

GROUP MANAGEMENT REPORT

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GROUP MANAGEMENT REPORT

INFORMATION ABOUT THE GROUP

The Group's business model

Boehringer Ingelheim has stood for innovation for over 135 years. The Group is among the world's 20 leading companies in this sector. Founded in 1885, the family-owned company with its headquarters in Ingelheim am Rhein is today one of Germany's most research-intensive companies. Its activities focus on both human and animal patients. Boehringer Ingelheim's strategic anchor is the goal of achieving medical breakthroughs in those areas where the need is greatest. In its Human Pharma, Animal Health and Biopharmaceutical Contract Manufacturing businesses, the company has 51,944 employees worldwide in research and development (R&D), from production to commercialization of its products and administration.

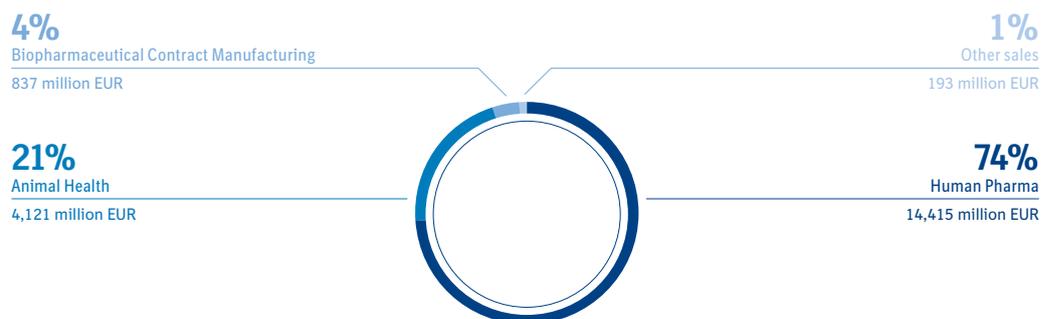
The Human Pharma business is the mainstay of Boehringer Ingelheim's activities and accounts for a 74% share of overall sales. This business area is underpinned by an innovative portfolio, and in many cases the company's products are standard treatments in medicine. Research focuses on cardiovascular and metabolic diseases, oncology, respiratory diseases, immunology, diseases of the central nervous system (CNS) and retinal health.

JARDIANCE® again
strongest
revenue contributor

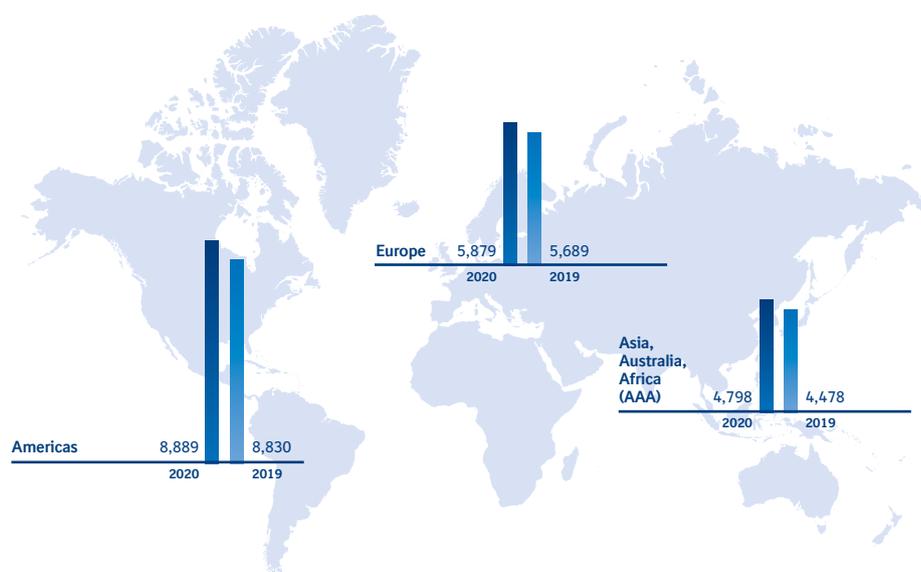
JARDIANCE®, a medicine for treatment of type 2 diabetes which also reduces the risk of cardiovascular diseases for type 2 diabetics with pre-existing cardiovascular conditions, was the Group's biggest selling Human Pharma product for the second consecutive year. OFEV®, which is used for the treatment of the rare respiratory disease idiopathic pulmonary fibrosis (IPF) and increasingly also in a further indication – systemic sclerosis with interstitial lung disease (SSc-ILD) – registered especially strong growth.

NET SALES BY BUSINESS

Group: 19,566 million EUR



NET SALES BY REGION (IN MILLION EUR)



Three other products also played a significant role in Boehringer Ingelheim's success: SPIRIVA®, which is used for the treatment of chronic obstructive pulmonary disease (COPD) as well as asthma, TRAJENTA®, which is used for treatment of type 2 diabetes, and PRADAXA®, which is used to prevent strokes in patients with atrial fibrillation and for the prevention and treatment of thromboembolic disorders.

In its Animal Health business, Boehringer Ingelheim is one of the biggest providers of veterinary vaccines and medicines. Boehringer Ingelheim is the market leader in Germany and, at the global level, is the second largest provider in the area of animal health. Its portfolio includes products for pets and horses as well as livestock such as swine, ruminants and poultry. The company's core brands NEXGARD®, followed by FRONTLINE® and HEARTGARD®, are the foundations of its success in the pets segment. In the swine segment, the established swine vaccine INGELVAC CIRCOFLEX®, which is used to treat porcine circovirus type 2, is an important component of the company's product portfolio.

Boehringer Ingelheim's biopharmaceutical activities comprise the manufacture of its own human pharmaceutical products (such as ACTILYSE®, METALYSE® and PRAXBIND®) and also – as one of the world's leading providers – process development and commercial production of biopharmaceuticals for third-party industrial customers.

Other sales mainly comprise discontinued operations.

In the 2020 financial year, Boehringer Ingelheim once again achieved the majority of its sales in the Americas (45%) and Europe (30%) regions. The Asia/Australia/Africa (AAA) region includes countries such as China and is of strategic significance for the Group's future development, making up 25% of its sales.

Research and development

In line with its mission statement, Boehringer Ingelheim's goal is to research and develop innovative medicines and therapies for the treatment of diseases for which there are as yet no satisfactory treatments available. Its major emphasis is on the development of medicines as well as new approaches and therapies to prevent, detect and treat chronic diseases. Driven by the desire to make a difference for patients, we aim to make a relevant contribution in areas where the need for treatment is high, in the human pharmaceuticals segment as well as in the field of animal health.

We have a global research network of 13 countries, with major facilities in Germany (Biberach and Ingelheim am Rhein), the USA (Ridgefield, Connecticut; Duluth, Georgia; and St. Joseph, Missouri), Austria (Vienna), Japan (Kobe) and France (Lyon) as well as China (Shanghai). Boehringer Ingelheim continues to explore opportunities for expanding and renewing its existing product portfolio through organic growth. We thereby rely on long-established relationships with academic institutions, biotech companies and public research institutions. In the scientific area, we collaborate in over 150 projects with more than 120 academic institutions spanning three continents.

R&D expenses
increased to
18.9% of net sales

We also expand our research portfolio in a targeted fashion with supplementary cooperation and license agreements. A key component of Boehringer Ingelheim's innovation strategy is to supplement our own broad-based R&D portfolio with partnerships. While the company's own research activities are highly productive and competitive, in Human Pharma we are aiming to source at least 30% of all new molecules in our pipeline through acquisitions from third parties. Our high scientific standards, the business development relationships which we have forged over time, and the early investments made by the Boehringer Ingelheim Venture Fund have proven to be a strong advantage here. The Group's research and development expenses have increased considerably in recent years – in the past three years, their growth has even outpaced our revenue trend.

Research and development

	2020	2019	2018	2017	2016
Expenses in million EUR	3,696	3,462	3,164	3,078	3,112
– as % of net sales	18.9	18.2	18.1	17.0	19.6
Human Pharma expenses in million EUR	3,283	3,042	2,780	2,714	2,870
– as % of Human Pharma net sales	22.8	21.8	22.1	21.5	23.9
Animal Health expenses in million EUR	412	419	384	357	180
– as % of Animal Health net sales	10.0	10.4	9.7	9.2	12.3
Average number of employees	9,504	9,154	8,552	8,589	8,055
Investments in tangible assets in million EUR (without investments in infrastructure)	181	183	136	71	92

In 2020, Boehringer Ingelheim acquired the Belgian veterinary biotech company Global Stem cell Technology NV, which is dedicated to the research, development and production of evidence-based, regenerative medicines that are already used to treat orthopedic diseases in animals. In its Human Pharma business, Boehringer Ingelheim reinforced its position in the area of immunoncology therapies by acquiring shares in the Canadian company Northern Biologics Inc., which was subsequently renamed BI IO Canada Inc. The Group also expanded its portfolio of collaborations and partnerships: In the past year, Boehringer Ingelheim entered into new partnerships which include relationships with the U.S. firm Mirati Therapeutics, Inc., which is investigating the use of “PAN-KRAS” inhibitors in the fight against tumors, and with the Swiss company Numab Therapeutics AG, with the goal of developing and commercializing multi-specific antibody therapies for potential treatment of lung and gastrointestinal cancers as well as geographic atrophy. Another new partner, CDR-Life Inc., which is likewise headquartered in Switzerland, also focuses on the latter indication. On the other hand, Boehringer Ingelheim’s new cooperation with the British company Enara Bio Ltd. aims to discover novel antigens for future cancer immunotherapies. In addition, with Click Therapeutics, Inc. in the USA, we are pursuing an innovative approach to the development and commercialization of a digital therapeutic for the treatment of schizophrenia. Shortly before the end of the year, Boehringer Ingelheim signed an agreement to acquire NBE-Therapeutics AG in the area of oncology. The transaction was completed on January 20, 2021. Additionally, we negotiated the acquisition of contract manufacturer Labor Dr. Merk & Kollegen GmbH. Completion of this transaction is subject to the usual closing conditions and is expected to take place over the course of the 2021 financial year.

Research network
expanded

R&D SITES



AMERICAS

Brazil

1. Paulínia (AH)

Mexico

2. Guadalajara/Tateposco (AH)

USA

3. Ames, Iowa (AH)
4. Athens/Colbert, Georgia (AH)
5. Duluth, Georgia (AH)
6. Fulton, Missouri (AH)
7. Gainesville, Georgia (AH)
8. North Brunswick, New Jersey (AH)
9. Ridgefield, Connecticut (HP)
10. St. Joseph, Missouri (AH)

EUROPE

Belgium

11. Evergem (AH)

Germany

12. Biberach (HP)
13. Ingelheim am Rhein (AH)
14. Katharinenhof-Rohrdorf (AH)

France

15. Lyon (AH)
16. Saint-Vulbas (AH)

Netherlands

17. Lelystad (AH)

Austria

18. Innsbruck (HP)
19. Vienna (HP)

Switzerland

20. Geneva (HP)

ASIA/OCEANIA

Australia

21. Sydney (AH)

China

22. Shanghai (AH)
23. Taizhou (AH)

Japan

24. Kobe (HP)
25. Tokyo (AH)

New Zealand

26. Auckland (AH)

In the 2020 financial year, BI X, Boehringer Ingelheim's digital laboratory, opened a second facility. With a total of 67 employees, it now has a presence in Shanghai as well as in Ingelheim am Rhein. In the past year, the BI X development teams transferred several innovative digital products to the company's businesses. For instance, "ADAM" helps researchers in early pharmaceutical research to identify the most relevant candidates in order to address a target molecule. BI X also added to its portfolio of services a company-wide scouting service, which helps to identify and evaluate potential partners in the field of digital technologies.

