



Dartmouth
GEISEL SCHOOL OF
MEDICINE

Office of
MEDICAL STUDENT
RESEARCH

Weekly Newsletter

May 14, 2026

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.

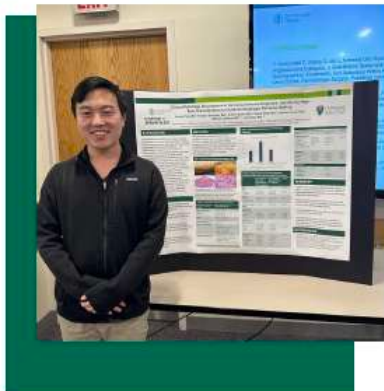
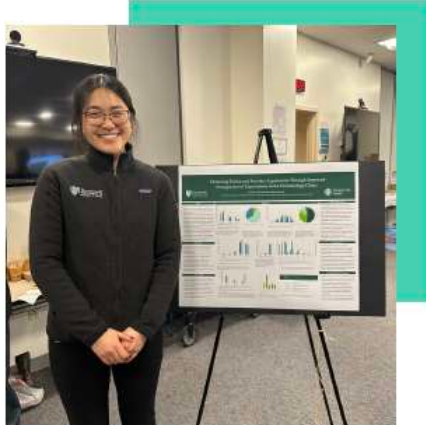
Contact: Medical.Student.Research@dartmouth.edu



The Geisel Medical Student Summer Research Scholarship in Dermatology



THE GEISEL MEDICAL STUDENT SUMMER RESEARCH SCHOLARSHIP IN DERMATOLOGY



SCHOLARSHIP DESCRIPTION

The Geisel Medical Student Summer Research Scholarship in Dermatology will offer \$2000 or \$4000 to a Geisel medical student to support their time performing research with the Dartmouth Health Department of Dermatology. The student will be mentored by a dermatology faculty member during their summer break between Year 1 and 2.

A number of clinical and translational research opportunities are available. Examples of faculty areas of interest can be found here:

• [Department Research Website](#)

Students are encouraged to reach out directly to faculty members whose research interests align with their own career goals and areas of interest to discuss potential sponsorship opportunities.

Students who already have an established summer research project and faculty mentor are also encouraged to apply. In addition, other dermatology faculty may be available as research mentors, and new student project ideas are welcome to be submitted for consideration. Please note that all applicants must identify a faculty sponsor and obtain faculty sign-off/approval for their proposed project prior to submission.

If you need assistance identifying a faculty mentor or choosing a project or have any other questions about the scholarship please reach out to Brittany.R.Stark@Hitchcock.Org

Students will be required to present their research at the Geisel Poster Night (fall 2026) and the Dermatology Research Night (winter 2027) in addition to any other conferences or manuscript submissions.

To apply, you must submit the following:

- A one-page statement explaining your interest in the specific research project, your overall career plans and background, and a description of how the funds will be used (which can be for personal support)
- A copy of your Curriculum Vitae
- Whether or not you are eligible for or receiving any other financial support (awards, scholarships, or stipends) for your summer research

Deadlines:

- Applications due by midnight, May 25, 2026
- Selected students will be notified by May 29, 2026

Submit Applications [HERE](#)

Apply here :

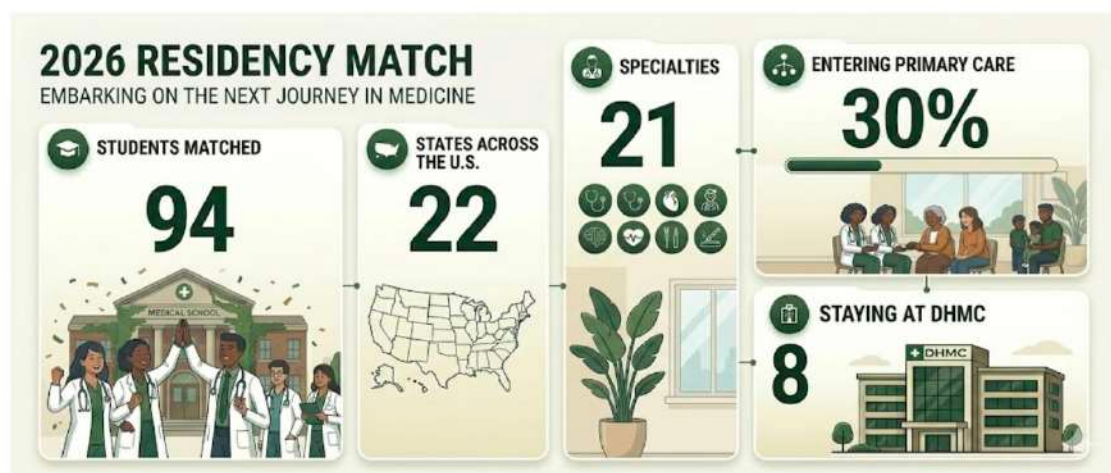
<https://app.smartsheet.com/b/form/019df85341387a6498f7803030ca69c6>

