**THE CENTER FOR CLINICAL & TRANSLATIONAL SCIENCE &**

**THE UNIVERSITY OF ILLINOIS AT CHICAGO’S**

**FACILITIES AND TRANSLATIONAL RESEARCH RESOURCES**

UIC contains an impressive array of resources and expertise useful to the clinical and translational investigator. Here, we highlight select examples that demonstrate both the University’s historical commitment to clinical and translational research and the solid foundation on which CCTS was built. These examples include campus-wide resources, model cross-campus research centers or training activities, and research programs in priority populations or multicenter trials. Rather than duplicating the efforts and infrastructure of these exemplary resources, the CCTS works to enhance these resources and expand their availability to the clinical and translational research community.

**CCTS FACILITIES & RESOURCES**

**Center Overview**

**The CCTS seeks to improve population health, particularly among minorities and underserved populations.** UIC’s CCTS was first funded by the NIH in 2009 as part of the Clinical and Translational Science Award (CTSA) program. The CTSA network of over 60 medical research institutions- known as hubs- seek to accelerate the research process, enabling scientific discoveries to reach patients and populations faster.

This unique hub structure enables research teams to tackle scientific and operational challenges in clinical and translational research that are best addressed by collaborative work. CTSA hubs work together locally and nationally to catalyze innovation in training, research tools and best research processes. The CCTS’s strength lies in high-quality multidisciplinary clinical and translational research, spanning the translational spectrum, and paired with strengths in community engagement, implementation science. The CCTS also incorporates an appreciation for the social determinants of health and helps to accelerate discoveries into practice and policy.

As one of the most ethnically and culturally rich university campuses in the nation and a premier public urban university, CCTS brings additional perspectives and assets to the national and local CTSA hubs with its mission to expand access and participation in clinical research to all populations. The CCTS is especially recognized for its collaborative strengths with the other Chicago CTSA hubs, serving as a model for collaboration within the CTSA consortium and further stimulating and advancing the impact of clinical-translational science discoveries.

**Biomedical Informatics Program**

The Biomedical Informatics Core is the principal provider of informatics support for clinical and translational research at UIC, sustaining the work of both large teams and individual investigators, leading the ongoing development and expansion of a Clinical Research Data Warehouse, offering consultative services on the best and appropriate use of clinical data, supporting preparations to research, study recruitment, as well as both retrospective and prospective EMR data pulls, developing tools for informatics-intensive studies, and offering educational opportunities focused on informatics application. The core provides the clinical research data resources, informatics infrastructure, and informatics services essential to the translation of research from bench to bedside to community and back again. The Biomedical Informatics Core works closely with Informatics resources across the UIC campus in the development of opportunities and best practices within informatics and health information science.

***Clinical Research Data Warehouse*:** Developed in collaboration with the Office of the Vice Chancellor for Research and the UIHealth Systems, the purpose of the CRDW is to provide a single, secure, managed release point for human subjects’ data for use in research.  The CRDW has a Research Patient Repository (RPR) that stores and integrates human subjects’ data, including protected health information (PHI) and personally identifiable information (PII), from various sources that can be used to derive data-marts for clinical, translational and basic research purposes. Researchers can request data extracts from the Clinical Research Data Warehouse by submitting an online service request for Biomedical Informatics support. This service is the key component of "UIC CIRCLE***.***" The UIC Clinical Information Repository for Cohort Learning and Exploration (UIC CIRCLE) refers to the patient data repository & the consult, data request, and data delivery service provided to UIC researchers. “UIC CIRCLE” references the process of utilizing segments of the CRDW Research Patient Repository (RPR) in order to fulfill data requests from UIC researchers for clinical data extracts.

QUICKSet, or “Query UIC Knowledge Set,” is the CCTS Biomedical Informatics Core built version of the i2b2 (Informatics for Integrating Biology and the Bedside) framework. The purpose of this tool is to allow researchers to access de-identified clinical data from the UI Health system to obtain aggregate patient counts. The CCTS Biomedical Informatics Core’s CUBIT webpage contains various helpful biomedical informatics tools including a vocabulary browser containing terms from QUICKSet and UIC CIRCLE.

***Accrual to Clinical Trials Project*:** The Accrual to Clinical Trials (ACT) network is a federated network of sites from the National Clinical and Translational Science Award (CTSA) Consortium that has been created to significantly increase participant accrual to multi-site clinical trials. The network has created governance and regulatory frameworks and a common data model to harmonize electronic health record (EHR) data, and deployed a set of Informatics for Integrating Biology and the Bedside (i2b2) data repositories that are linked by the Shared Health Research Information Network (SHRINE) platform. It provides investigators the ability to query the network in real time and to obtain aggregate counts of patients who meet clinical trial inclusion and exclusion criteria from sites across the United States. The ACT network infrastructure provides a basis for cohort discovery and for developing new informatics tools to identify and recruit participants for multi-site clinical trials.

**Biostatistics Core**

The CCTS's Biostatistics Core provides the biostatistical consulting service to develop statistical data and analysis design plans for proposal submission and to analyze data in hand for clinical-translational investigators. The Biostatistics Core provides campus researchers with expanded access to faculty and service personnel with a range of expertise in design and analysis methods and tools. We support the professional development of analytics specialists across campus to increase the availability of quality method design and analytic services and to engage quantitative faculty in developing new methodologies for clinical and translational research.

***REDCap*:** REDCap is a secure, web-based application for building and managing online surveys and databases. REDCap’s easy design environment allows you to quickly create web-based databases and data capture forms with special features like ad-hoc reporting and scheduling. The CCTS Biostatistics Core installed REDCap in 2010 and has been providing consultation/training and account management services with the joint sponsorship by the Center for Clinical and Translational Science and The UIC Cancer Center. REDCap server is maintained by the IT staff at the Institute for Health Research and Policy (IHRP). REDCap account is offered to UIC health investigators, faculty, and staff with no cost.

**Clinical Research Center**

The Clinical Research Center (CRC) is committed to providing UIC health investigators, trainees, and support staff a research environment and broad range of services that are conducive to the conduct of high quality, timely and efficient clinical and translational research. The CRC strives to facilitate clinical-translational research in a predictable and reproducible fashion. The CRC serves as an active resource for many clinical researchers, providing 1) dedicated clinical research space and laboratory space and equipment; 2) personnel and services support (e.g., study coordination, database management, phlebotomy, physical exam); and 3) education and training on high quality, ethical conduct of clinical research in human subjects.

The CRC provides an infrastructure of trained personnel that provide services in areas as diverse as recruitment and retention, industry relations, regulatory compliance, education/training, budget/proposal development, and research staff to conduct study procedures. An integrated CRC team including study coordinators, registered nurses, advanced practice nurses, and laboratory staff provide this wide scope of services and offer the flexibility of having personnel with various backgrounds to tailor the level of professional services in a clinically judicious and economically sensitive fashion.

The CRC nursing staff is comprised of registered nurses and advanced practice nurses with expert clinical knowledge and skills in vast areas of clinical practice. CRC clinical research coordinators also provide hands on clinical, laboratory, and regulatory support. The CRC’s resources include a specimen processing laboratory and a radioisotope laboratory, which offers the following services. CRC personnel can work with various outside labs to help investigators obtain the clinical analysis needed on research specimens. Each investigator creates an independent account and will receive custom requisitions with the lab of their choice. Laboratories commonly used by CRC investigators include the UIC Lab, Quest Diagnostics, and Alverno Lab. Clinical and Laboratory Services include, but are not limited to:

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| CRC Clinical Services | |
| Measurement of vital signs | Oral glucose tolerance testing |
| Orthostatic blood pressures | Intravenous Glucose Tolerance testing |
| Phlebotomy | Fast-Sampling IV Glucose Tolerance Testing |
| IV catheter insertion | Euglycemic Clamps |
| Investigational drug infusions | Insulin Clamps |
| Medication compliance assessment | Administration of questionnaires/surveys |
| Collection of urine/other biological fluids over specified time periods | Spirometry |
| Subcutaneous fat biopsy | Allergy skin testing |
| CRC Laboratory Services | |
| Processing of research specimens including blood, urine, stool, sputum, and saliva | |
| Point of Care Testing including blood glucose, hemoglobin, urine pregnancy, urine drug screen, urine dipstick | |
| Specimen shipping in accordance with IATA regulations | |
| Radioisotope laboratory facility available for radioisotope studies | |
| Temporary sample storage including refrigeration, -20 C and -80 C | |

***Investigational Pharmacy*:** The Investigational Drug Service at UI Hospital and Health Sciences System assures appropriate storage, handling, drug accountability, information access and compliance with hospital policy and FDA, Joint Commission, state and federal standards. The Investigational Drug Service can dispense the appropriate study drug to the CRC or the patient. The Investigational Drug Service can also receive and document receipt of drug shipments. Arrangements can be made for study drugs can be received and dispensed after hours and on weekends. The Investigational Pharmacist provides the following services:

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| **CRC Investigational Pharmacy Services** |
| Proper drug storage (i.e., temperature, light, moisture, security, etc.) |
| Precise drug preparation according to the approved study protocol |
| Proper dispensing of protocol-specific drugs |
| Ensure randomization and blinding procedures are followed |
| Maintain accurate records & inventory levels |

***Dietary Services*:** The Dietary Services offered through the CRC range from simply providing meals or snacks for research volunteers, to assisting in the planning and development of nutritional research study designs and protocols. CRC consultations can help investigators identify qualified professionals to assist with special diet preparation, preparation instructions, and patient dietary education services. Investigators may request a dietary service consultation for inpatient and outpatient studies, whether performed in the CRC clinical facilities or off-site.

***Integrative Physiology Laboratory (IPL)*:** In partnership with the College of Applied Health Science's the

CRC provides access to the Integrative Physiology Laboratory (IPL). The IPL Services Include:

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| Integrative Physiology Laboratory Services | |
| Resting metabolic rate (RMR) | Carotid intima thickness (IMT) |
| Dual-energy X-ray absorptiometry (DEXA) | Pulse wave analysis/velocity |
| Maximal oxygen consumption (VO2 max) | Flow-mediated dilation (FMD |

**Community Engagement and Collaboration Core**

The Community Engagement and Collaboration Core’s mission is to foster unique university-community-policy partnerships that encourage community-based clinical research to address social determinants of health relevant to local and regional communities. The core also supports the dissemination and implementation of evidence-based health programs and services. Drawing on theories of organizational and community context to promote effective and sustainable health policies and practices, their programs and services are designed to help UIC investigators, educational & community organizations, and key policy stakeholders improve the health of the community, with a special focus on effective health services for urban youth. The core also seeks to help investigators meet their study recruitment goals by better connecting with their study's target population, the general community, and other external stakeholders. The core provides campus health researchers with consultations on the evaluation, dissemination, implementation, and policy components of their research. They also consult on culturally sensitive communications; increasing engagement and overcoming barriers with disparity populations; and supporting capacity building for academic and community partners.

***Chicago Consortium for Community Engagement (C3):*** The C3 is a collaborative partnership that brings together the three CTSA institutions in the city (University of Illinois at Chicago, Northwestern University, and the University of Chicago) to increase research participation among Chicago residents and the local impact of research efforts. The C3 maintains a partnership with the Chicago Department of Public Health (CDPH) in service of these goals and supports a position at CDPH to increase connectivity with the local CTSA institutions.

***Community Engagement Advisory Board (CEAB)*:** The CEAB provides critical consultations and feedback to diverse groups of UIC faculty, pre- and post-doctoral students, community organizations, and trainees at other Chicago-area universities on their community-based research efforts. CEAB member affiliations are varied, including persons from UI Health, Rush University, Chicago Department of Health, Affinity Community Services, Project Brotherhood, Northwestern University, the American Osteopathic Association, the community-at-large, and guest experts when dealing with special research topics. Expertise includes, but is not limited to, racial/ethnic minority populations, low-income, and LGBT.

***CIRTification*:**  CIRTification is a training program in human research protections that is tailored to the unique roles of community research partners. Ideally, this training program will not only teach community research partners about the importance of protecting research participants but also enhance the overall contribution that they are able to make to their respective research teams towards the goal of becoming co-researchers. CIRTification was developed using a "train-the-trainer" model, but is being adapted as an online resource which will be available in 2019.

***Target Populations Toolkit*:** The Target Populations Toolkit is primarily a resource for researchers who would like to work with populations facing health disparities and underrepresentation in research. The goal is that all population groups benefit equally in advances in health care. Three strategies will help reach these goals: working to increase the number of investigators working with special populations, offering consultations and mentoring, and engaging in thoughtful recruitment and retention activities. The groups featured in the target populations toolkit have been identified as facing a double layer of obstacles to achieving health equity. Currently toolkits are available for African American, Hispanics & Latino/Latina, LGBT, People with Disabilities and Urban Youth populations.

***ResearchMatch*:** ResearchMatch is a national volunteer research registration connecting researchers with volunteers trying to find research studies and clinical trials. The national registry is free of cost to both researchers and volunteers, and provides a secure online tool to aid in reducing barriers to the identification and recruitment of research participants. ResearchMatch was developed through a collaboration of institutions affiliated with the Clinical and Translational Science Award (CTSA) program.

**Education and Professional Development Core**

The Education and Professional Development Core offers a broad, flexible, and integrated set of educational and professional development programs to assist individuals in enhancing their clinical and translational research skills. The offerings range from accredited, formal coursework and certificate programs to short courses, workshops, and seminars. This varied curriculum addresses the diverse needs of the clinical and translational workforce – from graduate students and postdoctoral fellows to clinical research staff to faculty researchers.

***Clinical and Translational Research Staff Network:*** The CTRS Network provides support for clinical and translational research coordinators at UIC to enhance research expertise at UIC and boost career progression. In addition to several general educational opportunities, the CTRS Network provides a monthly seminar series focus on topics unique to the roles of research staff in translational science. To facilitate sharing of best practices and professional network building, research coordinators have access to a dedicated communication platform.