Since 2010, the Boehringer Ingelheim Venture Fund has driven innovation through its strategic investments in early-stage science and technology. The Venture Fund invests in biotech and start-up companies with innovative concepts and technologies that have the potential to provide ground-breaking therapeutic platforms. The Venture Fund also founds companies when it identifies promising research projects in universities and academic institutions.

The Research Institute of Molecular Pathology (IMP) in Vienna is a biomedical research institute, which is primarily funded by Boehringer Ingelheim. With more than 200 scientists from approximately 40 countries, the IMP conducts research into molecular and cellular mechanisms that form the basis of complex biological life processes as well as human diseases. The IMP is one of the world's leading institutions of its kind: As of late 2020, 13 of its 16 group leaders had received at least one of the prestigious grants awarded by the European Research Council (ERC). With a success rate of 58% in its ERC applications in the period from 2014 to 2018, the IMP was ranked third among 172 European research institutes and universities. Five of its six senior scientists have been elected full members of the European Molecular Biology Organization (EMBO).

Boehringer Ingelheim's R&D activities – the preclinical as well as clinical research and development – are the basis for the company's sustainable success. Our innovative capability has played a key role in the Group's positive business development over the past years. In-house R&D – supplemented by external cooperation and partnerships – will also continue to be a top priority in the future.

In the 2020 financial year, we employed an average of 9,504 people at our R&D facilities. A total of around 3.7 billion EUR was invested in the research and development of new medicines. This is above the level in 2019 and corresponds to around 18.9% of the Group's net sales in 2020.

More than 60 new active substances in our Human Pharma portfolio

Human Pharma

In 2020, it became particularly apparent that trusting collaboration and modern science are decisive for our goal: to transform the lives of patients in areas of significant unmet medical need. In Human Pharma R&D we are focused on the areas of cardiovascular and metabolic diseases, oncology, respiratory diseases, immunology, diseases of the central nervous system (CNS), and retinal health.

By the end of 2020, our Human Pharma research portfolio included more than 60 new substances, on whose development and registration we work in around 100 clinical and preclinical projects.

DEVELOPMENT PIPELINE END OF 2020	PHASE
CARDIOMETABOLIC DISEASES	
Hemodynamic modulator 1	Phase I
Hemodynamic modulator 2	Phase I
Anorectic [^]	Phase I
Transient receptor potential channel inhibitor*	Phase I
BI 456906 ^{>} GLP1/GCGR agonist* Obesity	Phase II
Empagliflozin / New indication SGLT2 inhibitor CKD	Phase III
Empagliflozin / New indication ^{>***} SGLT2 inhibitor CHF	Phase III
ONCOLOGY	
PD-1 antibody	Phase I
mRNA vaccine*	Phase I
VEGF/Ang-2 antibody*	Phase I
BET inhibitor	Phase I
LRP 5/6 inhibitor	Phase I
MDM2-p53 antagonist*	Phase I
SIRP1 α antagonist*	Phase I
SOS1::KRAS inhibitor*	Phase I
MEK inhibitor*	Phase I
KISIMA [®] cancer vaccine ^{>*}	Phase I
TRAILR2/CDH17 antibody ^{>}	Phase I
DLL3/CD3 bispecific antibody ^{>*}	Phase I
STING agonist	Phase I
Xentuzumab (BI 836845)* IGF1/2 antibody mBC	Phase II

DEVELOPMENT PIPELINE END OF 2020	PHASE
RESPIRATORY DISEASES	
Cysteine protease inhibitor*	Phase I
Leukocyte protease inhibitor	Phase I
BI 1015550 [^] Anti-fibrotic IPF	Phase II
IMMUNOLOGY	
Epithelial barrier stress modulator	Phase I
Receptor serine / threonine kinase	Phase I
Spesolimab (BI 655130) IL36R antibody GPP	Phase II
Spesolimab (BI 655130) IL36R antibody PPP	Phase II
Spesolimab (BI 655130) IL36R antibody AtD	Phase II
Spesolimab (BI 655130) IL36R antibody CD	Phase II
Spesolimab (BI 655130) ROR γ antibody Psoriasis	Phase II
CENTRAL NERVOUS SYSTEM DISEASES	
Phosphodiesterase inhibitor*	Phase I
NMDA receptor modulator [^]	Phase I
Osoresnontrine (BI 409306)* PDE 9 inhibitor FEP	Phase II
Osoresnontrine (BI 409306)* PDE 9 inhibitor REX	Phase II
BI 425809 GlyT1 inhibitor CIAS	Phase II
BI 1358894 ^{>*} TRPC 4/5 inhibitor MDD	Phase II
BI 1358894* TRPC 4/5 inhibitor BoPD*	Phase II

DEVELOPMENT PIPELINE END OF 2020	PHASE	
RETINAL HEALTH		
Neuronal damage modulator	Phase I	
VEGF/Ang-2 antibody*	Phase I	
Ischemia modulator ^{>}	Phase I	
COVID-19		
SARS-CoV-2 neutralizing antibody ^{>*}	Phase I	
BI 764198 ^{>*} TRPC 6 inhibitor Cov-19 iARDS	Phase II ^{***}	
Indication abbreviations:		
AtD: Atopic dermatitis	Cov-19	MDD: Major depressive disorder
BoPD: Borderline personality disorder	iARDS: COVID-19 induced acute respiratory distress syndrome	MI: Myocardial infarction
CD: Crohn's disease	FEP: First episode psychosis	PPP: Palmoplantar pustulosis
CHF: Congestive heart failure	GPP: Generalized pustular psoriasis	REX: Reduction of relapse in schizophrenia
CIAS: Cognitive impairment in schizophrenia	HF: Heart failure	
CKD: Chronic kidney disease	IPF: Idiopathic pulmonary fibrosis	
	mBC: Metastatic breast cancer	

* Partnered projects or acquired assets.

** Study complete, submissions ongoing. In progress: Prevention of HF post MI.

*** Study terminated end of February 2021.

> Key pipeline advances (Dec 2019 – Dec 2020).

Interconnected cardio-renal-metabolic conditions – affecting the heart, kidneys, and metabolic system – are the leading cause of mortality worldwide and account for up to 20 million deaths annually. Building on our expertise in developing innovative treatments for a range of cardiovascular and metabolic conditions, our R&D strategy in cardiometabolic diseases takes a holistic view on the therapeutic needs of people affected by multiple, related cardiovascular and metabolic conditions. To explore the impact of empagliflozin (JARDIANCE®) on major clinical cardiovascular and renal outcomes in a spectrum of cardio-renal-metabolic conditions, the Boehringer Ingelheim and Lilly Alliance has developed the EMPOWER program. With more than 377,000 adults enrolled worldwide it is one of the broadest and most comprehensive clinical programs for an SGLT2 inhibitor to date. In 2020, we reported positive results of the EMPEROR-Reduced Phase III trial in adults with heart failure with reduced ejection fraction, with and without diabetes. In addition, we announced the initiation of EMPACT-MI in collaboration with the Duke Clinical Research Institute, the only trial in the SGLT2 inhibitor class to investigate the prevention of heart failure after acute myocardial infarction in patients with and without diabetes.

We are convinced that we can use highly innovative approaches to make a difference by transforming the lives of cancer patients with a focus on lung cancer and cancers of the gastrointestinal tract. We are collaborating with the oncology community to deliver scientific breakthroughs and first-in-class treatments that can help win the fight against cancer. Our commitment has resulted in treatments for lung cancer (GIOTRIF® and VARGATEF®) and from our rich pipeline we have advanced 15 compounds into clinical development. We are taking cancer on by focusing on scientific approaches of cancer cell-directed agents and immuno-oncology therapies as well as their smart combination – here we are in a good competitive position. In projects with our partners such as The University of Texas MD Anderson Cancer Center, Mirati Therapeutics, Numab Therapeutics, Oxford BioTherapeutics, and others we have also achieved progress in both approaches and their combination in 2020.

Scientific research on new therapeutic concepts for people with respiratory diseases is another focus for Boehringer Ingelheim. For example, in 2020, following more than a decade of research, a breakthrough in pulmonary fibrosis therapy was achieved: Since 2014, OFEV® (nintedanib) has been a treatment option for idiopathic pulmonary fibrosis (IPF) to slow down the decline in lung function in more than 80 countries. For people living with systemic sclerosis associated interstitial lung disease (SSc-ILD) and other chronic fibrosing interstitial lung diseases with a progressive phenotype (PF-ILDs), no approved treatment option had existed in most countries so far. As the first and only therapy, OFEV® now is approved in more than 50 countries for the treatment of SSc-ILD and in more than 40 countries for the treatment of PF-ILDs. This marks a turning point in the treatment of a wide range of rare forms of pulmonary fibrosis. But there is still further therapeutic need. With the InPedILD™ study, Boehringer Ingelheim is investigating the dosing and safety profile of nintedanib in children and adolescents. Yet not all projects can be completed successfully: In 2020, Boehringer Ingelheim and Bridge Biotherapeutics mutually agreed on the termination of the collaboration on an autotaxin inhibitor for fibrosing interstitial lung diseases including idiopathic pulmonary fibrosis (IPF).

Boehringer Ingelheim is dedicated to discovering and developing first-of-their-kind therapies that will help treat serious inflammatory diseases, which can greatly impact patients' lives emotionally and physically. With a deep understanding of molecular pathways, Boehringer Ingelheim is pioneering scientific breakthroughs that target, repair, and prevent inflammatory diseases of the skin, gut, and joints. Spesolimab is the most advanced investigational compound in Boehringer Ingelheim's immunology pipeline. Boehringer Ingelheim aims to give people with serious inflammatory diseases the chance to lead a self-determined and fulfilled life.

Some of the most important neuropsychiatric diseases, such as schizophrenia or depression, continue to be at the center of Boehringer Ingelheim's research on central nervous system diseases. Here, Boehringer Ingelheim is currently further broadening its development activities: In 2020, Boehringer Ingelheim started two Phase II trials for treatments of borderline personality disorder and major depressive disorder and had positive results from a Phase II clinical trial in patients with cognitive impairment associated with schizophrenia. Furthermore, we broadened our innovative activities in schizophrenia by in-licensing a digital therapy from Click Therapeutics.

