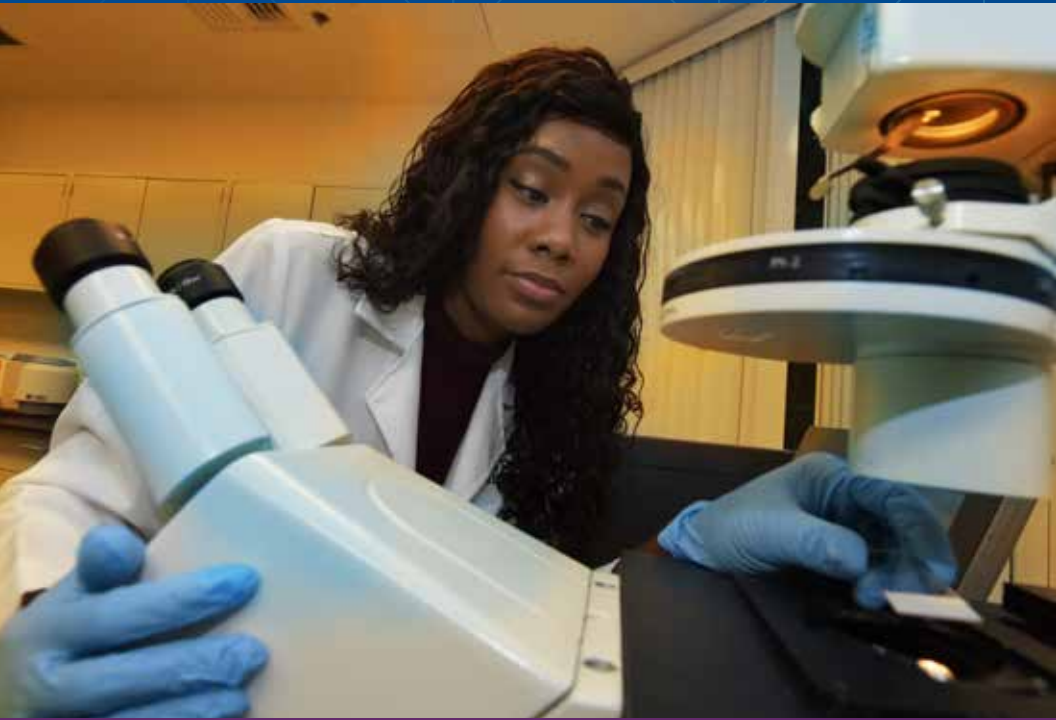


TL1 Program

**PREDOCTORAL AND POSTDOCTORAL CLINICAL
AND TRANSLATIONAL RESEARCH TRAINING**



Predoctoral and Postdoctoral Clinical & Translational Research Training - supported by an NIH Clinical and Translational Science Award (CTSA)

The Georgia Clinical & Translational Science Alliance (Georgia CTSA) TL1 provides outstanding opportunities for clinical and translational research training for predoctoral and postdoctoral trainees at the Georgia CTSA partner institutions (Emory University, Morehouse School of Medicine, Georgia Institute of Technology, and University of Georgia). The program provides innovative didactic and mentored research training for predoctoral (medical students, PhD students, PharmD students) and postdoctoral (resident and fellow physicians, PhD postdocs, PharmD residents) trainees interested in a career focused on clinical and/or translational research.

TL1 provides trainees accepted into the TL1 program with tuition support for the Master of Science in Clinical Research (MSCR) program (at Emory or Morehouse School of Medicine) or the Certificate Program in Translational Research, stipend support, health insurance, and support for travel to a scientific meeting. In addition to didactic training (e.g., MSCR program), all TL1 trainees will have mentored research training and carry out a hypothesis-driven research proposal (clinical or translational research) under the guidance of their lead mentor and mentoring team. It is anticipated that most trainees accepted into the TL1 program will pursue the MSCR as the component of their didactic research training.

Research Education is a critical component of Georgia CTSA and is dedicated to providing predoctoral and postdoctoral trainees with state-of-the-art scientific knowledge, tools, and methods to improve human health through rigorous clinical and translational research training. Through the TL1, Georgia CTSA increases the translational research workforce and enhances career development of future leaders of the biomedical research workforce, a major mission of NIH.

Georgia CTSA TL1 candidates are recruited from the strong and diverse pool of potential candidates at the Georgia CTSA partner institutions. Emory, Morehouse School of Medicine (MSM), Georgia Tech, and University of Georgia (UGA) feature world-class research facilities and outstanding research environments that provide exceptional opportunities for multidisciplinary clinical and translational research training for junior investigators in public health, biomedical sciences, pharmacy, and nursing.

Our extensive program of integrated, multidisciplinary education and training incorporates both didactic and mentored clinical and translational research activities. The TL1 offers expanded and personalized training pathways to provide flexible and tailored clinical and translational training to a diverse cadre of predoctoral and postdoctoral trainees. **For application details visit GeorgiaCTSA.org/training/TL1/**

On the cover: LaDonya Jackson, PharmD, a TL1 trainee at UGA, evaluating the phenotype of brain microglial cells after a therapeutic application aimed to downregulate inflammation and improve cognition

Eligibility

Per NIH requirements, TL1 program applicants must be U.S. citizens or permanent residents.

