



BIOTECHNOLOGY

Artificial Intelligence Laboratory

The Artificial Intelligence Laboratory specializes in applied AI research and development, particularly focusing on projects in the areas of transportation, molecular biology, and electronics manufacturing optimization.

Partners:

UIC Engineering
Illinois Department of Transportation
National Institutes of Health
National Science Foundation
United States Department of Transportation

Contacts:

Peter C. Nelson
Interim Dean,
College of Engineering
Phone: 312.996.2400
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Dates active:

1991—present

(see also *Industry Partnerships, Transportation Innovations*)

Brain Body Center

The Brain-Body Center's mission is to translate neurobiological principles into the treatment of individuals with social communication and social relationship problems. The Center draws together neuroscientists, endocrinologists, neuroanatomists, neurobiologists, psychiatrists, and psychologists who are interested in the neurobiological mechanisms of social behavior, behavioral pathology, developmental disorders, and emotional regulation.

Team members conduct research aimed at understanding the interdependence between the nervous system and social behavior. In addition to the dissemination of research findings through traditional professional vehicles, such as peer-reviewed articles, conferences, and workshops, the Center is working to develop teaching and training modules for clinicians and scientists that will describe new paradigms relating neural processes to social behavior.

Partners:

UIC Medicine

Contacts:

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Dates active:

2001—present

(see also *Health and wellness*)

Bridging the Digital Divide

"Bridging the Digital Divide: Are Nanotechnology and Nanoscience Important to our Community?" is a series of lectures to Chicago communities on advances on nanoscience and nanotechnology.

Partners:

UIC Engineering
Digital Development Corporation and
Oversight Committee, Inc.

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Dates active:

2005—ongoing

Center for Pharmaceutical Biotechnology

Current areas of research interest include mechanisms of antibiotic action, rational drug design, structure and function of the ribosome, protein folding, cancer research, microbial genomics, protein crystallography and NMR spectroscopy, systems biology and enzymology.

Research in the Center is supported by a number of grants from the major funding agencies such as the National Institutes of Health, as well as research grants and collaboration with various pharmaceutical companies.

Partners:

UIC Pharmacy
National Institutes of Health, Pfizer, Inc.

Contacts:

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Pharmaceutical Biotechnology
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Dates active:

1995—present

Center for Structural Biology

The Center for Structural Biology was established to coordinate and develop research and training at UIC in the area of Structural Biology, a field that is of fundamental importance to many areas of molecular medicine and biotechnology. The Center has five main objectives: (1) to provide an umbrella for the training of undergraduate, graduate and postdoctoral students in structural biology approaches; (2) to provide a synergistic environment for the development at UIC of a center of research excellence in structural biology; (3) to develop collaborative thematic programs that involve researchers outside of the Center and obtain extramural funding for such programs from federal agencies and private foundations; (4) to stimulate the incorporation of structural biology approaches into the research programs of other researchers at UIC; and (5) to coordinate acquisition of major research equipment needed for structural biology studies.

Partners:

UIC Engineering	Medical College of Wisconsin
UIC Liberal Arts and Sciences, Medicine, Pharmacy	National Institutes of Health Northwestern University
UIC Office of the Vice Chancellor for Research	University of Chicago

Contacts:

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Structural Biology
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Dates active:

2001—present

Chicago Biomedical Consortium

The CBC brings together experimentalists, instrumentalists and informaticians to apply new technology and techniques to the study of proteins. CBC's mission is to enable and encourage interdisciplinary research that is beyond the range of a single institution and thereby to promote educational, health and commercial developments that will benefit the Chicago community at large.

Partners:

UIC Medicine	Northwestern University
Chicago Community Trust	University of Chicago
Searle Funds	

Contacts:

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for Research
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Dates active:

2002—present

(see also *Health and Wellness*)

Chicago Technology Park

Located on fifty-six acres within the Illinois Medical District (IMD), the Chicago Technology Park (CTP) serves as an incubator facility for technology companies in early development as well as an expansion facility for those companies that are growing their operations. Such companies include those in drug discovery and delivery, medical devices and testing, genomics, nanotechnology and others who collaborate with our premier medical facilities for research and design.

The mission of the CTP, to assist in the growth of companies, is accomplished by supplying fully equipped infrastructure, university resources, internship programs and custom designed business development.

Contacts:

Samuel W. Pruett

President, Chicago Technology Park

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Dates active:

1985—present

(see also *Business and Entrepreneurial Development*)

Dorothy Bradley Atkins Medicinal Plant Garden

The Dorothy Bradley Atkins Medicinal Plant Garden contains more than seventy species of medicinal plants, many of which are mainstay drug-producing plants whose products are currently in use in clinical practice around the world. It builds upon the College's long-standing reputation as one of the world's foremost centers of natural products research.