***Clinical and Translational Science Scholar and Affiliate Scholar (CATS) Program:*** The CATS/CATS-Affiliate program encompasses both our NCATS-sponsored KL2 Mentored Career Development Awards and our institutionally supported Affiliate Scholars Program. The CATS Scholars Program is intended to accelerate the career progression of scientists who have demonstrated a commitment to clinical and/or translational research. Each program provides scholars with career and research planning and guidance; peer review of grants and external presentations; mentoring; and access to educational opportunities and research services provided by the CCTS.

**Pilot Translational and Clinical Studies Program**

The CCTS Pilot Grant Program serves a vital function in advancing translational research by funding a combination of broad translational and multidisciplinary projects and targeted priority areas as identified by the CTSA Program, such as pediatric research, community based research, health information technology, focused drug discovery, and population health.

**Regulatory Support and Knowledge Core**

The Regulatory Knowledge and Support Core aims to provide centralized, accessible regulatory advice and guidance. The CCTS’s Regulatory Knowledge and Support Core advise investigators on a variety of administrative activities involved with fulfilling the regulatory requirements for conducting human subjects research. This core serves as a liaison between the IRB, investigators, and research staff at UIC and CCTS partner organizations.

**Research Navigation Service**

The CCTS Research Navigation Service was created to help UIC clinical and translational research investigators, study coordinators, and other research personnel find the information and resources needed to foster research ideas through the university system. The Research Navigation Service supports investigators in two ways: through personal consultations and the Research Map. Individual consultations with the Research Navigator, who acts as a primary point of access to CCTS services (biostatistics, ethics, regulatory, recruitment and retention, etc.), can help researchers overcome project challenges and check on progress along the way. The Navigator is reachable remotely via the web as well as in-person, allowing for rapid and flexible investigator access.

*The Research Navigation Map:* The Research Navigation Mapsupplements the Navigation service asa web-based resource that is accessible by any investigator. The Map was designed to help those new to and experienced in translational research navigate the entire process from training, through proposal development and regulatory compliance, to data management, dissemination and award closeout.

**Translational Technology Service**

The CCTS Translational Technology Service (TTS) provides integrated online web application development to facilitate and improve research focused training, data collection, communication and collaboration for UIC investigators and collaborators. TTS provides expertise across the full spectrum of the develop processes to support online learning and research data initiatives, including the development of customized web-based learning; data collection and management; webcasting solutions to enhance communication objectives and improve information deliver.

**UICentre**

UICentre is the academic drug discovery initiative at UIC. It is a campus wide program centered on collaborative engagement designed to stimulate the application of pharmaceutical and translational knowledge in order to generate novel therapeutic compounds. In the Centre, a multidisciplinary project team will incorporate toxicology, bioavailability, and targeted delivery at the earliest stage of drug discovery. Bringing together Centre members from UI, pharma, bioventures, and others possessing knowledge and experience in chemical, pharmaceutical, and translational research with biomedical and clinical primary inventors at UI to provide and support project-based collaborations focused on discovery of novel chemical entities as viable clinical drug candidates. Projects are created by exploiting critical mass at UI in areas of excellence, to create and support Incentive grants focused on treatment and eradication of specific diseases. Projects are selected by working closely with the Office of Technology Management (OTM) to exploit existing Invention Disclosures (ID). In addition, two Campus wide RFAs are performed on a yearly basis in order to form multi-PI translational research grants and feed the pipeline for Project-Based Discovery.

**UI HOSPITAL AND HEALTH SCIENCES SYSTEM & UIC COLLEGES**

**The University of Illinois Chicago Campus**

The University of Illinois at Chicago (UIC) is a dynamic and progressive enterprise that works collaboratively to support cutting edge research. The UIC campus includes 15 colleges, including a full complement of seven health science colleges, the University of Illinois Hospital, 21 outpatient clinics, immediate care clinic, and 11 Mile Square Federally Qualified Health Clinics (FQHCs) across the Chicago area. The UIC West Campus is located within the Illinois Medical District (IMD), the largest medical complex in Illinois and one of the largest urban academic medical districts in the country. Here we describe aspects of the UIC enterprise that facilitate clinical and translational research and allow for the development and implementation of new initiatives that positively impact the health of the surrounding community, and that provide a foundation for inter professional and health science education and multidisciplinary health science research.

UIC is one of the most diverse research-intensive universities in the U.S. UIC one of the very few Research 1 minority-serving institutions receiving designation from the U.S. Department of Education as a Minority Serving Institution (MSI), an Asian American and Native American Pacific Islander-Serving Institution (AANAPISI) and as a Hispanic Serving Institution (HSI).  UIC has been recognized nationally for its ongoing leadership in matters of diversity. In 2018, UIC received its third Higher Education Excellence in Diversity (HEED) Award from INSIGHT Into Diversity magazine, the oldest and largest diversity-focused publication in higher education.  UIC was named one of the nation’s best 25 campuses for LGBT students by Campus Pride and the Huffington Post.

Further demonstrating its commitment to community engagement, UIC is pursuing classification in community engagement from the Carnegie Foundation for the Advancement of Teaching. The Carnegie Community Engagement Classification is a much sought-after and prestigious recognition for engagement for institutions of higher education in the United States.

**UI Hospital and Outpatient Care Center**

University of Illinois Hospital & Health Sciences System (UI Health) is made up of several facilities, all of which provide access to different levels of care. These include a 465-bed hospital, 21 outpatient and immediate clinics, and 11 Mile Square Health Centers, which are Federally Qualified Health Centers, including locations across the Chicago area (Back of the Yards, Cicero, Englewood, Near West, and South Shore. As a leader in patient care, research and education, UI Health is committed making positive and lasting differences in health science and in people’s lives.

The hospital and outpatient care center are located approximately one block from the CCTS academic home. UHHSS operates a 465-licenced bed general medical and surgical facility with over 600 active physicians, a Level 2 Trauma Center, and home to the Children's Hospital of Illinois (CHUI) that consists of 101-bed specialty pediatric hospital with 55-bed NICU. The Outpatient Care Center, a 245,000 square-foot facility housing 21 primary and specialty care clinics, connected to the Hospital by both an underground tunnel and an overland bridge, receives over 135,000 unique patients with over 600,000 visits annually. UIHHSS serves a diverse population with 48% of patients identified as African American, 24% Hispanic or Latino, 20% Caucasian, and 8% Asian or Pacific Islander. Collectively, outpatient and inpatient care is provided in all major medical and surgical subspecialties. Family Practice, General Internal Medicine, Pediatrics, and Obstetrics and Gynecology represent large primary care practices. UIHHSS also operates six Federally Qualified Health Centers around the city of Chicago. Collectively, these Centers care for over 18,000 unique patients with approximately 94% of patients identified as African American. Since 1997, UIHHSS healthcare providers have benefited from a state-of-the-art electronic medical record to archive and access patient medications, laboratory results, radiology reports, pathology reports, and nursing and physician documentation. Since its inception, the electronic medical record has accumulated over 2.5 terabytes of data that is securely available to caregivers at all campus inpatient and outpatient facilities, at remote clinic locations throughout the Chicago area, in private offices, at home, and while traveling.

The main facilities of the University of Illinois Hospital and Health Sciences System, the University of Illinois Hospital, the Outpatient Care Center, and the largest of the Mile Square Health Center locations, are all situated within the larger Illinois Medical District (IMD). The largest medical complex in Illinois and one of the largest urban academic medical districts in the country, the IMD also includes several other major institutions including: Rush University Medical Center, the John H. Stroger, Jr. Hospital of Cook County, and the Jesse Brown Veterans Administration Medical Center, as well as dozens of smaller clinical, laboratories, public agencies and a biotech business incubator.

***Mile Square Federally of Qualified Health Center (FQHC)*:** UIC is one of the only academic health centers in the country to have its own Federally Qualified Health Centers (FQHCs), which is key to servicing its communities. As part of the University, Mile Square offers medical education programs for physicians, nurses, certified nurse midwives, and pharmacy students. Mile Square is committed to serving Chicago's disenfranchised communities. Patients are predominantly racial and ethnic minorities; many of which are at or below the Federal Poverty Level and have public insurance or are uninsured. The Mile Square system provides comprehensive primary care for children and adults. The system includes primary care clinics, as well school-based health centers and nurse-practice sites that provide health care for people with severe and persistent mental illness. Mile Square includes almost 25% of the City's population, while extending additional services to a site in the suburb of Cicero. With a 150 member staff, Mile Square provides approximate 74,000 encounters to more than 24,000 patients each year.

The 11 Mile Square Health Center facilities are owned and operated by UIC and distributed throughout the city of Chicago with five main clinical sites (Roosevelt and Wood- on the UIC Campus, South shore, Cicero, Englewood, Back of the Yards) along with nursing-led integrated health clinics and school-based clinics.

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| **Table:** Mile Square Health Center demographics compared to City of Chicago, according to the US Census Bureau | | |
| **Demographic** | **Mile Square Catchment area** | **City of Chicago** |
| Total population | 1,465,102 | 2,716,450 |
| Black/African-American | 55% | 31% |
| Hispanic/Latino | 34% | 29% |
| Population with poverty status below 150% of poverty level | 44% | 21% |
| Population 25+ years old with high school degree or equivalent | 25% | 84% |

Mile Square’s research priorities focus on research conducted at or in collaboration with providers at Mile Square Health Center leading to outcomes that can immediately address health priorities such as asthma, cancer screening and treatment, cardiovascular disease diabetes, mental and behavioral health, obesity, and sickle cell disease.

**UIC Health Science Colleges**

Home to the nation's largest College of Medicine, the University of Illinois is an incubator for life-saving research and an educator of more physicians, nurses, dentists and pharmacists for Illinois than any other school. Our seven health-sciences colleges, which include Medicine, Applied Health Sciences, Dentistry, Pharmacy, Public Health, Nursing and Social Work, actively integrate teaching, research and service, while fostering compassion, dedication and advocacy.

***College of Applied Health Sciences:*** The College of Applied Health Sciences (AHS) is a socially conscious, research-intensive academic community whose mission is to broaden understanding of applied health sciences and disability. Nationally prominent in research, service, and education, AHS houses five departments: Biomedical and Health Information Sciences, Disability and Human Development, Kinesiology and Nutrition, Occupational Therapy, and Physical Therapy. It also offers three bachelor's degrees, ten master's degrees, and four doctoral programs. AHS has a broad based research portfolio that ranges from laboratory-based research to community-based (engaged) research to scholarship in the humanities. AHS has a track record of funding from a variety of federal and state agencies and foundations. Consistently ranked among the top five colleges of allied health in research funding, the college’s research emphasis is the intersection of health, disability and rehabilitation.

***College of Dentistry:*** The UIC College of Dentistry (COD) is a worldwide leader in oral health education, clinical care and research that is patient-centered and evidence-based, with a foundation in preventive and public health sciences. COD trains healthcare professionals, educators, and scientists in the oral health sciences, including over half of the dentists in Illinois. Offering integrated educational programs based upon advanced technology, and UIC's centers of research excellence, the college provides student-oriented education programs that prepare individuals for the thoughtful, ethical practice of dentistry and the life-long learning process associated with the profession. COD is a level-1 research institution, with more than 40 faculty performing research and funding of over $5 million annually. They are one of only 15 out of 70 institutions with DMD/PhD or PhD training grants from the NIDCR. Investigators lead cutting-edge research to discover and translate new knowledge at the boundaries of science, transforming oral health care practice, social systems and related technologies for the benefit of individuals, families and communities. COD is also an internationally recognized leader in craniofacial and oral health research.

***College of Medicine:*** The mission of the UIC College of Medicine (COM) is to enhance the health of the citizens of Illinois and the nation by educating physicians and biomedical scientists, advancing knowledge in health and disease, and providing healthcare in a setting of education and research. The UIC COM is one of the largest medical schools in the country. The diverse student body of over 1,300 students hails from a wide variety of cultural and economic backgrounds. The College’s four campuses - located in Chicago, Peoria, Rockford, and Urbana - take advantage of the state’s urban and rural environments and offer numerous opportunities for clinical training and research. COM’s research goals are broad and ambitious as they aim to advance treatment now, and health in the future, by pursuing both fundamental insights and their application to the practice of medicine. Investigators across the College of Medicine are doing cutting-edge research in clinical medicine, in basic biomedical science, and in the translation of basic findings into clinical practice and societal health. Focus areas include cancer, women’s health, neurosciences, cardiac and vascular medicine, infectious disease, and obesity and diabetes.

***College of Nursing:*** The mission of the College of Nursing (CON) is to transform health, healthcare and policy through knowledge generation and translation, and education of future leaders from diverse backgrounds.Recognizing the need to expand and diversify the nation's nursing workforce, the CON offers five regional programs, five degree and seven certificate programs. One out of every ten nurses in Illinois graduated from the college, a testament to the critical role UIC plays in nurse education. The CON has five campuses throughout Northern and Central Illinois: Peoria, Quad Cities, Rockford, Springfield, and Urbana. The college boasts award-winning faculty and has wide-ranging grant support. The program is currently ranked #9 among U.S. nursing schools with NIH funding. The CON is recognized nationally for its outstanding productivity in research and translation of research findings into healthcare practice, with sustained research programs in health promotion and disease prevention; symptom management and quality of life; health disparities and health equity; pregnancy outcomes, infant health/prematurity, and healthy families; and sexual minority health.

***College of Pharmacy:*** Established in 1859, the UIC College of Pharmacy (COP) stands as the oldest academic unit of the University of Illinois, one of the largest and most comprehensive research universities in the nation. COP is the major producer of pharmacy talent in the Midwest and has a history of producing pharmacy leaders; one third of all practicing pharmacists in Illinois are graduates of this college. Guided by the mission to serve the pharmaceutical care needs of society, COP faculty and students serve people in the communities of Chicago and Rockford through health-related events and services. COP’s two campuses offer hands-on learning opportunities focused on two different populations—urban and rural. In both settings, facilities and learning opportunities are shared with University of Illinois Medical Centers. COP is advancing the industry and training tomorrow’s leaders in our 10 specialized research centers and institutes, and we are consistently ranked in the top five for NIH funding among US pharmacy schools. Researchers are internationally- recognized leaders in alternative, complementary and traditional medicine; biotechnology and biodefense; cancer biology and therapeutics; drug discovery, development and delivery; infectious diseases; natural products; neuroscience; patient safety; pharmacoeconomics; genomics and pharmacogenomics.

