

The Danish life science strategy as of 16 April 2021 – in brief

Copenhagen, 22 April 2021. This brief in English is made by Molecule as a service for our international customers since the life science strategy is not (yet) available in English. This abbreviated English brief reflects Molecule's choice of examples from the official strategy description¹⁻³ and should not be seen as an official translation.

Background

The Danish Government launched a new life science strategy on Friday, 16 April 2021. For the first time in Danish history, a life science strategy was launched not only by the Minister for Industry, Business, and Financial Affairs but also by the Minister for Health, the Minister for Higher Education and Science, and the Minister for Foreign Affairs. This indicates a strong governmental dedication to the strategy. The time horizon for the strategy is 2021-2023. The substance and the financing hereof are to be negotiated with the rest of the Parliament in the near future.¹⁻³

The life science strategy intends to stimulate that Denmark can keep its increasingly leading position in innovative healthcare and welfare solutions as a provider of medicine, biotech, and medtech, and secure and improve a healthcare sector where the patients' preferences are at the core.

Life Science Strategy

Today, the life science industry in Denmark is nine times bigger than it was in 1990, measured by its contribution to the country's GDP. During the same period, it has halved its **CO2 emissions**. The life science industry makes up one-fifth of all Danish exports. In the Danish life science industry, foreign investments increased by 60 percent from 2013 to 2019. The life science industry contributes to Danish welfare because it provides better treatments through innovative medicine and technology, because of the jobs created in the industry, and because the tax income from the industry has doubled since 2008. The COVID-19 pandemic has

further shown the strength of the life science industry and the value of close public-private partnerships when handling health crises.

However, even with a strong and growing life science sector, the Danish Government acknowledges that the competition around the world is massive. Therefore, the life science strategy is an investment in gaining grounds for further development, innovative green growth, and to become one of the world's leading life science countries and the country with the best patient care. The life science strategy includes 38 initiatives in 7 areas.

Better incentives for research and development

First, the life science strategy aims to **boost research**, especially clinical research, development, and public-private partnerships. That is perceived as fundamental for being a leading nation within healthcare. This area has 11 suggested initiatives. Compared with all other OECD countries, Denmark is the country where the public sector conducts most research in healthcare measured in percentage of GDP, and Denmark is one of the countries in the world with the most clinical studies compared to the number of citizens. The life science industry accounts for two-thirds of all private investments in research and development (R&D), which benefits Denmark, but also poses a risk because R&D investments can easily be moved to other countries. For Denmark to stay attractive to R&D investments, the life science strategy aims to stimulate highly skilled environments to perform in and attractive partnerships to join.

The initiatives suggested to boost research are, amongst others, over-tax deductions for investments in research and funding for continuing Trial Nation that works to attract clinical trials to Denmark. There is an agreement between Danish Regions (the interest organisation for the five regions in Denmark) and the Danish Government to establish a working group across authorities, academia, patients, and the life science industry to suggest changes that can enhance the conditions for clinical research. Also, there are initiatives to support further tests of virtual clinical trials (decentralised trials) and better possibilities for clinicians to spend part of their working hours on research. A pilot of Open Entrepreneurship has proven successful in growing a more robust culture of translating Danish research results and innovations at the universities into commercial businesses; hence this is suggested to continue.

Better use of data

Another focus area of the strategy is a **better use of health data** to continue improving patient treatments and to keep innovating new solutions that improve health and efficiency without compromising data security and confidentiality. This focus area contains seven initiatives. The objective is to further position the unique Danish comprehensive health and socio-economic data that cover the entire population in Denmark and cover a period of almost half a decade.

The ambition is that these data are to be used in flexible and more extended ways and enable better clinical practice and future life science solutions while ensuring confidentiality and data security. This has become utterly more important with new technologies such as machine learning and new data types, such as genomic data. The strategy emphasises that, e.g., genomic data also pose new possibilities and perspectives to explore. Specifically, the strategy suggests creating one-point access to all Danish registry data, including a powerful analysis platform that enables combinations and the use of extensive data sets.

Another initiative to realise the potential of the Danish data is that the Ministry of Health and the Ministry of Industry, Business and Financial Affairs have established a national partnership for better use of health data to support research, quality improvement, and innovation. The partnership was announced in the strategy and established simultaneously with the launch of the strategy. The National Genome Center and the Regional Bio- and Genome Bank are examples of the partners in the new partnership.^{4,5}

The initiatives to ensure better use of data include efforts to spur the international life science and health sector to become more aware of the Danish data and the possibilities of these data to support research and development. There is a focus on enhancing infrastructure as well as transparency in options and requirements (legal, ethical, etc.) for using the data.

Denmark, a showcase for innovative solutions

The third focus area of the strategy is **better market access for innovative products and solutions** that benefit health and increase the potentials of Denmark as an innovative pioneer in health and life science. This focus area includes five initiatives. The area is relevant due to the growing elderly population, a population with more and more chronic illness, and the fact that 28 percent of the people employed in the Danish life science sector are employed in foreign-owned companies. When the Danish healthcare sector itself can exhibit fast uptake

of innovative solutions, it is attractive for the international life science sector to use Denmark as a showcase for innovative products. And it is beneficial to health and efficient treatment. Hence, this focus area includes initiatives with innovative and value-based procurement. It presents a new task force⁶ targeting chronic illness and inequalities in health. Also, there is an initiative to create the possibility to accredit health apps in partnership with the Nordic countries for the general practitioner to prescribe a targeted app for treatment.

Highly qualified labour

With new technologies, new data types, new analysis methods, and new treatment types, there is a need for continuous support and development of **highly qualified human resources**. This is the fourth focus area in the strategy, and it includes two initiatives. The proposals in the strategy include better possibilities for continuing education, e.g., personalised medicine, digital competencies, and data science. The newly developed master's degree in personalised medicine is used as an illustrative example^{1,7}.

Internationalising the Danish life science industry

Also, there is a focus on initiatives that improve the **Danish position as a health and life science exporter**, with seven initiatives aiming at helping the industry to conquer foreign markets. The Danish authorities and diplomacy are to work better and more consistently together to provide the best platform for the Danish life science industry to conquer the global market. The Danish Innovation Center in Boston, USA, is recommended to continue, Healthcare DENMARK is proposed to continue, and Invest in Denmark is suggested to continue and be strengthened.

Healthy and green growth

The life science strategy includes an ambition to support the industry in a **healthy and fossil-free growth** with three initiatives. Denmark has set goals beyond the Paris Agreement and committed itself to reduce the fossil footprint by 70 percent by 2030 (compared to 1990)⁸. The life science sector has the potential to invent and innovate ways to help reach the Danish goal. Therefore, the Danish Government will support the efforts to have a fossil-free life science industry, e.g., using bio-solutions and intelligent waste management.

Knowledge spreading and partnerships

Finally, there is the seventh focus area of **improving knowledge dissemination and partnerships**, which includes three initiatives. There is a particular focus on spreading knowledge and best practice across sectors, e.g., across the public health sector and the

private sector. One of the initiatives is establishing a new Life Science Board and a public-private partnership around strengthened access to vaccines.

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