

Guidelines for Summer Student Research Mentors

Summer Faculty Mentorship

Many students have expressed interest in summer research this year and are currently seeking mentors. The number of available funded spaces is uncertain right now but is likely to be around 10-12 as it has for the past several years. If there are more students than funded slots, departments will have to fund additional student projects from discretionary or grant funds. Faculty may want to talk with department chairs about the number of students being considered for a summer project. Last year there were 10 funded spots and we did not fill all of them.

Mentors should have no more than two(2) students for summer research projects. This is in the best interest of the student, the mentor and the distribution of projects throughout the school. From a funding and presentation perspective, it is best not to create team projects, but of course we want to support collaboration. Two students working together should have clearly defined separate roles, not just both doing the same thing. Students have been advised of this information.

Students will be expected, as always, to submit a strong application. Applications are judged on how well the student answers the questions on the application (see below for application details).

PROGRAM BACKGROUND AND GOALS

The School of Dental Medicine seeks to foster an interest in scientific investigation, involve Dental Students in research activities, and encourage ongoing research partnerships between students and faculty. This program promotes an environment of scientific inquiry within the School and is highly valued as an enrichment experience in the dental school curriculum

The goals of the Summer Research Program are for students to:

- Participate in the process of a scientific investigation
- Gain knowledge in a focused content area of mutual interest to the both student and faculty mentor
- Organize and communicate findings from their research experience

Students participating in the program will collect, analyze, and interpret the project data under the guidance of their faculty mentor. Upon completion of data analysis, **students will be expected to present at Professional's Day at the dental school and submit abstracts to or a national meeting.**

MENTOR RESPONSIBILITIES

- This is pre-doctoral student research. **The scope of the project should be feasible in one summer**, with minimal carryover. It can be something original or a component of an ongoing investigation. The student should be able to submit the abstract as first author for a presentation. It is not intended to assist with graduate student projects.
- Offer guidance, but do not write the research project application.
- Set a realistic project and timeline.
- Be clear about project expectations, goals.

February 2025

- If IRB review is needed, you are responsible for submission, but students can always get help from Dr. Demko. Students may not start or receive funds if approval is not obtained.
- If there are any outside collaborations, be sure they are reliable and support the project in a timely manner.
- The student receives a stipend; your lab/department is responsible for other project costs.
- Be available and accessible for the majority of the 8 week project. There is flexibility in the timeline.
- Meet regularly to monitor progress, make suggestions, offer encouragement.
- Be willing to provide feedback on student performance.
- Contact student research director with problems, questions.

PLEASE LET ME KNOW IF YOU ARE WILLING TO MENTOR A STUDENT AND I CAN SEND SOMEONE YOUR WAY. If a student contacts you and you are not able to mentor this summer, please just tell them or if you are looking at your schedule, just let them know you'll get back. Just keep in touch with them if you are seriously considering being a mentor this summer. Thank you.

TIMELINE and FUNDING – APPLICATIONS DUE March 24, 2025

- Stipend amount and numbers are still pending for 2025 but I am hopeful to know sooner this year; these are payable in 2 installments dependent on progress.
- Travel money will likely be limited; last year there were 3 slots not including the SCADA winner. It would be good if departments can assist with additional travel money, but let's coordinate for the best use of funds.

STUDENT RESPONSIBILITIES

- Honor the full-time, 8 week commitment to the project. Work timelines are flexible and must be approved by your mentor. This means that if you have 'down-time', your mentor may ask you to assist with other projects.
- Complete the CITI initial training for Human Subjects Protection. This applies to everyone, even laboratory-based studies.
- Attendance at the summer research D-CODAS meetings.
- Submit summaries as requested by the project administration; comply with benchmark requests.
- Concurrent participation in other paid/volunteer opportunities is not permitted.

Instructions to Student Applicants for Research Project Proposal –

The project plan should be double-spaced in 11-point font and with one-inch margins. It should be long enough to sufficiently answer every question. Make sure all pages are numbered and your name is in the upper-right hand corner. Here is a suggested organization and the general questions your proposal application should answer:

- **Objectives and Specific Aims:** What do you want to do? Provide a short description that describes what this project is intended to accomplish; what research question will it answer or research hypothesis will it test.
- **Background and significance:** Why is the work important? What has already been done? Provide a brief background for this proposal; what is the current state of knowledge; you must include at least several references related to this line of research. Specifically identify existing gaps that your proposal will address. State concisely the importance of this line of inquiry. This section should demonstrate that you understand the purpose and previous work in this area, not just what your mentor has told you.
- **Preliminary Studies:** This is optional; it would be applicable to describe how it fits into your faculty mentor's research or if you are continuing a previous student's work.
- **Methods: What methods will you use to do the work?**

Describe the study design and methodology to be used in this project. With your mentor's guidance, there should be sufficient detail to provide a clear understanding of the project's methods. For example,

- Lab or pre-clinical projects: describe the laboratory methods to be used; or dental materials.
- Surveys: what survey instrument will you be using, currently published, previously used in mentor's work, or to be designed. How will it be designed and tested. Who is your target audience and how will you reach them? How will you reach your target respondents?
- Interviews, direct observation: Projects with direct patient contact may still be limited in summer 2025. But they are allowed with proper precautions.
- Secondary analysis; if a mentor has a de-identified dataset for analysis, this might be a possibility.
- Chart reviews: these will have to be further approved in new process and may cause delays. If the mentor has an active IRB to which you can be added, that may be possible.

Some idea of sample size; how many experiments, how many surveys. How many will it take to give you a valid answer.

- Describe any collaborations outside of the dental school that you may need. If you have outside collaborations, these will require some additional support (letters or some assurance from your mentor). It's important to be sure that all the pieces are in place for the successful completion of the project.
- **Where will you do the work? Be sure that you can easily communicate with mentors; you and your mentor will be asked to confirm what physical space you will need to do your project. You must be on campus for some of the work.**
- **Describe how you will analyze the data.** What will you be describing, estimating (the prevalence of smoking in our clinic population) or what will you be comparing (successful implants in patients with and without diabetes).

Timeline: A general work schedule and timetable for progress helps you think through the process and must be included

Be clear on your role and responsibilities on the project. What experience and/or skills do you have that contribute to this project. What do you hope to learn? What specifically will YOU do.

- Projects with multiple students are typically discouraged because the goal is to conduct and present research conducted by one, funded student. Students on collaborative projects will have to split the stipend and if selected for travel, only one student is funded for travel.
- **Human subjects: If human subjects are involved, including all survey projects, think early about the IRB; even expedited reviews can take several weeks. Under some circumstances, your project may be exempted, but YOU cannot determine that; you must submit an IRB application and they will provide the exemption. Contact me if you need help.**
- Literature cited

Be sure to include a cover page with:

1. The title of the project
2. Your name
3. Your email (the one you most consistently check)
4. Your faculty mentor's name, department and email
5. The date of submission

Please submit electronically to Dr. Catherine Demko, Dental School Room 217 / catherine.demko@case.edu. Be sure to copy your mentor on the submission.