



# MEDICAL STUDENT TRAINING IN AGING RESEARCH (MSTAR) PROGRAM

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# MSTAR at Icahn School of Medicine at Mount Sinai

- Established in 1994
  - Provides medical students, with an enriching experience in aging-related research and geriatrics, under the mentorship of top experts in the field.
- Students participate in a 8-week structured research, clinical, and didactic program in aging.
  - Students may train at a National Training Center supported by the National Institute on Aging.



# MSTAR at Icahn School of Medicine at Mount Sinai

- **Major Sponsor:**
  - The National Institute on Aging (NIA)
- **Administered by:**
  - The American Federation for Aging Research (AFAR)
  - The National Institute on Aging (NIA)

# MSTAR National Training Sites

## National Training Centers (NTCs) and Partner Sites

- Harvard Medical School (Boston University, University of Massachusetts, University of Mississippi, Brown University)
- Johns Hopkins University
- New York University
- UCLA (UCSF and University of Washington)
- UC San Diego
- University of North Carolina at Chapel Hill
- Program for Aging Research in the Summer (PARIS) at Augusta University (Universidad Central del Caribe, Ponce Health Sciences University, San Juan Bautista School of Medicine)

# MSTAR National Training Sites

- National Training Centers and Partner Sites
  - Selected applicants are notified of their training site assignment prior to their acceptance of the award.
  - Accepted scholars work with their training site directors and research mentors to design an individualized research project and training program.
  - Due to NIA restrictions, individuals holding PhD, MD, DVM, or equivalent doctoral degrees in the health sciences are **NOT ELIGIBLE** to apply to do the MSTAR Program at a National Training Center

# MSTAR National Training Sites

- National Training Centers and Partner Sites
  - Additionally, applicants receiving a stipend or salary support from a federal source are not eligible for this program.
  - Applicants may NOT hold another award or participate in another program concurrently with the MSTAR program
  - Must participate in the program full-time for 8 weeks
  - Stipend of \$2,262 for 4 weeks
- Deadline: Set by individual NTCs
- Applicants will be notified of their application decision in February 14, 2025

# MSTAR at Icahn School of Medicine at Mount Sinai

- Formalized in 2000
- 310 medical students from 10 different medical schools
  - Over 200 peer-reviewed publications (Over 100 1<sup>st</sup> authorship)
  - Over 300 competitive poster presentations
  - For the last 15 years
    - 24 oral paper sessions at national meetings
    - 16 national student awards

# MSTAR at Icahn School of Medicine at Mount Sinai

- GOALS:
  - Develop basic knowledge and skills required for aging and palliative medicine research
  - Foster the application of geriatric and palliative medicine principles in the care of older adults and those living with chronic illnesses and/or at the end of their lives, in whatever field in the future
  - Stimulate interest in a career in academic geriatrics and palliative medicine



# MSTAR at Icahn School of Medicine at Mount Sinai



Participation in aging and palliative medicine research initiatives with established and successful research investigators



Development of formal mentoring relationships with leading research mentors in the field of aging and palliative medicine



Development and implementation of individual learning and research contracts



Participation in structured seminar series on basic research methodology and study design



Exposure to various clinical sites and aspects of geriatric and palliative medicine care

# Research and Learning Activities

Formal Mentorship in  
Research Work with  
Faculty Mentors

Research Methods,  
Leadership Training  
Sessions and Future  
Careers Workshops

**MSTAR Student  
Trainee**

Peer-to-Peer (P2P)  
Mentoring and Support

Nested Clinical Exposures



# MSTAR Research Methodology Training Series

Topic/Description	Seminar Leader
<b>The Basic Ingredients: Formulating Research Questions and Hypotheses</b>	
Students' oral presentation of their research question and 2-3 sentence background and significance	
<b>Study Design: Observational versus Experimental Research</b>	
Students' discuss their choice of study design including limitations and challenges	
<b>Measurement Approaches: Precision and Accuracy</b>	
Students describe their measurement approach for dependent and independent variables and alternative strategies	
<b>Enhancing Causal Inference in Observational Studies</b>	
Students discuss methods they are using to enhance causal inference, if applicable, followed by group discussion of recent publications employing methods to enhance cause inference	
<b>Sample Size and Power: Application and Examples</b>	
Students estimate the power of their primary analyses, if applicable, and describe the trade-offs inherent in increasing power	
<b>Qualitative and Mixed Methods Research</b>	
Students discuss ways in which their research was informed by or could be strengthened by a qualitative research approach	
<b>Trainee Oral Presentation Practice Session</b>	
All students attend both practice sessions to provide feedback and learn for their peers.	
<b>Trainee Oral Presentation to the Department of Geriatrics and Palliative Medicine</b>	

