the convertible note, as host contract, and is recognized as a separate financial instrument. Based on the classification as derivative, the instrument is measured at fair value through profit and loss until it is extinguished upon conversion. The fair value of the embedded derivative is determined by modeling the stock price movement using the Cox-Rubinstein binomial tree model to derive the value of the conversion right. The primary inputs used in the model include stock price volatility, credit spreads, risk-free interest rate and foreign exchange forward rates. Stock price volatility is based on our implied volatility, credit risk is model implied and adjusted for movement in credit spreads for B-rated corporates at each valuation date, the risk-free interest rate is based on currency specific time congruent IBOR and swap rates whereas the foreign exchange forward rates are based on observable market data.

Derivatives Not Designated as Hedging Instrument

Derivatives not designated as hedging instruments relate to foreign exchange forward contracts that were entered into during the year ended December 31, 2021, to manage some of our foreign currency exposures. The foreign exchange forward contracts are intended to reduce the exposure to foreign currency risk resulting from trade receivables denominated in U.S. dollar.

Other Financial Liabilities at Amortized Cost
Other financial liabilities at amortized cost mainly include obligations derived from license agreements which are being incurred with respect to our COVID-19 vaccine sales in our and the collaboration partners' territories where we and our partners are using third party intellectual property. In addition, other financial liabilities at amortized cost comprise obligations from services received but not yet invoiced.

12.3 Fair Values

Fair values of cash and cash equivalents, trade receivables, trade payables and other current financial assets and liabilities approximate their carrying amounts as of December 31, 2021, largely due to the short-term maturities of these instruments.

After repaying the EIB loan, the financial liabilities measured at amortized cost include four fixed-interest rate loans as well as the convertible note. As of December 31, 2021, the carrying value approximates their fair values as there have been no significant changes in relevant interest rates since the inception of the respective loans and note.

The fair values of financial instruments measured at fair value are reassessed on a quarterly basis. The valuation technique used for measuring the fair value of the embedded derivative is based on significant observable inputs (Level 2). During the year ended December 31, 2021, the fair value adjustment derived from remeasuring the embedded derivative was recognized as finance expenses in our consolidated statements of profit or loss and amounted to €277.8 million. The foreign exchange forward contracts are valued using valuation techniques, which employ the use of foreign exchange spot and forward rates (Level 2). The fair value adjustment derived from remeasuring the foreign exchange forward contracts amounted to other operating expenses of €86.3 million and other operating income of €5.7 million in our consolidated statements of profit or loss. The initial fair value of the contingent consideration determined at acquisition was based on cash flow projections (unobservable Level 3 input factors) and remains valid since no changes of the underlying available information has occurred.

12.4 Financial Instruments Risk Management Objectives and Policies

Our financial liabilities comprise bank loans, lease liabilities, trade and other payables as well as the convertible note and hedging liabilities. The main purpose of these financial liabilities is to enable our operations. Our principal financial assets include mainly cash and trade receivables that derive directly from our operations.

We are exposed to market risk, credit risk and liquidity risk. Our Management Board oversees the management of these risks.

The controlling committee provides assurance to our Management Board that our financial risk activities are governed by appropriate policies and procedures and that financial risks are identified, measured and managed in accordance with our policies and risk objectives. The Management Board reviews and agrees policies for managing each of these risks, which are summarized below.

12.5 Market Risk

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate due to changes in market prices. Market risk comprises of three types of risk: interest risk, foreign currency risk and other price risk. Financial instruments affected by market risk include financial assets like trade and other receivables, cash and cash equivalents as well as financial liabilities like trade payables and other financial liabilities. Interest risk as well as other price risk are not considered as risks.

The sensitivity analysis in the following sections relate to the position as of December 31, 2021 and December 31, 2020.

There were no material changes in the our market risk exposures or changes in the way risk was managed and valued during the periods.

Foreign Currency Risk
Foreign currency risk is the risk that the fair value or future cash flows of an exposure will fluctuate because of changes in foreign exchange rates. We are subject to currency risk, as our income and expenditures are denominated

in Euro and the U.S. dollar. As such, we are exposed to exchange rate fluctuations between these currencies. Cash inflows denominated in U.S. dollar mainly result from generating proceeds under our collaboration agreements which significantly increased in the past year. Our commercial revenues are primarily collaboration revenues from earnings based on our partners' gross profit, which is shared under the respective collaboration agreements and represents payments we receive in U.S. dollar. Cash outflows dominated in U.S. dollar mainly result from amounts spent on research and development activities as well as expanding our global footprint further. Especially when funds are required in Euros, we are exposed to foreign currency exchange risks. With the aim of preserving capital, surplus liquidity is invested carefully for example into foreign currency investments. Exchange rate fluctuations can reduce the value of our financial positions. We limit the effects of the identified risks by means of a coordinated and consistently implemented risk strategy. Besides applying natural hedging relationships where possible, a matter of principle, foreign exchange forward contracts are concluded as instruments to mitigate foreign currency exchange risk associated with foreign currency-denominated payments. However, the foreign exchange forward contracts which we entered were not designated as hedging instrument under IFRS.

The carrying amount of the monetary assets and liabilities denominated in U.S. dollar at the dates indicated are as follows:

(in millions)	December 31, 2021	December 31, 2020
U.S. dollar Bank accounts	€436.2	€673.5
Other financial assets in U.S. dollar	11,895.5	85.6
Financial liabilities in U.S. dollar	656.7	72.8
Total	**€11,675.0**	**€686.3**

The following tables demonstrate the sensitivity to a reasonably possible change in U.S. dollar exchange rates or U.S. dollar forward rates, with all other variables held constant. The impact on our profit / (loss) before tax is due to changes in the fair value of monetary assets and liabilities. The exposure to foreign currency changes for all other currencies is not material.

		Closing rate		Average rate	
1 € = **Currency**	**Country**	**2021**	**2020**	**2021**	**2020**
U.S. dollar	United States	1.1326	1.2271	1.1827	1.1422

(in millions)	Change in U.S. dollar rate	Effect on profit / (loss) before tax	Effect on pretax equity
2021	+5 %	€(329.5)	€(328.5)
	-5 %	364.3	363.0
2020	+5 %	(32.5)	(32.7)
	-5 %	35.9	36.1

12.6 Credit Risk Management

Credit risk is the risk that a counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Group is exposed to credit risk from its operating activities, including deposits with banks and financial institutions, foreign exchange transactions and trade and other receivables.

Trade and Other Receivables
Our exposure to credit risk of trade receivables and contract assets is primarily on transactions with corporate customers in the biopharma / biotech industry that operate in the United States or Germany as well as governments which are customers established in connection with fulfilling our commercial obligations in our territories as defined under our current COVID-19 collaboration agreements. An analysis of the aging of receivables and the creditworthiness of customers is used to evaluate this risk at each reporting date. The Group follows risk control procedures to assess the credit quality of the customers taking into account their financial position, past experience and other factors. The compliance with credit limits by corporate customers is regularly monitored by us.

As of December 31, 2021, the outstanding trade receivables were mainly due from our collaboration partner Pfizer as well as the Turkish government. Please see Note *12.1* ⊕ for information on trade receivables received or expected to be received subsequent to the end of the reporting period. Besides well-established pharmaceutical companies and governmental

institutions, to a smaller extent, our other customers are medical universities, other public institutions and peers in the biopharma industry, which all have a very high credit rating. Due to this customer portfolio, the credit risk on trade receivables and contract assets is generally very low. We have not incurred bad debt expense and do not expect that this will change with respect to the trade receivables recognized as of December 31, 2021.

Generally, if overdue by more than 90 days and not subject to enforcement activity trade receivables are considered for write-offs. The maximum exposure to credit risk at the reporting date is the carrying value of each class of financial assets disclosed in *Note 12.2*. The expected credit risk on trade receivables and other financial assets derived from applying the simplified approach in calculating expected credit losses was estimated to be not material as of December 31, 2021, as well as December 31, 2020. The Group does not hold collateral as security.

Cash and Cash Equivalents as well as Cash Deposits with an Original Term of Six Months
Credit risk from balances with banks and financial institutions is managed by our Treasury department in accordance with our policy.

Credit risk stemming from cash and cash equivalents as well as cash deposits with an original term of six months is very low due to its demand feature and the high credit rating of the respective banks.

The maximum exposure to credit risk for the components of the consolidated statements of financial position as of December 31, 2021, and December 31, 2020, are the carrying amounts as illustrated in *Note 12.1* and *Note 12.2*.

12.7 Liquidity Risk

Since December 2020, our COVID-19 vaccine has been fully approved, granted conditional marketing authorization, or approved or authorized for emergency or temporary use in over 100 countries and regions worldwide, resulting in commercial revenues respectively. We plan to invest heavily in R&D as we make a strong drive to build out our global development organization and diversify our therapeutic area footprint. Additionally, we plan to enhance capabilities through complementary acquisitions, technologies, infrastructure and manufacturing. Lack of external financial support could pose a risk of going concern. Our liquidity management ensures the availability of cash and cash equivalents, short term financial instruments for operational activities and further investments through appropriate budget planning. In addition, a sufficient level of cash and cash equivalents, which is managed centrally, is always maintained to finance the operational activities.

We monitor liquidity risks using a liquidity planning tool.

Ultimately, the responsibility for liquidity risk management lies with our Management Board, which has established an appropriate approach to managing short-, medium- and long-term financing and liquidity requirements. We manage liquidity risks by holding appropriate reserves, as well as by monitoring forecasted and actual cash flows and reconciling the maturity profiles of financial assets and liabilities.

Risk Concentration
Concentrations arise when the number of counterparties is small or larger number of counterparties are engaged in similar business activities, or activities in the same geographical region, or have economic features that would cause their ability to meet contractual obligations to be affected similarly by changes in economic, political or other conditions. Concentrations indicate the relative sensitivity of our performance to developments affecting a particular industry.

In order to reduce the concentrations of risk derived from having only few customers, including the significant relationship maintained with our collaboration partner Pfizer, our policies and procedures include specific guidelines to constantly monitor the customers' credit risks.

The maturity profile of our financial liabilities based on contractual undiscounted payments is summarized as follows:

Year ended December 31, 2021 (in millions)	**Less than 1 year**	**1 to 5 years**	**More than 5 years**	**Total**
Loans and borrowings	€2.6	€11.5	€6.1	**€20.2**
Trade and other payables	160.0	—	—	**160.0**
Lease liabilities	31.3	89.1	88.9	**209.3**
Contingent consideration	—	—	6.1	**6.1**
Foreign exchange forward contracts	63.0	—	—	**63.0**
Other financial liabilities	818.7	—	—	**818.7**
Total	**€1,075.6**	**€100.6**	**€101.1**	**€1,277.3**

Year ended December 31, 2020 (in millions)	**Less than 1 year**	**1 to 5 years**	**More than 5 years**	**Total**
Loans and borrowings	€3.2	€12.6	€66.7	**€82.5**
Trade and other payables	102.3	—	—	**102.3**
Lease liabilities	8.5	27.3	71.8	**107.6**
Contingent consideration	—	—	0.6	**0.6**
Other financial liabilities	74.1	—	—	**74.1**
Total	**€188.1**	**€39.9**	**€139.1**	**€367.1**

The mandatory convertible note, which was issued during the year ended December 31, 2020, and which is expected to be settled in equity is excluded from the table above.

12.8 Changes in Liabilities Arising from Financing Activities

Year ended December 31, 2021 (in millions)	January 1, 2021	Cash flows	Acquisition of subsidiaries and businesses	Changes in fair value	New leases and disposals	Reclassification	Other	December 31, 2021
Current obligations under lease contracts	€6.1	€(14.1)	€—	€—	€22.1	€13.4	€0.4	**€27.9**
Non-current obligations under lease contracts	78.1	—	—	—	87.7	(13.4)	1.3	**153.7**
Loans and borrowings	155.9	(52.6)	1.3	—	—	—	15.3	**119.9**
Convertible note – embedded derivative	30.9	—	—	277.8	—	—	—	**308.7**
Total	**€271.0**	**€(66.7)**	**€1.3**	**€277.8**	**€109.8**	**€—**	**€17.0**	**€610.2**

Year ended December 31, 2020 (in millions)	January 1, 2020	Cash flows	Acquisition of subsidiaries and businesses	Changes in fair value	New leases and disposals	Reclassification	Other	December 31, 2020
Current obligations under lease contracts	€3.5	€(12.7)	€2.7	€—	€8.6	€4.0	€—	**€6.1**
Non-current obligations under lease contracts	54.1	—	32.3	—	(4.3)	(4.0)	—	**78.1**
Loans and borrowings	16.6	140.8	—	—	—	—	(1.5)	**155.9**
Convertible note – embedded derivative	—	13.6	—	17.3	—	—	—	**30.9**
Total	**€74.2**	**€141.7**	**€35.0**	**€17.3**	**€4.3**	**€—**	**€(1.5)**	**€271.0**

13. Inventories

(in millions)	December 31, 2021	December 31, 2020
Raw materials and supplies	€248.3	€44.3
Unfinished goods	84.5	19.4
Finished goods	169.7	0.4
Total	**€502.5**	**€64.1**

During the year ended December 31, 2021, inventory write-offs and reserves related to our COVID-19 vaccine amounting to €194.6 million were recognized in cost of sales as a result of the respective inventories not fulfilling the predefined quality-specifications (GMP) and / or regulatory requirements (approval of the respective authorities, i.e. FDA) and / or shelf-life expiration, compared to nil in the previous period. We have not pledged any inventories as securities for liabilities. During the years ended December 31, 2021 and 2020, €1,255.1 million and €32.1 million, respectively costs of inventories were recognized as cost of sales.