Retinal diseases such as age-related macular degeneration are the leading cause for legal blindness in the developed world. Although current therapies for some retinal diseases exist, they have limited effectiveness in the real world, and significant unmet treatment needs still exist. In 2020, Boehringer Ingelheim therefore again expanded the global research and development activities for retinal diseases, with the first assets already in clinical development. The work of our scientists is complemented by collaborations with academic and patient organizations, alongside partnerships with biotech companies. While new partnerships have been announced in 2020, the development of an anti-inflammatory AOC3 inhibitor for the treatment of patients with moderate to severe non-proliferative diabetic retinopathy (NPDR) with Pharmaxis has been discontinued.

As a research-driven biopharmaceutical company, we utilize our different areas of expertise to find medical treatments for COVID-19. We initially had a look at our portfolio to identify compounds that may have the potential to manage the symptoms and tissue damage related to the SARS-CoV-2 infection. To directly tackle the virus, we have worked together with Cologne University Hospital (UKK), the University of Marburg (UMR) and the German Center for Infection Research (DZIF). We identified a SARS-CoV-2 neutralizing antibody which entered Phase I clinical studies sponsored by UKK. In addition, we are involved in different consortia such as the CARE (Corona Accelerated R&D Europe) consortium, a project of the Innovative Medicines Initiative (IMI) of the European Union and the COVID-19 Therapeutics Accelerator (CTA) of the Bill & Melinda Gates Foundation (BMGF). The aim is to identify the next generation of neutralizing antibodies and novel small molecule inhibitors of viral proteins or host factors responsible for the replication of SARS-CoV-2. We provided compounds from our historical small molecule library including legacy HIV and HCV assets from previous virology projects, as well as molecules selected through computational screening against the proteases of SARS-CoV-2. Through further screening, we hope to provide starting points for new compound optimization campaigns to be conducted as part of these collaborative consortium efforts.

We are convinced that novel platform approaches will enable us to discover new medicines across therapeutic approaches and disease boundaries by tackling common disease-causing mechanisms. With this strategy, we study immune modulations in the context of oncology and inflammation, or in fibrotic diseases across organs such as the lung, liver, eye, and kidney.

The following table shows the relevant changes in current clinical studies (Phase III) and in studies in people with COVID-19:

CLINICAL TRIAL	PHASE	CHANGES IN 2020
EmpaLinaMet XR (fixed-dose combination tablet of empagliflozin, linagliptin and metformin extended release (XR) for the treatment of adults with type 2 diabetes).	Phase III completed in 2019.	<i>Approved in the USA.</i>
EMPEROR-Reduced (NCT03057977), a Phase III, randomized, double-blind trial investigating once-daily empagliflozin compared with placebo in adults with heart failure with reduced ejection fraction, both with and without diabetes, who are receiving current standard of care.	Phase III	<i>Study completed, primary endpoint met and published in New England Journal of Medicine. Empagliflozin significantly reduced the combined relative risk of cardiovascular death and hospitalization for heart failure by 25% in adults with and without diabetes who had heart failure with reduced ejection fraction. Empagliflozin also significantly reduced the relative risk of first and recurrent hospitalizations for heart failure by 30% and significantly slowed kidney function decline.</i>
EMPEROR-Preserved (NCT0357951), a phase III randomized, double-blind trial investigating once daily empagliflozin compared with placebo in adults with chronic heart failure and preserved ejection fraction, both with and without diabetes, who are receiving current standard of care.	Phase III	<i>Ongoing.</i>
INBUILD® (NCT02999178) was a double blind, randomized, placebo-controlled trial evaluating the efficacy and safety of Nintedanib over 52 weeks in patients with progressive fibrosing interstitial lung disease (PF-ILD).	Phase III completed in 2019.	<i>Approved in more than 40 countries, including in the USA and the EU.</i>
SENSCIS® (NCT02597933) was a double blind, randomized, placebo-controlled trial evaluating efficacy and safety of oral nintedanib treatment for at least 52 weeks in patients with systemic sclerosis-associated interstitial lung disease	Phase III completed in 2019.	<i>Approved in the EU in April 2020, now approved in more than 50 countries.</i>
INPEDILD™ (NCT04093024) is a double blind, randomized, placebo-controlled trial evaluating the dosing and safety profile of nintedanib in children and adolescents between 6 and 17 years old with clinically significant fibrosing interstitial lung disease.	Phase III	<i>Ongoing.</i>
BI 764198 (NCT04604184) TRPC6 inhibitor ARDS in COVID-19 Study of an inhibitor of TRPC6 (inhibitor of the transient receptor potential cation channel 6), to investigate whether this selective inhibitor may reduce the need for ventilator support, improve patient recovery rates and ultimately save lives in patients hospitalized for COVID-19.	Phase II	<i>Ongoing.*</i>
BI 767551 (NCT04631705, NCT04631666) Studies investigate the efficacy and safety of a neutralizing antibody that is in development as a new therapeutic and prophylactic treatment option against COVID-19.	Phase I/IIa	<i>Ongoing.</i>

* Study terminated end of February 2021.

Animal Health

In its research and development activities in the area of animal health, Boehringer Ingelheim concentrates on the research, development, and supply of pioneering treatments and preventive therapies in areas where the medical need is currently unmet and where we will have the greatest impact. This includes innovative vaccines and antiparasitics for the protection of livestock and pets, as well as pharmaceutical products for the treatment of chronic diseases.

In 2020, the R&D unit of our Animal Health business was renamed Animal Health Global Innovation and given a new organizational structure which is based on a disease and system-centered research and development approach. This enables us to more effectively examine diseases in larger populations and on a cross-species basis, to step up our cooperation with our Human Pharma colleagues and external partners, and to bring to the market pioneering innovations in treatment as well as in preventive veterinary therapies.

We have defined six regional innovation centers in strategically important regions in order to boost this approach and encourage cooperation. Three of these are situated in the United States, two in Europe (France/Netherlands and Germany) and one in China. These centers consist of local clusters with specific areas of competence and enable us to cooperate within disciplines and on a multidisciplinary basis, and to implement our strategy at a local level. Following the concentration of our vaccine research and development activities in France and the USA, our German facility in Hanover discontinued its activities at the end of 2020.

External partnerships also play a key role – it is not possible to realize innovations on a broad scale and in new areas through our internal efforts alone. In addition to our internal research and development activities, we evaluate external projects and products and, where appropriate, seek to pursue joint development routes with our partners. In July, we acquired the Belgian veterinary biotech company Global Stem cell Technology NV, which specializes in the research, development and manufacturing of evidence-based, regenerative medicines – stem-cell therapies – for the treatment of orthopedic and immunological animal diseases. This acquisition will enable us not only to strengthen our existing capacities in the equine segment, but also to produce groundbreaking innovations for other species. In September, we joined forces with the Fraunhofer Institute for Molecular Biology and Applied Ecology IME in order to develop the next generation of safe, effective, and sustainable antiparasitics.

In 2020, we initiated more than 450 clinical studies worldwide and were awarded more than 240 product authorizations, including approval in the EU and the USA for the innovative and award-winning ASERVO®EQUIHALER® for the alleviation of severe equine asthma. Obtaining approvals for new products and new areas of application and expanding the geographic scope of our sales activities for existing products are additional important aspects of our research and development activities which help us to create value through innovation.

PRODUCTION FACILITIES



AMERICAS

Brazil

1. Itapecerica (HP)
2. Paulínia (AH)

Mexico

3. Guadalajara (AH)
4. Xochimilco (HP)

Puerto Rico

5. Barceloneta (AH)

USA

6. Athens, Georgia (AH)
7. Fremont, California (Bio)
8. Gainesville, Georgia (AH)
9. St. Joseph, Missouri (AH)
10. Worthington, Minnesota (AH)

EUROPE

Belgium

11. Evergem (AH)

Denmark

12. Kalundborg (AH)

Germany

13. Biberach (Bio)
14. Dortmund (HP)
15. Ingelheim am Rhein (HP)

France

16. Lyon (AH)
17. Toulouse (AH)

Greece

18. Koropi (HP)

Italy

19. Fornovo (HP)
20. Noventa (AH)

Netherlands

21. Lelystad (AH)

Austria

22. Vienna (Bio)

Spain

23. Sant Cugat (HP)

United Kingdom

24. Pirbright (AH)

ASIA / OCEANIA

China

25. Nanchang (AH)
26. Shanghai (HP, Bio)
27. Taizhou (AH)

Indonesia

28. Bogor (HP)

Japan

29. Yamagata (HP)

New Zealand

30. Auckland (AH)

Production

Human Pharma

In the Human Pharma business, our globally acting production division is responsible for the reliable supply of top-quality medicines for patients. The ongoing development of the company's internal production facilities and our strategic cooperation with external manufacturers have established a modern, flexible market supply network which encompasses the entire value chain, from suppliers of starting materials to worldwide logistics and the distribution of finished pharmaceutical products. Boehringer Ingelheim's production facilities concentrate on products that are strategically important for the company, as well as on state-of-the-art and in some cases unique manufacturing technologies. At the same time, partnerships with external manufacturers add specialist technologies to our production network that are not available in-house. They also expand the production capacity of standard technologies for products which have very high capacity requirements or are already far advanced in terms of their life cycle.

In the 2020 financial year, this global network included Boehringer Ingelheim's own plants in nine countries. The Group has four biopharmaceuticals facilities. It also has two facilities for the manufacture of pharmaceutical active substances; one that produces medical devices, and eight that manufacture finished pharmaceutical products. Even during the past year, which was unusual due to COVID-19-related logistical challenges, Boehringer Ingelheim was able to ensure a steady supply of medicines for patients. This was possible due to the fact that key manufacturing steps and technologies have been established at multiple facilities and that an inventory reserve concept is implemented at every step of the supply chain. The continuing digitalization of our production network and of the overall supply chain plays a key role in ongoing development measures to ensure the security of supply.

Delivery capacity and patient care are top priorities for Boehringer Ingelheim. The company consistently makes important investments in the development and transformation of production capacities in our chemical and pharmaceutical network. At its Ingelheim am Rhein headquarters, Boehringer Ingelheim made significant progress in line with its planning with the implementation of a key investment in a flexible plant for the industrialization of newly developed medicines and their initial market supply. We initiated the expansion of production technologies and capacities for pharmaceutical active substances at our Forno (Italy) facility and for finished pharmaceutical products at our Koropi (Greece) and Yamagata (Japan) facilities, to ensure the supply of anti-diabetic products (particularly JARDIANCE®) as well as pipeline products. The continuing expansion of Biopharmaceuticals at our Vienna facility serves to expand our own capacities in the network for newly developed products and covers the increased demand for ACTILYSE® and other products.

The ongoing implementation of the Group's supply chain strategy optimizes management of the value chain from the supplier to the customer ("end-to-end"). The use of modern digital and automated processes and technologies enables a high level of transparency and efficient management of the global production network supply chain.

17

Animal Health
production facilities
in twelve countries

Animal Health

In 2020, Animal Health products were manufactured for worldwide sale in a network of 17 production facilities in twelve countries. In addition to the company's own facilities, in 2020 around 135 contract manufacturers turned out products for Boehringer Ingelheim. The company's product portfolio comprises vaccines, pharmaceutical products and nutraceuticals. These traditional products are supplemented with diagnostic products as well as monitoring solutions, including digital applications which are used for livestock monitoring or which link livestock owners with veterinarians. Optimization of the company's production network continues and remains a priority, with the goal of ensuring a robust, efficient supply of all its products.

