

# GROUP MANAGEMENT REPORT

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# GROUP MANAGEMENT REPORT

## INFORMATION ABOUT THE GROUP

### The Group's business model

From its foundation 135 years ago, Boehringer Ingelheim has developed into a research-based pharmaceutical company. Headquartered in Ingelheim am Rhein, Germany, the company has been family-owned since its founding in 1885 and is among the world's 20 leading pharmaceutical companies. The aim of its business activities is to sustainably improve the health and quality of life of humans and animals. As one of Germany's most research-intensive companies, Boehringer Ingelheim concentrates on researching medicines and offering therapies for diseases for which satisfactory treatment options are currently unavailable. It provides the entire value chain, from research and development (R&D) through production and commercialization of its products. At a global level, every day more than 51,000 employees create value through innovation for the company's three businesses: Human Pharma, Animal Health and Biopharmaceutical Contract Manufacturing. In 2019, Boehringer Ingelheim generated net sales of 19 billion EUR in these businesses.

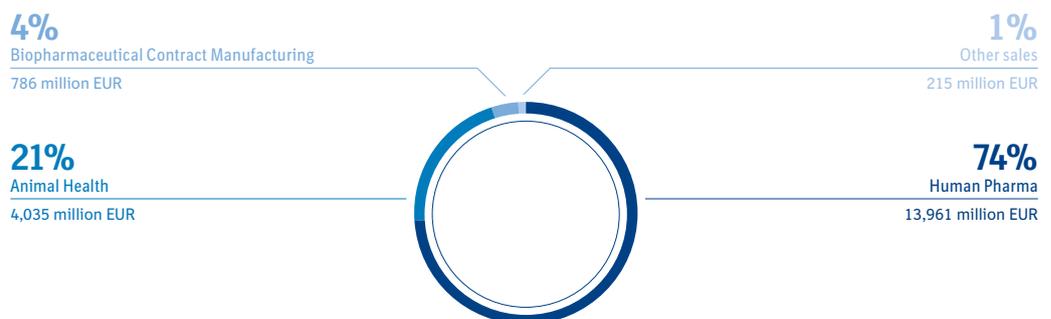
With a 74% share of overall sales, the Human Pharma business is the core focus of Boehringer Ingelheim's activities. Numerous of the company's own products are already standard treatments in medicine.

JARDIANCE® strongest revenue contributor for the first time

The Human Pharma business developed positively in the 2019 financial year. For the first time, the strongest revenue contributor in this segment was 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. The following medicines also played a significant role in Boehringer Ingelheim's success: SPIRIVA®, for the treatment of chronic obstructive pulmonary disease (COPD) as well as

### NET SALES BY BUSINESS

Group: 18,997 million EUR



## NET SALES BY REGION (IN MILLION EUR)



asthma, PRADAXA®, which is used to prevent strokes in patients with atrial fibrillation and for the prevention and treatment of thromboembolic disorders and TRAJENTA®, which is used for the treatment of type 2 diabetes. OFEV®, which is used for the treatment of the rare, fatal respiratory disease idiopathic pulmonary fibrosis (IPF) and increasingly also in a further indication – systemic sclerosis with interstitial lung disease (SSc-ILD) – likewise provided a significant contribution to the company’s growth.

Boehringer Ingelheim’s Animal Health business is one of the biggest providers of veterinary vaccines and medicines and has a strong presence in the livestock and pets segments. Mergers on the world market resulted in further consolidation on the animal health market in 2019. Boehringer Ingelheim is the market leader in Germany and the second-largest provider at a global level. While net sales increased in the pets segment, sales plunged in the swine segment in 2019 due to the outbreak of African swine fever, especially in China. The most significant products in terms of net sales include the antiparasitics NEXGARD®, HEARTGARD®, FRONTLINE® and the established swine vaccine INGELVAC CIRCOFLEX®, which is used to treat porcine circovirus type 2.

Biopharmaceutical Contract Manufacturing is another important growth area for Boehringer Ingelheim. Boehringer Ingelheim’s biopharmaceutical activities comprise the manufacture of own-brand marketable products (such as ACTILYSE®, METALYSE® and PRAXBIND®) and – 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 2019 financial year, Boehringer Ingelheim once again achieved the majority of its sales in the Americas (46%) and Europe (30%) regions. The region of Asia/Australia/Africa (AAA) with countries such as China, which reported a currency-adjusted sales growth of +21% for the Human Pharma business, is of strategic significance for the Group’s future development, making up 24% of its sales.

## Research & 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. In areas where the need for treatment is high, we want to make a major contribution in the human pharma business as well as in the field of animal health.

We have a global research network of 12 countries, with major facilities in Germany (Biberach, Hanover and Ingelheim), the USA (Ridgefield, Connecticut; Duluth, Georgia and St. Joseph, Missouri), Austria (Vienna), Japan (Kobe) and France (Lyon). Boehringer Ingelheim continues to explore opportunities for expanding its existing product portfolio through organic growth, including in cooperation with external partners.

We build on cooperation with academic institutions, biotech companies, public research institutions and a global research network comprising our own facilities. Moreover, our research activities in the field of development projects and technologies are supplemented by important cooperation and license agreements. A key component of Boehringer Ingelheim's innovation strategy is the supplementation of our own broad R&D portfolio with partnerships especially in the scientific area, where we collaborate over 150 active projects with more than 120 academic institutes spanning three continents, so as to strengthen the Group's innovative prowess. In Human Pharma we are aiming for at least 30% of all new molecules in our pipeline to come from external innovation.

R&D expenses  
increased to  
18.2% of net sales

### Research and development

	2019	2018	2017	2016	2015
Expenses in million EUR	3,462	3,164	3,078	3,112	3,004
– as % of net sales	18.2	18.1	17.0	19.6	20.3
Human Pharma expenses in million EUR	3,042	2,780	2,714	2,870	2,780
– as % of Human Pharma net sales	21.8	22.1	21.5	23.9	24.8
Animal Health expenses in million EUR	419	384	357	180	164
– as % of Animal Health net sales	10.4	9.7	9.2	12.3	12.0
Average number of employees	9,154	8,552	8,589	8,055	7,895
Investments in tangible assets (without investments in infrastructure) in million EUR	183	136	71	92	77

In 2019, Boehringer Ingelheim expanded its research network through its purchase of all shares in the Swiss biotech company Amal Therapeutics SA, which concentrates on cancer immunotherapy and develops innovative therapeutic cancer vaccines. This acquisition is an important step in strengthening Boehringer Ingelheim's position in research into immuno-oncological cancer therapies. Boehringer Ingelheim also agreed to collaborate with the South Korean pharmaceutical company Yuhan Corporation in treating non-alcoholic steatohepatitis (NASH). The cooperation and license agreement focuses on therapy for the three main causes of these diseases: steatosis, inflammation and scarring.