14. Other Assets

(in millions)	December 31, 2021	December 31, 2020
Sales tax receivable	€26.7	€4.2
Prepayments related to CRO and CMO contracts	22.8	14.2
Prepayments on inventories	6.1	29.8
Prepayments related to service contracts	6.5	3.8
Other	3.6	10.0
Total	**€65.7**	**€62.0**
Total current	64.9	61.0
Total non-current	0.8	1.0

15. Deferred Expenses

(in millions)	December 31, 2021	December 31, 2020
Deferred remuneration	€21.2	€—
Deferred transportation cost	12.7	—
Deferred expenses from CRO and CMO contracts	7.1	5.7
Deferred expenses from insurance contracts	5.0	13.8
Other	16.1	8.5
Total	**€62.1**	**€28.0**
Total current	48.5	28.0
Total non-current	13.6	—

16. Issued Capital and Reserves

On September 18, 2019, we effected a 1:18 share split by issuing 206,595,492 shares by way of a capital increase from our own funds; thus, no outside proceeds were received. The capital increase came into effect upon registration with the commercial register (*Handelsregister*). The accompanying consolidated financial statements and notes to the consolidated financial statements give retroactive effect to the share split for all periods presented.

Proposed Cash Dividend Distributions

(in millions)	December 31, 2021
Proposed cash dividends on ordinary shares	
Cash dividend for 2021: €2.00 per share	**€486.0**

We will propose a special cash dividend of €2.00 per ordinary share (including those held in the form of ADSs), which corresponds to an aggregate of approximately €486.0 million, based on the shares outstanding as of March 30, 2022. Since the cash dividend is subject to approval at our Annual General Meeting to be held in June 2022, no liability is recognized as of December 31, 2021. The Annual General Meeting expects to serve as the record date for the dividend.

Capital Transactions During the Year Ended December 31, 2021
In November 2020, we entered into a sales agreement, or the Sales Agreement, with Jefferies LLC and SVB Leerink LLC, as sales agents, to establish an at-the-market offering program, pursuant to which we may sell, from time to time, ADSs representing ordinary shares for aggregate gross proceeds of up to $500.0 million. During the year ended December 31, 2021, we sold 995,890 ADSs, each representing one of our ordinary shares that had previously been held in treasury, under the Sales Agreement for aggregate gross proceeds of $200.0 million (€163.6 million). As of December 31, 2021, the remaining capacity under the Sales Agreement is $207.1 million. Under the at-the-market offering program ADSs are sold via the stock exchange and therefore no shareholders' subscription rights are affected. As a result of the transaction, treasury shares in the amount of €1.0 million were issued and the capital reserve increased by €162.6 million. Costs of €2.7 million related to the equity transaction were recorded in equity as deduction from the capital reserve.

Capital Transactions During the Year Ended December 31, 2020
During the year ended December 31, 2020, our issued share capital increased by €14.0 million. Each share has a nominal value of €1.00. As a result of the financing transactions, treasury shares decreased by €0.7 million and capital reserve increased by €861.0 million. Costs of €33.2 million related to these equity transactions were recorded in equity as deduction from the capital reserve. The financing transactions that occurred during the year ended December 31, 2020, were as follows:

Shanghai Fosun Pharmaceuticals (Group) Co., Ltd
As part of the BNT162 program, we entered into a strategic alliance with Fosun Pharma to develop COVID-19 vaccine candidates in China. Fosun Pharma agreed to make an equity investment of €45.6 million ($50.0 million) for 1,580,777 ordinary shares via Fosun Industrial Co., Limited, Hong Kong. The increase in share capital with a nominal amount of €1.6 million was subject to execution of share subscription documentation and approval from regulatory authorities in China and became effective with the registration with the commercial register (*Handelsregister*) on April 23, 2020. As a result of the transaction, the capital reserve increased by €44.0 million.

Pfizer Inc., New York, New York, United States
As part of the collaboration between us and Pfizer for the co-development of BNT162, Pfizer agreed to make an equity investment of €103.9 million ($113.0 million). The issuance of 2,377,446 ordinary shares with the nominal amount of €2.4 million was registered with the commercial register (*Handelsregister*) on May 5, 2020. As a result of the transaction the capital reserve increased by €101.5 million.

Neon Therapeutics, Inc., Cambridge, Massachusetts, United States
We acquired Neon by issuing 1,935,488 ADSs representing our ordinary shares with the nominal amount of €1.9 million to former stockholders of Neon in the Merger. The capital increase was registered with the commercial register (*Handelsregister*) on May 8, 2020. As a result of the transaction the capital reserve increased by €87.6 million.

Global Offering
On July 27, 2020, our share capital increased by €5.5 million ($6.4 million) in conjunction with the underwritten offering of 5,500,000 ADSs each representing one ordinary shares at a public offering price of $93.00 per ADS ("Underwritten Offering"). On August 27, 2020, following the Underwritten Offering, our share capital was increased by additional €16 thousand ($19 thousand) in conjunction with the rights offering of 16,124 ADSs each representing one of our ordinary shares at a public offering price of $93.00 per ADS ("Rights Offering"). The Underwritten Offering and the Rights Offering are part of a single, global offering which we refer to as the Global Offering. The gross proceeds of the Global Offering were €436.3 million ($513.0 million) including €5.5 million increase in share capital and €430.8 million increase in capital reserve.

June 2020 Private Placement – Equity Investment
A fund associated with Temasek Capital Management Pte. Ltd., or Temasek, and another accredited investor, contributed a private investment. The private placement includes an investment in a 4-year mandatory convertible note (see *Note 12* ⊖) and an investment of €123.9 million in ordinary shares. The issuance of 2,595,996 ordinary shares with the nominal amount of €2.6 million was registered with the commercial register (*Handelsregister*) on September 8, 2020. As result of the transaction the capital reserve increased by €121.3 million.

At-The-Market Offering Program
During the year ended December 31, 2020, we sold 735,490 ADSs, each representing one of our ordinary shares and previously held in treasury, under the Sales Agreement with Jefferies LLC and SVB Leerink LLC in November 2020 for aggregate gross proceeds of $92.9 million (€76.5 million). As a result of the transaction the capital reserve increased by €75.8 million.

17. Share-Based Payments

During the years ended December 31, 2021 and 2020, our share-based payment arrangements led to the following expenses:

		Years ended December 31,		
(in millions)	Note	2021	2020	2019
Expense arising from equity-settled share-based payment arrangements		€61.0	€32.1	€30.2
Employee Stock Ownership Plan	17.5	20.2	17.1	27.0
Chief Executive Officer Grant	17.4	5.9	11.3	3.2
Management Board Grant(1)	17.3	2.4	2.7	—
BioNTech 2020 Employee Equity Plan for employees based outside North America	17.1	32.5	1.0	—
Expense arising from cash-settled share-based payment arrangements		32.7	0.7	—
Employee Stock Ownership Plan	17.5	6.3	—	—
Management Board Grant(1)	17.2, 17.3	3.6	0.7	—
BioNTech Restricted Stock Unit Plan for North America Employees	17.1	22.8	—	—
Total		**€93.7**	**€32.8**	**€30.2**
Cost of sales		7.0	1.1	0.9
Research and development expenses		60.5	24.9	23.2
Sales and marketing expenses		0.5	0.1	0.1
General and administrative expenses		25.7	6.7	6.0
Total		**€93.7**	**€32.8**	**€30.2**

(1) In May 2021, phantom options were granted under the Management Board Grant for the 2021 year which led to a modification from equity-settled to cash-settled share-based payment arrangement and a reclassification of €1.1 million between equity and non-current other liabilities, respectively. Expenses incurred before and after the modification date have been disclosed as equity-settled or cash-settled share-based payment arrangement, respectively. The amount includes expenses incurred with respect to a one-time signing bonus granted to Jens Holstein as of his appointment to the Management Board (see *Note 21.2* ⊖).

17.1 BioNTech Employee Equity Plan

BioNTech 2020 Employee Equity Plan for Employees Based Outside North America (Equity-Settled)

Description of Share-Based Payments

In December 2020, we approved the BioNTech 2020 Employee Equity Plan for employees based outside North America, the European Plan. Under the European Plan, Restricted Cash Units, or RSUs, are offered to our employees. As of the grant date in February 2021, the European Plan was implemented for the calendar year 2020 by entering into award agreements with our employees under the LTI 2020 program. In addition, further award agreements were entered into under the LTI-plus program with employees who did not participate in the Employee Stock Ownership Plan, or ESOP. In December 2021 and January 2022, award agreements were announced to and respectively entered into with our employees and the European Plan was granted for the calendar year 2021, the LTI 2021 program. Since employees obtained a valid expectation of the award already as of the announcement date and started rendering services as of such date, we concluded that the service commencement date for the LTI 2021 program was in December 2021 and started recognizing expenses related to the services received, respectively. RSUs issued under the LTI 2020 and LTI 2021 program vest annually in equal installments after four years and RSUs issued under the LTI-plus program vests annually in equal installments after two years, with the LTI 2020 and the LTI-plus programs commencing in December 2020 and the LTI 2021 program commencing in December 2021, respectively. Under the LTI-plus program, 50% of the RSUs awarded to the participant were awarded on commencement of the program in December 2020 and the remaining 50% were awarded to the participant shortly after the U.S. Food and Drug Administration, or the FDA, fully approved BNT162b2, our COVID-19 vaccine in August 2021 (non-vesting condition). As we have the ability to determine the method of settlement, all programs were classified as equity-settled. The cost of the awards will be recognized over the relevant service period, applying the graded vesting method.

Measurement of Fair Values

For the LTI 2020 and the LTI-plus program, the fair value of the awards was based upon the price of our ADSs representing ordinary shares at grant date. For the LTI 2021 program, the fair value of the awards for services received in advance of grant date was based upon the share price as of December 31, 2021, the reporting date. The estimate is revised at subsequent reporting periods until the date of grant has been established. A retention assumption is applied when estimating the number of equity instruments for which service conditions are expected to be satisfied and will be revised in case material differences arise. Ultimately, a true-up to the number satisfied until settlement date will be recorded.

Reconciliation of Outstanding Share-Options

	Restricted stock units	Weighted average fair value (€)
Granted under LTI 2020 and LTI-plus program	627,486	€89.41
Forfeited	(13,059)	88.84
Allocated under LTI 2021 program	110,036	227.62
As of December 31, 2021	**724,463**	**€110.4**

BioNTech 2020 Restricted Stock Unit Plan for North America Employees (Cash-Settled)

Description of Share-Based Payments

In December 2020, we approved the BioNTech 2020 Restricted Stock Unit Plan for North America Employees, or the North American Plan. Under the North American Plan, RSUs are offered to our employees. These RSUs generally vest over four years, with 25% vesting one year after the service commencement date and the remainder vesting in equal quarterly installments thereafter. The first awards under the North American Plan were granted in February 2021. The service date for these awards is the date as of which the employee became employed by BioNTech US. During the year ended December 31, 2021, further awards were granted under the North American Plan, which included awards granted to new hire employees and ongoing recurring awards to existing employees on the approximate anniversary of each employee's start date of employment with BioNTech US.

As these RSUs are intended to be cash-settled upon vesting, the awards were defined as a cash-settled share-based payment arrangement. The liability related to these awards is measured, initially and at the end of each reporting period until settled, at the fair value of the award considering the price of the ADSs representing our ordinary shares. The cost of the awards will be recognized over the relevant service period, applying the graded vesting method.

17.2 Management Board Grant – Short-Term Incentive (Cash-Settled)

The following sets forth the effective and termination dates of the current service agreements of our Management Board:

- Prof. Ugur Sahin, M.D.: September 1, 2019 – December 31, 2022
- Sean Marett: September 1, 2019 – September 30, 2022
- Dr. Sierk Poetting: September 1, 2019 – November 30, 2026 (renewed as of December 1, 2021)
- Prof. Özlem Türeci, M.D.: September 1, 2019 – May 31, 2022 (renewed as of March 1, 2022 until May 31, 2025)
- Ryan Richardson: January 1, 2020 – December 31, 2022
- Jens Holstein: July 1, 2021 – June 30, 2025

The service agreements with our Management Board provide for a short-term incentive compensation which is an annual performance-related bonus for the years of their respective service periods. Effective January 1, 2020, the maximum short-term incentive compensation for our Management Board members, Prof. Ugur Sahin, Sean Marett, Dr. Sierk Poetting and Prof. Özlem Türeci was 50% of their annual fixed compensation. The same applied to Ryan Richardson's maximum short-term incentive compensation effective since January 1, 2020. Effective July 1, 2021, the maximum short-term incentive compensation for Jens Holstein was defined as €300,000. Effective January 1, 2022, the maximum short-term incentive compensation for Dr. Sierk Poetting has been increased to €300,000.The payout amount of the short-term incentive compensation depends on the achievement of certain financial performance criteria and non-financial performance criteria (performance targets) of the Group in a particular financial year, which goals are set uniformly for all members of the Management Board. 50% percent of the compensation are paid following the determination on the actual achievement of the performance targets (first installment), with the remaining amount payable one year after such determination, subject to adjustment relative to the performance of the price of the American Depositary Shares representing our ordinary shares during that year (second installment).

For each of the yearly awards, the second installment of the short-term incentive compensation that is dependent on the price of the American Depositary Shares representing our ordinary shares, represents a cash-settled share-based payment arrangement. The fair values of the liabilities are recognized over the award's vesting period beginning as of service agreements' effective dates, being the service commencement date until each separate determination date and are remeasured until settlement date.

