Transforming Health Together:
The Center for Clinical and Translational Sciences at UTHealth Houston

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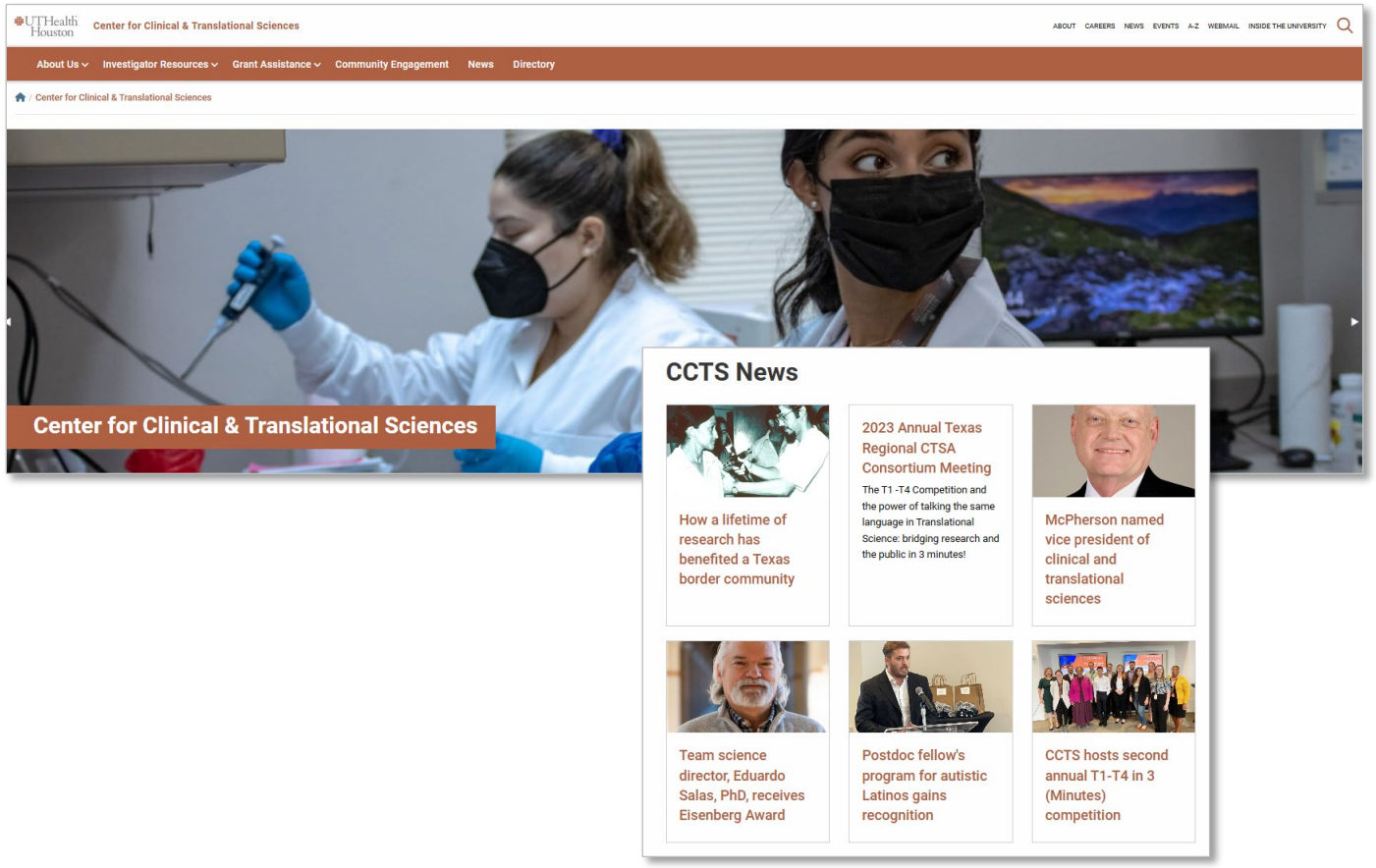
Director, Center for Clinical and Translational Sciences

UTHealth Houston

UTHealth Houston
UT MD Anderson Cancer Center
UT Tyler Health Science Center
UT Rio Grande Valley
Rice University
Texas Tech Health El Paso
Memorial Hermann Health System
Harris Health Lyndon B. Johnson Hospital