***Jane Addams College of Social Work:*** The Jane Addams College of Social Work (JASW)mission is to educate professional social workers, develop knowledge, and provide leadership in the development and implementation of policies and services on behalf of the poor, the oppressed, racial and ethnic minorities, and other at-risk urban populations. JASW is a vibrant urban college committed to diversity and social justice. The college carries forward the mission of Jane Addams and the Hull-House movement, adapting it to the realities of today's urban settings. Faculty, staff and students at JASW comprise a diverse community involved in a variety of research, evaluation, training, advocacy, and service activities. They are also engaged in partnerships with communities and organizations to promote social and economic justice and to improve the quality and effectiveness of social programs.

***School of Public Health:*** The UIC School of Public Health (SPH) is dedicated to excellence in protecting and improving the health and well-being of the people of the metropolitan Chicago area, the State of Illinois and the nation, and of others throughout the world. The School achieves this mission by educating scientists, professionals and the public; conducting research to develop solutions to public health problems; providing public health service; and formulating public health policy. The school includes four divisions - Community Health Sciences, Environmental and Occupational Health Sciences, Epidemiology and Biostatistics, and Health Policy and Administration.  SPH is committed to eliminating health disparities and bringing public health solutions to communities in need by combining academic excellence with cutting-edge research and engaged community-based practice. Currently, SPH has 73 community partners and 39 funded community projects within the City of Chicago. They also have 67 international partners, offer research and training opportunities in 46 countries, and rank 18th in NIH funding among schools of public health.

**Other UIC Colleges**

***College of Architecture, Design and the Arts*:** The UIC College of Architecture, Design, and the Arts educates and mentors the next generation of visual and performing artists, designers, architects, art historians and museum professionals. The college has four schools: architecture, art and art history, design, and theatre and music. The faculty, internationally recognized in their fields, fosters a transformative learning environment. The College is committed to transmitting the skills and knowledge required for these world-making activities at the highest level of rigor and discipline to the broadest and most diverse audience. They visualize, perform and popularize the ideas, forms, and arrangements that previously seemed unthinkable.

***College of Business Administration*:** The College of Business Administration is home to four academic departments—accounting, finance, information and decision sciences, and managerial studies. Its nearly 150 faculty members teach more than 2,500 undergraduate students in seven degree programs in accounting, business administration, entrepreneurship, finance, information and decision sciences, management, and marketing; and contribute to the creation of new knowledge through two doctoral programs—the PhD in Business Administration and the PhD in Management Information Systems. UIC Liautaud Graduate School of Business serves 300 graduate students in six masters programs—the MBA, Master of Accounting, Master of Business Analytics, Master of Finance, Master of Management Information Systems, and Master of Marketing.

***College of Education:*** The College of Education is a community of faculty, staff, students and alumni who are determined to improve educational and life outcomes and interrupt social and economic disparities in schools and communities. The College has worked for more than three decades to prepare teachers, principals, researchers, activists, and policymakers whose work focuses on positively impacting lives and forming healthy partnerships to counter indignities closely associated with poverty and race. College faculty, staff, students, and alumni numbering more than 10,000 advocate on behalf of children, particularly Black and Latino children, in Chicago and around the nation. The leaders of the College of Education’s centers and clinics are actively seeking solutions, creating pathways, and leading efforts to shape educational practices and policies.

***College of Engineering:*** The UIC College of Engineering is recognized for its academic excellence with undergraduate and graduate programs in six academic departments: Richard and Loan Hill Department of Bioengineering, Chemical Engineering, Civil and Materials Engineering, Computer Science, Electrical and Computer Engineering, and Mechanical and Industrial Engineering. UIC College of Engineering engages in a slate of interdisciplinary projects to inspire new collaborations across departments and strengthen existing ones. These interdisciplinary efforts recognize the points of interconnection around phenomena that are important in our society and world. Research programs in the College of Engineering have been growing rapidly over the years and are conducted in 6 departments and 8 interdisciplinary centers. The college is actively involved in interdisciplinary research in the areas of bio-technology, nano-technology, information technology, and infrastructure and environmental technology. Numerous collaborations between College of Engineering faculty and clinical and translational investigators have been funded by the NIH, NSF and corporate sources.

***College of Liberal Arts and Sciences:*** The College of Liberal Arts and Sciences (LAS) offers programs in the humanities, social sciences, and natural sciences, as well as interdisciplinary programs that enhance the educational quality and depth of all undergraduate colleges on campus. The largest of the colleges at UIC, LAS houses 26 departments and programs. They offer 38 undergraduate major fields of specialization, 39 minors, 14 languages, about 47 graduate degrees at the masters and doctoral levels, and almost 1,000 courses. LAS provides training and research resources to aid in the development of clinical and translational investigators and the building of collaborations across disciplines. The college is focused on the challenges of the 21st century: reframing health matters, creating solutions to urban issues, pioneering new paths in education, reducing community disparities, championing social justice, unraveling the human brain, and harnessing the power of big data.

***College of Urban Planning and Public Affairs*:** Research programs in CUPPA’s nine interdisciplinary research centers and institutes and two academic departments explore how communities can evolve to meet the needs of residents and improve lives. Ensuring social justice, promoting access to transportation and services, providing advocacy for underserved populations, creating jobs in economically depressed neighborhoods, and improving government management and performance at all levels are just some of the areas CUPPA faculty examine. College faculty, students, and staff design and implement multi-disciplinary scholarship using knowledge, tools, resources and talents drawn from the domains of education, research, and service. CUPPA research has been funded by renowned foundations such as the John D. and Catherine T. MacArthur Foundation, Ford Foundation, Rockefeller Foundation, the Robert R. McCormick Foundation, the Woods Fund, and Chicago Community Trust, as well as the National Institutes of Health, National Science Foundation, the U.S. Department of Transportation, and U.S. Department of Justice.

***UIC John Marshall Law School:*** The UIC John Marshall Law School, Chicago’s first and only public law school, will open in Summer 2019 through UIC’s acquisition of the John Marshall Law School. The John Marshall Law School, founded in 1899, was an independent law school located in the heart of Chicago’s legal, financial and commercial districts. Starting in Fall, 2019, the UIC John Marshall Law School will welcome its first entering class, as well as the approximately 900 Juris Doctor (JD) students, Master of Laws (LLM) and Master of Jurisprudence (MJ) students currently enrolled at John Marshall. The UIC John Marshall Law School provides opportunities for interdisciplinary courses; joint and dual-degree programs aligned with UIC strengths in disciplines such as the health sciences, engineering and technology, urban planning and public administration, the social sciences and business; emphasis on diversity within the workforce and communities served; and opportunities for interdisciplinary research and funding. John Marshall joining UIC will also open up new possibilities for research collaborations between UIC and John Marshall faculty.

**CENTERS, INSTITUTES & RESOURCES AFFILIATED WITH CCTS**

**Official & Collaborative Centers**

***UI Cancer Center****:* The University of Illinois Cancer Center is the only public university-based cancer center in Chicago dedicated to the pursuit of health equity and study of cancer disparities. Expert, multidisciplinary cancer focused physicians and researchers are dedicated to applying innovative breakthroughs for patient care from the bench to bedside to the delivery of treatment and clinical trial options to our community. The University of Illinois Cancer Center’s vision is to reduce the burden of cancer health disparities by becoming the national leader in innovative research and clinical trials in integrating our communities in everything we do. The UI Cancer Center partners with the seven health science colleges at the University of Illinois at Chicago and 11 Federally Qualified Health Clinics throughout Chicago and Illinois. Their programs feature state-of-the-art research, clinical trials, diagnostic and treatment options, with patients having access to the latest cancer resources and survivorship program, including cutting edge surgery options like an FDA-approved real-time magnetic resonance imaging-guided biopsy and the da Vinci robotic minimally invasive surgical system.

***Institute for Health Research and Policy***: Administered through the SPH on behalf of the deans of all UIC colleges, the IHRP was established in 1997 as a model multidisciplinary center that promotes collaborations across disciplines to enhance research that addresses health disparities related to race/ethnicity and socioeconomic status. The institute brings together faculty researchers from more than 8 colleges and 30 departments. IHRP is comprised of centers and programs along with a Methodology Research Core and an administrative infrastructure that includes assistance with financial management, human resources, communication, information technology, and research ethics. Research and outreach through IHRP provide important connections between UIC and the surrounding community. IHPR is consistently ranked among the top UIC campus departments for research productivity. **IHRP is directed by Robin Mermelstein, PhD, Co-Director for UIC Center for Clinical and Translational Science.**

***Population Health Sciences Program****:*The Population Health Sciences Program (PHSP) engages clinicians, patients, and other stakeholders in developing innovative inter-professional models of care that improve health in communities served by UI Health. The Population Health Sciences Program was developed in September, 2011, to catalyze and support enterprise-level leadership for care delivery science within the Office of the Vice Chancellor for Health Affairs. The Population Health Sciences Program supports the mission of UI Health by providing strategic, technical, and operational support for developing, testing, and implementing population-specific programs designed to achieve health equity.

***Office of Community Engagement and Neighborhood Health Partnerships (OCEAN-HP)****:* In 1993, the University of Illinois at Chicago created OCEAN-HP, which was established to work within the communities surrounding UIC. OCEAN-HP is a major vehicle through which the University fulfills the mission of its Great Cities Commitment with particular emphasis on the engagement of students, faculty and staff in long-term, meaningful relationships with communities. OCEAN-HP is the focal point for university and community collaboration. In 1994, OCEAN-HP received funding from the U.S. Department of Housing and Urban Economic Development (HUD) and was a pioneer in the national Community Outreach Partnership Centers movement of university-community partnerships. Subsequently it received further funding from HUD to fund its partnership model. OCEAN-HP has a unique model with vast community participation. Since inception, OCEAN-HP has received more than 35 grants totaling more than $13.8 million from federal, state and foundation sources for its innovative and comprehensive approach to neighborhood development, institutional commitments and university-community-government partnerships. OCEAN-HP has also received local and national recognition for achievement.

***Chicago Partnership for Health Promotion (CPHP)***: Established in 2002, the CPHP mission is to provide high quality nutrition education, health promotion and disease prevention services through partnerships, directed at eligible families in Chicago. The CPHP nutrition education team provides services through a wide network of community based organizations with interventions designed to improve nutrition and reduce health disparities for individuals with nutrition-associated diseases. CPHP provides high quality culturally tailored nutrition education in more than 300 venues reaching every region of Chicago. CPHP’s goal is to bring healthy lifestyle messages into communities where Chicagoans live, work, eat and play. CPHP staff encourages Chicago families to make healthier food choices, learn to prepare and consume healthier foods every day and be more physically active. CPHP provides nutrition education through a team of Nutrition educators, drawing on the unique strengths of both academic professionals and paraprofessional community peer educators.

***Healthy City Collaborative (HCC)***: HCC is a multidisciplinary workgroup that engages university researchers, external partners and community leadership in conversations and research to benefit the Health of Chicago. The HCC research agenda is derived from the broadest definition of health, which acknowledges interrelationships among individual, social, environmental, political and economic contributors to the health of the city. In coordination with its partners, the HCC develops and promotes a responsive, mutually accepted research agenda.

***National Center of Excellence in Women’s Health*:** In 1998, UIC was designated as one of 21 National Centers of Excellence in Women’s Health by the U.S. Department of Health and Human Services Office on Women’s Health.  In 2006, UIC was named a National Center of Excellence in Women’s Health Ambassador for Change. The UIC Center of Excellence in Women’s Health was built on an established collaboration among researchers from the Colleges of Nursing, Liberal Arts and Sciences, Medicine, Social Work, Pharmacy, the University Library, and the School of Public Health. The Center was designed to integrate biomedical and behavioral expertise with the grass roots women’s health vision, and emphasizes partnerships across disciplines and professions, between the academy and the community, and between health care providers and patients. The efforts of the Center are focused on comprehensive health care and innovative research across the life span, with particular emphases on underserved populations and global women’s health.  Major goals for the Center include implementing a strategic multidisciplinary research agenda relevant to informing health care delivery and training researchers for proficiency in multidisciplinary women’s health research.

***Office of Faith-based Community Health Promotion Partnership (OFCHPP)***: OFCHPP is a program that establishes mutually supportive and beneficial relationships between the University and with the diverse and rich faith community of the Chicago Metropolitan Area. Communities of faith possess unique strengths and capacities that can contribute to community health and well-being. OFCHPP’s mission is to engage UIC students, faculty and staff in the development of long-term, meaningful partnerships with communities of faith that contribute to neighborhood revitalization and measurable improvements in community health outcomes. OFCHPP aims to identify opportunities to work collaboratively with communities of faith congregations to address health holistically and improve community health and wellness. We act locally and collaborate nationally and internationally to identify best practices in this emerging area of work.

***UIC Innovation Center****:* The Innovation Center is a collaboration, education and incubation center embedded in UIC. The Innovation Center is a community of industry entrepreneurs and academic researchers working in partnership to instigate breakthroughs The Innovation Center’s mission is to produce Innovation and Innovators through collaboration by bringing industry thought leaders together with university experts to seed innovative thinking and to enable collaboration in design, technology, products, services, and business models. At the UIC Innovation Center, the holistic and inter-disciplinary nature of design is leveraged to cut across research and move projects from research to development.

***UIC Medical Accelerator for Devices Laboratory (MAD Lab)****:*The MAD Lab is comprised of an interdisciplinary team drawing on the strengths of our fields to support ideas to improve healthcare. A collaboration between the UIC Innovation Center and the UIC College of Medicine, MAD Lab uses a combination of expertise (Engineering, Medicine, Industrial Design, Business, and Design Research) to conduct problem validation, create concept solutions and provide an understanding of the market opportunity for new ideas. MAD Lab pairs business students with industrial designers and engineers to validate healthcare ideas and problems that UIC doctors, nurses, or students identify. Through a competitive application process, the interdisciplinary team provides multi-disciplinary researchers with concept validation, market analysis, prototype design or rendering and value proposition. Healthcare projects have included development of devices to prevent neonatal hypothermia in low-resource areas, improve corneal transplant surgery for patients and doctors; and streamline endoscopy cart management.