17.3 Management Board Grant Long-Term Incentive (partly Equity-Settled, partly Cash-Settled)

Description of Share-Based Payments
The service agreements with our Management Board provide for a long-term incentive compensation in terms of an annual grant of options to purchase BioNTech shares for the years of their respective service periods. The options granted each year will be subject to the terms, conditions, definitions and provisions of our Employee Stock Ownership Plan (ESOP) and the applicable option agreement thereunder. Effective January 1, 2020, the number of options to be granted each year to Prof. Ugur Sahin, Sean Marett, Prof. Özlem Türeci and Ryan Richardson are to be calculated based on a value of €750,000, €300,000, €300,000 and €260,000, respectively. The value used to calculate the number of options for Ryan Richardson increases to €280,000 for the year 2022. Effective December 1, 2021, with entering into a new service contract, the value on which the number of options to be granted each year to Dr. Sierk Poetting is based was increased from €300,000 to €550,000 for new awards. Effective as of his appointment to the Management Board on July 1, 2021, the number of options to be granted each year to Jens Holstein was to be calculated based on a value of €550,000. In each case the values must be divided by the amount by which a certain target share price exceeds the exercise price.

The right to receive options generally represents an equity-settled share-based payment arrangement. The allocation of the number of issued options in 2020 occurred in February 2020 (2020 allocation date). In May 2021 (2021 allocation date), phantom options equivalent to the number of options the Management Board members would have been entitled to receive for the year 2021 were granted under the Management Board Grant which led to a modification from equity-settled to cash-settled share-based payment arrangement and a reclassification of €1.1 million between equity and non-current other liabilities. As of December 31, 2021, the assessment about options expected to be allocated in future years was based on estimated allocation dates in the middle of the respective years.

The share options allocated and expected to be allocated to our Management Board as of the dates indicated are presented in the tables below.

	Share options (expected to be allocated)	Weighted-average exercise price (€)
Granted share options as of allocation date February 2020	248,096	€28.32
Granted phantom options as of allocation dates May 2021[2]	51,742	163.72
Estimated allocation date 2022[1]	38,674	229.00
Estimated allocation date 2023[1]	16,848	233.16
Estimated allocation date 2024[1]	16,680	235.52
Estimated allocation date 2025[1]	12,265	240.21
Estimated allocation date 2026[1]	7,314	246.18
As of December 31, 2021	**391,619**	**€83.81**

(1) Valuation parameter derived from the Monte-Carlo simulation model.

(2) Classified as cash-settled share-based payment arrangement; all other share-based payment arrangements are classified as equity-settled.

For the awards with estimated allocation dates the numbers of options expected to be allocated have been derived from a Monte-Carlo simulation model. Those will be adjusted until the actual allocation has occurred and the number of options granted has ultimately been determined. The options will vest annually in equal installments over four years commencing on the first anniversary of the allocation date and will be exercisable four years after the allocation date.

The options will be subject to the terms, conditions, definitions and provisions of the ESOP and the applicable option agreement thereunder. The vested options can only be exercised if and to the extent that each of the following performance criteria has been achieved: (i) at the time of exercise, the current price is equal to or greater than the threshold amount (that is, the exercise price, provided that such amount increases by seven percentage points on each anniversary of the allocation date); (ii) at the time of exercise, the current price is at least equal to the target price (that is, (a) for the twelve-month period starting on the fourth anniversary of the allocation date, $8.5 billion divided by the total number of the ordinary shares outstanding immediately following the initial public offering (other than ordinary shares owned by BioNTech), and (b) for each twelve-month period starting on the fifth or subsequent anniversary of the allocation date, 107% of the target share price applicable for the prior twelve-month period); and (iii) the closing price for the fifth trading day prior to the start of the relevant exercise window is higher than the exercise price by at least the same percentage by which the Nasdaq Biotechnology Index or a comparable successor index as of such time is higher than such index was as of the last trading day before the allocation date. The options expire ten years after the allocation date. If they have not been exercised by that date, they will lapse without compensation.

Measurement of Fair Values

A Monte-Carlo simulation model has been used to measure the fair values at the (estimated) allocation dates of the Management Board Grant. This model incorporates the impact of the performance criteria regarding share price and index development described above. The parameters used for measuring the fair values as of the respective (estimated) allocation dates were as follows:

	Allocation date February 2020	Allocation date May 12, 2021[2]	Allocation date May 17, 2021[2]	Estimated allocation date 2022
Weighted average fair value[1]	€10.83	€115.64	€91.66	€111.80
Weighted average share price[1]	€28.20	€164.34	€175.08	€227.62
Exercise price[1]	€28.32	€163.54	€164.96	€229.00
Expected volatility (%)	36.6%	47.2%	47.2%	43.7%
Expected life (years)[1]	4.8	4.6	4.6	5.8
Risk-free interest rate (%)	1.6%	1.5%	1.5%	1.5%

(1) Valuation parameter for estimated allocation dates derived from the Monte-Carlo simulation model.

(2) Classified as cash-settled share-based payment arrangement; all other share-based payment arrangements are classified as equity-settled.

	Estimated allocation date 2023	Estimated allocation date 2024	Estimated allocation date 2025	Estimated allocation date 2026
Weighted average fair value[1]	€98.77	€90.31	€90.20	€82.31
Weighted average share price[1]	€227.62	€227.62	€227.62	€227.62
Exercise price[1]	€233.16	€235.52	€240.21	€246.18
Expected volatility (%)	45.3%	41.0%	42.9%	43.6%
Expected life (years)[1]	5.8	5.8	5.8	5.8
Risk-free interest rate (%)	1.5%	1.6%	1.6%	1.6%

(1) Valuation parameter for estimated allocation dates derived from the Monte-Carlo simulation model

The exercise of the option rights in accordance with the terms of the ESOP gives the Management Board members the right to obtain shares against payment of the exercise price. The per share exercise price of the options is the Euro equivalent of the arithmetic mean of the closing prices of the ten last trading days prior to the allocation date. For the awards allocated as of February 2020, the exercise price has been determined to be $30.78 (€28.32), calculated as of grant date using the foreign exchange rate as published by the German Central Bank (*Deutsche Bundesbank*). As of December 31, 2021, the awards allocated as of February 2020 are subject to the effective exercise price cap. This means that the exercise price shall effectively be adjusted to ensure that the current price of an ADS as of the exercise date does not exceed 800% of the exercise price. For the awards allocated as of May 12, 2021, and May 17, 2021, the exercise price has been determined to be$185.23 (€163.54) and $186.83 (€164.96), respectively (both amounts calculated as of December 31, 2021, using the foreign exchange rate as published by the German Central Bank (*Deutsche Bundesbank*)). For the awards with estimated allocation dates the exercise prices of options expected to be allocated have been derived from the Monte-Carlo simulation model. Those will be adjusted until the actual allocation has occurred and the exercise price has ultimately been determined. With respect to the phantom share options issued in May 2021, as of December 31, 2021, all agreements include the effective exercise price cap and an additional maximum compensation clause limiting the total cash payment that the Management Board members are entitled to receive to €20.0 million for Ugur Sahin as Chief Executive Officer (CEO) or €10.0 million for all other Management Board members, less other compensation components received by each such board member in the respective grant year. Expected volatility was based on an evaluation of the historical volatilities of comparable companies over the historical period commensurate with the expected option term. The expected term was based on general option holder behavior for employee options.

Reconciliation of Outstanding Share-Options

The share options allocated and expected to be allocated under the Management Board Grant were as follows:

Allocation date February 13, 2020	Share options outstanding (expected to be allocated)	Weighted-average exercise price (€)
Prof. Ugur Sahin, M.D.	97,420	€28.32
Sean Marett	38,968	28.32
Dr. Sierk Poetting	38,968	28.32
Prof. Özlem Türeci, M.D.	38,968	28.32
Ryan Richardson	33,772	28.32

Allocation dates May 12 and May 17, 2021[1]	Share options outstanding (expected to be allocated)	Weighted-average exercise price (€)
Prof. Ugur Sahin, M.D.	17,780	€163.54
Sean Marett	7,112	163.54
Dr. Sierk Poetting	7,112	163.54
Prof. Özlem Türeci, M.D.	7,112	163.54
Ryan Richardson	6,163	163.54
Jens Holstein	6,463	164.96

(1) Classified as cash-settled share-based payment arrangement; all other share-based payment arrangements are classified as equity-settled. Allocation date May 17, 2021 concerns Jens Holstein.

Estimated allocation date 2022[1]	Share options outstanding (expected to be allocated)	Weighted-average exercise price (€)
Prof. Ugur Sahin, M.D.	11,696	€229.00
Sean Marett	3,509	229.00
Dr. Sierk Poetting	8,577	229.00
Prof. Özlem Türeci, M.D.	1,949	229.00
Ryan Richardson	4,366	229.00
Jens Holstein	8,577	229.00

(1) Valuation parameters for estimated allocation dates derived from the Monte-Carlo simulation model.

Estimated allocation date 2023[1]	Share options outstanding (expected to be allocated)	Weighted-average exercise price (€)
Dr. Sierk Poetting	8,424	€233.16
Jens Holstein	8,424	233.16

(1) Valuation parameters for estimated allocation dates derived from the Monte-Carlo simulation model.

Estimated allocation date 2024(1)	Share options outstanding (expected to be allocated)	Weighted-average exercise price (€)
Dr. Sierk Poetting	8,340	€235.52
Jens Holstein	8,340	235.52

(1) Valuation parameters for estimated allocation dates derived from the Monte-Carlo simulation model.

Estimated allocation date 2025[1]	Share options outstanding (expected to be allocated)	Weighted-average exercise price (€)
Dr. Sierk Poetting	8,177	€240.21
Jens Holstein	4,088	240.21

(1) Valuation parameters for estimated allocation dates derived from the Monte-Carlo simulation model.

Estimated allocation date 2026[1]	Share options outstanding (expected to be allocated)	Weighted-average exercise price (€)
Dr. Sierk Poetting	7,314	€246.18

(1) Valuation parameters for estimated allocation dates derived from the Monte-Carlo simulation model.

As of December 31, 2021, the share options allocated and expected to be allocated had a remaining weighted-average expected life of 3.7 years (as of December 31, 2020: 4.6 years).

17.4 Chief Executive Officer Grant (Equity-Settled)

Description of Share-Based Payments
In September 2019, we granted Prof. Ugur Sahin, M.D. an option to purchase 4,374,963 ordinary shares, subject to Prof. Sahin's continuous employment with us. The options' exercise price per share is the Euro translation of the public offering price from our initial public offering, €13.60 ($15.00) which, as of December 31, 2021, is subject to the effective exercise price cap. The option vests annually in equal installments after four years commencing on the first anniversary of the initial public offering and will be exercisable four years after the initial public offering. The option is subject to the terms, conditions, definitions and provisions of the ESOP and the applicable option agreement thereunder. The vested option rights can only be exercised if and to the extent that each of the following performance criteria has been achieved: (i) at the time of exercise, the current price is equal to or greater than the threshold amount (that is, the exercise price, provided that such amount increases by seven percentage points on each anniversary of the allocation date); (ii) at the time of exercise, the current price is at least equal to the Target Price (that is, (a) for the twelve-month period starting on the fourth anniversary of the allocation date, $8.5 billion divided by the total number of the shares outstanding immediately following the initial public offering (other than shares owned by us), and (b) for each twelve-month period starting on the fifth or subsequent anniversary of the allocation date, 107% of the target share price applicable for the prior twelve-month period); and (iii) the closing price for the fifth trading day prior to the start of the relevant exercise window is higher than the exercise price by at least the same percentage by which the Nasdaq Biotechnology Index or a comparable successor index as of such time is higher than such index was as of the last trading day before the allocation date. The option rights can be exercised up to ten years after the allocation date. If they have not been exercised by that date, they will lapse without compensation.

Measurement of Fair Values
A Monte-Carlo simulation model has been used to measure the fair value at grant date of the Chief Executive Officer Grant. This model incorporates the impact of the performance criteria regarding share price and index development described above in the calculation of the award's fair value at grant date. The inputs used in the measurement of the fair value at grant date of the Chief Executive Officer Grant were as follows:

	Grant date October 10, 2019
Weighted average fair value	€5.63
Weighted average share price	€13.60
Exercise price	€13.60
Expected volatility (%)	41.4 %
Expected life (years)	5.4
Risk-free interest rate (%)	1.5%

Expected volatility was based on an evaluation of the historical volatilities of comparable companies over the historical period commensurate with the expected term. The expected term was based on general option holder behavior for employee options.

Reconciliation of Outstanding Share-Options
During the years ended December 31, 2021 and 2020, no further options were granted or forfeited.

As of December 31, 2021, the share options outstanding had a remaining weighted-average expected life of 3.1 years (as of December 31, 2020: 4.1 years).

17.5 Employee Stock Ownership Plan (Equity-Settled)

Description of Share-Based Payments
On November 15, 2018, we established a share option program that grants selected employees options to receive shares in the Company. The program is designed as an ESOP. We had offered the participants a certain number of rights (Option Rights) by explicit acceptance of the participants. Grants under the ESOP took place from November 2018 until December 2019. The exercise of the Option Rights in accordance with the terms of the ESOP, gives the participants the right to obtain shares against payment of the exercise price. The Option Rights vest over four years and can only be exercised if we have executed a public offering in the United States (IPO) and when the Threshold Amount is met. Threshold Amount means the exercise price provided that such price increases by eight percentage points on the first and then each subsequent anniversary of the Allocation Date (September 26, 2018). The Option Rights can be exercised at the latest eight years after the Allocation Date. If they have not been exercised by that date, they will be forfeited without compensation.

As of December 31, 2021, with respect to the Management Board members, other than Ryan Richardson who was not a Management Board member at the time the options were granted, the options are subject to the effective exercise price cap.

Measurement of Fair Values
The fair value of the ESOP has been measured using a binomial model. Service conditions attached to the arrangement were not taken into account in measuring the fair value.

The share options can only be exercised by the grantee if the price of the share is equal or greater to the Threshold Amount as defined in the arrangement. Moreover, the option rights can only be exercised if the IPO has occurred. Both conditions have been incorporated into the fair value at grant date.