Center for Clinical and Translational Sciences

Overview

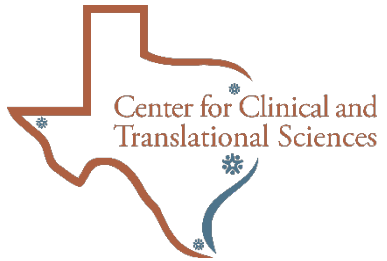


- Who we are
- What we do
- Components
- Services and resources
- Q&A
- Learn more / contact us

Who We Are

In 2006, three Texas Medical Center institutions were among the first in the nation to receive a Clinical and Translational Science Award (CTSA) from the National Institutes of Health to accelerate the translation of laboratory discoveries into patient treatments. The grant was used to establish the Center for Clinical and Translational Sciences (CCTS).

Today, the **Center for Clinical and Translational Sciences** at **UTHealth Houston** includes multiple partner organizations.



UTHealth Houston
Center for Clinical and Translational Sciences

THE UNIVERSITY OF TEXAS MD Anderson Cancer Center

UTTyler HEALTH SCIENCE CENTER

The University of Texas Rio Grande Valley

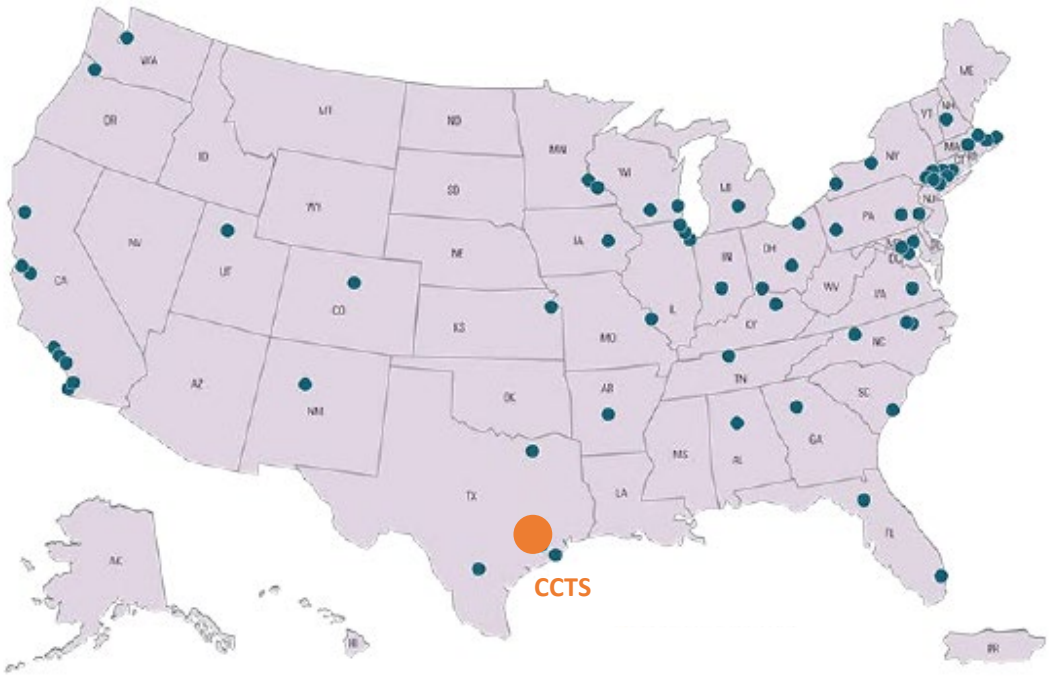
RICE UNIVERSITY

Texas Tech Health EL PASO

MEMORIAL HERMANN

HARRISHEALTH SYSTEM

CTSA Hubs: 66 Nationwide



https://ncats.nih.gov/files/CTSA-factsheet.pdf

