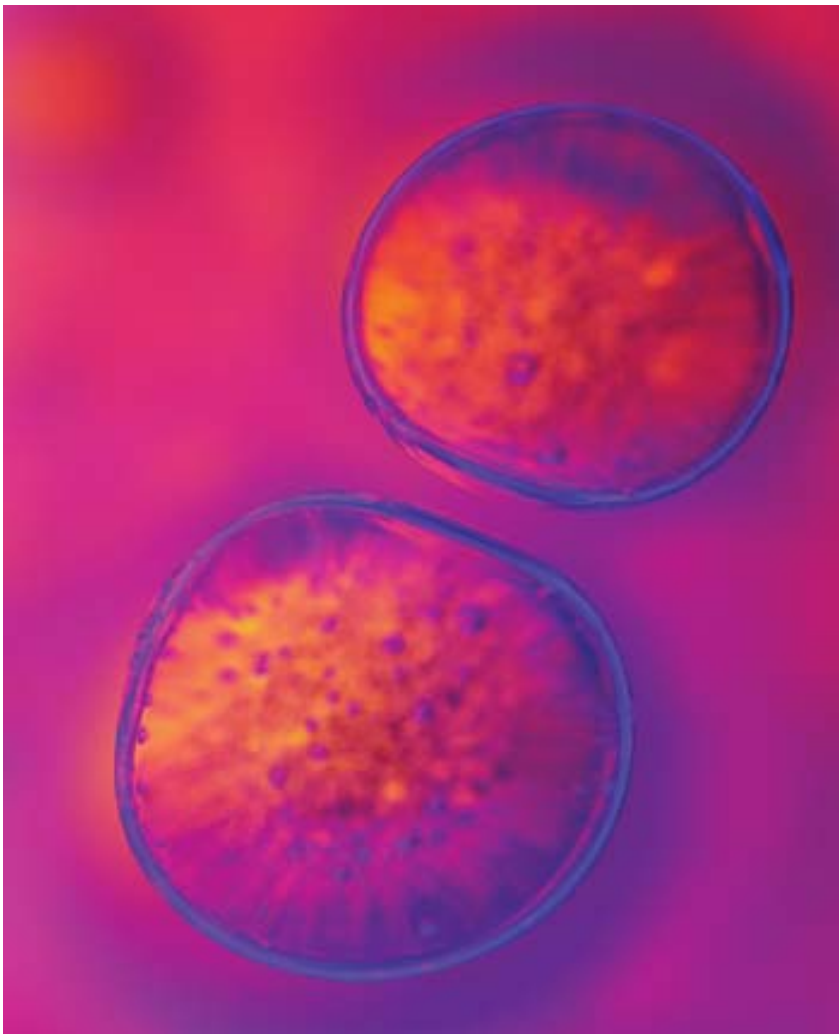


Cincinnati USA A Diverse Life Science Community



A Healthy Environment for

Life Science

Life science enterprises can take advantage of all that Cincinnati USA has to offer. From a skilled workforce and experienced professionals, to a full range of services and access to capital markets, Cincinnati USA is a supportive and affordable business environment.

The region is home to more than 220 businesses involved in the research, testing and production of pharmaceutical, medical and agricultural products. Additionally, a wide range of manufacturers, suppliers and support providers are located in Cincinnati USA. This, coupled with the region's existing transportation and logistics assets, makes Cincinnati USA a desirable location for life science companies to conduct business.

An Experienced Workforce

- Cincinnati USA has a stable, productive workforce of 1.5 million within 50 miles.
- More than 105,000 skilled workers are employed as physicians, engineers, biomedical and environmental scientists and technicians, agricultural and food scientists, and microbiologists.

Extensive Research & Development

- *Business Facilities* magazine ranked Ohio, with three metro areas including Cincinnati, among the top 30 biotech locations in the U.S.
- In 2004, Ohio hosted 26% of all clinical trials conducted in the U.S., critical to helping biotech companies move their products closer to commercialization.
- The University of Cincinnati (UC) Medical Center—a collective of nonprofits that include University Hospital, Cincinnati Children's Medical Center, and the Genome Research Institute, among others—is the region's largest employer, with an economic impact of more than \$3.59 billion per year.

