The NUCATS Institute

Speeding transformative research discoveries to patients and the community
What Is NUCATS

NUCATS: Northwestern University Clinical and Translational Sciences (Institute).

We are a collaboration between Northwestern University and its clinical partners: Northwestern Medicine®, Ann & Robert H. Lurie Children’s Hospital of Chicago and the Rehabilitation Institute of Chicago.

Our goal is to promote Northwestern's culture of collaboration, innovation and translation through team-building, education, and training to empower the multidisciplinary translational research teams of tomorrow.

We are the infrastructure that makes it easy for researchers and research support staff to find and utilize all the available services at Northwestern and beyond.
Center for Education and Career Development (CECD)

- Graduate Education:
  - Master of Science in Clinical Investigation (MSCI)
  - Master of Science in Regulatory Compliance (MSRC)

- Career Development Awards (KL2 & TL1)

- Early Career Faculty Development Programs:
  - First Mondays Faculty Development Seminar Series
  - Responsible Conduct of Research Training (required by NIH)

- Mentor Development Workshops & Feinberg Mentor Development Academy

- GCP and Research Staff Training (Live & Online Education)

- Team Science
Center for Clinical Research (CCR)

- Study budget preparation, billing and reconciliation support
- Regulatory compliance support
- Research participant recruitment assistance
- Clinical research nurse and non-nurse coordinators for hire
  - Part-time or full-time
- Clinical Research Unit (CRU)
  - Ann & Robert H. Lurie Children’s Hospital of Chicago
  - Northwestern Memorial Hospital (NMH)
  - For inpatient and outpatient visits (bionutrition, core laboratory and nursing services)
Meet Dennis West, PhD
Professor in Dermatology and Pediatrics-Dermatology

- **Research project(s):** Dermatology clinical and translational research studies (among the largest units in the U.S.)

- **Research needs:** Management of 150 actively funded and/or investigator-initiated human research studies under IRB purview for Dermatology at Lurie Children’s Hospital and at Northwestern

- **NUCATS solution:**
  - Center for Clinical Research services including:
    - Regulatory (local and federal), Recruitment (targeted media and web based) and Financial (income and expenses) management
    - CRC Basic Training for all authorized research personnel
    - NITRO Study Tracker for study management software

- **Outcome:**
  - IRB compliant studies with subject accrual goals met
  - Formally trained research staff in Good Clinical Practice
  - Electronically recorded research subject data

“The Center for Clinical Research has quite successfully been able to meet the challenges associated with rapid and large expansion of human research projects while maintaining compliance and effectively meeting subject accrual goals. This has been a “win-win” partnership for Dermatology and NUCATS,” said Dr. West.
Center for Translational Innovation (CTI)

- Partnered with INVO to create CTI
- Support for new drug and device development
  - New Venture Kit
  - Commercialization Clinic
  - SBIR/STTR Information Sessions
  - Chicago Innovation Mentors (CIM)
  - Entrepreneurs-in-Residence
- Funding and Pilot funding opportunities
  - NITRO Competitions
  - Across NU and beyond
Meet Jonathan Gunn, JD, PhD
Adjunct Professor, Northwestern University School of Law

- **Research project:** Develop a technology that detects blood vessels and other sensitive tissues during surgery

- **Research needs:**
  - Internal and external connections
  - Introduction to animal study facilities
  - Business approach and market need validation

- **NUCATS solution:**
  - Chicago Innovation Mentors
    - Created first NU fellowship position with CIM to help with project
    - Assisted in evaluating and interviewing potential research candidates
  - Connection to surgeons for market need validation and N-CASE for early animal testing
  - Fostered a relationship with Insight Product Development

- **Outcome:**
  - Turned idea into functional technology; Formed Briteseed and raised over $1M
  - Competition awards from Techweek, Rice Business Plan, Chicago Innovation, New York City Health, EMT Summit, NCIIA/VentureWell, iRIO PROPEL, Kauffman, and SPIE

“NUCATS walked along side us as we transformed from researchers into entrepreneurs and turned our idea into a company,” said Dr. Gunn.
Center for Data Science and Informatics (CDSI)