***IllinoisVENTURES***: IllinoisVENTURES was formally launched in 2002 to catalyze the creation and development of research-derived companies from the University of Illinois. The vision for IllinoisVENTURES is to not only provide guidance and capital, but also make Illinois a better and more vibrant place to do business. By helping researchers and entrepreneurs commercialize breakthrough technologies, IllinoisVENTURES is strengthening the entrepreneurial ecosystem and making Illinois a better and more vibrant place to do business. They do this by providing guidance and mentoring to startup teams at the earliest stages, by providing seed and expansion capital, and by working with companies to attract team members, investors and strategic partners. It is committed to helping entrepreneurs and technical founders build world-changing businesses with the potential to create new market opportunities or significantly expand existing ones. During the course of the past ten years, IllinoisVENTURES has led or collaborated on the initial funding of over 75 new ventures spanning a broad spectrum of scientific and technological innovation across multiple domains.

***UI Labs***: UI LABS was established to bring together top talent from universities, industry and civic organizations to pursue innovation and drive tech-based economic development in the Midwest. By creating a platform that promotes collaboration, UI LABS offers its partners an ideal environment to focus on developing, demonstrating, deploying, and commercializing innovations that address the world’s most pressing problems. UI LABS opened nearly 100,000 square feet of demonstration and collaboration space in May 2015. Since then, they have attracted more than 300 partners from industry, academia, and government in our work. The UI LABS Innovation Center has a LEED Silver Rating and has been recognized with the 2015 Design Excellence Award from American Institute of Architects (AIA) Chicago, 2016 Special Achievement of the Year from the Chicago Commercial Real Estate Awards, and a 2016 Vision Award in the Program Category from Urban Land Institute (ULI) Chicago.

***Advanced Pharmaceutical and Innovation Institute***: A new 250,000 GSF state-of-the-art research building will serve the Colleges of Medicine and Pharmacy, providing a substantial upgrade in research space. The new research facility will provide the necessary space for increased research growth and accommodate anticipated program growth in the Colleges of Pharmacy and Medicine. This project will ensure that the Colleges can improve research productivity, support collaborations with other colleges and industry partners, and recruit leading faculty, researchers and students. It will support the University’s priority of creating national and international impact and visibility for research while providing new opportunities for innovation in drug discovery, pharmaceutical product development and drive economic growth for the State of Illinois. The Advanced Pharmaceutical and Innovation Institute will include research labs, lab support space, dry labs, lab-related offices and office support space.

***Health Technology Incubator (HTI):*** HTI is Chicago’s first shared wet lab facility, the 12,000 square feet of shared wet laboratory and office space is available to UIC and non-UIC startups to perform proof-of-concept stage development.  The shared laboratory space brings together scientists, clinicians, engineers, and industry to facilitate an interdisciplinary approach to developing healthcare technologies. HTI provides the infrastructure to support technology development outside of academic labs and provides access to professional services to assist in commercialization planning and venture formation. HTI serves University faculty, staff, and students; Chicago area research institutions; and the broader entrepreneurial community as a nexus of biotechnology commercialization.

**Centers within the College of Applied Health Sciences**

***Integrative Physiology Laboratory (IPL)****:* IPL concentrates on health-related research across several disciplines using translational approaches that are both cellular and whole-body in scope. The current faculty’s research integrates aspects of cardiovascular function, metabolism, inflammation, hydration and nutrition status, and exercise/physical activity. It evaluates healthy individuals, as well as at-risk populations or those who suffer from chronic diseases, including hypertension, type 2 diabetes, kidney disease, and obesity. The IPL utilizes state-of-the-art applied and basic techniques to accomplish its research goals.

***Exercise Psychology Laboratory (EPL):*** The EPL aims to study and ultimately reduce health disparities and inequalities affecting different populations including racial and ethnic minorities, residents of rural areas, women, children, the elderly and persons with disability. The research conducted in the Exercise Psychology Laboratory involves a combination of physical activity, aging, and health disparities. Using Social Cognitive and Social Ecological models, the EPL attempts to study health and intervene at multiple levels of health influences.

***Institute on Disability and Human Development (IDHD)****:* IDHD is dedicated to promoting the independence, productivity, and inclusion of people with disabilities in all aspects of society. We realize our mission through academic programs, clinical services, research centers, and community programs. We conduct research and disseminate information about disability to academicians, policymakers, businesses, government agencies, service providers, and the general public. We also provide an extensive array of clinical and community service activities, and offer interdisciplinary pre-service training.

***Center on Health Promotion (CHP)****:* The CHP was established in 1997 with the primary aim to identify people with disabilities who are at risk for developing numerous health complications and provide them with the knowledge and skills necessary for promoting their own independence, equal opportunity, quality of life, and longevity. Building upon UIC core funding, the CHP has been able to successfully compete for federal funding from the National Institutes of Health, Centers for Disease Control and Prevention, and National Institute on Disability and Rehabilitation Research.

***Center for Capacity Building on Minorities with Disabilities Research (CCBMDR)***: CCBMDR’s mission is to generate state of the art research and interventions designed to promote empowerment of minority individuals with disabilities and capacity building among agencies delivering services to minority populations. The center follows a participatory action research approach in cooperation with consumers, families, businesses, local state and federal agencies in the greater community in order to enhance the quality of life of individuals with disabilities. It utilizes both quantitative and qualitative research approaches to inform stakeholders about policy recommendations benefiting individuals with disabilities.

***Child and Family Development Center (CFDC)****:* The primary goal of CFDC is to promote positive outcomes for children 0-3 years-old and their families through play-based evaluation and therapy services; routine-based interventions; and family support, education and training. CFDC addresses this goal by working concurrently in the areas of community service, research, and professional development to deliver high quality, early intervention services to young children with disabilities and their families. They seek to build an interdisciplinary science of child health, learning, and behavior, and advance the understanding of how to effectively address learning and performance disparities. CFDC applies research findings to the development of innovative, evidence-based models and practices and prepares professionals to make evidence-based decisions that will improve services focused on supporting young children with disabilities and their families.

***Evaluation and Public Policy Unit****:* The Evaluation and Public Policy Unit’s focus is the research and evaluation of policies and programs that impact people with disabilities and their families. The aim is to facilitate the public policy debate, legislative activity, and advocacy efforts in the disability field through the dissemination of research.

**Centers within the College of Dentistry**

***Dentistry Clinical Research Center****:* The Dentistry Clinical Research Center offers a spacious, state-of-the-art clinical laboratory for basic scientists to translate their laboratory findings into clinical care, provide clinical materials for analysis in laboratories, and engage clinical faculty in research that ultimately benefits patients and the community. The Dentistry Clinical Research Center offers five dental operatories (147-162 sq. ft.)- fully equipped for dental procedures, including one operatory outfitted for behavioral research with recording equipment for observing patient and clinician behavior ,and EHR access. All operatories have doors for privacy and noise control. In addition to operatories, the Clinical Research Center also provides administrative, patient and consultative space; instrument processing laboratory for specialized/proprietary instruments, and storage for supplies; preparation rooms for nursing staff to take clinical samples, e.g., blood, and for several staff to be in the room at the same time; and an in-suite laboratory for rapid processing of samples and preparation of dental biomaterials.

***Center for Wound Healing & Tissue Regeneration (CWHTR)****:* CWHTR is a unique community of scientists and clinicians devoted to the study of injury, wound healing, and regeneration. The members of this multidisciplinary research center investigate the body's reaction to injury, as well as mechanisms of repair and regeneration of tissues. The specific goals of the center are to promote collaborative research in the areas of tissue repair and regeneration, to support the research training of persons interested in the field, and to enhance translational research in injury and repair science. The long-term goal of the scientists and clinicians in the CWHTR is to translate research findings into innovative therapeutic strategies to improve tissue repair and regeneration. To insure the future of healing and regeneration research, the Center maintains a strong commitment to the research training of pre-doctoral, post-doctoral, and clinical trainees.

***Implant Innovation Center****:* The Implant and Innovations Center at the College of Dentistry is a state-of-the-art dental implant education and care center that features modern and convenient technologies for the best in dental implant therapies. Through a multidisciplinary approach, the team of experts provide the highest quality restorative dental care to Chicago and beyond, as well as highly competitive educational experiences for the next generation of practitioners to address the significant oral health issues related to missing teeth. The 5,900 square-foot facility features eight operatories and four private surgical suites. The Implant Innovation Center has created a collaborative environment that engages a broad range of experts and specialists (prosthodontists, periodontists, and oral surgeons) in providing the best patient care and professional education.

***Oral Medicine & Pharmacognosy Research (OMPR) Laboratory***: The OMPR Laboratory conducts medical anthropology and ethnopharmacology research associated with plants and other natural products used for oral medicine conditions, pains and pathologies. They leverage classical and portable spectroscopic technologies based on various forms of directed energies (i.e. Raman and FT-IR Spectroscopy) for biometric and pharmacognostic studies.

***Laboratory of Applied Dental Biomaterials and Interfaces****:* The Laboratory is committed to ongoing research focused on advancing oral health and in support of the ongoing scholarly development, enrichment, and programs for our students and faculty. This includes laboratory, clinical and educational-based research initiatives. Through a broad range of internal and external collaborations that embrace biomaterials science, molecular biology, education, and the clinical sciences, they aim to develop and systematically characterize bioinspired strategies to enhance the properties of the tissue and biointerfaces; develop novel therapies to replace and repair tooth structures and supporting systems; and translate and validate bench-top technology to every day clinical practice. The ultimate goal is to improve dental therapy outcomes and the quality of life.

***Dental Medicine Responder Training (DMRT) Office****:* The DMRT Office performs theory and policy research supporting the role of the dental profession in first responder and health security capacities. The DMRT Office assists various University of Illinois, Illinois State, and Federal agencies, facilitating dental research consistent with the Illinois Dental Practice Act and the 2013 Pandemic and All Hazards Preparedness Act. DMRT faculty work in collaboration with faculty from the UIC College of Pharmacy Forensic Science Program and the UIC School of Public Health Emergency Management and Continuity Planning Program, and with members of the UIC Police Department. Additionally, we collaborate with a number of local, state, and national organizations, including: the DuPage County Health Department, the Security Working Group of the Illinois Medical District, the Illinois Department of Public Health, the Illinois Terrorism Task Force, the Illinois State Dental Society, and the Association of State and Territorial Dental Directors.

***Multidisciplinary Oral Science Training (MOST)****:* Funded by the National Institute of Dental and Craniofacial Research, the MOST Program is an umbrella program that supports trainees at various stages of their career and graduate studies that fall within the core research/training mission of the training grant. The core research areas in the MOST program are in the biomedical sciences to advance craniofacial-oral-dental research including craniofacial biology, tissue regeneration, tissue engineering, biomaterials, oral cancer, microbiology, immunology, and translational research. MOST fellows work with world-class faculty, use cutting-edge technology and explore new directions from the bench to the bedside.

**Centers within the College of Engineering**

***Electronic Visualization Laboratory (EVL)****:*The EVL is an internationally renowned interdisciplinary research laboratory whose mission is to enable scientific and engineering discoveries by designing and developing high-performance visualization, virtual reality, and collaboration systems using advanced networking infrastructure. Established in 1973, EVL is the oldest formal collaboration between engineering and art in the U.S. From EVL’s early collaborations with artists, to today’s global collaborations with computational scientists and application scientists in academia, government and industry, EVL has had many successes developing, nurturing and growing user communities. To fulfill its mission of enabling scientific discovery, EVL faculty, staff and students form interdisciplinary teams of computer scientists, application scientists and artists in order to create useful and usable visualization and virtual-reality tools and techniques connected to remote data stores and distant colleagues via high-speed networks. Health Projects include: Precision E-Radiomics for Dynamic Big Head & Neck Cancer Data; Incorporating Image-based Features into Biomedical Document Classification; MyPHA - Automatically generating of personalized accounts of inpatient hospitalization; Englewood Social Service Finder and Englewood Analytics

***Natural Language Processing Laboratory (NLP)****:*Research in NLP at UIC focuses on semantics, and discourse and dialogue processing. The goal is to use NLP to support both education and instruction, and collaboration between human or artificial agents. The NLP Lab focuses on NLP with a purpose: interfaces and models whose core is NLP technology and that have the potential of positively affecting society. They focus on three main strands of research: NL interfaces for educational technology; summarization, including for health applications; and multimodal communication, including human-robot interaction and conversational interfaces for visualization.

**Centers within the College of Liberal Arts & Sciences**

***Laboratory of Integrative Neuroscience (LIN)***: LIN is a unique interdisciplinary entity that bringing together faculty from the Natural Sciences (Biology and Chemistry), Social Sciences (Psychology) and Humanities (Philosophy). Because of the interdisciplinary nature of neuroscience, their endeavors expand to other units in the College of Liberal Arts & Sciences, as well as other colleges, e.g. Applied Health Sciences, Engineering, Education, Medicine and Pharmacy. This breadth of intellectual inquiry represents a great strength in the pursuit of excellence in research and teaching – aimed towards understanding brain-behavior relationships. The LIN promotes interdisciplinary training in neuroscience. LIN faculty collaborate with other neuroscience faculty in the Colleges of Medicine, Engineering and Pharmacy that enrich the training and intellectual experience for our graduate students.

**Centers within the College of Medicine**

***Center for Dissemination and Implementation Science (CDIS)****:* CDIS, housed in the Department of Medicine, focuses on the processes that promote or inhibit the adoption of evidence-based and empirically-supported interventions in real-life settings in the US and globally. CDIS scholars examine the facilitators, barriers, and constraints to implementation, potential solutions to these factors, and the feasibility, cost-effectiveness, sustainability, health maintenance, acceptability, equity, and fidelity of interventions and programs. CDIS research seeks to identify and test new and innovative methodologies for diverse and underserved populations. CDIS integrates theories and principles from diverse fields, including but not limited to behavioral and social sciences, public health, medicine, economics, and public policy, recognizing key components of translational research. Key focus areas of the Center are mental health, adolescent sexual and reproductive health, HIV prevention and treatment, and urban and global health.

