

Opportunities to Engage in Research at the Larner College of Medicine

TO: Members of the UVM Larner College of Medicine Class of 2026
FROM: [Renee Stapleton, MD, PhD](#)
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DATE: November 30, 2022
RE: Opportunities to Engage in Research at the Larner College of Medicine (LCOM)

- ❖ Information in this document applies to both the UVM LCOM Summer Research Fellowship and the CVRI (Cardiovascular Research Institute) Summer Research Fellowship
- ❖ A [pre-proposal form](#) must be filled out and approved prior to writing a full proposal
- ❖ A mentor is required
- ❖ A Summer Research Award will be awarded for the 3 most meritorious projects (open to all students who submit the final abstract and present their research from their summer research experience at the new annual fall poster session). CVRI also bestows one merit award.

Research is an important component of the multiple missions of the Larner College of Medicine (LCOM). We encourage you to participate in the opportunities available during your medical training to engage in **basic, clinical, translational, medical education, health services, and/or health policy-related research** activities that are ongoing in the institution.

How to start?

[Visit the Larner Research Website](#). On the website, you will find departmental research web sites, programmatic web sites, links to the Research Protections Office, and a wide variety of information about the kind of research done in the College and at University of Vermont Medical Center. Based on what you see, you may want to contact one or several faculty members to find out if they would be willing to act as your mentor for a 7-week summer experience.

Visit the [Larner Medical Student Research resource page](#) for many research opportunities and links to additional resources, specific to medical students including information on the [Larner Summer Research Fellowship](#) and the [Cardiovascular Research Institute \(CVRI\) Summer Research Fellowship](#) programs.

Your fellow students (M2s) are also an important resource during an informational meeting on Summer Opportunities, which will occur in December, during the lunch hour. Students and program directors will present the possibilities for your summer between your first and second year, including but not limited to the UVM LCOM Summer Research Fellowship. Please [visit the Summer](#)

[Opportunities section of the Medical Student Services Commons space](#) for resources from this year's and past years' sessions.

Also, you may reach out to [Medical Student Services](#) to reference pre-proposal forms submitted by the current second-year students who participated in summer research activities following their first academic year (please do not remove the folder from the office). Examples of final posters can be found on the [LearningCommons Summer Fellowship page, under our Mentor/Projects database](#).

How is this summer experience supported?

There are several mechanisms available to provide financial support for summer research. Additional information can also be obtained through individual faculty and departments. Here is a listing of the types of support that are available:

1. Both the College of Medicine and the CVRI **Summer Research Fellowships** (described in more detail at the end of this memo). These Fellowships are competitive and support students for a 7-week summer research project with stipends of up to \$3000.
2. NIH-funded Grants may have support for summer experiences for medical students. The Training Grants at the College are listed on the [UVM Larner Medical Student Research resource page](#). You might also consider contacting the following center to inquire:
 - a. Vermont Lung Center – contact Dr. Anne Dixon, Department of Medicine
 - b. Vermont Center on Behavior & Health – Dr. Stephen Higgins, Department of Psychiatry
 - c. Cardiovascular Research Institute of Vermont – Dr. David Schneider, Department of Medicine
 - d. Vermont Cancer Center – Dr. Randall Holcombe, Division of Hematology/Oncology
 - e. Vermont Center on Cardiovascular and Brain Health – Dr. Mary Cushman, Division of Hematology/Oncology
3. There are opportunities in some **Departments of the College of Medicine** to support students for a summer and all departments have a 'research liaison' faculty member. However, departmental opportunities for support are often limited and on a first come – first served basis.
4. Arrangements with **individual faculty**. Many individual College of Medicine faculty have access to extramural funding or departmental/divisional funds to support summer activities, and as mentioned above, the website is an excellent way to get started in reviewing the faculty's interests. The Office of Medical Education maintains an [online database of individual faculty who have expressed interest in students joining their groups for summer research](#), but it is not exhaustive.
5. Dr. Renee Stapleton, Director of Medical Student Research, is an excellent resource for help with navigating the research process and finding a mentor.
6. One frequently asked question regards statistical support for student research projects. You may well have access to statistical assistance through your mentor. However, if you need additional help, please be in touch with Maria Scolnick, a statistical consultant in the UVM libraries. [Statistical software support and consulting services are available to students](#),

postdocs, and researchers at UVM. Maria can assist with statistical methodologies, data interpretations and analysis, experimental design, and the use of statistical software. The Dana Library walk-in hours are Wednesday 2-4pm, in addition to the other options on the web page.

What are some key issues?