Dartmouth Space Medicine Innovations Laboratory

The Dartmouth Space Medicine Innovations Laboratory is looking for a motivated medical student or undergraduate to assist with an ongoing project investigating brain changes seen in astronauts after spaceflight, and comparing them to similar brain changes seen in bariatric surgery patients. The lab has already published a pilot study and is looking to acquire our own scans for a larger-scale project to further characterize these changes and any implications they may have for long duration spaceflight and patients who undergo extreme weight loss. This study will lead to at least one publication as well as likely multiple offshoot projects, and students will also be welcome to join other projects ongoing at the Space Medicine Innovations Lab. Students will also have numerous mentorship opportunities from lab directors, research assistants, and recent Geisel alumni.

Open to all students; well suited for those with an interest in space medicine, applied physiology, surgery, gastroenterology, or weight and wellness. Interested students may contact to Dr. Richard Rosato (Class of 2026) - Richard.J.Rosato.II.MED@dartmouth.edu or rjrosato98@gmail.com, Dr. Jay Buckey (Jay.C.Buckey.Jr@dartmouth.edu)

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





Resources for Students and Incoming Residents Interested in Hematology

For students interested in hematology and incoming residents exploring career options, the American Society of Hematology (ASH) offers a range of helpful resources. These include career guidance, educational materials, and opportunities to support your training and professional development in hematology.

Learn more :

<https://www.hematology.org/education/trainees/medical-student-resident-resources>



NIH Clinical Electives Program: Pediatric Oncology by National Cancer Institute (NCI)

Offered by the NIH Office of Clinical Research Training and Medical Education, this program provides valuable clinical and research experience in pediatric oncology.

Select 4th-year medical students may participate in a 4-week elective rotation at the Pediatric Oncology Branch. This experience highlights the connection between research and patient care in pediatric oncology.

<https://ccr.cancer.gov/Pediatric-Oncology-Branch/training-medical-student-rotation>

If you are interested in preparing for this opportunity, learn more here. https://www.cc.nih.gov/training/students/clinical_electives/pediatric_oncology

Advancing Your Career as a Medical Education Researcher and Scholar

The AAMC is committed to developing a community of leaders in medical education research and scholarship, to drive innovation across the continuum of medical education, from medical school and residency training to continuing professional development.

AAMC's Scholar Development Pathway guides you through each stage of your scholarly journey, from building essential skills to leading at the national level. This flexible framework allows you to progress step by step or to focus on specific areas that match your career goals. Explore each stage below and discover resources to support your growth.

Learn More : <https://www.aamc.org/about-us/mission-areas/medical-education/scholar-development#innovation>



Quality Improvement Project Opportunities

Project Name: Enhancement of Career Advising and Professional Development Resources

Project Team: Office of Student Life

Brief Overview: This summer project focuses on strengthening career advising and professional development support across the MD curriculum. The student will assess and organize existing advising resources and incorporate student feedback to improve clarity and accessibility of resources. The project will also support the development of student-facing materials to better support students' professional exploration and decision-making.

Project Name: Program Evaluation & Reaccreditation Preparation

Project Team: Office of Evaluation, Accreditation, and Assessment

Brief Overview: This summer project supports ongoing program evaluation and preparation for upcoming reaccreditation efforts. For program evaluation, the student will support an ongoing evaluation project by helping to identify defining experiences within the medical school curriculum, reflecting on their own experiences and in feedback from their peers. For LCME reaccreditation, they will help build a launch plan for the Independent Student Analysis, helping to identify a timeline of work, tools, and vision.