***Institute for Juvenile Research (IJR)****:* Established in 1909, IJR was the first child mental health clinic in the nation and one of the first to train psychologists and psychiatrists in child and adolescent specialties. Their mission is to develop and promote effective policy and practices to prevent mental health difficulties and relieve the mental health burden of children and families living in high poverty urban communities through research, teaching, and direct service. The programs and models developed and supported by IJR focus on early identification, prevention, and intervention of behavioral, social or emotional difficulties among children and youth. Through strategic linkages with key public policy and community stakeholders, IJR is a major center in the Chicago region for the development, training, and implementation of high quality mental health services spanning the prevention to intervention continuum.

***Center for Magnetic Resonance Research****:* The Center for MR Research was initiated as an institution-wide program to focus research efforts towards a center of excellence in imaging. The goals for the program include fostering involvement of all departments in using these state-of-the-art imaging facilities for research generated in each of these disciplines. The Center for MR Research houses two 3 whole body Tesla scanners (MR750, GE Healthcare, Milwaukee) for cardiac and functional brain imaging. The 3.0T scanners have 8 parallel channels and BRAINWAVE RT, the latest technology for functional brain imaging. All scanners support spectroscopy and image analysis with “functools”. The scanners are connected to a PACS (GE Healthcare) and advantage windows workstation for image display and processing. The 9.4T 80 cm MR scanner at the Center for MR Research is a custom built, state of the art system for MR imaging. With a bore size of 80 cm and equipped with a head gradient set, the 9.4T scanner is primarily used for human brain imaging. The ultra-high static magnetic field increases the sensitivity of the MR signal and enables the completion of experiments (1H, 23Na, 31P, 17O, 39K) that are no practical at 3T when performed within acceptable imaging times for human subjects. Housed within the same building as the 9.4T scanner are faculty offices, electronics laboratory, physiology laboratory, computing facilities, and a conference room.

***Center for Cardiovascular Research (CCVR)***: The CCVR brings together more than fifteen laboratories and facilities focused on defining cures for cardiovascular diseases. The center supports interdisciplinary research in basic, translational and clinical cardiovascular sciences. The Center offers a campus-wide networking platform, core services for monitoring animal physiology, in addition to education and training. This provides an excellent environment for interactive research, better training opportunities for doctoral students, postdoctoral fellows, medical students, residents and fellows with the express goal of recruiting and training the talented leaders in cardiovascular science for the future.

***UI NeuroRepository*** ***(UINR):*** The UINR is a one-of-a-kind human brain tissue bank and research database that fuels innovative research and cures for brain disorders. The UINR is unique because it takes a ‘big data’ approach to link clinical, radiological, physiological, histological, and molecular/genomic data to thousands of human tissue samples. UINR was established to provide a network of resources to integrate human neurological disease specific clinical, electrophysiological, histopathological, imaging, and molecular data; linking molecular information to disease processes in order to generate new research directions. The UINR enables investigators to identify both targets and biomarkers through a unique biorepository that is clinically and anatomically linked to a human subject data repository. The incorporation of radiological and microscopic images, as well as electrical records that are directly linked to each piece of human brain and other tissues provides a basis for discovery not available through any other tissue bank or data warehouse.

***Ophthalmic Clinical Trials and Translational Center (OCTTC)****:* The OCTTC provides services in clinical trials and translational research that evaluate preventive, therapeutic, and diagnostic interventions in ophthalmic disease. The center offers a new model for dedicated clinical trial support services which provides personalized clinical trial patient care, cutting-edge equipment and ophthalmic lanes, and a platform for clinician-scientists to launch new trials and studies. The OCTTC streamlines research operations and enhances the performance of clinical trials to provide patients diagnosed with the most difficult and complex ophthalmic diseases an opportunity for new promising treatments

***Center for Advanced Resuscitation Medicine (CARM)****:* The CARM brings together scientists and clinicians to advance the understanding of sudden cardiac arrest, hemorrhagic shock, and hypertension from molecular, translational, and clinical perspectives. The mission of CARM is to integrate cutting-edge research, education, and clinical leadership to facilitate the translation of new discoveries into improved patient care and community health, and reduced racial/ethnic disparities.

***Center for Global Health***: The Center for Global Health is focused on improving the health of populations and individuals around the world, and to reduce health disparities, by collaboratively conducting trans-disciplinary research, training the next generations of global health leaders, and building the capacities of global and local partners. They aim to facilitate and conduct innovative research that responds to the changing global burden of disease, emerging threats, and local needs of partners, and that can impact practice and policy relevant for low resource settings.

***The Center for Research on Women and Gender (CRWG):***  CRWG is the result of collaborative work among researchers from the Colleges of Nursing, Liberal Arts and Sciences, Medicine, Social Work, and the School of Public Health. CRWG’s efforts are focused on multidisciplinary, collaborative research and training in the areas of health, work, and culture, broadly defined. The Center’s mission is to produce improved understanding of the lives of women and the role of gender in society. The Center promotes collaborative, multidisciplinary research related to women and gender, with an emphasis on work, health and culture. In addition to research conducted within the university community, the Center collaborates with a range of other Chicago organizations to assist them in developing their evaluation and research programs. The Center has received support from multiple sources including the John D. and Catherine T. MacArthur Foundation, the National Endowment for the Humanities, the National Institutes of Health, and the Johnson Foundation.

***Institute for Minority Health Research (IMHR)****:* IMHR is a campus-wide unit committed to promoting interdisciplinary research, training, policy, and community partnerships to improve the health of vulnerable minority populations living locally, nationally, and internationally. IMHR collaborates with faculty and staff across UIC campuses, colleges, institutes, and centers, as well as state agencies, other universities, and community organizations with the goal of working towards eliminating health disparities in vulnerable populations. IMHR also collaborates with academic programs in order to foster interdisciplinary research and assist, train, and support investigators to successfully compete for external funding in minority health research.

***Building Interdisciplinary Research Careers in Women’s Health (BIRCWH)***: BIRCWH is a collaborative effort among UIC’s National Center of Excellence in Women’s Health, the Department of Obstetrics and Gynecology, and UIC’s six health colleges. The goal of the UIC BIRCWH program is to train a cadre of researchers to become independent investigators who use novel, interdisciplinary approaches to advance the science of women’s health and sex/gender-based research. The program consists of a core and tailored curriculum, research training, mentoring (by a team of at least 2 senior researchers plus a member of the BIRCWH leadership team), individualized career planning, and a research project. BIRCWH focal areas include health and illness issues which are unique to women, more prevalent in women, or are different in women than in men. Whether research is at the basic science, clinical, or community levels, the UIC BIRCWH program fosters an interdisciplinary approach to understanding women’s health and sex/gender determinants of health and disease.

***Urban Youth Trauma Center (UYTC)****:* **UYTC**is a SAMHSA-funded Treatment Service Adaptation Center and a member of the National Child Traumatic Stress Network. The program promotes and disseminates comprehensive, integrated, and coordinated care for multi-problem, high-risk youth affected by trauma and community violence. UYTC aims to increase awareness about the needs of traumatized youth who are affected by community and domestic violence, as well as youth with co-occurring substance abuse, disruptive behaviors, and those who are involved with court, juvenile justice, and law enforcement systems, while emphasizing the enhancement of community resources and service system collaboration. They disseminate trauma-informed intervention models designed for multi-problem youth experiencing traumatic stress, violence exposure, and co-occurring substance abuse. UYTC also **provides training and consultation** to facilitate service system and community resource collaboration, using a socio-ecologically based and trauma-informed model of collaboration.

***Community Based Children and Family Mental Health Services Research***: This program, housed within the Institute for Juvenile Research, conducts research to provide mental health services for children living in low-income urban communities. The primary goal of the program is to conduct research that promotes effective and sustainable mental health services to support the prevention, early intervention, and treatment of urban children's mental health difficulties. The program focuses on training teachers to use classroom-based interventions for disruptive students, deescalating aggressive behavior on the playground before it becomes violent, and building and supporting community-based workforces. The program works closely with public agencies to insure that the work has real world significance, including projects with the Chicago Park District, the Chicago Public Schools, and Chicago Department of Public Health, and nonprofit social service agencies in schools and after school programs.

***Alcohol Research Center***: The Alcohol Research Center is dedicated to innovative research regarding mechanisms involved in the development of alcohol use and alcoholism. The basic and clinical research ongoing at the center will contribute to identify the neurobiological basis and the underlying cause and treatment for alcoholism, which affects millions of individuals, in order to alleviate the enormous social and economic burden to society. The center is interested in developing transdisciplinary approaches aimed at characterizing molecular, cellular, genetic, and epigenetic mechanisms associated with the development of alcoholism, the consequences of these alterations on brain circuits involved in addiction, and their behavioral outcomes.

***Center on Depression and Resilience (CDR)****:* The CDR is a multidisciplinary initiative that brings together clinicians, educators, and researchers committed to personalized patient care and innovative research. It aims to improve the quality of life and their families by bringing pioneering, evidence-based approaches to detect, monitor, and treat mood disorders and depression. CDR is predicated on a multifaceted approach that considers epigenetics, neuroscience, blood biomarkers, systemic issues, and other methods together—a team science approach—as the only way of understanding, treating, and beating depression. As the only National Network for Depression Center (NNDC) node in Chicagoland, they are dedicated to finding ways to promote resilience and recovery across the lifespan. Annually UI CDR provides 49,000+ patient visits for young children and adolescents through adults and elderly patients. Their team science approach to pioneering research is structured to accelerate research by decades saving thousands of lives, improving countless others, and recovering millions of dollars in the process.

***Center on Mental Health Services Research and Policy****:* This Center engages in research, training, and technical assistance to enhance service delivery and increase knowledge about behavioral health. Efforts fully involve people with mental health disorders, their friends and family members, service providers, and other stakeholders. Their work promotes concepts of recovery, self-determination, and full community participation. The Center conducts projects in the areas of vocational, residential, and educational rehabilitation; integration of mental and physical health services; crisis management and prevention of psychiatric and medical hospitalizations; the needs of women and people from diverse cultural backgrounds; and systems change. The Center also emphasizes the needs and experiences of individuals living with HIV/AIDS, diabetes, and other co-occurring medical conditions.

***Midwest AIDS Training and Education Center*** (***MATEC):*** MATEC is a federally-funded training center, providing AIDS and HIV clinical training and support to health care professionals. MATEC has built connections with the top HIV clinicians and researchers in our region to offer health care professionals targeted training and direct access to expert information. As part of a national network of AIDS Education and Training Centers, MATEC provides HIV training and support services through local sites in nine Midwestern states including Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio and Wisconsin. Each site is charged with developing services delivers targeted trainings, technical and capacity building assistance to meet the needs of health care professionals in their area.

***Graham Clinical Performance Center (GCPC)***: The Graham CPC mission is to help educators in the health professions improve clinical performance and patient safety by using clinical simulations for instruction, assessment, quality improvement and research. The GCPC is an integrated simulation center that utilizes a wide variety of simulation modalities including standardized patients, procedural skills task trainers, high-fidelity mannequins, clinical findings simulators, virtual and enhanced reality simulators, and screen-based simulation. GCPC facilities include two eight-room “clinics” for standardized patient encounters, two mannequin simulation suites, two procedural skills labs, and two classrooms, all equipped with AV recording and playback capability; as well as office and administrative spaces. As a member of the UIC Health Sciences Simulation Consortium, the GCPC was awarded accreditation as a Level I Comprehensive Educational Institute by the American College of Surgeons (ACS).The UIC-HSSC joins a select group of ACS accredited simulation centers worldwide, facilitating opportunities for research and collaboration in the development of innovative simulation-based educational programs.

**Centers within the College of Nursing**

***Behavioral Research Core Laboratory***: The Behavioral Research Core Laboratory is designed to support behavioral (descriptive and intervention) and survey research. This facility includes methods technologies for the developing self-report instruments, including automated data scanning, direct computer entry programs and automated telephone assessments. Data management and statistical consultants are also housed in this laboratory. It has a research participant waiting room, a private, fully stocked physical examination room, a group intervention or focus group meeting room and spaces for research assistant data collection and management and group meeting space. Multiple project directors are housed in this core laboratory to allow for collaboration and consultation among investigators regarding subject recruitment, retention, data collection and management.

***Human Performance and Respiratory Function Laboratory***: The Human Performance and Respiratory Function Laboratory (approximately 2,000 sq. ft.) is equipped with state-of-the-art equipment for conducting pulmonary function tests, exercise tests and measures of body composition. Pulmonary function testing equipment includes multiple spirometers, a body plethysmograph, a diffusion capacity system, a single breath nitrogen washout system, a blood gas analyzer and a co-oximeter. The laboratory includes transducers, signal processing instruments, recorders, custom manufactured instruments and software for measuring respiratory muscle strength and endurance. Exercise testing equipment includes an electronically braked cycle ergometer, a Quinton Q55 treadmill, multiple pulse oximeters, two 12 lead electrocardiographs, a Paramed automatic blood pressure monitor, and two Sensor Medics metabolic carts. The laboratory is also equipped to measure isokinetic strength with a Cybex 340 isokinetic dynamometer and to measure body composition with Bioelectrical Impedance Analysis system (RJL Systems) and a Hologic QDR 4500 dual energy x-ray absorptiometry instrument.

***Biological Research Core Laboratory***: The Biological Research Core Laboratory provides assay support for investigators across studies measuring a variety of serum and tissue-based biomarkers, hormones or other physiologic proteins/ions. A variety of equipment is available for preparing serum and plasma samples. Other equipment available includes a DCA 2000+ Analyzer for determining HbA1c levels, Packard Gamma counter, SpectraMax 190 microtiter plate reader (protein determination) and dedicated Dell computer, two Baker cell culture/biosafety hoods, an IEC Centra CL3R centrifuge (refrigerated, medium range, with swinging bucket rotor and carriers [16mm and 13mm]), Fisher Flammable storage refrigerator, Eppendorf multichannel pipette, and Eppendorf 200ul pipette as well as equipment for performing Western Blot and RT-PCR analysis.. The general core facility (approximately 800 sq. ft.) includes a walk-in refrigeration unit, -80 C freezer, gamma counter and ultracentrifuge.