Research network  
expanded

R&D SITES



AMERICAS

Brazil

- 1. Paulínia (AH)

Mexico

- 2. Guadalajara /Tateposco (AH)

USA

- 3. Ames (AH)
- 4. Athens / Colbert (AH)
- 5. Duluth (AH)
- 6. Fulton (AH)
- 7. Gainesville (AH)
- 8. North Brunswick (AH)
- 9. Ridgefield (HP)
- 10. Saint Joseph (AH)
- 11. Sioux Center (AH)

EUROPE

Germany

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

France

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

The Netherlands

- 18. Lelystad (AH)

Austria

- 19. Innsbruck (HP)
- 20. Vienna (HP)

Switzerland

- 21. Geneva (HP)

ASIA / OCEANIA

Australia

- 22. Sydney (AH)

China

- 23. Beijing (AH)
- 24. Shanghai (AH)
- 25. Taizhou (AH)

Japan

- 26. Kobe (HP)
- 27. Tokyo (AH)

New Zealand

- 28. Auckland (AH)

BI X, Boehringer Ingelheim’s digital laboratory, grew to 51 employees in 2019. In the past year, its agile development teams transferred several innovative digital products to the company’s businesses. Examples are the “FARMERA” platform, which helps swine farmers keep their livestock healthy and thus enhances their productivity, and “SMART”, which employs self-learning algorithms to increase efficiency on biopharmaceutical production lines.

Since 2010, the Boehringer Ingelheim Venture Fund drives 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 creates companies when it identifies promising research projects in universities and academic institutions.

At the biomedical research institute IMP in Vienna (Austria), which is largely funded by Boehringer Ingelheim, more than 200 scientists from 40 countries carry out research on molecular and cellular mechanisms, which form the basis of complex biological phenomena.

Boehringer Ingelheim's R&D activities 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 2019 financial year, we employed an average of 9,154 people at our R&D facilities. A total of almost 3.5 billion EUR was invested in the research and development of new medicines. This is above the level in 2018 and corresponds to around 18.2% of the Group's net sales in 2019.

#### Human Pharma

More than 60 new substances in our Human Pharma portfolio

For more than a century, we have been committed to improving the lives of patients. The focus of Human Pharma R&D lies on cardiovascular and metabolic diseases, oncology, respiratory diseases, immunology, diseases of the central nervous system (CNS) and retinal health.

By the end of 2019, more than 60 new substances were included in our Human Pharma development portfolio, and in around 100 clinical and preclinical projects we are working on their development and registration.

A selection of important research and development projects is shown hereinafter.

DEVELOPMENT PIPELINE END OF 2019	PHASE
<b>CARDIOVASCULAR AND METABOLIC DISEASES</b>	
GLP1R/GCGR agonist*	Phase I
Amylin analog*	Phase I
Hemodynamic modulator	Phase I
EmpaLinaMet XR (combination of empagliflozin, linagliptin und metformin)**	registration/ approval
Appetite modulator	Phase I
Empagliflozin / New indication** SGLT2 inhibitor   T1DM	Phase III
Empagliflozin / New indication SGLT2 inhibitor   CKD	Phase III
Empagliflozin / New indication SGLT2 inhibitor   CHF	Phase III

DEVELOPMENT PIPELINE END OF 2019	PHASE
<b>ONCOLOGY</b>	
PD-1 antibody	Phase I
mRNA vaccine*	Phase I
VEGF/Ang-2 antibody *	Phase I
LAG 3 antibody	Phase I
SMAC-mimetic	Phase I
BET inhibitor	Phase I
LRP 5/6 inhibitor*	Phase I
MDM2-p53 antagonist*	Phase I
SIRP1α antagonist*	Phase I
SOS1::KRAS inhibitor	Phase I
MEK inhibitor *	Phase I
Recombinant vaccine *	Phase I
Xentuzumab (BI 836845)* IGF1/2 antibody   mBC	Phase II
<b>RESPIRATORY DISEASES</b>	
Autotaxin inhibitor*	Phase I
Non-receptor tyrosine kinase inhibitor*	Phase I
Cysteine protease inhibitor*	Phase I
Leukocyte protease inhibitor	Phase I
Phosphodiesterase inhibitor	Phase I
BI 1265162 <sup>▷</sup> ENaC inhibitor   CF	Phase II
Nintedanib / new indication **> Triple angiokinase inhibitor   PF-ILD	registration/ approval
Nintedanib / new indication **>> Triple angiokinase inhibitor   SSc-ILD	registration/ approval
<b>IMMUNOLOGY</b>	
Nuclear receptor antagonist	Phase I
Epithelial barrier stress modulator	Phase I
Receptor serine/threonine kinase inhibitor	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   Ulcerative colitis	Phase II
Spesolimab (BI 655130) <sup>▷</sup> IL36R antibody   CD (Crohn's disease)	Phase II
BI 730357 Nuclear receptor antagonist   Psoriasis	Phase II

## DEVELOPMENT PIPELINE END OF 2019

## PHASE

CENTRAL NERVOUS SYSTEM DISEASES	
TRPC 4/5 inhibitor*	Phase I
BI 409306* PDE 9 inhibitor   FEP	Phase II
BI 409306* PDE 9 inhibitor   REX	Phase II
BI 425809 GlyT1 inhibitor   CIAS	Phase II
BI 425809 GlyT1 inhibitor   AD	Phase II
RETINAL HEALTH	
Neuronal damage modulator	Phase I
VEGF/Ang-2 antibody*	Phase I
BI 1467335* AOC3 inhibitor   Diabetic retinopathy	Phase II

## Indication abbreviations:

AD: Alzheimer's disease	CKD: Chronic kidney disease	REX: Reduction of relapse in schizophrenia
AtD: Atopic dermatitis	FEP: First episode psychosis	SsC-ILD: Systemic sclerosis-associated interstitial lung disease
CD: Crohn's disease	GPP: Generalized pustular psoriasis	T1DM: Type 1 diabetes mellitus
CF: Cystic fibrosis	mBC: Metastatic breast cancer	
CHF: Congestive heart failure	PF-ILD: Progressive fibrosing interstitial lung disease	
CIAS: Cognitive impairment in schizophrenia	PPP: Palmoplantar pustulosis	

\* Partnered projects or acquired assets.

\*\* Study complete, submissions ongoing.

> Key pipeline advances (April–December 2019).

>> Now approved in the US for systemic sclerosis-associated ILD.

Boehringer Ingelheim's therapeutic area of cardiovascular and metabolic diseases contains some of the company's core products. Within the diabetes portfolio and the alliance with Eli Lilly important research data were published in 2019.

Heart failure is a progressive, debilitating and potentially fatal condition and the leading cause of hospitalization in Europe and the US. About half of people with heart failure are expected to die within five years of diagnosis. In 2019, the Boehringer Ingelheim and Eli Lilly Alliance announced the initiation of EMPULSE, the sixth phase III study in the empagliflozin heart failure program, which also consists of the EMPEROR-Reduced and EMPEROR-Preserved, EMPERIAL-Preserved and EMPA-VISION studies. These studies are investigating the effects of empagliflozin on heart failure-related outcomes and functional capacity in more than 9,500 patients with heart failure, including those with and without type 2 diabetes. Building on our legacy of innovative treatments for a range of cardiovascular and metabolic conditions, our R&D strategy takes a holistic view of the needs of cardio metabolic disease patients who often have multiple, related conditions. We are pursuing the next wave of innovative medicines for obesity, kidney and liver diseases – including non-alcoholic steatohepatitis (NASH).

Our focus in oncology research is to take cancer on by developing novel therapeutic approaches that address unmet needs in lung and gastrointestinal cancers. We are advancing a very broad pipeline of cancer cell-directed agents, immune oncology therapies and combinations of these approaches. In 2019, we have successfully advanced a range of research programs in this area. Ten new development projects have been tested in people for the first time.