Project Name: Self-Designed

Project Leads: TBD

Brief Overview: What area of continuous quality improvement at Geisel are you passionate about that is not represented here? Outline your proposal here!

Apply here :

https://dartmouth.co1.qualtrics.com/jfe/form/SV_41jBlm41lvs6zLU

More info : <https://geiselmed.dartmouth.edu/md-program/geisel-education-offices/program-evaluation-at-geisel/contact/summer-quality-improvement-projects/>



The Geisel M4 Student Research Competition and Award Dinner successfully took place on May 7, 2026, from 5–7 PM at DHMC (Auditorium A–D).

Congratulations to all finalists, winners, and semi-finalists! Thank you to all faculty, Gisele leadership, and attendees for your support, dedication, and participation in making this event a success.

<https://geiselmed.dartmouth.edu/student-research/geisel-m4-student-research-competition-and-award-2026/>

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

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=5&y=2026&v=m>

The logo for the 2027 STFM Conference on Medical Student Education in Anaheim. It features a purple rectangular box at the top containing the text "2027 STFM" in white. Below this, the words "CONFERENCE ON MEDICAL STUDENT EDUCATION" are written in large, bold, purple capital letters. At the bottom, the word "ANAHEIM" is displayed in white capital letters, with each letter inside a separate purple circle. The background of the logo is a light yellow-to-white gradient on the left, transitioning into a series of overlapping purple curved shapes on the right.

2027 STFM
**CONFERENCE ON
MEDICAL STUDENT
EDUCATION**
ANAHEIM

Submit Your Proposal to Present at the 2026 STFM Conference on Medical Student Education

Submissions are OPEN to present at the 2027 STFM Conference on Medical Student Education! Submit your proposals to show your work to hundreds of medical student educators February 5–7 in Anaheim, CA. The deadline to submit your proposal is **June 17, 2026**.

Submissions should focus on topics related to undergraduate medical education. We strongly encourage collaborative submissions reflecting the perspectives of all involved in medical student education: department chairs, faculty, coordinators, preceptors, residents, and students. We also welcome engaging and interactive submissions, with an emphasis on encouraging audience participation.

<https://stfm.org/conferences/mse/overview/>

Student Spotlight



Yash Deshmukh, MD (Class of 2026)

Yash is a rising PGY1 who will be starting general surgery residency at Northwestern this July. He spent his time in medical school as the advocacy director for Physicians for Human Rights, an asylum evaluator for the Upper Valley Human Rights Clinic, and director of the Oncology Interest Group. He worked with Dr. Richard Barth to design and evaluate an EMR-based intervention to nudge providers to discuss disposal of excess opioids at post-op visits. Along with patient education and reminders, these interventions increased disposal rates from 30% to 92% and have been implemented across the departments of general surgery, orthopedics, and OBGYN. He also worked with Dr. Nirav Kapadia to assess levels of financial toxicity among rural cancer patients, with the goal of informing future interventions.

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.



Quantitative proteomics and phosphoproteomics of PP2A-PPP2R5D variants reveal deregulation of RPS6 phosphorylation *via* converging signaling cascades

Received for publication, January 11, 2023, and in revised form, July 28, 2023; Published, Papers in Press, August 10, 2023; <https://doi.org/10.1016/j.jbc.2023.105154>

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Reviewed by members of the JBC Editorial Board. Edited by Phillip A. Cole

Genetic germline variants of *PPP2R5D* (encoding: phosphoprotein phosphatase 2 regulatory protein 5D) result in *PPP2R5D*-related disorder (Jordan's Syndrome), which is characterized by intellectual disability, hypotonia, seizures, macrocephaly, autism spectrum disorder, and delayed motor skill development. The disorder originates from *de novo* single nucleotide mutations, generating missense variants that act in a dominant manner. Pathogenic mutations altering 13 different amino acids have been identified, with the E198K variant accounting for ~40% of reported cases. However, the generation of a heterozygous E198K variant cell line to study the molecular effects of the pathogenic mutation has been challenging. Here, we use CRISPR-PRIME genomic editing to introduce a transition (c.592G>A) in a single *PPP2R5D* allele in HEK293 cells, generating E198K-heterozygous lines to complement existing E420K variant lines. We generate global protein and phosphorylation profiles of WT, E198K, and E420K cell lines and find unique and shared changes between variants and WT cells in kinase- and phosphatase-controlled signaling cascades. We observed ribosomal protein S6 (RPS6) hyperphosphorylation as a shared signaling alteration, indicative of increased ribosomal protein S6-kinase activity. Treatment with rapamycin or an RPS6-kinase inhibitor (LY2584702) suppressed RPS6 phosphorylation in both, suggesting upstream activation of mTORC1/p70S6K. Intriguingly, our data suggests ERK-dependent activation of mTORC1 in both E198K and E420K variant cells, with additional AKT-mediated mTORC1 activation in the E420K variant. Thus, although upstream activation of mTORC1 differs between *PPP2R5D*-related disorder genotypes, inhibition of mTORC1 or RPS6 kinases warrants further investigation as potential therapeutic strategies for patients.