CCTS – Center for Clinical and Translational Sciences

CTSA – Clinical and Translational Science Award

NIH-NCATS – National Center for Advancing Translational Sciences

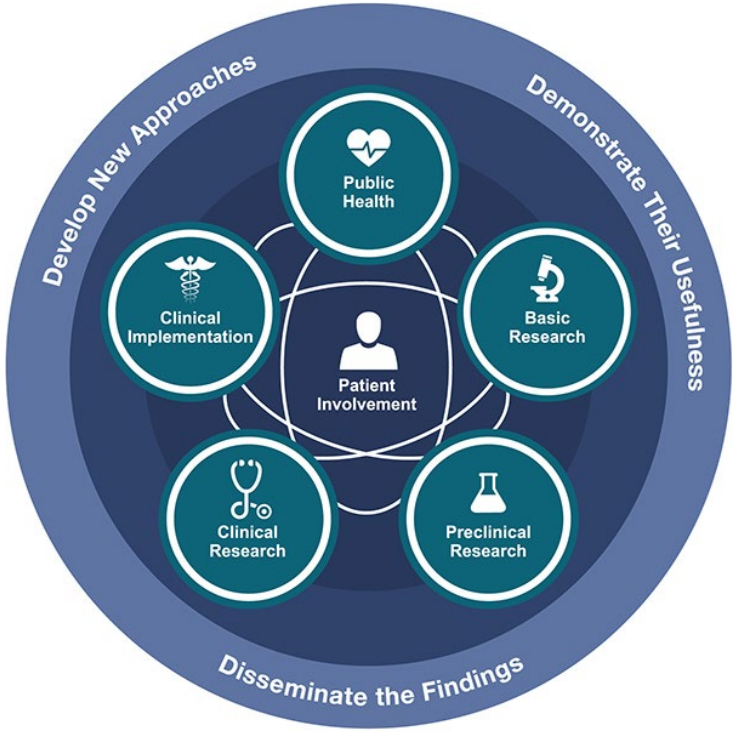
What We Do

Center for Clinical and Translational Sciences

Mission: To support translational research and advance translational science

Translation: "*The process of turning observations in the laboratory, clinic or the community into interventions that improve the health of people." (NCATS)*

> *A novel drug can take 10-15 years and more than $2 billion to develop.*
>
> ncats.nih.gov

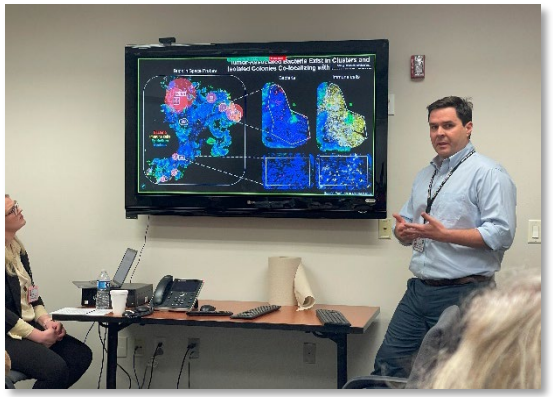


https://ncats.nih.gov/about/about-translational-science

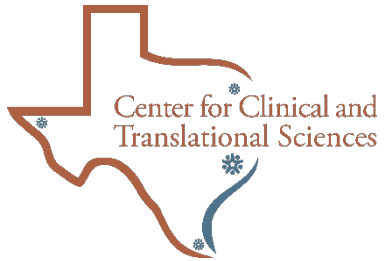
How We Do It

Center for Clinical and Translational Sciences

- Support researchers, clinicians, and community members bringing scientific discoveries to the doctor's office and to the population (Bench – Bedside - Population)
- Deliver community health concerns to the lab through the clinic
- Build the next generation of translational researchers



