

# Group Management Report

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# Group Management Report

## Information about the Group

### The Group's business model

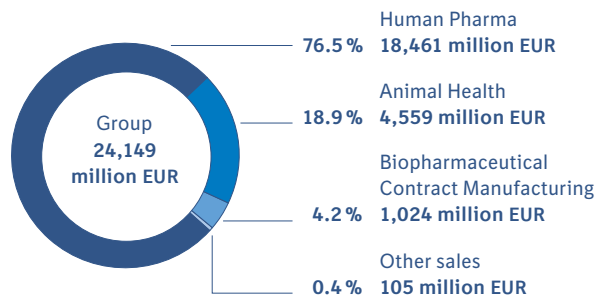
Boehringer Ingelheim develops breakthrough therapies that transform lives, today and for generations to come. Independent and family owned, we pursue our long-term vision to identify challenges and develop solutions in areas where the medical and therapeutic needs of patients are still unfulfilled or insufficiently addressed. Our aim is to transform the lives of patients – across generations. This goal inspires all of our over 53,000 employees to make a real and significant contribution to the life of humans and animals alike. Boehringer Ingelheim has stood for innovation for more than 135 years. One of our strategic pillars is to make long-term, competitive investments in innovation and patient well-being. This maxim makes us one of the most research-intensive companies in Germany – across all sectors.

The Human Pharma business is the mainstay of our activities and accounts for 76.5% of overall sales. This business area is underpinned by an innovative portfolio, and in many cases its products are standard treatments in medicine. Our research focuses on cardiovascular and metabolic diseases, oncology, respiratory diseases, immunology, diseases of the central nervous system (CNS), and retinal health.

**JARDIANCE® with two new indications in heart failure**

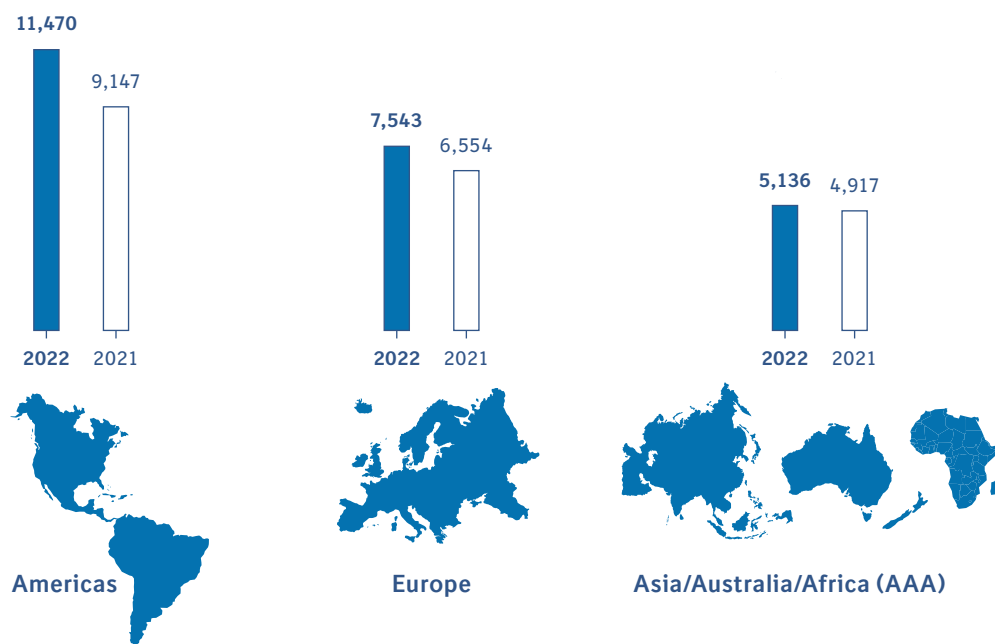
JARDIANCE® – a medicine for treatment of type 2 diabetes that also reduces the risk of cardiovascular diseases for type 2 diabetics with pre-existing cardiovascular conditions – was the Group's best-selling Human Pharma product in 2022.

### Net sales by business



## Net sales by region

in million EUR



At the beginning of 2022, JARDIANCE® was approved by the US (FDA) and the European (EMA) regulatory authorities for the treatment of heart failure with preserved ejection fraction. In addition, the effectiveness of JARDIANCE® against chronic renal failure was proven in the EMPA-KIDNEY study. 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) – recorded strong growth. 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 the 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 thrombo-embolic disorders. Another milestone was reached in September 2022 with the approval of SPEVIGO® (substance: spesolimab) in Japan and the USA. SPEVIGO® is the first product to receive FDA approval for the treatment of generalized pustular psoriasis (GPP) – a rare, life-threatening neutrophilic disease.

In its Animal Health business, Boehringer Ingelheim is a leading provider of vaccines and therapeutics. Our portfolio includes products for pets and horses as well as livestock: swine, ruminants, and poultry. Our core brands NEXGARD®, followed by FRONTLINE® and HEARTGARD®, are the foundation of our success in the pets segment. The product portfolio for horses was expanded in 2022 with the approval of RENTEND™ in Europe. RENTEND™ is the first approved product to enhance the healing of tendon and suspensory ligament injuries in horses, complementing another equine stem cell product from Boehringer Ingelheim, ARTI-CELL® FORTE, which is used to treat mild to moderate recurrent lameness associated with a non-septic joint inflammation in horses. 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.

Our Biopharmaceutical activities comprise the manufacture of our own human pharmaceutical products (such as ACTILYSE®, METALYSE®, PRAXBIND®, and SPEVIGO®) 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 2022 financial year, we achieved the majority of our sales in the regions of the Americas (47.5%) and Europe (31.2%). The Asia/Australia/Africa (AAA) region includes countries such as China and is of strategic significance for the Group’s future development, making up 21.3% of its sales.

## Research and development

Our goal is to research and develop innovative medicines and therapies for the treatment of diseases for which there are still no satisfactory treatments available. We aim to make a relevant contribution in areas where the need for treatment is high, as well as in the human pharmaceuticals segment and in the field of animal health.

**More than  
5 billion EUR  
invested in R&D**

We employed an average of 10,691 people in our global, cross-divisional research network in 2022. We are present in nine countries, with central 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). Through our activities at these locations, we are continuing to expand and renew our existing product portfolio in order to safeguard the Group’s organic long-term growth. Accordingly, we have increased our research and development (R&D) expenses in recent years – in the past four years, their growth has even outpaced our revenue trend. A total of approximately 5.0 billion EUR was invested in the R&D of new medicines in 2022. This is above the level of the previous year and corresponds to 20.9% of the Group’s net sales in 2022 (2021: 20.0%). Our R&D expenses in Human Pharma amounted to 4.6 billion EUR.

### Research and development

	2022	2021	2020	2019	2018
Expenses in million EUR	5,047	4,127	3,696	3,462	3,164
– as % of net sales	20.9	20.0	18.9	18.2	18.1
Human Pharma expenses in million EUR	4,583	3,710	3,283	3,042	2,780
– as % of Human Pharma net sales	24.8	24.3	22.8	21.8	22.1
Animal Health expenses in million EUR	464	416	412	419	384
– as % of Animal Health net sales	10.2	9.7	10.0	10.4	9.7
Average number of employees	10,691	10,109	9,504	9,154	8,552
Investments in tangible assets in million EUR (without investments in infrastructure)	298	242	181	183	136

Long-term collaborations with academic institutions and other public research institutions, biotech companies, and pharmaceutical companies are an integral part of our R&D work. In the scientific field, we are collaborating on over 150 joint projects with more than 120 academic institutions spanning four continents. We are continuously expanding and accelerating our R&D portfolio through cooperation and license agreements as well as acquisitions. Our long-term objective is for at least 30% of our pipeline to be based on external innovation. In this way, we are combining the strengths of our own research with our partners' strengths. The acknowledged high scientific standards, the business development relationships that we have forged over the years, and the early investments made by the Boehringer Ingelheim Venture Fund contribute significantly to this objective.

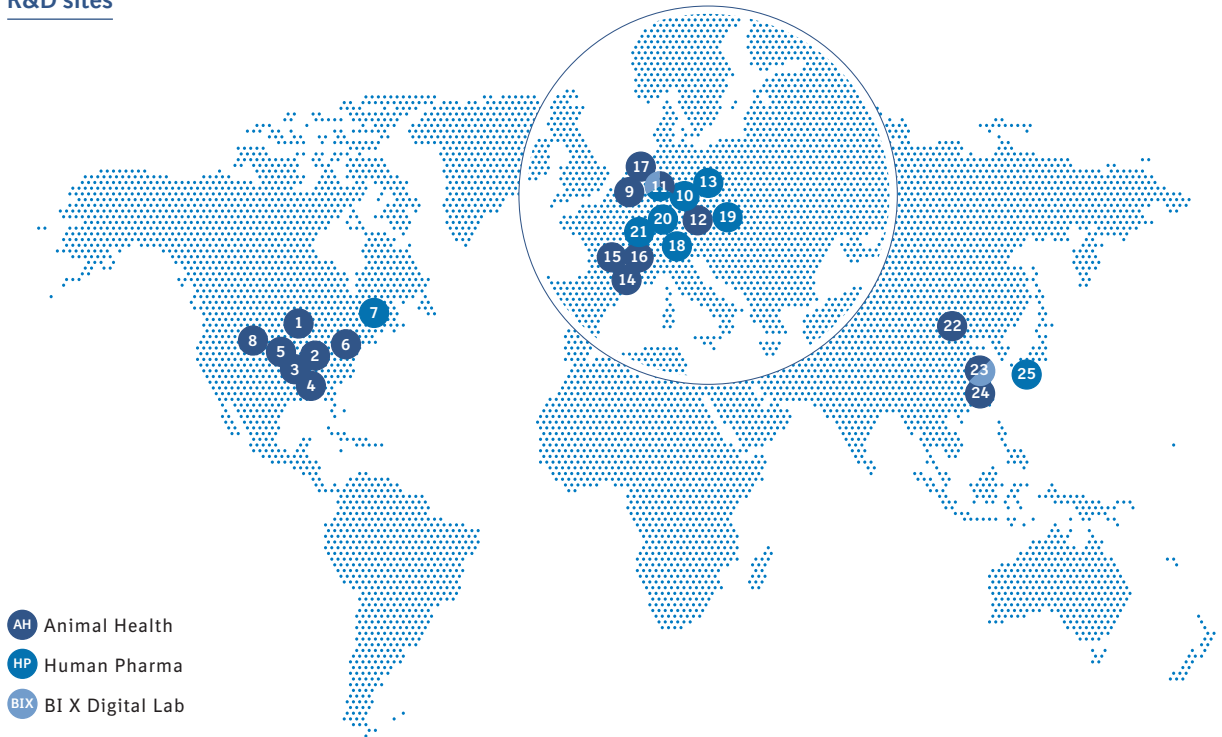
Boehringer Ingelheim also confirmed its attractiveness as a partner in 2022 through new partnerships and was able to strengthen the pipeline on this basis. For example, we are working with Lifebit Biotech, Ltd. – a biomedical data analytics provider – to build a scalable data, analytics, and infrastructure platform. The aim of this collaboration is to collect findings from large external biobanks, thereby accelerating the development of new drugs. Together with Evotec SE and bioMérieux, we also launched the company Aurobac Therapeutics SAS, which aims to develop novel antibiotic precision therapies to combat anti-microbial resistance (AMR). A new grant program in partnership with the University of Tübingen, Germany, aims to explore new approaches to improving human and animal health through AI and data science methods. After the successful start of an initial joint development in 2020, we also started another collaboration with the company Click Therapeutics, Inc., to develop another digital health application (*Digitale Gesundheitsanwendungen, DIGA*) for prescribing to patients with schizophrenia, which could be used alone or in combination with the drug therapy.