No matter what the source of support or with whom you work, here are some key issues that need to be addressed:

- 1. Types of Projects:** Projects are expected to be “research”, defined as posing a hypothesis and performing a basic science or clinical “experiment” with data collection and analysis, to address the hypothesis and provide new insight and knowledge; in some cases we may accept more descriptive research such as observing a new area of medicine and/or biological science and carefully documenting features or characteristics, thereby providing important new insight into “what” something is. However, such projects will be given a lower priority and may not receive funding if we have many proposals. Chart reviews and case series of small numbers of patients from local data sets are rarely funded because their results are unlikely to be generalizable.
- 2. Your role on the project:** Students are expected to have a major role in the project that is distinct from others in the research group who might be working on the same project. In other words, each student should have their own research question that they are working to answer independently. They should not be shadowing other researchers in the group/lab. Additionally, while more than one medical student can be supported by an individual mentor for summer projects, more than one student cannot work on the same research question.
- 3. Mentorship:** having a mentor is a requirement. Having your mentor be an LCOM faculty member is not a requirement BUT we strongly advise you do so; proposals with extramural mentors and performance sites will receive a lower priority and may not be funded if there are more proposals that funds can support.
- 4. Funding:** Funds to conduct research are always very tight, and to try to support as many students as possible, we encourage mentors to contribute funds in addition to the OMSE. Student projects where the mentor is committed to sharing the funding will receive priority over those without mentor funding.
- 5. Human studies:** If your research involves human subjects, the protocol must be in place and approved by the UVM Institutional Review Board (IRB) in order for you to receive funding for your project. In other words, **if your proposal is accepted for funding, you must show proof of IRB approval to receive your summer stipend.** This means that you need to make sure this IRB approval process starts early. Work with your mentor to make sure this happens.
- 6. Animal studies:** If your research involves animals, you will need to submit a protocol to the Institutional Animal Care and Use Committee (IACUC) and have it approved before you can begin your work. This needs to be done in consultation with your mentor. However, often you can be added to an existing protocol based on your mentor’s work. Ms. Aubrie Class is the Director of IACUC and can be a resource for you in this area. A certificate for completion of web-based training for working with animals is also a requirement and can be found on the [Animal Resources Center website](#).
- 7. Training in the conduct of research:** There are 2 trainings that students must complete.

- a. First, all summer students must complete the ***UVM LCOM Summer Research Fellowship Students Fundamentals in the Conduct of Clinical Research Training Program***. This program was designed in partnership between the LCOM Office of Clinical Trials Research and the LCOM Medical Student Research program, with the goal of providing Summer Research Fellowship recipients a foundation for the conduct of research at UVM and UVMHN. Ms. Kim Luebbers directs the [Office of Clinical Trials Research](#) and the [Clinical Research Center](#), and she was instrumental in designing this training. She can be an excellent resource to you for help.
- b. Second, if your research involves human subjects, you must also complete the UVM on-line course concerning human subjects research (CITI Training). This course is available on the [IRB website](#). The [IRB website](#) is an excellent source of additional information.
8. **Timing and Work Expectations:** You will only have a maximum of 7 weeks available in the summer, so you and your mentor will need to make careful plans to fit in a productive project. It is important to start early! The expectation is that you will work full time (i.e. 40 hours per week) for the 7-week summer research experience.
9. **Final Research Presentations/Abstracts:**
 - 1) You must submit a final research abstract and a copy of your poster by Monday, October 16th, 2023 (submitted electronically to [Student Services](#)). These are to be submitted as a single PDF document with the file name “2023_SummerResearch-FinalAbstract_studentlastnamestudentfirstname.” There are no formatting requirements or a template for the poster; please work with your mentor to design your poster.
 - 2) A poster session will occur on Thursday, October 26, 2023, from 11am-2pm where you are required to present your summer research. You may print it at UVM Print and Mail (link [here](#)), and the Office of Medical Education will cover the cost of printing. Make sure you submit the poster in plenty of time to allow them to print it before the Poster Session.

