



F a c t S h e e t

Amgen Manufacturing

One of the many important ways that Amgen fulfills its mission to serve patients is producing vital medicines in sufficient quantity to meet patient demand while creating and following good manufacturing practices to ensure that our medicines meet our high standards for safety and potency.

The manufacture of biotechnological medicines is a complex and highly specialized activity. Amgen is a leader in the field, producing more than a third of the world's output of non-vaccine and non-insulin protein therapeutics. The company's state-of-the-art biologics manufacturing and process development capabilities help us to realize the potential of our promising pipeline for patients around the world.

Scalable, flexible, and focused on safety and reliability, our capabilities in process development, manufacturing, distribution, quality and supply chain management are continually growing. Amgen is making significant investments to increase our capacities 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. 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 biologic-based medicines. We

have an outstanding track record of regulatory compliance, thanks to stringent controls and a superior quality system. Most important, we have a track record of safely and reliably delivering medicines to patients who need them.

Quick Facts

Locations

- Thousand Oaks, California
- Longmont and Boulder, Colorado
- Juncos, Puerto Rico
- West Greenwich, Rhode Island
- Bothell and Seattle, Washington

Staff

Approximately 5,800

Key Functions

- Process Development
- Manufacturing (clinical, bulk, formulation, fill and finish; contract manufacturing)
- Quality and Regulatory Compliance
- Supply Chain Management
- Environmental Health and Safety
- Operations Planning
- Corporate Engineering and Capital Projects

Principal Protein Therapeutics Manufactured

- Aranesp® (darbepoetin alfa)
- Enbrel® (etanercept)
- EPOGEN® (Epoetin alfa)
- Kevivance™ (pallifermin)
- Kineret® (anakinra)
- Neulasta® (pegfilgrastim)
- NEUPOGEN® (Filgrastim)

Contact

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Expertise in Process Development

When a potential new biotechnological medicine advances to tests in humans, a process is developed for producing it for use in clinical trials and is later refined as needed for commercial production. Amgen's strengths in this area are difficult to match; arguably, only one or two companies are in the same league. The company recruits chemists, biologists and engineers from the world's leading institutions to innovate newer and more efficient ways to produce state-of-the-art therapies. We are also committed to finding ways of shortening overall development time so as to move potential new medicines from gene to human testing as quickly and safely as possible.

Growing Our Operations to Meet Patient Needs

Amgen has been investing to expand our capabilities at several of our major manufacturing locations.

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 Kineret® (anakinra), Kepivance™ (palifermin), and a number of pipeline product candidates in late-stage clinical development. Amgen is investing millions of dollars to increase the capacity of the LakeCentre facility.

Puerto Rico

Amgen is developing a state-of-the-art biotechnology campus for bulk manufacturing in Juncos, Puerto Rico that represents a \$1.2-billion investment. The new facility comprises biologics manufacturing capability, expanded full-testing quality and analytical labs, additional syringe fill and lyophilization (freeze-drying) capability, warehouses, process development facilities, administrative and training buildings, a cafeteria, and a child care center. Amgen Puerto Rico recently received U.S. Food and Drug Administration (FDA) approval of a bulk manufacturing facility for NEUPOGEN® (Filgrastim) and Neulasta® (pegfilgrastim). Amgen also plans to move production of Aranesp® and EPOGEN® to Puerto Rico.

Rhode Island

Amgen's facility in West Greenwich, Rhode Island, operates around the clock to manufacture Enbrel® (etanercept) in bulk substance form. The first Amgen plant in West Greenwich received FDA approval in December 2002, and a new plant, representing a total investment of more than \$1.1 billion, received FDA approval in September 2005. The new plant adds to the campus more than 500,000 square feet of manufacturing, utility, administrative and laboratory space. It houses one of the world's largest mammalian protein manufacturing facilities as well as administrative, utilities, and quality analytical laboratory buildings.

About Amgen

Amgen (Nasdaq: AMGN) discovers, develops, 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 novel medicines from lab to manufacturing plant to patient. Amgen therapeutics have changed the practice of medicine, helping millions of people in the fight against cancer, kidney disease, rheumatoid arthritis, and other serious illnesses.

Headquartered in Southern California and with offices in 31 countries, Amgen has approximately 15,000 staff members worldwide. With a broad and deep 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.