Introduction to Shapiro Summer Research Program

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Learning Objectives

1. Become familiar with the Shapiro Summer Research Program
2. Identify key resources for finding projects and mentors
3. Learn strategies for contacting and interviewing mentors
4. Know timeline and application process
Shapiro Summer Research Program

- 130 M1s participated in the 2022 Shapiro Summer Research Program
  - $400 per week stipend ($3200-$4000 total, in one payment in June)
  - 8-10 weeks full-time mentored summer research
- Can combine with other summer opportunities
  - Shorter term global health, clinical opportunities, vacations
- Curriculum sessions
- Counts towards Path of Distinction in Research requirements
- Student responsible for finding a mentor and project
- All research areas are accepted
- Prior research experience not required
Shapiro Summer Research Program

Key Dates and Timeline

- Faculty submit summer projects;
- M1s attend workshops;
- Faculty and M1s meet and match;
- M1s write proposals

M1s finish proposals and submit by deadline: March 3, 2023

Proposals are reviewed

Decisions are announced by April 15

Shapiro Summer Research Program

- December - January
- February
- March
- April
- May - August
Why Do Summer Research?

- As a first year med student:
  - With research, you can go in-depth on a topic of your choosing and combine it with targeted shadowing opportunity
  - Research provides an opportunity to do something innovative

- Research is an integral part of evidence-based medicine and medical advancement
  - Helps you navigate the ever expanding lanes of the information highway
  - Informs and improves your clinical practice
# Identifying Your Research Interests

<table>
<thead>
<tr>
<th>Student-generated Idea</th>
<th>Mentor-generated Idea</th>
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<tbody>
<tr>
<td>• Might take more time, work, and coordination between now and start of project due to IRBs and other protocols</td>
<td>• Easier to start and you can still carve out your own piece of the project</td>
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<tr>
<td>• Can be very rewarding</td>
<td>• Might not be exactly what you envisioned</td>
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Best scenario: pick something you like and something your mentor likes.
How Did You Find Your Mentor? (in %)

- Worked with Mentor Previously: 9%
- Web Search: 2%
- Student Research Portal: 53%
- Recommendation from a Student: 6%
- Recommendation from Faculty: 14%
- Through a Class or Lecture: 7%
- Research Forum: 9%
<table>
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<tr>
<th>Dept.</th>
<th>Non-Shapiro Opportunities</th>
<th>Project Information</th>
<th>Open Slots</th>
<th>Mentor Information</th>
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<tbody>
<tr>
<td>Anesthesiology</td>
<td>Research Electives for credit</td>
<td>Reversal of Paralysis in the Cardiothoracic Surgery Intensive Care Unit: Patients are given paralysis in the operating room to tolerate surgery. This is most often reversed in the operating room, but when patients undergo cardiac surgery, this is often skipped and left up to the discretion of the intensive care team. Unfortunately, due to false assumptions about drug offset, residual paralysis is a very real, potentially life threatening problem. We know reversal is often skipped and believe that this greatly impacts outcomes. While this has been shown repeatedly for regular OR cases, it has never been published in the CTICU. We plan to review all patients who underwent cardiac surgery, who received paralysis with rocuronium and who were extubated within 24-hours, comparing those who received reversal of paralysis, and those who did not, for important clinical outcomes, including mortality. Once done at UW, we hope to group an already-arranged multicenter cohort to publish a 2nd broad, high-impact trial.</td>
<td>1</td>
<td>Micah Long, <a href="mailto:mlong@wisc.edu">mlong@wisc.edu</a> -- Co-Mentor: John T. Dollerschell <a href="mailto:dollerschell@wisc.edu">dollerschell@wisc.edu</a></td>
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Role - Coordinating the IT export of data, then guidance / statistical planning for study design for necessary outcome measures, then literature search and writing up of the effort. For multi-center effort, this will involve preparation of lectures/powerpoints and writeups, including potential local-grant funding requests; IRB Status - Submitting, expected approval by end of 2022. Skills - Medical students have more than enough skill for this.
Contacting Potential Mentors

- Tailor your initial email
  - Introduce yourself and emphasize any relevant experience
  - Show familiarity with mentor’s work
  - Attach an updated resume/CV

- Pursue 2 or 3 opportunities at the same time

- Be persistent

- Respond promptly

- If a new mentor, cc me
Interviewing Potential Mentors

Student Research at SMPH

Shapiro Summer Research

Instructions for Students

Information for Faculty

Projects

How to Find a Mentor (Slides)

How to Write a Shapiro Proposal

Questions for Shapiro Mentors

Resources

Path of Distinction in Research

ICTR/Shapiro Year-long Fellowship

Research Forum

Projects

Projects with open slots are available to Shapiro applicants. “Non-Shapiro Opportunities” are interested in a shorter term (non-summer) projects and yearlong projects.

March 2023
Questions for Mentors

The Project:

- **Is IRB needed and approved? Will it be approved by summer?**
- Is the project ongoing or new?
- Does it have a clear hypothesis or is it explorative?
- Is the scope appropriate for a summer project?
- What are the expected outcomes?
- What is the potential for continuation past summer?

