



Dartmouth  
GEISEL SCHOOL OF  
MEDICINE

Office of  
MEDICAL STUDENT  
RESEARCH

## Weekly Newsletter

Aug 14, 2025

The Student Research Office is actively supporting medical students throughout their research journey, serving as a central resource to help navigate onboarding requirements and connect with opportunities across departments. The office regularly shares active research projects and offers guidance on how to get involved.

Students are strongly encouraged to visit the office at **Remsen 230** for any research-related information and to begin their research journey.

**Contact:** [Medical.Student.Research@dartmouth.edu](mailto:Medical.Student.Research@dartmouth.edu)



### Recent News

## **A Warm Welcome for Geisel's MD Class of 2029 :**

<https://geiselmed.dartmouth.edu/news/2025/a-warm-welcome-for-geisels-md-class-of-2029/>

## **Geisel Medical Student Awarded National Fellowship for AI Tool Advancing Brain Tumor Research**

<https://geiselmed.dartmouth.edu/news/2025/geisel-medical-student-awarded-national-fellowship-for-ai-tool-advancing-brain-tumor-research/>



DARTMOUTH HITCHCOCK MEDICAL CENTER

# **Medical Student Research Fair 2025**

Join us for the 1st Annual Medical Student Research Fair, featuring representatives from departments across Geisel, including both foundational and clinical sciences.

**DATE: THURSDAY, SEPTEMBER 4, 2025**  
**TIME: 5 PM - 7 PM**  
**LOCATION: DHMC, AUDITORIUMS E & F**

Refreshments and foods will be provided.

## **Featured Opportunities**



## Emergency Medicine

Emergency Medicine at DH offers a wide range of research and scholarly opportunities, including wilderness and rural medicine, EMS, critical care transport, and system-based QI projects. Additional areas may include ultrasound-guided procedures, substance use, telehealth, narrative medicine, and global health initiatives.

Students can also engage in publication writing, curriculum development, and innovative clinical research alongside EM faculty.

Interested students can reach out to Dr. Zachary Soucy, DO and Melissa



## Rheumatology

### Rheumatology Research

Are you a student interested in autoimmune disease, immunology, or translational research?

Join one of our diverse Rheumatology Research Projects exploring cutting-edge questions in both adult and pediatric care, including: Projects span clinical, translational, and health services research, with opportunities for data analysis, patient chart review, lab-based assays, and protocol development. Contact for the medical student research coordination

- Sladjana Skopelja-Gardner, PhD ,  
*Sladjana.Skopelja-Gardner@dartmouth.edu*

Students interested in these research opportunities are encouraged to contact [Medical.Student.Research@dartmouth.edu](mailto:Medical.Student.Research@dartmouth.edu) for more information and guidance.

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## NIH Medical Research Scholars Program (MRSP)

The NIH Medical Research Scholars Program (MRSP) is a comprehensive, year-long research enrichment opportunity for creative, research-focused medical, dental, and veterinary students. The program takes place at the NIH intramural campus in Bethesda, MD.

Applications open on **September 1st, 2024**, and the deadline to apply is **December 2nd, 2024**. This is an externally reviewed program.  
For more information and to apply, please visit the NIH MRSP website.

More information can be found at: [NIH Medical Research Scholars Program \[cc.nih.gov\]](https://cc.nih.gov).

**National Institutes of Health**  
**Medical Research Scholars Program**  
*The premier pre-doctoral training program, shaping the future of health by inspiring careers in biomedical research as clinician-scientists*

**World Class Research**  
Access to the technical and clinical resources of over 300 NIH laboratories

**Mentorship**  
Close supervision of research project by senior NIH investigator

**Career Development**  
Curriculum of lectures, rounds, journal clubs, and leadership forums

**Networking**  
Connect with leading national experts across varied career fields

**Eligibility**  
For U.S. citizens and permanent residents currently enrolled in an LCME accredited medical, AOA accredited osteopathic, CODA accredited dental, or AVMA accredited veterinary programs, and in their 2nd, 3rd, or 4th year. Interested students should have strong interest in conducting basic, clinical, or translational research.

**Application Opens September 1<sup>st</sup>**  
**Application Deadline is December 1, 2025**

**NIH** Office of Clinical Research Training and Medical Education  
Contact: MRSP@mail.nih.gov

Follow us! @NIHClinicalCntr

## Research Opportunity Highlight: Neurology

### 1. HOBSCOTCH Program

**Investigator:** Dr. Elaine Kiriakopoulos, Neurology

HOBSCOTCH (HOMe-Based Self-Management and Cognitive Training CHanges Lives) supports patients with neurodegenerative conditions. Dr. Kiriakopoulos is expanding the model to new populations.