Timeline

August – January of first year (M1)	Have discussions with faculty, identify a mentor and a potential project
Friday, December 2	Summer Opportunities Informational Session
Monday, December 5	LCOM Research Faculty Brown Bag Lunchtime Social, to be advertised in The WeeklyWire
Monday, February 13	Submit pre-proposal form electronically to Medical Student Services *Must be submitted as a single PDF document with the file name “2023_SummerResearch-PreProposal_studentlastnamestudentfirstname”
Friday, March 3	Project review outcomes sent via email

Monday, April 10	Final proposals due (submitted electronically to the Medical Student Services)* *Must be submitted as a single PDF document with the file name "2023_SummerResearch-FinalProposal_studentlastnamestudentfirstname"
Friday, May 12	Award notifications for LCOM fellowships sent via email
June 24 - August 12	Summer Research Fellowships completed under mentor supervision
Monday, October 16	Final research abstracts due (submitted electronically to the Medical Student Services)* *Must be submitted as a single PDF document with the file name "2023_SummerResearch-FinalAbstract_studentlastnamestudentfirstname." See detailed instructions below.
Thursday, October 26 11am-2pm	Poster session attended by students, mentors, Medical Student Research Committee Members, faculty, administration, etc.
January, at end Foundations Level	Selected Merit Award Recipients presented at the class's End of Foundations Celebration

College of Medicine and CVRI Summer Research Fellowships:

Summer Research Fellowships funded by the College provide **up to \$3000** and are **seven weeks** in length. Support is available for these fellowships is awarded based on the relative merit of the proposals submitted. We will try to fund as many as possible. We require each applicant to ask their mentor to help with their support (see more below), and many of the training faculty members contribute their own research funds to these endeavors in order to make more fellowships available.

The CVRI (Cardiovascular Research Institute) also funds three Summer Research Fellowships **up to \$3000** each for research related to cardiovascular disease. The application process for these fellowships are the **same as for the LCOM Summer Research Fellowships**.

Students wishing to compete for these funds (either from the College or from the CVRI) must submit a [pre-proposal form](#) that includes student and mentor information as well as a **brief** description of the project and anticipated funding sources. We will be in touch with your proposed mentor to encourage financial support of your project.

Following approval of the pre-proposal,

A full proposal will be required describing the project **not to exceed 5 double-spaced, type-written pages**. It is understood that the student requesting support will write his/her pre-proposal and proposal in collaboration with their chosen mentor. The proposal **must** contain:

- a cover page indicating the title of the proposal, and the name of your faculty mentor;
- a statement of Specific Aims including the hypotheses to be tested or objective of project (1 page);
- a brief background and significance section (1-2 pages);
- methods of procedure including the rationale for their choice (1-2 pages);

- future directions in which this project may lead (½ -1 page);
- your specific role in the project (1-2 sentences); and
- a letter from your chosen mentor/sponsor indicating his/her willingness to mentor you in this endeavor as well as indicating what funds, if any, are available to support the various aspects of the project. He/she should specifically address whether funds are available to support ½ of the stipend.
- Please note that the 5-page limit does not include the cover page and mentor letter.

Applications will be reviewed and awards made on a competitive basis. All final proposals must be submitted **by Monday April 10, 2023** electronically to [Medical Student Services](#).

Merit Awards

LCOM Summer Research Awards (from either the College or the CVRI)

All recipients of the LCOM Summer Research Fellowship are required to present their final work summarizing their research experience in the form of a 400-word abstract and a poster presentation at an annual poster session. The Larner College of Medicine Medical Student Research Committee will evaluate the abstracts and posters and will select three merit award recipients based on the quality of the project. The **three selected students are recognized and receive a \$500 Merit Award at their End of Foundations Celebration, in January**. The **CVRI also bestows one merit award each year** to the most meritorious cardiovascular research-related final report.

The final abstract should have the following characteristics:

1. Should be no more than 400 words to include sections d-g below (excluding cover letter [below], title, authors, and one reasonably-sized table or figure)
2. Should include the following sections:
 - a. Title
 - b. Authors
 - c. Introduction/background/rationale
 - d. Methods
 - e. Results
 - f. Discussion of the importance and impact of the Results
 - g. Conclusions
3. You must also include a cover letter (not more than one page, single-spaced) that introduces the abstract, and contains the following:
 - a. a section on difficulties encountered and how they were addressed
 - b. if appropriate, a comment from your mentor explaining what part of the project was actually done by you
 - c. a section on what the you learned and what you “took away from this experience”

The Larner College of Medicine Research Committee will evaluate all submitted final abstracts and posters presented at the annual fall poster session and will select three based on the merit of the project and the final report. The **three selected students will be recognized and receive a \$500 Merit Award at their End of Foundations Celebration, in January**. In addition, the merit award recipients

will be asked to present a summary of their experience in a research forum determined by the Associate Deans for Students and Research.

While students that obtain funding through other means are not required to submit a final abstract or present their poster, all those who wish to be eligible for the Summer Research Award will be required to submit a final abstract and present a poster.

The **CVRI also bestows one merit award each year** to the most meritorious cardiovascular research-related final report.

Final research abstracts are due Monday, October 16, 2023 by 11:59 PM EST, submitted electronically to [Medical Student Services](#).