We have also established long-term partnerships in our Animal Health business. For example, we are collaborating with the biopharmaceutical company MabGenesis Inc. to accelerate the discovery and development of new monoclonal antibodies for potential canine therapies. A research cooperation for the development of small-molecule therapies in canine oncology was initiated with CarthroniX. This collaboration will focus on identifying new molecules to fight cancer in dogs.

One form of basic research started in 2021 is the three-year cooperation agreement with Google in the field of quantum computing. As part of our digital transformation strategy, this partnership aims to harness the computing power of this new technology and make it usable for Boehringer Ingelheim's R&D and thus pursue innovation in a more rapid and, above all, more precise manner, while conserving resources at the same time.

As our Digital Lab, BI X further expanded the capabilities for the development and approval of software medical devices and established itself as a center of excellence throughout the company in 2022. BI X is also systematically expanding its external innovation network and developing digital health products for the global market. A good example of this is Consanas Cloud: an intelligent digital platform for stroke patients that was recently launched in the Chinese market and provides access to state-of-the-art rehabilitation measures. Consanas Cloud supports patients and their relatives on the often difficult journey back to everyday life with digital diagnosis and treatment methods. This solution therefore represents a milestone in the development of digital health products in China.

R&D sites



- AH Animal Health
- HP Human Pharma
- BIX BI X Digital Lab

**Americas**

**USA**

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

**Europe**

**Belgium**

9. Evergem (AH)

**Germany**

10. Biberach (HP)
11. Ingelheim am Rhein (AH, HP, BI X)
12. Kathrinenhof-Rohrdorf (AH)
13. Ochsenhausen (HP)

**France**

14. Lyon – Boreal (AH)
15. Lyon – Porte des Alpes (AH)
16. Saint-Vulbas (AH)

**Netherlands**

17. Lelystad (AH)

**Austria**

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

**Switzerland**

20. Basel (HP)
21. Geneva (HP)

**Asia**

**China**

22. Beijing (AH)
23. Shanghai (AH, BI X)
24. Taizhou (AH)

**Japan**

25. Kobe (HP)

Since 2010, the Boehringer Ingelheim Venture Fund has driven innovation through investments in young companies that are carrying out research into early-stage science and technology. Our Venture Fund invests in biotech startup companies with innovative concepts and technologies that have the potential to provide ground-breaking new therapeutic platforms. The Venture Fund also creates companies when it identifies research projects in universities and academic institutions. In 2021, we established a Venture Fund Asia alongside our existing venture funds in Germany and the USA.

The Research Institute of Molecular Pathology (IMP) in Vienna is a biomedical research institute and a Group company of Boehringer Ingelheim. With more than 220 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 leading institutions of its kind: as of late 2022, ten of its 15 group leaders had received at least one of the prestigious grants awarded by the European Research Council (ERC). Seven of its 15 group leaders have been elected full members of the European Molecular Biology Organization (EMBO).

With its open innovation platform [opnMe.com](https://www.opnme.com), Boehringer Ingelheim is contributing to the process of scientific collaboration in the pharmaceutical world: over 70 molecules in the preclinical stage are currently being made available to academic researchers around the world free of charge. This form of collaboration has already enabled new scientific findings in the field of oncology, for example.

Boehringer Ingelheim's R&D activities – the preclinical as well as clinical R&D – are the basis of our sustainable success. The Group's positive business development over the past years has been underpinned by an organic process of renewing its portfolio based on its own R&D activities. In-house R&D – supplemented by external cooperation and partnerships – will also continue to be a top priority in the future. The high level of innovation is reflected in our pipeline. After three FDA Breakthrough Therapy Designations (BTD) in 2021, another BTD for BI 1015550 – a novel experimental phosphodiesterase 4B (PDE4B) inhibitor – was confirmed in the 2022 financial year. The decline in lung function in patients with idiopathic pulmonary fibrosis (IPF) can be reduced with the help of BI 1015550.

### Human Pharma

In 2022, the Human Pharma business and R&D contributed to our purpose to transform lives for generations. We achieved important milestones in the pipeline and launches to new indications within different disease areas such as cardiometabolic diseases, oncology, respiratory diseases, immunology, and diseases of the central nervous system (CNS).

In 2022, the Human Pharma portfolio included overall around 90 clinical and preclinical projects based on more than 50 new molecules.

**More than 50 new  
active substances in  
our Human Pharma  
portfolio**

## Development pipeline end of 2022

Cardiometabolic diseases	Phase
GLP-1/FGF21 agonist*	Phase I
> Heart disease modulator*	Phase I
> BI 764198* TRPC6 Inhibitor   FSGS	Phase II
> BI 456906* GLP1/GCGR agonist   NASH	Phase II
BI 456906* GLP1/GCGR agonist   Obesity	Phase II
> BI 685509 sGC activator   CSPH	Phase II
> Empagliflozin + BI 690517 SGLT2 inhibitor + Aldosterone synthase inhibitor   CKD	Phase II
Empagliflozin / New indication** SGLT2 inhibitor   Post MI	Phase III
> Empagliflozin / New indication SGLT2 inhibitor   CKD	Registration
Oncology	Phase
B7-H6/CD3 T-cell engager*	Phase I
DLL3/CD3 T-cell engager*	Phase I
CD137/FAP agonist*	Phase I
Ezabenlimab (PD-1 antibody)†	Phase I
HER2 TKI	Phase I
KISIMA <sup>®</sup> cancer vaccine*	Phase I
KRAS (G12C) inhibitor*	Phase I
MDM2-p53-antagonist*	Phase I
> VSV-GP*	Phase I
> Heterologous prime boost vaccine*	Phase I
SIRP $\alpha$ -antagonist*	Phase I
pan KRAS SOS1 inhibitor *†	Phase I
TRAILR2/CDH17-antibody	Phase I
> BI 907828 MDM2-p53-antagonist*   DDLPS	Phase II
Respiratory diseases	Phase
> Ion channel inhibitor	Phase I
> Lysophospholipase inhibitor	Phase I
> BI 1291583* CatC inhibitor   nCFB	Phase II
> BI 1015550 PDE4B inhibitor   PPF	Phase II
> BI 1015550 PDE4B inhibitor   IPF	Phase III



## Development pipeline end of 2022 (continued)

Immunology	Phase
PD-1 antibody	Phase I
> BI 706321 Kinase inhibitor   CD	Phase II
Spesolimab IL36R antibody   HS	Phase II
> Spesolimab IL36R antibody   GPP flare prevention	Phase II
> Spesolimab*** IL36R antibody   GPP flare treatment	Registration
Central nervous system diseases	Phase
Phosphodiesterase inhibitor*	Phase I
> Digital therapeutic*	Phase I
NMDA regulator	Phase I
BI 1358894* MDD	Phase II
BI 1358894 BPD	Phase II
> BI 1358894* PTSD	Phase II
Iclevartin GlyT1 inhibitor   CIAS	Phase III
Retinal diseases	Phase
> Phospholipid modulator	Phase I
> Vascular modulator	Phase I
> BI 765128 Ischemia modulator   DMI	Phase II
BI 764524 Sema3A antibody   DMI	Phase II

† Being investigated only in combination with other therapies

> Key Pipeline Advances

o Breakthrough Therapy Designation granted by the US Food and Drug Administration in 2022

\* Partnered projects or acquired assets

\*\* Prevention of HF post MI

\*\*\* Approved in the US, Europe, China, and Japan for the treatment of generalized pustular psoriasis (GPP) flares in adults.

## Indication abbreviations:

BPD	Borderline personality disorder	DDLPS	Dedifferentiated liposarcoma	IPF	Idiopathic pulmonary fibrosis
CD	Crohn's disease	DMI	Diabetic macular ischemia	MDD	Major depressive disorder
CIAS	Cognitive impairment associated with schizophrenia	FSGS	Focal segmental glomerulosclerosis	MI	Myocardial infarction
CKD	Chronic kidney disease	GPP	Generalized pustular psoriasis	NASH	Non-alcoholic steatohepatitis
COPD	Chronic obstructive pulmonary disease	HF	Heart failure	nCFB	Non-cystic fibrosis bronchiectasis
CSPH	Clinically significant portal hypertension	HS	Hidradentis suppurativa	PPF	Progressive pulmonary fibrosis
				PTSD	Post-traumatic stress disorder

### Cardiometabolic diseases

The year 2022 began with an indication extension for empagliflozin in adults suffering from heart failure with preserved ejection fraction. The EMA and US FDA approvals were based on the first clinically proven benefit in patients with symptomatic chronic heart failure including those with preserved ejection fraction.

In addition, in 2022, the phase III EMPA-KIDNEY study was stopped early due to the positive efficacy of empagliflozin in adults with chronic kidney disease. The results of the study, presented at the ASN congress, showed superior benefits of empagliflozin in patients with chronic kidney disease (CKD) versus placebo. Submission for marketing authorization for this new empagliflozin indication in CKD with regulators took place in core markets and is planned worldwide.

Moreover, results from the DINAMO trial were presented at the IDF congress and showed that empagliflozin is the first SGLT2 inhibitor to show a statistically significant reduction in blood sugar levels in children and adolescents with type 2 diabetes.

In 2022, we completed the phase II trial of the glucagon receptor /GLP-1 receptor dual agonist BI 456906 in people with obesity. BI 456906 is also being investigated in another phase II trial in people with NASH and liver fibrosis (F1-F3). The aldosterone synthase inhibitor BI 690517 is investigated in a phase II trial alone or in combination with empagliflozin in people with chronic kidney disease with and without type 2 diabetes. BI 690517 has received Fast Track Designation from the US FDA in October 2022.

### Oncology

In Oncology, our aspiration is to improve the lives of people with cancer by delivering meaningful advances with the ultimate goal to significantly and sustainably improve life expectancy in a number of types of cancer in the long term. We have a robust pipeline of homegrown and licensed/partnered clinical assets with a diverse range of mode of actions, including cancer cell-directed and immuno-oncology investigational therapies. The smart combination of these approaches may offer the greatest benefit for people living with cancer.

In 2022, we have started two pivotal phase II/III trials with the MDM2-p53 antagonist BI 907828. The so-called Brightline-1 trial investigates BI 907828 compared to doxorubicin as a first-line treatment for people with advanced dedifferentiated liposarcoma – a rare and aggressive form of liposarcoma. The US FDA has granted Orphan Drug Designation to BI 907828 for the treatment of soft tissue sarcoma. In Brightline-2 we are investigating the drug as second-line treatment and beyond, for people with a specific form of biliary tract carcinomas or pancreatic cancer.

### Respiratory diseases

Another focus for Boehringer Ingelheim is the R&D of new therapeutic options for people with respiratory diseases where there is high unmet need. Since 2014, OFEV® (nintedanib) has been a treatment option for idiopathic pulmonary fibrosis (IPF) to slow down the decline in lung function.

