

# Unique microbial technologies for the production of pharmaceutical proteins

## Wacker Biotech a Europe-wide leader with the production of bacterial biologics

*The biotechnology company Wacker Biotech GmbH is a contract producer of pharmaceutical proteins. Its areas of business include molecular biology, analysis and process development as well as the production of active pharmaceutical agents for clinical studies. In the city of Halle in the German federal state of Saxony-Anhalt, WACKER is also producing an active pharmaceutical agent for a previously approved drug to treat heart disease.*

Biopharmaceuticals or "Biologics" are medicines which are produced in living organisms with the help of biotechnology, such as bacteria, yeast cells or mammalian cell cultures. They are the new weapons in the fight against cancer and autoimmune diseases in particular. The demand for pharmaceutical proteins is therefore huge: They are now the fastest growing market for therapeutic agents and already account for 20 percent of the entire pharmaceuticals market. "Until 2020, the global market for biopharmaceuticals is set to grow by an average rate of nine percent and a volume of about 280 billion US dollars," explains Sebastian Schuck, Manager of the Business Development department at Wacker Biotech GmbH.

As a highly specialised contract producer of therapeutic proteins, the biotechnology company develops and produces specialist pharmaceutical proteins in the city of Halle in the German federal state of Saxony-Anhalt as well as in nearby Jena. While around two thirds of the therapeutic proteins on the market are produced with mammalian cell cultures, WACKER only uses microbial systems. "We define ourselves as being European leaders in the provision of biologics that are of purely bacterial origin," explains Sebastian Schuck. We are therefore a specialist in the niche area of the contract production of pharmaceutical proteins. The customers of WACKER include internationally active pharmaceutical and biotechnology companies.

"Our customers approach us because it has been evident for some years that it isn't possible to make all biotherapeutic products with the standard system. It's a great opportunity for us in the market," explains Schuck, who holds a PhD in molecular biology. WACKER is also able to offer unique solutions for products that are hard to make, for which many of the major competitors no longer have the required expertise. The background is that the production of novel active agent formats such as antibody fragments using conventional mammalian cells is much more complex, time-consuming and expensive.

WACKER ascertained the long term importance of bacterial systems at an early stage: Wacker Biotech GmbH is now a contract producer of biologics with over 25 years' experience in microbial systems. The company which has been a one hundred percent subsidiary of the global company Wacker Chemie AG since 2005 was established in the year 1999 with the name ProThera GmbH in Jena (Thuringia). About two and a half years ago, WACKER took ownership of the facilities and technology of the biotechnology company Scil Proteins Production GmbH in the city of Halle in Saxony-Anhalt. On this basis, WACKER was able to decisively expand its production capacities. With the Halle location, the company now has fermenter capacities of up to 1,500 litres. "The acquisition in Halle in Saxony-Anhalt was an important step in accompanying our pharmaceutical customers from the clinical testing to supplying the market," explains Sebastian Schuck. "It proved to be the ideal addition to our position in the market. This is also acknowledged internationally - reflected in increasing demand and the positive response in the market," explains Sebastian Schuck.

The company Wacker Biotech GmbH has 180 employees in Jena and Halle. Sebastian Schuck goes on to praise the excellent conditions at the Weinberg Campus in Saxony-Anhalt, one of the biggest centres for technology and new business start-ups in Germany. The ability to hire talented young people adjacent to the academic environment of the university campus is a genuine location advantage, and one that the company needs: Wacker Biotech intends to continue expanding as a contract producer of proteins and active agents for the pharmaceuticals industry.

For the contract production of medicines made using biotechnology and for wide-ranging therapeutic use, cost-efficient production is a decisive factor. "For biopharmaceuticals, gram prices of over 10,000 Euros are frequently quoted for the production of the active agents. Medicines sometimes never make it to the market because they fail to pass the cost-benefit assessment. Our systems help make the production costs more efficient," explains Sebastian Schuck. Higher yields and efficient preparation - WACKER fulfils these requirements surrounding the contract production of proteins with its proprietary technology platforms. ESETEC® and FOLDTEC® are two unique, patent protected procedures in the market which make a decisive contribution to the development of modern and resource-saving production processes.

With its innovative technologies for the efficient production of biopharmaceuticals, WACKER has recently been nominated for the highly regarded "Innovation Prize of the German Economy". "This prize is awarded to the leading scientific, technical, entrepreneurial and intellectual property innovations in the German economy each year. We are very happy about our nomination because it shows we offer unique technology which is acknowledged beyond the pharmaceuticals industry."

"We intend to continue developing our technology platforms. We don't just want to be a straightforward service provider, we want to offer innovative technologies which aren't available anywhere else," explains Sebastian Schuck. To be able to achieve this, they want to expand. Along with several other innovative biotech companies from Saxony-Anhalt, Wacker will be attending the BIO International 2016 in San Francisco with its own stand. "We want to increase our presence in the USA because of its importance as one of the key markets for pharmaceuticals and biotechnology," explains Sebastian Schuck, Manager of the Business Development department.

Caption: Clean room for the production of therapeutic proteins in Halle Photo: Wacker Chemie AG

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