The scientific research for new therapeutic concepts to help patients with respiratory diseases continues to be of high importance for Boehringer Ingelheim. In 2019, our focus areas leveraged our extensive expertise in respiratory medicine, inflammation and fibrosis to target a broad range of interstitial lung diseases (including indications such as IPF and systemic sclerosis-associated interstitial lung disease (SSc-ILD)), as well as serious lung diseases with high unmet need, such as cystic fibrosis and severe asthma. Data readouts from two phase III data sets for nintedanib in SSc-ILD (SENCSIS® trial) and in progressive fibrosing interstitial lung diseases (PF-ILD, INBUILD® trial) occurred in 2019. Based upon these data, filings for regulatory approvals in the respective indications were submitted and first approvals for OFEV® to slow the rate of decline in pulmonary function in patients with SSc-ILD have been granted in the US, Japan and other countries in 2019. The new RESPIMAT® reusable was launched in the first countries in 2019.

Boehringer Ingelheim has been continuously developing its immunology R&D activities for some years now and is ramping up its capacities for a series of dermatological and gastroenterological indications. Last year, risankizumab, originally discovered through our research activities and partnered with AbbVie, received marketing approval and is now commercialized by AbbVie in major geographies.

Some of the most important neuropsychiatric diseases, such as schizophrenia or depression, continue to be the center of Boehringer Ingelheim's research in central nervous system diseases. Whilst the medical need is high and the number of patients is increasing, the scientific challenges are extremely high. Boehringer Ingelheim takes in this challenge and remains optimistic that we can develop effective therapies for the treatment of neuropsychiatric diseases. The clinical investigation program also encompasses the aspect of early treatment options at a point, when symptoms and physical disorders are disturbing, but not yet pronounced, so that they could potentially be detected (e.g. by voice analysis). This could favorably impact and avoid a more dramatic development.

Boehringer Ingelheim has also expanded the global research and development activities to tackle eye diseases, specifically those affecting the back of the eye. Science and innovation are at the core of the comprehensive pipeline portfolio the company has built in retinal health, with the first assets already in clinical development with the aim to prevent visual impairment and blindness as effective as possible.

In addition to building on our strengths in core therapeutic areas, we capture synergies by focusing on research platforms, OFEV® being a good example for this. In areas such as immune modulation and fibrosis we are working on combining the new approaches. The focus on common pathophysiological mechanisms enables us to discover new approaches and to accelerate the development of new medicines.

Boehringer Ingelheim  
extends research  
spectrum by retinal health

The following table shows the relevant changes in current clinical studies (Phase III):

CLINICAL TRIAL	PHASE	CHANGES IN 2019
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 (SSc-ILD).	Phase III	Study completed and met primary endpoint. Published in <i>New England Journal of Medicine</i> .  <i>In the Phase III SENSCIS® trial nintedanib slowed the loss of pulmonary function in patients with SSc-ILD compared to placebo. Patients taking nintedanib showed a 44% reduction in the rate of decline of their lung function, measured in FVC assessed over 52 weeks.</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	Study completed and met primary endpoint. Published in <i>New England Journal of Medicine</i> .  <i>In the Phase III INBUILD® trial, nintedanib slowed lung function decline significantly by 57% across the overall study population, as assessed by the annual rate of decline in forced vital capacity (FVC) over 52 weeks in patients with fibrosing interstitial lung disease (ILDs) with signs of progression.</i>
An open-label, long-term extension study to assess the safety and efficacy of BI 655130 (spesolimab) treatment in patients with generalized pustular psoriasis (GPP) who took part in previous studies with BI 655130.	PHASE III	First patient included.
EMPA-KIDNEY (NCT 03594110) is a multinational randomized, double-blind, placebo-controlled clinical trial, designed to evaluate the effect of empagliflozin on kidney disease progression and cardiovascular mortality risk in people with pre-existing chronic kidney disease with and without type 2 diabetes.	Phase III	First patient included.
CAROLINA (NCT 01243424) is a multinational, randomized, double-blind, placebo-controlled clinical trial designed to assess the effect of linagliptin compared to glimepiride on cardiovascular (CV) safety in adults with relatively early type 2 diabetes and increased CV risk or established CV disease.	Phase III	Study completed and met primary endpoint. Published in <i>Journal of the American Medical Association</i> .

### Animal Health

In its R&D activities in the field of animal health, Boehringer Ingelheim concentrates on innovative vaccines and antiparasitics for the protection of livestock and pets, as well as pharmaceutical products for the treatment of chronic diseases. Our goal is to strengthen animal health by means of innovative, preventive solutions and medicines.

At our globally oriented research and development facilities, we focus on research into new substances and the development of future therapeutic solutions. Since many vaccines are based on local pathogens and pathogen variants, it is imperative that we are present in all key market regions with local R&D and production facilities.

In the past year, we created a comprehensive database of pet and livestock diseases which will serve as the basis for focusing our research and development activities. Over 2,000 diseases and clinical symptoms which have been entered in this database can be evaluated based on various key criteria such as pathogens or affected organ systems.

In addition, we brought ARTI-CELL® Forte, the first stem cell-based animal health product, onto the European market. This is used to treat lameness in horses. We also continue to work on highly promising innovative, digitally integrated diagnostics solutions.

Launch of  
ARTI-CELL® Forte

In 2019, we initiated more than 400 clinical studies worldwide and received more than 200 product authorizations. In addition to our internal research and development, we analyze external projects or products and integrate them in our portfolio where appropriate. Obtaining approvals and expanding the geographical distribution of existing products are other important aspects of our R&D activities.

## 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 (AH)
7. Fremont (Bio)
8. Gainesville (AH)
9. St. Joseph (AH)
10. Worthington (AH)

### EUROPE

#### Denmark

11. Kalundborg (AH)

#### Germany

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

#### France

15. Lyon (AH)
16. Toulouse (AH)

#### Greece

17. Koropi (HP)

### Italy

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

### The Netherlands

20. Lelystad (AH)

### Austria

21. Vienna (Bio)

### Spain

22. Sant Cugat (HP)

### United Kingdom

23. Pirbright (AH)

### ASIA / OCEANIA

#### China

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

#### Indonesia

27. Bogor (HP)

#### Japan

28. Yamagata (HP)

#### New Zealand

29. Auckland (AH)

## Production

### Human Pharma

In the Human Pharma business, production is responsible for the reliable supply of innovative, top-quality medicines at competitive prices for patients and customers. 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. Partnerships with external manufacturers expand production capacities, particularly for products which are already far advanced in terms of their life cycle.

In the 2019 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. In 2019, the Group's network was optimized further and the facility in Malgrat (Spain) was sold. By assigning important steps and technologies within the production processes to more than one facility, Boehringer Ingelheim was always able to ensure the patient care in 2019.

Delivery capacity and patient care are a high priority for Boehringer Ingelheim. The company consistently makes important investments in the development and transformation of its production capacities, in both its internal and external network. At its Ingelheim headquarters, Boehringer Ingelheim made significant progress with the implementation of a key investment in the industrialization of newly developed innovative medicines and an initial supply of them to the market. The construction of a plant at the Group's Sant Cugat facility in Spain was completed on schedule and the company's markets were additionally supplied with RESPIMAT® technology-based inhalation medicines. The extension of our biopharmaceutical site in Vienna (Austria) also creates additional in-house capacities to cover the increasing demands for ACTILYSE® and PRAXBIND®.

