Open the door for your research

NC TraCS

The integrated hub of the NIH Clinical and Translational Science Awards (CTSA) program at UNC-Chapel Hill
Who We Are

The North Carolina Translational & Clinical Sciences (NC TraCS) Institute is one of over 60 CTSA medical research institutions, a national consortium created to improve how biomedical research is conducted across the country.

The CTSA (Clinical and Translational Science Awards) program is led by the NIH’s National Center for Advancing Translational Sciences (NCATS).

Our mission is to accelerate clinical and translational research from health science to discovery to dissemination to patients and communities. We seek to overcome barriers to translation by improving efficiency, training the research workforce, and sharing successful research methods.

We combine the research strengths, resources, and opportunities of the UNC-Chapel Hill campus and our partners RTI International in the Research Triangle Park and North Carolina Agricultural and Technical State University (N.C. A&T) in Greensboro.

Together we are strategically designed to overcome barriers that historically have been responsible for fragmenting and delaying research efforts.

Faculty and staff experts across NC TraCS offer targeted, comprehensive, and interdisciplinary solutions to investigators in the areas of clinical and translational science.

NC TraCS, enabled by the resources and vision of the CTSA program, has fundamentally changed the clinical and translational research landscape at UNC and across the state. We now have a presence in each of North Carolina’s 100 counties.

"NC TraCS deserves so much credit. It is such a wonderful and extremely helpful institution — one of UNC’s most valuable resources. I don’t know how I could have done this without them."

— NC TraCS customer
Leadership

Dr. Buse’s clinical and research interests are in the prevention and treatment of diabetes and its complications. He works with teams of investigators in diabetes clinical trials, comparative effectiveness research, and translation of basic science research towards clinical application.

Current projects focus on the development of glucose-responsive insulin, cardiovascular safety and efficacy of diabetes drugs, and developing the evidence-base for treatment guidelines of the future in diabetes care.

Dr. Carey’s research interests include clinical epidemiology, access to care, and health services research. With a specific emphasis on back pain, he has extensively examined the epidemiology of musculoskeletal illnesses, and also explored the patterns, quality, and outcomes of care for patients in multiple settings.

He has recently led and collaborated on multiple projects addressing issues of the federation and use of electronic health record data for population health research.

Dr. Carnegie directs the administrative, financial, and operational affairs of NC TraCS. She has a PhD in Pharmacology from Vanderbilt University and did her postdoctoral training at Oregon Health Sciences University, where her research focused on intracellular signaling pathways regulating heart cell growth and heart disease.

She joined the Center for Clinical and Translational Science at the University of Illinois at Chicago in 2009 and, since 2015, has used her combined scientific and administrative experience to help lead the advancement of clinical and translational science at UNC.
We provide clinical and translational research resources and services for investigators, spanning the entire T1 through T4 spectrum:

Community Academic Resources for Engaged Scholarship (CARES)
We work to improve the health of North Carolinians by building partnerships with communities, health care providers, and faculty conducting clinical and translational research. These partnerships between academic investigators and the community can lead to increased public trust and involvement in research. We offer expertise in stakeholder engagement, practice-based research, working with underserved populations, and implementation science (impsci.tracs.unc.edu).

Comparative Effectiveness Research
We facilitate research to improve clinical treatment decisions and public health for diverse populations. We educate clinician-scientists in a range of CER methods.

Core Lab Facilities & Resources
We provide support for, and access to, a broad spectrum of UNC biomedical research core facilities and resources. We assist the Office of Research with strategic planning and resource allocation and maintain a searchable database of core services and instrumentation.

Drugs, Devices & Diagnostics Development
Focused on development and commercialization, we provide a no-cost support program to help translate research more quickly and effectively.

Early-Phase Drug Discovery
We provide researchers with HTS assay development and library screening to identify novel hit molecules with expertise to further optimize the hits using traditional medicinal chemistry and SAR by catalog. We also offer the ability to characterize compounds using in vitro absorption, distribution, metabolism, and excretion (ADME) assays and in vivo pharmacokinetics (PK).