OFEV® now is approved as a treatment for IPF in 89 countries, for SSc-ILD (systemic sclerosis-associated interstitial lung disease) in 85 countries, and for PF-ILD (progressive fibrosing interstitial lung disease) in 83 countries. In 2022, we published results from the InPedILD™ trial,

investigating the dosing and safety profile of nintedanib in children and adolescents. Based on these findings, regulatory applications were submitted to the European Medicines Agency and will be followed by a submission to the US FDA. If accepted, nintedanib would become the first approved treatment for pediatric patients with fibrosing interstitial lung disease, addressing a high unmet need for this underserved patient population.

Despite these advances in therapy, new treatments are urgently needed to complement existing therapies and to help stop, rather than slow, disease progression.

In 2022, the company reported promising 12-week phase II trial data with BI 1015550, a novel investigational phosphodiesterase 4B (PDE4B) inhibitor, which showed a reduction in the rate of lung function decline in patients with idiopathic pulmonary fibrosis (IPF). The potential new treatment builds on our leadership in lung fibrosis and BI 1015550 will be further investigated in two phase III pivotal clinical trials initiated in 2022: FIBRONEER™-IPF in patients with idiopathic pulmonary fibrosis and FIBRONEER™-ILD in people living with other progressive fibrosing interstitial lung diseases.

### **Immunology**

Immunological diseases greatly impact patients' lives both physically and psychologically. Boehringer Ingelheim is dedicated to discovering and developing first-of-their-kind therapies for these serious inflammatory diseases.

With a deep understanding of molecular pathways, we are pioneering scientific breakthroughs that target, repair, and prevent inflammatory diseases of the skin, gut, and joints. Spesolimab, marketed as SPEVIGO®, is the most advanced immunological compound out of the current Boehringer Ingelheim pipeline and just received approvals in major markets for treatment of GPP flares in adults. In 2022, we received marketing authorization with the US FDA, EMA, China and Japanese authorities. The approvals are based on positive phase II data from our EFFISAYIL 1 trial.

### **Central nervous system diseases**

Boehringer Ingelheim is evolving mental health research to enable people to thrive so that people with mental health conditions and their carers benefit from a treatment experience that provides more predictable outcomes. Within our approach, we link behavior to the underlying neurobiology to develop targeted therapies. Through innovative approaches and digital therapeutics, we strive to enable people with mental health conditions to create more meaningful connections to their lives, loved ones, and society.

One example of this approach is BI 1358894 that we currently further investigate in clinical phase II trials in people living with borderline personality disorder, post-traumatic stress disorder, and major depressive disorder. In 2022, BI 1358894 received fast-track-designation by the US FDA for post-traumatic stress disorder in addition to borderline personality disorder in 2020, and we have completed the phase II trial of the compound in this indication in January 2023.

### Animal Health

In line with the above-mentioned goal of operating in areas of high medical need, we also concentrate in Animal Health on the discovery and development of highly innovative treatments and preventive therapies. Among other things, this includes therapeutics for oncology and immunology, new chemical entities, and new methods of control to counter resistance in parasites, as well as new tools and technologies to improve the prevention of infectious diseases. The current portfolio includes innovative vaccines and parasiticides for the protection of pets and livestock as well as pharmaceutical products for the treatment of chronic diseases. Our research increasingly incorporates new approaches and technologies such as the use of stem cells and monoclonal antibodies.

Our innovation strategy is built on a scientific approach to the investigation of the causes and mechanisms of diseases across multiple animal species, leading to the discovery of new ways to mitigate those causes or intervene in the disease process. Our three focus areas in R&D are infectious disease, noninfectious disease, and parasiticides. In our work we also use experience from Human Pharma research as well as from external partners in areas outside Animal Health.

Our 17 R&D sites are organized into six regional innovation centers located in the USA, Europe, and China. This ensures the concentration of critical mass and expertise needed to deliver therapies to customers in our key geographies. Designated sites within each region serve as a focus for specific segments of our overall strategy. Our footprint strengthens local execution and facilitates regional external networks and partnerships.

### Synergies through collaboration of Human Pharma and Animal Health

A key advantage for Boehringer Ingelheim is that we retain both Human Pharma and Animal Health divisions. Our teams in Human Pharma and Animal Health work together to share knowledge about specific disease mechanisms, chemistry, compounds, cutting edge techniques, and more. In previous years, we successfully introduced products such as ASERVO® EQUIHALER® and SEMINTRA® that resulted from the synergies between our Human Pharma and Animal Health teams. With additional promising compounds in our pipeline, we expect further innovation through this connection, particularly in the area of therapeutics.

External collaborations also play a key role. In 2022, we initiated new strategic partnerships, including a partnership with CarthroniX, a biopharmaceutical company focused on developing small molecule-based therapies for degenerative and aging-related diseases. The collaboration will focus on identifying new molecules to target cancers in dogs. Boehringer Ingelheim will test a select group of small molecules provided by CarthroniX with the goal of determining their impact on canine cancers. We also entered a partnership with MabGenesis Inc., a private biopharmaceutical company headquartered in Yokohama, Japan. This collaboration aims to discover innovative canine therapeutic antibodies, using MabGenesis Inc.'s platform technologies. Furthermore, we continue to work with key research institutions around the globe to develop new solutions to unmet medical needs: for example, our efforts to develop more effective approaches to prevent African Swine Fever, which continues to cause massive losses in pig populations, have led to partnerships with the Friedrich-Loeffler-Institut, the Pirbright Institute, and Oxford University, among others.

In 2022, we initiated more than 630 research, development, and clinical studies worldwide and were awarded more than 180 product registrations. Key new approvals in 2022 include RENUTEND™ in Europe, a new stem cell therapy to improve the healing of tendon and suspensory ligament injuries in horses, and VETMEDIN®-CA1 in the USA, which received conditional approval under a new FDA procedure as the first drug to delay onset of canine congestive heart failure in dogs with preclinical myxomatous mitral valve disease. In Europe and some countries

in the Middle East, we received approval for FENCOVIS<sup>®</sup>, a new vaccine to prevent calf diarrhea. FENCOVIS<sup>®</sup> provides passive immunity to calves through maternal colostrum. Obtaining approvals for new products and new areas of application as well as expanding the geographic scope, our sales activities for existing products are additional important aspects of our R&D activities.

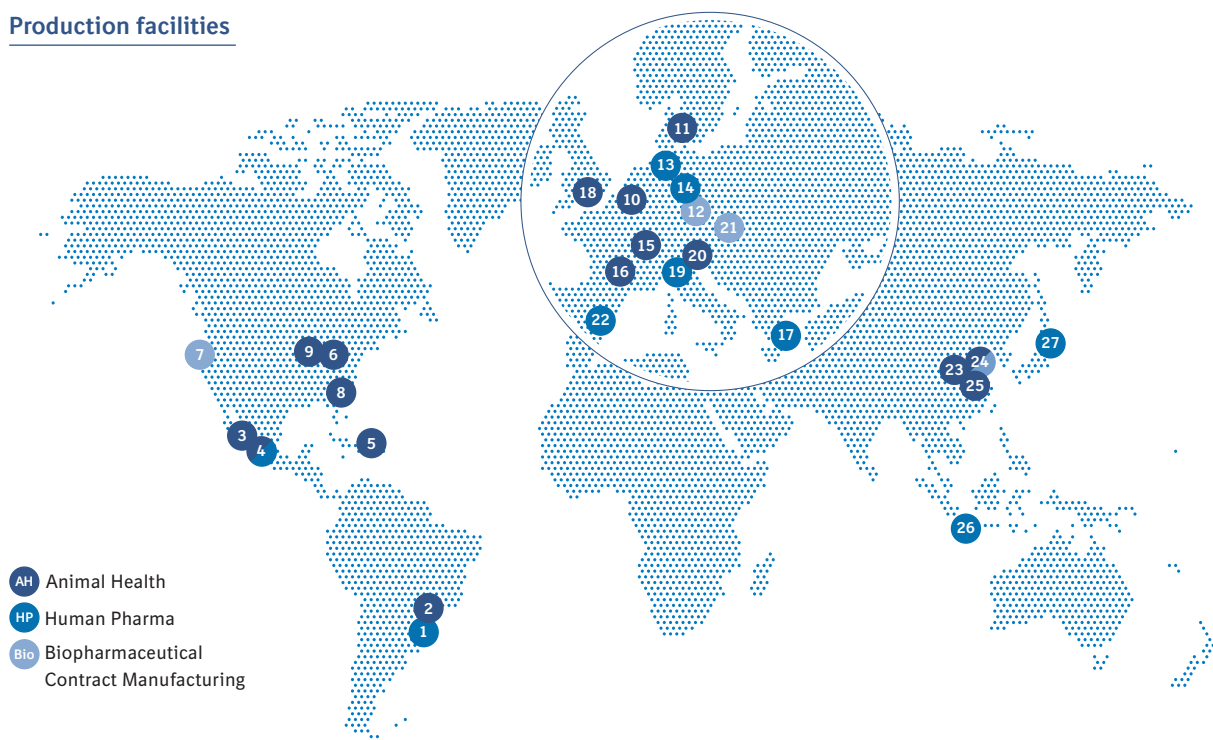
## Production

### Human Pharma

In the Human Pharma business, our globally active production facilities are responsible for the steady 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 that 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 focus on products that are strategically important for the company as well as on state-of-the-art 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 that have very high capacity requirements or that have reached an advanced point in their life cycle.

In the 2022 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 pharmaceutically active substances and one that produces medical devices. Finished pharmaceutical products are manufactured and packaged at eight facilities. In the past year, which again presented particular logistical challenges due to the ongoing effects of the COVID-19 pandemic and the effects of the Russia-Ukraine war, Boehringer Ingelheim was again able to ensure a steady supply of medicines for patients. Alongside the use of appropriate safety stocks, this was possible thanks to the establishment of key manufacturing steps and technologies at multiple facilities that are in different geographical regions in some cases and by further strengthening the resilience concept for every link in the supply chain. A significant contribution to the further development of supply security was the progress in the digital transformation of the production network and the entire supply chain in 2022. The control of the value chain from the supplier to the customer ("end-to-end") has been optimized through greater implementation of the supply chain strategy. The use of digital and automated processes and technologies enables a high level of transparency and efficient control of the global production network's supply chain.

**Production facilities**



**Americas**

**Brazil**

- 1. Itapecerica (HP)
- 2. Paulínia (AH)

**Mexico**

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

**Puerto Rico**

- 5. Barceloneta (AH)

**USA**

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

**Europe**

**Belgium**

- 10. Evergem (AH)

**Denmark**

- 11. Kalundborg (AH)

**Germany**

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

**France**

- 15. Grand Lyon Industrial Biologic Center\* (AH)
- 16. Toulouse (AH)

**Greece**

- 17. Koropi (HP)

**Great Britain**

- 18. Pirbright (AH)

**Italy**

- 19. Forno (HP)
- 20. Noventa (AH)

**Austria**

- 21. Vienna (Bio)

**Spain**

- 22. Sant Cugat (HP)

**Asia**

**China**

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

**Indonesia**

- 26. Bogor (HP)

**Japan**

- 27. Yamagata (HP)

\* composed of the three sites Lyon Porte-des-Alpes, Lentilly, Jonage

Delivery capability 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, a key investment in a flexible plant for the industrialization of newly developed innovative medicines and their initial market supply was fully executed. Expansion of production technologies and capacities for active pharmaceutical substances at the Ingelheim am Rhein (Germany) and Forno (Italy) sites and for pharmaceutical bulk goods and finished medicinal products at the Sant Cugat (Spain) and Koropi (Greece) sites were initiated or pushed forward in a sustained manner to ensure the supply of antidiabetics (in particular JARDIANCE®) as well as pipeline products. The operational activation of our biopharmaceuticals large-scale cell culture production building at our Vienna facility represented a milestone in the expansion of our capacities in our network for newly developed products as well as a strengthening of the biopharmaceutical business.