- Secure, web-based applications for studies
  - REDCap (Research Electronic Data Capture): Data Collection Forms
  - NITRO Study Tracker (formerly eNOTIS): Clinical Trial Management System
  - NITRO Recruit (formerly Registrar): Research Registry System
- Analytics Services
  - Advanced Bioinformatics and Bio-Computation (ABBC) Core: Big data and computation support
  - Northwestern Medicine® Enterprise Data Warehouse (NMEDW) and i2b2: Repository of clinical and research data from NU healthcare affiliates
  - Biostatistics Collaboration Center (BCC): Support for biostatistical, epidemiological, programming, and data management needs
- Education and Training
Meet Emilie Powell, MD/MBA
Assistant Professor in Emergency Medicine and Center for Healthcare Studies

- **Research project:** Improve sepsis care in the ED
- **Research needs:** Identify quality metrics that were not being met and why
- **NUCATS solution:** Collaboration with NMEDW Data Analysts to identify 376 patients with severe or septic shock over a 2-year period and gather demographics, vital signs, lab values, and more
- **Outcome:**
  - Published findings in American Journal of Emergency Medicine in 2013
  - Collaborated with Dr. David Salzman to create a real-time simulation of a sepsis patient’s presentation at the ED
  - Translated simulation findings into a high-fidelity patient simulator to train EM residents-in-training

“The information about sepsis patients from the NMEDW was very powerful, enabling Dr. Salzman and I to create a realistic patient case simulation and plug it directly into the workflow of the ED to get a better grasp of the real-time influencers of care,” said Dr. Powell.
Galter Health Sciences Library

- Clinical Support
  - Clinical Informationists
  - Systematic Review Services
  - Clinical Key License
- Research Services
  - Computing cluster
  - Consultations
  - Training and Workshops
    - EndNote and PubMed
    - Creating Posters with PowerPoint
    - NIH Public Access Policy and Publication Management
    - Computational Skills for informatics
    - Galaxy
- Scholarly Services
  - Impact and Evaluation
  - NIH Public Access Policy
  - New NIH biosketch requirements
Meet Amee Seitz, PT/PhD
Assistant Professor in Physical Therapy and Human Movement Sciences

- **Research project(s):** Treatment outcomes of individuals with upper extremity musculoskeletal disorders
- **Research needs:** Revising K23 grant and submitting for New Investigator Foundation Training Initiative (NIFTI)
- **NUCATS solution:**
  - Biosketch review with Galter Library’s Metrics and Impact Core
  - CECD Navigator consultation for connection to:
    - 1st Mondays Faculty Development Seminar Series & Grant Writers Groups
    - RCR syllabus and boilerplate language and CECD resources statement
    - Referral to MSCI, BCC, and Voucher and Pilot Programs
- **Outcome:**
  - Robust didactic training sections that utilizes CTSA infrastructure
  - Compliant biosketch that meets new NIH biosketch format requirements and reinforces impact of science
  - NIFTI fellowship ($73,000 plus $5,000 stipend over two years)

"I have been using the NUCATS resources to assist with preparation of my grants and found these to be outstanding. The weekly grant writers group with Rick McGee, the library specialists’ consultation service and the formal research training offered to junior investigators have all strengthened my proposals. I know this will help me meet my funding and ultimately my long-term research career goals," said Dr. Seitz.
Center for Community Health (CCH)

- Supported by IPHAM and NUCATS
- Patient and stakeholder engagement
- Partnership brokering and development
- Workshops, seminars and programs on community and stakeholder engagement
- Seed grants offered through the ARCC and PBR programs for community-academic research teams
- Community-engaged research proposal review and support
- Consultations for design and implementation of community engaged/based projects
Meet Shyam Prabhakaran, MD
Associate Professor in Neurology

• **Research project:** Address stroke disparities in Chicago

• **Research needs:**
  – New approach to making an impact in stroke behavior in the south and west sides of Chicago
  – Guidance on community-engaged research and preparing a PCORI application

• **NUCATS solution:**
  – ARCC workshop on community review processes to gather feedback from community-academic teams
  – Connections to ARCC community-academic partners and volunteers for community advisory board
  – Collaboration to develop a PCORI grant

• **Outcome:** 3 year, $1.4 million PCORI grant

“I knew Dr. Ackermann and Jen Brown were experienced in community-engaged research (CER). When we discussed the project and their services, we knew we could collaborate together on a PCORI grant. Our committee members were not familiar with CER methods prior to this and they guided us through the learning curve,” said Dr. Prabhakaran.
Clinical & Translational Research Program at Stanley Manne Children’s Research Institute of Ann & Robert H. Lurie Children’s Hospital of Chicago

