Dartmouth GEISEL SCHOOL OF MEDICINE | Office of MEDICAL STUDENT RESEARCH

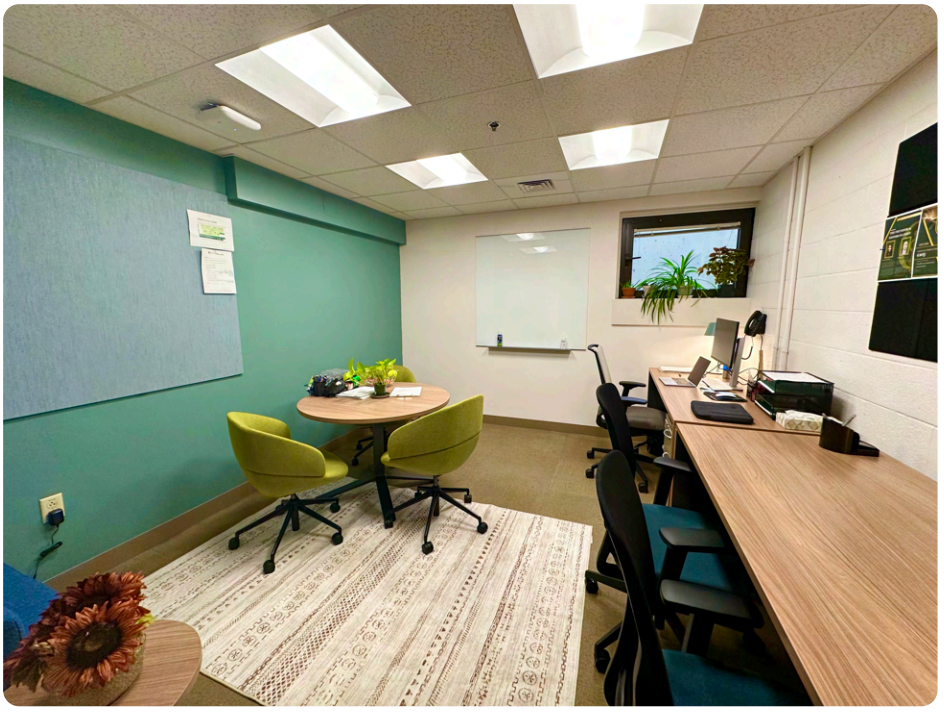
Weekly Newsletter

Oct 30, 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 Medical Students Showcase Research Projects at Annual Poster Night

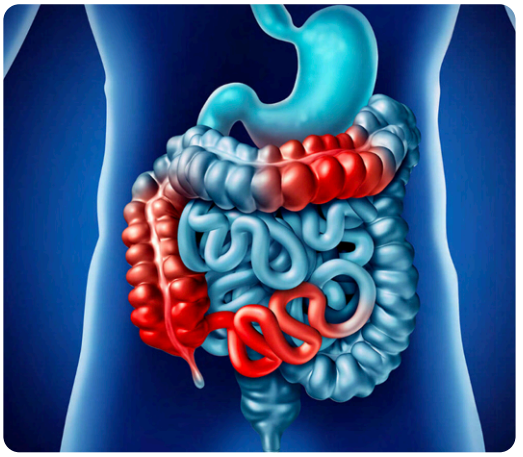
The Annual Medical Student Research Poster Night successfully took place on October 22nd , 2025, at DHMC.

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.

https://geiselmed.dartmouth.edu/news/2025/geisel-medical-students-showcase-research-projects-at-annual-poster-night/

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 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.

GI Research Project

Crowdsourcing" of patient-generated advice for improving the bowel preparation process for colonoscopy

Summary: Bowel preparation is vital to performance of colonoscopy yet is probably patients' least favorite part of the procedure and a big barrier to getting it done.

This project involves "crowdsourcing" patient recommendations, tips and tricks for getting through the bowel preparation process – starting with comments within a NYTimes article and potentially looking beyond at other sources.

Opportunities for Students: The student will work directly with Dr. Calderwood and potential other co-investigator(s). Students involved in this project may have the chance to publish an abstract or poster and potentially a short research letter.

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 pursing 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/

Orthopaedic Surgery Research project 2026-2027 in Steadman Philippon Research Institute

The Biomedical Engineering Department (BME) lab develops and tests new orthopedic surgeries in cadaveric specimens and evaluates their efficacy using state-of-the-art robotic manipulation and sensors. As a research fellow in the orthopedic robotics/biomechanics lab, the employee will play an integral role in projects from initiation to completion.

Apply here : https://recruiting.paylocity.com/Recruiting/Jobs/Details/3658243

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/

American Physician Scientist Association Interactive Series

A Day in the Life of a Physician-Scientist

Join APSA for a student panel with current physician-scientist trainees, followed by a Fireside Chat with Surgeon-Scientist Ginny Bumgardner, MD, PhD!