The inputs used in the measurement of the fair values at grant date of the ESOP were as follows:

	Grant date November 15, 2018	Grant dates between February 21 - April 3, 2019	Grant dates between April 29 - May 31, 2019	Grant date December 1, 2019
Weighted average fair value	€7.41	€6.93	€7.04	€9.49
Weighted average share price	€14.40	€15.72	€16.03	€19.84
Exercise price	€10.14	€15.03	€15.39	€15.82
Expected volatility (%)	46.0%	46.0%	46.0%	46.0%
Expected life (years)	5.8	6.0	6.0	5.5
Risk-free interest rate (%)	0.1 %	0.1 %	0.1 %	0.1 %

Expected volatility has been based on an evaluation of the historical and the implied volatilities of comparable companies over the historical period commensurate with the expected term. The expected term has been based on general option holder behavior for employee options.

Reconciliation of Outstanding Share-Options

Set out below is an overview of changes to share options outstanding and number of ordinary shares underlying these options that occurred during the periods indicated:

	Share options outstanding	Number of ordinary shares underlying options	Weighted-average exercise price (€)
As of January 1, 2020	655,383	11,796,894	€10.38
Forfeited	(9,491)	(170,838)	10.78
As of December 31, 2020	**645,892**	**11,626,056**	**10.23**
As of January 1, 2021	645,892	11,626,056	10.23
Forfeited	(3,885)	(69,932)	10.14
As of December 31, 2021	**642,007**	**11,556,124**	**€10.23**

As of December 31, 2021, the share options outstanding had a remaining weighted-average expected life of 2.7 years (as of December 31, 2020: 3.7 years).

The share options outstanding as of December 31, 2021, issued to the Management Board Grant were as follows:

	Share options outstanding	Number of ordinary shares underlying options	Weighted-average exercise price (€)
Prof. Ugur Sahin, M.D.	101,686	1,830,348	€10.14
Sean Marett	33,895	610,110	10.14
Dr. Sierk Poetting	33,895	610,110	10.14
Prof. Özlem Türeci, M.D.[1]	108,463	1,952,334	10.14
Ryan Richardson[2]	8,306	149,508	10.14

(1) Options fully vested on March 16, 2019; however these options will not become exercisable until September 16, 2022.

(2) Ryan Richardson was appointed to the Management Board as Chief Strategy Officer (CSO) and Managing Director on January 12, 2020. The share options granted on November 15, 2018, under the Employee Stock Ownership Plan were granted before his appointment to the Management Board. Options fully vested on October 10, 2019; however these options will not become exercisable until September 16, 2022.

18. Provisions and Contingencies

Provisions
As of December 31, 2021, certain claims were pending or threatened against us or our subsidiaries, mainly related to purported obligations arising out of use or alleged use of third party intellectual property. Our best estimate of potential outflow of economic resources from such proceedings amounts to €177.9 million, which is expected not to be settled within the next twelve months and is therefore included in non-current provisions in our consolidated statements of financial position as of December 31, 2021,and was recognized in cost of sales in our consolidated statements of profit or loss (nil as of December 31, 2020). This assessment is based on assumptions deemed reasonable by management including those about future events and uncertainties. The outcome of these matters is ultimately uncertain, such that unanticipated events and circumstances might occur that might cause us to change those assumptions and give rise to a material adverse effect on our financial position in the future.

As of December 31, 2021, our current provisions include €35.4 million (nil as of December 31, 2020) estimated deferred expenses in the form of inventor remuneration, which represents compensation used to honor service inventions made by employees related to our COVID-19 vaccine development and was recognized as research and development expenses in our consolidated statements of profit or loss. The inventor's compensation is determined on the basis of the so-called license analogy and is therefore related to our revenues.

As of December 31, 2021, our current provisions include €58.5 million (nil as of December 31, 2020) international trade obligations including customs value calculation, customs tariff number classification and other related securities requirements whereof €42.1 million related to our commercial sales were recognized as cost of sales and €16.4 million related to clinical trials were recognized as research and development expenses in our consolidated statements of profit or loss. The expenses are partially subject to reimbursement under our collaboration agreement with Pfizer.

Contingencies
In addition to the above, from time to time, in the normal course and conduct of our business, we may be involved in discussions with third parties about considering, for example, the use and/or remuneration for use of such third party's IP. As of December 31, 2021, none of such IP-related considerations that we have been notified of and for which potential claims could be brought against us or our subsidiaries in the future, fulfill the criteria for recording a provision. We will continue to evaluate whether, if circumstances were to change in the future, the recording of a provision may be needed and whether potential indemnification entitlements exist against any such claim. It is currently not practical to estimate the potential liability, if any.

19. Other Liabilities

(in millions)	December 31, 2021	December 31, 2020
Liabilities to employees	€54.6	€24.3
Other	1.3	4.4
Total	**€55.9**	**€28.7**
Total current	43.1	28.0
Total non-current	12.8	0.7

20. Leases

20.1 Amounts Recognized in the Consolidated Statements of Financial Position

Right-of-Use Assets

The following amounts are presented as right-of-use assets within the consolidated statements of financial position as of the dates indicated:

(in millions)	December 31, 2021	December 31, 2020
Buildings	€175.0	€80.9
Equipment, tools and installations	0.8	—
Automobiles	0.1	0.1
Production facilities	19.4	7.2
Advance payments	2.6	10.8
Total	**€197.9**	**€99.0**

Additions to the right-of-use assets during the year ended December 31, 2021, were €126.5 million (during the year ended December 31, 2020: €22.1 million) including advanced payments of €2.6 million (during the year ended December 31, 2020: €10.8 million) related to embedded leases under contract manufacturing agreements that not yet commenced. Since the advanced lease payments have already been settled, the amounts are not included in the lease liability presented below.

Lease Liability

The following amounts are included in loans and borrowings as of the dates indicated:

(in millions)	December 31, 2021	December 31, 2020
Current	€27.9	€6.1
Non-current	153.7	78.1
Total	**€181.6**	**€84.2**

20.2 Amounts Recognized in the Consolidated Statements of Profit or Loss

Depreciation Charge of Right-of-Use Assets

	Years ended December 31,		
(in millions)	2021	2020	2019
Buildings	€14.7	€4.7	€4.7
Equipment, tools and installations	0.2	—	—
Automobiles	0.1	—	—
Production facilities	14.0	1.6	—
Total depreciation charge	**€29.0**	**€6.3**	**€4.7**
Interest on lease liabilities	2.9	2.0	1.7
Expense related to short-term leases (included in other expenses)	9.1	0.9	0.4
Expense relating to leases of low-value assets that are not short-term leases (included in other expenses)	0.4	0.3	0.1
Total amounts recognized in profit or loss	**€41.4**	**€9.5**	**€6.9**

20.3 Amounts Recognized in the Consolidated Statements of Cash Flows

During the year ended December 31, 2021, the total cash outflow for leases amounted to €17.0 million (during the year ended December 31, 2020: €14.7 million; during the year ended December 31, 2019: €4.8 million).

20.4 Extension Options

The Group has several lease contracts that include extension options. These options are negotiated by management to provide flexibility in managing the leased-asset portfolio and align with the Group's business needs. Management exercises judgement in determining whether these extension options are reasonably certain to be exercised. The undiscounted potential future lease payments, which relate to periods after the exercise date of renewal options and are not included in lease liabilities, amount to up to €82.8 million until 2049 (during the year ended December 31, 2020: €38.3 million until 2049).

21. Related Party Disclosures

21.1 Parent and Ultimate Controlling Party

ATHOS KG, Holzkirchen, Germany is the sole shareholder of AT Impf GmbH, Munich, Germany and beneficial owner of our ordinary shares. Entities controlled by ATHOS KG mainly provide rental and property management activities and sell property, plant and equipment to us. ATHOS KG via AT Impf GmbH has de facto control over BioNTech based on its substantial shareholding, which enabled it to exercise the majority of voting rights to pass resolutions at BioNTech's Annual General Meeting, or AGM.

21.2 Transactions with Key Management Personnel

Key Management Personnel Compensation
Our key management personnel has been defined as the members of the Management Board and the Supervisory Board. Key management personnel compensation is comprised of the following:

	Years ended December 31,		
(in millions)	2021	2020	2019
Management Board	**€20.4**	**€23.7**	**€19.8**
Fixed compensation	2.2	1.9	1.3
Short-term incentive – first installment	0.6	0.5	—
Short-term incentive – second installment[1]	1.2	0.6	—
Other performance-related variable compensation[2]	—	—	0.4
Share-based payments (incl. long-term incentive)[3]	16.4	20.7	18.1
Supervisory Board	**€0.4**	**€0.4**	**€0.5**
Total compensation paid to key management personnel	**€20.8**	**€24.1**	**€20.3**

(1) The fair value of the second installment of the short-term incentive compensation which has been classified as cash-settled share-based payment arrangement was determined pursuant to the regulations of IFRS 2 "Share-based Payments." This table shows the pro-rata share of personnel expenses for the respective financial year that are recognized over the award's vesting period beginning as of the service commencement date (date when the respective service agreement becomes effective) until each separate determination date and are remeasured until settlement date.

(2) Includes a one time bonus payment for the year ended December 31, 2019.

(3) The fair value of the share-based payments was determined pursuant to the regulations of IFRS 2 "Share-based Payments." This table shows the pro-rata share of personnel expenses resulting from stock-based compensation for the respective financial year. During the year ended December 31, 2021, the amount included a one-time signing bonus of €800,000 granted to Jens Holstein as of his appointment to the Management Board by awarding 4,246 phantom shares. The phantom shares vest in four equal installments on July 1 of 2022, 2023, 2024 and 2025 but will only be settled in cash on July 1, 2025. As of December 31, 2021, the cash payment is subject to an effective settlement closing price cap. This means that the settlement closing price shall effectively be adjusted to ensure that the current price of an ADS as of the settlement date does not exceed 800% of the closing price applied when the award was initially granted. In addition, the total cash payment under the award shall not exceed €6.4 million. During the year ended December 31, 2020, the amount included expenses from a bonus arrangement agreed with Ryan Richardson in advance of his appointment to the Management Board. During the year ended December 31, 2020, the arrangement was modified from an all-equity share-based payment arrangement into a partly cash and partly equity settled share-based payment arrangement including 4,534 ordinary shares which were issued during the year ended December 31, 2021. In September 2019, we agreed to grant Prof. Ugur Sahin, M.D., our co-founder and Chief Executive Officer, an option to purchase 4,374,963 ordinary shares (see *Note 17* ⊕). Management Board members participate in our ESOP program (see *Note 17* ⊕).

Key Management Personnel Transaction

A number of key management personnel, or their related parties, hold positions in other companies that result in them having control or significant influence over these companies. A number of these companies have entered into transactions with us during the year.

We purchased various goods and services from Translationale Onkologie an der Universitätsmedizin der Johannes Gutenberg-Universität Mainz gemeinnützige GmbH, or TRON.

The aggregate value of transactions related to key management personnel were as follows for the periods indicated:

	Years ended December 31,		
(in millions)	2021	2020	2019
Consulting services / patent assignment	€—	€—	€0.1
Purchases of various goods and services from TRON(1)	—	10.1	9.9
Total	**€—**	**€10.1**	**€10.0**

(1) We purchase various goods and services from TRON, an institute where Prof. Ugur Sahin, M.D served as Managing Director. TRON is no longer considered to be a related party for the year ended December 31, 2021, as the criteria for such classification are no longer fulfilled.

The outstanding balances of transactions related to key management personnel were as follows as at the periods indicated:

(in millions)	December 31, 2021	December 31, 2020
TRON(1)	€—	€1.2
Total	**€—**	**€1.2**

(1) We purchase various goods and services from TRON, an institute where Prof. Ugur Sahin, M.D served as Managing Director. TRON is no longer considered to be a related party for the year ended December 31, 2021, as the criteria for such classification are no longer fulfilled.

21.3 Related Party Transactions

The total amount of transactions with ATHOS KG or entities controlled by it was as follows for the periods indicated:

	Years ended December 31,		
(in millions)	2021	2020	2019
Purchases of various goods and services from entities controlled by ATHOS KG	€0.9	€2.3	€2.1
Purchases of property and other assets from entities controlled by ATHOS KG	—	2.3	—
Total	**€0.9**	**€4.6**	**€2.1**

The outstanding balances of transactions with ATHOS KG or entities controlled by them were as follows as at the periods indicated:

(in millions)	December 31, 2021	December 31, 2020
ATHOS KG	€0.3	€0.5
Total	**€0.3**	**€0.5**

In addition to the transactions above, we have lease arrangements with ATHOS KG or entities controlled by them in place. None of the balances are secured and no bad debt expense has been recognized in respect of amounts owed by related parties.

22. Number of Employees

The average number of employees is:

	Years ended December 31,		
Quarterly average number of employees by function	2021	2020	2019
Clinical Research & Development	137	113	81
Scientific Research & Development	875	586	414
Operations	863	490	376
Quality	322	184	129
Support Functions	431	218	126
Commercial & Business Development	66	33	69
Total	**2,694**	**1,624**	**1,195**

The number of employees as of the balance sheet date is:

	Years ended December 31,		
Number of employees by function as of the reporting date	2021	2020	2019
Clinical Research & Development	153	128	90
Scientific Research & Development	1,026	661	459
Operations	1,036	699	416
Quality	301	234	142
Support Functions	539	276	139
Commercial & Business Development	83	49	77
Total	**3,138**	**2,047**	**1,323**

23. Fees for Auditors

The following fees were recognized for the services provided by Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft for the fiscal years ended December 31, 2020 and December 31, 2019:

	Years ended December 31,	
(in millions)	2021	2020
Audit fees	€ 1.9	€1.4
Audit-related fees	0.7	0.4
Tax fees	0.5	0.3
All other fees	0.1	0.4
Total fees for professional audit services and other services	**€3.20**	**€2.50**

24. Corporate Governance

The declaration of conformity pursuant to Section 161 para. 1 of the German Stock Corporation Act (*Aktiengesetz*) is issued in accordance with the Corporate Governance Code in connection with the corporate governance declaration pursuant to Section 315d in conjunction with Section 289f HGB and can be found in the combined management report of BioNTech SE.