The global quality vision “Quality & safety in all we do” was successfully implemented with the help of the “Global Quality Transformation” program. In this transformation – which was designed to last 2 years – quality processes and systems were strengthened and prepared for future requirements, and quality was manifested as a competitive advantage. An important contribution to the cultural transformation was the rollout of a more highly developed “Quality Culture 2.0”, in which the patient is the focus of our actions and every employee actively contributes.

### Animal Health

In 2022, Animal Health products were manufactured in a network of 15 production facilities in nine countries. In addition to the company’s own facilities, in 2022, around 75 contract manufacturers manufactured medicines for Boehringer Ingelheim. The product portfolio essentially consists of vaccines, pharmaceutical products, and nutraceuticals, and was successfully expanded with the launch of the innovative packaging technology TwistPAK®. These chemical medicines and vaccines are supplemented with stem cell therapeutics and diagnostic products as well as monitoring solutions, which include digital applications that are used for livestock monitoring or that link livestock owners with veterinarians.

Boehringer Ingelheim’s investments, inter alia, to expand capacities for the top-selling product group NEXGARD® at the Barceloneta (Puerto Rico) site and in the manufacturing capacities in Jonage/Lyon (France), were continued, which include the construction of a modern plant for vaccines with the highest biological safety standards. The production network optimization that has already begun will be further advanced. The objective is the reliable and efficient delivery of all products.

### Biopharmaceutical Contract Manufacturing

Boehringer Ingelheim performs 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®, PRAXBIND®, and SPEVIGO®), and of biopharmaceuticals for clinical testing. Boehringer Ingelheim 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 in this regard, 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.

# 15

Animal Health  
production facilities  
in nine countries

One of the leading  
Biopharma providers  
for industrial  
customers

Capacity utilization of the network’s industrial-scale production facilities remained at a very high level in 2022. The maximum production volume of ACTILYSE® was reached at the Biberach site. An in-house process transfer to the new large-scale cell culture facility in Vienna was carried out for an established market product. In the future, this product will be manufactured in parallel at two Boehringer Ingelheim sites. In this way, we can optimally use the advantages of the global biopharmaceutical production network to ensure a reliable connection to patients.

Furthermore, the Boehringer Ingelheim IL36R monoclonal antibody spesolimab under the trade name SPEVIGO® was successfully launched from the Biberach site in September. We have built a balanced late-stage and commercial product portfolio at our microbial production facility in Vienna. Despite the challenging external situation associated with COVID-19, our cell culture plants in Biberach, Shanghai, and Fremont and our microbial production in Vienna continued to manufacture and deliver biopharmaceuticals very reliably for patients worldwide.

## Employee reporting

In 2022, Boehringer Ingelheim employed 53,155 people on average worldwide. This represents an increase of + 1.5 % over the previous year.

### Average number of employees by region

	2022	2021
Americas	13,248	13,187
Europe	29,221	28,266
Asia/Australia/Africa (AAA)	10,686	10,938
	<b>53,155</b>	52,391

Our committed employees – who identify with our company’s aims and find the work atmosphere at Boehringer Ingelheim to be positive and appreciative – are a major success factor driving our Group’s positive growth. With their high level of personal commitment every day, they help us to fulfill our joint promise of ensuring the supply of vital medicines. Our annual global employee survey provides us with relevant feedback that enables us to continuously improve our work environment.

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 wide-ranging requirements of national regulators demand great flexibility of 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.

At Boehringer Ingelheim, we are convinced that the future holds unique opportunities for more innovation, more sustainability, and better health. Our company-wide purpose “Transforming lives for generations” is an expression of our ambition to create a better future for upcoming generations and unites us all. In order to optimally equip our employees for the future requirements of the constantly changing health and labor market, we have made lifelong learning and



further development of our personnel a priority in our corporate strategy. In addition to access to external offers for all employees worldwide such as LinkedIn Learning and the online language provider goFluent, the company established business-area and topic-specific academies early on with the objective of building up the required skills internally and in a focused manner. Examples of this are the Data Science Academy that opened in November 2021 and the University of Medicine Excellence that was founded in July 2021.

In the Data Science Academy, various target groups – from beginners to data experts – can find tailor-made learning opportunities on the use of data and analyses for their respective areas of responsibility. In 2022, more than 3,000 employees were trained internally in the field of data and data science. Almost 1,000 employees from various medical disciplines took part in the University of Medicine Excellence’s three-month inaugural program “Accelerate” in 2022. The program was developed and rolled out with the renowned Harvard Medical School.

Another important cornerstone for developing the specialists of tomorrow is our training programs: with 32 different scientific, technical, and commercial training courses and cooperative study programs, our company offers young people an opportunity to get started in their professional lives. An average of 760 young people worldwide were enrolled in Boehringer Ingelheim’s vocational training program in 2022. A total of 215 young people started at the German locations of Boehringer Ingelheim alone. The selection of training and cooperative study programs is closely coordinated with our disciplines to ensure that the curricula and training programs meet our needs.

One of the company’s most important objectives is to strengthen the appeal of Boehringer Ingelheim as an employer. In addition to attractive career paths, Boehringer Ingelheim offers additional benefits for the workforce. These include a range of company pension plans, flexible and home-based work options, and numerous health-related benefits. In 2022, our company once again won recognition as a top employer from the auditors of the international and independent Top Employers Institute. The Institute rated our company particularly well globally in the areas of “business strategy”, “values”, and “ethics & integrity”. Boehringer Ingelheim was placed above all other competitors in the overall average, especially in the area of “Rewards & Recognition”. In addition, the independent Institute has also highlighted the areas of “Diversity & Inclusion”, “Onboarding”, “Sustainable Development”, and “Agile Working Methods”, as this is where they have seen the most growth in the last three years.

The award in 29 key countries and three regions once again makes us the “Global Top Employer” – only 11 employers worldwide hold this title. In addition to Germany, Boehringer Ingelheim was also awarded in Argentina, Australia, Austria, Brazil, Chile, China, Colombia, Ecuador, France, Great Britain, Hungary, Indonesia, Italy, Malaysia, Mexico, the Netherlands, New Zealand, the Philippines, Poland, Romania, Russia, Saudi Arabia, Singapore, South Korea, Spain, Thailand, the United Arab Emirates, and Vietnam.

**Boehringer  
Ingelheim  
recognized as  
“Global Top  
Employer”**

## Sustainable Development – For Generations

### Sustainable Development as part of our strategy

Sustainability has been firmly anchored in our corporate philosophy since Boehringer Ingelheim's founding in 1885. Our understanding and awareness of sustainability has developed over the generations and continues to influence our decision-making and actions. With our focus on human and animal health, Boehringer Ingelheim is well positioned to address interconnected sustainable development challenges and subsequently provide a relevant contribution to a healthier and more sustainable future. Our sustainability strategy, entitled “Sustainable Development – For Generations” is based on the following three pillars:

MORE HEALTH – Good Health for People & Animals

MORE POTENTIAL – Good Health for Communities & Our People

MORE GREEN – Good Health for Our Planet

Through these pillars, Boehringer Ingelheim implements 20 initiatives around the globe to drive the company's contributions and impact. These are in alignment with the United Nations Sustainable Development Goals.

By 2030 (base year 2021), we aim to achieve the following concrete measurable goals:

**MORE HEALTH:** expanding access to healthcare for an additional 50 million people in vulnerable communities, investing 35 billion EUR in health innovation and research to tackle non-communicable diseases and an additional 250 million EUR in partnerships to combat emerging infectious diseases.

**MORE POTENTIAL:** our aim is to positively impact 50 million people in vulnerable communities by empowering and supporting our employees, partners, and innovative social entrepreneurs.

**MORE GREEN:** we will become carbon-neutral in our company operations by 2030 (Scope 1 and 2). We will also significantly reduce the resource footprint across the value chain in the same period, despite our growing business activities.

### MORE HEALTH – Good Health for People & Animals

#### MORE HEALTH Focus on the health of people and animals

MORE HEALTH follows our ambition to develop better therapies and enable better solutions for global healthcare challenges. The pillar includes a number of projects and initiatives, reflecting the diversity of our patients and the expertise of our partners. These include:

#### Access to Healthcare

The “Access to Healthcare” initiatives seek to improve healthcare in vulnerable communities, from disease awareness, diagnosis, effective prevention, and care up to the availability of medicines. We have achieved several milestones in 2022, including:

- Expanding access to healthcare in less developed regions through the UN Defeat-NCD Partnership, a public-private-people partnership that envisions universal health coverage for non-communicable diseases (NCDs). Boehringer Ingelheim joined the Defeat-NCD Partnership in 2019 and is currently collaborating around four interconnected pillars: National NCD capacity building, community scale-up of NCD Services, affordability and accessibility of essential NCD supplies, and financing for country-level NCD programming. The first countries in focus are India, Gambia, Rwanda, and Djibouti. During the World Health Summit in October 2022, Boehringer Ingelheim and other partners discussed progress in improved care for patients with NCDs in collaboration with the partnership.

- Access to Healthcare Initiative, offers a comprehensive program to patients (from screening to follow-up). In 2022, the program started in Kenya with screening and referral for chronic obstructive pulmonary disease (COPD) followed by patients' enrollment to access SPIRIVA® at a tiered price to achieve equitable access and support adherence for patients with low income.
- The PATHWAYS Indigenous Health Collaborations project in Canada aims to impact the lives of over 20,000 members of indigenous communities until 2025, addressing the high prevalence of certain non-communicable diseases (NCD) in these communities. The program was established in 2017, is indigenous-led and indigenous-informed, and has the vision to close the health gap experienced by indigenous communities, while focusing on relationship building and a positive, sustainable future for all partners. Currently, four pilot projects are underway in British Columbia, Alberta, Manitoba, and Nova Scotia, each tailored to the individual needs of the respective communities. Similarly, various initiatives, in collaboration with healthcare professionals, patient advocacy groups, and the national Pharmaceutical Management Agency, assist indigenous communities in New Zealand with more equitable access to new type 2 diabetes (T2D) medication.
- In 2022, we collaborated with experts, NGOs, and the Global Alliance for Rabies Control (GARC) to set up a pilot for a mass vaccination programs for dogs. The intent is to design new models to scale up rabies elimination sustainably. The effort aims at fighting rabies in vulnerable communities in endemic countries through controlling rabies in animals, and thereby helping to reduce the human death toll of the disease. A "STOP Rabies" piloting initiative had been launched in South Africa in 2021. In an effort to enable sustainable dog vaccination campaigns for vulnerable communities, Boehringer Ingelheim has vaccinated over 5,000 dogs through a collaboration with the Khula Outreach program in South Africa, which partners with the local government, to tackle rabies.