In 2020, Boehringer Ingelheim invested in capacity expansion for the strongest revenue contributor, NEXGARD®, at its Barceloneta (Puerto Rico) facility; in the expansion of small animal vaccine production at the company's facility in Athens, Georgia (USA); in the expansion of vaccine capacity in Lyon (France) and St. Joseph, Missouri (USA); and in capacity expansion for foot-and-mouth disease vaccines in Jonage (France). It also invested in the development of innovative technologies for the manufacture of our products.

Biopharmaceutical Contract Manufacturing

Boehringer Ingelheim pursues its biopharmaceutical activities at its facilities in Biberach (Germany), Vienna (Austria), Fremont (California, USA) and Shanghai (China). These comprise the manufacture of own-brand marketable products (such as ACTILYSE®, METALYSE®, and PRAXBIND®) and of biopharmaceuticals for clinical testing. BI is also one of the world's leading companies in process development, launch preparation, and commercial production of biopharmaceuticals for third-party industrial customers. Twelve of the top 20 pharmaceutical companies and innovative biotech firms are clients of our Biopharmaceutical Contract Manufacturing business. Boehringer Ingelheim covers the entire biopharmaceutical value chain, from development of the production cell (mammalian cells as well as microorganisms) and the production process, to the manufacture of the active substance and the finished pharmaceutical product, to product launch and global market supply.

One of the leading
providers for
industrial customers

Capacity utilization of the network's industrial-scale production facilities remained at a very high level in 2020. There was increased market demand for ACTILYSE® at our Biberach facility; in addition, two new customer products (monoclonal antibodies for cancer therapy) were approved in our Biopharmaceutical Contract Manufacturing business. Process validation (as a precondition of approval) was successfully completed for another two products. In 2020, our facility in Fremont, California (USA) succeeded in gaining authorization to produce a customer's pharmaceutical product. It will thus be possible to meet rising product demand within the network from both Biberach and Fremont. A further customer product at our Vienna facility was also approved by international authorities. Despite the challenging external conditions associated with COVID-19, our cell culture plants in Biberach, Shanghai and Fremont and our microbial production in Vienna continued to reliably manufacture and deliver biopharmaceuticals for patients worldwide without incurring interruptions.

We have almost completed the process of expanding our capacities at our Vienna facility. Initial test runs were successfully completed at the end of the year. The commissioning and qualification process is well advanced, whereby the measures to ensure employees' safety in the context of COVID-19 have made this work even more complex. In early 2020, our new energy center was already operating at full capacity, while our new cell culture production building has now been granted official authorization to operate. An additional, microbial expansion project for the production of a recombinant vaccine with a very high level of demand is expected to complete the commissioning and qualification process on time in 2021. These two projects are of key strategic significance in view of the growing global importance of biotechnologically produced active substances.

In Shanghai (China), hospital products and products for the commercial market were manufactured for both the local and export markets in line with our planning. Our first biopharmaceutical product to win approval under China's new contract manufacturing regulatory requirements was the first commercial product delivered to our customer. Its approval and launch were the final milestones in a pilot project between Boehringer Ingelheim and the Chinese regulatory authorities. The new rules governing cooperation between a marketing authorization holder – our customer – and a contract manufacturer were evaluated and successfully applied. Boehringer Ingelheim's facility in Shanghai was thus recognized as a contract manufacturer (CMO) by the Chinese authorities. We successfully completed the expansion of our "Oasis" production facility in Shanghai with a second 2,000 L bioreactor. Commercial production began in early October.

Number of employees
continues to increase

Employee reporting

In 2020, Boehringer Ingelheim employed 51,944 people on average worldwide. This represents an increase of +1.8% over the previous year. The number of staff increased in every region.

Average number of employees by region

	2020	2019
Americas	13,176	13,113
Europe	27,379	26,884
Asia/Australia/Africa (AAA)	11,389	11,018
	51,944	51,015

A major success factor for the positive growth of the Group is our engaged and motivated staff. We place considerable emphasis on actively developing and supporting our employees. In order to be best prepared for the challenges ahead, we emphasize the acquisition of technical expertise and also promote social skills as part of a comprehensive qualification system.

The core aspects of our mission statement were particularly relevant in 2020: The success of our company relies on the strength of our employees; we aim to improve human and animal health; and we feel a sense of responsibility toward the communities in which we operate. As part of our global support program in the fight against COVID-19, we enabled all our employees to take up to 10 days of fully paid leave in the period from April 1 to December 31, 2020, so they could volunteer with external organizations. We will offer all of our employees the same opportunity in 2021. In this way, we can help meet the urgent need for volunteers with a medical background. The impact of the COVID-19 pandemic on work and private life has demanded a great deal from all employees, which is why all employees worldwide were given the opportunity to take a paid vacation from December 24, 2020 until January 3, 2021 inclusive.

By investing in a flexible infrastructure and digital technologies even prior to the pandemic, we had created important prerequisites that enable 40,000 users to work seamlessly from home at the same time. We were thus able to protect our employees while safeguarding our business activities, ensuring the global supply of medicines, and making progress in researching treatment options. Pre-established central digital tools, work flows, and digital channels also ensured communication with medical experts, veterinarians and pet owners.

However, the pandemic has not only raised challenges for us. It has also identified opportunities. Early on, we adapted digital learning formats and training concepts for our apprentices and students who are enrolled in dual-study courses to COVID-19 conditions. We established additional training courses to help our employees work in virtual teams. We document all our new experiences and insights regarding new virtual work methods and tools, meeting formats, business travel, as well as the role of offices, in a “future of work” concept. In the future, this will provide a global framework for a modern and flexible approach to work at Boehringer Ingelheim – beyond COVID-19.

Boehringer Ingelheim's success is based on innovation as well as its presence in 80 countries. The global nature of our value chain, the international nature of our clientele, and the stringent and substantially varying requirements of national regulators demand great flexibility on our organization as a whole. We are convinced that relationships based on trust as well as mutual openness, respect, and empathy are values that make us strong and competitive. Diversity of thought and a spirit of inclusion in our relationships with one another promote a capacity for innovation in every area of our business.

In addition to competitive salaries, Boehringer Ingelheim offers other benefits to its employees. These benefits include a range of company pension plans, flexible and home-based work options, and numerous health-related benefits. As a significant segment of our corporate strategy, the human resources department's scope of duties includes promoting a wide range of opportunities for innovation at work and helping our employees to nurture their own talents and to develop as individuals.

Vocational training has always been of major importance to Boehringer Ingelheim. The company provides many young people with career entry opportunities. At the same time, we also tie a talented and well-qualified workforce of young professionals to the company against a backdrop of demographic change. However, at our company, vocational training does not just mean passing on expertise. We also emphasize getting to know one another and enable young professionals to experience the many aspects of our company and our values.

In 2020, our new recruits began their training or dual-study courses in unusual circumstances. Boehringer Ingelheim anticipated the effects of the pandemic and developed a concept that enabled people to get to know one another in person, subject to strict safety concepts at our plants, while also providing a large number of new digital learning formats. At Boehringer Ingelheim's German facilities, 216 young people started their careers in more than 32 different scientific, technical and commercial fields, through training and dual-study courses. On average, more than 700 young people worldwide were enrolled in our vocational training program in 2020.

One of the company's aims is to strengthen the appeal of Boehringer Ingelheim as an employer for our current and future employees. In 2020, Boehringer Ingelheim once again won recognition as a top employer from the auditors of the international, independent Top Employers Institute. In addition to Germany, Boehringer Ingelheim also received this award in Argentina, Austria, Brazil, China, Colombia, Indonesia, Italy, Malaysia, the Philippines, Poland, Romania, Russia, Singapore, Spain, South Korea, Thailand and Vietnam.

Sustainable development

Sustainability has been firmly anchored in our corporate philosophy since our company's founding in 1885. As a family-owned business, Boehringer Ingelheim plans in generations and for generations. Our sustainable development efforts leverage our unique strengths as a global human and animal health company and are guided by our core values of empathy, respect, passion, and trust as well as by our Focus, our Leitbild. We aspire towards a healthier world where our people and communities can reach their full potential and aspire to have a positive impact on health, society, and our planet.

To achieve sustainability for future generations our efforts focus on three main areas:

1. More Health – Focusing on good health of people and animals
2. More Potential – Focusing on people and communities
3. More Green – Focusing on the environment

MORE HEALTH - Key initiatives

Angels

To optimize stroke care, Boehringer Ingelheim established the “Angels Initiative” together with the European Stroke Organisation (ESO), the World Stroke Organization (WSO), the Stroke Alliance for Europe (SAFE) and many other national stroke associations and companies. In the past year, this initiative achieved its goal of developing a network of over 4,300 clinics worldwide in 112 countries, which ensure that stroke patients are treated in line with defined standards. Overall, more than 40,000 doctors and nurses are involved.

LastMile

South of the Sahara, small farmers in Africa do not always have access to veterinary treatments. Boehringer Ingelheim’s “LastMile” initiative seeks to tackle this problem together with the Bill & Melinda Gates Foundation and GALVmed. The goal is long-term, sustained improvement in the availability of veterinary medicine and the creation of awareness about this issue. This project was launched in Kenya in 2018 and is currently being expanded to include further central markets such as Cameroon, Nigeria, Mali, Burkina Faso, and Ethiopia. There are also plans to include Tanzania. The initiative targets ruminants such as sheep, goats, and cattle as well as poultry. Our mission is to establish long-term partnerships with small farming communities to promote sustainable economic activities in the target countries. In 2020, Boehringer Ingelheim launched a mobile app as part of this initiative. This enables the local “LastMile” teams and employees to manage their daily activities and to work more effectively with farmers, traders and veterinarians. The app helps with the precise monitoring of activities, data collection, and evaluation of the impact and scope of the initiative. It thus helps us better understand challenges and improve our knowledge of the small-farming sector. In the future, this will enable us to make informed decisions based on reliable data.

MORE POTENTIAL - Key initiatives

Making More Health

A major pillar of our social commitment is our Making More Health (MMH) initiative in partnership with Ashoka. Since its start in 2010, it has continuously developed as a social entrepreneurship movement, both within our company and externally. The emphasis is on co-creating sustainable solutions that empower local communities and start-ups while leveraging Boehringer Ingelheim’s employees’ expertise and engagement in vulnerable communities. MMH helps people living on the poverty line with many different areas of their daily lives, such as health, infrastructure, education and income-generating measures. These activities and various projects aim for systemic change. MMH supports the activities and the development of sustainable business models of social entrepreneurs worldwide and has established a broad and diverse network of local and international partners from different sectors. Co-creation as a bridge between social and commercial entrepreneurship brings together social entrepreneurs and non-profit organizations from the health care sector with Boehringer Ingelheim employees and their resources.

Networking across all traditional visible and invisible borders is a central element of a successful social movement, in order to identify, promote, and implement innovative solutions for far-reaching and complex challenges in the health care sector. Through the MMH network, which consists of more than 100 social entrepreneurs in the area of health care, Boehringer Ingelheim and Ashoka – one of the world’s largest non-profit organizations – have together reached approximately 9.3 million people worldwide.