Your Role:

- What is expected of you?
- What are your skills and training needs?
- Independent or team effort?
- Time commitment?
- Likelihood of publication or presentation?

The Mentor:

- Availability and communication style
- Experience mentoring students
After your interview

• Send a thank-you email
• Follow up on mentor’s suggestions:
  • If they give you papers, read them
  • If they ask you to reach out to others in the lab, do it
• If you decide to pursue a topic of greater interest, tell them promptly!
The Application is Due March 3
Submit via https://medwisc.smapply.io/prog/ShapiroSummer

1. Facesheet
2. Research proposal outline (3 pages):
   1. Background and Significance
   2. Research Questions
   3. Research Design and Methods
   4. Student Role and Responsibilities
   5. Statement of Motivation
   6. Learning Objectives
   7. Mentoring Plan
3. Student Resume or CV
4. Mentor Statement of Support (request 2 weeks in advance
5. Mentor biosketch or CV
6. Copies of IRB Approvals
7. Program participation agreement
Shapiro graduates give advice to M1s:

- “Meet with your mentor before beginning your summer research to coordinate all the administrative items that need to be lined up before beginning your project.”
- “Plan ahead. Tell your mentors during the initial interview what kind of experience you want AND what you want out of it, then see how they respond and if they have a proven track record of producing success with past students.”
- “Make clear expectations with your mentor about what you would like to get out of the project and whether there will be publications”
- “Learn about the resources available to you and take advantage of them to advance your research and polish your skills, read relevant articles before you start.”
- “Take advantage of all the opportunities provided, and don't be afraid to try research in an area that you aren't sure you want to do a residency in.”
- “Find mentors who are great and research that you are actually interested in, otherwise it could be a long summer.”
- “Don't focus too much on what type of research it is - having an accessible and enthusiastic teaching mentor is invaluable.”
- “Pursue a project in something you haven’t done before. It will give you the opportunity to learn about a different field of medicine and rule in/out career opportunities.”
Shapiro graduates give advice to M1s:

• “Have a clear idea of the steps you need to take and the people who can help you at each step. When things don’t go as planned, try another direction. Take advantage of those around you who are interested in teaching you what they do and what opportunities and options exist for you as a learner and in a future career. Remember people's names and send them thank yous for their time meeting with you.”

• “I would recommend trying to set up a day of the week that you plan to check in with your mentor. This helps keep you both on schedule.”

• “Find a topic or area that you are truly interested in and passionate about. When you really care about what you're learning and the impact it will have the medical community, it makes the experience seem less like a "job" and much more beneficial and rewarding. Also, finding a mentor with similar interests, passions, and drive as you makes it a much more relaxing, beneficial experience.”

• “Seek a mentor out early, before winter break if possible! I waited until during winter break to contact mentors and that felt a bit too late. Look into your mentor’s previous work, read up on the project they are proposing, and set up a meeting. View this meeting as an interview - be professional and have questions prepared to show your interest. Show an interest in their field.”

• “If a publication is the end goal, start writing earlier in the summer. Without data, you can still work on the introduction and methods sections. It will save you a lot of time down the road.”

• “Go for it! Research is a great experience, and you will become a stronger student and better learner by undertaking a research project, exploring the literature, and testing a hypothesis.”
What did you gain from summer research?

- “A valuable insight into surgical research that will help guide me in my future career”
- “A broader understanding of what a career in medicine and research could look like in my future”
- “The knowledge that I am less interested in pursuing research long term”
- “Experience with qualitative research”
- “Global health experience”
- “Statistical techniques for processing large amounts of clinical data”
- “Shadowing experience”
- “Ability to work independently and formulate research questions”

- “Making sufficient progress to present at a national meeting and possibly publishing a paper or two”
- “The potential for future publications”
- “Learning to write a research paper and abstract”
- “I gained valuable insight into the world of research from a clinical perspective and gained a deeper appreciation for my colleagues in healthcare”
- “An appreciation for how data collection should be conducted to adequately and completely answer research questions”
What did you gain from summer research?

- “It really helped me approach how I can look at a public health problem in my community in the future and I feel empowered to look for other avenues to advance public health issues.”
- “I gained the ability to adapt to changing environmental circumstances. Communication is key in moving forward on a research project that may need to be adjusted due to the circumstances.”
- “Strong partnership with my mentor”
- “Skills in literature review”
- “Appreciation for basic science research”

“I was able to understand that most medical papers are not that great due to small population sizes. I was able to learn how to properly interpret statistics, study design, and results from literature review.”

“The most valuable part of my clinical experience was the opportunity to shadow telehealth visits. I got to see what gender affirming health care looks like, and all the wonderful ways in which the PATH clinic helps young transgender and gender non-conforming kids”

“Gaining a mentor who allowed me to grow as an independent researcher”
Contacts

Main Link with all Shapiro-related content (projects, application, etc)

https://summerresearch.med.wisc.edu/

Email me with any questions

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