



Dartmouth
GEISEL SCHOOL OF
MEDICINE

Office of
MEDICAL STUDENT
RESEARCH

Weekly Newsletter

Oct 24, 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



🎉 Geisel Annual Medical Student Research Poster Night 🎉

The Annual Medical Student Research Poster Night successfully took place on October 22nd, 2025, at DHMC.

Kudos to the geisel medical student researchers for their outstanding presentations. Students showcased projects spanning clinical research, foundational science, medical education, DEI, and community health science, sharing their findings with faculty, staff, and peers in an engaging evening of scholarship and collaboration.



Featured Opportunities



Radiation Oncology Research

Research project with the Lichter GreenHealth Lab

Research focuses on the intersection of **climate, environment, and oncology**—including projects on energy use and decarbonization in cancer imaging and treatment, climate-related disruptions to



Emergency Medicine Research Research

Students interested in Emergency Medicine can explore diverse research areas such as wilderness and EMS medicine, quality improvement, critical care transport, operations, and community health. Projects also include opportunities

cancer care, and resilience planning for healthcare systems.

Students interested in these research opportunities are encouraged to contact Medical.Student.Research@dartmouth.edu for more information and guidance.

in education, global health, and innovative ultrasound applications.

Students interested in these research opportunities are encouraged to contact Medical.Student.Research@dartmouth.edu for more information and guidance.



Research in Diagnostic Radiology

Robert Jeffery Fellowship

The Robert F. Jeffery Student Fellowship in Radiology is a one-year opportunity for M2, M3 and M4 Geisel students at DHMC , combining clinical, educational, and research experiences. Recipients receive an annual stipend.

Application Deadline: December 15 (for the following year)

<https://geiselmed.dartmouth.edu/student-research/hospital-specialty-specific-research-opportunities/>

Samuel D. Pressman Fellowship in Medical Imaging, Precision Health & AI

This fellowship offers Geisel M.D., Ph.D., M.S., and M.P.H. students the chance to conduct research at the intersection of imaging, AI, and precision health. Fellows receive mentorship from Radiology and CPHAI faculty, present at Grand Rounds, and work toward publication.

Applications Open: Fall 2025 (Updated deadlines and timelines will be shared soon.)

Requirements: Specific Aims (≤ 0.5 pg), Research Proposal (≤ 1.5 pg), CV, and transcript.

Contact: Dr. Jessica Sin – jessica.m.sin@hitchcock.org

Students interested in these research opportunities are encouraged to contact Medical.Student.Research@dartmouth.edu for more information and guidance.

Dartmouth Radiology Summer Research Internship

The Dartmouth Radiology Summer Research Internship will enable MD students at Geisel to engage in innovative and emerging areas of research in the field of radiology.

\$6,000.00 will be provided to the successful candidate for pursuing a research project that meets the criteria set forth above. This project would be expected to span a 10-week period over the Summer of 2026.

More information : <https://geiselmed.dartmouth.edu/student-research/2026-geisel-dhmc-summer-research-project-opportunities/>

Research project with Dr. Chris Niemczak's Lab

Auditory function in mild cognitive impairment (MCI) - behavioral and electrophysiological auditory approaches along with cognitive function.

Auditory function in HIV related neurocognitive dysfunction - behavioral and electrophysiological auditory approaches along with cognitive function with all work taking place in Tanzania.

Interested in doing research in summer 2026?

Explore the **2026 Geisel/DHMC Summer Research Project Opportunities** here: <https://geiselmed.dartmouth.edu/student-research/2026-geisel-dhmc-summer-research-project-opportunities/>

Application Now Open: Sept 1, 2025 – Dec 1, 2025
[Click to Apply](#)

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.