The MMH initiative promotes employees’ commitment to social entrepreneurship in order to advance health care projects in many different countries, by working with local, external partners as well as colleagues from throughout Boehringer Ingelheim. Several MMH leadership programs have been established over the past 10 years: 1) Insights India and Insights Kenya in rural southern India and Kenya, 2) the MMH Business Accelerator in Kenya Nigeria and Ghana, 3) social intrapreneurship online courses, 4) the “Executives in Residence” program that provides opportunities to collaborate with social entrepreneurs in our MMH network, and 5) an internal competition promoting employees’ own projects.

These MMH leadership programs have nurtured our staff’s social entrepreneurial thinking and activities and have contributed significantly to local communities. We have also strengthened our networking philosophy through partnerships with non-profit organizations and social enterprises in the health care sector. A large number of local projects have taken shape in which our employees are actively involved. Above all, improving health means understanding people’s environment and their everyday challenges and offering solutions where they are needed. Health awareness, affordability, accessibility of health services, and acceptance play a key role here. MMH is active in the university sector, with the goal of helping students and lecturers learn more about social entrepreneurial thinking and practical activities through the development of health care-related projects.

Diversity & Inclusion

Boehringer Ingelheim is convinced that employees with diverse ideas, strengths, interests, and backgrounds are critical to the success of our company. We see a major competitive advantage in the diversity of our employees. It not only helps us to better fulfill the various needs and requirements of our patients around the globe, but also strengthens our performance in the workplace. We are determined to create a work environment in which all of our employees are granted the same high level of respect – irrespective of their gender, nationality, ethnic origin, religion, worldview, abilities, age, sexual orientation or identity. We steadfastly oppose any form of discrimination.

As part of our global commitment in this area, we are participating in multiple internal and external initiatives, which are intended to promote diversity & inclusion. Throughout our company, we support the ongoing development of networks in which employees from different walks of life are granted a voice. This includes networks on gender roles in the working world, people who identify as LGBTIQ+, and people with disabilities.

Outside of our company, we are active members of national and international associations that promote communication and the exchange of knowledge and best practices. We are delighted to have not only published but successfully executed the first action plan in Germany for implementation of the UN Convention on the Rights of Persons with Disabilities 2012-2020, and that we thus serve as an example for many companies in Germany. Continuing the focus of the 2020 PROUT AT WORK conference and the motto “Achieving.More.Together,” we sought optimal ways in which various diversity dimensions can work together and benefit from one another.

Be Safe

Health protection and safety are a prerequisite for our production, processes, business planning and decision-making. We offer all employees a safe workplace. Our “BE SAFE – Zero by Choice” program promotes the exchange of best practices; it increases our employees’ level of safety awareness as well as their training.

MORE GREEN - Key initiatives

The protection of employees and the environment, as well as the sustainable use of natural resources and the promotion of environmental awareness, are major components of our company’s mission statement and are of prime importance to Boehringer Ingelheim.

Group-wide, our company has developed binding standards in terms of environmental protection and health and safety at work. These internal guidelines reflect the respective country-specific requirements. In many cases, they go far beyond the standards prescribed by law. In particular, we follow international standards and guidance documents and closely cooperate with various associations. Within Boehringer Ingelheim, our Environment, Health, Safety & Sustainability (EHS&S) department is responsible for this strategic focus.

In 2011, we launched our “BE GREEN – Future by Choice” program. This underwent further development in 2020 and set new strategic, global goals for the period up to 2030, while taking our business growth into account. With this program, we optimize “green” activities at all our facilities and business areas worldwide, while factoring in the value chain. The program considers many different environmental aspects: building up facilities close to nature to provide habitats for a variety of plants and animals, encouraging “green” behavior of our employees, adopting measures to avoid water and air pollution, using renewable energy, reducing waste and creating environmentally friendly products as well as implementing certified systems for environmental protection and energy management.

We continuously work on measures to reduce CO₂ emissions at our facilities. We aim to continuously lower the greenhouse gas emissions associated with our global operations by purchasing energy from renewable sources, and we are planning further reductions in our emissions across our value chain. We are concentrating on the sustainability of our major projects and have established a BE GREEN capital expenditures fund as well as an internal CO₂ pricing method in order to invest in a green future and promote environmentally friendly solutions.

Using digitalized solutions, we are working on implementing globally efficient processes with standardized software solutions. Global digitalization projects such as the collection of environmental data for our Group-wide “BE GREEN” program and electronic signature solutions for EH&S audit systems were successfully supported and implemented. This digitalization approach enables us to rationalize our activities throughout the world and to reduce our expenditure without suffering quality or performance losses.

Certification of production and R&D facilities to standards such as ISO 14001, ISO 45001, and ISO 50001 serves as the basis for internally and externally recognized EHS management systems. Many BI facilities have already achieved a solid certification status. The systematic, continuous improvement of EHS&S facilitates compliance with legislation, reduces licensing fees and generates energy savings. The reduction in internal audits and a positive public profile are just two further examples of why these global standards should be maintained.

Boehringer Ingelheim is aware of the need for active water management programs. Access to sufficiently clean water has an impact on social and cultural justice, ecological sustainability and commercial benefits. We are therefore introducing water management programs at all facilities that are prone to water risk and are reducing the volume of medicines left in production wastewater; we require our suppliers to do the same. Our production facility in Xochimilco (Mexico) has a valid Alliance Water Stewardship (AWS) certification. In 2019, Boehringer Ingelheim was the first pharmaceutical company worldwide to receive certification according to this globally recognized standard.

Antimicrobial resistance (AMR) poses an increasingly serious threat to global public health and requires action at every level of government as well as by businesses and society at large. For this reason, Boehringer Ingelheim joined the AMR Industry Alliance – one of the largest private coalitions established to offer sustainable solutions for combating antimicrobial resistance.

Boehringer Ingelheim supports the objectives of the Nagoya Protocol and is concerned with those aspects of biodiversity, which are relevant for its activities in the pharmaceutical sector.

REPORT ON ECONOMIC POSITION

2020 will remain in our memories for a long time. The SARS-CoV-2 pandemic has caused a great deal of suffering for many people all over the world, and many have experienced considerable economic cutbacks. We would like to extend our sympathy to them. Thanks are due to those who have made tremendous efforts to care for sick and particularly vulnerable people, as well as families, during the lockdown. At the same time, we are pleased that the research-driven biopharmaceutical industry is able to utilize its strong global partnerships to develop solutions at an unprecedented pace. This allows us to look confidently to the future.

Macroeconomic environment

In 2020, world economic output fell by around 3.5% – its largest decline in several decades – chiefly due to the effects of the COVID-19 pandemic. In the second quarter especially, the consequences of anti-pandemic measures such as lockdowns and curfews resulted in a dramatic reduction in economic output, trade volume, and private investments, particularly in the developed and emerging economies. Extensive public investments cushioned the impact of the immediate economic consequences on consumers and companies. Unlike during previous crises, parts of the service industry were particularly badly affected by the social distancing measures.

The ongoing trade tensions between the USA and China and the United Kingdom's Brexit negotiations with the EU placed an additional burden on international trade and investment activities in general. However, these overall conditions had a more direct and immediate impact in the strongly cyclical sectors of the economy. Due to the essential nature of their products and their long-term preparation for Brexit, the pharmaceutical markets were less affected by these hurdles. In general, they are predominantly influenced by the performance capability of national economies and the demographic development of societies, especially on a long-term basis. Their performance is also shaped by the continuous global improvement in access to medical care. The global pharmaceutical market thus grew in the past financial year, unlike many other sectors, which were severely affected by the crisis. However, the growth was lower than in the previous year. Preliminary estimates currently suggest growth of at least 3% (Source: IQVIA). This was due to the fact that, especially in the industrialized nations, visits to doctors' offices and hospitals were postponed during the COVID-19 pandemic, which resulted in a decline in the demand for products. In addition, social distancing measures resulted in delays to clinical studies in the pharmaceutical industry and thus affected research activity schedules. Since its core business is stable compared with other sectors, pharmaceutical firms were able to make a strong contribution to the fight against COVID-19 by increasing their research and development investments in the SARS-CoV-2 virus.

In 2020, there were continued efforts in a number of countries – including in core markets – to reduce rising health care expenditures by means of regulatory action to lower pharmaceutical prices. There are also an increasing number of initiatives seeking a shift of the burden of payment onto patients, which limit the opportunities for access to innovative medicines. These include, for example, government-imposed industry-wide price reductions, mandatory reference price systems and imports of medicines from lower-cost countries. The approaches also include the mandatory substitution of patented medicines with generics. Furthermore, the protection of our intellectual property is under increasing pressure. The "Pharmaceutical Strategy for Europe" presented by the European Commission at the end of 2020 has the declared aim of sustainably strengthening the attractiveness of Europe as a research and production location and improving access to medicines and therapies. An important prerequisite for achieving this objective remains a reliable legal framework that promotes innovation and ensures the protection of intellectual property. We are critical of tendencies which are aimed at weakening incentive instruments. They would be the wrong signal and would further shift future cutting-edge research and investment in pharmaceutical innovation to other regions of the world, with an impact also on supply in Europe.

The animal health industry, which focuses on pets and livestock, is on a very strong growth path in the emerging markets in particular, due to population growth and improving living standards for many people. The animal health market is characterized by rising demands for animal proteins as well as the increasing popularity of pets. The impact of the COVID-19 pandemic on these segments varied. While product sales increased in the pet segment despite limited physical access to veterinary clinics at times, the livestock segment partly experienced a drastic decline in demand due to closures of slaughterhouses and restaurants. Online channels are becoming increasingly important and have largely made up for the lack of physical access during the COVID-19 pandemic. In general, consolidation through mergers on both the supplier and the customer side is ongoing, which leads to increased competition. In the future, growth in the Animal Health business will largely be driven by therapeutic innovation. In order to grow faster than the market, investment in innovation in this area will be vital. In therapeutic areas in particular, the company expects to be able to realize synergies from its Human Pharma business. Continuous, sustained and competitive investment in innovation will play a key role, analogous to the Human Pharma segment.

In the 2020 financial year, Boehringer Ingelheim implemented an extensive range of measures to minimize the impact of the COVID-19 pandemic on its employees, patients, and society at large, and to protect the health of its workforce. Another important aspect of its activities was safeguarding production and the supply of medicines for patients as well as veterinary pharmaceuticals for pet and livestock owners. Boehringer Ingelheim was able to realize this objective in 2020 thanks to its broad production and supplier network. In the second quarter of the year, the company even fulfilled peak wholesaler and pharmacy demand generated by their strategic stockpile purchases.

In this environment, Boehringer Ingelheim defended its market position thanks to the dedication of its workforce, its capacity for innovation, and its particularly strong and competitive investment in innovation. It will thus be able to make a major contribution to human and animal health.

In 2021, according to the International Monetary Fund, the global economy will grow by 5.5%. The trade policy of the new US government and the withdrawal agreement concluded between the United Kingdom and the EU offer the prospect of a significant upswing. The successful production, distribution and application of COVID-19 vaccines should also have a positive effect. However, according to the IMF, there are also many risks which, if realized, could lead to weaker growth. These include further lockdowns due to the uncontrolled spread of the COVID-19 pathogen, heightened geopolitical tensions, and weather-related natural disasters.

