



Life Sciences in Alabama

From the discovery of six cancer-fighting drugs at 70-year-old Southern Research Institute to the merging of scientists and entrepreneurs at the three-year-old Hudson-Alpha Institute, Alabama's biotech industry runs the gamut of the life sciences.

Center for Biophysical Sciences and Engineering

Located at the University of Alabama at Birmingham (UAB), the CBSE is a leading drug discovery research center and one of the most prolific generators of three dimensional structures for proteins and protein drug complexes routinely used in structure-based drug design. The CBSE is recognized as a leader in the development of novel technologies that support the design of new therapeutics to treat both chronic and infectious diseases. This expertise and the ability to engineer cutting-edge technologies are crucial to pharmaceutical and biotechnology companies in their pursuit of effective therapeutically-relevant drug targets.

With more than 100 employees, the center is home to one of the world's largest X-ray crystallography research centers. In addition to industrial research, the CBSE educates and trains students in the life sciences field and supports the South's first master's degree program in biotechnology, one of the few in the United States.



Southern Research Institute

Headquartered in Birmingham, Southern Research Institute is a not-for-profit 501(c) 3 scientific research organization founded in 1941 that conducts drug discovery and preclinical drug development research as well as advanced engineering research in materials, systems development, energy conservation and environmental protection.

More than 550 employees support clients and partners in the pharmaceutical, biotechnology, defense, aerospace, environmental and energy industries. Southern Research has facilities in Wilsonville, Frederick, Md., and Durham, N.C., and offices in Huntsville, New Orleans, Washington, D.C. and Kiev, Ukraine.

Southern Research has a remarkable cancer-fighting track record, having discovered seven FDA-approved drugs used in the treatment of cancer and six currently in preclinical development or clinical trials. Southern Research has evaluated approximately half of the cancer drugs currently on the market for patients.

Engineers at Southern Research are known for conducting successful verifications for the Environmental Protection Agency through the Greenhouse Gas Technology Center to help identify effective pollution control and energy-conserving technologies. Southern Research has supported space exploration and defense systems from the days of Apollo to current hypersonic flight systems.

BioCryst

With 30 Birmingham employees, BioCryst designs, optimizes and develops novel small-molecule pharmaceuticals that block key enzymes involved in infectious diseases, inflammatory diseases and cancer. BioCryst has three late-stage compounds in development for the treatment of influenza, gout and hematological malignancies.

Currently in Phase 2 testing, BCX4208 is a next generation purine nucleoside phosphorylase (PNP) inhibitor with the potential for once-a-day dosing suitable for chronic administration. With a unique



mechanism of action, promising clinical activity and safety in studies to date, BCX4208 may address unmet medical needs across a broad spectrum of inflammatory and autoimmune diseases.

BioCryst was awarded a \$178 million, five-year contract from the U.S. Department of Health and Human Services to develop intravenous peramivir for the treatment of seasonal and life-threatening influenza, including avian flu. During the 2009 H1N1 influenza epidemic in the United States, peramivir was the first unapproved drug authorized for emergency use by the U.S. government. In 2010, peramivir was approved in Japan and Korea.

BioCryst's Discovery Center of Excellence in Birmingham consists of a team of approximately 30 scientists who play a critical role in the development of new compounds and their progression through pre-clinical and early development.

The company has 50 employees in Durham, N.C.

HudsonAlpha

The HudsonAlpha Institute for Biotechnology in Huntsville leads the nation in research on the human genome. The non-profit institute on 153 acres in the Cummings Research Park Biotechnology Campus, the nation's second largest research park.

Housed in a 270,000 - square-foot facility, HudsonAlpha has a three-fold mission of conducting genomics-based research to improve human health and well-being; sparking economic development; and providing educational outreach to nurture the next generation of biotech researchers and entrepreneurs.

Resident associate companies include Diatherix Laboratories, EGEN, Thermo Fisher Scientific, iCubate, Digital Radiance, iXpress Genes, Gene Capture, Microarrays Inc., CFDR, Concero Scientific, iRepertoire, Conversant Bio, Kailos Genetics, Serina Therapeutics, Clariant and Southern Cord.



Gambro Renal Products

Based in the southeast Alabama town of Opelika, Gambro makes the Revaclear dialyzer, a high-tech blood-filtering product used in kidney dialysis treatment.

The success of Gambro's 170 employees is best illustrated by the 9.3 million dialyzers they made in 2010, just two years after the grand opening of the \$180 million facility.

The 160,000-square-foot plant lists among its customers DaVita, one of the nation's largest providers of kidney care equipment.