***Institute for Health Care Innovation (IHCI)****:* The Institute for Health Care Innovation (IHCI) exists to expand the mission of the UIC's College of Nursing through the innovative integration of teaching, practice and research. The IHCI is a model entrepreneurial business unit in the CON, a leader in financial viability and recognized for its expertise in healthcare and educational financial management.

***Laboratory for Sleep Neurobiology***: Focused on basic sleep and brain research, with ongoing studies that examine sleep-disordered breathing, circadian rhythm disorders, cognitive and cardiovascular consequences of disordered sleep, and narcolepsy. The lab can perform blood gas analysis (pH, PaCO2, PaO2) and histology services.

***Research Interests Groups***: The College of Nursing supports two research interest groups. The Exercise and Physical Activity Research Interest Group’s mission is to support scientific discovery that promotes the health of persons with chronic disease across the lifespan using clinical, basic, and translational research with a focus on exercise and physical activity. The Diabetes Interest Group supports scientific discovery that promotes the health of persons living with or at-risk for diabetes. The Diabetes Interest Group supports innovative diabetes research within the College of Nursing; raises awareness of the importance of diabetes research; promotes interdisciplinary collaboration within UIC and the larger diabetes community; enhances scholarly and research activity related to diabetes and enhances diabetes research, education and training opportunities for students.

**Centers within the College of Pharmacy**

***Center for Biomolecular Sciences****:* The goal and mission of the Center for Biomolecular Sciences is to advance and support research that exploits genomics-based and genome-wide approaches for revealing the basis of human diseases, developing new therapeutics and exploring mechanisms of drug action. The Center unites laboratories of the College of Pharmacy at UIC, whose research emphasizes biological aspects of pharmaceutical science. The researchers of the Center are advancing conceptually new fundamental approaches for exploring the molecular mechanisms of diseases, discovering new therapies and understanding basic biological mechanisms.

***Center for Pharmacoepidemiology and Pharmacoeconomic Research (CPR*)**: The UIC Center for Pharmacoepidemiology and Pharmacoeconomic Research (CPR) is an interdisciplinary research unit of the UIC College of Pharmacy. The goal of the Center is to advance understanding of the impact of pharmacy and health care services, products, and policy by conducting research in pharmacoeconomics, pharmacoepidemiology, and patient-centered outcomes; translating and disseminating research; and educating, training, and mentoring researchers. The purpose of the CPR is 1) to conduct pharmacoeconomics, pharmacoepidemiology, and patient-centered outcomes research to advance understanding of the impact of pharmacy and health care services, products, and policy; 2) to translate and disseminate research findings to inform health care policy and practice, and 3) to educate, train, and mentor current and future scientists to expand the fields of pharmacoeconomics, pharmacoepidemiology, and patient-centered outcomes research.

A primary goal of the CPR is to conduct ground-breaking research in pharmacoeconomics, pharmacoepidemiology, and patient-centered outcomes research in order to advance understanding of the impact of pharmacy and health care services, products, and policy. Research conducted by investigators in the Center is funded by a variety of sources, including pharmaceutical manufacturers, private research foundations, and by government agencies, including the National Institutes of Health, and the Agency for Healthcare Research and Quality.

***Drug Information Group****:* The Drug Information Group (DIG) is a fee-for-service business unit within the UIC College of Pharmacy. Historically, the DIG provided traditional, internal drug information services such as a bimonthly newsletter, P&T support, and responses to requests from providers and patients in the Chicagoland community. However, the practice model changed in 1997 when the unit was required to become self-supporting and eventually revenue generating for the College of Pharmacy. Through professional networking, the DIG signed its first major client (Cardinal Health) in 1998. This long-term contract provided drug information services for approximately 450 hospital pharmacies with an extensive call volume. This contract allowed the DIG to expand from 3 to 5 drug information specialists, and it also necessitated the provision of extended service hours (7 AM to 8 PM CST during weekdays and 10 AM to 2 PM CST on Saturdays) to meet the needs of hundreds of pharmacies nationwide. The DIG continues with these expanded hours to this day with a staff of 10 specially trained drug information faculty.

The DIG has a varied client listing including Cardinal Health, MedAssets, Baxter, Astellas Pharma, Takeda Pharmaceuticals, Chicago State University College of Pharmacy, Postgraduate Healthcare Education, Scripps Health, Abelson Taylor, PharMEDium, and the Illinois Department of Healthcare and Family Services, among others. To address the needs of these clients, the DIG offers a wide array of services including: responses to individual drug information requests submitted via a toll-free phone number or email; single drug, drug class, and disease state formulary reviews; consultative services for P&T committees; disease-specific treatment algorithms and step-care documents; continuing education programs for healthcare professionals offered in a variety of formats (i.e., written, live, webinars); drug information slide kits; database development; writing projects including dossiers, standard response letters, global core response documents, manuscripts, newsletters, and posters; documents in patient-specific language; training programs for sales representatives and medical science liaisons; advisory board and consensus conference development; and drug information and literature evaluation courses

***Phamacogenomics Laboratory***: The Department of Pharmacy Practice Pharmacogenomics Laboratory is a 1400 square foot, state-of-the-art facility housed within the UIC College of Pharmacy Building, and contains the equipment and personnel necessary to complete pharmacogenomic analysis on a variety of sample types. The lab also provides assistance for investigators looking to complete pharmacogenomic projects. The UIC Pharmacogenomics Laboratory is dedicated to conducting research to determine how we can best utilize genetic information to personalize drug therapy. The primary research activities of the Pharmacogenomics Laboratory investigators involve neuropsychiatric and cardiovascular medications, with additional collaborations with oncology and internal medicine colleagues. We are conducting research to determine how best to use genetic markers associated with pathways of drug action as predictors of medication response and activity in the body. In doing so, we hope to ultimately translate our research activities into clinically useful tools to help us improve clinical outcomes from drug therapy and to facilitate the development of new medications for the future.

***UIC/NIH Center for Botanical Dietary Supplements****:* The UIC/NIH Center for Botanical Dietary Supplements (UIC Botanical Center) has been studying Botanical Dietary Supplements for safety, health and well-being since 1999 when it was founded with the support of NIH's Office of Dietary Supplements (ODS) and National Center for Complementary and Integrative Health (NCCIH). Center researchers believe that all botanical dietary supplements must be authenticated, chemically and biologically standardized as well as formulated according to good manufacturing practices so that consumers can be confident of the safety and efficacy profile of the botanical dietary supplements they consume. Focusing their research interests on women's health, Center investigators study those plants which are reported to alleviate the symptoms of menopause and premenstrual syndrome. Additionally, the Center investigates botanicals to determine their effect on estrogen metabolism, their antioxidant properties and their impact on estrogen carcinogenesis.

***UIC WHO Collaborating Centre for Traditional Medicine****:* The College of Pharmacy, UIC, is one of 21 global WHO Collaborating Centres for Traditional Medicine associated with the WHO Programme on Traditional Medicine. The Centre was designated in 1981 and is engaged in service and research activities related to the use of traditional medicine (TRM) and complementary and alternative medicine (CAM) in primary health care. It is only one of the two collaborating centres for traditional medicine in the USA and the Region of the Americas (AMRO), with the second centre being located at the National Center for Complementary and Alternative Medicine (NCCAM), NIH. Two centres each are located in the Eastern Mediterranean (EMRO), European (EURO), and 14 are in the Western Pacific (WPRO) Regions.

**Centers within the College of Urban Planning and Public Affairs**

***Institute for Research on Race and Public Policy***: The Institute for Research on Race & Public Policy promotes and coordinates engaged research on racial and ethnic justice in the U.S. Our mission is to increase society’s understanding of the root causes of racial and ethnic inequality and to provide the public, organizers, practitioners, and policymakers with research-based policy solutions. To fulfill that mission, IRRPP funds research on race and ethnicity, trains scholars to participate in policy discussions, collaborates on social justice projects with community organizations, and holds events exploring the link between policy and racial and ethnic injustice. The Institute for Research on Race and Public Policy is a campus-wide, cross-disciplinary research, policy and practice unit.

***Great Cities Institute****:* UIC’s Great Cities Institute is a research hub for scholars, policymakers, and stakeholders who share an interest in finding answers to the question, “What can cities and regions do to make themselves into great places?” The Great Cities Institute (GCI) represents UIC’s commitment to “engaged research” while contributing to its stature as a Research One University thereby highlighting the value of quality research for addressing today’s urban challenges. The Mission of the UIC Great Cities Institute is to link its academic resources with a range of partners to address urban issues by providing research, policy analysis and program development. Tied to the University of Illinois at Chicago *Great Cities Commitment*, GCI seeks to improve quality of life in Chicago, its metropolitan region and cities throughout the world. The Great Cities Institute is committed to convening UIC faculty and researchers with interdisciplinary expertise; producing engaged research, to disseminate relevant analysis that contributes to equity, justice and quality of life in cities and metropolitan regions; fostering broad accessibility to research, analysis, dialogue and University resources; and improving community planning, programming, and service delivery.

GCI is home to the *UIC Neighborhoods Initiative (UICNI)*, a university-community partnership with neighborhoods both adjacent to the UIC campus and in the Chicagoland area. UICNI was formed based on a unique organizational model that combines resources from numerous units and colleges and coordinates multi-disciplinary, campus-wide partnerships between community organizations and UIC students and faculty. The UIC Neighborhoods Initiative (UICNI) promotes and facilitates partnerships between UIC faculty, staff and students, and elected officials, residents, and organizations in neighborhoods throughout the city. Over the past twenty years, UICNI has secured more than $6.5 million dollars, and implemented more than thirty community and economic development programs. UICNI has recruited over 100 students and 65 faculty members to work with over 100 neighborhood groups on community projects. Most importantly, hundreds of thousands of community members have benefited from the programs in their neighborhoods. UICNI has maintained its focus on collaboration with neighborhood groups, elected officials, institutions and residents through its’ current projects including annual implementation of participatory budgeting and community planning projects in multiple communities throughout the city.

***Urban Data Visualization Lab***: The Urban Data Visualization Lab (UDVL), housed in the Department of Urban Planning and Policy, is the university’s in-house team of spatial analysts, modelers, designers and visualization experts who help decision makers and researchers across disciplines solve problems through better understanding of critical challenges. They employ various technologies, including mapping and geospatial data analysis, complex systems modeling, data management and selection, and visual approaches to effective and meaningful communication. UDVL helps researchers avoid the ambient “noise” of extraneous information by focusing on data that really matter. This sharp focus enables the transformation of numbers and descriptive data into models, maps, graphs, and other meaningful patterns that help explain societies and their problems.

**Centers within the Jane Addams School of Social Work**

***Jane Addams Center for Social Policy and Research****:* The mission of the Jane Addams Center for Social Policy and Research (Center) is to engage in University-community partnerships that advance knowledge about effective social welfare policies, programs, and services and promote social, racial and economic justice. As a unit of the Jane Addams College of Social Work at the University of Illinois at Chicago, the Center involves faculty and staff in public service and research activities that address the social conditions and needs of urban communities, families and children, and especially those who are poor. The Center conducts research and evaluation studies, analyzes public policies, disseminates research findings, tests new program models and service delivery strategies, and provides assistance to organizational leaders in implementing policy directives.

***Midwest Latino Health Research, Training, and Policy Center****:* Improves the health status and quality of health-care delivery to Hispanics/Latinos and other racial/ethnic minorities in Chicago and the Midwest region through research, training, community education, and policy work. Center activities include: developing and conducting health and human service outcome research on health disparities among Hispanics/Latinos following a community-participatory research model; providing mechanisms for communication, coordination, networking, and health information dissemination among service providers and community-based organizations; increasing the pool of culturally and methodologically competent Latino and non-Latino faculty, students, and community practitioners in service research; developing train-the-trainer and consumer-education curricula on the management and control of chronic conditions; training community health workers and professionals on cross-cultural approaches in the management and control of chronic conditions and conducting policy analyses and information dissemination activities.

**Centers within the School of Public Health**

**MidAmerica Center for Public Health Practice:** The MidAmerica Center for Public Health Practice (MCPHP) has been training public health professionals since 1991. By linking workforce development initiatives to the strategic needs of partner organizations, MCPHP provides customized solutions to address the current challenges in public health practice. They also promote academic-practice partnerships for the purpose of improving the performance of the public health system. By bridging the gap between research and practice, their goal is to improve the quality of education for Masters and Doctoral students, and to explore and identify best practices for public health organizations. Among the services provided to date, the team at MCPHP has developed specialized trainings in the areas of preparedness, management, and leadership; customized face-to-face, online, and blended learning courses; assisted organizations in the application of web technologies to facilitate organizational learning; provided assessment, planning, and evaluation services; and has planned, convened, and facilitated meetings and conferences that have addressed a wide range of timely public health-related topics.

**UIC Occupational and Environmental Health and Safety Education and Research Center (Illinois ERC)**: Illinois ERC provides masters and doctoral training in industrial hygiene, occupational safety, occupational and environmental epidemiology, and agricultural health and safety, and residency training in occupational medicine. We also provide continuing education to occupational health and safety professionals. The Illinois ERC is in the University of Illinois at Chicago School of Public Health and is funded by the National Institute for Occupational Safety and Health (NIOSH). The Illinois ERC supports two research training programs, a pilot project research training program which provides small grants to new occupational safety and health investigators and a targeted research training program that provides support to interdisciplinary research training teams of faculty and students.

***Cure Violence****:* Cure Violence is a teaching, training, research and assessment NGO focused on a health approach to violence prevention. Founded by Gary Slutkin, MD, Cure Violence launched in West Garfield Park, one of the most violent communities in Chicago, and was quick to produce results, reducing shootings by 67% in its first year. The Cure Violence health model is used by more than 50 communities in the U.S., as well as countries ranging from El Salvador to South Africa to Syria. Cities and organizations implementing the Cure Violence health model regularly experience reductions in violence within the first year ranging from 40-70% and greater reductions in subsequent years. They provide cities and organizations with the training and technical assistance to effectively implement the Cure Violence model.