We offer investigators a no-cost, personalized mentoring program with highly specialized expertise in translational research:

- **Transformative Technologies (T2)** – focused on discovery and validation
- **Drugs, Devices and Diagnostics Development (4D)** – focused on development and commercialization
- **Comparative Effectiveness Research (CER)** – focused relative effectiveness

**Biomedical Informatics**
We support investigator studies with innovative technology and advanced analytics. We can provide UNC Health Care System patient data for approved research studies, train you in i2b2 to explore data on your own, offer access to multi-institutional patient data via our participation in Clinical Data Research Networks, build features in Epic to support research studies, provide informatics tools to manage patient registries and study data, and much more.

**Biostatistics**
We offer biostatistical collaboration, statistical methodology research, study coordination and data management solutions for multi-site studies, and education in various topics relevant to biomedical researchers. We disseminate biostatistical tools to researchers.

**Clinical Research Ethics**
We provide confidential ethics consultation on research design and ongoing research projects. We help with background research and policy advice on best practices in research ethics.
Clinical & Translational Research Center (CTRC)

The mission of the CTRC is to improve the health and well-being of the people of North Carolina and beyond by ensuring an optimal professional environment for clinical innovation, quality care, resource stewardship, and research leadership.

We provide a variety of research support services, including a 9,600 sq. ft. outpatient unit, access to inpatient beds, research on location services, a staff of highly-skilled research professionals, and specimen processing and storage facilities. We also provide assistance with study budgeting and implementation, consultations during protocol development, and new user orientation.

Education
We facilitate learning opportunities and training for all types of researchers — from junior academics to community advocates — in areas that help accelerate the advancement of translational research. We have a number of formal educational programs tailored specifically to interdisciplinary clinical and translational science.

Metabolomics
We provide expertise in metabolomics, including guidance in study design, sample collection, data acquisition, multivariate and statistical analysis, visualization, pathway mapping, literature review, manuscript and grant preparation, training and outreach, and synthesis of standards.

Patient and Caregiver Outcomes in Rare Disease
We provide investigators consultation and assistance in planning and building disease-specific patient registries. We help investigators create useful and flexible patient registries to learn about the real-life consequences of disease.

Pilot Program
This program encourages and facilitates novel clinical and translational research in its many forms. Cross-disciplinary basic science research addressing the development of therapies, diagnostics or devices applicable to human disease, clinical research/trials, epidemiological studies, and/or community-based research are considered eligible for these awards. We offer a variety of Pilot Grant opportunities ranging from $2K to $100K.

Proposal Development
We assist in all aspects of the grant writing process, including identifying funding sources, providing editorial support and scientific consultation, proposal review, and grant application training and education.

Recruitment Services
We bring research studies to life with customized protocol review, recruitment planning, and consultations. We help identify participant populations, provide engagement methods using traditional and new promotional tools, and sponsor educational opportunities to share best practices to accelerate research participation in studies. Visit jointheconquest.org for more information on clinical trials at UNC.

Regulatory
We provide clinical regulatory assistance, guidance, and education to investigators and study coordinators to ensure adherence with national regulatory and institutional requirements. Through a joint initiative with RTI International, investigators are provided with pre-clinical regulatory guidance and development strategies to advance a novel compound or device into clinical medicine.

Team Science
We promote interdisciplinary collaborations (one-to-one; one-to-many; and many-to-many) by linking investigators with essential expertise and key research resources and by developing activities that provide an environment conducive for groups of investigators to work together on projects that are key to their research programs.

Transformative Technologies
We support and encourage the application of next-generation technologies to transform clinical practice and translational research. Focused on discovery and validation, we provide a no-cost, personalized mentoring program offering highly specialized expertise in genomics (including microbiome studies), proteomics, structural biology, imaging (whole animal to cellular level), and metabolomics.
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