25. Events After the Reporting Period

In January 2022, we announced a new research, development and commercialization collaboration with Pfizer to develop a potential first mRNA-based vaccine for the prevention of shingles (herpes zoster virus, or HZV). The collaboration builds on the companies' success in developing the first approved and most widely used mRNA vaccine to help prevent COVID-19. Under the terms of the agreement, we will leverage a proprietary antigen technology identified by Pfizer's scientists and our proprietary mRNA platform technology used in the our COVID-19 vaccine. The parties will share development costs. Clinical trials are planned to start in the second half of 2022. Pfizer will have rights to commercialize the potential vaccine on a global basis, with the exception of Germany, Turkey and certain developing countries where we will have commercialization rights. Under the terms of the agreement, Pfizer will pay $225.0 million in upfront payments, including a cash payment and an equity investment as we will pay Pfizer $25.0 million for the company's proprietary antigen technology. In addition, we are eligible to receive future regulatory and sales milestone payments of up to $200.0 million as well as a share of gross profits arising from future product sales. The issuance of 497,727 ordinary shares with the nominal amount of €0.5 million was registered with the commercial register (*Handelsregister*) on March 24, 2022.

In February 2022, we gave notice to Temasek that we will exercise our early redemption option and fully redeem the convertible note on March 1, 2022, the redemption date. The early redemption will be fulfilled by issuing the number of our ordinary shares calculated pursuant to the early redemption provisions of the convertible note, plus paying any fractional share and accrued but unpaid interest up to (but excluding) the redemption date. The early redemption was already expected and reflected in the presentation of the financial liability and our estimates for future cash flows and conversion effects under the convertible note as of December 31, 2021.

In February 2022, we announced that we have entered into a multi-target research collaboration with Medigene AG, or Medigene, to develop T-cell receptor (TCR) based immunotherapies against cancer. The initial term of the collaboration is three years. Under the terms of the agreement, we will acquire Medigene's next generation preclinical TCR program, will obtain the exclusive option to acquire additional existing TCRs in Medigene's discovery pipeline and will receive licenses to Medigene's PD1-41BB switch receptor and precision pairing library. We are responsible for global development and hold exclusive worldwide commercialization rights on all TCR therapies resulting from this research collaboration. Medigene will receive a €26.0 million upfront, as well as research funding for the period of the collaboration and will be eligible to receive development, regulatory and commercial milestone payments up to a triple digit million EUR amount per program in addition to tiered deferred option payments on global net sales for products based on TCRs arising from the collaboration and royalties on products utilizing at least one of the licensed technologies.

The escalation of the conflict between Russia and Ukraine which has led to armed conflicts in Ukraine has created uncertainties regarding the development of the world economy. As of the date of this filing, we do not anticipate any material impact of the conflict on our business. Russia and Ukraine are part of our collaboration partner Pfizer's distribution territory and are currently not expected to have a material effect on our revenues. We also do not expect an impact on our clinical trial execution as we do not have active clinical sites in Russia or Ukraine. We do not have any local subsidiaries in the affected countries, do not have direct relationships with Russian banks and do not purchase raw materials or services from Russian suppliers. Together with our third party vendors, we are monitoring the situation closely to ensure that risk mitigations are implemented. We will continue to assess any impact, including the medium- to long-term implications on our business and on the world economy, as well as to continue to evaluate any risks as they arise.

Mainz, March 29, 2022

BioNTech SE

Prof. Ugur Sahin, M.D.
Chief Executive Officer, CEO

Jens Holstein
Chief Financial Officer, CFO

Sean Marett
Chief Business Officer, CBO and Chief Commercial Officer, CCO

Sierk Poetting, M.D.
Chief Operating Officer, COO

Prof. Özlem Türeci, M.D.
Chief Medical Officer, CMO

Ryan Richardson
Chief Strategy Officer, CSO

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Remuneration Report 2021

A. Remuneration Report

The remuneration report describes the structure and individualized amount of the compensation components of the Management Board and Supervisory Board of BioNTech SE, hereinafter also referred to as "BioNTech," the "Group," "we" or "us," as well as the remuneration system applied for the year ended December 31, 2021.

The report is aligned with the requirements of Sec. 162 German Stock Corporation Act (AktG), the recommendations of the German Corporate Governance Code as amended on December 16, 2019. The disclosures in our Remuneration Report are explicitly not expense-related and do not follow the IFRS regulations as published in our consolidated financial statements or the HGB regulations as published in the statutory financial statements of BioNTech SE.

Our Management Board and Supervisory Board have jointly agreed to engage our auditors to perform a substantive audit of the report.

We prepare and publish this report in Euros and round numbers to thousands or millions of Euros, respectively. Accordingly, numerical figures shown as totals in some tables may not be exact arithmetic aggregations of the figures that preceded them, and figures presented in the explanatory notes may not precisely add up to the rounded arithmetic aggregations.

B. Review of the Year Ended December 31, 2021

The year ended December 31, 2021 was another transformational year for us. Since December 2020, our COVID-19 vaccine has been fully approved, granted conditional marketing authorization, or approved or authorized for emergency or temporary use in over 100 countries and regions worldwide. Consequently, during the year ended December 31, 2021 we emphasized bringing our production capabilities up to full speed to help ensure global supply of our vaccine. During the year ended December 31, 2021, we and Pfizer delivered more than 2.6 billion doses of our COVID-19 vaccine to more than 165 countries and regions worldwide, including approximately 1 billion doses to low- and middle-income countries. Simultaneously, we continued pushing forward our vision to harness the power of the immune system to fight human diseases and expanded our pipeline by starting nine oncology clinical trials, including launching four Phase 2 trials and five first-in-human studies. We have established offices around the globe, acquired and integrated a cell manufacturing facility in the United States, and entered new strategic partnerships to further strengthen and expand our multimodal immunotherapy portfolio and deliver breakthrough precision medicines for patients. We have also had robust and rapid growth and have welcomed many new colleagues along the way. These achievements, along with the transformation plans which were developed during the year ended December 31, 2021, will allow us to use the once-in-a-generation opportunity to transform medicine going forward.

During the year ended December 31, 2021, we expanded our management team by appointing Jens Holstein to the Management Board as Chief Financial Officer (CFO) as of July 1, 2021. Jens Holstein took over the CFO role from Dr. Sierk Poetting, which has enabled him to fully focus on his tasks as Chief Operating Officer (COO) going forward. During the year ended December 31, 2021 there were no changes to our Supervisory Board.

To contribute to the promotion of the business strategy and the long-term development of BioNTech, we challenged our compensation system during the year ended December 31, 2021. Following a thorough review, our Supervisory Board slightly modified the compensation system for the members of the Management Board, and this modified system was approved by the Annual General Meeting in June 2021. At the same Annual General Meeting, the compensation amounts of our Supervisory Board members were slightly adjusted, while generally retaining the system for the compensation of Supervisory Board members.

The compensation system and the actual compensation according to Sec. 87a AktG are presented below.

C. Remuneration of Supervisory Board Members

The remuneration system of our Supervisory Board as included in our Articles of Association is structured as purely fixed compensation. While retaining the system for the compensation of Supervisory Board members, the compensation of Supervisory Board members was adjusted during the year ended December 31, 2021 to maintain its competitiveness. The new provisions were approved by the Annual General Meeting on June 22, 2021 and were applied on a pro-rata basis from July 23, 2021, the date of entry of the corresponding amendment to the Articles of Association in our Commercial Register. Pursuant to Sec. 113 para. 3 AktG, as amended by the Act Implementing the Second Shareholder Rights Directive, the Annual General Meeting of a listed company must pass a resolution on the compensation of the members of the Supervisory Board at least every four years.

Until July 23, 2021, the annual remuneration for each member of the Supervisory Board amounted to €50,000. However, the chairman was entitled to receive €150,000 per year and the vice chairman €75,000 per year. In addition, the chairman of the audit committee was entitled to be paid €20,000 per year.

From July 23, 2021, the members of the Supervisory Board receive an annual compensation of €70,000, the Chairman €210,000 and the Vice Chairman €105,000. The Chairman of the Audit Committee shall receive an additional annual compensation of €30,000. The respective Chairman of another committee shall receive an additional annual compensation of €10,000.

All members of the Supervisory Board are reimbursed for their expenses.

The remuneration of our Supervisory Board for the year ended December 31, 2021 was paid out during December 2021. Even though the compensation in the past has not always been paid in the year that the respective remuneration relates to, the fixed compensation and the remuneration for committee activities of our Supervisory Board members is considered owed and granted in the respective financial year in which the underlying services were performed.

The expenses recognized as aggregate remuneration of our Supervisory Board during the years ended December 31, 2021 and 2020 was €0.4 million and €0.3 million, respectively. The individual amounts of granted and owed compensation of our Supervisory Board members are included in the following table:

in thousands	Helmut Jeggle	Michael Motschmann	Prof. Christoph Huber, M.D.	Dr. Ulrich Wandschneider
Base Compensation				
2021	€177	€59	€59	€88
2020	150	50	50	75
Committee Compensation				
2021	4	4	—	24
2020	—	—	—	20
Total				
2021	**€181**	**€63**	**€59**	**€112**
2020	**€150**	**€50**	**€50**	**€95**

Members of the Supervisory Board who are only members of the Supervisory Board for part of the financial year or who chair or vice-chair the Supervisory Board or the Audit Committee or another committee shall receive the respective compensation on a pro-rata basis. The same applies insofar as this regulation or this regulation in a specific version is only in force during part of the financial year. Therefore, the amounts disclosed above consider the pro-rata application of the adjusted provisions of the Supervisory Board remuneration system.

If the reimbursement of expenses or the compensation is subject to value-added tax, the value-added tax shall be paid in addition.

The Supervisory Board members are included in our D&O liability insurance and are co-insured at our expense.

There are no arrangements or understandings between us and any member of our Supervisory Board providing for benefits upon termination of their service as director.

D. Remuneration of Management Board Members

1 Remuneration System

1.1 Remuneration System Philosophy

The compensation structure of the Company's Management Board is designed to promote corporate governance and is oriented towards the Company's sustainability and long-term development. The compensation is therefore also linked to ethical, ecological and social criteria, which reflects our overall strategy and culture. The compensation system therefore sets incentives for the sustainable, long-term development of the Company as a whole and for the long-term commitment of the Management Board members. The compensation system is designed to be clear and comprehensible. It is aligned with the requirements of the AktG and the recommendations of the German Corporate Governance Code as amended on December 16, 2019 and ensures that the Company's Supervisory Board can react to organizational changes and flexibly take into account changing market conditions.

1.2 Responsibility for Determining the Remuneration of the Management Board

The Supervisory Board is responsible for determining the structure of the compensation system. On the basis of the compensation system, the Supervisory Board determines the specific compensation of the individual Management Board members. Within the framework of what is legally permissible, the Supervisory Board wishes to offer the members of the Management Board compensation that is both in line with the market and competitive in order to continue to attract and retain outstanding individuals in the future.

When determining the specific compensation, the Supervisory Board ensures that the compensation of the Management Board is appropriate and in line with market customary standards.

1.3 Involvement of the Annual General Meeting

The compensation system adopted by the Supervisory Board shall be submitted to the Annual General Meeting for approval. Pursuant to Sec. 120a para. 1 AktG, the Annual General Meeting (AGM) of a listed company shall resolve on the approval of the system for the compensation of the members of the Management Board presented by the Supervisory Board whenever there is a significant change to the compensation system, but at least every four years. A resolution confirming the compensation is permissible. Taking the requirements of Sec. 87a para. 1 AktG into account, the Supervisory Board adopted a slightly modified compensation system for the members of the Management Board on May 7, 2021. The compensation system for members of the Management Board was approved by the AGM on June 22, 2021 and becomes effective whenever new service agreements are entered into, existing service agreements are extended or specific compensation components are initiated.

The comprehensive remuneration system as approved by the AGM on June 22, 2021 is available online on our website www.biontech.de.

2. Compensation Components, Target Total Compensation and further Provisions

The following table outlines an overview of the compensation components as well as the target total compensation and other provisions as foreseen by our comprehensive remuneration system as approved by the AGM on June 22, 2021, which is available online on our website www.biontech.de.

	Basis of Assessment / Parameters	Strategic Reference
Non-Performance related Compensation		
Fixed compensation	Fixed contractually agreed compensation paid in twelve equal monthly installments.	The compensation of the Management Board is based on customary market standard. It is also in line with their duties and performance, as well as the situation and success of the Group.
Fringe benefits	Mainly allowances for health and long-term care insurance and supplementary insurance, non-cash benefits from bicycles and travel allowances.	
Performance-related Compensation		
Short-term performance-related variable compensation (short-term incentive, STI)	Target bonus Limit on payout amount: up to a maximum of 60% of the amount of fixed compensation; Performance criteria: Company targets and ESG targets; Of the STI, 50% is payable in cash in the month following approval of the consolidated financial statements; Of the STI, 50% is payable in cash one year after the end of the financial year to which the STI relates and subject to an adjustment in relation to the share price development one year following the date, when the STI achievement is determined.	Incentivizes strong annual (non-financial and financial) performance as the foundation of the Group's long-term strategy and sustainable value creation with achieving strategic sustainability targets.
Long-term performance-related variable compensation (long-term incentive, LTI)	Stock Option Program and/or Restricted Stock Unit Program (RSUP); Performance targets: Relative share price development and absolute share price development Waiting period: Four years after allocation of the stock options or allocation of the remaining restricted stock units.	The LTI is intended to promote the Management Board's long-term commitment to the Group and its sustainable growth. Therefore, the performance targets of the LTI are linked to the Group's long-term share price development.