Predoctoral TL1 program eligibility:

- **Medical students:** Medical students from Emory University School of Medicine and MSM are eligible for TL1 support as part of a dual degree (MD/MSCR) track. Accepted students will begin the TL1 program after their year of clinical rotations (i.e., generally after their third year of medical school). MD/PhD students at Emory and MSM may apply during their mentored PhD training period or after their initial year of clinical rotations.
- **PharmD students:** Predoctoral trainees enrolled in the UGA College of Pharmacy who are accepted will begin the TL1 program after their second year of training. TL1 support would provide opportunities to receive a dual degree (PharmD/MSCR track).
- **PhD graduate students:** PhD-level graduate students at all Georgia CTSA partner institutions may apply to begin the TL1 in the subsequent year after passing comprehensive examinations at their institutions. TL1 support would provide opportunities to receive a dual degree (PhD/MSCR track).

Postdoctoral TL1 program eligibility:

- **Physicians in Training:** Postdoctoral physicians, including senior residents and those in clinical and research specialty fellowship programs at Emory School of Medicine and MSM, may apply to the TL1 program at any point in their postdoctoral training.
- **Postdoctoral fellows with PhD, PharmD, or equivalent degrees:** Postdoctoral non-physician fellows from Emory, MSM, Georgia Tech, and UGA College of Pharmacy may apply at any point in their postdoctoral training. Those enrolled in PharmD residency programs are also eligible to apply.
- **Postdoctoral fellows currently supported by other NIH or federal T-level or F-level training grants** are not eligible for the Georgia CTSA TL1 program but may apply to the MSCR program, supported with stipends and tuition costs provided by their specific training grants.



TL1 postdoctoral trainee Lauren Collins, MD, fellow, Division of Infectious Diseases, Emory School of Medicine, evaluating a volunteer research study participant



Successful MSCR graduates focused on HIV-related research and women's health (left to right): Drs. Cecile Lahiri, Igbo Ofotokun, Lauren Collins, Caitlin Moran, and Anandi Sheth

MSCR Curriculum

Core Courses (30 minimum credits)

- Introduction to Clinical and Translational Research
- Analytic Methods for Clinical and Translational Research
- Biostatistics
- Data Management
- Community Engagement and Health Disparities
- Clinical Trial Design and Analysis
- Scientific and Grant Writing
- Overview of High Dimensional Data
- Clinical Research Colloquium
- Analysis and Presentation of Clinical Research Data
- Health Services Research
- Ethical, Legal, and Social Issues of Responsible Clinical Research
- Big Data to Knowledge (BD2K) for Clinical and Translational Research

Additional Requirements for the MSCR

- Observe an Institutional Review Board (IRB) meeting
- Clinical and Translational Research Journal Club
- Special Workshops and Lectures
 - Team Science
 - Leadership Training
 - Mentor Training

Elective Courses

- Advanced Data Management in R
- Personalized training, includes courses at any of the Georgia CTSA partner institutions

Certificate Program in Translational Research (CPTR) (16 minimum credits)

The Certificate Program in Translational Research is an option as the didactic training for KL2 scholars with PhD degrees.

About the Program

The CPTR is a formal program in Emory Laney Graduate School. CPTR trainees may elect to take the coursework over a single year or spread over two years.

GeorgiaCTSA.org/CPTR

CPTR Courses

- Introduction to Clinical and Translational Research
- Fundamentals of Epidemiology
- Community Engagement and Health Disparities
- Health Services Research

- Translation to Clinical Medicine
- Biostatistics for Translational Research
- Clinical Research Colloquium
- Ethical, Legal, and Social Issues of Responsible Clinical and Translational Research
- Scientific and Grant Writing
- Big Data to Knowledge (BD2K) for Clinical and Translational Research
- Elective: Advanced Data Management in R

Electives

A 1-2 credit elective is required and may be taken at any Georgia CTSA institution upon approval by the Associate Director of the CPTR.

Additional Requirements for the CPTR

- Observe an Institutional Review Board (IRB) Meeting
- Clinical and Translational Research Journal Club
- Special Workshops and Lectures



TL1 trainee Arslan Zahid, Emory medical student, getting vital signs from a volunteer prior to MRI with microgravity simulation per NASA protocol at Georgia Tech

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Co-Director, KL2 Program Co-Course Director, Clinical Research Colloquium Co-Coordinator, MSCR Journal Club



TL1 postdoctoral trainee **Adriana Gamboa, MD**, Emory School of Medicine General Surgery resident, using a multi-institutional database for clinical outcomes cancer research

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CTSA Clinical & Translational
Science Awards Program



Further information about the **Georgia Clinical & Translational Science Alliance Research Education Programs** is available online:

GeorgiaCTSA.org/training

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**GEORGIA CTSA IS SUPPORTED BY A GRANT FROM THE NIH/NATIONAL
CENTER FOR ADVANCING TRANSLATIONAL SCIENCES (NCATS)
UL1TR002378 AND TL1TR002382**