Master of Science in Clinical Research

The Master of Science in Clinical Research (MSCR) degree program, in the Laney Graduate School at Emory University, provides innovative didactic and mentored research training to those interested in pursuing a career in clinical and/or translational research.

NIH-FUNDED CLINICAL AND TRANSLATIONAL SCIENCE AWARD
GEORGIA CLINICAL & TRANSLATIONAL SCIENCE ALLIANCE (GEORGIA CTSA)
**Master of Science in Clinical Research**

In order to achieve excellence in the 21st century, investigators undertaking clinical and translational research must couple their knowledge of medicine and biology with analytic sciences including statistical reasoning, decision analysis, probability theory, analytical epidemiology, and informatics. They must also have an understanding of the principles of evidence-based medicine, implementation science, bioethics, clinical trial design, regulations involving human subjects and animals, scientific and grant writing, and responsible conduct of research.

The Master of Science in Clinical Research (MSCR) degree program from the Emory University Laney Graduate School provides didactic and mentored clinical and translational research training to predoctoral (medical students, PhD students, or PharmD students), postdoctoral (resident and fellow physicians), and junior faculty members (physicians, PhD-level scientists, or PharmDs) from Emory University, Morehouse School of Medicine, Georgia Institute of Technology, and the University of Georgia.

Applicants not requesting Georgia Clinical & Translational Science Alliance (Georgia CTSA) financing support (e.g., predoctoral and postdoctoral trainees supported by NIH T32 training grants or other mechanisms) should apply directly to the Emory MSCR program or MSM MSCR program: GeorgiaCTSA.org/training/MSCR.html

Applicants requesting financial support from the NIH-funded Georgia CTSA should apply through either the TL1 or KL2 mechanisms:

**TL1 website:** GeorgiaCTSA.org/training/tl1/

**KL2 website:** GeorgiaCTSA.org/training/kl2/

The MSCR requires a minimum of 30 academic credit hours, which include classes, a research thesis, and a written grant proposal. Full-time students complete two semesters of class work in the first year. The summer and second year consist of completing the grant writing product and a master’s thesis.

Mentoring is by an established and successful federally funded clinical and translational investigator.

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**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

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*On the cover: Anna Woodbury, MD, assistant professor, Emory University Department of Anesthesiology, evaluates the feasibility of using fMRI as a biomarker in fibromyalgia studies*
**Emory MSCR: Who Should Apply**

The MSCR degree is designed for predoctoral trainees (medical students, PhD students, PharmD students), postdoctoral trainees (physicians, PhD and PharmD scientists), and junior faculty (MD, PhD, or PharmD) at Emory University, Morehouse School of Medicine (MSM), Georgia Institute of Technology (Georgia Tech), and the University of Georgia (UGA) College of Pharmacy who have a commitment to a career in clinical and/or translational research.

MSM-based predoctoral and postdoctoral MSCR candidates apply at MSM to matriculate through MSM’s MSCR didactic and mentored research curriculum.

Predoctoral trainees from Emory (medical students, MD/PhD students, and PhD graduate students), MSM (medical students, MD/PhD students, and PhD graduate students) Georgia Tech (PhD graduate students), and UGA (PharmD and PhD graduate students in the College of Pharmacy) may apply through the Georgia CTSA TL1 program: [GeorgiaCTSA.org/training/tl1/](GeorgiaCTSA.org/training/tl1/)

Predoctoral or postdoctoral trainees 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.

**MSCR Application Instructions**

All application components should be uploaded to an online submission system. Visit [GeorgiaCTSA.org/training/MSCR/how-to-apply.html](GeorgiaCTSA.org/training/MSCR/how-to-apply.html) for application instructions.

**Components of the application must include:**

1. Cover Page
2. Personal Statement
3. NIH-Style Predoctoral or Postdoctoral Biosketch
4. NIH-Style Biosketch of Lead Mentor, Co-Mentors, and Advisors
5. Research and Training Plan
6. Human Subjects/Data Safety and Monitoring Plan
7. Literature Citations
8. Letters of Support from Mentors, Division/Program Director, or Dean of Students

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Jessica Shantha, MD, assistant professor, Emory University Department of Ophthalmology, with mentor Steven Yeh, MD, examining a patient at the Emory Eye Center

Ravi Patel MD, MSc, assistant professor, Pediatrics/Neonatology, Emory School of Medicine, and MSCR graduate and former KL2 scholar in Grady Hospital’s neonatal ICU
GEORGIA CTSA RESEARCH EDUCATION EXECUTIVE COMMITTEE