The ongoing implementation of the Group's supply chain strategy is optimizing value chain management significantly, from the supplier to the customer ("end-to-end"). The use of modern digital and automated processes and technologies facilitates the transparent and efficient management of an integrated, flexible supply chain that is based on a global production network.

### Animal Health

In 2019, Animal Health products were manufactured for worldwide sale in a network of 16 Animal Health production facilities in eleven countries. In addition to Boehringer Ingelheim's internal facilities, the company used around 170 contract manufacturers to manufacture products for Boehringer Ingelheim. The company's product portfolio is essentially unchanged and is well balanced between vaccines, pharmaceutical products and nutraceuticals. These traditional products are supplemented with diagnostics 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. The company sold its facility in Saint-Herblon (France) and reduced the number of its contract manufacturers in 2019.

In 2019, investments were made in capacity expansion for the strongest revenue contributor, NEXGARD®, at the Barceloneta (Puerto Rico) facility; in the expansion of small animal vaccine production at the company's facility in Athens, Georgia (USA) and of cattle vaccine production in St. Joseph, Missouri (USA); and in capacity expansion for foot-and-mouth disease vaccines in Lyon (France). Additional investments were made 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). They comprise the manufacture of own-brand marketable products (such as ACTILYSE®, METALYSE® and PRAXBIND®), the manufacture of biopharmaceuticals for clinical testing and – as one of the world's leading companies – process development, launch preparation and commercial production of biopharmaceuticals for third-party industrial customers. 70% of the top 20 pharmaceutical companies and innovative biotech firms are clients

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Animal Health  
 production facilities  
 in eleven countries

One of the leading  
 providers for  
 industrial customers

of Boehringer Ingelheim's Biopharmaceutical Contract Manufacturing business. Boehringer Ingelheim covers the entire biopharmaceutical value chain, from genetic development of the production cell, followed by manufacturing the active substance and filling the finished pharmaceutical product, down to the product launch and the global market supply.

2019 saw an overall increase to the full use of capacity at its network of industrial-scale production facilities. Besides many other products, the Biberach facility fulfilled the increasing market demand for ACTILYSE®. At the company's facility in Fremont, California (USA), the approval process for a customer's market product was successfully completed in 2019. It will thus be possible to meet rising product demand within the network from both Biberach and Fremont. Moreover, at our large-scale cell culture plant in Biberach and our large-scale microbial plant in Vienna, three further customer products were successfully approved by the international authorities. One of these products is plasmid DNA, which is used as a gene therapy. At its Vienna facility, Boehringer Ingelheim is actively examining new therapy options.

The expansion project for a new industrial-scale biopharmaceutical production facility at Boehringer Ingelheim's facility in Vienna reached a further milestone in 2019, when two key functions went into operation. The strategic relevance of our biotechnological production capacities is rising in the context of the increasing importance of NBEs (new biological entities) in our pipeline.

In 2019, the production and delivery of everything from hospital products to finished pharmaceutical products began as scheduled in Shanghai (China), for both the local market and countries outside China. In addition, an application for approval of a customer product by the Chinese authorities was successfully completed. This will be the first biopharmaceutical product to be approved in line with the new regulatory requirements for contract manufacturing in China. Approval is the final milestone in a pilot project between Boehringer Ingelheim and the Chinese regulatory authorities. The principles of cooperation between a marketing authorization holder and a contract manufacturer were evaluated and successfully applied, and our facility in Shanghai will be recognized as a contract manufacturer (CMO) by the Chinese authorities.

### **Sustainability, occupational safety and environmental protection**

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. Compliance with social and environmental aspects has been firmly anchored in our corporate philosophy for many years now to ensure that we can achieve sustainability for future generations.

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 work in close cooperation with the relevant associations. Within Boehringer Ingelheim, the corporate department Environment, Health, Safety & Sustainability (EHS&S) is responsible for this strategic focus.

In 2011, we started our “BE GREEN – Future by Choice” program, which was developed further in 2019, setting new strategic global goals for 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 are continuously working on CO<sub>2</sub>-reducing measures at our facilities, and we are aiming to lower our absolute CO<sub>2</sub> emission by 30% until 2030. We focus on the sustainability of our major projects, we are spending additional 10 million EUR per year to invest into a green future, and we foster environment-friendly and energy-saving investments.

By means of digitalized solutions, we work on implementing globally efficient processes with standardized software solutions. Global digitalization projects such as the collection of environmental data for the Group-wide “BE GREEN” program and electronic signature solutions for EH&S audit systems were successfully supported, tested 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.

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. This year in October, our Promeco production facility in Xochimilco (Mexico) was awarded Alliance Water Stewardship (AWS) certification. Boehringer Ingelheim is the first pharmaceutical company worldwide to be certified 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, in 2019 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 the aspects of biodiversity which are relevant for its activities in the pharmaceutical sector. We are committed to upholding the obligations which result from acceptance of the Nagoya Protocol, by pursuing research and development in a responsible manner.

In 2019, the “BE SAFE – Zero by Choice” program, which aims to further reduce the number of workplace accidents, celebrated its tenth anniversary in Germany. In addition, the “High Five for Safety” initiative, which is intended to promote occupational safety, was introduced in 2019.

10 years “BE SAFE - Zero  
by Choice”

### Growing number of employees

## Employee reporting

In 2019, Boehringer Ingelheim employed 51,015 people on average worldwide. This represents an increase of + 1.4% over the previous year. The number of staff increased in all of its regions.

### Average number of employees by region

	2019	2018*
Americas	13,113	13,023
Europe	26,884	26,691
Asia / Australia / Africa (AAA)	11,018	10,619
	51,015	50,333

\*The methodology used to calculate the average number of employees was revised for the 2019 consolidated financial statements. The calculated average, which was originally based on the four previous end-of-quarter figures, has been changed to an assessment based on 12 month-end figures. The figures for 2018 have been adjusted in line with the new methodology.

A major success factor for the positive growth of the Group is its engaged and motivated staff. Accordingly, we are particularly committed to actively developing and supporting our employees. In order to be best prepared for the challenges ahead and as part of a comprehensive training system, we emphasize the acquisition of technical expertise and also promote social skills.

With the integration of various experiences, cultural backgrounds and personalities, Boehringer Ingelheim creates an openness to different approaches and opinions, living up to its corporate vision "Value through Innovation". As a global company, it is important to us that the diversity of our customers is reflected in our workforce. Creating a working environment that embraces diversity and differences is one of the pillars of Boehringer Ingelheim's corporate culture and is a contributing factor to the company's success.

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, it is part of our human resources department's scope to ensure the employability of our staff, promote a wide range of opportunities for innovation at work, and support our employees to nurture their own talents and develop as individuals.

Vocational training has always been of major importance to Boehringer Ingelheim. As part of its understanding of social responsibility, the company offers career opportunities to a great number of young people. 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. In 2019, 194 young professionals started their careers with Boehringer Ingelheim in Germany in over 25 different scientific, technical and commercial fields, in training and dual-study courses. On average, 704 young people were enrolled in our vocational training program in 2019.