Phosphoprotein phosphatase 2 regulatory protein 5D (*PPP2R5D*)-related intellectual disability (ID) and developmental delay disorder (OMIM#616355) is a syndrome

characterized by mild to severe neurodevelopmental delay. The disorder, also known as Jordan's Syndrome, is characterized by ID, epilepsy, macrocephaly, autism-spectrum-disorder (ASD), hypotonia, and delayed motor skill development (1–4). *PPP2R5D*-related developmental disorder is autosomal dominant, arising from *de novo* germline missense mutations in the *PPP2R5D* gene (1, 2, 5).

PPP2R5D encodes a regulatory subunit of type 2A serine/threonine phosphoprotein phosphatase (PP2A). Most PP2A phosphatases function as heterotrimeric holoenzymes, which are ubiquitously expressed. To generate each PP2A holoenzyme, a unique regulatory-targeting (B) subunit is assembled with a common core dimer consisting of a scaffolding (A) subunit and a catalytic (C) subunit (6, 7) (Fig. 1A). The A-C core dimer is expressed in most, if not all, human cells, and humans express two highly similar isoforms of both the C and A subunits (*PPP2CA/PPP2CB* and *PPP2R1A/PPP2R1B*, respectively). There are four families of B-subunits (B, B', B'', and B'''/Striatin), and each family has several members (Fig. 1A). Some B subunits are widely expressed, while the expression of others is restricted to a subset of cell types (8). *PPP2R5D* encodes the delta isoform of the B'-family subunit and is called B'δ, B56δ, PR61, and *PPP2R5D* in the literature. *PPP2R5D/B56δ* is ubiquitously expressed, with slightly higher levels reported in the brain, breast, testis, and gastrointestinal tissue (9–11). In addition to each B-family having several isoforms, additional isoforms are generated by alternate splicing (8, 12). Therefore, although commonly referred to as PP2A in the literature, combinatorially, the PP2A family may include over a 100 unique holoenzymes (Fig. 1A).

To date, over 20 germline mutations in the *PPP2R5D* coding region have been reported, generating pathogenic missense mutations of 13 amino acids (13) (Fig. 1B and Table S1). Many pathogenic variants are charge reversal changes, in which a negatively charged acidic amino acid (e.g., glutamic acid, E) is mutated to a positively charged basic amino acid (e.g., lysine or arginine, K or R) due to a single base genomic alteration (e.g., glutamate (E), encoded by GAA or GAG, is converted to lysine (K), encoded by AAA or AAG). The most frequently observed pathogenic changes are p.Glu198Lys (E198K), p.Glu200Lys

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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.

We look forward to reviewing your work and celebrating your contributions to scholarship at Dartmouth!

Just published: Vol. 2 No. 1 (2026) of Graduate Medical Scholars Journal

<https://gmscholars.com/index.php/gmsj/article/view/11>



Dartmouth Medical and Health Sciences Libraries Research Support

A variety of research support services provided by the Dartmouth Medical and Health Sciences

Libraries including information on data searching and management, systematic reviews and analysis, and data sharing and visualization.

For more information :

<https://geiselmed.dartmouth.edu/student-research/dartmouth-biomedical-research-support-pages/>



Interested in an Academic Scholar Year (ASY)?

The Academic Scholar Year (ASY) offers Geisel medical students the opportunity to engage in a structured, rigorous program of academic, scholarly, or research activity.

Students remain in good academic standing while pursuing full-time, non-resident scholarly work.

All ASY proposals undergo a formal approval process to ensure high academic quality and educational value.

Want to learn more?

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



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