



We live in a world of possibilities.

A world that is constantly changing thanks to new ideas. This inspires and drives us to look more closely at things, to challenge the status quo and to think outside the box. Since 1668, we have been offering highquality products for a better life.



Founded in Darmstadt, Germany in 1668 by Friedrich Jacob Merck, we are the world's oldest pharmaceutical and chemical company. The Merck family has remained the majority owner of the company to this very day.

Over the course of nearly 350 years, we have become a truly global company with approximately 50,000 employees in 66 countries. Our people are united by their passion for new ideas, the possibilities of technology, and the potential to make a difference in the world.

internationally. In the United States and Canada, however, as MilliporeSigma in the Life



# <section-header><text>

Across Healthcare, Life Science and Performance Materials, we bring expert and high-quality products to the world. From prescription medicines to treat conditions such as cancer, multiple sclerosis and infertility to over-the-counter products developed to help protect every member of your family: our goal is to make a difference to millions of people around the world.

#### Life Science

Providing scientists and engineers with best-in-class lab materials, technologies and services, we are dedicated to making research and biotech production simpler, faster and safer.

#### **Performance Materials**

Developing specialty chemicals for particularly demanding applications, we provide groundbreaking liquid crystals as well as OLED materials for displays and lighting, effect pigments for coatings and color cosmetics, as well as high-tech materials for the production of integrated circuits.

# anaitions charging

Our goal is to help improve and prolong life – and to drive innovation in science and technology to make a lasting difference for patients and consumers.

We offer prescription drugs and solutions to treat cancer, multiple sclerosis, infertility, growth disorders as well as certain cardiovascular and metabolic diseases. As a leading science and technology company, it is our ambition to develop breakthrough therapies for patients with cancer. We conduct research and development and are working on several R&D projects in the field of immuno-oncology, for example. This promising approach uses the patient's immune system to attack cancer cells – and aims to help more patients in the future.

Worldwide, some 2.3 million people have multiple sclerosis (MS), a chronic disease of the central nervous system. MS therapy has made great progress over the past decades. However, there is potential for further improvements – both in treatment and in patient support. We have a long-term commitment to developing treatments for neurodegenerative diseases such as MS. Our research and development aims at offering new therapeutic options and addressing unmet patient needs.

We support people at every stage of life – including the creation of new life: our company is the global market leader in fertility treatments. An estimated 2.5 million babies worldwide have been born with the help of our fertility portfolio. We are complementing our drug portfolio with a continually growing number of fertility technologies, aiming to further increase the chances of treatment success.

#### Oncology

We offer a treatment for metastatic colorectal cancer as well as for head and neck cancer.

#### **Neurodegenerative Diseases**

We help to treat relapsing forms of multiple sclerosis (MS), one of the most common neurological diseases among young adults.

#### Fertility

An estimated 2.5 million babies worldwide have been born with the help of our fertility portfolio.

#### General Medicine and Endocrinology

Every day, some 55 million patients across the globe use our medicines for type 2 diabetes, thyroid disorders, cardiovascular diseases and growth hormone disorders.

#### Allergies

We are a leader in allergen immunotherapy and our portfolio encompasses a diverse spectrum of approved allergen products.

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We manufacture and market over-the-counter products with the aim of protecting every member of your family so that they can enjoy healthy, happier lives. Our brands are household names and can be found in pharmacies around the world.

#### Our products help to protect and support people at every stage of life.

We were the first company to develop **Metafolin®** – integral to **Femibion®**. This product's special nutrients support women from the first wish for a child, through pregnancy, until the end of breastfeeding.

Our product **Bion**<sup>®</sup> with its probiotic vitamins and minerals offers daily immune support for the whole family.

**Seven Seas**<sup>®</sup> brand dietary supplements support brain health, vision, heart health and general well-being.

Our over-the-counter nasal spray **Nasivin**<sup>®</sup> has even been tried and tested on the moon! It was included by NASA on the Apollo 11 mission in 1969 manned by Neil Armstrong and his team.

#### **Nasivin**®

Nasal spray to manage the symptoms of a common cold (rhinitis).

#### **Neurobion**<sup>®</sup>

Global market leader in B vitamins to nourish and protect nerves.