One of the company's aims is to strengthen the appeal of Boehringer Ingelheim as a top employer for our current and future employees. In 2019, Boehringer Ingelheim received a Top Employer award in this area from the auditors of the international, independent "Top Employers Institute". In addition to Germany, Boehringer Ingelheim also received this award in Argentina, Brazil, China, Italy, Indonesia, Colombia, Malaysia, Austria, the Philippines, Poland, Romania, Russia, Singapore, Spain, South Korea, Thailand and Vietnam.

## Social responsibility

At Boehringer Ingelheim we are powered by our people. We therefore actively promote a diverse, cooperative and open working environment where our employees' differences are valued and respected. Diversity makes for the right mix, but it is inclusion which brings out the best results from this mix. Since we concentrate on encouraging a respectful environment, we have a comprehensive diversity and inclusion action plan in place to promote diversity and the parameters necessary for it. Core issues in 2019 included many activities of our diversity networks and our new recommendations for respectful communication. Boehringer Ingelheim has been an official member of the "Diversity Charter" since early 2016 and a PROTEMPLOYER acknowledged by the PROUT AT WORK foundation since 2017.

Taking social responsibility is an important aspect of our corporate culture. Our commitment to the well-being of our patients and employees as well as their families is the focus of a wide range of projects. It is important for us to become involved into social interaction within the regions where we are active as a company, with the main focus of our social engagement or support of people in need for help being centered on the human person. All of Boehringer Ingelheim's activities also focus on protecting and maintaining the environment.

A major pillar of our social commitment is our Making More Health (MMH) initiative. Since its start in 2010, it has continuously developed as a social entrepreneurship movement, both within our company and externally. Socially entrepreneurial and sustainable activities are not limited to individual projects relating to various regions and issues. Instead, this initiative focuses on creatively connecting with local and international partners from different sectors. 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 healthcare sector. 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. To date, within the MMH network, Boehringer Ingelheim and Ashoka – one of the world's largest non-profit organizations – have together helped around 100 social entrepreneurs to reach approximately 9 million people worldwide in the area of health care.

The MMH initiative also aims to promote 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. MMH leadership programs in rural southern India (Insights India) as well as Kenya (Insights Kenya), participation in social intrapreneurship online courses, opportunities to collaborate with social entrepreneurs in our MMH network as "Executives in Residence", and an internal competition promoting employees' own projects have honed our staff's social entrepreneurial thinking and activities. 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 plays a role in the university sector, with the goal of helping students and lecturers to learn more about socially entrepreneurial thinking and practical activities through the development of health care-related projects.

To optimize stroke care in Europe and emerging markets, 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 2019, this initiative achieved its goal of developing a network of 1,500 clinics in Europe which ensure that stroke patients are treated in line with defined standards. Worldwide, there are already more than 2,700 clinics in more than 95 countries.

Support of  
COVID-19 medication  
development

Boehringer Ingelheim supports the German Center for Infection Research (DZIF) in a project to develop a therapy for the new coronavirus (SARS-CoV-2) with the development of monoclonal antiviral bodies, aiming to complete molecule discovery efforts within six months.

In 2019, Boehringer Ingelheim continued to pursue its LastMile program with support from the Global Alliance for Livestock Veterinary Medicines (GALVmed) and funding from the Bill & Melinda Gates Foundation. This integrated, solution-oriented initiative aims to respond to critical challenges in the field of animal health by ensuring the consistent availability of medical resources for animals in hard-to-access areas of sub-Saharan Africa. Through this project, Boehringer Ingelheim helps small farmers to gain access to veterinary medicines at a local level. Also newly approved medicines and new employment opportunities in technical and regulatory fields had a positive effect on the well-being of animals and people in the "LastMile" countries in 2019. This underlines Boehringer Ingelheim's strong social commitment: We aim to have a positive impact on human and animal lives in areas where there is a particularly vital need for this.

Beyond that, our employees are getting involved in a large variety of local initiatives together with the company in order to help people in need in case of environmental catastrophes or just in everyday situations, by providing technical support and their time or by providing medical or nursing care.

# REPORT ON ECONOMIC POSITION

## Macroeconomic environment

The world economy suffered a noticeable loss of momentum in the past year. A world economic growth rate of almost 3% was recorded for 2019, the lowest level since the 2008 /2009 financial and economic crisis. The trade policy tensions between the US and China, the United Kingdom's Brexit negotiations with the EU, and growing global uncertainty about domestic and international political measures prompted uncertainty among investors and resulted in a strong decrease in investment activity. The growth slowdown affected the advanced economies and the emerging economies in equal measure, although its significance for individual countries varied depending on the nature of their trading activities. These overall conditions have a more direct and stronger impact in cyclical industries. The pharmaceutical markets are characterized rather by the performance capability of national economies and, in particular, by the demographic development of societies.

The global pharmaceuticals market registered a growth rate of 6% in the 2019 financial year (source: IQVIA). This trend was driven by rising demand in the industrialized countries for innovative medicines. Due to the aging population in the industrialized nations and the better access to medical care, the industry's growth remained positive and surpassed the figure for the previous year 2018 of 5%.

Global pharmaceutical  
market continues  
to grow

The growth of healthcare costs as a percentage of gross domestic product in many countries means that governments and payors are under pressure to control and regulate healthcare expenditures even more strongly than in the past. Along with sustained public and political pressure to contain the prices for pharmaceuticals, many cost-cutting measures have been imposed by governments and other payors. These include government-imposed industry-wide price reductions, mandatory reference price systems, payors limiting access to treatments based on strict cost-benefit analyses, imports of medicines from lower-cost countries to more expensive ones, a shift of the burden of payment to patients through higher co-payment programs and mandatory substitution of generics for the patented equivalent. Furthermore, the protection of our intellectual property (patents, etc.) is under increasing pressure.

The animal health industry, which focusses on livestock and pets, is on a growth path in particular in the emerging markets, due to population growth and improving living standards for many people. The animal health market is characterized by rising demands for animal proteins and increasing popularity of pets. On the other hand there are challenges as well. Strategic growth requires constant research and development and innovations to be brought to market. In addition, a consolidation through mergers of suppliers as well as on customer side currently leads to increasing competition.

Boehringer Ingelheim responded to this environment with boldness and innovative spirit and remains determined to improve human and animal health even in difficult times.

In 2020, the International Monetary Fund and the OECD expect the world economy to register a growth rate similar to that in 2019. The continued loose monetary policy of the leading central banks and a preliminary partial agreement in the trade conflict between the US and China point to stabilization. The United Kingdom's expected orderly withdrawal from the EU should also have a positive impact. However, there are also many risks which, if realized, could lead to weaker growth. They include in particular the recently emerged viral disease COVID-19 (coronavirus), which could have drastic consequences for people and the world economy, a repeated escalation in the trade dispute, a worsening of geopolitical tensions, a spillover of the industrial sector's weakness into the overall economy and weather-related natural disasters.

Due to its global activities, Boehringer Ingelheim is depending on currency developments, in particular regarding the USD and the Japanese Yen. In addition, the Chinese renminbi increases in importance. All currencies with major significance for Boehringer Ingelheim had a positive impact on the sales in the past year. Significant currency risks are hedged through suitable financial instruments.