CCTS Components

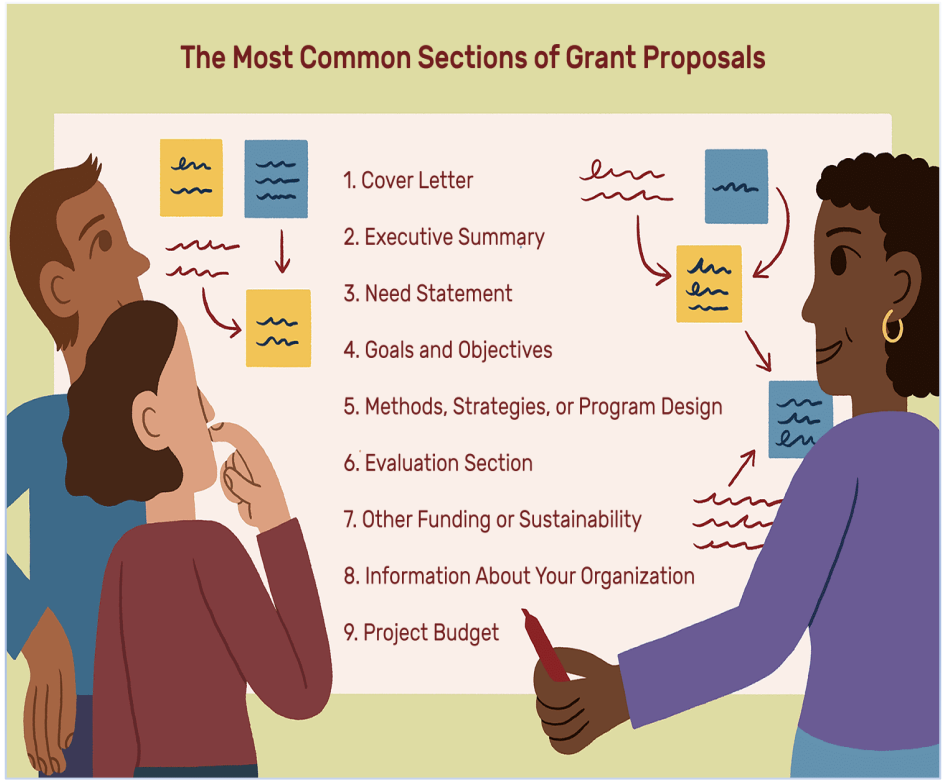


Grant Assistance		Clinical Trials		Community		Education & Training	
Grant Writing	BERD	Clinical Research Units	Clinical Trials Resource Center	Community Engagement	Integrating Special Populations	Translational Workforce Development	Pilot Projects
Regulatory Knowledge & Support	Biomedical Informatics	Trial Innovation Network	Learning Healthcare	Team Science	Implementation & Dissemination	T32 Training for Pre- and Post-Doc students	K12 Career development

Grant Assistance

- Advice from experienced CCTS faculty and staff for proposal development
- Help finding funding opportunities
- Review and edit grant applications

***Tip*: Request *letters of support* from CCTS**



https://www.liveabout.com/how-to-write-a-grant-proposal-2501980

BERD

Biostatistics, Epidemiology & Research Design Component

Center for Clinical and Translational Sciences

- Support and advice on study design, data management, data quality and statistical analysis

- For assistance and free initial consultation, fill out form https://www.uth.edu/ccts/services/berd

***Tip*: Get help *well before* you submit your proposal**

https://georgiactsa.org/research/berd/index.html

NCATS Smart IRB Platform

Center for Clinical and Translational Sciences

- Streamlined, multisite, accelerated resources for trials (SMART) IRB Platform
- A single institutional review board (IRB) platform for multisite clinical studies
- Single IRB reliance model: all sites participating in a multisite clinical study rely on the ethical review of a single IRB

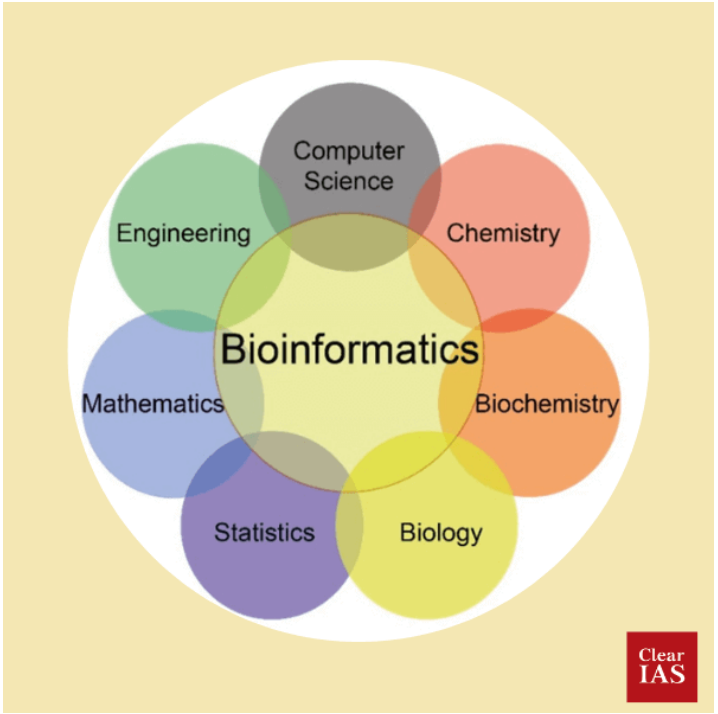
https://ncats.nih.gov/research/research-activities/ctsa/projects/smart-irb

https://www.bioprocessintl.com

Biomedical Informatics

Center for Clinical and Translational Sciences

- **UTHealth Clinical Data Warehouse (CDW):** a single source for clinical data from various systems/institutions
- **Consultation:** Best practices in database design and implementation
- **REDCap Services:** Technical support and training



https://www.clearias.com/bioinformatics/

Clinical Research Units (CRUs)

