

Opportunities to Engage in Research at the Larner College of Medicine

TO: Members of the UVM Larner College of Medicine Class of 2024
FROM: [Renee Stapleton, M.D., Ph.D.](#)
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DATE: November 20, 2020
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 and reports (open to all students who submit a final report on their summer research experience). 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, medical education, health services, and/or health policy-related research** activities that are ongoing in the institution.

How to start?

Visit the [LCOM 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.

You can also [find information on the CVRI Summer Research Fellowships](#) online.

Your fellow students (M2s) are also an important resource during an informational meeting on Summer Opportunities, which will occur the third Friday, in November, during the lunch hour, in Med Ed 200. 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 [Summer Griffin](#) 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). Final summary reports are found in the [UVM LCOM Summer Research Fellowship Learning Commons space](#).

Projects are expected to be “research”, defined as posing an 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 a large number of proposals. Chart reviews of small numbers of patients from local data sets are rarely funded because their results are unlikely to be generalizable.

How is this summer experience supported?

There are a number of 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 LCOM Research website](#). You might also consider contacting the following center to inquire:
 - a. Vermont Lung Center – contact Dr. Anne Dixon, Department of Medicine
 - b. Vermont Center for Immunology and Infectious Disease - contact Dr. Ralph Budd, Department of Medicine
 - c. Vermont Center on Behavior & Health – Dr. Stephen Higgins, Department of Psychiatry
 - d. Cardiovascular Research Institute of Vermont – Dr. David Schneider, Department of Medicine
 - e. Vermont Cancer Center – Dr. Gary Stein, Department of Biochemistry
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 web site is an excellent way to get started in reviewing the faculty’s interests.

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. **Mentorship:** having a mentor is a requirement. Having your mentor be a LCOM faculty member is not a requirement BUT we strongly advise you do so; again, proposals with extramural mentors and performance sites will receive a lower priority and may not be funded if there are a large number of proposals.
2. **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.
3. **Human studies:** If your research involves human subjects, the protocol to the Institutional Review Board (IRB) must be in place and approved at the time of your application. Work with your mentor to make sure this happens. You must also complete the UVM on-line course concerning human subjects research. Ms. Gale Weld is a Research Review Administrator at the IRB and can be a resource for you in this area. The [IRB web site](#) is also an excellent source of information. Ms. Kim Luebbers directs the [Office of Clinical Trials Research](#) and the [Clinical Research Center](#), and can be a resource to you for help.
4. **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. Penni Cross is a Research Review Administrator in the 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 web site](#).
5. **Timing:** 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!
6. **Final Reports:** All recipients of the COM Summer Research Fellowships are required to write a report summarizing their research findings; those with other funding sources are encouraged to provide written reports as well (see below). The final report should not exceed 2 pages (single-spaced), not including figures. Any difficulties encountered should also be addressed.

Timeline

August – January	Have discussions with faculty, identify a mentor and a potential project
Friday, November 16	Summer Opportunities Informational Session
TBD	LCOM Research Faculty Brown Bag Lunchtime Social, to be advertised in The WeeklyWire
Monday, February 15	Submit pre-proposal form electronically to the Office of Medical Student Education (OMSE)

Friday, March 5	Project review outcomes sent via email
Monday, April 12	Final proposals due (submitted electronically to the OMSE)
Friday, May 14	Award notifications for LCOM fellowships sent via email
June 21 - August 13	Summer Research Fellowships completed under mentor supervision
Monday, September 13	Final research reports due (submitted electronically to the OMSE)
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 **7 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); 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 12, 2021** electronically to the [Office of Medical Student Education](#).

Merit Awards

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

All recipients of the LCOM Summer Research Fellowship are required to submit a final report summarizing their research experience. The final report should have the following characteristics:

1. Should be no less than 2 pages (single spaced) and no more than 5 pages (single spaced) single space (excluding cover page, tables, figures and references); the report should include the following sections:
 - a. Introduction and Rationale for this project
 - b. Methods used
 - c. Analysis done and Results
 - d. Discussion of the importance and impact of the Results
2. A cover letter that introduces the report, 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; what you “took away from this experience”

The Lerner College of Medicine Research Committee will evaluate all submitted final reports 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 recipients will be asked to present a brief 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 report, **all those who wish to be eligible for the Summer Research Award will be required to submit a final report.**

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

Final research reports are due Monday, September 13, 2021 by 11:59 PM EST, submitted electronically to the [Office of Medical Student Education](#).