#### Currency development

Average rate - basis: EUR 1	2019	2018	Effect on net sales (in million EUR)
US dollar	1.12	1.18	377
Japanese yen	122.06	130.41	89
Chinese renminbi	7.73	7.81	7

#### Earnings position

Our guiding principle of "Value through Innovation" and our long-term corporate strategy are intended to secure the company's independence. Improving human and animal health based on new, future-oriented therapies in areas with high medical need are at the core of Boehringer Ingelheim's strategic focus. This requires a stable earnings position and a solid financing base in the near term.

**19**  
billion EUR in sales

Boehringer Ingelheim recorded net sales of 18,997 million EUR in the 2019 financial year, which corresponds to an increase of +8.6% compared with the previous year's level of 17,498 million EUR. The exchange rate development on the foreign exchange markets and the associated exchange rate effects had a positive impact on the sales trend. Adjusted for these effects, the Group grew by +5.7%.

With sales of 8,830 million EUR and a share of around 46% of overall sales, the Americas region remains Boehringer Ingelheim's key sales market. For the Americas region, sales increased by +9.2% year-over-year (currency-adjusted +4.7%). Sales in the Europe region rose by +7.0% to 5,689 million EUR (currency-adjusted +6.9%). The Group thus achieved 30% of its sales in this region. This growth was driven by the markets in Germany, Spain and Great Britain, as well as Russia and Poland, while the French market was unable to match the previous year's sales volume. The Asia/Australia/Africa (AAA) region also realized strong growth of +9.4% (currency-adjusted +6.4%). Revenues of 4,478 million EUR were generated in this region, corresponding to a 24% share of the Group's total revenues. The strategically important Chinese market provided 5.2% of the company's overall sales volume, which represents a currency-adjusted increase of +5.1% year-over-year. The growth in the Animal Health business in China was negatively affected by the outbreak of African swine fever.

Net sales by region (in million EUR)

	2019	2018	Change	currency adjusted
Americas	8,830	8,088	+9.2%	+4.7%
Europe	5,689	5,316	+7.0%	+6.9%
Asia/Australia/Africa (AAA)	4,478	4,094	+9.4%	+6.4%

Growth in all regions

Supported by good results from clinical trials as well as by cooperations with our external partners, we placed new products on the market and successfully pushed ahead with well-established products in our Human Pharma business. On the other hand the results of our Animal Health business were negatively affected by the outbreak of African swine fever in Asia in particular, but also increasing consolidation in the animal health industry.

Key figures (in million EUR)	2019	2018	Change
Net sales	18,997	17,498	+8.6%
Operating income	3,782	3,472	+8.9%
Return on net sales	+19.9%	+19.8%	
Income before taxes	3,496	3,176	+10.1%
Income after taxes	2,721	2,075	+31.1%

The materials ratio (taking into consideration the change in inventory) rose slightly to 14.2% (2018: 13.5%). This was mainly attributable to increased destruction costs due to African swine fever. The personnel expenses rose at a disproportionately slower rate than revenues, which was also related to high extraordinary effects in the previous year. The company's workforce once again increased in 2019, particularly at its strategic facilities.

Amortization and depreciation increased in comparison to 2018. In the past financial year, this item included adjustments to intangible fixed assets in the Human Pharma and Animal Health businesses as well as impairments losses on tangible fixed assets. Other operating expenses rose disproportionately due to increased investment in research and development, services purchased for other projects and higher currency losses (also from hedging) year-over-year.

The operating income in 2019 included extraordinary effects resulting from impairment losses on intangible fixed assets, restructuring measures and integration costs as well as reversals of provisions, amounting to a total of –163 million EUR (2018: –420 million EUR). The previous year's operating income was surpassed, thanks primarily to the positive operating trend in our Human Pharma business. Boehringer Ingelheim recorded an operating income of 3,782 million EUR, corresponding to a return on sales of 19.9% (2018: 19.8%).

Income before taxes increased, due to higher operating income and financial income. The financial income remains strongly adversely affected due to the further decline in the discount rate for pensions and similar obligations and amounts to –369 million EUR. The financial income improved overall due to gains from plan assets to cover pensions and similar obligations.

Income after taxes was significantly higher (+31.1%) than in the previous year and reflected the favorable course of business. It should be pointed out that the previous year was particularly burdened by strong aperiodic tax expenses.

It must be noted 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. Taking this specificity into account, the actual tax ratio is markedly higher than the figure shown in the profit and loss statement.

**2,721**  
million EUR  
Group profit

Despite challenging market conditions in some business areas, the Boehringer Ingelheim Group registered a positive performance in the 2019 financial year. Following a Group profit of 2,075 million EUR in the previous year, in 2019 this figure increased considerably and amounted to 2,721 million EUR.

### Development of the businesses

In the past financial 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)

	2019	2018	Change	currency adjusted
Human Pharma	13,961	12,559	+ 11.2%	+ 8.0%
Animal Health	4,035	3,960	+ 1.9%	- 0.7%
Biopharmaceutical Contract Manufacturing	786	734	+ 7.1%	+ 7.1%
Other sales	41	40	+ 2.5%	+ 3.4%
Discontinued Operations	174	205	- 15.1%	- 14.6%

#### Human Pharma

With around 74% of total Group revenue, Human Pharma was the main pillar of Boehringer Ingelheim's business activities. Human Pharma sales amounted to 13,961 million EUR in 2019. This is equivalent to growth of +11.2% (currency-adjusted +8.0%) compared with the previous year. This positive sales trend resulted from the solid market position of established medicines, yet was driven as well by the products in the JARDIANCE®-family and OFEV®. The company achieved growth year-over-year in all regions. Despite the price pressure – particularly for established medicines – Boehringer Ingelheim successfully held its own and continued to pursue the reorganization of its Human Pharma product portfolio as planned.

In 2019, the type 2 diabetes medicine JARDIANCE® was the company's biggest revenue contributor for the first time. We achieved sales of 2,152 million EUR with JARDIANCE® in the reporting period, which corresponds to an increase of +47.3% compared with the previous year's 1,461 million EUR.

Boehringer Ingelheim's second-strongest product in terms of sales in the past year was SPIRIVA®, which is used to treat chronic obstructive pulmonary disease (COPD). This generated a sales volume of 2,058 million EUR, which was lower than the previous year's level (2,412 million EUR) as expected in view of the product's life cycle.

Human Pharma grows in  
all regions

TRAJENTA® and JENTADUETO®, for the treatment of type 2 diabetes, registered a sales volume of 1,559 million EUR, a growth rate of +11.6%.

In the 2019 financial year, the anticoagulant PRADAXA® achieved a +2.9% increase on the previous year's figure of 1,486 million EUR. With a sales volume of 1,529 million EUR, this medicine remains one of Boehringer Ingelheim's biggest revenue contributors.

OFEV® registered a growth rate of +31.6% and contributed 1,491 million EUR to the company's successful sales result. The product is used for the treatment of idiopathic pulmonary fibrosis and to an increasing extent also for SSc-ILD.

MICARDIS®, which is used for treatment of high blood pressure, recorded further growth despite increasing generic competition. The product family achieved sales of 734 million EUR (2018: 689 million EUR).

For ACTILYSE® we were able to increase sales by 67 million EUR to 448 million EUR. Since having been launched in 1987 more than 7,500,000 patients were benefiting from the medication. Despite having lost its patent protection more than a decade ago, the biopharmaceutical remains the only available option for immediate treatment in cases of ischaemic stroke worldwide.

