Dear shareholders, dear friends,

We had a special year in 2018: The company commemorated an amazing anniversary – 350 years. We were able to look back on a long history of contributing to the progress of science again and again. Above all, however, we have been directing our focus on what lies ahead. After all, the most important history remains the one we are writing today.

In business terms, 2018 proved challenging, but we held up well over the year. We also made decisions that will guide our future path and allow us to generate profitable growth again in 2019.

- In our Healthcare business sector, we presented a number of results from clinical studies involving our drug candidates. Not all of the studies achieved the results we had hoped for; this is normal when developing innovative medicines. We gained many important insights that will help us streamline the development of our Biopharma pipeline. One further key milestone was the FDA’s acceptance of our application for market approval of cladribine tablets as a potential treatment for relapsing-remitting multiple sclerosis. Finally, we also further refined our focus on innovation-driven businesses through the sale of the over-the-counter products business (Consumer Health).

- Growth in our Life Science business sector continued to perform above the market. We have further expanded our position as the most profitable technology and solutions supplier in the life science industry. We recorded particularly strong sales growth in our Process Solutions area, where we offer leading-edge processing technologies for biotech and pharmaceutical companies as well as products critical to the advancement of cell and gene therapy. Moreover, our e-commerce platform made a significant contribution to business growth.

- In the Performance Materials business sector, we have developed a new strategy and restructured our organization. With the help of our multi-year “Bright Future” transformation program, we will implement our new strategy and create the basis for future profitable growth beyond 2019. Our goals in taking this step are to sharpen our focus on our customers’ needs as well as to centrally decide on the assessment of projects and the related use of resources as part of an integrated approach to research and development.
To Our Shareholders

Letter from Stefan Oschmann

Stefan Oschmann
Chairman of the Executive Board and CEO
Our Group sales in 2018 showed a slight increase of 2.2% to € 14.8 billion¹, supported primarily by the Life Science and Healthcare business sectors. EBITDA pre, the key performance indicator to measure our operations, dropped by –10.5% to € 3.8 billion¹. There are several reasons for this decline: Last year, we invested in research and development as well as the market launches of the new products in our pharmaceutical business. Our Liquid Crystals business recorded further price declines. For the most part, however, the decline in earnings was due to negative foreign exchange effects that are primarily attributable to movements in the currencies of various growth markets. Over the past year we reduced our debt load by € 3.4 billion and thus reached our target for 2018, which was to achieve a net financial debt to EBITDA pre ratio of less than two.

Our shares essentially closed out the year 2018 at the level they recorded at the start of the year. The shares performed well when compared with the sector, particularly in the fourth quarter, and closed out the year above the relevant benchmark index for the pharmaceutical industry² and well above the relevant chemical industry index³ and the German benchmark DAX index. For 2018, we will propose to the Annual General Meeting a dividend of € 1.25 per share.

As you can see, we achieved a solid result in 2018. This result is largely thanks to our employees. Numbering some 52,000 worldwide, they worked hard and achieved much in 2018. On behalf of the entire Executive Board, I would like to express my heartfelt thanks for their extraordinary dedication.

Once again, there is much to do for us this year. The markets and industries in which we operate continue to develop at a rapid pace.

- Precision medicine will profoundly change the entire healthcare sector. New technologies and high-performance data analyses will enable us to gain an ever greater understanding of serious and complex diseases. Looking ahead, we will be able to tailor medicines even more exactly to the needs of each patient.

- Falling equipment costs, improved access to knowledge and new financing options will raise scientific research and development to a completely new level. It will, for example, become easier for smaller biotech companies to bring new technologies and therapies to market maturity with greater speed.

- At the same time, more and more items in our everyday lives will be interconnected. The Internet of Things is becoming a reality, and unimagined possibilities are emerging in almost all areas of our lives.