Informational Webinar

October 9, 2025

1PM EST

[REGISTER](#)



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

Follow us!
[@NIHClinicalCntr](#)



46TH ANNUAL NNE CO-OP PCBRN MEETING

“Advocacy in Action: Shaping Primary Care at Every Level”

January 23-25, 2026 | StoweLake Mountain Resort & Spa, Stowe, VT



Call for Poster Abstracts Now Open

- COMPLETED RESEARCH
- STUDENT RESEARCH
- IN-PROGRESS RESEARCH
- NON-RESEARCH



VISIT: <https://redcap.link/46COOPPoster>

LIMITED STUDENT SCHOLARSHIPS AVAILABLE



THE UNIVERSITY OF TEXAS

MD Anderson
Cancer Center

Med Students **SOAR** Program

*Medical Students Summer in Oncology at
Anderson Research*

Program starts on June 01, 2026 (8-10 weeks)

Application deadline: January 14, 2026

This NCI-funded program supports first-year medical students participating in rigorous hands-on research experience to promote broader physician participation in all aspects of cancer research.



PROGRAM ACTIVITIES

- Hands-on scientific research with a faculty mentor
- Clinical observations
- Lectures and career conversations
- Interprofessional clinical simulation trainings
- Communication skills workshops/seminars
- End-of-program presentations of research

ELIGIBILITY

- Must be US citizen or permanent resident
- Must have completed first year at LCME- or COCA-accredited U.S. medical school
- Must have interest in cancer research
- Must start on June 1 and commit to full 8-10 week program

SUPPORT

- Stipend and research funds will be provided.



For more information, contact:
SOAR@mdanderson.org

www.MDAnderson.org/SOAR

Program Directors:

Marites P. Melancon, Ph.D.

Professor, Interventional Radiology Department, Diagnostic Radiology Division

Jillian R. Gunther, M.D., Ph.D.

Associate Professor, Radiation Oncology Department, Radiation Oncology Division

SOAR @ MD Anderson Cancer Center | 2026

Med Students SOAR Program

The Medical Students Summer in Oncology at Anderson Research (Med Students SOAR) program, funded by the National Cancer Institute, offers first-year medical students an 8–10 week hands-on research experience. Students work with renowned faculty on individualized projects, gaining laboratory skills and insights into multidisciplinary, research-driven oncology care through lectures, workshops, clinical observations, and simulations. The program aims to inspire long-term careers in basic, translational, and clinical cancer research.

HVC at Dartmouth: Empowering Students in Research



Dartmouth
Health

Heart and Vascular Center
DARTMOUTH HITCHCOCK MEDICAL CENTER

HVC at Dartmouth Health is sharing resources and supporting students to explore their research interests. Monthly meetings are held on the **second Monday of each month, 5–6 PM**, in the Vascular Surgery Conference Room (subject to change).

Student-focused sessions cover:

- How to find a research mentor
- Exposures, outcomes, and overlooked factors
- Effect size and its importance
- Surviving survival analysis
- Reading and interpreting observational studies

All students, residents, and fellows are welcome. Please let HVC at Dartmouth know if you plan to attend!

Stephen Marsh Tenney, M.D., Medical Student Fellowship

The Department of Molecular and Systems Biology at Geisel School of Medicine invites applications for the Stephen Marsh Tenney, M.D., Medical Student Fellowship. This annual award supports one year of full-time research for an M.D. student, preferably with a faculty mentor in the Department of Molecular and Systems Biology, though research in any Geisel department is eligible.

The fellowship provides a \$43,000 grant (\$40,000 stipend and \$3,000 for research expenses). Interested students for the 2026–2027 academic year (April 2026–March 2027) should discuss their plans with a potential mentor and submit a CV, a two-page research summary, and a mentor letter to Cheryl Bush (Cheryl.A.Bush@Dartmouth.edu)

For more details and faculty mentors, visit

<https://geiselmed.dartmouth.edu/msb/faculty/>

Radiation Onc Medical Student Research Fellowship

Geisel medical students interested in pursuing a dedicated research year in Radiation Oncology are invited to apply for the Radiation Oncology Medical Student Research Fellowship. The fellowship provides a \$35,000 grant (including a \$32,000 stipend) and offers structured mentorship, research experience, and career

development under the guidance of Dr. Charles R. Thomas, Jr., Chair of the Department of Radiation Oncology and Applied Sciences.

- Duration: 12 months maximum (10 minimum)
- Offered: medical student
- Faculty: Charles R. Thomas, Jr., MD

For more : Learn from <https://geiselmed.dartmouth.edu/student-research/hospital-specialty-specific-research-opportunities/>

Interested to do research in Medical Education Department ?

