



Amgen Manufacturing

At Amgen, one of the many important ways we fulfill our mission to serve patients is by producing vital medicines in sufficient quantity to meet patient demand, while following good manufacturing practices to ensure that our products meet our high standards for safety and potency.

Manufacturing biotechnological medicines is a highly specialized activity, and Amgen is a leader in the field. The company's state-of-the-art biotechnology manufacturing and process development capabilities help us to realize the potential of our pipeline for patients around the world.

Scalable, flexible, and committed to safety and reliability, our capabilities in process development, manufacturing, quality, and supply chain management are continually growing. Amgen is continually monitoring capabilities in those areas to meet future needs.

A Pioneer in Biotechnology Manufacturing

Manufacturing therapies based on proteins found in the human body is a complex process. In the biotechnology industry, therapeutics are manufactured using living organisms that contain the genetic code for the specific molecule being produced. Precisely controlling the manufacturing process and environment is necessary to obtain consistent results and to ensure efficacy and safety.

As one of the industry's original innovators, Amgen has extensive knowledge and first-hand expertise in clinical and commercial manufacturing of biotechnology-based medicines. We have an outstanding track record of regulatory compliance, thanks to stringent controls and a superior quality system. We have world-class capabilities in process development and continually innovate newer and more efficient ways to produce therapies using biotechnology. Most importantly, we have a track record of safely and reliably delivering medicines to patients who need them.

QUICK FACTS

Locations

Fremont and Thousand Oaks, California
Boulder and Longmont, Colorado
Juncos, Puerto Rico
West Greenwich, Rhode Island
Louisville, Kentucky
Breda, The Netherlands

Key Functions

- Process Development
- Clinical Manufacturing
- Bulk Protein Manufacturing
- Formulation, Fill, and Finish
- Distribution
- Quality/Regulatory Compliance

Principal Protein Therapeutics Manufactured

- Aranesp® (darbepoetin alfa)
- Enbrel® (etanercept)
- EPOGEN® (Epoetin alfa)
- Neulasta® (pegfilgrastim)
- NEUPOGEN® (Filgrastim)
- Nplate® (romiplostim)
- Vectibix® (panitumumab)

ABOUT AMGEN

Amgen (NASDAQ: AMGN) discovers, develops, manufactures, and delivers innovative human therapeutics. A biotechnology pioneer since 1980, Amgen was one of the first companies to realize the new science's promise by bringing safe and effective medicines from lab to manufacturing plant to patient. Amgen therapeutics have changed the practice of medicine, helping millions of people around the world in the fight against cancer, kidney disease, rheumatoid arthritis, and other serious illnesses. With a deep and broad pipeline of potential new medicines, Amgen remains committed to advancing science to dramatically improve people's lives. To learn more about our pioneering science and our vital medicines, visit www.amgen.com.

Amgen Operations Locations

California

Amgen has long had protein manufacturing capabilities at our Thousand Oaks headquarters. The site has a proud history as Amgen's first manufacturing location. Going forward, Thousand Oaks will increasingly focus on clinical operations. In 2006, with the acquisition of Abgenix Inc. in Fremont, Amgen expanded its development and production capability for human monoclonal antibodies. The 100,000-square-foot manufacturing facility in Fremont manufactures Vectibix® (panitumumab), an entirely human, monoclonal antibody cancer therapeutic.

Colorado

Amgen has two manufacturing facilities near Boulder, Colorado: Longmont and LakeCentre. Longmont is responsible for bulk manufacture of EPOGEN® (Epoetin alfa) and Aranesp® (darbepoetin alfa). LakeCentre manufactures Nplate® (romiplostim) and a number of product candidates in late-stage clinical development.

Puerto Rico

Amgen has developed a state-of-the-art biotechnology campus for bulk manufacturing in Juncos, Puerto Rico, with biologics manufacturing capability, expanded full-testing quality analytical labs, formulation, fill, and finish capability, warehouses, process development facilities, administrative and training buildings, a cafeteria and a child care center. Amgen Puerto Rico's bulk manufacturing facility produces a variety of medicines available to patients today, including NEUPOGEN® (Filgrastim), Neulasta® (pegfilgrastim), and Aranesp® (darbepoetin alfa).

Rhode Island

Amgen's facility in West Greenwich, Rhode Island, manufactures Enbrel® (etanercept) in bulk substance form. The first Amgen plant in West Greenwich received FDA approval in December 2002, and a new plant received FDA approval in September 2005. The new plant houses one of the world's largest mammalian protein manufacturing facilities as well as administrative, utilities, and quality analytical laboratory buildings.

Kentucky

Ensuring that Amgen medicines rapidly, reliably, and safely reach patients in hospitals, clinics, and doctors' offices is a critical part of the company's operations. Amgen's distribution center in Louisville, Kentucky, plays a key role in meeting that objective. The company's manufacturing facilities ship finished products to the center, which complies with the most stringent and protective handling and storage requirements. As soon as orders arrive, the Kentucky staff quickly loads and ships them where they are needed.

Breda, The Netherlands

Amgen Breda, the company's European distribution center, is located in The Netherlands between the ports of Rotterdam and Antwerp and close to airports in The Netherlands, Belgium, and Germany. The site houses commercial operations that assemble devices, label, package, and distribute product to Europe, North Africa, and the Middle East.