Continued on next page

	Basis of Assessment / Parameters	Strategic Reference
Other Compensation Rules		
Target total compensation	For each Management Board member for the upcoming financial year the Supervisory Board sets Target Total Compensation corresponding to the sum of fixed compensation (~40%), target STI (~20%) and target LTI (~40%, each as percentage of the Target Total Compensation). Relative to the Target Total Compensation the individual compensation components shall reflect the following percentage ranges. Chief Executive Officer Fixed compensation: 25-35% Variable compensation: 65-75% Target STI: 12-18% Target LTI: 50-60% Other Management Board members Fixed compensation: 35-45% Variable compensation: 55-65% Target STI: 17-23% Target LTI: 30-40%	Sets targets to the compensation of the Management Board to ensure a well-weighted combination between fixed and variable compensation components.
Maximum compensation	Maximum compensation for the financial year in accordance with Sec. 87a para. 1 sentence 2 no. 1 AktG: Chief Executive Officer (CEO): €20 million Other Management Board members: €10 million Maximum compensation can only be achieved if the value of the stock options granted under the LTI at the time of exercise of the stock options is at least eight times the exercise price.	Caps the compensation of Management Board members to avoid uncontrollably high payouts and thus disproportionate costs and risks for the Group.
Further provisions	Supervisory Board mandates within the BioNTech group: fully compensated for with the compensation as a member of the Management Board. Supervisory Board mandates outside the BioNTech group: Supervisory Board has to approve and decides within the scope of the approval whether and to what extent compensation is to be offset against the compensation of the Management Board member.	Further provisions also functions as a cap in case of different mandates within the BioNTech Group to avoid uncontrollably payouts and risks for the Group.

Continued on next page

	Basis of Assessment / Parameters	Strategic Reference
Other Compensation Rules (continuation)		
Claw-back and malus rules	Service contracts of Management Board members to be newly concluded or extended and the terms and conditions of the Stock Option Plans and the RSUPs will contain so-called malus and claw-back provisions entitling the Company to withhold or reclaim variable compensation components in whole or in part in the event of a breach by the Management Board member concerned of internal company policies or statutory obligations. Service contracts of Management Board members to be newly concluded or extended and the terms and conditions of the Stock Option Plan will in future contain a provision obliging Management Board members to repay variable compensation already paid out if it transpires after payment that the basis for calculating the amount paid out was incorrect.	Ensures sustainable corporate development and ensures avoiding taking inappropriate risks.
Severance payment cap	In the event of premature termination, Management Board members are granted a severance payment in the amount of the compensation expected to be owed by the Company for the remaining term of the employment contract, up to a maximum of two years' compensation.	Caps the compensation of Management Board members in the case of premature termination to avoid uncontrollably high payouts and risks for the Group.

3 Terms of the Service Contracts in place during the Year Ended December 31, 2021

The following sets forth the effective and termination dates of the current service agreements of our Management Board:

- Prof. Ugur Sahin, M.D.: September 1, 2019 – December 31, 2022
- Sean Marett: September 1, 2019 – September 30, 2022
- Dr. Sierk Poetting: September 1, 2019 – November 30, 2026 (renewed as of December 1, 2021)
- Prof. Özlem Türeci, M.D.: September 1, 2019 – May 31, 2022 (renewed as of March 1, 2022 until May 31, 2025)
- Ryan Richardson: January 1, 2020 – December 31, 2022
- Jens Holstein: July 1, 2021 – June 30, 2025

4 Review of the Appropriateness of Management Board Compensation for the Year Ended December 31, 2021

During the years ended December 31, 2021 and 2020, we underwent a major transformational process internally to develop and fully commercialize our COVID-19 vaccine. Consequently, during the year ended December 31, 2021 we emphasized bringing our production capabilities up to full speed to ensure worldwide support to meet the continued global vaccine supply needs. To promote the business strategy and the long-term development of BioNTech, we challenged our remuneration system during the year ended December 31, 2021. Following a thorough review, our Supervisory Board slightly modified the compensation system for the members of the Management Board and the remuneration system was approved by the AGM in June 2021. At the same AGM, the compensation of our Supervisory Board members was adjusted while generally retaining the system for the compensation of Supervisory Board members. A horizontal assessment comparing the remuneration system with data of comparable companies and a vertical assessment comparing it with the compensation of our employees (including the senior management) was performed for the years ended December 31, 2021 and 2020.

During 2022, we plan to conduct a review of the remuneration system of the Management Board to ensure appropriateness and to challenge the compensation of the members of the Management Board. Taking the market position of BioNTech into account, this assessment will review our Management Board's compensation in the light of market practice. We have started to engage an external and independent compensation consultant to assess the compensation level and structure with both horizontal and vertical comparisons in line with the rules of our comprehensive remuneration system as approved by the AGM on June 22, 2021, which is available online on our website www.biontech.de.

5 Remuneration during the Year Ended December 31, 2021

5.1 Remuneration Granted and Owed during the Year Ended December 31, 2021

The total compensation granted or owed according to Sec. 162 para. 1 AktG to all members of the Management Board for the years ended December 31, 2021 and 2020 amounted to €3.2 million and €2.7 million. Compensation is considered granted if it either has been received by the Management Board members or the activities, to which the remuneration relates, have been performed. Compensation is considered owed, if the compensation components are legally due, but have not yet been received by the Management Board members. Hereinafter, if either one of the definitions applies, compensation is referred to only as being "granted and owed."

in thousands	Prof. Ugur Sahin, M.D.	Sean Marett	Dr. Sierk Poetting	Prof. Özlem Türeci, M.D.	Ryan Richardson[1]	Jens Holstein[2]
Fixed compensation						
2021	€360	€400	€376	€360	€320	€275
2020	360	400	360	360	320	—
Fringe benefits[3]						
2021	6	22	4	—	16	3
2020	6	11	11	3	4	—
Short-term incentive - first installment[4]						
2021	90	100	90	90	80	75
2020	90	100	90	90	80	—
Short-term incentive - second installment[5]						
2021	90	100	90	90	80	75
2020	90	100	90	90	80	—
Share-based payments (incl. long-term incentive)[6]						
2021	—	—	—	—	—	—
2020	—	—	—	—	—	—
Total						
2021	**€546**	**€622**	**€560**	**€540**	**€496**	**€428**
2020	**€546**	**€611**	**€551**	**€543**	**€484**	**€—**

(1) Ryan Richardson was appointed to the Management Board as Chief Strategy Officer (CSO) and Managing Director effective as of January 12, 2020.

(2) Jens Holstein was appointed to the Management Board as Chief Financial Officer (CFO) effective as of July 1, 2021.

(3) Includes social security, health and additional insurance, company bike and travel expenses.

(4) The first installment of the STI for the year ended December 31, 2021, will be paid out in April 2022, the month after approval of the consolidated financial statements. The first installment of the STI for the year ended December 31, 2021 was considered granted and owed in 2021, the year in which the activity, to which the remuneration relates, has been performed.The first installment of the STI for the year ended December 31, 2020 was considered granted and owed in 2020 and was paid out in January 2021.

(5) The second installment of the STI for the year ended December 31, 2021 was also considered granted and owed in 2021, as the Management Board had already completely performed the activity to which it relates. It will be paid out in February 2023 subject to an adjustment due to the share-price development. The second installment of the STI for the year ended December 31, 2020 was considered granted and owed in 2020 and was paid out in December 2021 with adjustments due to the share-price development. The amounts ultimately paid were as follows: Prof. Ugur Sahin, M.D. €221 thousand, Sean Marett €245 thousand, Dr. Sierk Poetting €221 thousand, Prof. Özlem Türeci, M.D. €221 thousand and Ryan Richardson €196 thousand.

(6) Explanations on our share-based payment arrangements are given in section 6 and include the LTI arrangements and a one-time signing bonus agreed with Jens Holstein as outlined in detail under section 5.4. The benefits from our share-based payment arrangements are considered as granted and owed when the underlying performance and service requirements are considered fulfilled. During the year ended December 31, 2021, no performance and service requirements to a share-based payment arrangement (incl. long-term incentive) were considered fulfilled.

For the years ended December 31, 2021 and 2020 we did not make use of the malus and claw-back provisions, which would entitle us to withhold or reclaim variable compensation components in whole or in part as no event incurred which would be considered a breach in this respect.

For the years ended December 31, 2021 and 2020, there was no event of termination of the Management Board service contracts. According to this, we did not use the termination related rules and regulations, i.e., outstanding variable compensation components to the period up to termination shall be granted and in the event of premature termination due to evocation of the appointment the Board member shall receive a severance payment.

A detailed description of the malus and claw-back as well as termination provisions are included in our comprehensive remuneration system as approved by the AGM on June 22, 2021, which is available online on our website www.biontech.de.

5.2 Fixed Compensation and Fringe Benefits

Effective September 1, 2019, the annual fixed compensation for our Management Board members, Prof. Ugur Sahin, Sean Marett and Prof. Özlem Türeci was €360,000, €400,000 and €360,000, respectively. Effective January 1, 2020, the annual fixed compensation of Ryan Richardson is €320,000. All agreements led to the respective effective annual fixed compensation during the year ended December 31, 2021. Effective December 1, 2021, Dr. Sierk Poetting's annual fixed compensation was increased from €360,000 to €550,000 which led to an effective annual fixed compensation of €375,833 during the year ended December 31, 2021. Effective as of his appointment to the Management Board on July 1, 2021, Jens Holstein's annual fixed compensation was €550,000 which led to an effective annual fixed compensation of €275,000 during the year ended December 31, 2021.

The fixed compensation is paid out in twelve monthly installments as a salary. Other components of the fixed compensation include fringe benefits such as allowances for health and long-term care insurance and supplementary insurance, non-cash benefits from bicycle and travel allowances. The Management Board of BioNTech SE benefits from our D&O insurance policy. The expenses of our D&O insurance are not considered compensation as it is concluded in our own interest covering risks for our Management Board, our Supervisory Board as well as senior executives and managing directors of BioNTech group entities.

5.3 Short-Term Incentive Compensation (STI)

The STI is a performance-related bonus with a one-year assessment period. The old service agreements with our Management Board provide for short-term incentive compensation of up to a maximum of 50% of the annual base salary; the new compensation system provides for STI amounts to a maximum of 60% of the amount of the fixed compensation per year. The payout amount of the short-term incentive compensation depends on the achievement of certain financial performance criteria and non-financial performance criteria (performance targets) of the Group in a particular financial year, which goals are set uniformly for all members of the Management Board.

A detailed description of the STI and potential performance targets are included in our comprehensive remuneration system as approved by the AGM on June 22, 2021, which is available online on our website www.biontech.de.

Effective January 1, 2020, the maximum short-term incentive compensation for our Management Board members, Prof. Ugur Sahin, Sean Marett, Dr. Sierk Poetting and Prof. Özlem Türeci was 50% of their annual fixed compensation. The same applied to Ryan Richardson's maximum short-term incentive compensation effective since January 1, 2020. Effective July 1, 2021, the maximum short-term incentive compensation for Jens Holstein was defined as €300,000. Effective January 1, 2022, the maximum short-term incentive compensation for Dr. Sierk Poetting has been increased to €300,000.

The performance targets defined by our Supervisory Board for the year ended December 31, 2021 were derived from the strategic and operational objectives of the Company rather than financial performance as continued development was the main emphasis in the year ended December 31, 2021. As shown in the table below, the ambitious and measurable performance targets include various Company Goals as well as an ESG Target and were defined in line with the applicable compensation system.

The determination on the actual achievement of the performance targets, which was made by the Supervisory Board in its reasonable discretion in the beginning of the 2022 financial year, is shown in the following table and explained below.

	Performance Targets 2021 Financial Year	Relative Weighting	Achievement
Company Goals	Release and sell / distribute 3 billion COMIRNATY® doses	15%	100%
	Develop explicit transformation plans and implement quick wins: Manufacturing network plan Integrated oncology acceleration plan Integrated infectious disease acceleration plan Integrated digitalization plan Integrated automation plan Global commercial strategy Global corporate strategy Business support and processes	40%	100%
	Establish Singapore and China Headquarter and China Joint Venture (JV) + Tech Transfer	10%	100%
	Reach a specified number of clinical trials milestones	15%	100%
ESG Target	Achieve C+ rating for ESG (Environment / Social / Governance)	20%	100%
	Total	**100%**	**100%**

Considering the strong development of our year ended December 31, 2021 and the positive overall development, our Supervisory Board at its due discretion considered the manufacturing target to be fully achieved as 98% of the three billion doses set as manufacturing capacity target for the year ended December 31, 2021 were released. In addition, for strategic reasons, it was decided not to implement the technology transfer with China as this can only take place once marketing approval had been granted.

The determination on the actual achievement of the performance targets by the Supervisory Board for the year ended December 31, 2020 was also 100%.

The first installment of the STI for the year ended December 31, 2021, will be paid out in April 2022, the month after approval of the consolidated financial statements. The first installment of the STI for the year ended December 31, 2021 was considered granted and owed in 2021, the year in which the activity, to which the remuneration relates, has been performed. The first installment of the STI for the year ended December 31, 2020 was considered granted and owed in 2020 and was paid out in January 2021.

The second installment of the STI for the year ended December 31, 2021 was also considered granted and owed in 2021, as the Management Board had already completely performed the activity to which it relates. It will be paid out in February 2023 subject to an adjustment due to the share-price development. The second installment of the STI for the year ended December 31, 2020 was considered granted and owed in 2020 and was paid out in December 2021 with adjustments due to the share-price development.

Unchanged between the old service agreements and the new compensation scheme, the second installment of the STI is subject to adjustments in relation to the development of the share price between the determination date, when the STI achievement is determined, and the respective anniversary of that date (i.e., in the event of an increase or decrease in the share price, the payment amount is multiplied by the factor of the development of the share price).

The following table summarizes the overall target achievement and the resulting bonus payout amount per Management Board member.