- In 2004, the UC Medical Center received more than \$113 million for medical research, and Cincinnati Children's received \$115 million. The two institutions frequently partner to form joint research teams and share resources.

- Six departments within the UC College of Medicine rank in the Top 20 for federal research funding: Neurology (#10); Surgery (#15); Cell Biology, Neurobiology and Anatomy (#15); Environmental Health (#10); Molecular Genetic, Biochemistry and Microbiology (#13); Obstetrics and Gynecology (#14).

- Recipient of a \$9.6 million NIH grant, UC is partnering with Cincinnati Children's to establish one of four national breast cancer research centers.

- The Vontz Center for Molecular Studies at UC, home to the university's Cell Biology and Neuroscience graduate programs, has received major grants to conduct stroke and lung cancer research.

Leadership in Pediatrics

- Cincinnati Children's has the largest pediatric research program in the Midwest, studying pulmonology, cardiovascular development, gene regulation, cancer biology and rheumatology.

- Children's currently ranks second nationally in the National Institutes of Health (NIH) funding to full-service children's hospitals.

- Children's is the only pediatric organization in the U.S. to receive the prestigious Pursuing Perfection grant from the Robert Wood Johnson Foundation for two pilot programs focused on acute and chronic conditions of bronchiolitis and cystic fibrosis.

- Children's was recently awarded a \$17.3 million grant by the National Institute for Neurologic Disorders and Stroke for the largest federally-funded study of childhood epilepsy.
- Children's researchers are world leaders in vector technology for human gene therapy.
- The hospital is one of the nation's largest centers for pediatric blood, marrow and stem cell transplants.

Unique Partnerships

- Scientists at the Genome Research Institute (GRI) are working to convert data from the human genome project into better medical treatment. Housed in a \$9-million facility, the GRI works with regional academic, commercial, and government research institutions in a partnership created to enhance Ohio's biotechnology industry and help the state become the preeminent genome research center.
- The Ohio Valley Affiliates for Life Sciences (OVALS)—an alliance of UC, Wright State University, University of Kentucky and University of Louisville—was formed to reshape approaches to economic development by advancing research in life sciences and stimulating the formation of a regional cluster for biotech organizations in Ohio and Kentucky. Collectively, the OVALS universities attract more than \$500 million annually in extramural research funding.



Photo by Mark Bowen, Courtesy of BIO/START

Top Educational Support

Cincinnati USA offers a range of options for career preparation with numerous training and research institutions.

- The **University of Cincinnati (UC)** Medical Center, Nursing and Allied Health programs are ranked among the nation's best graduate schools by *U.S. News & World Report*.
- UC has been classified as a "Doctoral/Research University – Extensive" by the Carnegie Commission.
- UC ranked 27th nationally out of 151 U.S. research institutions, earning \$6.5 million in patents (more than the Cleveland Clinic). Fifty percent are licensed or optioned to companies.
- UC's Medical Center is one of the largest centers of life science research in the Midwest, and its graduate biomedical training program ranks 15th nationally.
- The university recently opened the new \$125 million Center for Computational Medicine.
- Recognized as a leader in clinical teaching and research, UC's Department of Emergency Medicine was the first in the nation to offer an Emergency Medicine Resident Training Program.
- UC's world-class Center for Surgical Innovation is involved in testing and developing new surgical techniques using robotics. The Center's staff includes the first U.S. surgeon to perform cardiac surgery in Europe using the new robotic technology.
- **Cincinnati State Community & Technical College** offers associate degrees and certificate programs in Business and Health Technologies, and ranks fourth nationally for total co-op placements. Programs include environmental engineering, biomedical, clinical laboratory technology, nursing, health technology and computer technology.