### Angels

The Angels Initiative aims to improve stroke care worldwide. In 2022, an additional 1,000 clinics, and around 27,000 doctors, nurses, and paramedics joined the network. The Angels Initiative is now the biggest stroke community in the world and includes over 107,000 healthcare professionals and 7,300 hospitals in 147 countries. This helped to ensure that an estimated 10 million patients were treated in line with defined standards.

### Product donations

Product donations are aimed at complementing Boehringer Ingelheim's access to healthcare efforts, by providing medicines to vulnerable communities, who otherwise would not have access. These product donations have reached over 105,000 patients in 34 countries worldwide in 2022. This also includes product donations of over 11 million EUR for patients in the Ukraine in 2022.

### LastMile

The "LastMile" initiative, launched in 2018 and stretching across sub-Saharan Africa, has reached over 40,000 smallholder farmers in Kenya, Cameroon, Nigeria, Mali, Burkina Faso, and Ethiopia and enabled 56 product registrations. The initiative aims to train smallholder farmers in vulnerable communities on the prevention of animal diseases and leveraging access to healthcare solutions, vaccines, and treatments to optimize the health and productivity of their livestock.

**MORE POTENTIAL**  
Focus on people and  
communities

**MORE POTENTIAL – Good Health for Communities and Our People**

MORE POTENTIAL is focused on providing health as well as the best possible conditions for our people at Boehringer Ingelheim, in our communities, and at our partners to reach their full potential.

**BE SAFE**

Through our “BE SAFE” program, which was established in 2010, we place a particular emphasis on the importance of ensuring a safe workplace for our employees and partners. We continuously review and optimize our work and safety culture through a global network of safety experts, striving to maintain our employees’ good health by preventing incidents, accidents, and occupational health risks. This is communicated regularly internally with management, colleagues, partners, and in our communities on a global level. The ambition is to successfully transform our organization from one driven by the enforcement of rules to creating a corporate culture where safety is embedded as creating value for our people. To further bring about this safety culture mindset, the “High Five for Safety” initiative was created, which addresses the most frequent safety concerns, as well as offering support for all employees to stay safe, lead by example, and encourage others to do the same in our daily work life.

Furthermore, Boehringer Ingelheim became an official partner of the EUOSHA “Healthy Workplaces Lighten the Load” campaign to prevent work related musculoskeletal disorders (MSDs) in 2021, which continued in 2022.

**BE HEALTHY**

The “BE HEALTHY” program was established in 2022 to better support our employees with additional knowledge, tools, and resources to maintain, and if necessary, improve health and wellbeing at the workplace. The program has defined a set of global health and wellbeing standards and implemented an international network of “health and wellbeing ambassadors” (Health Navigators), to foster a healthy company culture and promote a stronger awareness for physical and mental health and healthy habits.

**Diversity, Equity & Inclusion (DEI)**

Through our core values of empathy, respect, passion, and trust, we foster a diverse, collaborative, open, and inclusive work environment, which is key for innovation, value creation, and sustainable growth. Boehringer Ingelheim is convinced that valuing diversity and fostering an inclusive environment is not only the right thing to do for our people and communities, but also the smart thing to do for our business, since it helps us to better understand and fulfill the different needs of our patients, customers, and partners around the globe.

Organizationally, we enable our aim of an open, collaborative, and inclusive culture through a Corporate DEI office, over 20 DEI Champions around the globe, representing different countries and regions in the Global Culture and DEI Council. Boehringer Ingelheim also promotes social wellbeing by encouraging Employee Resource Groups (ERGs) and networking. The company has over 40 ERGs or networks that are voluntarily formed and leadership sponsored. In 2022, the ERG Women in Tech was founded. Its 250 members aim to connect and empower women working in technology at Boehringer Ingelheim.

Furthermore, the company enables employees to raise their voice in case of any potential non-compliance through the “Speak Up” procedure and pursues the mediation of biases and inequities within systems, processes, and practices. Boehringer Ingelheim continues to train leaders and employees on unconscious bias and inclusive behaviors with over 10,000 e-Trainings completed since December 2019, a Masterclass program and the integration of DEI into employee onboarding and leadership development programs. In 2022, e-Trainings were held for the first time in 12 languages in addition to German and English.

### Human Rights

Boehringer Ingelheim is continuously stepping up efforts in the areas of human rights and ethics. Our approach is aligned with the United Nations’ Guiding Principles on Business and Human Rights. Human Rights are embedded in our company culture, underlined in our Human Rights and our Environmental, Health, Safety, and Sustainability policies. Human Rights are integrated in our business through our Code of Conduct, our Supplier Code of Conduct, and our Environmental, Health, Safety (EHS) Compliance program. In 2022 and continuing in 2023, we are focused on the implementation of all components required by the forthcoming German Supply Chain Due Diligence law, which goes into effect in January 2023.

### Making More Health

In 2010, Boehringer Ingelheim and Ashoka, the world’s largest network of social entrepreneurs, jointly established the “Making More Health” (MMH) initiative. This long-term partnership focuses on enabling innovative solutions to tackle complex healthcare challenges for people, animals, and their communities. This approach links interdependent issues such as economic development, infrastructure, education, culture, and healthcare issues. It emphasizes collaboration with communities as equal partners and engages Boehringer Ingelheim employees to share their knowledge and skills. MMH’s individual initiatives form a holistic continuum that generates impact at various levels, from supporting vulnerable communities to financing social enterprises. Highlights include:

- **Social innovation:** To date, over 120 social entrepreneurs worldwide working in the areas of human and animal health have been supported.
- **Community activation:** Since 2014, programs have been established in India and sub-Saharan Africa that have proven to be groundbreaking and already reached more than 364,000 people, of which over 180,000 were reached in 2022 alone. This includes clean water and hygiene projects, implementing innovative farming models, and providing animal health and business skills training courses, as well as inclusion programs for marginalized community groups, such as people with albinism.
- **Support of Social Businesses:** We have supported 18 social enterprises through the Making More Health Business Accelerator program, five of these joined the program in 2022. In cooperation with our partner Villgro Afrika, five more social enterprises with a focus on animal health were accepted in 2022 as part of a new incubation program “Rising Stars”. These programs assist social start-ups in sub-Saharan Africa with financial means and management skills through employee engagement to accelerate, scale-up, and sustain their business model.

The “Making More Health Together 2022” convention, a two-day hybrid event in Ingelheim (Germany) and Nairobi (Kenya), brought together over 600 participants from industry, government, civil society, academia, social entrepreneurship, and impact financing to connect, collaborate, and innovate towards achieving sustainable solutions for pressing healthcare issues. Making More Health Together focuses on social entrepreneurship and innovative approaches to solving health-related challenges.

#### Boehringer Ingelheim social engagement

The impact engagement fund leverages innovative financing tools beyond grant funding and donations with the intention to continue to support and amplify social impact by sustaining and scaling-up social businesses in sub-Saharan Africa. The aim is to create a portfolio of complementary social businesses, to address healthcare challenges. In 2022, Cowtribe Inc., a leading LastMile veterinary delivery company from Ghana, was announced as the first investment recipient. Cowtribe supports farmers in remote regions of Ghana by ensuring the supply of essential vaccines for animals. The investment is intended to reach significantly more than the 7,000 farmers and their animals already supported.

### MORE GREEN Focus on the environment

#### MORE GREEN – Health for Our Planet

A healthy planet is a prerequisite for healthy people, animals, and communities. Environmental challenges should not be seen in isolation, as they are interconnected with and have tangible effects on the health of entire societies. Subsequently, the sustainable use of natural resources, applying “eco-design” and “green chemistry” concepts, and the promotion of a strong environmental awareness are key components of our environmental sustainability program in order to help protect the health of current and future generations and safeguard their prospects for a healthy future.

The MORE GREEN Fund supports internal projects in the areas of circular economy, decarbonization, and water management, and has already provided funding for 48 new environmental projects worldwide since 2020. Boehringer Ingelheim pays particular attention to environmental sustainability aspects in major projects and has set aside an additional 130 million EUR for this purpose.

In 2021, Boehringer Ingelheim was the first pharmaceutical company in the EU to receive the “GreenCanteen” certification for the sustainable catering concept at the Ingelheim headquarters. Building on this, our Dortmund site was certified in 2022. Currently, a total of five corporate canteens have received this certification in Germany, two of which belong to Boehringer Ingelheim.

#### Carbon footprint

We are continuously working on reducing our greenhouse gas emissions, having committed to becoming carbon neutral in our company operations (Scope 1 and 2) by 2030, using 100% renewable electricity and continuing to make substantial investments in sustainable technology. One of the tools used in this process is the introduction of an internal carbon price of 100 EUR per ton to create an additional economic incentive for green innovation. Examples of our activities to reduce greenhouse gas emissions in 2022 include:

- The new certification of carbon neutrality for our sites at Kathrinenhof-Rohrdorf (Germany), Gainesville (Georgia, USA) and Shanghai (China), to now total five sites in addition to Dortmund (Germany) and Sant Cugat (Spain).
- The transition to renewable electricity solutions at numerous locations, including sites in Austria, Germany, Spain, and the USA. Since the year 2020, the company's share of renewable electricity purchased worldwide has increased from 30 % to over 60 % in 2022.
- The construction of a new solar plant at our headquarters in Ingelheim which is nearing completion.
- Initiation of a supplier collaboration program with 100 key suppliers, with the intention to reduce CO<sub>2</sub> emissions in the value chain (Scope 3). Performance is measured via a digital platform.
- The continued partnership with ClimateSeed, through which we support reforestation projects in Africa, Canada, China, India, Indonesia, and Germany, that are offsetting unavoidable carbon emissions while also strengthening biodiversity and protecting drinking water.

#### Resource use

Circular economy aspects are implemented in stages of the value chain to minimize waste and to apply eco-design and green chemistry concepts in new products. Through continuous optimization measures, we have reduced our annual volume of waste to landfills and resource use, while increasing our recycling and reuse rates since 2010, thus optimizing the environmental footprint of future Boehringer Ingelheim products.

Specifically, by integrating criteria for sustainability into the design of our products during the R&D phase of the product life-cycle, our Innovation Unit (IU) is working towards further reducing the environmental footprint of our medicines. This approach utilizes principles of eco-design and green chemistry across the global R&D organization, starting from the synthesis of drug substances to the packaged products. In 2022, we achieved several milestones, including:

- Establishing the IU MORE GREEN Grant program, aiming at accelerating sustainable science, technology and innovation through academic collaboration and creating new options for eco-design. We have already launched the first research challenge with our open innovation platform openMe.
- The launch of the IU MORE GREEN Award, to recognize outstanding implementation of green chemistry, green engineering, and eco-design concepts, as well as demonstrating compelling environmental, health and safety, and efficiency improvements. The first winning team was awarded at IUCon2022.
- The conception of an Eco-Design Playbook, to better evaluate and implement eco-design and green chemistry criteria during pharmaceutical development.