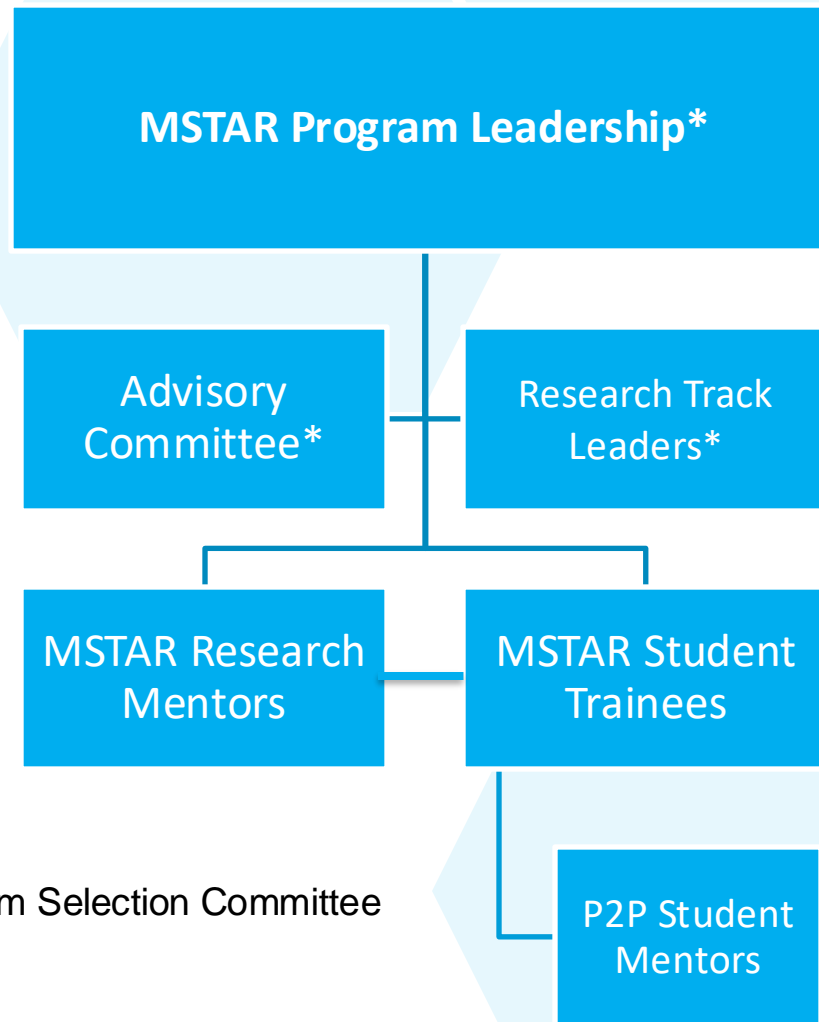
# MSTAR Research Career & Leadership Skills Development Workshops

Topic/Description	Workshop Leader(s)
<b>The Next Generation of Geriatric and Palliative Medicine Researchers</b>	
An overview presentation of the current state of aging and palliative care research in the US and the roles of the trainees in its future.	
<b>Geriatric Palliative Care: Transforming the Care of Serious Illness</b>	
Presentation on the evolution of palliative care in the US and the expansion of the field to various aspects of health care.	
<b>Understanding the Institutional Review Board</b>	
Presentation of the history of the IRB and its role in maintaining the safety of research trainees and integrity and ethics of the research process.	
<b>Research Ethics</b>	
The historical context of ethics in research will be presented. Trainees will also be able to learn an approach how to make decisions and to act ethically in various situations in the conduct of research.	
<b>Basics of Basic Science Research</b>	
An interactive session by the research track lead that will both describe research careers within the track and include a walk-through of clinical settings for aging research within the Mount Sinai Health System	
<b>Clinician-Scientist</b>	
This will be an interactive session by the research track lead that will both describe research careers within the track and include a walk-through of clinical settings for aging research within the Mount Sinai Health System	
<b>Understanding Your Leadership Style</b>	
Active learning focused on identifying and comparing different leadership Style using the DiSC assessment with an opportunity to critique and reflect on trainees' styles	
<b>A Career in Health Services Research</b>	
This will be an interactive session by the research track lead that will both describe research careers within the track and include a walk-through of clinical settings for aging research within the Mount Sinai Health System	
<b>How to Write an Abstract</b>	
Trainees will review effective abstract templates and craft their research abstracts	
<b>A Guide to Research Podium Presentations</b>	
Review of effective communication skills and delivery techniques for research podium presentations	

# Sample MSTAR Trainee Schedule

Week	Mon	Tue	Wed	Thu	Fri
First Week	Introduction to MSTAR Program  Trainees, Faculty Mentors and Near-Peer Mentors	AM: Research Methodology Seminar Series Career and Leadership Workshops	Research Work  Mentoring Sessions		
		PM: Research Work	Nested Clinical Exposures		
Week 2 to Weeks 7 or 11	Research Work Mentoring Sessions	AM: Research Methodology Seminar Series Career and Leadership Workshops	Research Work  Mentoring Sessions		
	Nested Clinical Exposures	PM: Research Work	Nested Clinical Exposures		
Last Week	Presentation Prep	MSTAR Program Podium Presentations and Poster Sessions	Research Work  Mentoring Sessions  Individual Exit Interviews		

# Project Administrative Structure



\* Program Selection Committee

# MSTAR at Icahn School of Medicine at Mount Sinai

- **Specifics:**
  - A stipend is provided.
  - All students enrolled in U.S. allopathic or osteopathic medical schools can apply, provided they are U.S. citizens or permanent residents.
  - Applicants must have a faculty sponsor from their home institution (non-ISMMS) or a Faculty Reference (ISMMS)
  - Also require a Research Mentor at ISMMS
  - Scholars are selected based on their:
    - Academic excellence
    - Interest in aging and geriatrics
    - Potential for future achievement and leadership.



# MSTAR at Icahn School of Medicine at Mount Sinai

- **Specifics:**
  - Applicants may NOT hold another award or participate in another program concurrently with the MSTAR program
  - Must participate in the program full-time for at least 7 of the 12 weeks.
- **Deadline:** Monday, January 27, 2025 at 12PM EST
- Applicants will be notified of their application decision on Friday, February 14, 2025.



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## Next Steps:

- Find a Research Mentor
  - MSTAR Research Abstract Book
  - 2022/25 MSTAR Research Mentors List
  - If you already have a potential research mentor, then ask if the research area qualifies for MSTAR
- Review the Application Form