**Student Responsibilities:** Serving as a memory coach or assisting with home-based memory training for patients.

## 2. ALS Retrospective Chart Review

**Investigator:** Dr. Mark A. Garret, Neurology

Participate in a chart review study focusing on ALS patients to identify trends in disease progression and treatment outcomes.

**Student Responsibilities:** Conducting retrospective chart reviews.

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**Angelo Volandes, MD, MPH**

Anna Gundlach Huber  
Professor of Medicine  
Geisel School of Medicine at  
Dartmouth

Vice Chair for Research  
Department of Medicine

## Medicine Grand Rounds

**Friday, September 12, 2025**

**8:00 - 9:00 AM**

**Auditorium H**

### ***“Finding the Meaning of Life and Death in Healthcare”***

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Step into Grand Rounds reimagined. See how cinematic artistry and cutting-edge healthcare research can ignite a sense of purpose. We travel beyond medicine's daily routines and ask deeper questions: What calls you to heal? Where do you find meaning in life and death? Powerful patient stories and breakthrough discoveries will rekindle the ideals that set you on this path—no matter your discipline. Experience how storytelling and shared decision-making empower families and care partners to navigate life's most meaningful choices with clarity and compassion.

This session is more than a lecture. It will be a film festival, research showcase, and philosophical salon all in one. We call on every member of our community to remember: healing is not just a profession—it's a sacred trust. Arrive ready to be moved. Expect to be challenged. Leave renewed.

All Dartmouth faculty, residents, students, and staff are invited to rediscover hope, deepen empathy, and unite around the enduring mission of our healing professions and the humanities that inspire them.

Please note: In-person attendance is strongly recommended given the highly visual nature of the presentation. This lecture will not be recorded.

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## Rheumatology Research Opportunities Highlight

**Use of corticosteroids and immunosuppression in cardiac sarcoidosis –**

**Dr. Vivekanand Tiwari**

**Steroid use in giant cell arteritis with and without IL-6 inhibitor – Dr.**

*Vivekanand Tiwari*

**Osteoporosis screening in PMR/GCA patients (retrospective and potential prospective study) – Vivekanand Tiwari**

**DNA methylation as a marker of corticosteroid response in PMR – Vivekanand Tiwari, Skopelja-Gardner, Brock Christensen**

**The role of inflammation in knee osteoarthritis – Lindsey MacFarlane**

**Using urine DNA methylation to predict kidney disease in rheumatic patients – Skopelja-Gardner, Christopher Burns, Lucas Salas**

For More : <https://geiselmed.dartmouth.edu/student-research/active-medical-student-research-opportunities/>

## Looking for something else?

To learn about additional ongoing research projects, **visit our website** or **reach out to our office.** <https://geiselmed.dartmouth.edu/student-research>

We're here to help you find opportunities that match your interests and goals.

## Upcoming Events

### **Medical Student Research Fair –**

**When:** Thursday, September 4, 2025 at 5:00 PM

**Where:** DHMC Auditoriums E & F

### **Dartmouth Health Biomedical Research Day**

**When:** Wednesday, October 8, 2025 | 8:00 AM – 5:00 PM

**Where:** Dartmouth Hitchcock

A full-day event highlighting innovative biomedical research across departments.

Open to all faculty, staff, trainees, and students.

### **Annual Medical Student Research Poster Night**

**When:** Thursday, October 23, 2025 | 11:00 AM – 8:00 PM

**Where:** DHMC

Celebrate the research achievements of your peers and share your own work at this key Geisel tradition.

### **Research Education Series**

### **Co-curricular interdisciplinary seminars**

**When: September 4th– | 7:00 AM – 8:00 AM**

**Where:** Chilcott

**Topic - How to Start Clinical Research**

Learn about research design, grant writing, IRB processes, and more from experienced faculty.

## **Student Spotlight**



### **Emily St. John , MD Candidate Class of 2028**

Emily began her research journey in 2017 at the Schermerhorn Lab (BIDMC), focusing on vascular surgery topics including critical limb ischemia, aortic repair outcomes, and disparities in post-procedure care. Her work highlighted how research shapes patient care guidelines and revealed the impact of social determinants especially food insecurity on vascular health. This led her to study SNAP recipients' experiences with the FIG lab at Cornell University, aiming to improve the program and showcase participant resilience.