Due to its global presence, Boehringer Ingelheim is affected by changes in foreign exchange rates, particularly those of the US dollar (USD), the Japanese yen (JPY) and, increasingly, the Chinese renminbi (CNY). The US dollar fluctuated between 1.07 EUR/USD (January) and a low of 1.23 EUR/USD (December). Following an interim high of 114.65 EUR/JPY (May), the Japanese yen ended the year at a low of 127.23 EUR/JPY (December), around 4% lower than at the start of the year. The Chinese renminbi reached a high of 7.55 EUR/CNY (February) and an interim low of 8.26 EUR/CNY (July). Emerging markets currencies were also highly volatile in 2020. Significant transactional currency risks are hedged through suitable currency instruments.

Currency development

Average rate - basis: EUR 1	2020	2019	Effect on net sales (in million EUR)
US dollar	1.14	1.12	- 140
Japanese yen	121.78	122.06	3
Chinese renminbi	7.87	7.73	- 17

Earnings position

A stable and competitive earnings position and solid financing guarantee Boehringer Ingelheim's independence and are therefore central to our activities. It is on this basis that we pursue our guiding principle of "Value through Innovation" and contribute to improvements in human and animal health by means of innovative therapies.

19.6

billion EUR in sales

Despite the COVID-19 pandemic, business performance was positive in 2020. Boehringer Ingelheim recorded net sales of 19,566 million EUR, which corresponds to a +3.0% increase compared with the previous year's 18,997 million EUR. The exchange rate development on the foreign exchange markets and the associated exchange rate effects had a negative impact on the sales trend. Adjusted for these effects, the Group grew by +5.6%. All regions contributed to this growth.

With sales of 8,889 million EUR and a 45% share of overall sales, the Americas region remains Boehringer Ingelheim's key sales market. For the Americas region, sales increased by +0.7% year-over-year (currency-adjusted +4.8%). Sales in the Europe region rose by +3.3% to 5,879 million EUR (currency-adjusted +4.2%). This region accounts for 30% of the Group's net sales. This growth was driven by the countries in Central and Eastern Europe as well as Germany, Spain, and the United Kingdom, while in Italy the Group was unable to match the previous year's sales volume. The Asia/Australia/Africa (AAA) region also realized strong growth of +7.1% (currency-adjusted +8.8%). Revenues of 4,798 million EUR were generated in this region, corresponding to a 25% share of the Group's total revenues. The strategically important Chinese market provided 6.0% of the company's overall sales volume, which represents a currency-adjusted increase of +20.5% year-over-year. Among other factors, the market

benefited here from the decline in the incidence of African swine fever, which had negatively affected growth in 2019.

Net sales by region (in million EUR)

	2020	2019	Change	currency adjusted
Americas	8,889	8,830	+0.7%	+4.8%
Europe	5,879	5,689	+3.3%	+4.2%
Asia/Australia/Africa (AAA)	4,798	4,478	+7.1%	+8.8%

In our Human Pharma business, in 2020 we once again made our products available to more patients thanks to new approvals in additional countries; we also further strengthened established products. Boehringer Ingelheim had already begun to introduce digital customer relations strategies in previous years. Our local sales organizations successfully expanded these strategies under COVID-19 restrictions, and they played an even more important role in our customer relations activities. The strategic growth areas of our Animal Health business registered positive results. However, some parts of the livestock segment were strongly impacted by the effects of COVID-19 measures (for instance, our customers' sales declined due to the closure of slaughterhouses and restaurants).

Growth in all regions

Key figures (in million EUR)

	2020	2019	Change
Net sales	19,566	18,997	+3.0%
Operating income	4,624	3,782	+22.3%
Return on net sales	23.6%	19.9%	
Income before taxes	4,305	3,496	+23.1%
Income after taxes	3,062	2,721	+12.5%

The materials ratio (taking into consideration the change in inventory) improved to 12.9% (2019: 13.2%). Personnel expenses increased primarily due to the additional employees hired in the areas of research, development, medicine and biopharmaceutical medicine production, which are of strategic significance for Boehringer Ingelheim. In addition to the increase in the average number of employees (+1.8%), the higher personnel expenses reflect effects associated with additional vacation days, which we granted our employees in 2020 to provide them with support, as well as the performance-related compensation which enables our employees to share in the company's success.

Amortization of intangible assets and depreciation of tangible assets increased by 196 million EUR by comparison with 2019. This rise mainly reflected higher valuation adjustments on intangible assets in the Animal Health and Human Pharma businesses. Depreciation of tangible assets also increased, due to the continuing high volume of investment activities.

The increase in operating income to 4,624 million EUR in 2020 demonstrates that Boehringer Ingelheim is resolutely pursuing its long-term goal of profitable growth in all business areas. In addition to the positive sales trend for our business activities, lower operating costs year-over-year also contributed to the improved level of operating income. The return on sales thus increased to 23.6% in the

2020 financial year (2019: 19.9%). Income before taxes rose, due in particular to the higher operating income. Financial income declined overall due to reduced income from plan assets to cover pension and similar obligations, as well as a lower level of income from long-term securities; this was partly offset by holding income, which was influenced by one-off effects.

Income after taxes was 12.5% higher than in the previous year and reflects the favorable course of business. It is noteworthy in this regard that, under the provisions of German commercial law, shareholders' personal taxes arising from Group business activities may not be recognized as tax expenses. Instead, these taxes are presented as part of withdrawals from Group equity. When taking this specificity into account, the actual tax ratio is markedly higher than the figure shown in the profit and loss statement.

3,062

million EUR

Group profit

Despite challenging market conditions in some business areas, Boehringer Ingelheim registered a positive performance in the 2020 financial year. The improved level of profitability enabled additional research and development investments, including in the race to develop therapies to treat the health effects of COVID-19. Following a Group profit of 2,721 million EUR in the previous year, in 2020 this figure rose by 341 million EUR to 3,062 million EUR.

Development of the businesses

As in the previous year, Boehringer Ingelheim's activities were divided into the Human Pharma, Animal Health, and Biopharmaceutical Contract Manufacturing businesses.

Net sales by businesses (in million EUR)

	2020	2019	Change	currency adjusted
Human Pharma	14,415	13,961	+ 3.3%	+ 5.8%
Animal Health	4,121	4,035	+ 2.1%	+ 5.0%
Biopharmaceutical Contract Manufacturing	837	786	+ 6.5%	+ 6.6%
Other sales	33	41	- 19.5%	- 19.7%
Discontinued Operations	160	174	- 8.0%	+ 1.0%

Human Pharma

With around 74% of total Group revenue, Human Pharma was the main pillar of Boehringer Ingelheim's business activities. In the context of the COVID-19 restrictions, the company effectively expanded the scope of the digital information strategies, which it had already established in previous years. This was crucial, since important scientific symposia and the activities of pharmaceutical representatives were greatly limited or could not take place due to contact restrictions. Human Pharma sales amounted to 14,415 million EUR in 2020. This is equivalent to growth of +3.3% (currency-adjusted +5.8%) compared with the previous year. This positive sales trend resulted primarily from increased sales of products in the JARDIANCE® family and OFEV®. The company achieved growth year-over-year in all regions. Despite price pressure – particularly for established medicines – Boehringer Ingelheim successfully held its own and continues to pursue the reorganization of its Human Pharma product portfolio as planned. This included the sale of non-strategic products in the 2020 financial year. The growing licensing business – in particular of SKYRIZI®, which has been licensed to AbbVie – also contributes to the positive development of the Human Pharma segment.

As in the previous year, JARDIANCE®, which is used to treat type 2 diabetes, was the company's biggest revenue contributor in 2020. We achieved sales of 2,480 million EUR with JARDIANCE® in the reporting period, which represents a currency-adjusted increase of +18.1% year-over-year.

Net sales (in million EUR)

	2020	2019	Change	currency adjusted
JARDIANCE®	2,480	2,152	+ 15.2%	+ 18.1%
OFEV®	2,055	1,491	+ 37.8%	+ 40.6%
SPIRIVA®	1,793	2,058	- 12.9%	- 10.8%
TRAJENTA® / JENTADUETO®	1,512	1,559	- 3.0%	- 0.3%
PRADAXA®	1,492	1,529	- 2.4%	- 0.2%

40.6%
currency-adjusted
growth of OFEV®

Last year, OFEV® was Boehringer Ingelheim's second-strongest revenue contributor for the first time. This product is used to treat idiopathic pulmonary fibrosis and, to an increasing extent, for two additional indications, SSc-ILD and PF-ILD. OFEV® generated sales of 2,055 million EUR, which represents currency-adjusted growth of 40.6%. This significantly exceeded the previous year's figure.

SPIRIVA®, which is used for the treatment of chronic obstructive pulmonary disease (COPD), is the third-strongest product in Boehringer Ingelheim's portfolio, with sales of 1,793 million EUR. This revenue was lower than in the previous year (2,058 million EUR), as expected in view of the product's life cycle.

TRAJENTA® and JENTADUETO® for treatment of type 2 diabetes registered a slightly lower sales volume of 1,512 million EUR. With sales of 1,492 million EUR in the 2020 financial year, the anticoagulant PRADAXA® likewise fell marginally short of the previous year's result but nonetheless remains one of Boehringer Ingelheim's strongest revenue contributors.

Risankizumab, a medication for treatment of plaque psoriasis, which was mainly developed by Boehringer Ingelheim, is successfully marketed globally through our partner AbbVie under the brand name SKYRIZI®. Revenues from the license agreement increased by 17.5% in 2020 year-over-year (currency-adjusted + 17.5%).

With regard to the regional distribution of revenues in the Human Pharma business, the USA was once again the largest market with a share of 39%. Here, Boehringer Ingelheim generated sales of 5,658 million EUR, which corresponds to a 1.5% increase compared with the previous year (currency-adjusted + 3.4%).

The EUCAN region (Europe, Canada, Australia, and New Zealand), our second-biggest market, accounted for 32%, with revenues of 4,585 million EUR. Sales increased by + 4.7% (currency-adjusted + 6.0%) compared to 2019 (4,381 million EUR).

In the past year, the company's emerging markets registered sales growth of +3.2% (currency-adjusted +10.4%). Sales rose from 2,753 million EUR in the previous year to 2,841 million EUR in 2020. The People's Republic of China was a key driving force in the region, with a currency-adjusted growth rate of +12.7%.

In Japan, sales increased by +6.4% to 1,331 million EUR (currency-adjusted +6.2%). Last year's sales amounted to 1,251 million EUR.

Net sales by region (in million EUR)

	2020	2019	Change	currency adjusted
USA	5,658	5,576	1.5%	3.4%
EUCAN	4,585	4,381	4.7%	6.0%
Emerging Markets	2,841	2,753	3.2%	10.4%
Japan	1,331	1,251	6.4%	6.2%

Animal Health

The sales in the Animal Health business amounted to 4,121 million EUR in 2020. This is equivalent to growth of +2.1% (currency-adjusted +5.0%) compared with the previous year.