Center for Clinical and Translational Sciences

- Memorial Hermann Hospital, UT MD Anderson Cancer Center, UTHealth School of Public Health-Brownsville, School of Dentistry, LBJ Hospital
- Dedicated specialized facilities, experienced personnel, and advice on conducting clinical studies
- Active protocols = 157 (71% industry, 29% non-industry)

Clinical Trials Resource Center

Center for Clinical and Translational Sciences

- Help investigators start up or join multisite nation-wide clinical trials
- Trial design and conduct – training for investigators, research nurses, and study coordinators
- Assistance with IND and IDE applications

https://www.uth.edu/ctrc/

https://www.biopharmaservices.com

Trial Innovation Network

Center for Clinical and Translational Sciences

- CTSA program funded to support multi-site and decentralized clinical research (trials)
- Planning guidance, resources, and operational assistance (proposal development, statistical, regulatory, recruitment and retention)
- Helps investigators start up of NIH-funded multisite trials and/or find new sites for ongoing national trials

Learning Healthcare

https://www.theglobeandmail.com/

- Implement research findings into clinical practice
- Distinguish effective from ineffective or harmful therapies in real-world clinical settings
- Broad integration into CCTS K12 and Integrating Special Populations Component
- Consultation and training services to promote rigorous trials of new therapies and quality improvement studies

Community Engagement

CCTS-CE-Solutions in Action Workshops

- Assist in the design and conduct of community studies
- Advice and training in research dissemination
- Programs and Community Advisory Boards in Houston, Brownsville, and Tyler

<u>Tip</u>: Talk to our CE Component about working with Houston, Rio Grande Valley, East Texas, and El Paso community groups

Integrating Special Populations

Center for Clinical and Translational Sciences

- **CARE:** Cultural awareness, respect and empathy
- Ensure that our research includes the entire range of the population
- Includes units on pediatric, geriatric, and LGBTQ+ populations, and Hispanics and other minorities with cancer

Center for Hispanic Health Research and Cameron County Hispanic Cohort (CCHC)

Center for Clinical and Translational Sciences

- Joseph McCormick, MD, and Susan Fisher-Hoch, MD - CCTS collaborators in Brownsville, TX
- Underserved, understudied, 97% Hispanic community
- A population-based cohort (>5000) with demographic, biochemical, molecular, medical, and behavioral data for >15 years

McCormick and Fisher-Hoch

CCHC research meeting (November 2024)

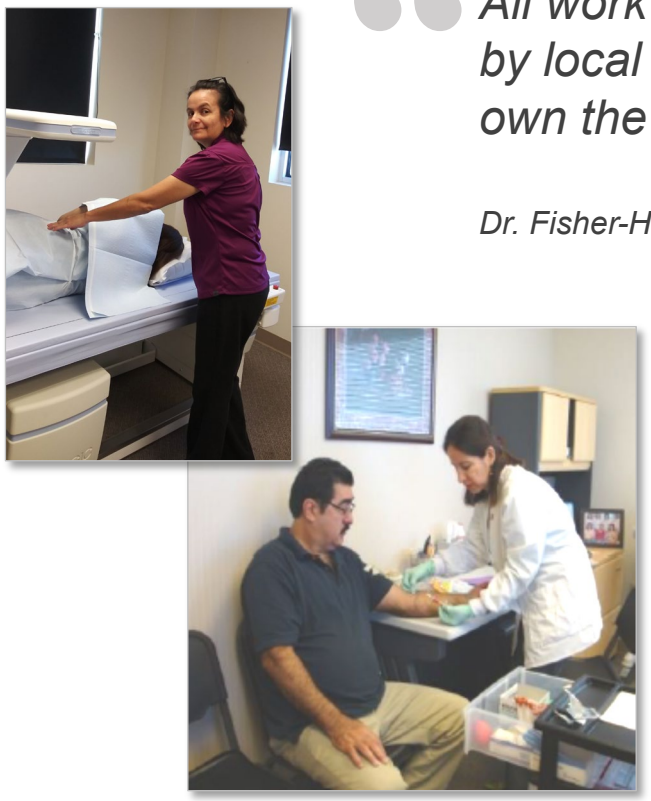
Clinical research unit staff, Brownsville

