400 YEARS OF HISTORY

From the first Lion Pharmacy in 1620 to global dermatological front-runner in 2020

1620 1672

Today, LEO Pharma is a global player within treatment of skin diseases – and the company's goal is to become the market leader in medical dermatology. The skin is our largest organ and globally one in every four persons will suffer from a skin disease at any point in time. LEO Pharma's goal is therefore highly ambitious.

Since the establishment of LEO Pharma in 1908, the company has manufactured and delivered high-quality medicines to patients. But its roots go much further back.

The 17th century – Authorities set the framework

LEO Pharma evolved from the Lion Pharmacy that was located on the corner of Amagertorv and Hyskenstræde in the centre of Copenhagen. The Danish King Christian IV awarded the Lion Pharmacy royal license on 12 September **1620**. Already 400 years ago they were, in other words, aware that it would not be desirable to allow just anybody to manufacture and sell pharmaceutical products.

In addition to manufacturing medicines, the Lion Pharmacy's first owner, Esaias Fleischer, also worked as a merchant and distributor of exotic spices and other ingredients for cookery.

Half a century later, in **1672**, the new Medicinal Regulation drew a firm line between doctors' and pharmacists' work areas. Pharmacists were no longer allowed to see patients in consultation, whereas doctors, on the other hand, were not allowed to manufacture pharmaceutical products. This distinction is still in force today.

King Christian IV, 1577 – 1648
(Painted by Pieter Isaacsz)

Lion Pharmacy at the corner of Amagertorv and Hyskenstræde in Copenhagen, 1799

1728 1795 1799 1800 1820

The 18th century – Progress despite great fires

In **1728** and **1795**, Copenhagen was ravaged by great fires and the Lion Pharmacy burned to the ground at both events. But the owners rebuilt the pharmacy and ensured that its leading position in the city was maintained.

For most parts of the 18th century, the pharmacy was run by talented and visionary pharmacists who quickly adopted new methods and discoveries. Following the second fire in **1795**, the owner, Johan Georg Ludvig Manthey, completed a modernisation of the pharmacy's equipment in connection with the reconstruction and the ultramodern pharmacy was re-inaugurated in **1799**.

The 19th century – Science and industrialisation

Apart from being a pharmacist, Manthey was also a chemistry professor. Among his friends was one of the most outstanding figures in Danish history of natural science, Hans Christian Ørsted. In **1820**, H.C. Ørsted discovered electromagnetism, and this year we can thus celebrate the 200-year anniversary of his ground-breaking discovery, which we all benefit from in various ways every single day.

H.C. Ørsted also had a background as a pharmacist and was a tenant with professor Manthey during his studies. When Manthey went to Paris in **1800** for a prolonged stay, it was therefore only natural that he asked H.C. Ørsted to manage the Lion Pharmacy during his absence.

H.C. Ørsted used the opportunity to perform a series of chemical and physical experiments in the pharmacy's laboratories. In the following decades, H.C. Ørsted contributed to strengthening the education of pharmacists in parallel with this academic work as a physicist. The importance of combining practical training with a solid theoretical basis was emphasized – and chemistry was given a prominent role in line with pharmacy. Back then, H.C. Ørsted's ideas were far ahead of his time.

Hans Christian Ørsted, 1777 – 1851

During the second half of the 19th century, industrialisation was progressing at full steam, and in the leading industrialised countries, advances in medical science and chemistry were manifested in the establishment of a pharmaceutical industry. However, in Denmark, medicines were still only produced in pharmacies.

The 20th century – Løvens kemiske Fabrik and the start of Danish pharmaceutical exports

On 30 May **1908**, the Lion Pharmacy was acquired by the two pharmacists, Anton Antons and August Kongsted, and shortly thereafter, they registered the company 'Løvens kemiske Fabrik' (which later changed name to LEO Pharma). With an industrial production, high hygienic requirements, standardisation and scientifically based development work, they wanted to cover the need for high-quality medicines in Denmark. However, their plans were met with great resistance from the colleagues at the Association of Danish Pharmacies who wanted to keep the pharmacies' exclusive rights to manufacture pharmaceutical products.

1908 **1909** **1917** **1920** **1922** **1923** **1939** **1940** **1945** **1947** **1959**

But Antons' and Kongsted's minds were set – they wanted to move fast, and they had great ambitions. Right from the start, they cooperated with both Danish and foreign scientists. The first LEO product, Paraghurt®, was the result of a cooperation with the Pasteur Institute in Paris – and the product remained in the company's portfolio from **1909** to **2003**, that is for more than 90 years.

At the University of Copenhagen, LEO Pharma cooperated with Doctor Marie Krogh and her husband, August Krogh, who was a physiologist. Marie Krogh characterised the active ingredient in the plant Digitalis. Extracts from the plant had been used to treat heart disease for more than a thousand years, but Marie Krogh assessed that the treatment could be improved considerably and side effects reduced if the active ingredient was given in correct and controlled dosages. Her efforts resulted in the product Digisolvin LEO®, which was marketed in Denmark in **1917**. The product became so popular that it paved the way for Danish pharmaceutical exports.

In **1920**, August Krogh received the Nobel Prize in physiology or medicine. Afterwards he was invited to give numerous lectures at American universities, including Yale and Harvard, but due to Marie Krogh's diabetes disease, the Krogh couple did not arrive in the USA until autumn **1922**. At this exact time, a new product for the treatment of diabetes, insulin, was being developed in both Canada and the USA. August Krogh contacted the researchers at the university in Toronto and obtained the rights to manufacture and sell insulin in Scandinavia. With financial assistance from August Kongsted in LEO Pharma, it was possible to start a Danish production of insulin, and the product Insulin LEO® was launched in **1923**. Thanks to this achievement, the foundation stone for two companies was laid – Nordisk Insulinlaboratorium and Novo Terapeutisk Laboratorium which many years later were merged into one company that we are all familiar with today, that is Novo Nordisk.