#### Water Stewardship

Access to clean water has a major impact on social and cultural justice, environmental sustainability, and the local economy. For this reason, Boehringer Ingelheim implements programs related to water and related risks at all production sites. Sites in established water scarcity areas implement the "Water Stewardship" program of the "Alliance for Water Stewardship" (AWS). In 2022, our production site in Fremont (California, USA) received AWS certification, the second site to do so, following the AWS certification of our Promeco production facility in Xochimilco (Mexico) in 2021.

Furthermore, we have evaluated the wastewater at the production sites regarding possible residues of active pharmaceutical ingredients (API) and other trace substances. On this basis, the “Clean Water” initiative ensures that traces of pharmaceuticals in wastewater remain significantly below any effect level. The initiative also collaborates with industrial networks and suppliers to encompass the entire value chain.

In this context, Boehringer Ingelheim also enables joint projects with our initiative “Making More Health” in Kenya which aim to improve access to clean water. For example, the construction of a solar-powered water tower for storing water from the nearby Kibisi Dam in water dispenser stations and providing water distribution to public facilities and private homes. The project is estimated to positively impact the lives of up to 20,000 people in the local community.



# Report on economic position

## Macroeconomic environment

In 2022, the global economy was faced with immense economic challenges. According to the International Monetary Fund (IMF), global economic growth fell to +3.4% after +5.9% in 2021. Russia's war of aggression in Ukraine and the associated sanctions imposed on Russian products led to a sharp increase in gas and energy prices at the beginning of 2022, which continued over the course of the year due to the significant restrictions placed on Russian natural gas supplies. At the same time, the electricity-generation costs of gas-fired power plants rose, which also led to significant price increases on the electricity market. The high energy prices resulted in higher production costs for companies and led to reduced purchasing power in private households. Companies were forced to reduce their energy intensity. The shortage of goods and rising energy prices were significant drivers of a global increase in inflation.

Nevertheless, the global pharmaceutical market – excluding COVID-19 vaccines – grew to over EUR 1.2 trillion last year, which corresponded to compound annual growth of +7% over the last five years (source: IQVIA). This is particularly the case as the pharmaceutical market – in contrast to other sectors – tends to be characterized over the long term by the performance of national economies and, in particular, by the demographics of the respective societies. In addition, the average growth of the market is influenced by the constant improvement in global access to medical care.

Russia's war of aggression in Ukraine indirectly led to higher energy and production costs for pharmaceutical companies – and also for Boehringer Ingelheim. However, the sales prices, which are often regulated, did not change. The high rates of inflation led to interest rate hikes in numerous countries by the central banks, an increase in financing costs, and greater volatility on the currency market. At the same time, government regulatory programs to combat inflation were adopted in several countries, some of which had a direct impact on the pharmaceutical industry or will have such an impact in future financial years. The Inflation Reduction Act (IRA) in the US is particularly noteworthy in this regard.

The effects of the COVID-19 pandemic continued to have a negative impact. The negative economic impact of the COVID-19 pandemic had by no means been fully overcome, as international supply chain disruptions continued to affect industrial production. In China, there were also restrictions due to temporary lockdowns, which had a negative impact on demand for medicines. At the same time, the costs of combating the COVID-19 pandemic led to high additional burdens on the healthcare systems in many countries. In order to address these challenges, many healthcare systems are expanding the use of cost-containment tools such as mandatory price reductions for pharmaceutical products, external price reference systems, and lengthy as well as complex negotiation processes which delay access to innovative new medicines. The patient is also increasingly involved in covering the cost of treatments using different co-payment models. In Germany, the savings plans of politicians for the healthcare system were implemented via the GKV (Statutory health insurance) Financial Stabilization Act (*GKV-Finanzstabilisierungsgesetz*), the specifications of which could increase cost pressure on pharmaceutical companies and reduce the willingness to invest in Germany. In the UK, pharmaceutical companies participating in the VPAS (Voluntary Scheme for Branded Medicines Pricing and

**Growing Human  
Pharma market  
allowed increased  
investment in R&D**

Access) have had to pay higher reimbursements to the health authority due to increased health-care spending. The repayment rate for 2022 was increased to 14.3% (from 10.9%), and the rate for 2023 was set at 24.4%.

Such measures are increasingly putting pressure on pharmaceutical companies and therefore may limit their future ability to invest in the development of new treatment options and to provide innovative medicines. The pharmaceutical industry works closely with governments and public health authorities to meet these challenges in order to ensure and improve access to medicines in a sustainable manner, reduce delays in market approval, and provide patients with innovative medicines. An important prerequisite for achieving this objective remains a reliable legal framework that promotes innovation and ensures the protection of intellectual property. Tendencies at the EU level aimed at weakening incentive instruments would send the wrong signal. Cutting-edge research, investment in pharmaceutical innovation, and competitiveness would be in decline. This could make it more difficult for European patients to participate in clinical trials and access new, innovative therapies.

**Animal health  
market continues  
positive growth  
trend**

The animal health market – consisting of the pet and livestock segments – continued its growth trend in 2022. Compared to previous years, growth slowed during the reporting period, in particular due to consumer behavior adjustments in response to high inflation and supply chain issues. The long-term drivers of growth are above all population growth, the rising standard of living of many people in growth markets, and the increased life expectancy of animals due to constant improvements in veterinary care. Pets are increasingly seen as life companions whose health is important to the owners. This is reflected in an increased demand for products in the pet segment. The livestock segment benefited from increased demand for animal protein and continuous growth in consumer awareness with regard to high-quality products. The increasing prevalence of zoonotic diseases (infectious diseases that are transmissible from animals to humans and from humans to animals) is reinforcing the importance of the animal health industry. In general, consolidation through mergers on 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 with the market, investments need to be continuous, sustainable, and competitive.

According to the IMF, global economic growth will amount to 2.7% in 2023. This forecast by the IMF represents a significant slowdown in global economic growth. According to the OECD and the IMF, inflation will remain high, but is expected to decline in many countries. Global inflation is therefore projected to ease from 8.8% in 2022 to 6.5% in 2023. According to the IMF, there are numerous additional risks that could have a significant impact on economic growth: miscalculation of monetary policy to lower inflation and higher energy and food prices could lead to inflation lasting longer. Furthermore, tighter financing conditions could have a significant impact not only on companies but also on emerging market debt. Economic growth could be hampered by new global health fears or renewed effects of COVID-19. In addition, an ongoing crisis in China's real estate sector could affect the domestic banking sector and growth in China, which could involve cross-border implications. Furthermore, global supply chains could be permanently impaired due to "geopolitical fragmentation" and consequently make cooperation on climate policy more difficult. In addition, ongoing climate change is increasing the risk of the occurrence of natural disasters and therefore of the related health and economic impacts.

### Currency development

Boehringer Ingelheim's global presence means that currency trends influence its financial performance. The US dollar (USD), the Japanese yen (JPY), and the Chinese renminbi (CNY) are particularly worthy of note here. Extraordinarily high inflation prompted the US Federal Reserve in particular to significantly raise key interest rates, which supported the appreciation of the USD against other currencies. After a low of 1.13 EUR/USD (February) at the beginning of the year, the US dollar fluctuated until the end of the year between this low and a high of 0.98 EUR/USD (October). The Japanese yen fluctuated between a high of 130.01 EUR/JPY (January) and a low of 145.12 EUR/JPY (November). The Chinese renminbi started the year at 7.19 EUR/CNY (January). The high was achieved mid-year at 6.85 EUR/CNY (July), while the low was reached towards the end of the year at 7.39 EUR/CNY (December). Significant transactional currency risks are hedged through suitable currency instruments.

### Currency development

Average rate - basis: 1 EUR	2022	2021	Effect on net sales (in million EUR)
US dollar	1.05	1.18	933
Japanese yen	138.00	129.86	-87
Chinese renminbi	7.08	7.63	87

### Earnings position

For Boehringer Ingelheim, stable and competitive financial performance and solid financing are the basis for independence, making them the focus of our actions. On this basis, we can implement our corporate purpose "Transforming lives for generations" and invest in innovation on a competitive scale, thereby making our contribution to improving human and animal health with innovative therapies.

Boehringer Ingelheim continued its positive growth trend in 2022. We generated net sales of 24,149 million EUR, which corresponds to an increase of +17.1% compared to the previous year's revenue of 20,618 million EUR. The exchange rate effects had a positive impact on revenue development in 2022. Once adjusted for these effects, Group growth was +10.5%.

**24.1**  
billion EUR  
in net sales

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

	2022	2021	Change	currency- adjusted
Americas	11,470	9,147	+25.4%	+12.3%
Europe	7,543	6,554	+15.1%	+12.4%
Asia/Australia/Africa (AAA)	5,136	4,917	+4.5%	+4.0%

We achieved net sales growth in every region. As in previous years, with net sales of 11,470 million EUR and a 47.5% share of overall sales, the Americas region was Boehringer Ingelheim's key sales market, growing by +25.4% (currency-adjusted +12.3%). Furthermore, net sales growth in the region of Europe improved to +15.1% in the past financial year (currency-adjusted +12.4%). The sales, which also include the global license business, amounted to 7,543 million EUR and corresponded to a 31.2% share of Group sales. This positive trend was driven by the global licensing business allocated to this region as well as the markets in Germany, Spain, and the countries of Eastern Europe. In our Asia/Australia/Africa (AAA) region, net sales increased by +4.5% (currency-adjusted +4.0%) to 5,136 million EUR.

#### Key figures (in million EUR)

	2022	2021	Change
Net sales	24,149	20,618	+17.1%
Operating income	4,770	4,705	+1.4%
Return on net sales	19.8%	22.8%	
Income before taxes	4,111	4,368	-5.9%
Income after taxes	3,181	3,406	-6.6%

Due to the significant increase in net sales, above all for the products of the JARDIANCE® family and OFEV®, the materials ratio (taking into account the change in inventories) fell to 12.1% (2021: 13.5%). Personnel expenses rose by an above-average rate of 16.3%. Alongside the additional employees in the areas of research, development, and medicine – which are strategically important for Boehringer Ingelheim – and in the production of biopharmaceutical medicines, this was also due to adjustments to pensions for inflation and expectations for pension trends as well as currency effects.

Amortization of intangible assets and depreciation of tangible assets were 346 million EUR higher in 2022 compared with the previous year. This was particularly attributable to impairment losses on intangible assets. These impairment losses on acquired R&D projects are due to the risk inherent in the research-based pharmaceutical industry in the development of innovative medicines. In addition, scheduled depreciation and amortization increased due to continued high investment activity and currency effects.

In the 2022 financial year, the operating result increased slightly to 4,770 million EUR due to the positive operating development compared to the previous year despite increased costs, high impairment losses, and other non-reoccurring charges. The pleasing development of our businesses' net sales provides us with the basis to sustainably invest in R&D – we were able to increase the expenses for R&D as a percentage of sales to approximately 21% in the 2022 financial year. On this basis, our return on net sales fell to +19.8% (2021: +22.8%). This was also due to higher prices on our procurement markets, our increased number of employees in strategically important areas, and our investments.

The financial income declined, primarily due to developments on the stock markets, which had an impact on budgeted assets for pensions and similar obligations. Loss allowances on non-consolidated investments also reduced the holding income. Income before taxes thus fell by 257 million EUR despite a slight increase in the operating result.

Income after taxes fell by 225 million EUR with a slightly higher tax rate. 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. When taking this specificity into account, the actual tax burden is markedly higher than the figure shown on the profit and loss statement.