October 30th 2025
7-9 PM EST

Register at:
https://tinyurl.com/APSAWebinars

Panelist Bios at:
https://tinyurl.com/APSA-10-30-25

For more info about our sessions, see:
https://www.physicianscientists.org/page/interactive-sessions

APSA
American Physician Scientists Association

46TH ANNUAL NNE CO-OP PCBRN MEETING

"Advocacy in Action: Shaping Primary Care at Every Level"
January 23-25, 2026 | Stoweflake Mountain Resort & Spa, Stowe, VT

Call for Poster Abstracts Now Open

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

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

LIMITED STUDENT SCHOLARSHIPS AVAILABLE

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.

Fellowship opportunity for medical students interested in taking a year off to conduct clinical research. The fellowship is a year-long funded research program at The Children's Hospital of Philadelphia in the Division of Orthopaedic Surgery. Students interested in Orthopaedics who have completed their **second** or **third** year of medical school are eligible. There will be accepting applications on a rolling basis **until Nov 15**.

However, earlier applications are welcome and fellowship spots will be offered to the candidates on rolling basis.
For more information, http://www.chop.edu/pages/benjamin-fox-orthopedic-research-scholar-award

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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/

Dartmouth Climate Collaborative: Living Lab Grants Opportunity

The Dartmouth Climate Collaborative, a newly launched initiative funded by the Provost and President, aims to connect and enhance climate and sustainability-related research and teaching across all Dartmouth schools.

This fall, the Collaborative is launching the **Climate Collaborative Living Lab Grants** — $30,000 grants for projects that use Dartmouth's campus and the greater New England community for climate and sustainability research and teaching. This year, there is a special focus on proposals at the **intersection of climate and health** from Geisel faculty. Medical students are eligible to apply with a faculty co-PI or sponsor.

A Geisel-specific info session will be held on **Wednesday, November 5, from 12:00–1:00 PM** for those interested in applying. Come learn more about this exciting opportunity!

MSTAR – Medical Student Training in Aging Research

The UNC-Chapel Hill Medical Students Training in Aging Research (MSTAR) summer program is now accepting applications for Summer 2026. The UNC-CH MSTAR program provides medical students with an enriching experience in aging-related research and geriatrics. As a nationally-recognized NIH training center for aging research, this program has an outstanding track record, with many of our students publishing first author manuscripts and winning awards at national meetings

Applications for the 2026 MSTAR Program open at the end of October 2025.

More Info https://www.med.unc.edu/aging/mstar/

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

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

Dartmouth Health

DARTMOUTH

Dartmouth GEISEL SCHOOL OF MEDICINE

Dartmouth Health

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.

NEW ENGLAND HEALTHCARE SIMULATION CONSORTIUM

SCAN ME

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

Student Spotlight

Ethan Ho , MD Class of 2028

Ethan is a second-year MD student at Geisel School of Medicine. He is interested in using continuous monitoring and data-driven approaches to predict disease and improve clinical outcome. His passion for this work began during his undergraduate studies in biomedical engineering, where he contributed to research using consumer wearable devices and machine learning to detect COVID-19 infection and severity.

At Geisel, he is involved in developing a non-invasive blood pressure monitoring device by applying signal processing techniques to improve device performance and accuracy. He is also interested in predicting clinical outcomes for patients undergoing cardiac procedures. Recently, he completed a summer research fellowship at Yale New Haven Hospital, where he developed novel biomarkers from high-resolution right ventricular pressure waveforms to characterize right heart function and cardiopulmonary interactions. He co-created Geisel's first medical device innovation elective course and hopes to translate advances in medical technology to patient care.

🎉 Congratulations to the all participants and presenters at the Annual Medical Student Research Poster Night 🎉

Congratulations to all participants and presenters at the Annual Medical Student Research Poster Night, and your dedication, innovation, and scholarship exemplify the spirit of research excellence at Geisel.

Kudos again to this year's **Best Poster Award** recipients.

Best Clinical Research Posters

- **Annie Cao ('28)**
  Comparative Efficacies of TMR vs. RPNI in Reducing Phantom Limb and Neuroma Pain for Patients with BKAs
- **Daniela Armella Tangarife ('28)**
  Microbiome Patterns Differ Between Simple and Complicated Pediatric Appendicitis: A Systematic Review
- **Ethan Shih-An Ho ('28)**
  One-Year Longitudinal Follow-Up for IVUS-Guided PCI versus Angiography-Guided PCI
- **Habesha F. Petros ('28)**
  Cardiac Intervention Outcomes in Patients with Liver Disease: Predictive Value of Preoperative MELD 3.0
- **Jose Omar Romero ('28)**
  Applications of Image-Guided Transoral Robotic Surgery for Target Localization
- **Milan Stolpman ('28)**
  Enabling Outpatient Antibiotic Therapy and Early Discharge for Patients Who Use IV Drugs
- **William Patterson ('28)**
  Improving Hip Fracture Care Delivery: A Patient-Centered Observational Assessment at Dartmouth Health in Preparation for CMS Team

