

# University of Illinois Chicago Capability Statement

Institution: **University of Illinois Chicago** (formerly University of Illinois at Chicago)

DUNS No: **098987217** CAGE Code: **1YGW1** Federal EIN No: **37-6000511** 

SIC Code: 8731 (University) / 8011 (Health System)

NAICS Code: 541715 (University) / 621111 (Health System)

Certificates, Registrations, and Accreditations: AAALAC (American Association for

Accreditation of Laboratory Animal Care) Accreditation; **ACS** (American Chemical Society) Accreditation; **NCATE** (National Council for Accreditation of Teacher Education) Accreditation;

**SAM** (System for Award Management) Registration

# **POC Information:**

Dr. Joanna Groden, Vice Chancellor for Research

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URL: https://research.uic.edu/

## **OVERVIEW**

The University of Illinois Chicago (UIC), in the heart of the city, is Chicago's hub for research, education and innovation. Through 16 colleges, UIC's academic and research offerings are comprehensive, including not only humanities, social sciences, natural sciences and engineering but also urban planning, public affairs, arts, business, education and transportation. In addition, UIC is home to the University of Illinois Hospital & Health Sciences System (UI Health), a leading health system which consists of UIC's seven health sciences colleges, locations across the state, its hospital, associated clinics and Federally Qualified Health Center – Mile Square Health Center. Dedicated to the pursuit of health equity, UI Health provides comprehensive care, education and research to train health care leaders and foster healthy communities both locally and globally.

UIC is one of the nation's most ethnically- and culturally-rich college campuses. Our welcoming environment and diverse student body deepen understanding and intellectual achievement. UIC achieved designation from the Department of Education as a Title III & Title V Minority Serving Institution (MSI) in 2008. Currently, UIC is classified as both an Asian American, Native American, and Pacific Islander-Serving Institution (AANAPISI) and an Hispanic Serving Institution (HSI). In addition, the diverse patient population served by UI Health includes many who are significantly underserved with regard to health promotion and health care. UIC currently has multiple initiatives to address health disparities and promote diversity within the health sciences.

UIC is classified by the Carnegie Foundation for the Advancement of Teaching as a very high research status (R1) university. Our world-class research benefits individuals and society. As Chicago's only public research university, real-world problems are solved through innovation and discovery. Research at UIC is re-shaping educational policy; developing cleaner, more sustainable energy; helping to make sense of today's vast amounts of computer-generated data and driving economic development by moving research to practical application. Outstanding programs range from the creation of new medical diagnostic techniques to turning carbon dioxide into fuel.



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## **RESEARCH CAPABILITIES**

UIC is home to over 100 departments and divisions. The list below highlights UIC academic units that rank in the top 25% nationwide for research activity in their respective disciplines. (*Per Academic Analytics, March 2022. To determine rank, the weighting of research-related articles, awards, books, and citations is discipline-specific*).

Architecture, Design, and the Arts: Architecture; Art History

Business: Finance

**Education**: Special Education

Engineering: Civil, Materials, and Environmental Engineering;

Mechanical and Industrial Engineering

**Health Sciences / Medicine**: Biobehavioral Nursing Science; Health Systems Science; Kinesiology and Nutrition; Occupational Therapy; Pharmacy Systems, Outcomes, and Policy; Physical Therapy; Women, Children, and Family Health Science

Liberal Arts and Sciences: Chemistry; Classics and Mediterranean Studies; Communication;

English; Gender and Women's Studies; Hispanic and Italian Studies;

Latin American and Latino Studies; Mathematics, Statistics, and Computer Science;

Physics; Sociology

Other UIC departments that are notable for their unique strengths include Biomedical and Health Information Sciences, Disability and Human Development, Ophthalmology, Pharmacology and Regenerative Medicine, Public Administration, and Urban Planning and Policy.

Research at UIC takes place not only at the laboratory- and department-level, but also in multi-disciplinary teams that leverage expertise from across the campus, state, nation, and world. Formal UIC *centers* and *institutes* recognized by the Illinois Board of Higher Education are listed on the final page of this document.