Risankizumab, a medication for treatment of plaque-psoriasis, which was mainly developed by Boehringer Ingelheim, is marketed globally through our partner AbbVie under the brand name SKYRIZI®.

Net sales (in million EUR)

	2019	2018	Change
JARDIANCE®	2,152	1,461	+47.3%
SPIRIVA®	2,058	2,412	-14.7%
TRAJENTA® / JENTADUETO®	1,559	1,397	+11.6%
PRADAXA®	1,529	1,486	+2.9%

**47.3%**  
growth of JARDIANCE®

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 40%. Here, Boehringer Ingelheim generated sales of 5,576 million EUR, which corresponds to an increase of 9.2% compared with the previous year (currency-adjusted +3.6%).

The EUCAN region (Europe, Canada, Australia and New Zealand), our second-biggest market, accounted for 31%, with revenues of 4,381 million EUR. Sales increased by +9.6% compared to 2018 (3,999 million EUR). Exchange rate effects did not have any significant influence on the sales trend here.

**Strong sales increase  
in the company's  
emerging markets**

In the past year, the company's emerging markets registered strong sales growth of +19.9% (currency-adjusted +20.1%). The People's Republic of China was a key driving force in the region, with a currency-adjusted growth rate of +21.2%. Sales rose from 2,296 million EUR in the previous year to 2,753 million EUR in 2019.

In Japan, sales increased by +7.8% to 1,251 million EUR (currency-adjusted +1.1%). Sales in the previous year had amounted to 1,160 million EUR.

**Net sales by region (in million EUR)**

	2019	2018	Change
USA	5,576	5,104	+9.2%
Europe/Canada/Australia/New Zealand (EUCAN)	4,381	3,999	+9.6%
Emerging Markets	2,753	2,296	+19.9%
Japan	1,251	1,160	+7.8%

**Animal Health**

The volume of sales in the Animal Health business amounted to 4,035 million EUR in 2019. This represents a change of +1.9% over the previous year (currency-adjusted -0.7%).

**Net sales (in million EUR)**

	2019	2018	Change
NEXGARD®	740	610	+21.3%
FRONTLINE®	379	399	-5.0%
HEARTGARD®	318	299	+6.4%
INGELVAC CIRCOFLEX® / FLEXCOMBO®	238	303	-21.5%

The sales figures were negatively affected by the outbreak of African swine fever in Asia. In the TCM (China, Taiwan and Hongkong) region alone, sales plunged by -32.6%. The swine vaccine INGELVAC CIRCOFLEX® accordingly registered a strong decline in sales (-21.5%) to 238 million EUR.

Increasing price pressure was perceptible on both the company's pets segment and its swine segment. While the FRONTLINE® antiparasitic achieved sales of 379 million EUR, this was -5.0% lower than in the previous year.

**Antiparasitics  
drive growth**

The company's NEXGARD® product performed strongly in this environment, with revenues of 740 million EUR (2018: 610 million EUR) and +21.3% growth year-over-year.

HEARTGARD®, another antiparasitic, achieved +6.4% growth and registered sales of 318 million EUR (2018: 299 million EUR).

The horse segment was very successful in 2019 as well and realized currency-adjusted growth of +5.7% year-over-year.

**Net sales by region (in million EUR)**

	2019	2018	Change
USA	1,768	1,627	+ 8.7%
EUCAN	1,233	1,211	+ 1.8%
ALAMEA*	829	818	+ 1.3%
TCM**	205	304	- 32.6%

\* Asia, Latin America, Middle East and Africa

\*\* China, Taiwan and Hongkong

**Biopharmaceutical Contract Manufacturing**

The Biopharmaceutical Contract Manufacturing business maintained its positive performance trend. The order situation for the entire business has developed positively, resulting in a high level of capacity utilization for biopharmaceutical production.

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 amongst others obligations and income resulting from the business swap with Sanofi. These are in particular service agreements as well as the BUSCOPAN® business in Brazil, which was excluded from the sale.

**Financial position**

(in million EUR)	2019
<b>Financial funds as of 1.1.</b>	<b>9,454</b>
Cash flow from operating activities	3,344
Cash flow from investing activities	- 1,421
Cash flow from financing activities	- 1,029
<b>Change in financial funds from cash relevant transactions</b>	<b>894</b>
Change in financial funds due to change of consolidated companies or exchange rate movements	29
<b>Financial funds as of 31.12.</b>	<b>10,377</b>

Boehringer Ingelheim's financial management instruments and methods are aimed at securing liquidity and ensuring appropriate management of financial risks. Our financial activities are therefore geared towards supporting the business strategy.

Cash inflow from operating activities amounted to 3,344 million EUR, which represents an increase of 356 million EUR in comparison to the previous year (2,988 million EUR). This is attributable to the positive business trend. Cash flow from investing activities amounted to 1,421 million EUR which is a similar level as prior year (2018: 1,403 million EUR) and reflects the significant investments in external innovation and strategic infrastructure to support the business activities.

High capital  
expenditure volume

Of particular note are our R&D investments with Amal Therapeutics SA and our cooperations with Yuhan Corporation or SoundTalks NV, which strengthen our R&D pipeline. In addition, major investments in fixed assets could reach further milestones in 2019. One investment was made in the expansion of the production facilities in Vienna for our Biopharmaceutical Contract Manufacturing. In 2019, around 230 million EUR were invested in the facility, which has been a significant site for the Group for decades. Boehringer Ingelheim made another major investment in its new development center for biopharmaceutical medicines (BDC) in Biberach. The BDC, whose foundation stone was laid in 2018, is intended to create 100 new jobs and to increase our contract manufacturing capacity. It focuses on therapeutic areas where the need for treatment is high, such as cancer and immunological diseases. More than 60 million EUR were invested in the BDC in 2019, supplementing a number of significant investments in Boehringer Ingelheim's global biopharmaceutical development network. A further important investment was made in the Animal Health business. In 2019, nearly 50 million EUR were invested in a new antigen production center for regulatory animal disease control in Jonage, France. The foundation stone for this major high-tech facility was laid in fall 2018. Planned overall investments in this production center of more than 200 million EUR are intended to enable our Animal Health business to respond to the growing demand for medicines to treat foot-and-mouth and bluetongue disease.

Cash outflow from financing activities in the amount of 1.029 million EUR comprises payments of 400 million EUR to the charitable Boehringer Ingelheim foundation, which supports basic research in the fields of natural and life science, payments to the parent company's shareholders, that are mainly used to pay personal taxes arising from Group business activities, and interest paid. In addition, a German private placement was repaid. Overall, after taking into consideration exchange effects and changes within the group of consolidated companies, this led to an increase in the Boehringer Ingelheim Group's financial funds of 923 million EUR to 10,377 million EUR.