Cure Violence stops the spread of violence by using the methods and strategies associated with disease control – detecting and interrupting conflicts, identifying and treating the highest risk individuals, and changing social norms – resulting reductions in violence of up to 70%. The Cure Violence Health Model uses the same three components that are used to reverse epidemic disease outbreaks. 1) Interrupting transmission of the disease. 2) Reducing the risk of the highest risk. 3) Changing community norms. Cure Violence is also leading a movement to treat violence as a health problem. We intend to fundamentally change the discourse on and approach to violence from the prevailing paradigm that understands violence as moral corruption or human failing that applies punitive strategies to address the issue, to one that includes an understanding and addressing of violence as a health problem – a contagious epidemic. To do so successfully, we are activating voices and resources throughout our comprehensive health system and establishing violence prevention as a health sector responsibility and imperative.

***Community Outreach Intervention Projects (COIP)***: COIP was founded in 1986 to address HIV/AIDS, particularly among people who use drugs. COIP operates from storefront sites in Austin, Humboldt Park, West Englewood, South Chicago, and Uptown. Other neighborhoods are served by COIP’s motorhome and mobile van units. COIP’s interventions are known for their use of the Indigenous Leader Outreach Model, which employs people from the populations we serve to deliver services and assist in conducting research. COIP’s services include street outreach, counseling and testing for HIV, HCV, syphilis and other infectious diseases associated with substance use, case management for people who are HIV or HCV positive, syringe exchange, drug abuse and risk reduction counseling, drug overdose education, support groups, and other educational activities. COIP also provides referrals to other providers, including drug treatment programs, HCV treatment providers, shelters, food pantries, mental health programs, assistance with entitlements, etc. Through collaboration with UIC’s Community Clinic Network, all COIP storefront sites provide free medical, mental health and pharmacy care for people living with HIV.

***Center for Excellence in Maternal and Child Health (CoE in MCH)***: CoE in MCH trains students to support and promote the health and well-being of women, children, and families. The Center emphasizes multi-level approaches to understanding the complex factors that affect population health and health disparities. An essential ingredient is the partnerships we have with public and private agencies serving the MCH population and the communities in which MCH problems are prevalent. The Center is committed to scientific rigor, evidence-based public health practice, and the principles of participatory and collaborative research and practice.

**UNIVERSITY-WIDE FACILITIES & RESOURCES**

**Office of the Vice Chancellor for Research (OVCR) Offices and Services**

The Office of Research Services (ORS) handles all pre-award and non-financial post-award activities. Pre-award activities include activities from the pre-proposal stage to the receipt and processing of the award, up to the point of account set up. They assist faculty and staff in proposal development, review and endorsement of proposals, submission of electronic proposals, negotiation and execution of contracts, reporting, receipt and processing of the Notice of Awards (NOA), interpretation of sponsor guidelines, and ensuring compliance with both agency and University policies. They also develop and communicate institution-wide policies specific to sponsored programs. Their ultimate goal is to support sponsored research by providing exceptional service, expertise, and education while maintaining a collaborative model of stewardship among all University faculty and staff.

***Research Development Services****:* The Research Development Service manages resources and provides tools to support researchers. RDS assists researchers in identifying funding opportunities based on their expertise.

***Office of Grants and Contracts****:* The Office of Grants & Contracts (GCO) at UIC supports University faculty and their departments in the administration and expenditure of sponsored project awards by developing and disseminating policies and procedures, managing the financial interactions with sponsors, and assuring compliance with University and sponsor policies, while minimizing the administrative burden on faculty and protecting the interests of the faculty and the University. The primary services of the UIC Office of Grants & Contracts include: sponsored project post-award management; audit and compliance; cash and receivable management; and costing, training and analysis. UIC has a sponsored portfolio of approximately 2790 active awards and $356M in sponsored expenditures from Federal, State, Other Government, and Private funding sources (FY17 figures).

***Office for the Protection of Research Subjects*:** The Office for the Protection of Research Subjects (OPRS) provides administrative support for the review and approval of research protocols (experiments) involving humans and human embryonic stem cells (hES). We help ensure that regulations are adhered to for the protection and welfare of subjects, investigators, and the University. Before you conduct these types of research, please verify that you meet the training requirements and have your protocol approved by the designated committees.

***Animal Care Committee****:* The Animal Care Committee (ACC) is responsible for reviewing and approving all research involving animals used in research, testing, or teaching. Committee functions are administrated through the Office of Animal Care and Institutional Biosafety (OACIB) within the Office of the Vice Chancellor for Research. The goal of the OACIB is to facilitate the protocol writing/review process for the investigator and to ensure compliance of animal-based research, testing or teaching with federal regulations. OACIB accepts all protocol submissions, coordinates protocol review, notifies the investigator of the outcome of protocol review and works with investigators during the protocol writing/review process.

***Environmental Health and Safety Office****:* It is the mission of the UIC Environment Health and Safety Office (EHSO) to promote and ensure a safe and healthy environment in order to support the academic and administrative functions of the university. EHSO aims to provide services in the areas of hazardous waste management, biological safety, occupational safety, fire safety, laboratory safety, laser safety and radiation safety. EHSO safety professionals aim to provide high quality training courses to faculty, staff, visitors and students to ensure safe work practices that can be integrated into the academic and administrative pursuits of the university. They are dedicated to reducing injuries, accidents and negative environmental impacts, and supporting University administration to ensure compliance with all federal, state, and local regulations and standards. They aim to provide comprehensive workplace evaluations and emergency response to ensure that students, faculty and staff are not in danger of potential health hazards.

**OVCR Centers, Institutes and Resources**

***Biological Research Laboratory****:* The Biologic Resources Laboratory (BRL) manages the care of animals used in research and teaching in UIC’s fully-accredited Animal Care and Use Program. This includes making sure that UIC meets all government regulations and best practices in its treatment of animals. The professional staff of the lab includes five board certified veterinarians and 40 animal care technicians; they are responsible for helping about 300 researchers, teaching graduate and technical courses, and directing the postdoctoral training program. All animal facilities at UIC are either managed directly by the staff of the BRL or overseen by the veterinary staff of the BRL.

***UIC Animal Care and Use Program****:* The UIC Animal Care and Use Program consists of 137,000 sq. ft. of animal holding/support space distributed amongst more than 10 facilities. The Biologic Resources Laboratory (BRL) and the contiguous animal holding space in the basement of the College of Medicine Research Building are considered the institution’s centralized animal facility. Together these two buildings contain approximately 110,000 sq. ft. of animal holding/support space. Located within the centralized facility are the institution’s large animal, nonhuman primate and murine pathogen free rodent colonies, a full-service diagnostic laboratory, full-service experimental surgery and radiology units, rodent quarantine service, cross-foster rederivation service, cage wash and sterilization support areas, veterinary and investigator procedural support areas, and a necropsy support area. The other facilities/satellites contain approximately 27,000 sq. ft. five satellite facilities are considered general use satellites and support the research projects of multiple investigators in the Behavioral Science, Dentistry, Molecular Biology Research, Science and Engineering South, and School of Public Health Psychiatric Institute buildings. The other satellites are considered specialized satellites and support the work of one investigator or one specific type of research.

***Research Resources Center****:*The Research Resources Center is a division of the Office of the Vice Chancellor for Research at the University of Illinois at Chicago. RRC offers research faculty and staff a diverse inventory of high-end scientific equipment as well as a wide range of services. The RRC also welcomes external users doing scientific research. RRC currently has 17 cores that specialize in various research techniques and areas. These cores employ personnel with extensive skill sets in various scientific protocols who are able to assist or fully execute your research projects. Furthermore, these cores maintain a diverse inventory of fully calibrated instruments available for users. Each core offers training on the use of instruments and core staff are equipped with skills and knowledge to troubleshoot equipment usage problems. In addition to the cores, RRC has a suite of Research Support Units that function in collaboration with all other cores as well as individually to give customers full support in their research endeavors.

Through RRC, UIC faculty can access research core facilities at the University of Chicago and Northwestern University via an Open Access Agreement. Open access means researchers at each university will be treated the same in regard to availability and pricing of services regardless of their home institution. Each university has agreed to waive the indirect (F&A) costs of researchers wishing to use each other's core facilities.

Bioanalytics, Biophysics, & Cytomics Division

*Biophysics Core:*The Biophysics Core at the Center for Structural Biology is to provide unimpeded access to state-of-the-art and well-maintained biophysics equipment. The Biophysics Core offers three main categories of research and services: characterization of macromolecules using various biophysical instruments (SPR, ITC, DLS, CD & AUC), large-scale protein production, and macromolecular structural biology using X-ray crystallography and Cryo-EM in collaboration. The Biophysics Core houses a suite of various biophysical instruments and has a fully equipped wet-laboratory for molecular cloning, recombinant protein expression, and protein purification. Large-scale protein purification service is also offered to users who need purified proteins for SPR, High-Throughput Screening (HTS), and structural biology.

*Flow Cytometry Core:* The Flow Cytometry Core (FCC) is a full operational facility with seven flow cytometers. We provide flow cytometry services for analysis and sorting of cells, as well as training and expert consultation for project/experiment planning. We maintain a traditional cell sorter the Beckman-Coulter Elite ESP, a high-speed sorter the Beckman Coulter Legacy MoFlo and a Bio-Rad Bio-Plex flow cytometer. All of the others are benchtop flow cytometers that are strictly analyzers. Each instrument is capable of analyzing and sorting (Elite and MoFlo) thousands of cells/particles per second. Five to eleven parameters (relative size, granularity, and up to three/nine colors of emitted fluorescence) can be measured simultaneously and correlated particle by particle. The signals can be instantly collected into histograms for immediate results and/or stored as raw data for experimental analysis later. The data may also be transmitted to a stand-alone FCS PC workstation for analysis. The FCC also maintains an automatic magnetic bead sorter (autoMACS from Miltenyi Biotec) that is often used as a pre-sorter to enrich rare populations of cells before sorting for greater purity on one of our sorting flow cytometers.

High Throughput Screening Core: igh-Throughput Screening Core (HTSC) is one of the most important tools in modern-day drug discovery. The premise of HTSC is to automate and miniaturize the assay process, thereby significantly decreasing the cost and time commitments of screening a biological target against thousands of chemical compounds. The HTSC houses a Tecan Freedom EVO 200 liquid handling robot that is fully capable of assembling and monitoring over 10,000 reactions, in duplicate, in a typical working day. A Tecan Infinite F200 Pro spectrophotometer is fully integrated into the robot deck to capture absorbance, fluorescence, and luminescence output from the assays. All assay plates are barcoded in order to automate data collection and to ultimately correlate activity measurements with specific library compounds. Once the screening and data collection are completed, the results are analyzed to generate a structure-activity relationship (SAR) for the screened compounds, identifying chemical trends in the compounds that affect or inhibit the biological target of interest. The HTSC currently offers a library of over 100,000 diverse, drug-like compounds and a number of specialty compound sets available for screening. Researchers at UIC who wish to deposit novel compounds or natural product fractions into our collection are encouraged to do so. The Tecan Freedom Evo 200 is also ideally suited to carry out high-throughput protein crystallization. Users can typically screen over 1000 crystallization conditions in less than 2 hours. Crystallization plates contain 96 wells, with 3 sitting drop compartments per well, with a 1 µL protein + 1 µL crystallization reagent capacity per compartment. Assembly of the crystallization plates is temperature controlled, and all completed plates are automatically sealed with an optically clear adhesive. The HTSC is stocked with 12 NeXtal crystallization suites (Qiagen), with each suite containing 96 unique conditions. Users have the option to supply their own crystallization screens in 96 deep-well blocks.

Mass Spectrometry Core: Beyond making available state-of-the-art, user-friendly facilities and services, the MSC laboratory enables education, methods development, and new applications development, designed to meet the fast-pace needs of researchers. Equipped with one GC MS, two MALDI-time of flight and seven LC-MS systems: one single quad, four triple quads, two hybrid time of flight and one hybrid LTQ-Orbitrap. Data acquisition/analysis conducted with Xcalibur, ChemStation, Masshunter, Analyst; Mascot, Sequest Sorcerer, Mass Matrix, Scaffold, Maxquant, ProteomeDiscoverer and ProteinPilot. Routine mass spec services include molecular weight determination, MS^n, LC-MS, high resolution MS, protein identification, PTMs analysis, nano LC-MS/MS and database search, quantitative analysis of small molecule/protein, lilpidomics, metabolomics, proteomics and more.

NMR Core: The NMRC Core provides access for researchers, staff, and students to high sensitivity, high-resolution solution state NMR instrumentation for studies of protein function, biochemical processes and natural products characterization projects. Within the facility is high-resolution solution state NMR instrumentation equipped for studies of ligand binding or drug discovery, natural products characterization, protein function in biochemical processes, and the identification of metabolites in cell extracts and biofluids. We also provide competent and qualified training and education for students, postdocs and staff to operate scientific instrumentation, to analyze and interpret complex data as well as devising proper techniques or approaches to conducting analytical studies or research. Last we are available to advise and collaborate with researchers that wish to pursue projects such as fragment-based library screening/drug discovery, the analysis of metabolites, biofluids or mixtures as well as detailed studies that require structural biology or biophysics data.

Protein Core: Protein Core is a research-focused core providing biomolecular expertise serving Academic and Non-Academic research professionals from both within and outside the UIC community. All research services include consultation and any collaborative efforts tailored to accomplish individual research objectives. Users are encouraged to discuss their research intent with core scientists prior to submitting their samples PTC projects include, but are not limited to: Protein production/purification /characterization; Peptide synthesis/purification/characterization; Metabolite synthesis/purification /characterization; Antiprotein/antipeptide antibody production/purification/characterization (polyclonal antibody; monoclonal antibody) HPLC; Biophysical spectroscopic characterization; 1-D and 2-D gel electrophoresis (SDS, Native, IEF) with Western Blotting; ELISA; tissue culture; others.

Genome Research Division

Genome Editing Core: The GEC seeks to enable broad incorporation of genome editing technology and genetically engineered cells and mice into researcher's programs by providing CRISPR reagents, training, and services. The GEC has a three-pronged mission of 1) helping labs incorporate CRISPR/Cas9 genome editing into their existing research programs, 2) performing genome editing procedures to generate customized cell lines and mice, and 3) innovating new genome editing technology.