¹ Excluding the Consumer Health business divested in 2018.
² MSCI European Pharma Index.
³ Dow Jones European Chemical Index.
This is good news for us because we are helping to shape all these developments. Science is at the heart of everything we do. It forms the basis for the technologies we get off the ground. Every day, our more than 7,000 researchers work to push the boundaries of the possible.

In Healthcare, we continue to pursue our long-term goal of becoming a global specialty innovator. To this end, we focus on oncology, immuno-oncology and immunology. Our pharma pipeline harbors great potential, which we want to harness further in 2019 and beyond, also in collaboration with strong partners.

Life Science plays a leading role in attractive markets, and we want it to stay that way. This is the reason we are strengthening fast-growing business areas such as bioprocessing technology for the manufacturing of medicines. It is also the reason we are pushing promising new technologies such as our BioContinuum Platform. It will help us to significantly simplify the complex process of producing biological medicines over the coming years as well as accelerate it.

In Performance Materials, we aim to expand our position as a leading solutions supplier for the electronics industry. The electronics sector is considerably benefiting from the megatrends of digitalization, mobility and urbanization. It services a broad range of different customers, making it less susceptible to the ups and downs of individual markets. In particular, our business with semiconductor materials will continue to advance Performance Materials over the long term.

At our company, we are also working on technologies of the future beyond our three business sectors.

The announced Syntropy joint venture we plan to create with Palantir Technologies represents a particularly exciting project. Syntropy aims to markedly accelerate cancer research. To achieve this, the large volume of biomedical data being collected by scientists and physicians worldwide every day plays a key role. This data may prove very valuable to science. Far too often, however, it’s not accessible to the scientists who need it. We aim to change this through Syntropy. We want to enable researchers to structure and analyze data from various sources through the use of pattern recognition. In addition, it is planned that scientists can securely exchange data in a traceable manner while retaining control of their own data at all times.

Syntropy is a project with considerable potential, an attribute it shares with other issues of the future – for example, new interfaces between the human body and the digital world and new technological approaches for liquid biopsy or for the biotechnological production of meat. Please see the magazine section of this Annual Report for more information on these issues.
To advance our research, we are present in all of the world’s technology regions, which, of course, today also means China. Alongside Germany, the United States, and Israel, China has become a top location for science and technology, and we are investing heavily in the country. Last November, we announced the establishment of our new Innovation Hub in the southern Chinese city of Guangzhou, one of the country’s major technology hubs. We are also stepping up our production in China: we operate one of our biggest pharmaceutical production plants in the eastern Chinese city of Nantong.

Contributing to advancements in science and technology is a great opportunity – but it also comes with considerable responsibility. We strongly believe what matters is not just what a company does, but also how it achieves its goals. Our long history has taught us that sustainable business success always derives from responsible conduct. I am very pleased we achieved a very good fourth place in the 2018 “Access to Medicine” index for the second time in a row. Every two years, experts from the Access to Medicine Foundation compare the activities of the 20 leading pharmaceutical companies in this area. Our fourth-place ranking is a gratifying recognition of our commitment to improving access to healthcare for people in developing countries, and it is a strong incentive for us to continue our efforts.

For us, scientific research and responsible entrepreneurship go hand in hand. Only when combined do they enable technological advancement that benefits all of us – our customers, our employees, society and, of course, you, our shareholders.

Over the coming years, we at Merck KGaA, Darmstadt, Germany, want to develop breakthrough technologies that will make a substantial difference in the lives of millions of people. This is what drives us, now and in the future.