## Net assets position

(in million EUR)	31.12.2019	31.12.2018	Change	Change in %
<b>Assets</b>				
Intangible and tangible assets	9,636	9,400	236	
Financial assets	9,162	6,058	3,104	
<b>Fixed assets</b>	<b>18,798</b>	<b>15,458</b>	<b>3,340</b>	<b>+21.6%</b>
Inventories	3,563	3,312	251	
Trade accounts receivable	4,196	3,540	656	
Other receivables and other current assets	1,241	1,033	208	
Cash and cash equivalents	2,195	4,303	-2,108	
<b>Current assets</b>	<b>11,195</b>	<b>12,188</b>	<b>-993</b>	<b>-8.1%</b>
Other assets	3,487	3,242	245	
<b>Total assets</b>	<b>33,480</b>	<b>30,888</b>	<b>2,592</b>	<b>+8.4%</b>
<b>Equity and liabilities</b>				
<b>Group equity</b>	<b>14,681</b>	<b>12,334</b>	<b>2,347</b>	<b>+19.0%</b>
Provisions for pensions and similar obligations	5,185	4,712	473	
Tax provisions and other provisions	9,336	9,040	296	
Accounts payable and loans	1,715	2,142	-427	
– thereof residual term over 1 year:	83	45	38	
<b>Liabilities</b>	<b>16,236</b>	<b>15,894</b>	<b>342</b>	<b>+2.2%</b>
Other liabilities and difference from capital consolidation	2,563	2,660	-97	
<b>Total equity and liabilities</b>	<b>33,480</b>	<b>30,888</b>	<b>2,592</b>	<b>+8.4%</b>

In the 2019 financial year, Boehringer Ingelheim's total assets amounted to 33,480 million EUR, an increase of 2,592 million EUR as compared with the previous year. 923 million EUR of this growth was attributable in particular to an increase in the volume of financial funds (cash and long-term securities), which grew significantly due to the positive cash flow in the financial year. Long-term financial assets increased in this regard through the investment of cash in securities. Despite scheduled and unscheduled depreciation and amortization, tangible and intangible fixed assets increased due to the high volume of capital expenditure in the strategic expansion of the company's business, including in Human Pharma research, Biopharmaceuticals in Vienna (Austria) and Fremont, California (USA), and Animal Health in France. Working capital (receivables and inventories) especially picked up as a result of the positive sales trend in the US and increased inventories in the US, France and Greece. The other assets likewise increased thanks to the positive market trend for plan assets for pensions and similar obligations in the US. Another reason for the increase was higher deferred tax assets that resulted from temporary differences between the values in the consolidated companies' tax balance sheets and the values in the consolidated balance sheet. Currency effects also resulted in increases for all items on the asset side of the balance sheet.

Equity ratio increases  
despite higher  
balance sheet total

Group equity increased by 2,347 million EUR due to the Group profit in 2019 as well as positive currency differences. Equity amounted to 14,681 million EUR as of December 31, 2019. The equity ratio thus improved to around 44% (December 31, 2018: 40%) 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 in the long term. The total of these three items amounted to 19,949 million EUR as of December 31, 2019, representing a share of 60% of the total assets. Consequently, as in the previous year, long-term disposable capital covers all intangible and tangible fixed assets as well as working capital.

Pension provisions increased in Germany, particularly due to a lower actuarial discount rate. The increase in other provisions correlates to the change in net sales, since the key elements represent provisions for discounts in the USA. The decrease in liabilities relates to other liabilities, liabilities to banks, and trade accounts payable, mainly in Germany. In 2019 the German private placement, which had been issued in 2009, was completely repaid. The other liabilities declined, mainly due to the release of the difference arising from capital consolidation and lower deferred tax liabilities from temporary differences.

Boehringer Ingelheim's positive performance in the 2019 financial year is also reflected in its net assets position. Boehringer Ingelheim remains a profitable and soundly financed company, making considerable capital expenditure and high R&D expenditure to ensure long-term growth and thus 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 and innovative pharmaceutical company, the current research and development activities are naturally considered a relevant opportunity. Relevant projects have already been outlined in the Research and Development (R&D) chapter. We also look at digitalization as 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.

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. 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. 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 a moderate and abstract risk.

#### *Patent protection risks*

Protection of innovations through trademark and patent rights is of particular importance to Boehringer Ingelheim as a research 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 moderate risks are regarded as concrete.

### 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.

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. As a result, we see the risk as concrete.

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 countermeasures described above, the risk is regarded as moderate and concrete.

### 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 are still considered high and abstract. 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 on many sales 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 the state reimbursement systems. Boehringer Ingelheim is therefore 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, financial or earnings position that could jeopardize the continued existence of Boehringer Ingelheim.

## REPORT ON EXPECTED DEVELOPMENTS

Boehringer Ingelheim can look back on a successful 2019 financial year in which we made our innovations available to more patients than in the previous year and contributed significantly to the health of livestock and pets. We also achieved our ambitious targets – both in absolute numbers and in comparison with our competitors – while creating a foundation for sustainable corporate development and long-term growth.

We look ahead optimistically to 2020 and will work passionately to continue improving human and animal health. However, the increasingly difficult market environment for the pharmaceutical industry, combined with the volatility of the economic environment, also makes planning capability increasingly challenging. The outbreak of the new coronavirus poses another multi-dimensional challenge: for our Chinese employees, for our global production network and for our global supply chain. In this rapidly evolving environment, we will take advantage of the opportunities that present themselves again in 2020 and respond courageously to risks that materialize.

To ensure our continued success on the market, and with a view to our competitiveness, it remains important that we preserve and make use of our financial flexibility for growth and innovation. In view of the many changes unfolding in health care systems which are faced with aging populations and increasing price pressure in many major markets – especially, but not exclusively, the core markets in the USA, Japan, Europe and China – we expect only limited growth impetus for the pharmaceutical industry in the coming year. We plan to focus even more strongly on our Animal Health customers and on solutions to their challenges, as well as on innovation in our product portfolio. The spread of the African swine fever to further countries remains a risk. Our priorities in our biopharmaceuticals business are supplying the market with our own products and contract manufacturing for customers. Beyond this, there is the completion of our LSCC large-scale production facility in Vienna (Austria). For 2020, 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 2019, is compatible with our strategic focus on continuing to drive growth and the flow of new products. We achieved our goal of managing some of our R&D through external innovation and general partnerships in 2019, and we will continue to pursue this strategy in 2020. We invest in our own and external R&D with care, 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.

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. In this context, the increasing cost pressure in health care systems as outlined above also has to be particularly emphasized. These systems are increasingly unwilling to make substantial investments in the development of new medicines and to contribute adequately to increased efficiency of the system as a whole. Animal Health research likewise requires major investments in both preventive research and diagnostic options. In conjunction with longer planning and development cycles for new products, this makes business less predictable; it requires us to quickly recognize and seize opportunities in both Human Pharma and Animal Health on the one hand, while subjecting costs and strategies to continual monitoring and adjustments on the other. To this end, we have launched initiatives over the past few years to accelerate our reaction to changes and to reduce organizational complexities as well as to lower our cost base in order to create potential for capital expenditure and to secure the company's long-term success.

Against the backdrop of a very successful 2019 and taking into account the expected economic and market environment, we expect operating income for 2020 on a comparable basis (adjusted for currency and extraordinary effects) to be on the level of the fiscal year 2019.

As a family-owned company, Boehringer Ingelheim's primary aim remains the creation of "Value through Innovation." Supported by long-term, sustainable organic growth, this vision will preserve the company's independence and competitiveness. We are confident that we will achieve our ambitious targets thanks to our great innovative strength based on a comprehensive portfolio of prospective products, our global presence and the support of our highly qualified and motivated employees in all of our businesses. We remain committed to our "Ambition 2025" and will research and develop innovative products and bring them to the market in areas where the medical need is high. We will break new ground with therapeutic approaches in both human and animal medicine. 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.