		Compensation Corridor			STI Payment (in thousand)	
Short-Term Incentive Compensation (STI) for the year ended December 31, 2021	**Relative to fixed compensation (in %)**	Lower Limit (0%)	Upper Limit (100%)	**Overall Target Achievement**	**Thereof First Installment to be paid out in April 2022**	**Thereof Second Installment deferred and to be paid out in February 2023**
Prof. Ugur Sahin, M.D.	50 %	—	180	100 %	90	90
Sean Marett	50 %	—	200	100 %	100	100
Dr. Sierk Poetting	48 %	—	180	100 %	90	90
Prof. Özlem Türeci, M.D.	50 %	—	180	100 %	90	90
Ryan Richardson	50 %	—	160	100 %	80	80
Jens Holstein	55 %	—	150	100 %	75	75

(1) Effective July 1, 2021, the maximum short-term incentive compensation for Jens Holstein was defined as € 300.000 which was applied on a pro-rata basis for the year ended December 31, 2021.

(2) Deferred amount is dependent on the share price development during the year following the determination date in February 2022.

5.4 Share-based Payments (incl. Long-Term Incentive (LTI))

In the past, share-based payment arrangements were entered into with our Management Board members, which continue to be outstanding as of December 31, 2021. These include the Employee Stock Ownership Plan (ESOP) (granted in 2018) and the Chief Executive Officer Grant (granted in 2019), which are explained in detail in section 6 below.

The service agreements with our Management Board provide for a long-term incentive compensation in terms of an annual grant of options to purchase BioNTech shares for the years of their respective service periods. Those yearly LTI programs are in line with our comprehensive remuneration system as approved by the AGM on June 22, 2021, which is available online on our website www.biontech.de. The options granted each year will be subject to the terms, conditions, definitions and provisions of our Employee Stock Ownership Plan (ESOP) and the applicable option agreement thereunder (see section 6 below).

Effective January 1, 2020, the number of options to be granted each year to Prof. Ugur Sahin, Sean Marett, Prof. Özlem Türeci and Ryan Richardson are to be calculated based on a value of €750,000, €300,000, €300,000 and €260,000, respectively. The value used to calculate the number of options for Ryan Richardson increases to €280,000 for the year 2022. Effective December 1, 2021, with entering into a new service contract, the value on which the number of options to be granted each year to Dr. Sierk Poetting is based was increased from €300,000 to €550,000 for new awards. Effective as of his appointment to the Management Board on July 1, 2021, the number of options to be granted each year to Jens Holstein was to be calculated based on a value of €550,000. In each case the values must be divided by the amount by which a certain target share price exceeds the exercise price.

As of his appointment, the Supervisory Board granted Jens Holstein a one-time signing bonus of €800,000 by awarding 4,246 phantom shares. The phantom shares vest in four equal installments on July 1 of 2022, 2023, 2024 and 2025 but will only be settled in cash on July 1, 2025. As of December 31, 2021, the cash payment is subject to an effective settlement closing price cap. This means that the settlement closing price shall effectively be adjusted to ensure that the current price of an ADS as of the settlement date does not exceed 800% of the closing price applied when the award was initially granted. In addition, the total cash payment under the award shall not exceed €6.4 million.

During the year ended December 31, 2021, 25% of the Chief Executive Officer Grant (October 10, 2021) and 25% our 2020 LTI program (February 13, 2021) vested but continue to be subject to performance requirements.

The benefits from our share-based payment arrangements are considered as granted and owed when the underlying performance and service requirements are considered fulfilled. During the year ended December, 2021, no performance and service requirements to a share-based payment arrangement (incl. long-term incentive) were considered fulfilled.

5.5 Target Total and Maximum Compensation

The target total compensation for the Management Board for the years ended December 31, 2021 and 2020 is presented in the tables below. The following table discloses the compensation instruments and their compliance with the percentage ranges defined for target total compensation in our remuneration system.

	Prof. Ugur Sahin, M.D.				Sean Marett			
	Years ended December 31,				Years ended December 31,			
	2021		2020		2021		2020	
	in thousands	in % of TTC	in thousands	in % of TTC	in thousands	in % of TTC	in thousands	in % of TTC
Non-performance related compensation								
Fixed compensation	360	28 %	360	28 %	400	43 %	400	44 %
Fringe benefits	6	— %	6	— %	22	2 %	11	1 %
Performance-related compensation								
Short-term incentive	180	14 %	180	14 %	200	22 %	200	22 %
Share-based payments (incl. long-term incentive)	750	58 %	750	58 %	300	33 %	300	33 %
Target Total Compensation (TTC)	**1,296**	**100 %**	**1,296**	**100 %**	**922**	**10 %**	**911**	**100 %**

	Dr. Sierk Poetting				Prof. Özlem Türeci, M.D.			
	Years ended December 31,				Years ended December 31,			
	2021		2020		2021		2020	
	in thousands	in % of TTC	in thousands	in % of TTC	in thousands	in % of TTC	in thousands	in % of TTC
Non-performance related compensation								
Fixed compensation	376	44 %	360	42 %	360	43 %	360	43 %
Fringe benefits	4	— %	11	1 %	—	— %	3	— %
Performance-related compensation								
Short-term incentive	180	21 %	180	21 %	180	21 %	180	21 %
Share-based payments (incl. long-term incentive)	300	35 %	300	35 %	300	36 %	300	36 %
Target Total Compensation (TTC)	**860**	**100 %**	**851**	**100 %**	**840**	**1**	**843**	**1**

	Ryan Richardson				Jens Holstein[1]			
	Years ended December 31,				Years ended December 31,			
	2021		2020		2021		2020	
	in thousands	in % of TTC	in thousands	in % of TTC	in thousands	in % of TTC	in thousands	in % of TTC
Non-performance related								
Fixed compensation	320	42 %	320	43 %	275	39 %	—	— %
Fringe benefits	16	2 %	4	1 %	3	— %	—	— %
Performance-related compensation								— %
Short-term incentive	160	21 %	160	22 %	150	21 %	—	— %
Share-based payments (incl. long-term incentive)	260	34 %	260	35 %	275	39%	—	— %
Target Total Compensation (TTC)	**756**	**100 %**	**744**	**100 %**	**703**	**100 %**	**—**	**— %**

(1) Jens Holstein was appointed to the Management Board as Chief Financial Officer (CFO) on July 1, 2021. His compensation excludes the one-time signing bonus granted to him at the time of his appointment to the Supervisory Board.

Starting with the phantom share options issued in May 2021 (see section 6) the agreements include a maximum compensation (expense cap) clause limiting the total cash payment that the Management Board members are entitled to receive to €20.0 million for our Chief Executive Officer (CEO) or €10.0 million for all other Management Board members, less other compensation components received by each such board member in the respective grant year. It is not important when the respective compensation element was paid out, but for which financial year it was granted. Therefore, the application only becomes visible when all compensation components (including the long-term incentive) are considered owed and granted. That means that the target total achievement of the share-based payments (incl. long-term incentive) cannot be accessed in the year ended December 31, 2021.

6 Additional Disclosures on Share-Based Payment Instruments

In accordance with Sec. 162 para. 1 no. 3 AktG, the table below provides an overview of the share options and other share-based payment instruments allocated to our Management Board as of December 31, 2021.

	Grant Date / (Estimated) Allocation Date	Number of Ordinary Shares Underlying Share Options / Number of Phantom Share Options [2]	Option Exercise Price (€) [9]	Earliest Option Exercise Date[11]	Option Expiration Date	Name of the Program
Prof. Ugur Sahin, M.D.	11/15/2018[1]	1,830,348	10.14	9/16/2022	9/17/2026	ESOP 2018
	10/10/2019[3]	4,374,963	13.60	10/10/2023	10/10/2029	CEO Grant 2019
	2/13/2020[4]	97,420	28.32	2/13/2024	2/13/2030	LTI 2020[12]
	5/12/2021[5]	17,780	163.54	5/12/2025	5/12/2031	LTI 2021[12]
Sean Marett	11/15/2018[1]	610,110	10.14	9/16/2022	9/17/2026	ESOP 2018
	2/13/2020[4]	38,968	28.32	2/13/2024	2/13/2030	LTI 2020[12]
	5/12/2021[5]	7,112	163.54	5/12/2025	5/12/2031	LTI 2021[12]
Dr. Sierk Poetting	11/15/2018[1]	610,110	10.14	9/16/2022	9/17/2026	ESOP 2018
	2/13/2020[4]	38,968	28.32	2/13/2024	2/13/2030	LTI 2020[12]
	5/12/2021[5]	7,112	163.54	5/12/2025	5/12/2031	LTI 2021[12]
Prof. Özlem Türeci, M.D.	11/15/2018[6]	1,952,334	10.14	9/16/2022	9/17/2026	ESOP 2018
	2/13/2020[4]	38,968	28.32	2/13/2024	2/13/2030	LTI 2020[12]
	5/12/2021[5]	7,112	163.54	5/12/2025	5/12/2031	LTI 2021[12]
Ryan Richardson [7]	11/15/2018[8]	149,508	10.14	9/16/2022	9/17/2026	ESOP 2018
	2/13/2020[4]	33,772	28.32	2/13/2024	2/13/2030	LTI 2020[12]
	5/12/2021[5]	6,163	163.54	5/12/2025	5/12/2031	LTI 2021[12]
Jens Holstein	5/17/2021[5]	6,463	164.96	5/17/2025	5/17/2031	LTI 2021[12]
	7/1/2021[10]	4,246	n/a [10]	01/07/2025[10]	n/a [10]	Signing Bonus

(1) Options fully vest on September 16, 2022.

(2) 18-for-1 stock split of our ordinary shares, which became effective on September 18, 2019 upon registration with the commercial register (*Handelsregister*) is reflected in share amounts granted in advance.

(3) Options vest in four equal installments on October 10 of 2020, 2021, 2022 and 2023 but will not become exercisable until October 10, 2023.

(4) Options vest in four equal installments on February 13 of 2021, 2022, 2023 and 2024 but will not become exercisable until February 13, 2024.

(5) Options were issued as phantom share options and vest in four equal installments on May 12 of 2022, 2023, 2024 and 2025 for all Management Board members but Jens Holstein and May 17 of 2022, 2023, 2024 and 2025 for Jens Holstein. The options will not become exercisable until May 12, 2025 and May 17, 2025, respectively.

(6) Options fully vested on March 16, 2019, however these options will not become exercisable until September 16, 2022.

(7) Ryan Richardson was appointed to the Management Board as Chief Strategy Officer (CSO) and Managing Director on January 12, 2020. The share options granted on November 15, 2018 under the Employee Stock Ownership Plan were granted before his appointment to the Management Board.

(8) Options fully vested on October 10, 2019, however these options will not become exercisable until September 16, 2022.

(9) As of December 31, 2021, all options other than those granted to Ryan Richardson before he was appointed to the Management Board are subject to an effective exercise price cap. This means that the exercise price shall effectively be adjusted to ensure that the current price of an ADS as of the exercise date does not exceed 800% of the exercise price. As of December 31, 2021, with respect to the phantom share options issued in May 2021, all agreements include an additional maximum compensation clause limiting the total cash payment that the Management Board members are entitled to receive to €20.0 million for Ugur Sahin as Chief Executive Officer (CEO) or €10.0 million for all other Management Board members, less other compensation components received by each such board member in the respective grant year.

(10) As of July 1, 2021 when Jens Holstein was appointed to the Management Board as Chief Financial Officer (CFO), the Supervisory Board granted Jens Holstein a one-time signing bonus as outlined in section 5.4.

(11) Indicates end of the respective waiting period, additional restrictions with respect to exercise windows may apply.

(12) Management Board Grant (Long-Term Incentive) in the respective years.

Employee Stock Ownership Plan 2018
Based on a pertinent authorization of the general meeting on August 18, 2017, we established a share option program under which we granted selected employees options to receive our shares. The program is designed as an Employee Stock Ownership Plan, or ESOP. We have offered the participants a certain number of rights by explicit acceptance of the participants. The exercise of the option rights in accordance with the agreement gives the participants the right to obtain shares against payment of the exercise price. The option rights (other than Prof. Özlem Türeci's and Ryan Richardson's options referred to in the above table and footnotes) generally fully vest after four years and can only be exercised if: (i) the waiting period of four years has elapsed; and (ii) at the time of exercise, the average closing price of the shares of the Company or the average closing price of the right or certificate to be converted into an amount per share on the previous ten trading days preceding the exercise of the option right exceeds the strike price by a minimum of 32%, with this percentage increasing by eight percentage points as of the fifth anniversary of the respective issue date and as of each subsequent anniversary date. The option rights can be exercised at the latest eight years after the allocation date. If they have not been exercised by that date, they will forfeit without compensation.

As of December 31, 2021, with respect to the Management Board members, other than Ryan Richardson who was not a Management Board member at the time the options were granted, the options are subject to an effective exercise price cap. This means that the exercise price shall effectively be adjusted to ensure that the current price of an ADS as of the exercise date does not exceed 800% of the exercise price.

By way of shareholders' resolution of the general meeting on August 19, 2019, the authorization to issue such option rights was amended such, that, in order for the options to be exercisable, the average closing price of the Company's shares or the average closing price of the right or certificate to be converted into an amount per share on the ten trading days immediately preceding the exercise must exceed the strike price by a minimum of 28%, with this percentage increasing by seven percentage points as of the fifth anniversary of the issue date and as of each subsequent anniversary date. Also, in addition to the aforementioned requirements, the exercise is only possible if the share price (calculated by reference to the price of the ordinary share underlying the ADS) has performed similar to or better than the Nasdaq Biotechnology Index. The changes made do not affect option rights already issued.