With a consolidated profit of 3,181 million EUR overall, the 2022 financial year was a year of positive corporate development for Boehringer Ingelheim, as cost increases and non-reoccurring charges were largely offset by the positive business development, despite challenging market conditions.

**3.2**  
billion EUR  
Group profit

## Development of the businesses

In the past 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)

	2022	2021	Change	currency-adjusted
Human Pharma	18,461	15,294	+20.7%	+13.6%
Animal Health	4,559	4,295	+6.1%	-0.5%
Biopharmaceutical Contract Manufacturing	1,024	917	+11.7%	+11.1%
Other sales	105	112	-6.3%	-7.9%

### Human Pharma

In our Human Pharma business, we once again made our products available to more patients in 2022 thanks to new approvals in additional countries; we also further strengthened established products. More than 30 million patients were treated with our products in 2022.

The Human Pharma business is the mainstay of Boehringer Ingelheim's activities and accounts for a 76.5% share of the Group's net sales. Net sales in our Human Pharma business increased by +20.7% (currency-adjusted +13.6%) in the 2022 financial year to 18,461 million EUR. This growth was mainly driven by the established products of the JARDIANCE® family as well as OFEV®. The growing volume of licensing business – in particular SKYRIZI®, which we have licensed to AbbVie who is responsible for the marketing of this product – also made a key contribution to the positive development of our Human Pharma business.

**Human Pharma: Net sales top 5 products (in million EUR)**

	2022	2021	Change	currency-adjusted
JARDIANCE® family	5,832	3,940	+48.0%	+39.1%
OFEV®	3,227	2,491	+29.5%	+20.6%
TRAJENTA® / JENTADUETO®	1,703	1,552	+9.7%	+6.0%
SPIRIVA®	1,560	1,548	+0.8%	-5.8%
PRADAXA®	1,108	1,318	-15.9%	-19.4%

**JARDIANCE® and OFEV® drive growth**

The product with the highest net sales in 2022 was JARDIANCE®, which, in addition to the treatment of type 2 diabetes, is also used for the treatment of chronic heart failure. The JARDIANCE® family generated net sales of 5,832 million EUR, which was therefore +48.0% (currency-adjusted +39.1%) higher than in the previous year.

OFEV®, the second largest product by net sales in 2022, is primarily used to treat idiopathic pulmonary fibrosis and has two other indications – SSc-ILD and PF-ILD. OFEV® recorded net sales of 3,227 million EUR and therefore achieved a growth rate of +29.5% (currency-adjusted +20.6%).

As in the previous year, TRAJENTA® and JENTADUETO® – which are used to treat type 2 diabetes – achieved revenue growth. Net sales increased by +9.7% (currency-adjusted +6.0%) in 2022 to 1,703 million EUR.

Our product SPIRIVA®, which is used to treat chronic obstructive pulmonary disease (COPD) and asthma, developed in line with the product life cycle. In 2022, net sales of 1,560 million EUR were +0.8% above the level of the previous year (currency-adjusted -5.8%) due to currency reasons.

Net sales of the anticoagulant PRADAXA® declined in line with the product life cycle and fell by -15.9% (currency-adjusted -19.4%) compared to the previous year. However, with net sales of 1,108 million EUR, PRADAXA® continued to be one of Boehringer Ingelheim's five top-selling medicines in the 2022 financial year.

An increase in net sales of +66.5% (currency-adjusted also +66.5%) was achieved in license income for SKYRIZI®. This product, which is marketed globally by our partner AbbVie, is based on the substance risankizumab, which was largely developed by Boehringer Ingelheim, and is used to treat moderate to severe plaque psoriasis and psoriatic arthritis. Additionally, the medicine was approved in some markets in 2022 for the treatment of moderately to severely active Crohn's disease. The sales volume in the 2022 financial year therefore also reflects related non-recurring milestone payments.

The Human Pharma business achieved growth in every region year-over-year. In terms of the regional distribution of this revenue, the USA remained our strongest revenue contributor, with a growth rate of +29.8% (currency-adjusted +15.7%) to 7,501 million EUR. This represents an almost 41% share of the Human Pharma business's overall net sales.

We achieved net sales of 5,931 million EUR in our EUCAN region (Europe and Canada) in 2022, a growth rate of +19.0% (currency-adjusted +14.8%). The EUCAN region therefore generated a sales share of 32.1% (–0.5% compared to the previous year).

The company's emerging markets also registered an improved volume of sales in the past financial year, with a growth rate of +15.8% (currency-adjusted +10.8%). Overall, net sales in these countries rose to 3,700 million EUR. In 2022, double-digit growth was again generated compared to the previous year. The market in China remained challenging in 2022 due to volume-based procurement mechanisms as well as COVID-19 lockdowns in part and was only able to record slight sales growth of +1.2% compared to the previous year (currency-adjusted –6.2%) due to favorable exchange rates.

Japan accounted for approximately 7% of total net sales in the Human Pharma business. Here, net sales fell by –0.6% (currency-adjusted +5.6%) to 1,329 million EUR due to the significantly weaker Japanese yen compared to the euro.

#### Human Pharma: Net sales by region (in million EUR)

	2022	2021	Change	currency-adjusted
USA	7,501	5,777	+29.8%	+15.7%
EUCAN	5,931	4,983	+19.0%	+14.8%
Emerging Markets	3,700	3,196	+15.8%	+10.8%
Japan	1,329	1,337	–0.6%	+5.6%

#### Animal Health

In the past financial year, the Animal Health business achieved revenue totaling 4,559 million EUR and therefore provided almost 18.9% of the Group's revenue. Animal Health was able to increase revenue by +6.1% (currency-adjusted –0.5%), supported by currency effects.

#### Animal Health: Net sales top 4 products (in million EUR)

	2022	2021	Change	currency-adjusted
NEXGARD®	1,064	916	+16.2%	+8.0%
FRONTLINE®	401	418	–4.1%	–10.1%
HEARTGARD®	323	307	+5.2%	–5.2%
INGELVAC CIRCOFLEX® / FLEXCOMBO®	236	253	–6.7%	–9.7%

Our top-selling animal health medicines come from the pet business: the antiparasitic NEXGARD® recorded sales growth of +16.2% (currency-adjusted +8.0%) to 1,064 million EUR in 2022 and therefore remained the highest-selling product family in the portfolio of the Animal Health division in the 2022 financial year. With the growth products NEXGARD® SPECTRA and NEXGARD® COMBO, the NEXGARD® family became one of the top-selling brands in the animal health industry in 2022 and was able to reach the milestone of more than one billion EUR in sales.

In contrast, the antiparasitic FRONTLINE® and the medicine HEARTGARD® recorded a decline in net sales due to increased competition. The high inflation, which forced many pet owners to prioritize in their household budgets, particularly in the USA, had a significant influence here.

Declining sales were observed for our INGELVAC CIRCOFLEX® swine vaccine in 2022: net sales fell by –6.7% (currency-adjusted –9.7%) to 236 million EUR. This was mainly due to the difficult market environment in China.

In Animal Health, we were able to exceed the previous year's net sales in almost all regions. This can essentially be attributed to currency effects. In the USA, we grew by +10.8% (currency-adjusted by –1.2%) and were able to compensate for the decline in sales in the swine segment, particularly in the pet segment including horses.

A slight increase in sales was achieved in the EUCAN region. Sales in Ukraine and Russia fell short of expectations due to the war. Supply difficulties also weighed on the pet and poultry business in Europe. Overall, net sales growth in the EUCAN region was +3.3% (currency-adjusted +1.3%).

The ALAMEA (Asia, Latin America, Middle East, Africa) region registered sales growth of +8.4% (currency-adjusted +5.9%). Sales in the pet segment were higher than those in the livestock segment.

Sales in the TCM (The Chinese Market) region fell by –15.2% (currency-adjusted –19.4%) compared to the previous year. The decisive factors for the decline were, first, the zero-COVID policy in China combined with numerous lockdowns, and second, a difficult market in the swine segment, which is characterized by high feeding and husbandry costs as well as low sales prices and income on the swine producer side. As a result, there was significantly less demand for medication to prevent diseases in the swine segment.

#### Animal Health: Net sales by region (in million EUR)

	2022	2021	Change	currency-adjusted
USA	2,016	1,819	+10.8%	–1.2%
EUCAN	1,218	1,179	+3.3%	+1.3%
ALAMEA	1,035	955	+8.4%	+5.9%
TCM	290	342	–15.2%	–19.4%

#### Continued strong growth in Biopharmaceutical Contract Manufacturing

##### Biopharmaceutical Contract Manufacturing

In the Biopharmaceutical Contract Manufacturing business, revenue was +11.7% (currency-adjusted +11.1%) higher than in the previous year due to strong demand for our business partners' market products. The order situation for the entire business has developed positively, resulting in a high level of capacity utilization. In addition, the focus in 2022 was on product and process transfers to the new production facilities in Vienna.

##### Other sales/discontinued operations

Under discontinued operations, we aggregate activities of minor strategic importance for Boehringer Ingelheim. Net sales decreased as expected.



## 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.

Cash inflow from operating activities was 4,746 million EUR and, despite the further build-up of inventories to provide safe care for our patients and the revenue-related build-up of receivables due to the positive business development, was significantly higher than the previous year (+900 million EUR). Our core business also provides the basis for our ability to continue investing in strategic business development, as our investments totaling 3,405 million EUR could also be fully financed from operating cash flow.

(in million EUR)	2022
<b>Financial funds as of 1.1.</b>	<b>2,546</b>
Cash flow from operating activities	4,746
Cash flow from investing activities	- 1,642
Cash flow from financing activities	- 3,899
<b>Change in financial funds from cash relevant transactions</b>	<b>- 795</b>
Change in financial funds due to exchange rate movements and valuation adjustments	146
<b>Financial funds as of 31.12.</b>	<b>1,897</b>

In Germany, more than 500 million EUR were invested in the Biberach and Ingelheim locations in the past financial year. In addition, we have further strengthened the biopharmaceutical and R&D location in Vienna with over 150 million EUR.

In the field of Animal Health, Boehringer Ingelheim is investing in the construction of a modern plant for vaccines with the highest biological safety standards. The total investment for this project is over 230 million EUR, of which approximately 32 million EUR were paid in the past financial year.

The cash outflow from investing activities after taking asset sales into account was 1,642 million EUR. In total, following disbursements for financing activities of 3,899 million EUR and changes due to exchange rate movements and measurement adjustments, the Group's financial funds decreased from 2,546 million EUR by 649 million EUR to 1,897 million EUR.