Genomics Core: The Genomics Core at UIC provides resources for investigating gene functioning with an emphasis on applying DNA microarray technology to transcriptional profiling and transcriptional regulation studies, genotyping and molecular cytogenetics based studies. Services for real-time PCR based array data validation studies are also available. GMC provides equipment, resources and bioinformatics support for all aspects of these applications, ranging from sample preparation and quality control to data analysis and results validation. These services are available for all UIC investigators as well as qualified external users. Computer workstations supplied with analytical software packages for data acquisition and analysis, including Partek Genomics Suite (Partek), PathwayStudio (AriadneGenomics), and ScanArrayGx Microarray Analysis System (Perkin Elmer) are available for individual use. GMC also provides assistance with the development of experimental study design and grant applications.

Research Informatics Core: The Research Informatics Core (RIC) at the University of Illinois-Chicago (UIC) provides a broad spectrum of bioinformatics services to the UIC and Chicago-area research communities, including genomics, transcriptomics, epigenomics, metagenomics, metabolomics, and proteomics analysis, as well as applications in statistical analysis, systems biology, and machine learning. Bioinformatics analyses are catered to the aims and requirements of each project individually, following initial service request consultations. In addition, the RIC is dedicated to supporting grant applications for UIC researchers. In addition to Letters of Support detailing RIC capabilities as they relate to a proposed project, They also assist with crafting the study design and research strategy, and devising a budget for informatics analysis

Sequencing Core: The Sequencing Core (SQC) is a shared resource facility that serves the UIC scientific community, as well as external academic and non-academic researchers. The SQC is a multi-faceted facility providing a broad range of services to investigators, including nucleic acid extraction, cell line authentication, Mycoplasma testing, quantitative PCR, capillary sequencing and next-generation sequencing (NGS). The core also offers consultation for all projects, as needed. The core also houses instrumentation for customer use (real-time PCR instruments, nucleic acid quantification devices, and acoustic shearing devices) and provides full service for nucleic acid extraction, quantitative PCR and analysis, daily capillary electrophoresis (Sanger) sequencing, and high-throughput NGS for analysis of DNA and RNA. The facility has particular expertise in the high-throughput microbiome studies and is highly responsive for time-sensitive sequencing projects. The Sequencing Core (SQC) is a customer-friendly facility dedicated to supporting investigators working on research projects involving nucleic acids. The SQC supports investigators by providing access to high-end instrumentation and to a knowledgeable staff capable of conducting projects from sampling to data analysis. In addition to standard sample processing, SQC staff members assist in project design and planning, manuscript and grant writing, rapid generation of preliminary data, and letters of support.

Viral Vector Core: The Viral Vector Core provides researchers with a single facility where they can access a comprehensive range of resources and services for gene transfer purposes. The Core constructs, purifies and titers custom recombinant adenovirus, adeno-associated virus, and lentivirus.

Scientific Imaging & Nanotechnology Division

*Electron Microscopy Core:* The Electron Microscopy Core (EMC) is a central facility offering access to instrumentation, training, and service using scanning (SEM), transmission (TEM) and scanning transmission (STEM) electron microscopy, surface analysis (XPS) and vibrational spectroscopy (Raman). EM instruments and services are located in two laboratories, one on each side of campus. EMC staff have a broad range of experience covering life and materials science specimen preparation, imaging and spectroscopy using electron microscopes and surface analysis using XPS and Raman. The EMC mission is to provide cost-effective, safe and efficient access to state-of-the-art and core electron microscopy imaging and analytical characterization, and also surface analysis by XPS or Raman, with 24/7 access for the UIC community and beyond. In addition to instrument access, EMC staff offer advice, hands-on training, education and research collaboration. EMC aims to promote, enable, and encourage cutting-edge education and research using the core’s instrumentation. Instrumentation in the EMC includes two TEMs for materials science applications, one TEM for life science applications; two SEMs used by both life science and materials science users, XPS and a Raman Spectrometer. Equipment for life science specimen preparation includes freeze substitution, coating, and ultramicrotomy. Equipment for materials science specimen preparation includes slicing, disc cutting, polishing, ultramicrotomy, electrochemical and ion beam milling.

*Fluorescence Imaging Core:* The goal of the Fluorescence Imaging Core (FIC) is to accommodate any biological research that requires wide-field, confocal, 2 Photon and TIRF fluorescent microscopy. Our mission is to support research endeavors by advising and optimizing acquisition, analysis, and presentation of imaging data.

The microscope systems currently in service include: Zeiss Laser Scanning Confocal Microscope (LSM) 710 META; Zeiss Laser Scanning Confocal Microscope (LSM) 710 BiG; Zeiss Laser TIRF (Total Internal Reflection Fluorescence) Microscope; Zeiss Spinning Disk Confocal Microscope; Zeiss Widefield Microscope; Zeiss Ratiometric Calcium Microscope; Prairie Technologies Ultima In Vivo Multiphoton Microsopy System; Olympus VivaView Incubator/Fluorescence Microscope; Olympus BX51 Fluorescence Microscope (Upright); Olympus IX70 Fluorescence Microscope (Inverted); Image Analysis Workstation (Imaris/MetaMorph/Volocity/MatLab/Fiji)

*Nanotechnology Core Facility:* The Nanotechnology Core Facility (NCF), located in the Engineering Research Facility (ERF) building on the University of Illinois at Chicago campus, is a versatile MEMS/Nano facility and is accessible to both academic non-profit and industrial researchers. The NCF enables research by providing access, training, service and process guidance on fabrication and characterization equipment. As a research and development laboratory, NCF is dedicated to application of integrated circuit and fiber optic technology to improve manufacturing methods for MEMS/Nano devices, BioMEMS, Microfluidic, Electromechanical, Mechanical, Chemical, Optical, Photonic and multi-functional devices, some of which have previously been built by more traditional techniques. Equipment is available for: Photolithography, Thin Film Deposition (metals, semiconductors, and dielectrics) and etching, sample characterization (electrical, optical, and surface), dicing and lead attachment, and Computer Aided Design (CAD) workstations.

*Preclinical Imaging Core:* The Preclinical Imaging Core facility is located in the basement of Nuclear Magnetic Resonance Laboratory (NMRL) building. The facility houses: a 31cm bore size 9.4T Agilent MRI system that can provide the full support of MRS and MRI studies in small animals (including mouse, rat, rabbit); a 129Xe hyperpolarizer that is being installed to provide high-purity, hyperpolarized 129Xe for gas phase magnetic resonance studies.

*Research Histology and Tissue Imaging Core:* The mission of the Research Histology and Tissue Imaging Core is to provide high throughput histological and digital microscopy imaging services for reproducible, automated analysis of biomarkers expression levels in human and animal tissues as well as for measurements of spatial and temporal features of biological objects. The RHTIC offers two major digital microscopy systems: the Aperio Scanscope AT2®for whole-slide brightfield imaging and the PerkinElmer Vectra® 3 for multispectral imaging in brightfield or fluorescence imaging. Available software for image analysis includes Definiens Tissue Studio®, Leica Aperio Image Analysis Framework, PerkinElmer inForm® and Indica Labs Halo.®

Research Support Division

*Scientific Computing Core:* The Scientific Computing Core's (SCC) primary mission is to provide IT support for all of the services/facilities within the RRC. They provide IT services to cross colleges and centers such as Cancer Center, CCTS and Pathology. They provide guidance on the best practices on hosting services, data analysis and purchasing of hardware. We maintain the computers and peripherals from the desktops in the staff offices, the workstations that collect instrument data, to the servers that run the RRC websites and its web-based applications (e.g. UICore, MyData Server). We provide business intelligence dashboards for management to make the best decisions on instruments usage and revenue and budget analysis. Outside of our normal day-to-day duties, we also often provide computing services to many of the RRC's customers who may need computer repair/maintenance, data recovery, network support, training and consulting. The Scientific Computing Core facility also provides solutions to research problems and scientific endeavors that require advanced computing tools.

*Scientific Instrument Shop*: The Scientific Instrument Shop (SIS)/Machine Shop West Campus is staffed by Instrument Makers, Senior Laboratory Mechanics, Biomedical Electronics Engineers and Biomedical Electronics Technicians who construct and repair all types of mechanical and electronic/electrical equipment for the research, teaching and clinical requirements of faculty, staff, students and other RRC services.

*Scientific Storeroom:* The Scientific Storeroom carries a wide variety of items for the research lab, ranging from molecular biology reagents to office supplies. If we do not stock an item, we will be happy to place a special order request with our regular weekly orders from our vendors.

*UI Health Biorepository:* The UI Health Biorepository (BIOR) is co-managed by the UIC Department of Pathology and the Research Resources Center. The mission of the Biorepository is to develop and promote a collection of biospecimens as a research tool to advance clinical and translational research at UIC and improve public health. The biorepository acquires, stores, catalogs, processes, analyzes, and provides tissue or other biological samples for investigators at UIC. It was established in 2012 as a resource in the UI Health system in collaboration with the RRC to augment clinical and translational research and improve the treatment and health of individuals from Chicago, Illinois, and beyond. The facility manages a centralized, secure, and 24/7-monitored freezer farm for biological storage, a centralized lab facility for processing and analysis, and the acquisition of biospecimens through PI-initiated studies. Any biospecimens remaining after analysis from PI-initiated studies can then be used for any unspecified future use if approved by a research oversight board. An Honest Broker is on staff to help with control and access to patient information.

***Collaborative for Advanced Design, Research and Evaluation****:* The Collaborative for Advanced Design, Research, and Evaluation (CADRE) promotes successful multidisciplinary research at UIC by providing proposal development and project management expertise for complex research initiatives. CADRE promotes research, innovation, and development at UIC by providing strategic collaborations, technical expertise, and project management in the areas of national security, global health, and disaster preparedness. We facilitate multi-disciplinary partnerships between the academic, governmental, and industrial communities to provide effective solutions that address the Nation's most complex problems. Our philosophy focuses heavily on encouraging the creative combination of established products and cutting-edge research to solve real-world problems in the near - and long - term.

***Institute for Environmental Science and Policy (VCR)****:* The vision of the Institute for Environmental Science and Policy at UIC is based on the belief that exciting thinking often lies at the borders of different points of view. IESP’s mission is based on the belief that solutions to modern environmental problems facing society are increasingly national and global, and their complexity requires that many scholars work collaboratively. The mission is built upon a five-tiered foundation: advance knowledge at the intersection of environmental quality, management, societal well-being, and policy through scholarly research; facilitate interdisciplinary collaboration among scholars to develop new paradigms of inquiry that address and define environmental research priorities; attract new faculty members to UIC, appointed jointly with cognate departments, who bring to the university scholarly approaches to sustainable development; gather together multidisciplinary teams of scholars and counterparts in the public and private sectors to devise sustainable solutions for today’s complex environmental challenges; and prepare the next generation of environmental scholars, scientists, and decision-makers through cross-disciplinary education to gain an understanding of the interrelated roles that science, technology, economics, and government policy play in environmental issues.

**Office of Technology Management:**The Chicago Office of Technology Management works with faculty, staff, and students to advance research, education, and economic development. They aim to encourage innovation, enhance research, and facilitate economic development through the transfer of intellectual property. The Office of Technology Management encourages innovation that enhances research and facilitates economic development through the effective management, transfer, and commercialization of UIC technologies and intellectual property. OTM focuses on ensuring that results of outstanding research at UIC are successfully transferred outside the University to drive economic growth in the State of Illinois and benefit the general public. The Office of Technology Management is responsible for managing the intellectual property generated by research and educational activities at the University. The Office seeks to guide technologies through every appropriate stage of the commercialization process by providing services that include the evaluation, protection, marketing, and licensing of intellectual property. The OTM provides resources and consultations to guide researchers through the various processes and policies governing intellectual property, patents, communication services, and entrepreneurship.

**Academic Computing and Communications Center**

The Academic Computing and Communications Center (ACCC) provides central computer support to the UIC campus community. Our major services include network, wireless and internet connectivity; Blackboard, public labs, classrooms, and instructional technology; digital and analog telephony; email, calendar, emergency communications, accounts and passwords, and other business tools. ACCC aims to provide a wide range of information solutions and services to the University’s campuses, operating units, and external stakeholders.

***Advanced Cyberinfrastructure for Education and Research****:* To facilitate research, ACCC has instituted the ACER (Advanced Cyberinfrastructure for Education and Research) group which strives to provide researchers, and their collaborators around the globe, with broad-array of computational resources and data-related services to meet any or all of their technical needs. These services include, but not limited to, providing access to high-performance computing clusters, big data analytics clusters, collaborative research data storage, secure research environments and high-performance networking. In addition to providing resources, ACER group provides consulting services to researchers for their broad range of research aims. From building architecture to securely receive and analyze data from environment sensors, personal wearable devices to software defined networking projects, ACER group is committed to further UIC’s research ambitions holistically.

***Qualtrics***: Qualtrics is a sophisticated, easy to use web-based service for creating, publishing, and analyzing survey data. Qualtrics offers advanced options and is highly customizable. Provided through ACCC, Qualitrics is available for all University faculty, staff and students.

**University Library System**

The University Library at the University of Illinois at Chicago supports the teaching, research and service mission of the University. The UIC University Library is comprised of faculty, academic professional and Civil Service employees in the Richard J. Daley Library, the Library of the Health Sciences-Chicago (including the National Network of Libraries of Medicine Greater Midwest Region), the Library of the Health Sciences-Peoria, the Library of the Health Sciences-Rockford, and the Library of the Health Sciences-Urbana.

The Library of the Health Sciences-Chicago includes materials on medicine, nursing, dentistry, pharmacology and other health-related professions. Its special collections include the History of Nursing and Pharmacy Collection, the Kiefer Collection (urology), the Percival Bailey Library (neurology) and the Nyhus Collection (gastroenterology). The LHS – Chicago is actively collaborates with the Health Science Colleges to provide resources and training on data management through the development of best practices, data management and data sharing plans and data curation.