The garden exists not only for educational and research purposes, but also for the enjoyment it offers as an island of beauty on the campus of the University of Illinois at Chicago.

Partners:

UIC Pharmacy

Contacts:

Jerry L. Bauman

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Dates active:

July 2002—present

(see also *Environmental Protection*)

Experience BioEngineering Summer Day Camp

"Experience BioEngineering" is a day camp held on the UIC main campus for a week each summer. The camp introduces local high school teachers to the field of bioengineering, with an emphasis on learning what a bioengineer does and seeing how he or she applies engineering principles to solve biological and biomedical problems. The program includes talks, tours, and technology. Participating teachers can choose a laboratory project for a hands-on opportunity to experience how a bioengineer approaches a problem.

Partners:

UIC Engineering

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(see also *Education Innovation*)

Institute for Tuberculosis Research

Specializes in advanced research and new drug discovery and delivery in the combat against TB.

Partners:

UIC Pharmacy

Contacts:

Scott Franzblau

Director, Institute for Tuberculosis Research

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Dates active:

1980s—present

(see also *Healthcare for At-Risk Populations*)

International Cooperative Biodiversity Group Program

The specific aims of this program are (1) to study plant diversity at Cuc Phuong National Park and medicinal plants of Laos, (2) to search for biologically active molecules from plants of these two countries as potential candidates for drug development (cancer, AIDS, malaria, tuberculosis, Alzheimer disease, pain), and (3) to promote economic development among members of communities in the areas where the ICBG research is undertaken, as well as to strengthen the scientific capacity and infrastructure of the ICBG host institutions.

Partners:

UIC Pharmacy

Cuc Phuong National Park (Vietnam)

John E. Fogarty International Center

National Center for Complementary and Alternative Medicine (NCCAM)

Institutes of Biotechnology, Chemistry, and Ecology and Biological Resources

National Institutes of Health

Traditional Medicine Research Center (Laos)

United States Department of Agriculture, Foreign Agricultural Service

Contacts:

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Dean, College of Pharmacy

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Lions of Illinois Eye Research Institute (LIERI)

Vision research, like all biomedical science, has been revolutionized by ability to identify and manipulate genes. The promise and power of research to prevent and cure disease has never been greater.

Partners:

UIC Medicine

National Institutes of Health

Contacts:

Joseph A. Flaherty

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Dates active:

1986—present

Plant Collections and Taxonomy, Task B, Southeast Asia, Herbarium Collection

In conjunction with the Field Museum of Natural History, plant samples are collected from Southeast Asia and Central America and placed in an herbarium at the museum for scientific use. Other samples go to the National Cancer Institute for analysis for possible active agents for cancer prevention and/or treatment. Analysis is also done in the College for the drug discovery process.

Partners:

UIC Pharmacy
Field Museum of Natural History
National Cancer Institute

Contacts:

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(see also Industry Partnerships)

Prototype Drug Shows Promise in Slowing Replication of Severe Acute Respiratory Syndrome (SARS)

Currently there is no effective therapy or vaccine for SARS, which killed over 800 people in an epidemic in 2002-2003. Researchers from the Center for Pharmaceutical Biotechnology received an \$8 million grant from the National Institute of Allergy and Infectious Diseases to develop protease inhibitors that should block key enzymes in the SARS virus and hamper its advance. Protease inhibitors, a class of drugs capable of disrupting enzymes that digest protein, have been successfully used to thwart the human immunodeficiency virus, which causes AIDS.

Partners:

UIC Pharmacy
National Institutes of Health
National Institute of Allergy and Infectious Diseases

Contacts:

Michael E. Johnson
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Email: mjohnson@uic.edu

Dates active:

2005

Virtual Reality in Medicine Laboratory (VRMedLab)

Working with UIC's Electronic Visualization Lab (EVL), developers of the CAVE, ImmersaDesk and PARIS technology, we focus on collaborative biomedical virtual reality applications. Our international high-performance networking connectivity, combined with one of the largest academic health sciences centers in the world and our computer visualization experts enables the VRMedLab to advance biomedical research, education and communication.

Partners:

UIC Applied Health Sciences
UIC Engineering
UIC Medicine
Advanced Visualization Lab (AVL)
Argonne National Laboratory
Edward Hines Veterans Administration Hospital
John H. Stroger, Jr
Hospital of Cook County
Laser Modeling, Inc.
Loyola University Medical Center
National Institutes of Health
National Library of Medicine

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Dates active:

1997–present
(see also Health and Wellness)