Best Foundational Science Posters

- **Charlie Mazof ('28)**
  Single-Nuclei RNA Sequencing Reveals Inhibitory Network Dysregulation in Focal Cortical Dysplasia
- **Rym El Mahil ('28)**
  Mitochondrial Leakage and Parthenogenetic Oocyte Activation in Ovarian Teratoma Formation

Best Medical Education Poster

- **Kiran Ganga ('28)**
  Building Ultrasound-Guided Procedure Skills in Regional Anesthesia via Simulation Training with a Formalin-Embalmed Cadaver Model

Best DEI Research Posters

- **Edith Rekpene Ben-Eboh (’28)**
  Strengthening Maternal Health in New Hampshire: Perspectives from the NH Perinatal Quality Collaborative (NHPQC)
- **Julia Elaine Katter (’28)**
  Mapping Medicaid's Reach: Gains in Early-Stage Lung Cancer Diagnosis and Persistent Disparities in Surgical Treatment in Indiana

Students who presented at Poster Night are encouraged to publish their poster abstracts in the GMSJ Journal.
For more information, please contact the **Editor-in-Chief of the GMSJ Journal.**

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.
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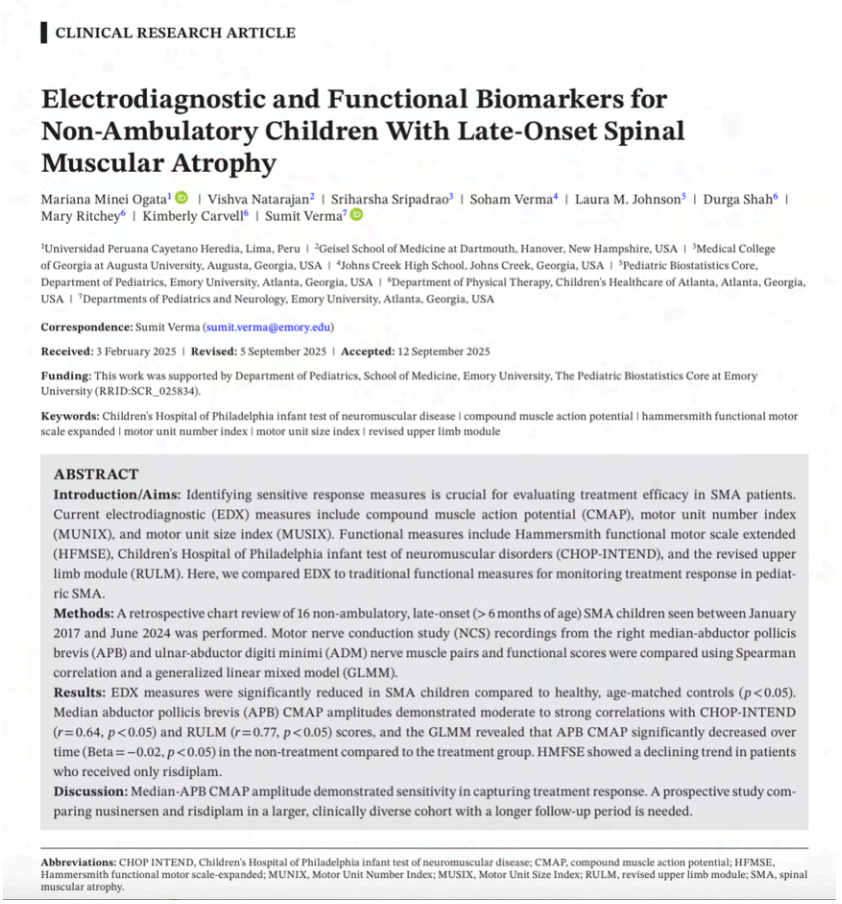

CLINICAL RESEARCH ARTICLE

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

Mariana Minei Ogata[1] | Vishva Natarajan[2] | Sriharsha Sripadrao[3] | Soham Verma[4] | Laura M. Johnson[5] | Durga Shah[6] | Mary Ritchey[6] | Kimberly Carvell[6] | Sumit Verma[7]

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

🔗 **Learn more and explore the journal:**
https://gmscholars.com/index.php/gmsj/index

Datasets for Research

Multiple datasets are available for use to perform clinical and population-based research. These datasets can be used by researchers to answer specific questions related to population.

https://geiselmed.dartmouth.edu/student-research/datasets-for-research/

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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