Net sales (in million EUR)

	2020	2019	Change	currency adjusted
NEXGARD®	804	740	+8.6%	+12.0%
FRONTLINE®	406	379	+7.1%	+9.2%
HEARTGARD®	312	318	-1.9%	+0.0%
INGELVAC CIRCOFLEX® / FLEXCOMBO®	264	238	+10.9%	+14.9%

Antiparasitics drive growth

The swine and pet antiparasitics segments developed successfully and outperformed expectations. The increased sales in the pet segment in the USA compensated for declining sales in the ruminant and equine segments. In the USA region especially, livestock medication sales declined due to the temporary closures of slaughterhouses and restaurants due to COVID-19. In China, the decrease in the incidence of African swine fever had a positive impact on the swine segment. The swine vaccine INGELVAC CIRCOFLEX® thus achieved a global growth rate of +10.9% to 264 million EUR (currency adjusted +14.9%).

However, the pet segment accounts for the three best-selling medicines in Boehringer Ingelheim's Animal Health business: NEXGARD® enjoyed revenues of 804 million EUR (2019: 740 million EUR), with a currency-adjusted growth level of +12.0% year-over-year. The antiparasitic FRONTLINE® achieved sales of 406 million EUR, a +9.2% improvement on the previous year's level on a currency-adjusted basis. HEARTGARD®, another antiparasitic, registered a -1.9% decline and sales of 312 million EUR (2019: 318 million EUR).

There was a decline in sales in the poultry segment. The equine segment was also unable to match the previous year's strong performance. This was primarily a reflection of the cancellation in 2020 of equestrian events – at which we present our innovative equine health solutions – due to COVID-19.

The decline in sales in the ALAMEA (Asia, Latin America, Middle East, Africa) region is mainly attributable to developments in the Middle East and Africa region. The COVID-19 crisis has aggravated existing economic difficulties in this region and triggered a significant decline in demand, especially in the poultry segment. In addition, Boehringer Ingelheim discontinued its unprofitable ruminant business in India. The region TCM (The Chinese Market) registered 43.0% currency-adjusted growth.

In the 2020 financial year, the Animal Health business was confronted with various production and supply bottlenecks because of the COVID-19 pandemic; this included delays in the delivery of raw materials and active ingredients and capacity constraints in freight transport (especially air and sea freight). Thanks to the significant commitment of all employees, particularly in production and sales, Boehringer Ingelheim was able to ensure the market supply to the extent possible, and thus minimize potential revenue losses.

Net sales by region (in million EUR)

	2020	2019	Change	currency adjusted
USA	1,815	1,768	+ 2.7%	+ 4.6%
EUCAN	1,244	1,233	+ 0.9%	+ 2.2%
ALAMEA	770	829	- 7.1%	+ 0.2%
TCM	292	205	+ 42.3%	+ 43.0%

Biopharmaceutical Contract Manufacturing

In the Biopharmaceutical Contract Manufacturing business, revenue was +6.5% higher (currency-adjusted +6.6%) than in the previous year due to strong demand for our customers' market products. The order situation for the entire business has developed positively, resulting in a high level of capacity utilization.

Continued strong growth in the Biopharmaceutical Contract Manufacturing

Other sales / discontinued operations

Other sales mainly contain discontinued operations, which were winding down as expected. Under discontinued operations we aggregate activities of minor strategic importance for Boehringer Ingelheim, which include obligations and income resulting from the business swap with Sanofi.

Discontinued operations still include the BUSCOPAN® business in Brazil, whose divestiture was completed in 2020.

Financial position

Boehringer Ingelheim's financial management strategy aims to safeguard the company's financing by means of its operating cash flow as far as possible, to minimize financial risks and optimize the cost of capital.

(in million EUR)	2020
Financial funds as of 1.1.	2,195
Cash flow from operating activities	3,963
Cash flow from investing activities	– 326
Cash flow from financing activities	168
Change in financial funds from cash relevant transactions	3,805
Change in financial funds due to change of consolidated companies or exchange rate movements and valuation adjustments	105
Financial funds as of 31.12.	6,105

Cash inflow from operating activities amounted to 3,963 million EUR, which represents an increase of 619 million EUR in comparison to the previous year (3,344 million EUR). This is attributable to the positive business performance.

Cash outflow from investing activities amounts to 326 million EUR and remains significantly lower than in the previous year, despite a continuing high level of investment in strategic infrastructure for our business activities and external innovation. This was especially due to the divestiture of our holding in Hikma Pharmaceuticals PLC in 2020.

High capital expenditure volume

Further milestones were reached in the 2020 financial year in terms of major investments in fixed assets, such as the expansion of the production facilities in Vienna (Austria) for Biopharmaceutical Contract Manufacturing. They included the first successful test runs at production scale in our fermentation unit. In 2020, we invested more than 300 million EUR in our long-established Vienna site. The development center for biopharmaceutical medicines (BDC), currently under construction in Biberach, also achieved important project milestones in 2020. Around 70 million EUR were invested in the BDC, supplementing a number of significant investments in Boehringer Ingelheim's global research and development network.

In Jonage (France), Boehringer Ingelheim is investing in a new antigen production center in the area of Animal Health for regulatory animal disease control, in response to the growing demand for medicines to treat foot-and-mouth and bluetongue disease. Due to the magnitude of the COVID-19 pandemic in France, this investment project failed to match the envisaged level of progress in 2020. The infection rates in France and the countermeasures employed will determine whether further delays arise in 2021. Also noteworthy is the Group's acquisition of the Belgian company Global Stem cell Technology NV in the area of Animal Health R&D.

Cash inflow from financing activities amounts to 168 million EUR and mainly comprises tax refunds for shareholders' personal taxes associated with the Group's activities in previous years, as well as research bonuses received – in particular with regard to our investments in research in Austria.

Overall, after taking into consideration changes within the group of consolidated companies as well as changes due to exchange rate movements and valuation-related changes, the Group's financial funds increased by 3,910 million EUR to 6,105 million EUR as of December 31, 2020.

Net assets position

(in million EUR)	31.12.2020	31.12.2019	Change	Change in %
Assets				
Intangible and tangible assets	9,345	9,636	- 291	
Financial assets	8,553	9,162	- 609	
Fixed assets	17,898	18,798	- 900	- 4.8%
Inventories	3,863	3,563	300	
Trade accounts receivable	4,302	4,196	106	
Other receivables and other current assets	950	1,241	- 291	
Securities	1,499	0	1,499	
Cash and cash equivalents	4,606	2,195	2,411	
Current assets	15,220	11,195	4,025	+ 36.0%
Other assets	3,769	3,487	282	
Total assets	36,887	33,480	3,407	+ 10.2%
Equity and liabilities				
Group equity	17,307	14,681	2,626	+ 17.9%
Provisions for pensions and similar obligations	5,581	5,185	396	
Tax provisions and other provisions	9,739	9,336	403	
Accounts payable and loans	1,912	1,715	197	
- thereof residual term over 1 year:	77	83	- 6	
Liabilities	17,232	16,236	996	+ 6.1%
Other liabilities and difference from capital consolidation	2,348	2,563	- 215	
Total equity and liabilities	36,887	33,480	3,407	+ 10.2%

As of December 31, 2020, Boehringer Ingelheim's total assets amounted to 36,887 million EUR, an increase of 3,407 million EUR as compared with the previous year. This increase was due, in particular, to the rise in the level of cash and cash equivalents which was attributable to the positive cash flow in the financial year.

Despite the high level of investment in the strategic expansion of the company's business in Human Pharma research in Germany, Biopharmaceuticals in Vienna (Austria) and Fremont, California (USA), as well as Animal Health in France, overall intangible and tangible fixed assets decreased due to depreciation and amortization as well as exchange rate effects. In spite of negative currency effects, working capital (receivables and inventories) increased, particularly due to the buildup of safety stocks in the Human Pharma business, especially in Germany, the USA, and Austria. Trade accounts receivable increased on business grounds in the USA and China in particular. Other receivables and other assets declined due to exchange rate effects, lower tax prepayments in France and decreases in Germany. Other assets increased due to higher deferred tax assets resulting from temporary differences between the valuations in the consolidated companies' tax balance sheets and the valuations in the consolidated balance sheet as well as the positive market trend for plan assets for pensions and similar obligations in the USA.

Despite negative exchange rate effects, Group equity increased due to the Group profit in 2020. Equity amounted to 17,307 million EUR as of December 31, 2020. The equity ratio thus improved to around 47% (December 31, 2019: 44%) in spite of the higher balance sheet total. In addition to equity, the pension provisions and long-term liabilities are also available to the Group as capital in the long term. These three items totaled 22,965 million EUR as of December 31, 2020, representing a 62% share of total assets. Consequently, as in previous years, long-term disposable capital continues to cover all intangible and tangible fixed assets as well as working capital.

Pension provisions increased in Germany, especially due to a lower actuarial discount rate. The increase in other provisions correlates to the change in the level of revenue, since this includes provisions for discounts in the USA and for royalty payments. Provisions for environmental and legal risks, unclaimed vacation and other personnel-related expenses also rose. Exchange rate effects in particular had the opposite effect. The increase in liabilities mainly relates to other liabilities as well as trade accounts payable, in Germany especially. The other liabilities declined, mainly due to the release of the difference arising from capital consolidation and lower deferred income.

The net assets position likewise reflects Boehringer Ingelheim's positive development in the 2020 financial year. Boehringer Ingelheim remains a soundly financed company, incurring considerable capital expenditure in the development of its business and research activities in order to ensure its long-term growth and thus its independence.

REPORT ON OPPORTUNITIES AND RISKS

Opportunities and risk management

When assessing the risks in the context of holistic opportunities and risk management, we also endeavor to take into account the resulting opportunities.

Opportunity management is based on the strategies and objectives of the company and of individual businesses and operating business units, and is an integral part of the Group-wide planning and management systems. Those responsible for the businesses and functions bear direct responsibility for the early and systematic identification, analysis and use of opportunities.

For Boehringer Ingelheim as a research-driven biopharmaceutical company, its current research and development activities are naturally considered an opportunity. Relevant projects have already been outlined in the research and development (R&D) chapter. We also consider digitalization to be an opportunity and see new technological possibilities in the areas of research and (particularly clinical) development, as well as in the support of patients during therapy. In the current COVID-19 pandemic, we are giving greater priority to this opportunity for digitalization in many different areas, but especially in sales and administration.

The aim of the risk management system implemented at Boehringer Ingelheim is to identify business-specific risks as early as possible (particularly risks that jeopardize the continued existence of the company), to assess them, and to reduce them to a reasonable level by means of suitable measures. The persons responsible for the key businesses and functions are also included in the process of calculating and assessing risks. The Group-wide risk and information system ensures that all identified risks are analyzed and assessed carefully. Following appropriate classification, adequate risk management measures are initiated and their implementation is consistently monitored.

In the year under review, internal auditing performed targeted routine audits as well as extraordinary audits around the world. In addition to adherence to legal requirements and internal Group guidelines, the main focal points were the functionality of systems, the effectiveness of internal controls for the prevention of loss of assets and the efficiency of structures and processes. Corresponding adjustments or optimizations were initiated as necessary.