- Resources and services for Lurie Children’s researchers
- Research Scientist Navigator
- Coordinator and Research Staff Services Pool
  - CRCs can be deployed on an hourly basis according to study needs
- Discounts for biostatistical support
- Pilot funding
- Business Associates Agreement for REDCap utilization
- IRB Authorization Agreement for joint review panel
  - For studies that involve both adults and children
Services NUCATS Offers

*Navigator Consultation Form

You can contact one of our navigators by requesting a NUCATS consultation: http://nucats.northwestern.edu/request-nucats-consultation-ORIG

REQUEST A NUCATS CONSULTATION

Not sure who to contact in NUCATS? Let us know which areas you need more information or help and one of our Research Navigators will contact you.

- First Name *
- Last Name *
- Email *
- Phone
- Affiliation *
- Data Science and Informatics Services
  - Biomedical Informatics
  - Northwestern Medicine Enterprise Data Warehouse (NMEDW)
  - Data management (REDCap)
  - Clinical trials management system (Study Tracker)
  - Other
- Drug, Device and Diagnostic Development
  - Commercialization and entrepreneurship
  - Intellectual property
  - Core services
  - Other
Services NUCATS Offers

*NUCATS C&T Research Studio Consultations:
  – For investigators in the planning stages of a new program or center grant at Northwestern University and affiliate organizations
  – Brings together leadership from NUCATS and our affiliates to identify relevant resources that support and enhance grant submissions
  – Opportunity to leverage in-kind or heavily subsidized existing NUCATS resources and services

*Chicagoland Clinical and Translational Science Award (CTSA) Shared Resources:
  – Northwestern University, University of Chicago and University of Illinois in Chicago CTSA’s are committed to providing seamless access to all relevant resources for translational researchers
  – Investigators and research staff at Chicagoland CTSA’s have access to each institute’s shared resources and services
  – Universities are also partners in the Open Access Initiative that allows access to each other’s core facilities
Meet Richard D’Aquila
Professor in Medicine-Infectious Diseases

• **Research project:** Center for AIDS Research P30 NIH grant
• **Research needs:** Infrastructure and collaboration support
• **NUCATS solution:** Studio Consultation that identified the following to support grant application:
  • Connections to University of Chicago
  • Software tools: NITRO competitions, NMEDW, NITRO Recruit
  • Core Facilities Open Access Initiative
  • Biostatistics support
  • Early Career Faculty Development workshops
  • Clinical Research Unit
  • Community engaged research support
  • Impact and evaluation consultations
  • Research Navigation
  • Voucher and Pilot Programs
• **Outcome:** 5 year, $6.25 million P30 NIH grant

“The NUCATS Studio opened my eyes to all that NUCATS offers and how we could leverage existing infrastructure. They helped with every core in our application. We didn’t have to re-invent the wheel, duplicate services or spend grant money on resources that already existed,” said Dr. D’Aquila.
Services NUCATS Offers

*myNUCATS: NUCATS Membership Portal

– Become a member for access to all free services, plus enhanced services and resources that are only available to members (funding opportunities, vouchers for services, etc.)
– It takes less than 60 seconds to become a member

https://membership.nubic.northwestern.edu/people/sign_in
Cite and Acknowledge the CTSA

• NUCATS Institute provides essential infrastructure, resources and services at Northwestern to support the translational research enterprise through the CTSA grant

• Publications are the key metric that Congress, the NIH, and Northwestern use to demonstrate effective use of grant funding

• When you site the NUCATS grant in your publication you help NUCATS, Northwestern, Yourself and NIH

• Learn how to link your research results: nucats.northwestern.edu/about/ctsa-resources.html
Key Takeaways

- NIH expects researchers to leverage CTSA infrastructure in grant applications
- Researchers who utilize CTSA infrastructure are more competitive for federal funding
- NUCATS Navigators are here to assist you at any stage of the biomedical research pipeline
- Join myNUCATS to stay connected and for access to NUCATS resources and services
- Cite and acknowledge the NUCATS CTSA to continue to have essential infrastructure at Northwestern
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Questions?