Students interested in conducting research in the Department of Medical Education, explore more here : <https://geiselmed.dartmouth.edu/medical-education/>

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

Research Education Series

Co-curricular interdisciplinary seminars

When: November 5 | 7:00 AM – 8:00 AM

Where: Chilcott

Topic – Research Ethics by Dr. Gardner

The Geisel School of Medicine Events Calendar

Students are encouraged to check the Events Calendar to stay updated on upcoming research talks and Grand Rounds sessions.

<https://geiselmed.dartmouth.edu/calendar/index.php?m=9&y=2025&d=22>

October Medical Student Grand Rounds featuring research from 3 students!

Join us on **Tuesday, 10/28/25, from 6:00-7:00 PM** in DHMC Aud G or Zoom.

Food will be provided in person!



Medical Student Grand Rounds - October

October 28th, 2025 at 6 PM in Aud G (DHMC) or Zoom



**Skin from Scratch: An
Introduction to Tissue
Engineering Topics through a
Proof-of-Concept Skin
Substitute**

Jewelía Durant
MD, MS Candidate
Class of 2026



**Spinal Surgery Outcomes
Based on Zung Depression
Scores**

Tejas Purimetla
MD Candidate
Class of 2027



**Hyperbaric Oxygen Therapy
for Sudden Sensorineural
Hearing Loss**

Kiran Ganga
MD Candidate
Class of 2028

RSVP



**7th Brain Science Day –
Neurology, Psychiatry, and Neurosurgery United**



**Friday, November 21, 2025
10:30 am - 4:30 pm
at DHMC (Auditorium E & F)**

Come join us to learn more about the remarkable array of research, scholarship and creative activities conducted by faculty, staff, and students at Dartmouth Health and Dartmouth College

Keynote Speaker: M. Elizabeth Ross, M.D., Ph.D.

Nathan E. Cumming Professor of Neurology and Neuroscience

Chair, Neuroscience Graduate Program

Director, Center for Neurogenetics

Weill Cornell Medicine

10:30 - 11:45 AM Poster Session & Lunch

(Lunch and afternoon refreshments provided)

11:45 - 1:00 PM Welcome and Keynote Speaker: Dr. M. Elizabeth Ross,
Weill Cornell Medicine

1:10 – 2:40 PM Research Updates from Neurology, Psychiatry, Neurosurgery, and
other Departments at Dartmouth Health and Dartmouth College

3:00-4:30 PM Panel Discussion: Fostering Research Collaborations to Drive
Innovation and Address Challenges

Sponsored by: Department of Neurology and Department of Psychiatry
Dartmouth Health and Geisel School of Medicine at Dartmouth College



New England Healthcare Simulation Consortium Conference 2025: Professional Development for Simulation-Based Education and Operations



Monday, November 17, 2025

Registration: 7:00 – 7:45 am

Consortium: 7:45 am – 5:00 pm

Auditoria E and F, Dartmouth Hitchcock Medical Center, Lebanon, NH

OVERVIEW

The 2025 New England Healthcare Simulation Consortium (NEHSC) Conference provides an opportunity for simulation education and operations professionals in our region to come together and learn about professional development in simulation from experts in the field.

LEARNING OBJECTIVE(S)

At the conclusion of this learning activity, participants will be able to:

1. Describe three professional development pathways in healthcare simulation education or operations specialties.
2. List three healthcare simulation resources or opportunities in the New England region.

TARGET AUDIENCE

Healthcare Simulation Professionals from the New England region.

REGISTRATION

The registration fee is \$25. Need-based scholarships are available. Please email amanda.e.sanchez@hitchcock.org with your financial need.

Advance registration is required for planning purposes. Please make every effort to register seven (7) business days in advance of the learning activity. We will not accept walk-in or late registrants on the day of the learning activity.

To register, please visit the event website: <https://dh.cloud-cme.com>. For registration questions, please call (603) 653-1234 or email clpd.support@hitchcock.org.

If you need to cancel your registration, please call (603) 653-1234 or email clpd.support@hitchcock.org. Cancellations should be made five (5) business days in advance of the learning activity.