Cincinnati USA Life Science Leaders

Agriculture, feedstock and chemicals

Givaudan Flavors Corp.: flavors for medicines

KAO Brands Co.: cosmetics and skin care

Wild Flavors: colors, flavors and ingredients for health and wellness products

Drugs and pharmaceuticals

Amylin Pharmaceuticals: drug delivery and manufacturing

Barr Pharmaceuticals Inc.: oral contraceptives research, manufacturing, packaging

Biologics International Inc.: yeast extracts

Camargo Pharmaceuticals: professional and technical consulting

Cognis: chemical products for personal care and nutrition

Evotec: small molecule drugs

Forest Pharmaceuticals: drug development and manufacturing

Girindus America: pharmaceutical manufacturer and oligonucleotide production facility

Molecular Research Center Inc.: isolation and analysis of RNA and DNA

P&G Pharmaceuticals Inc.: prescription and over-the-counter pharmaceuticals, R&D

Patheon Pharmaceuticals Inc.: contract manufacturing and drug development

PediaMed: pediatric pharmaceuticals

Pfizer: pharmaceutical manufacturing

Prasco Laboratories: generic drugs

Viacell Inc.: therapies for bone defects and myocardial regeneration

Xanodyne Pharmaceuticals Inc.: pharmaceuticals for women's health

Medical devices, diagnostics and equipment

Atricure: devices for tissue ablation

Beiersdorf Inc.: wound and skin care products

CardioQuickSys: devices for emergency response

Ethicon Endo-Surgery: minimally invasive devices and instruments

Haag-Streit: ophthalmological equipment

Hill-Rom Co.: hospital equipment

Meridian Bioscience Inc.: medical diagnostics for infectious disease

Schaerer Mayfield: neurosurgical equipment and imaging

Teledyne Tekmar: gas chromatography and carbon analysis

Tyco Healthcare/Mallinkrodt: urology imaging

Research, testing and medical labs

CTI: clinical trial and consulting services

Hill-Top Research Inc.: clinical research

Kendle International Inc.: clinical development services

Medpace Inc.: clinical research organization

Omicare Inc.: data management for long term care and clinical research

Quest Diagnostics (Lab One): diagnostic testing

Research Institutions

Cincinnati Children's Medical Center: pediatric hospital

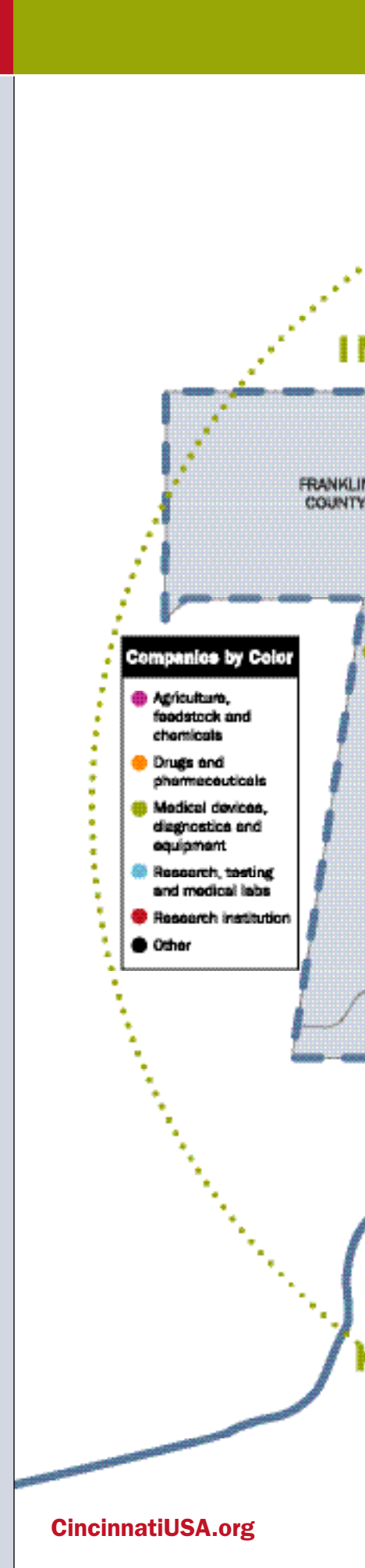
University of Cincinnati Medical Center: research and teaching hospital

Other

BIO/START: bio/medical business start-up center

Gerard Biotech: scientific research supplies

MedPlus Inc.: medical practice information management



Cincinnati USA is home to more than 220 businesses involved in the research, testing and production of pharmaceutical, medical and agricultural products, including those highlighted below.