## **FACILITIES**

The Research Resources Center (RRC) offers research faculty, staff, students, and external partners a diverse inventory of high-end scientific equipment as well as a wide range of services and training provided by 13 core facilities staffed with highly skilled scientists. Through the RRC, researchers also have access to statistical and computational support for data handling, transfer, and interpretation. The RRC Scientific Storeroom and Scientific Instrument Shop provide support for obtaining and maintaining research supplies and equipment, respectively. **Research Resource Center core facilities** include:

**Biophysics** 

Cardiovascular Research

Electron Microscopy

Flow Cytometry

Fluorescence Imaging

Genome Research

**High-Throughput Screening** 

Mass Spectrometry

Nanotechnology

Nuclear Magnetic Resonance (NMR)

**Preclinical Imaging** 

Research Histology

**Research Informatics** 



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#### **PAST PERFORMANCE**

UIC received \$446 million in sponsored funding during the 2021 fiscal year, setting a record for research awards. The awards supported a wide range of research activities in all UIC's Colleges and disciplines, from the health sciences and STEM fields to the social sciences and the arts and humanities. Federal awards account for 76% of this funding, with the National Institutes of Health (NIH) providing the largest amount — nearly \$205 million. Other top sponsors include the National Science Foundation (NSF), the U.S. Department of Defense, and the State of Illinois. *Recently-funded research projects* include:

## NASA

- Resonance Ionization Mass Spectrometry Analysis of Trace Elements in Genesis Solar Wind Collectors (*Dr. Igor Ryokan, Chemistry*)
- Line-of-Sight Gravity Measurements are Key to Address the Habitability of Europa's Subsurface Ocean with Europa Clipper (*Dr. Andrew Bombard, Earth and Environmental Sciences*)
- fs-LDPI MS Mapping of Organic Compounds in Deep Time Earth Sediments: A Tool for Determination of the Spatial Distribution of Lipid Biosignatures at the Micron Scale (*Dr. Fabien Kenig, Earth and Environmental Sciences*)
- PIPES: Piezoelectric Instrument for Precision Exploration Sampling (*Dr. Jie Xu, Mechanical and Industrial Engineering*)
- Stationary and Swing-like Pool Boiling for Microgravity Applications for Cooling of High-Power Microelectronics (*Dr. Alexander Yarin, Mechanical and Industrial Engineering*)

## NSF

Investigating delay, reliability, and rate tradeoffs in Wi-Fi

Improving first-generation and Latinx undergraduate engagement in environmental sciences, physiology, and chemistry through study of the Monarch butterfly

Constructing a beamline to expand chemistry and materials research capability through a partnership with the Argonne National Laboratory

## NIH

Investigating the impact supportive policies have on stress, drinking, and health among underserved women

Exploring and understanding the plasticity circuits in Alzheimer's disease

Supporting critical clinical and translational health research programs

Assessing the association of chronic eye disease in Hispanic/Latino groups with cardiovascular disease and sociocultural risk factors

# U.S. Department of Education

Preparing educators to teach the underserved through the Chicago Early Childhood Preparation and Pathway Partnership

Mentoring Latinx students in successfully earning degrees in STEM fields

# Illinois Department of Transportation

Using artificial intelligence to bolster real-time traffic information throughout the Midwest and to address impacts of traffic and congestion on the economy, the environment, and the safety of drivers

# State of Illinois Department of Human Services

Developing and providing assistive technologies to people with disabilities



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#### APPENDIX: IBHE-CERTIFIED CENTERS AND INSTITUTES AT UIC

#### Centers

Advanced Design, Research, and Exploration (CADRE)

Biomolecular Sciences

**Botanical Dietary Supplements Research** 

Cancer

Cardiovascular Research

Child and Family Development

Clinical and Translational Science (CCTS)

Collaborative Engagement in Novel Therapeutic Research and Enterprise (CENTRE)

**Craniofacial Anomalies** 

**Economic Education** 

**Energy Resources** 

Global Health

**Government Finance Research** 

International Center for Futures and Derivatives

Jane Addams Center for Social Policy and Research

Literacy

Lung & Vascular Biology

Magnetic Resonance Research

Molecular Biology of Oral Diseases

Natalie P. Voorhees Center for Neighborhood and Community Improvement

National Center for Rural Health Professions

Outcomes Research (COR)

Pharmacoepidemiology and Pharmacoeconomic Research

**Public Safety and Justice** 

Research in Law and Justice

Research on Women and Gender

Sickle Cell

Software Technologies Research

**Urban Transportation** 

Structural Biology

**Urban Economic Development** 

**Urban Education Leadership** 

Wound Healing and Tissue Regeneration

#### Institutes

Disability and Human Development

**Environmental Science and Policy** 

**Great Cities** 

Health Research and Policy

Healthcare Delivery Design

The Humanities

Juvenile Research

Leadership Excellence and Development (iLead)

Learning Sciences Research

Research on Race and Public Policy

**Tuberculosis Research**