Chief Executive Officer Grant 2019
In September 2019, we granted Prof. Ugur Sahin, M.D., our co-founder and Chief Executive Officer, an option to purchase 4,374,963 of our ordinary shares, subject to Prof. Sahin's continuous employment with us. The option is subject to the terms, conditions, definitions and provisions of our ESOP and the applicable option agreement thereunder. The options' exercise price per share is the Euro translation of the public offering price from our initial public offering, $15.00 (€13.60) which, as of December 31, 2021, is subject to the effective exercise price cap. The option will vest annually in equal installments after four years commencing on the first anniversary of our initial public offering and will be exercisable four years after our initial public offering. The vested option rights can only be exercised if and to the extent that each of the following performance criteria has been achieved: (i) at the time of exercise, the current price is equal to or greater than the threshold amount (that is, the exercise price, provided that such amount increases by seven percentage points on each anniversary of the allocation date); (ii) at the time of exercise, the current price is at least equal to the Target Price (that is, (a) for the twelve-month period starting on the fourth anniversary of the allocation date, $8.5 billion divided by the total number of the shares outstanding immediately following the initial public offering (other than shares owned by us), and (b) for each twelve-month period starting on the fifth or subsequent anniversary of the allocation date, 107% of the target share price applicable for the prior twelve-month period); and (iii) the closing price for the fifth trading day prior to the start of the relevant exercise window is higher than the exercise price by at least the same percentage by which the Nasdaq Biotechnology Index or a comparable successor index as of such time is higher than such index was as of the last trading day before the allocation date. The option rights can be exercised up to ten years after the allocation date. If they have not been exercised by that date, they will lapse without compensation.

Management Board Grant (Long-Term Incentive)
The service agreements with our Management Board provide for a long-term incentive compensation in terms of an annual grant of options to purchase BioNTech shares for the years of their respective service periods. The options granted each year will be subject to the terms, conditions, definitions and provisions of our Employee Stock Ownership Plan (ESOP) and the applicable option agreement thereunder. The allocation of the number of issued options in 2020 occurred in February 2020 (2020 allocation date). In May 2021 (2021 allocation date), phantom options equivalent to the number of options the Management Board members would have been entitled to receive for the year 2021 were granted under the Management Board Grant.

The per share exercise price of the options is the Euro equivalent of the arithmetic mean of the closing prices of the ten last trading days prior to the allocation date. For the awards allocated as of February 2020, the exercise price has been determined to be $30.78 (€28.32), calculated as of grant date using the foreign exchange rate as published by the German Central Bank (Deutsche Bundesbank). As of December 31, 2021, the awards allocated as of February 2020 are subject to the effective exercise price cap. For the awards allocated as of May 12, 2021, and May 17, 2021 the exercise price has been determined to be $185.23 (€163.54) and $186.83 (€164.96), respectively (both amounts calculated as of December 31, 2021 using the foreign exchange rate as published by the German Central Bank (Deutsche Bundesbank). With respect to the phantom share options issued in May 2021, as of December 31, 2021, all agreements include the effective exercise price cap and an additional maximum compensation clause limiting the total cash payment that the Management Board members are entitled to receive to €20.0 million for Ugur Sahin as Chief Executive Officer (CEO) or €10.0 million for all other Management Board members, less other compensation components received by each such board member in the respective grant year. The options will vest annually in equal installments over four years commencing on the first anniversary of the allocation date and will be exercisable four years after the allocation date. The vested options can only be exercised if and to the extent that each of the following performance criteria has been achieved: (i) at the time of exercise, the current price is equal to or greater than the threshold amount (that is, the exercise price, provided that such amount increases by seven percentage points on each anniversary of the allocation date); (ii) at the time of exercise, the current price is at least equal to the target price (that is, (a) for the twelve-month period starting on the fourth anniversary of the allocation date, $8.5 billion divided by the total number of the ordinary shares outstanding immediately following the initial public offering (other than ordinary shares owned by BioNTech), and (b) for each twelve-month period starting on the fifth or subsequent anniversary of the allocation date, 107% of the target share price applicable for the prior twelve-month period); and (iii) the closing price for the fifth trading day prior to the start of the relevant exercise window is higher than the exercise price by at least the same percentage by which the Nasdaq Biotechnology Index or a comparable successor index as of such time is higher than such index was as of the last trading day before the allocation date. The options expire ten years after the allocation date. If they have not been exercised by that date, they will lapse without compensation.

E. Information on the Relative Development of the Compensation of the Management Board, the Compensation of the Employees and the Development of the Company's Earnings

The following table shows the relative development during the year ended December 31, 2021 compared to the prior year of the compensation granted and owed to the Supervisory and Management Board members, the average compensation of our employees and selected key earning indicators.

Selected key earning indicators considered by Sec. 162 para. 1 no. 2 AktG generally measure the development of earnings on the basis of revenues, operating income/ (loss) of the BioNTech Group (IFRS) and net income (HGB) of BioNTech SE. Considering our operational and financial development our key earnings indicators increased exceptionally and changed significantly during the year ended December 31, 2021 compared to the prior-year period. Therefore, the development of those indicators relative to our Supervisory and Management Board members' compensation is not considered meaningful.

For the presentation of the average compensation of employees, the calculation was based on the average number of full-time equivalent people employed during the respective period by the BioNTech Group.

in %	Change 2021 vs. 2020
Management Board	
Prof. Ugur Sahin, M.D.	—
Sean Marett	2
Dr. Sierk Poetting	2
Prof. Özlem Türeci, M.D.	(1)
Ryan Richardson	2
Jens Holstein [1]	n.m.[6]
Supervisory Board	
Helmut Jeggle	21
Michael Motschmann	26
Prof. Christoph Huber, M.D.	18
Dr. Ulrich Wandschneider	18
Earnings indicators	
Revenues from contracts with customers (IFRS BioNTech Group)[2]	n.m.[6]
Operating income/ (loss) (IFRS BioNTech Group)[3]	n.m.[6]
Net income (HGB BioNTech SE) [4]	n.m.[6]
Compensation of the workforce	
Total workforce [5]	5

(1) Jens Holstein was appointed to the Management Board as Chief Financial Officer (CFO) on July 1, 2021. Therefore, a comparison with the prior year is not possible.

(2) Revenues changed significantly from €482.3 million during the year ended December 31, 2020 to €18,977 million during the year ended December 31, 2021.

(3) Operating profit / (loss) changed significantly from €82.4 million operating loss during the year ended December 31, 2020 to €15,283.8 million operating profit during the year ended December 31, 2021.

(4) Net income (HGB) changed significantly from €128.9 million net loss during the year ended December 31, 2020 to €10,777.6 million net income during the year ended December 31, 2021. The information on net income (HGB) is not representative for the group but is considered to be a key earning indicator in terms of Sec. 162 para. 1 no. 2 AktG.

(5) The average employee compensation is based on the compensation of BioNTech Group employees including social security contributions, excluding expenses incurred from share-based payment as those are not yet considered granted and owed since the underlying performance and service requirements are not yet considered fulfilled, and calculated using the average full-time equivalent at the beginning and end of the respective period.

(6) n.m. not meaningful

F. Conclusion on Applied Remuneration System for the Year Ended December 31, 2021

The year ended December 31, 2021 was another transformational year for us during which our Supervisory Board and Management Board remained constant, apart from the new addition of Jens Holstein who joined the Management Board as of July 1, 2021 as new CFO. During the year ended December 31, 2021 the service agreement with Dr. Sierk Poetting was renewed as of December 1, 2021.

To promote the business strategy and the long-term development of BioNTech, we challenged our remuneration system during the year ended December 31, 2021. Following a thorough review, our Supervisory Board slightly modified the compensation system for the members of the Management Board and the remuneration system was approved by the AGM in June 2021. At the same AGM, the compensation of our Supervisory Board members was adjusted while generally retaining the system for the compensation of Supervisory Board members.

Other than those listed in this report, the members of the Management Board and Supervisory Board received no further compensation or benefits in the reporting year.

Based on the overall analysis, the Supervisory Board comes to the conclusion that the remuneration system for the Management Board and Supervisory Board was applied in all aspects as adopted at the Annual General Meeting during the year ended December 31, 2021. All agreements with the Management Board contribute to our business strategy.

Mainz, March 29, 2022

BioNTech SE

For the Management Board

Prof. Ugur Sahin, M.D.
Chief Executive Officer, CEO

Jens Holstein
Chief Financial Officer, CFO

For the Supervisory Board

Helmut Jeggle
Chairman of the Supervisory Board

HUMAN ANTIBODY BINDING TO HUMAN CELL RECEPTORS. 3D ILLUSTRATION

Independent Auditor's Reports

Independent Auditor's Report (Consolidated Financial Statements of BioNTech SE)

To BioNTech SE

Opinions
We have audited the consolidated financial statements of BioNTech SE, Mainz, and its subsidiaries (the Group), which comprise the consolidated balance sheet as of 31 December 2021, the consolidated income statement, the consolidated statement of other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the fiscal year from 1 January to 31 December 2021, and notes to the financial statements, including a summary of significant accounting policies. In addition, we have audited the combined group management report of BioNTech SE for the fiscal year from 1 January to 31 December 2021. We have not audited the group statement on corporate governance in section 5 of the group management report, and the non-financial report in section 7 of the group management report.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Sec. 315e (3) and (1) HGB and, in compliance with these requirements, give a true and fair view of the assets, liabilities and financial position of the Group as at 31 December 2021 and of its financial performance for the fiscal year from 1 January to 31 December 2021 and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our opinion on the group management report does not cover the group statement on corporate governance in section 5 of the combined group management report, and the non-financial report in section 7 of the combined group management report referred to above.

Pursuant to Sec. 322 (3) Sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the opinions
We conducted our audit of the consolidated financial statements and of the group management report in accordance with Sec. 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report" section of our auditor's report. We are independent of the Group entities in accordance with the requirements of German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the group management report.

Other information
The supervisory board is responsible for the report of the supervisory board. The executive directors and the supervisory board are responsible for the statement pursuant to Sec. 161 AktG on the German Corporate Governance Code, which forms part of the group statement in corporate governance, and for the remuneration report pursuant to Sec. 162 AktG. In addition, the executive directors are responsible for the other information. The other information comprises the above-mentioned group statement on corporate governance, and the non-financial statement referred to above. In addition, the other information includes other components intended for the annual report, a version of which we have obtained up to the date of this auditor's report, in particular:

- the non-financial report,
- the remuneration report,

but not the consolidated financial statements, not the group management report information included in the audit, and not our audit opinion thereon.

In addition, the other information comprises the other parts of the annual report which are expected to be made available to us after the audit opinion has been issued, in particular:

- the letter from the Executive Board to the shareholders,
- the multi-year summary of business performance.
- Furthermore, the other information includes other components intended for the annual report, a version of which we have obtained up to the date of this auditor's report, in particular:
- the report of the Supervisory Board pursuant to Sec. 171 (2) AktG

but not the consolidated financial statements, not the combined group management report information included in the audit, and not our audit opinion thereon.

Our opinions on the consolidated financial statements and on the combined group management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the combined group management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the executive directors and the supervisory board for the consolidated financial statements and the group management report
The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec 315e (3) and (1) HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting, unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sec. 317 HGB will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.

- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (3) and (1) HGB.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.

- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.

- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Cologne, 30 March 2022

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Zwirner
Wirtschaftsprüfer
[German Public Auditor]

Weigel
Wirtschaftsprüfer
[German Public Auditor]

Independent Auditor's Report (Remuneration Report of BioNTech SE)

To BioNTech SE

We have audited the attached remuneration report of BioNTech SE, Mainz prepared to comply with Sec. 162 AktG ["Aktiengesetz": German Stock Corporation Act] for the fiscal year from 1 January 2021 to 31 December 2021 and the related disclosures. We have not audited the content of the disclosures on the review of the appropriateness of the remuneration of the Board of Management in section 4, which represent disclosures of the remuneration report that go beyond Sec. 162 AktG.

Responsibilities of the executive directors and the supervisory board

The executive directors and supervisory board of BioNTech SE are responsible for the preparation of the remuneration report and the related disclosures in compliance with the requirements of Sec. 162 AktG. In addition, the executive directors and supervisory board are responsible for such internal control as they determine is necessary to enable the preparation of a remuneration report and the related disclosures that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on this remuneration report and the related disclosures based on our audit. We conducted our audit in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the remuneration report and the related disclosures are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts in the remuneration report and the related disclosures. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the remuneration report and the related disclosures, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the preparation of the remuneration report and the related disclosures in order to plan and perform audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the accounting policies used and the reasonableness of accounting estimates made by the executive directors and supervisory board, as well as evaluating the overall presentation of the remuneration report and the related disclosures.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Opinion

In our opinion, on the basis of the knowledge obtained in the audit, the remuneration report for the fiscal year from 1 January 2021 to 31 December 2021 and the related disclosures comply, in all material respects, with the financial reporting provisions of Sec. 162 AktG. Our opinion on the remuneration report does not cover the content of the above-mentioned disclosures of the remuneration report that go beyond the scope of Sec. 162 AktG.

Other matter – formal audit of the remuneration report
The audit of the content of the remuneration report described in this auditor's report comprises the formal audit of the remuneration report required by Sec. 162 (3) AktG and the issue of a report on this audit. As we are issuing an unqualified opinion on the audit of the content of the remuneration report, this also includes the opinion that the disclosures pursuant to Sec. 162 (1) and (2) AktG are made in the remuneration report in all material respects.

Limitation of liability
The "General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften [German Public Auditors and Public Audit Firms]" as issued by the IDW on 1 January 2017, which are attached to this report, are applicable to this engagement and also govern our responsibility and liability to third parties in the context of this engagement.

Cologne, 30 March 2022

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Zwirner
Wirtschaftsprüfer
[German Public Auditor]

Weigel
Wirtschaftsprüfer
[German Public Auditor]

Financial Calendar 2022

MAY 9, 2022
First Quarter 2022 Earnings

JUNE 1, 2022
Annual General Meeting

JUNE 29, 2022
Capital Markets Day

AUGUST 8, 2022
Second Quarter 2022 Earnings

NOVEMBER 7, 2022
Third Quarter 2022 Earnings

Imprint

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