50 MILES / 80 KM





Photo by Gordon Baer, Courtesy of Procter & Gamble

Cincinnati USA's Life Science Innovators

Agriculture, feedstock and chemicals

- Givaudan is a leading company in the flavors and fragrance industry with a vision to be the essential source of sensory innovation for customers, driven by a mutual passion for excellence. Through unique sensory expertise and consumer insight, Givaudan provides customers with the taste and smell profiles that are key to their products' success.
- KAO Brands is in the business of transforming women's lives through beauty by providing premium skin care and hair care products.
- Wild Flavors, Inc. is the fastest-growing company of its kind in North America, producing natural flavors and ingredients for the beverage and food industry worldwide.

Drugs and pharmaceuticals

- Cincinnati USA is an emerging hub of pharmaceutical development and manufacturing.
- Many companies manufacture pharmaceuticals and pharmaceutical intermediates in Cincinnati USA. Included are:
 - P&G Pharmaceuticals, a global giant in household products whose rapidly growing Health Care division has a number of drugs on the market and in development.
 - PediaMed, a company passionate about improving the health and wellness of infants, children and adolescents, is devoted to identifying, developing and marketing brand-ed pharmaceuticals, like Clarinex, within pediatrics.
- Amylin Pharmaceuticals, a San Diego-based drug delivery and manufacturing company, recently opened a 150-person biotech manufacturing facility in Cincinnati USA. The company chose the region for its first North American production facility due in part to its existing partnership with Alkermes, a drug delivery technology company located in Wilmington, Ohio.

- Camargo Pharmaceuticals is the outsourcing partner for small, virtual and mid-sized pharmaceutical and biotechnology firms. The company specializes in an array of clinical, scientific and regulatory drug development services, from pre-clinical through commercialization.
- Girindus, a technology-driven company, supports the pharmaceutical and cosmetic industries by developing active pharmaceutical ingredients (API) for preclinical and clinical laboratories and pilot plant facilities.
- Patheon is a leading provider of pharmaceutical manufacturing and development services to more than 200 client companies in the pharmaceutical and biotechnology industries. Patheon's expertise is supported by the technologies required to manufacture finished products in virtually all dosage forms with integrated services from preclinical development through to commercial manufacturing.

Medical devices, diagnostics and equipment

- Ethicon Endo-Surgery, a division of Johnson and Johnson, is headquartered in Cincinnati USA. The company develops innovative instruments for non-invasive and traditional surgery, and safety catheters for vascular access.
- Beiersdorf-Jobst, Inc. manufactures and distributes a full range of vascular, wound care and skin care products.
- Haag-Streit is a leading provider of instruments and medical-practice equipment for ophthalmologists, optometrists and opticians. Haag-Streit has relocated several of its U.S. company operations to Mason, Ohio, including Reliance Medical Products.

■ Hill-Rom employs 2,000 at its global headquarters in Batesville, Indiana. Founded in 1929, Hill-Rom helps healthcare professionals safely deliver effective and efficient care to their patients in acute care, long-term care and home care environments.

■ Meridian Bioscience is a fully integrated life science company that manufactures, markets and distributes a broad range of innovative diagnostic test kits, purified reagents and related products and offers biopharmaceutical enabling technologies.

Research, testing and medical labs

■ Kendle International Inc., headquartered in Cincinnati USA with 1,600 associates worldwide, provides clinical development, regulatory/validation consulting and medical communications services to the pharmaceutical and biotech industries through offices in the U.S., Europe and Asia.

