MorphoSys: From service provider to drug maker

No other manager has led a listed biotech company longer than Simon Moroney – 27 years in total, if you count the time from MorphoSys’s founding to its IPO on the Frankfurt Stock Exchange in 1999. After studying chemistry and mathematics in his native New Zealand and earning a doctorate at Oxford in 1984, Moroney gained his first biotech experience at ImmunoGen in Boston. In 1992 he teamed up with Andreas Plückthun, a biochemist of about the same age who was then leading a research group at the Max Planck Institute of Biochemistry in Martinsried, Germany, to found MorphoSys. The idea behind the new company was to develop new drugs using human antibodies. Back in 1992, this was a new approach that required courage and perseverance. Hardly anyone had any idea that monoclonal antibodies would one day become one of the most successful drug classes in medicine.

Just two years later, MorphoSys had already given its founding idea a solid foundation: a library of ten billion human antibodies, the Human Combinatorial Antibody Library (HuCAL®). Moroney and his colleagues based this invention on the fragment antigen-binding (Fab) regions of antibodies. From then on, the HuCAL library has formed the basis of the company’s strategy to specialize in developing fully human antibodies in order to find new therapeutic approaches for treating life-threatening diseases. The goal was to establish HuCAL as the global standard for antibody development, both for research purposes and for drug discovery.

In 2000, MorphoSys moved into its own building in Martinsried with a staff of 100. In the same year, the stock market newcomer, like many other start-ups at the time, was struggling with the consequences of the burst dotcom bubble. However, thanks to lucrative partnerships with well-known pharmaceutical companies like Novartis, Janssen, Schering-Plough, Pfizer, Merck, Bayer and Roche, who appreciated the potential of the antibody library, MorphoSys found its footing as a research service provider and was able to easily overcome all financing difficulties in the coming years. Its scientists simultaneously drove the expansion of HuCAL into a platinum standard consisting of 45 billion human antibodies. Through the acquisition of the British companies Biogenesis and Serotec, MorphoSys rose to become the largest provider of antibodies for research in Europe from 2005 onwards. That same year saw the birth of guselkumab, an antibody that targets the body’s own inflammatory mediator, interleukin 23. It went on to be approved in the United States in July 2017 for the indication psoriasis by licensing partner Janssen. This was the first market approval for a HuCAL-based drug – and a turning point for MorphoSys, which had celebrated its 25th birthday the week before. Janssen’s annual sales of guselkumab (Tremfya®) soon rose to more than US$2 billion. Buoyed by this success, MorphoSys took the plunge and listed on New York’s NASDAQ in 2018.

The following year, Jean-Paul Kress, a physician, took over as CEO. Under his leadership, the company has focused on oncology and expanded its antibody pipeline to include small molecules. In 2019, the FDA granted approval for the first time to a drug from MorphoSys’s own development pipeline, which it had begun building in 2007. This drug is Monjuvi® (tafasitamab), which in combination with lenalidomide, can be used to treat patients with a certain type of blood cancer. For its commercialisation, MorphoSys established its own sales and marketing organisation in the US, transforming itself into an integrated biopharmaceutical company in the process. In 2021, MorphoSys acquired the US biotech company Constellation Pharmaceuticals for US$1.7 billion, and with it promising product candidates, including the kinase inhibitor pelabresib for the treatment of myelofibrosis, whose Phase III data should be available in early 2024. By 2025, Kress and his more than 600 employees hope that MorphoSys will be able to offer patients two cancer drugs.