ACCREDITATION

In support of improving patient care, Dartmouth Health is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Dartmouth Health designates this live activity for a maximum of 6.0 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Dartmouth Health designates this live activity for a maximum of 6.0 ANCC contact hours.

All other learners may claim CME-designated participation credit. Consult your professional licensing board regarding the applicability and acceptance of CME-designated participation credit for programs certified for credit by organizations accredited by Joint Accreditation for Interprofessional Education.



SCAN ME

REGISTER ONLINE: <https://dh.cloud-cme.com>

Student Spotlight



Sarah M. Chacko , MD Class of 2027

Sarah is a third-year MD-MBA student at the Geisel School of Medicine. Her interest in the application of artificial intelligence in healthcare began during her undergraduate studies at Dartmouth, where she studied computer science and biology. For her honors thesis, she fine-tuned large language models and conducted sentiment analyses to discover linguistic features that can predict the therapeutic effects of medications for back pain.

Sarah is especially interested in leveraging artificial intelligence to expand access to quality medical care. She contributed to the development of an accessible therapeutic chatbot for suicide prevention and co-authored a chapter in the *Neurobiology of Mental Illness* on the use of digital phenotyping in mental health research. During medical school, she participated in the SOAR MD Anderson summer program, working with a radiation physics lab to develop a low-cost deep learning model for generating radiotherapy treatment plans for cervical cancer patients in low- and middle-income countries. She hopes to use her clinical and technical background to continue developing equitable AI solutions to bridge gaps in access to care across healthcare systems.

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/>

Students are requested to submit their published manuscripts to be archived in the Student Manuscript section of the website.

CLINICAL RESEARCH ARTICLE

Electrodiagnostic and Functional Biomarkers for Non-Ambulatory Children With Late-Onset Spinal Muscular Atrophy

Mariana Minei Ogata¹ | Vishva Natarajan² | Sriharsha Sripadrao³ | Soham Verma⁴ | Laura M. Johnson⁵ | Durga Shah⁶ | Mary Ritchey⁶ | Kimberly Carvell⁶ | Sumit Verma⁷

¹Universidad Peruana Cayetano Heredia, Lima, Peru | ²Geisel School of Medicine at Dartmouth, Hanover, New Hampshire, USA | ³Medical College of Georgia at Augusta University, Augusta, Georgia, USA | ⁴Johns Creek High School, Johns Creek, Georgia, USA | ⁵Pediatric Biostatistics Core, Department of Pediatrics, Emory University, Atlanta, Georgia, USA | ⁶Department of Physical Therapy, Children's Healthcare of Atlanta, Atlanta, Georgia, USA | ⁷Departments of Pediatrics and Neurology, Emory University, Atlanta, Georgia, USA

Correspondence: Sumit Verma (sumit.verma@emory.edu)

Received: 3 February 2025 | Revised: 5 September 2025 | Accepted: 12 September 2025

Funding: This work was supported by Department of Pediatrics, School of Medicine, Emory University, The Pediatric Biostatistics Core at Emory University (RRID:SCR_025834).

Keywords: Children's Hospital of Philadelphia infant test of neuromuscular disease | compound muscle action potential | hammersmith functional motor scale expanded | motor unit number index | motor unit size index | revised upper limb module

ABSTRACT

Introduction/Aims: Identifying sensitive response measures is crucial for evaluating treatment efficacy in SMA patients. Current electrodiagnostic (EDX) measures include compound muscle action potential (CMAP), motor unit number index (MUNIX), and motor unit size index (MUSIX). Functional measures include Hammersmith functional motor scale extended (HFMSE), Children's Hospital of Philadelphia infant test of neuromuscular disorders (CHOP-INTEND), and the revised upper limb module (RULM). Here, we compared EDX to traditional functional measures for monitoring treatment response in pediatric SMA.

Methods: A retrospective chart review of 16 non-ambulatory, late-onset (> 6 months of age) SMA children seen between January 2017 and June 2024 was performed. Motor nerve conduction study (NCS) recordings from the right median-abductor pollicis brevis (APB) and ulnar-abductor digiti minimi (ADM) nerve muscle pairs and functional scores were compared using Spearman correlation and a generalized linear mixed model (GLMM).