#### **Bion**<sup>®</sup>

Global market leader in probiotic vitamins offering daily immune support for the whole family.

#### Seven Seas®

Dietary supplements that support brain health, vision and heart health.

#### Femibion®

Special nutrients supporting women from the first wish for a child, through pregnancy, until the end of breastfeeding.

#### Sangobion<sup>®</sup>

Helps to fight iron deficiency symptoms in adults, children and babies.

#### **Vigantoletten**®

Vitamin D3 products that help to maintain healthy bones.

#### Kytta®

Helps to reduce muscle, joint and back pain.

This publication is intended to provide information to an international audience. Not all products discussed on this page may be available in your country and local prescribing information and approved indications may differ from country. For local prescribing information and approved indications, please visit our local websites.

## soling problems

Our Life Science business is dedicated to solving the world's toughest life science problems by collaborating with the global scientific community, and through that, accelerating access to health for people everywhere. Throughout history, people have been obsessed with aging, and have made many attempts – some more successful than others – to slow down the process. Indeed, people are now living longer and longer. But with longevity come age-related disorders, such as dementia, diabetes and certain cancers.

To address these challenges and improve quality of life for the elderly, scientists conducting basic research need to first understand aging in biological terms – and our products are here to help them. Our well-documented **chemical reagents** can block certain pathways that may affect the way the body responds to food – which, in turn, affects metabolism. Our **stem cell research portfolio** allows researchers to investigate why aging stem cells stop self-renewal – and why we get gray hair. Scientists are using our **platforms for cellular analysis** to understand how the environment around cells, the building blocks of our body, can affect how cells age.

Aging is still inevitable. But we're collaborating with researchers to better understand it – and make growing old a whole lot easier.



Air is an invisible, valuable resource that most people usually don't pay much attention to.

ur customers in the pharmaceutical, cosmetics and redical device industries are different. For them, r can be a source of microbial contamination of roduction areas. We understand that accurate air ronitoring is critical for our customers. Our microbial r monitoring systems sample air in production areas eliably and in accordance with regulatory standards.

#### Particle contamination concerns are

**everywhere.** Despite their minute size, microorganisms pose a severe threat to the safety and efficacy of products and brands: every year, several hundred products have to be recalled, resulting in financial and image losses. If particles end up in the air, on surfaces, and in water, fuel and other liquids, the consequences can be serious for human health and safety, as well as for process efficiency. Breathing in polluted air increases the risk of cancer and age-related diseases. Contaminated aviation fuel can impair the performance of jet engines. Contaminated hydraulic fluids can lead to premature wear and tear on industrial equipment.

'e've been tackling this issue for more han half a century. Our comprehensive hvironmental monitoring solutions provide eliable protection against contamination.

ur customers are in safe hands with us.



We are the world market and technology leader in liquid crystals. Unstoppable in our quest to advance display technology, our products have enabled razor-sharp images in smartphones, laptops, flat-screen TVs and tablet PCs around the world. O in fle di re th W de er Po (0 er er

Our quest for excellence drives us to explore and innovate. From ultra-high definition screens and flexible displays to the technology behind the display, we push the boundaries of possibility, researching and developing the technologies of the future in partnership with our customers.

We think about the bigger picture as well as the small details. Because our pioneering liquid crystal technologies use less energy than standard solutions, people can enjoy brilliant images for longer wherever they are.

Possibility excites us. Organic light-emitting diodes (OLEDs) are a technology we are exploring with enthusiasm. Beautifully thin, lightweight and energy-efficient, they display perfect pictures at any angle, making them ideal for portable devices, large-format screens and lighting. Through a partnership, we have made it possible to print OLEDs, a discovery that opens the door to yet more possibilities. A little sparkle goes a long way. As the global market leader in pearlescent pigments, we add shimmer to the paint on your car, sparkle to your lipstick and luminescence to the coating on your packaging.

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Our **Xirallic**® range of pearlescent pigments uses a technology we discovered while working with aluminum oxide platelets, and is the secret behind the luxurious shine of premium cars. Our diverse range of effect pigments add sparkle to your ice cream and pearlescence to your lipstick.