Sincerely,

Dr. Stefan Oschmann
Chairman of the Executive Board and CEO
To Our Shareholders

The Executive Board

Udit Batra
Member of the Executive Board
CEO Life Science

Stefan Oschmann
Chairman of the Executive Board and CEO

Kai Beckmann
Member of the Executive Board
CEO Performance Materials

Marcus Kuhnert
Member of the Executive Board
Chief Financial Officer

Belén Garijo
Member of the Executive Board
CEO Healthcare
At a glance

The performance of our shares was, on the whole, characterized by volatility in 2018: Following a downswing in the first quarter amid a market setting that came under visible pressure, the share price staged a recovery by the year-end. Our share price remained almost unchanged over the previous year at +0.26%, finishing the year at €89.98. The shares substantially outperformed the relevant reference indices, which all recorded a downswing during the same period. When compared with the DAX® reference index, which fell by around 18% during the period as a whole, our shares performed just under 19 percentage points better. Their outperformance vis-à-vis the relevant chemical industry index, which fell by almost 16% in 2018, was around 16 percentage points. The pharmaceutical industry index declined by around 3% in 2018, thus underperforming our shares by 3 percentage points in the same period.

In 2018, the Executive Board and the Investor Relations team gave in-depth briefings to more than 660 investors at investor conferences as well as during roadshows and conference calls.

The average daily trading volume of our shares increased by 23% from approximately 474,000 in 2017 to over 584,000 in 2018. The North America region continued to dominate: its proportion of the free float increased to around 36% (2017: 29%). By investor type, growth and value investors dominated, as in the previous year. In 2018, growing interest could be seen among value investors, who now hold approximately 28% of the free float. At the end of 2018, the top five investors held around 28% of the free float (2017: 19%).
OUR SHARES

Share price development from January 1, 2018 to December 31, 2018 in %

- Share price low March 26, 2018 ➞ € 74.80
- Share price high December 3, 2018 ➞ € 99.82

Source: Bloomberg (closing rates).
### OUR SHARES

#### Key share price data¹

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividend²</td>
<td>€ 1.25</td>
<td>€ 1.25</td>
</tr>
<tr>
<td>Share price high</td>
<td>€ 99.82</td>
<td>€ 114.40</td>
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<tr>
<td>Share price low</td>
<td>€ 74.80</td>
<td>€ 87.90</td>
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<tr>
<td>Year-end share price</td>
<td>€ 89.98</td>
<td>€ 89.75</td>
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<td>Daily average number of shares traded³</td>
<td>number</td>
<td>583,653</td>
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<tr>
<td>Market capitalization⁴ (at year-end)</td>
<td>€ million</td>
<td>39,121</td>
</tr>
<tr>
<td>Market value of authorized shares⁵ (at year-end)</td>
<td>€ million</td>
<td>11,629</td>
</tr>
</tbody>
</table>

¹ Share-price relevant figures relate to the closing price in XETRA® trading on the Frankfurt Stock Exchange.

² 2018 dividend subject to approval by the AGM.

³ Based on the floor trading systems of all German exchanges and the regulated market on XETRA®.

⁴ Based on the theoretical number of shares (434.8 million).

⁵ Based on the number of shares in free float (129.2 million).

Source: Bloomberg, Thomson Reuters.

### OUR SHARES

#### Identified investors by type as of December 2018

<table>
<thead>
<tr>
<th>Type</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>GARP (Growth At Reasonable Price)</td>
<td>17%</td>
</tr>
<tr>
<td>Index</td>
<td>19%</td>
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<tr>
<td>Value</td>
<td>28%</td>
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<tr>
<td>Growth</td>
<td>32%</td>
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<tr>
<td>Hedged</td>
<td>3%</td>
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<tr>
<td>Other</td>
<td>1%</td>
</tr>
<tr>
<td>German Retail/Undisclosed</td>
<td>10.3%</td>
</tr>
<tr>
<td>Germany</td>
<td>10.3%</td>
</tr>
<tr>
<td>Europe (excl. Germany/Uk)</td>
<td>16.1%</td>
</tr>
<tr>
<td>Rest of World</td>
<td>7.0%</td>
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<tr>
<td>United Kingdom</td>
<td>14.8%</td>
</tr>
<tr>
<td>United States</td>
<td>35.6%</td>
</tr>
</tbody>
</table>

Source: Nasdaq Shareholder Identification. Total number of shares outstanding: 129.2 million.