Center for Hispanic Health Research and Cameron County Hispanic Cohort

Center for Clinical and Translational Sciences

Ongoing studies:

- Diabetes and obesity
- Tuberculosis
- Cardiovascular disease
- Non-alcoholic fatty liver disease
- Bone metabolism and body fat distribution
- Cervical cancer prevention
- Liver cancer
- Microbiome
- Mental health



"All work is performed by local staff. They own the program."

Dr. Fisher-Hoch

Team Science

- Develop teamwork practices
- Address potential barriers to successful collaboration
- Implement training programs
- Disseminate best practices
- Evaluate the learning progress of teams

Dissemination and Implementation

Center for Clinical and Translational Sciences

- Dissemination: Strategies to spread the knowledge
- Implementation: Methods to facilitate adoption and integration of interventions
- Understand barriers and facilitators
- UTHealth Institute for Implementation Science (consultation, training, collaboration)

https://ictr.wisc.edu/research-resources/dissemination-implementation-launchpad/di-education-resources/

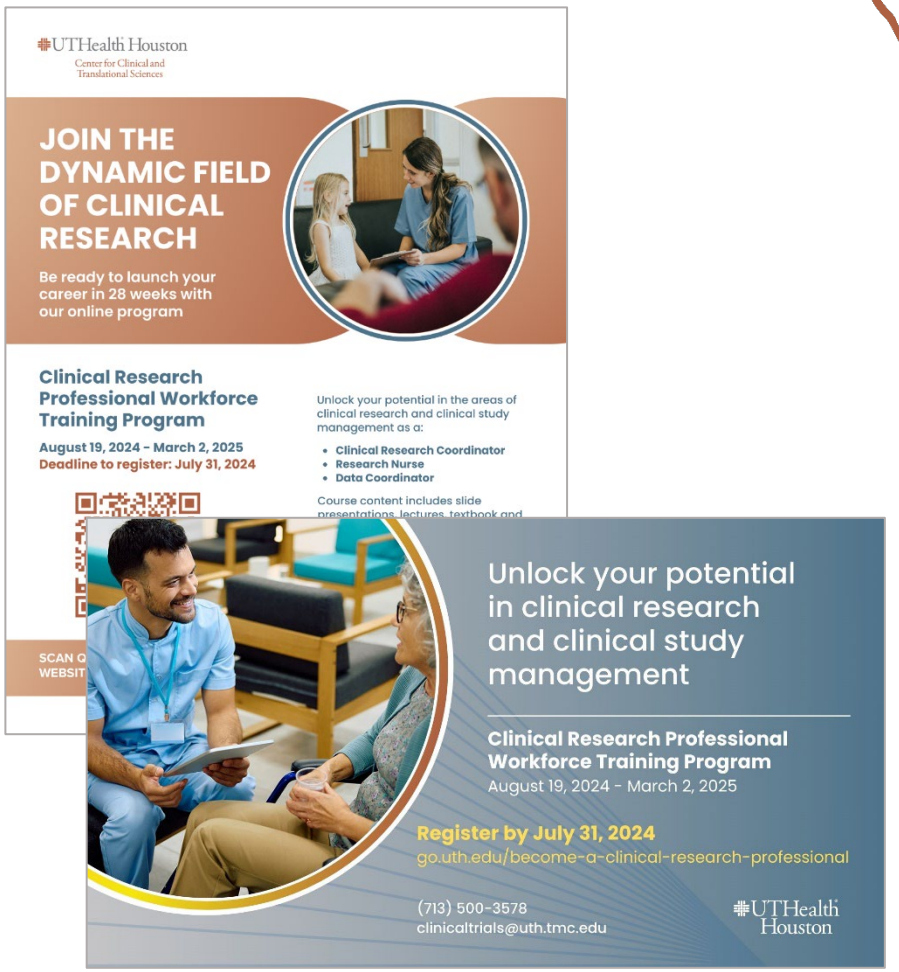
www.uth.edu/implementation-science

Workforce Training

Clinical Research Professional Workforce Training Program (Fall 2024)