**High capital  
expenditure volume  
to enable business  
development**

## Net assets position

(in million EUR)	31.12.2022	31.12.2021	Change	Change in %
<b>Assets</b>				
Intangible and tangible assets	9,923	10,113	- 190	
Financial assets	13,572	12,964	608	
<b>Fixed assets</b>	<b>23,495</b>	<b>23,077</b>	<b>418</b>	<b>+ 1.8%</b>
Inventories	4,886	4,237	649	
Trade accounts receivable	6,143	5,178	965	
Other receivables and other current assets	1,555	1,407	148	
Securities	17	250	- 233	
Cash and cash equivalents	1,880	2,296	- 416	
<b>Current assets</b>	<b>14,481</b>	<b>13,368</b>	<b>1,113</b>	<b>+ 8.3%</b>
Other assets	4,522	4,174	348	
<b>Total assets</b>	<b>42,498</b>	<b>40,619</b>	<b>1,879</b>	<b>+ 4.6%</b>
<b>Equity and liabilities</b>				
<b>Group equity</b>	<b>19,185</b>	<b>19,331</b>	<b>- 146</b>	<b>- 0.8%</b>
Provisions for pensions and similar obligations	6,900	6,190	710	
Tax provisions and other provisions	12,223	10,765	1,458	
Accounts payable and loans	2,273	2,224	49	
- thereof residual term over 1 year:	81	85	- 4	
<b>Liabilities</b>	<b>21,396</b>	<b>19,179</b>	<b>2,217</b>	<b>+ 11.6%</b>
Other liabilities and difference from capital consolidation	1,917	2,109	- 192	
<b>Total equity and liabilities</b>	<b>42,498</b>	<b>40,619</b>	<b>1,879</b>	<b>+ 4.6%</b>

As of December 31, 2022, Boehringer Ingelheim's total assets amounted to 42,498 million EUR, an increase of 1,879 million EUR as compared with the previous year. The increase was primarily due to higher working capital (trade receivables and inventories). Moreover, positive currency effects (+ 505 million EUR) have increased all balance sheet items.

While tangible assets increased by 364 million EUR as a result of the renewed high level of investment activity in particular in the strategic expansion of business in areas such as biopharmaceuticals in Austria and Germany, human pharmaceutical research in Germany, and animal health in France and the USA, as well as positive currency effects, intangible assets decreased significantly due to amortization. Funds that were previously held as cash or invested in short-term investments were invested in long-term securities. Financial assets increased as a result of this and as a result of investments in shareholdings.

Working capital (inventories and trade receivables) increased due to the build-up of stocks to ensure security of supply, higher acquisition and production costs due to price increases on the procurement markets, and currency effects. Trade accounts receivable also increased as a result of reporting-date and revenue-related circumstances, primarily in the USA and Germany. The increase in other receivables and other assets was due to factors such as increased tax prepayments and positive currency effects. Other assets increased due to higher deferred tax assets resulting from temporary differences between the measures of the consolidated companies' tax balance sheets and the measures in the consolidated balance sheet (for pension provisions in particular) as well as currency effects.

Equity amounted to 19,185 million EUR as of December 31, 2022 and decreased slightly by 146 million EUR as a result of withdrawals, which also included withdrawals for the financing of the Boehringer Ingelheim Foundation as well as tax payments. The Boehringer Ingelheim Foundation is a non-profit foundation that promotes excellence in basic research in the natural and life sciences. According to the applicable commercial law regulations, the shareholders' tax payments attributable to Group activities are not to be shown in the profit and loss statement as tax expenses, but as withdrawals. The equity ratio fell slightly mainly due to the increase in total assets to approximately 45% (December 31, 2021: 48%). 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 26,166 million EUR as of December 31, 2022, representing a 62% share of total assets. Consequently, as in previous years, long-term disposable capital continues to cover all intangible assets and tangible assets, as well as working capital.

**45%**  
equity ratio

The pension provisions increased in Germany due to a further reduction in discount rates and due to the adjustment of the provisions to the current development of inflation and to the current assumptions for pension trends, as well as in the USA due to the lower market values of the plan assets. The increase in other provisions correlates to the change in the level of revenue, since this includes provisions for discounts in the USA, for commissions and for royalty payments. Currency effects also led to an increase in provisions. The increase in liabilities stems exclusively from trade payables and positive currency effects; other third-party debt was reduced. Other liabilities have declined, mainly due to the release of the difference arising from capital consolidation as well as deferred income.

The financial position likewise reflects Boehringer Ingelheim's healthy economic development in the 2022 financial year. Boehringer Ingelheim remains a soundly financed company, making considerable capital expenditure in the development of its business and research activities from its own resources in order to ensure its long-term growth and 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.

As a research-driven biopharmaceutical company, Boehringer Ingelheim's current research and development activities are, by definition, considered an opportunity. Relevant projects have already been outlined in the research and development chapter. We also see the digital transformation as an opportunity and see new possibilities to use these technologies in the area of research and development – especially clinical development – but also in supporting patients during therapy. The digital transformation is also of particular importance in sales and administration.

The aim of the risk management system implemented at Boehringer Ingelheim is to identify business-specific risks and, in particular, risks that jeopardize the continued existence of the company as early as possible, 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 carefully analyzed and assessed. Following appropriate classification, adequate risk management measures are initiated and their implementation is systematically monitored.

In the year under review, the Internal Audit department 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 key risks which Boehringer Ingelheim is exposed to are broken down into the following specific categories: financial risks, legal risks, information technology risks, production and environmental risks, personnel risks, and industry 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, in turn, broken down as follows: currency risks, geopolitical risks, credit and country-specific risks, and financial investment and shareholding risks.

### Currency risks

The global orientation of our business activities is subject to risks and opportunities due to exchange rate volatility in relation to the US dollar and the Japanese yen above all – 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 using 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.

### Geopolitical risks

The business of Boehringer Ingelheim as a global company can be adversely affected by geopolitical developments. Significant risks may arise from factors such as geopolitical tensions or changing economic and political conditions that may have an impact on production sites and on sales markets. Global geopolitical developments, in particular in connection with the Russian war of aggression in Ukraine, are under constant observation by Boehringer Ingelheim so that appropriate measures to address these generally concrete and low risks and to maintain a successful global business can be taken at an early stage.

### 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, 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 conservative investment strategy in the management of its financial assets. Its primary objective is long-term preservation of their real value. This is reflected in the orientation of our portfolio, which mainly comprises money market and bond investments. This results in a concrete, controllable, and limited level of risk for most of our 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 concrete risks have been covered by the 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. In addition, all employees at Boehringer Ingelheim are regularly trained in compliance with regulatory requirements in order to minimize the probability of such risks occurring.

**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. However, there is absolutely no guarantee 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 concrete liability risks, 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 medicine 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.

**Information technology risks**

Boehringer Ingelheim uses global networked IT systems in core areas of its operations for business and production processes as well as internal and external communication. It also makes use of cloud-based third-party systems and services. These systems are used to process, store, and transmit confidential and personal data. The availability, integrity, and confidentiality of these systems and the data processed are thus highly significant.

External cyber attacks or any manipulation of systems may result in the loss of information and expertise as well as temporary interruptions to business and production processes. This risk is considered to be high and concrete in view of the continuously evolving global environment and the growing frequency of cyber attacks.

The risk of such threats and attacks has increased in the last few years since people are increasingly working from home and employees thus have access to sensitive data within less secure IT environments.

Boehringer Ingelheim is countering this risk by means of continuous IT process analysis and improvements as well as further preventive and reactive measures. This helps to identify and ward off current threats and to minimize potential damage.

#### **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 included 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 guarantee the supply of our products to the market, we have implemented measures that guarantee reliable and high-quality supplies for our 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 the 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**

As with other companies, Boehringer Ingelheim 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 this risk by means of a comprehensive personnel concept, which also presents the Group with opportunities in the context of global personnel management. 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 also 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, to the extent necessary, using digital applications rather than in-person meetings. In view of these measures, this is considered to be a concrete and moderate risk.

**Industry-specific risks**

Boehringer Ingelheim is exposed to business risks that are specific to the pharmaceutical industry. These risks have materialized in part over 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 medicines, these industry-specific 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 state reimbursement systems due to cheaper generic drugs. Boehringer Ingelheim is keeping a close eye on the various changes in the respective sales markets and takes appropriate measures in response to current developments.

The net book value of individual balance sheet items is exposed to changes in market and business conditions and therefore also to changes in fair values. In the event of necessary impairments, there may be significant non-cash impacts on earnings and balance sheet ratios. This applies in particular to intangible assets, including goodwill, which essentially stem from past company acquisitions. All relevant risks were assessed and taken into account as part of the preparation of the consolidated financial statements.

**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 net assets, 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 financial year, in which we achieved our objectives in terms of our contribution to the well-being of patients, livestock, and pets, as well as in terms of key financial data – and even exceeded them in terms of expected growth. Despite the very volatile environment, we were able to ensure the company's sustainable development and profitable growth.

Influential developments in 2022 will also influence the coming financial year, and some will also present challenges for us. We expect that general inflation will remain above the level of recent years despite the countermeasures taken by the central banks and that the high energy prices resulting from the war in Ukraine will only ease again in the medium term, particularly in Europe. Also, the impact of China's move away from the zero-COVID policy, which was initiated at the end of 2022, cannot yet be fully assessed. We continue to expect China to have a limited global presence as well as subdued national development in 2023.

We continue to look to 2023 with confidence and plan to improve the lives of patients and animals through innovation, thereby also achieving sustainable growth. However, an outlook for the coming financial year remains difficult in the current economic situation.

The greatest uncertainty over the coming years will be the potential impact of various government economic recovery, sustainability, and support programs on the respective government's budget planning and whether this will result in policy shifts related to innovative medicines. We expect moderate market growth in 2023 for prescription pharmaceuticals (excluding COVID-19 medication) but are also observing increasing global institutional efforts to lower the prices of medicinal products. In view of this development, the financial ability to act with regard to sustainable growth and innovation remains of great importance to us.

We expect moderate market growth in the new financial year in the animal health sector, in which research and innovation are particularly important. Together with our business partners, we intend to continue to provide our customers with innovative solutions. For Boehringer Ingelheim, various new launches in both the pet and livestock segments will enable growth in the magnitude of the market.

Our priorities in our Biopharmaceuticals business area are supplying the market with our own products and contract manufacturing for our business partners. The utilization of the large-scale cell culture facility in Vienna will continue to be the focus in 2023.

For 2023, 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 2022, is in line with our strategic focus on continuing to drive growth and the flow of new products. In 2022, 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 2023. 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 and development pipeline shows short-, medium-, and long-term growth potential. We expect to see a further increase in R&D investments in new medicines in 2023 and intend to reach new milestones in research and development as well as individual market approvals.

In addition to patent expiry, 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 healthcare systems. In the last two years of the pandemic, research-driven pharmaceutical companies displayed an unprecedented level of networking and energy to develop solutions in the interests of patients extremely quickly, thereby proving the societal value of research and innovation. Nevertheless, further sustainable steps are required involving politicians and supporting stakeholder groups so that the pharmaceutical companies' contribution of value to the overall economic added value and to increasing the efficiency of the healthcare system as a whole continues to be appropriately rewarded. 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 while continuously monitoring and adjusting costs and strategies. In 2022, we implemented measures in all our business areas to accelerate the speed of our response to changes, reduce the complexity of the organization, and optimize the cost base. In this way, we are creating potential for capital expenditure and securing the company's long-term success.

For 2023, we expect Boehringer Ingelheim to achieve a slight improvement in operating income despite our increased level of investment in research and development on a comparable basis (adjusted for currency and extraordinary effects).

Boehringer Ingelheim develops therapies that fundamentally change lives – today and for generations to come. As a traditional family enterprise, we thereby ensure our competitiveness and long-term entrepreneurial independence. We are confident that we will achieve our ambitious targets in all of our business areas thanks to our great innovative strength, which rests on a comprehensive portfolio of prospective products, our global presence, and the support of our highly qualified and motivated employees.