Individual risks

The most important risks to which Boehringer Ingelheim is exposed are broken down into the following specific categories: financial risks, legal risks, production and environmental risks, personnel risks and industry-specific risks.

Risks are identified below as being “concrete” when they appear to be controllable by means of specific management procedures. The term “abstract” is used in the case of risks that cannot be completely controlled, even by means of targeted management procedures, regardless of the probability of their occurrence.

Financial risks

Relevant financial risks are themselves broken down as follows: currency risks, credit and country-specific risks, as well as financial investment and shareholding risks.

Currency risks

The global orientation of our business activities is subject to opportunities and risks due to exchange rate volatility, particularly with regard to the US dollar and Japanese yen – but also with regard to emerging markets' currencies, especially the Chinese renminbi. The Group monitors and quantifies these risks at regular intervals, making them predictable for future business by means of relevant hedging strategies and appropriate financial instruments, such as forward exchange contracts. The resultant risks are subsequently designated as being concrete and controllable and therefore limited.

Credit and country-specific risks

Boehringer Ingelheim is exposed to various credit and country-specific risks as a result of its international business activities. From the portfolio of trade accounts receivable and trade accounts payable, we have not identified any extraordinary risks for the Group beyond the usual level in the industry since the start of the COVID-19 pandemic, also compared with previous years. The same applies to possible default risks for receivables, which are largely hedged against economic and political risks. We will continue to carefully track credit and country-specific risks, so as to be in a position to respond to negative changes in a timely manner. These risks, which we consider moderate, are therefore regarded as concrete.

Financial investment and shareholding risks

The Group pursues a defensive investment strategy in the management of its financial assets.

This is reflected in the orientation of its portfolio, which is focused on European Economic and Monetary Union (EMU) government bonds with top credit ratings and short-term money market deposits. This results in a concrete, controllable and thus limited risk – but therefore only limited opportunities – for the major part of the financial investments. The net book value of some of the strategic investments in related companies is affected by market and business circumstances, which leads to a higher level of volatility in the fair market value. All specific risks have been covered by respective impairments in the consolidated financial statements.

Legal risks

The business activities of the Group are exposed to legal risks. A distinction is made between regulatory, liability and patent protection risks.

Regulatory risks

Boehringer Ingelheim is exposed to risks arising from legal disputes and proceedings as well as official investigations. As the legal or administrative decisions in ongoing or future proceedings cannot be predicted, we regard the resultant risks as being abstract and high.

Liability risks

The marketing and sale of pharmaceuticals are exposed to a potential product liability risk. Boehringer Ingelheim currently has product liability insurance for the company's risk profile. There is absolutely no guarantee, however, that this insurance coverage can be maintained at reasonable cost and acceptable conditions, or that it is sufficient to protect Boehringer Ingelheim against a claim or loss, or against all potential claims or losses. In case it is foreseeable that the product liability insurance does not cover or only partially covers a specific liability risk, the remaining risk exposure has been covered by a provision. We therefore see a moderate risk for the Group here.

Furthermore, product liability claims could tie up substantial financial resources and management capacity and be detrimental to the company's image in the event that the market considers the product to be unsafe or ineffective as a result of unexpected side effects. We see this as an abstract and moderate risk.

Patent protection risks

Protection of innovations through trademark and patent rights is of particular importance to Boehringer Ingelheim as a research-driven biopharmaceutical company. These commercial protective rights are increasingly the target of attacks and breaches. We have taken the necessary precautions to allow us to detect threats at an early stage and, by commencing appropriate countermeasures, defend our legal position using all legal means available to us so that these factors are regarded as concrete and moderate risks.

Production and environmental risks

Our quality management system and compliance processes are continuously optimized in close cooperation with the relevant authorities in order to ensure compliance with cGMP standards (current good manufacturing practices). Risks in this area continue to be of high significance to the Group and are classified as abstract. Boehringer Ingelheim implemented risk-mitigating measures in the past year in order to counter COVID-19-specific threats to its production activities. These include the physical segregation of production teams when possible, the obligation to wear a mask, an increase in the supply of disinfectants, and in-house initiatives for testing the COVID-19 status of employees. In order to protect facility-based functions, employees whose presence is not site-dependent were asked to work from home.

In order to guarantee the supply of our products to the market, we have implemented measures that guarantee reliable and high-quality supplies for internal and external customers. In addition to supplier management on the procurement side, this also involves building up internal standby capacities. Overall, this represents a concrete and moderate risk.

Risks in the areas of environment, health, safety and sustainability (EHS&S) are preemptively minimized by ensuring global adherence to our high safety standards. Appropriate emergency plans have been drawn up for possible incidents of any kind and are practiced and subjected to comprehensive quality testing at regular intervals. As a result of these measures, these risks are classed as concrete and limited.

Personnel risks

Boehringer Ingelheim, as other companies, is exposed to demographic change and the resultant risk of being affected by a lack of appropriately qualified personnel. This potential risk can have a substantial impact on the company's business activities. It has therefore been included in the long-term planning process for many years and has gained strategic significance as a result.

Boehringer Ingelheim counters the risk by means of a comprehensive personnel concept. In the context of global personnel management, this also presents the Group with opportunities. Regardless of their ethnic background, gender or religion, we offer all of our company's employees development opportunities based on their professional abilities, social skills, personal aptitudes, and willingness to take on responsibility in accordance with the needs of the company. In view of the measures described above, the risk is regarded as concrete and moderate.

Boehringer Ingelheim is likewise exposed to human resources risks as a result of the COVID-19 pandemic. If the pathogen were to spread, this would have a significant impact both in and outside of our production activities. The company is therefore closely monitoring the situation in the vicinity of its sites. It also emphasizes working from home, using digital applications rather than in-person meetings, and curbing employee travel to a large extent. In view of these measures, this is considered to be a concrete and moderate risk.

Industry-specific risks

Boehringer Ingelheim is subject to the industry-specific business risks of the pharmaceutical industry. These risks have partly materialized in the past financial year and are becoming increasingly important for Boehringer Ingelheim due to their effects. They continue to be classed as abstract and high. In addition to the loss of exclusivity of products established on the market and risks associated with the development and registration of new products, these risks increasingly include changing and restrictive requirements relating to pricing and reimbursement in many markets. Frequently, the prices of pharmaceutical products are subject not only to state monitoring and regulation, but also to price pressure from cheaper generic drugs caused by state reimbursement systems. Boehringer Ingelheim is keeping a close eye on the various changes in its sales markets and takes appropriate measures in response to current developments.

Overall statement on the risk situation

From a current perspective, we are not aware of any risks that alone or in conjunction with other risks could lead to a lasting impairment of the company's assets or financial or earnings position and could jeopardize the continued existence of Boehringer Ingelheim.

REPORT ON EXPECTED DEVELOPMENTS

Boehringer Ingelheim can look back on a successful 2020 financial year in which we achieved our ambitious targets, in terms of both absolute figures and our contribution to the wellbeing of patients, pets, and livestock. We were able to safeguard the company's sustainable development and profitable growth, even during volatile months for the world economy and the pharmaceutical industry.

The ongoing COVID-19 pandemic and a more difficult industry environment will continue to pose challenges for Boehringer Ingelheim in 2021. While this makes planning for the coming cycle more difficult than usual, we nonetheless look forward to the year ahead with confidence. For 2021, we envisage a partial recovery of the world economy from the deep recession of the past year. Due to our experience last year, we are optimistic that we will be able to cope with temporary setbacks and new lockdowns without experiencing substantial supply problems.

In view of global efforts to reduce the prices of medicines, financial flexibility remains critical for the growth and innovation of Boehringer Ingelheim. Assuming that the approved vaccines and other medicines currently undergoing the approval process help curb the COVID-19 pandemic, we expect strong general market growth for prescription pharmaceuticals. The "Focus to Accelerate" initiative in our Animal Health business represents a strategic reorientation. In the future, it will allow us to provide our customers with even more innovative solutions, including through external partnerships. The continuing spread of African swine fever remains a significant factor, despite an improved situation in some key markets such as China. Our priorities in our biopharmaceuticals business are supplying the market with our own products and contract manufacturing for customers. Beyond this, the launch of our LSCC large-scale production facility in Vienna (Austria) remains a focus.

For 2021, we expect Boehringer Ingelheim to achieve a slight year-on-year increase in net sales on a comparable basis (adjusted for currency and extraordinary effects).

Our consistently high R&D expenditure, which once again increased in 2020, is compatible with our strategic focus on continuing to drive growth and the flow of new products. In 2020, we once again achieved our goal of obtaining some of our R&D through external innovation and partnerships. We will continue to actively pursue this strategy in 2021.

We invest in our own and external R&D after close investigation of the therapeutic benefit and the associated prospects for success. The flow of innovative medicines in our research pipeline shows short-, medium- and long-term growth potential. For 2021, we anticipate a significant increase in R&D investments for new medicines; we also expect to continue our high level of commitment to research on medicines that will help alleviate the effects of the COVID-19 disease.

In addition to patent expiry and attacks on patents, the major challenges facing the research-driven pharmaceutical industry are the increasing amount of investment in R&D as well as bigger hurdles and increased costs associated with product approvals. Also of particular note is the previously mentioned growing cost pressure in health care systems. In 2020, policymakers' readiness to contribute to the substantial investments needed for the development of new medicines was apparent in the area of COVID-19 research. Only by providing vaccines and therapeutics will it be possible to successfully tackle the COVID-19 pandemic in the long term. In the past year, research-driven pharmaceutical companies displayed an unprecedented level of networking and energy to develop solutions extremely quickly, thus proving the societal value of research and innovation. Additional concrete steps are

needed so that the contribution of pharmaceutical companies to the increased efficiency of the overall health care system is remunerated appropriately. Animal health research likewise requires major investments in both preventive research and diagnostic options.

In conjunction with the long planning and development cycles for new products, growing public cost pressure means that business is less predictable. It requires us to quickly recognize and seize opportunities in both Human Pharma and Animal Health on the one hand while continuously monitoring and adjusting costs and strategies on the other. In 2020, we implemented measures in all our business areas to accelerate the speed of our response to changes, to reduce the complexity of the organization, and to optimize the cost base. In this way, we are creating potential for capital expenditure and securing the company's long-term success.

In view of its increased research activities in the coming financial year, Boehringer Ingelheim expects a slightly lower operating result for 2021 on a comparable basis (adjusted for currency and extraordinary effects).

As a family-owned company, Boehringer Ingelheim's primary aim remains the creation of "Value through Innovation." This safeguards our competitiveness and our long-term entrepreneurial independence. We are confident that we will achieve our ambitious targets in all our business areas, thanks to our considerable innovative strength, which rests on a comprehensive portfolio of prospective products, our global presence, and the support of our highly qualified and motivated employees. We remain committed to our "Ambition 2025" for our company as a whole. We will research and develop innovative products in human and veterinary medicine and bring them to the market in areas of high medical need, and we will break new ground with therapeutic approaches. The aim of our endeavors is to make new medicines available to both humans and animals so they can be treated more effectively with new therapies.