Results: EDX measures were significantly reduced in SMA children compared to healthy, age-matched controls ($p < 0.05$). Median abductor pollicis brevis (APB) CMAP amplitudes demonstrated moderate to strong correlations with CHOP-INTEND ($r = 0.64$, $p < 0.05$) and RULM ($r = 0.77$, $p < 0.05$) scores, and the GLMM revealed that APB CMAP significantly decreased over time (Beta = -0.02 , $p < 0.05$) in the non-treatment compared to the treatment group. HFMSE showed a declining trend in patients who received only risdiplam.

Discussion: Median-APB CMAP amplitude demonstrated sensitivity in capturing treatment response. A prospective study comparing nusinersen and risdiplam in a larger, clinically diverse cohort with a longer follow-up period is needed.

Abbreviations: CHOP INTEND, Children's Hospital of Philadelphia infant test of neuromuscular disease; CMAP, compound muscle action potential; HFMSE, Hammersmith functional motor scale-expanded; MUNIX, Motor Unit Number Index; MUSIX, Motor Unit Size Index; RULM, revised upper limb module; SMA, spinal muscular atrophy.

GMSJ

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

THE FOUNDERS & EDITORS-IN-CHIEF



Aryna C. Armand, MS
Geisel School of Medicine at Dartmouth College

Aryna Armand is a third-year medical student at the Geisel School of Medicine with a strong foundation in research and biotechnology. She earned her bachelor's degree in Biology from the University of San Diego, where she conducted bench research on molecular mechanisms involved in cancer biology, sparking her passion for scientific discovery. She later earned her master's in Biotechnology from Johns Hopkins University.

Aryna's research experience spans basic science, clinical research, and surgical innovation. At Children's Hospital Los Angeles, she contributed to translational research projects aimed at improving pediatric neuroblastoma outcomes, and at Geisel, she is involved in research within the plastic surgery department, focusing on advancements in reconstructive techniques. Her interests include plastic surgery, medical device development, and the integration of technology in surgical innovation, with a focus on improving patient care and expanding access to life-changing procedures.

Contact: aryna.c.armand@gmscholars.com

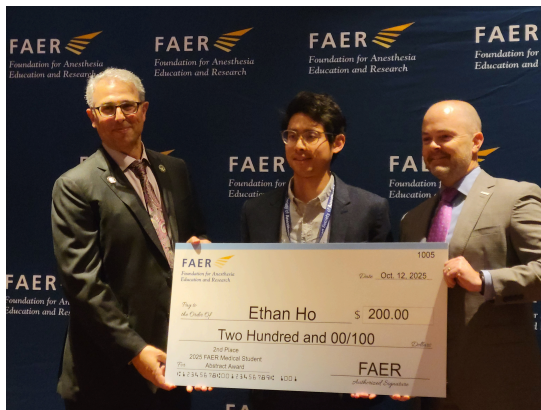


Matin Bikaran, BS
Geisel School of Medicine at Dartmouth College

Matin Bikaran is a third-year medical student at the Geisel School of Medicine at Dartmouth with a strong foundation in research and clinical medicine. He earned his bachelor's degree in Microbial Biology with Highest Distinction from the University of California, Berkeley.

Matin's research experience spans interventional radiology and immunology. At UCSF, he led an NIH RO1-funded project in genomic immunology, and at Geisel, he is exploring innovative radiological techniques for the treatment of complex medical conditions. His interests include interventional radiology, oncology, and the intersection of clinical medicine and innovation, with a focus on advancing patient care and outcomes.

Contact: matin.bikaran@gmscholars.com



Kudos to Ethan Ho ,Class of 2028 !
for receiving an abstract award at the American Society of Anesthesiologists Annual Meeting in San Antonio for his research titled *“Automated Right Ventricular Pressure Waveform Analysis to Quantify Pulsatile Afterload Components,”* funded by the Foundation for Anesthesia Education and Research (FAER).



DH Academic Scholar Year Opportunities

Some Geisel students choose to take an additional year to engage in scholarly work within a department or section at Dartmouth-Hitchcock (DH) or The Dartmouth Institute (TDI).

More information:

<https://geiselmed.dartmouth.edu/student-research/hospital-specialty-specific-research-opportunities/>



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