- Clinical research coordinators, research nurses and data coordinators
- 100% online, 28-week program
- Curriculum based on Joint Task Force for Clinical Trial Competency's recommendations
- Experiential components integrated into each course

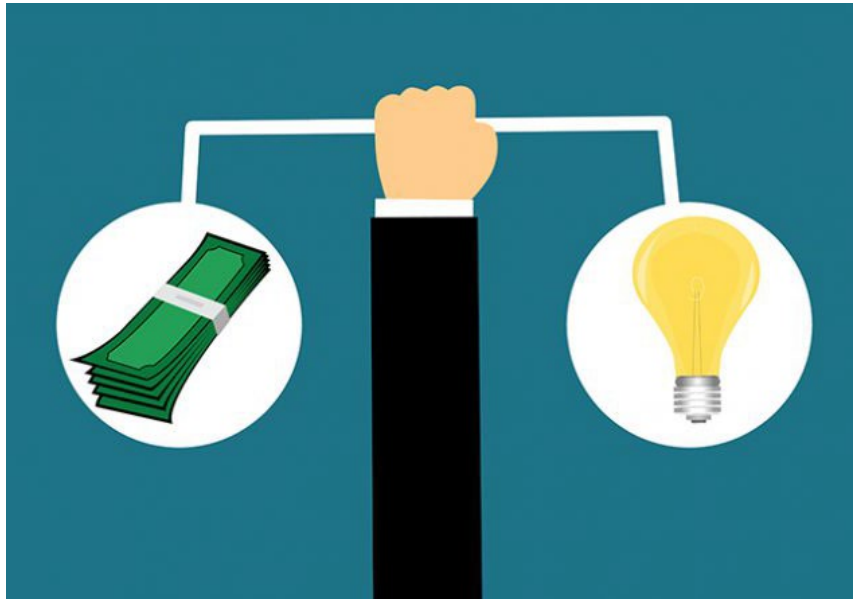
www.uth.edu/ctrc/training/crp-wtp



Pilot Funding Program

- New, unfunded, collaborative clinical research to help generate preliminary data for extramurally funded projects
- Junior faculty at CCTS partner institutions
- 1-year ~$25,000 grant

Tip: Check current RFA (2025-2026 cycle).
Deadline for applications: 2/17/2025.



https://www.researchprofessionalnews.com/*rr-news-africa-pan-african-2020-7-science-funding-after-covid-19-will-be-a-balancing-act/*

2024 Pilot Funding Awardees

Muhammad O. Awiwi, MD
Assistant Professor, Dept. of Diagnostic Imaging, McGovern Medical School, UTHealth Houston

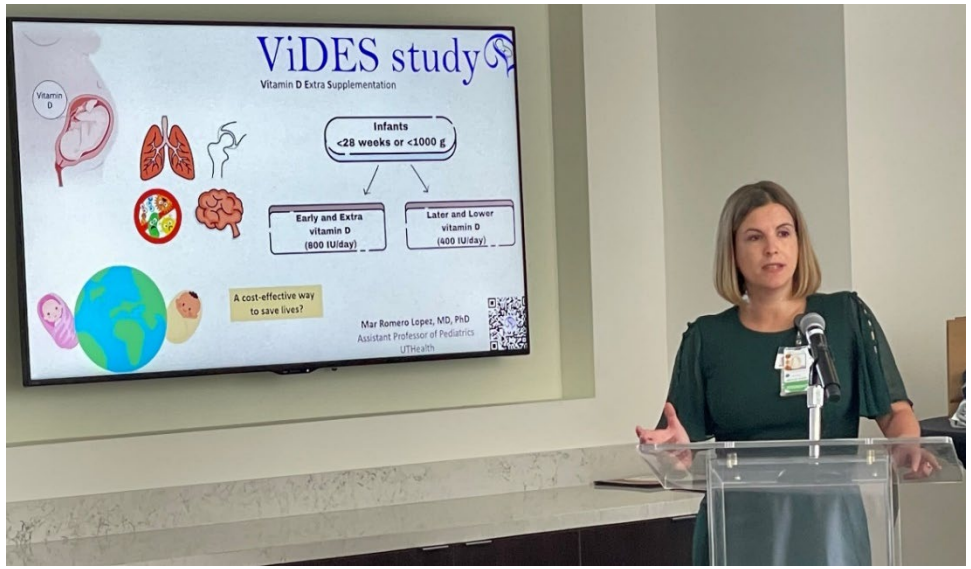
Opportunistic screening for osteoporosis using low-dose chest CT obtained for lung cancer screening