Jessica A. Alvarez, PhD, RD  
Associate Director, Certificate Program in Translational Research (CPTR)  
Assistant Professor of Medicine, Division of Endocrinology, Metabolism, and Lipids  
Emory University School of Medicine

Pamela Bhatti, PhD, MSc  
Co-Director, KL2 & TL1 Programs, Georgia Tech  
Associate Chair for Innovation and Entrepreneurship and Associate Professor  
School of Electrical and Computer Engineering  
Georgia Institute of Technology

Lou Ann Brown, PhD  
Professor of Pediatrics, Division of Neonatal-Perinatal Medicine  
Director, Office of Postdoctoral Education  
Emory University School of Medicine

Dawn L. Comeau, PhD, MPH  
Mentor Training Director  
Associate Professor & Vice Chair for Faculty Development

Department of Behavioral Sciences and Health Education  
Emory Rollins School of Public Health

Cam Escoberry, PhD, MPH, CHES  
Associate Professor of Behavioral Sciences and Health Education  
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Program Director, Georgia CTSA Pediatrics  
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Division of Pulmonology, Allergy/Immunology, Cystic Fibrosis, and Sleep Medicine  
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David R. Goldsmith, MD  
Assistant Professor of Psychiatry and Behavioral Sciences  
Emory University School of Medicine

Jordan A. Kemper, MD, MSc  
Co-Course Director, Introduction to Clinical & Translational Research  
Assistant Professor of Medicine  
Division of Pulmonology, Allergy, Critical Care, and Sleep Medicine  
Emory University School of Medicine

Matthew Magee, PhD  
Co-Course Director, Analytic Methods for Clinical and Translational Research  
Associate Professor  
Hubert Department of Global Health  
Rollins School of Public Health

Amita Hanatunga, PhD  
Course Director, Overview of High Dimensional Data, Co-Director, MSCR Thesis Committee

Professor, Department of Biostatistics and Bioinformatics  
Emory Rollins School of Public Health

Greg S. Martin, MD, MSc  
Program Director, Georgia CTSA Clinical Research Centers  
Professor of Medicine and Executive Associate Director  
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Anita K. Misra, MD, MSc  
Assistant Professor of Medicine  
Department of Medicine  
Emory University School of Medicine

Vasiliki Michopoulos, PhD, MSc  
Co-Director, KL2 Program  
Assistant Professor of Psychiatry and Behavioral Sciences  
Emory University School of Medicine

Igho Ofotokun, MD, MSc  
Co-Director, KL2 Program  
Assistant Dean for Graduate Studies  
Professor of Pathology and Anatomy  
Morehouse School of Medicine

Alexander Quarshie, MD, MSc  
Co-Director, KL2 Program  
Associate Professor of Surgery and Epidemiology  
Department of Surgery, Division of Transplantation & Department of Epidemiology  
Rollins School of Public Health  
Director of Health Services Research, Emory Departments of Medicine & Surgery

Douglas F. Paulsen, PhD  
Co-Director, TL1 Program, MSM  
Associate Professor of Biostatistics and Biometry  
Informatics Program  
Professor of Community Health and Preventive Medicine  
Morehouse School of Medicine

Andi L. Shane, MD, MPH, MSc  
Co-Course Director, Clinical Trial Design  
Professor of Pediatrics  
Division of Infectious Diseases  
Marcus Professor of Hospital Epidemiology and Infection Control  
Emory University School of Medicine

William M. Shafer, PhD  
Professor of Microbiology and Immunology  
Children's Healthcare of Atlanta

Emory University School of Medicine

Senior Research Career Scientist  
Atlanta VA Medical Center

Amit Shah, MD, MSc  
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Emory Rollins School of Public Health  
Department of Medicine  
Division of Cardiology  
Emory University School of Medicine

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Co-Director, TL1 and KL2 Programs, UGA  
Professor, College of Pharmacy  
Director of Clinical and Experimental Therapeutics  
University of Georgia

Anandi Sheth, MD, MSc  
Associate Professor of Medicine  
Division of Infectious Diseases  
Emory University School of Medicine

Thomas R. Ziegler, MD  
Co-Director, TL1 Program  
Co-Director, Georgia CTSA Clinical Research Center  
Co-Course Director, Grant Writing  
Professor of Medicine  
Division of Endocrinology, Metabolism and Lipids  
Emory University School of Medicine

Successful MSCR graduates focused on HIV-related research and women’s health (left to right):  
Drs. Cecile Lahiri, Igho Ofotokun, Lauren Collins, Caitlin Moran, and Anandi Sheth
Further information about the Georgia Clinical & Translational Science Alliance Research Education Programs is available online:

GeorgiaCTSA.org/training

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