■ Founded in 1947, Hill Top Research is one of the world's leading clinical research services companies with centers throughout North America. Hill Top Research provides clinical research, microbiology and CRO services for the health care, personal care and oral care industries.

■ Cincinnati USA is the national headquarters for Omnicare Inc., a Fortune 500 company and the leading provider of pharmaceutical care for long-term care institutions. Omnicare operates two business segments, pharmacy services and contract research organization services, with a market cap of \$5.5 billion.

■ CTI Clinical Trial and Consulting Services is a drug and market development company offering services including regulatory pathway design, clinical trial management, data analysis, medical writing, CME and training program development, market analysis and development and other consulting services.

Industry support providers

■ BIO/START, Cincinnati USA's bio/medical start-up center, catalyzes life science commercialization by finding medical product innovators, by nurturing ventures that develop competitive technology and by connecting entrepreneurs with the resources needed to create companies, wealth and jobs.

■ CincyTechUSA takes a strong collaborative approach aimed at developing the region as a growing hub for biosciences, information technology and advanced manufacturing. The mission is clear: to help regionally based technology companies grow and succeed.

■ OMERIS is Ohio's life science association, a non-profit organization that builds and accelerates bioscience industry, research and education in Ohio.

Additional research activities & facilities

Cincinnati USA is home to many organizations that serve the life science industry, including:

■ Cincinnati's **Shriner's Burns Institute**, one of only four in North America, offers support of basic and clinical burn research, including cultured skin substitutes and resistance to infection.

■ **Miami University's Center for Bioinformatics and Functional Genomics**, and an interdepartmental facility for molecular biology research and the analysis of molecular data. Miami recently announced the establishment of the Center for Nanotechnology Research (MUCN). Initial research will focus on sensor applications in biomedical and industrial uses.

■ **Northern Kentucky University's Center for Applied Ecology** does consulting and research with an emphasis on environmental and ecological issues.

■ **Cincinnati Zoo's Center for the Reproduction of Endangered Wildlife**—dedicated to the survival of endangered species—has achieved a number of firsts, including the world's first test tube gorilla, first cat born through in vitro fertilization and first birth of an exotic animal produced through nonsurgical embryo transfer.

■ The **Lloyd Library**, founded more than 130 years ago, is the world's premier reference library on eclectic, botanical and pharmaceutical medicine.

■ **VA Hospital** is conducting research on neurological damage experienced by soldiers returning home from tours of duty.

- U.S. Food and Drug Administration's National Forensic Chemistry Center

- U.S. Environmental Protection Agency's National Homeland Security Research Center

- National Institute of Occupational Safety and Health



Cincinnati/Northern Kentucky International Airport (CVG) was voted the No. 1 U.S. Airport, 2004.

Location and Accessibility

Cincinnati USA is a premiere location for companies in the life science field in the United States. The region is centrally located, home to one of the world's top international airports and dedicated to educating people for careers associated with these fields.

Cincinnati USA is within 600 miles (1000 kilometers) of:

- 43 percent of the nation's population
- 44 percent of the nation's manufacturing establishments

One of the World's Top Airports

- Cincinnati/Northern Kentucky International Airport (CVG) was voted the No. 1 U.S. Airport, 2004.
- More than 500 daily departures.
- 120 non-stop destinations.
- International non-stop air service to Frankfurt, London, Paris, Montreal, Toronto, Amsterdam and Rome.
- Serves more than 22 million passengers a year.
- Courier hubs for DHL, FedEx and UPS are located within 100 miles.



For additional information about locating your business in Cincinnati USA, visit: CincinnatiUSA.org. For specific questions, email us at partners@cincinnatiachamber.com.

The Cincinnati USA Partnership is a regional economic development organization representing Southwest Ohio, Southeast Indiana, and Northern Kentucky. The Partnership has helped hundreds of companies locate their businesses in Cincinnati USA.

300 Carew Tower
441 Vine St.
Cincinnati, OH 45202
513.579.3100