Fadi Musfee, MD
Assistant Professor, Institute for Stroke and Cerebrovascular Diseases, UTHealth Houston

A new at-home telerehabilitation care service delivery model for stroke survivors in the Rio Grande Valley (Clinical Trial)

Career Development Program (K12)

- Career development awards to outstanding early-career faculty members holding an MD, PhD, or equivalent doctoral degree
- Experiential training and supervision provided by established senior faculty researchers (mentors)
- Funding of up to 75% of total salary and additional support for research and education for 1-3 years



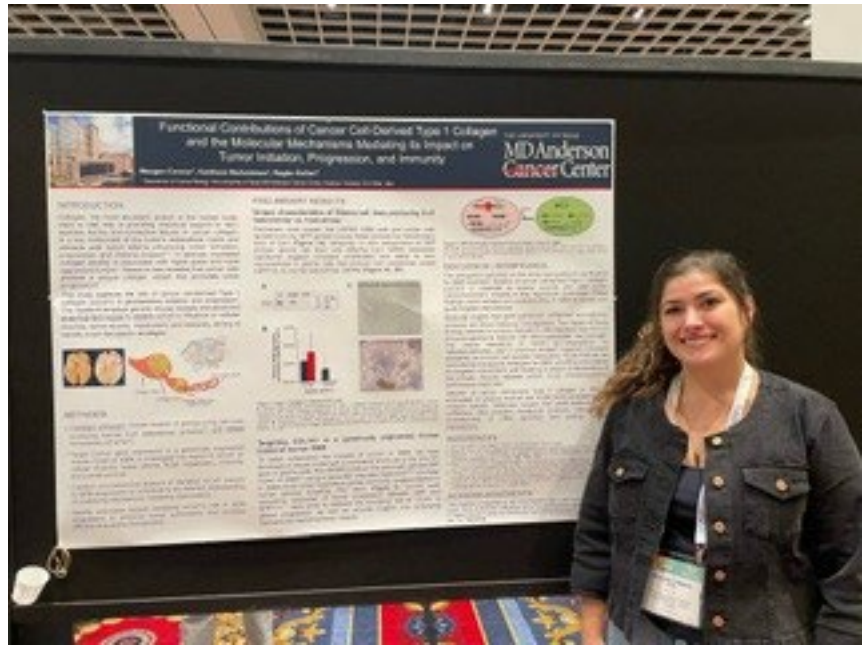
T1 to T4 in 3 (Minutes) competition, Houston, TX (2024)

Pre- and Post-Doc Training Program (T32)

Center for Clinical and Translational Sciences

- Up to 2 years of full support for graduate students and postdocs interested in clinical translational research
- T32 Goals:
  - Train the next generation of translational workforce
  - Widen participation of underserved populations

Tip: Watch for RFA



Association for Clinical and Translational Science (ACTS) meeting, Las Vegas, NV (2024)

T1-T4 in 3 (Minutes) Competition

- Annual event for T32 trainees / K12 scholars
- Opportunity for young investigators to reach the public by “translating” research ideas and achievements
- Valuable feedback from community members
- Winner represents CCTS at the regional competition (TRCC meeting)

1st-place winner, Jacob Mattia, presents “Listening to the Genetic Symphony of Neurodevelopment in Down Syndrome,” at the TRCC T1 to T4 in 3 (Minutes) Competition, Dallas, TX (2024)

Texas Regional CTSA Consortium (TRCC)

Center for Clinical and Translational Sciences

- Five Texas CTSA hubs:
  - UTHealth Houston Center for Clinical & Translational Sciences
  - UT Southwestern Medical Center CTSA Program (Dallas)
  - UT Health San Antonio Institute for Integration of Medicine & Science
  - The University of Texas Medical Branch Institute for Translational Sciences (Galveston)
  - Baylor College of Medicine and University of Houston
- Joint research and education programs
- Core labs and collaborative training

Tip: Reach out for potential collaborations

Q&A

Thank you

Center for Clinical and Translational Sciences

Learn More

www.uth.edu/ccts/

Contact Us

General Inquiries
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