Currently at Dartmouth-Hitchcock, Emily continues her vascular research under Drs. David Stone and Jesse Columbo. She has presented at major conferences

such as the American Heart Association Scientific Sessions and the New England Society of Vascular Surgery, earning several awards including first place at Harvard Surgery Day. Emily's mentors and experiences fuel her passion for research as she advances her career at Geisel and beyond.

## Scholarly Manuscripts by Geisel Students

Geisel students continue to drive innovation through research, contributing to peer-reviewed publications across clinical medicine, global health, and more. Their scholarly work reflects a deep commitment to scientific inquiry and advancing patient care. Each year, our students co-author numerous manuscripts, showcasing their passion for discovery and academic excellence. <https://geiselmed.dartmouth.edu/student-research/research-papers-by-geisel-students/>

Journal of Affective Disorders 340 (2023) 213–220

Contents lists available at ScienceDirect

**Journal of Affective Disorders**

journal homepage: [www.elsevier.com/locate/jad](http://www.elsevier.com/locate/jad)

Research paper

**Using machine learning to forecast symptom changes among subclinical depression patients receiving stepped care or usual care**

Bruno T. Scodari<sup>a,\*</sup>, Sarah Chacko<sup>b</sup>, Rina Matsumura<sup>b</sup>, Nicholas C. Jacobson<sup>a,b,c,d</sup>

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**ARTICLE INFO**

**Keywords:**  
Subclinical depression  
Stepped care  
Machine learning  
PHQ-9  
HADS-A

**ABSTRACT**

**Background:** Subclinical depression (SD) is a mental health disorder characterized by minor depressive symptoms. Most SD patients are treated in the primary practice, but many respond poorly to treatment at the expense of provider resources. Stepped care approaches are appealing for tiering SD care to efficiently allocate scarce resources while jointly optimizing patient outcomes. However, stepped care can be time inefficient, as some persons may respond poorly and be forced to suffer with their symptoms for prolonged periods. Machine learning can offer insight into optimal treatment paths and inform clinical recommendations for incident patients.

**Methods:** As part of the Step-Dep trial, participants with SD were randomized to receive stepped care ( $N=96$ ) or usual care ( $N=140$ ). Machine learning was used to predict changes in depressive symptoms every three months over a year for each treatment group.

**Results:** Tree-based models were effective in predicting PHQ-9 changes among patients who received stepped care ( $r=0.35-0.46$ ,  $MAE=0.14-0.17$ ) and usual care ( $r=0.34-0.49$ ,  $MAE=0.15-0.18$ ). Patients who received stepped care were more likely to reduce PHQ-9 scores if they had high PHQ-9 but low HADS-A scores at baseline, a low number of chronic illnesses, and an internal locus of control.

**Limitations:** Models may suffer from potential overfitting due to sample size limitations.

**Conclusion:** Our findings demonstrate the promise of machine learning for predicting changes in depressive symptoms for SD patients receiving different treatments. Trained models can intake incident patient information and predict outcomes to inform personalized care.

## GMSJ Coming Soon!

We are excited to share that Graduate Medical Scholars Journal (GMSJ) is pending launch in September, 2025 !

GMSJ is a student-led publication dedicated to showcasing the research, insights, and perspectives of medical students. It offers a hands-on opportunity to gain experience in academic publishing, including research dissemination, peer review, and scholarly writing—valuable skills for future careers in academic medicine.



GMSJ welcomes submissions from all fields of research relevant to medicine and healthcare, including but not limited to:

- Clinical Medicine and Practice
- Public Health and Epidemiology
- Biomedical and Basic Science Research
- Medical Education and Training
- Health Policy and Ethics
- Nutrition and Lifestyle Medicine
- Medical Technology and Device Development

 **Learn more and explore the journal:**

<https://gmscholars.com/index.php/gmsj/index>



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**The Geisel School of  
Medicine *Community  
of Scholars* Program  
Structured Support for  
Medical Student  
Research &**

# MD Research Scholars Program

The Geisel MD Research Scholars Program offers advanced interdisciplinary research training to the most promising Geisel students, who will be designated MD Research Scholars.

**Application deadline:** August 17th.

Selections will be announced by email on August 22nd.

For more information

[:https://geiselmed.dartmouth.edu/student-research/medical-student-compton-research-scholars/](https://geiselmed.dartmouth.edu/student-research/medical-student-compton-research-scholars/)

Questions? Reach out to the Medical Student Research Office.



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