During the following decades, LEO Pharma's areas of interest were expanded. Hormone products were developed and the anticoagulant product, Heparin LEO®, was marketed in **1940**.

August Kongsted passed away in **1939** and his son-in-law, Knud Abildgaard, took the helm of LEO Pharma.

Knud Abildgaard, 1901 – 1986

It was Knud Abildgaard's ambition to develop LEO Pharma into a large, export-oriented pharmaceutical company conducting research on an international level. Despite difficult conditions during World War II, LEO Pharma became the first company outside the USA and the UK that developed and launched a penicillin product, when Leopenicillin® was marketed in May **1945**. With significant penicillin exports as a launching pad, Knud Abildgaard succeeded in creating the export company that he had dreamed of.

During the years **1947** to **1959**, Knud Abildgaard moved the production to the area in Ballerup, Denmark, where LEO Pharma's headquarters are located today. Subsidiaries were set up in Ireland, France, Greece and the Netherlands, and during the following decades, LEO Pharma developed and launched a range of new original pharmaceutical products.

It was important for Knud Abildgaard to ensure LEO Pharma's continued development and success. Knud

LEO Pharma Ballerup

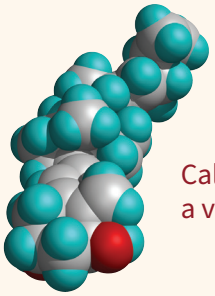
The 21st century – Growth and new visions

Shortly after the turn of the millennium, LEO Pharma brought the combination product Daivobet® to the market and psoriasis patients were thereby offered another treatment option. LEO Pharma's business activities were successful and provided a solid financial platform for future investments.

Following LEO Pharma's 100th birthday in **2008**, the corporate strategy was directed towards globalisation, innovation and growth within medical dermatology. Additional subsidiaries were set up in a number of countries including the USA, China and Brazil. The company invested in both already marketed products and innovative development projects. Thereby, the product portfolio as well as the research pipeline were expanded – and LEO Pharma gained a much stronger foothold on the dermatology market. In **2017**, LEO Pharma launched its first biological product within dermatology, Kyntheum®, for the treatment of psoriasis. In addition, in the summer of **2020**, LEO Pharma submitted applications for registration of a new biological product, tralokinumab, for the treatment of atopic dermatitis. Pending regulatory approval, this product is expected to be launched in **2021**.

1984 **1985** **1986** **1991** **2008** **2017** **2020** **2021**

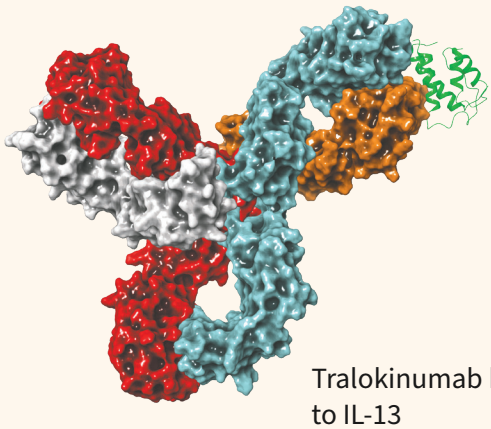
Abildgaard had one daughter, but she was unable to secure the continuation of the company, and in **1984** he established the commercial foundation, the LEO Foundation, which was to take up the ownership of LEO Pharma upon his death. Knud Abildgaard passed away in **1986** and the LEO Foundation has owned the company since then.



Calcipotriol, a vitamin D analogue

Among the many original products from Knud Abilgaard's reign was One-Alpha®, which is a chemically modified version of D-vitamin. At a meeting in **1985**, Japanese researchers reported that they had observed a pronounced effect of One-Alpha® during a treatment of a psoriasis patient. This information later proved to be of crucial importance for LEO Pharma's development. A new D-vitamin product, Daivonex®, for the treatment of psoriasis was launched in **1991**, which was also the year when a new anticoagulant product, innohep® was launched. Daivonex® and innohep® still contribute to LEO Pharma's earnings, and **1991** consequently became a pivotal year for LEO Pharma.

Innohep® syringes



Tralokinumab bound to IL-13

A matter of will, ability and courage

If you want to join the race to deliver the best treatment options to the patients, you must have the will to survive, the ability to operate a business and the courage to seize the opportunities that ensure your long-term market presence.

That exact will, ability and courage have always characterized LEO Pharma's history. Right from the beginning in **1620** when Esaias Fleischer made the Lion Pharmacy the leading pharmacy in Copenhagen. In the 18th century when the owners rebuilt the pharmacy following two devastating fires. In **1908** when Kongsted and Antons saw the opportunities in the market and had the courage to buy the Lion Pharmacy. They combined their pharmaceutical knowledge with solid business acumen and great industrial experience and established LEO Pharma. They became the pioneers of the Danish pharmaceutical industry. When Knud Abildgaard, in the middle of World War II and against all odds, insisted on developing an independent production of penicillin in Denmark – and when he subsequently turned LEO Pharma into an international company. In **1984**, when Abildgaard established the LEO Foundation to ensure LEO Pharma's future development and success as a research-based pharmaceutical company, headquartered in Denmark. And as LEO Pharma has recently shown by putting globalisation, innovation and growth on the agenda with the objective of generating solid earnings and helping even more patients with skin diseases.

Looking ahead, the LEO Foundation will endeavour to increase the sustainable value creation across all our activities with a clear aim to ensure the long-term success of LEO Pharma and improve acceptance, understanding and treatment of people living with skin disease.

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LEO FOUNDATION