Our work with pigments goes beyond color and shimmer. Our functional pigments impart unique physical properties to many diverse products; from antistatic floor coverings and counterfeit-proof product labels, to heat-reflecting blinds. Our ideas are everywhere.



### discovering The Future

We are united by our passion for new ideas. Our over 6,000 researchers are dedicated to discovering pioneering health solutions and developing new technologies. In 2016, our research and development costs totaled € 2.0 billion.

Reimagining how cancer could be treated, we are working to boost the immune system so it can better recognize cancer cells and fight them. Complementary to our work in immuno-oncology, we also have strong expertise in oncology and immunology.

We are dedicated to supporting life science research and production, developing many new products every year to support this work. For example, our CellASIC® ONIX2 Microfluidic System converts laboratory microscopes into powerful tools for analyzing cellular mechanisms and behaviors in a live environment.

Our groundbreaking work in liquid crystal research is leading to the technologies of tomorrow. We consistently think beyond current display technologies, developing new products such as liquid crystal windows that automatically regulate a building's sunlight levels, keeping it cool in summer and warm during winter.

# Taking Denter

Our success is founded on long-term profitable growth. But we know that a company's future depends on more than economic factors.

Through our business activities, we aim to help solve global challenges and create a sustainable future. We respect the interests of our employees, customers, shareholders, and society.

Our corporate responsibility strategy focuses on those areas where we can have the greatest impact, namely health and the environment as well as culture and education. We actively want to make a difference. Since 2007, we have been partnering with the World Health Organization (WHO) to help eliminate the neglected tropical disease schistosomiasis, which affects more than 200 million people and takes an estimated 280,000 lives every year. We are fighting the disease head on by producing and donating praziquantel tablets. Through this effort and further initiatives, we are proud to support access to health. In 2016, we were evaluated by the Access to Medicine (ATM) Foundation, resulting in an excellent fourth-place ranking for our company in the important 2016 ATM Index.

We continuously work to improve the sustainability balance of our products. New products in our Life Science business, for example, aim to minimize our environmental impact, as well as the environmental impact of our customers, reducing the consumption of raw materials, energy and water as well as emissions and waste. That way we help our customers achieve their own sustainability goals. Our liquid crystal technology enables a similar effect, with even higher contrast displays consuming little energy.

We believe that culture inspires people, opening minds to new possibilities and fueling creativity. Our company philharmonic orchestra is our musical ambassador. We are also involved in educational and literature projects around the world, such as sponsoring literature awards in Germany, Italy, India, Russia, and Japan.

## Sclende

**Our products touch** peoples' lives in diverse ways. From sunscreen and sparkly lipstick, to cancer therapies and technologies that affect how people will live and work in the future. But it's not just products that make us unique. Our employees and our culture also set us apart.



we don't accept the status quo. It's in our nature

## growing profilably

#### Our key figures

€ billion	2015	2016
Sales	12.8	15.0
EBITDA pre exceptionals	3.6	4.5
Margin (% of net sales)	28.3	29.9
Research and development costs	1.7	2.0
Business free cash flow	2.8	3.3
Employees (as of December 31)	49,613	50,414

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#### Sales by business sector 2016 (€ million)

17% Performance Materials 2,511 38% Life Science 5,658

#### EBITDA pre exceptionals by business sector 2016 (€ million)



#### Sales by region 2016 (€ million)

1% sia-Pacific	31%
736	Europe
	4,735
%	
atin America	26%
136	North America
	3,858
%	
iddle East & / frica (MEA) /	

### "Mere curiosity adds wings to every step..."

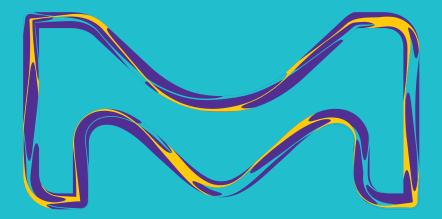
The great German writer and passionate scientist Johann Wolfgang von Goethe could not have put it more aptly. Breakthroughs begin with curiosity!

We could not agree more. Curiosity has been adding wings to our steps for nearly 350 years. Reason enough to launch a dedicated research project: What sparks curiosity? What keeps it alive? And how does it lead to innovation? Together with experts, we are examining this and further questions about curiosity.

Curious?

curiosity.emdgroup.com #catchcurious





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