Medical Student Research and Discovery Programs at the UF College of Medicine

Discovery Pathways Program

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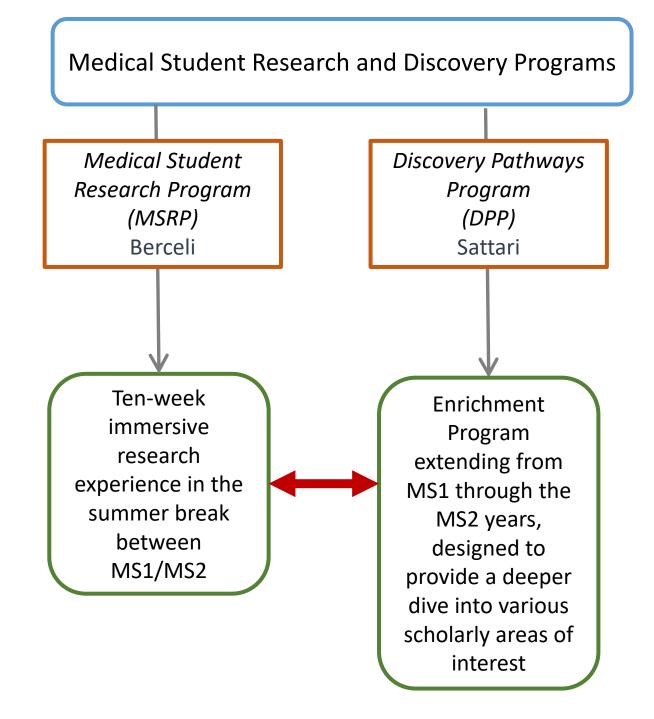
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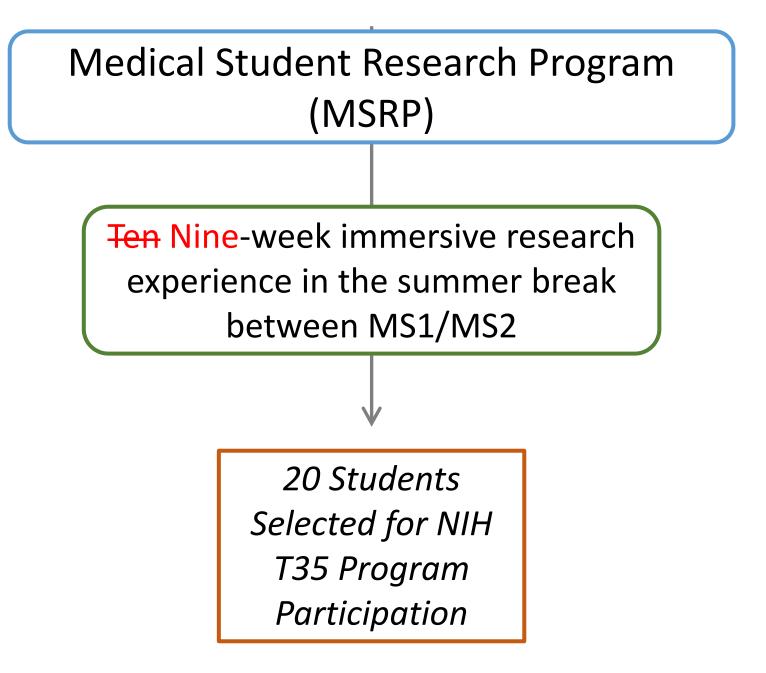
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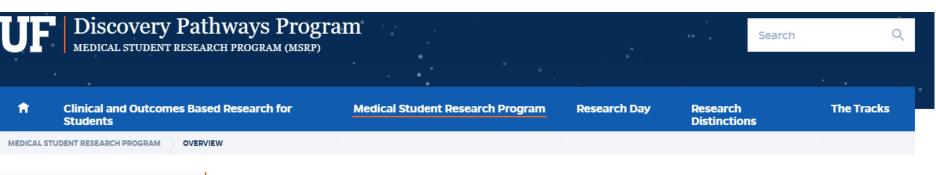 Administrative Support

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Medical Student Research and Discovery Programs

Medical Student Research Program (MSRP)
Berceli

Discovery Pathways Program (DPP)
Sattari

Ten-week immersive research experience in the summer break between MS1/MS2

Enrichment Program extending from MS1 through the MS2 years, designed to provide a deeper dive into various scholarly areas of interest

MSRP

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Medical Student Research Program
(MSRP)
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~~Ten~~ Nine-week immersive research
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between MS1/MS2
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20 Students
Selected for NIH
T35 Program
Participation
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https://discovery.education.med.ufl.edu/msrp/

🏠 | Clinical and Outcomes Based Research for Students | Medical Student Research Program | Research Day | Research Distinctions | The Tracks

MEDICAL STUDENT RESEARCH PROGRAM | OVERVIEW

Medical Student Research Program Overview

- Current Projects
- External Research Opportunities
  - International Research Requirements
- Frequently asked questions
- MSRP Application Forms
  - Faculty Project Description Form
  - MSRP Student Proposal Form
- NIH T35 Training Grant Resources
- Past MSRP Projects
- Required Training Information
- Student Research Travel Policy

Medical Student Research Program

SUBMISSION DUE DATE FOR MSRP

The deadline to apply for the 2021 MSRP is April 9th, 2021

WEBFORM

NOTE- International Projects require additional forms & approvals

Proposal Form Available Here →

SUMMER MSRP DATES

JUNE 8 – AUGUST 13, 2021

During the Summer you will likely receive a total of $2,000 (some sources pay more). The disbursements will be one lump sum in June. It is important that if you are considering and/or need financial assistance beyond the $2000 that you first speak with Susana Morales, Coordinator, Student Financial Affairs. There will be a review of your financial aid eligibility to determine the types of available aid you can receive and the amount.

Stipend SUBJECT TO REPAYMENT if final report & course is not completed successfully. Failure to complete course & repay funds may result in disciplinary actions.

First year UFCOM medical students are invited to apply for a scholarship that will support them during a 10-week individual research experience during the summer. Summer scholarships will be available from Maren Endowment, Lawrence M. Goodman trust, and Educational Affairs office. Scholarships will typically be in the range of $2,000 depending upon the funding source. Students will also receive academic course credit as a 2 credit Medical elective.

Summer MSRP Timeline

- Faculty Mentors Post MSRP Project Ideas - September 2022 - December 2022

- Project List Available to MS1s – December 2022

- Proposals Open for Submission – January 2022

- Proposals Due - March 2023

- Summer Research Project Begins – June 13, 2023

- Enrichment Program begins - June 2023

- Mid-Summer Report Due – mid-July 2023

- Last Day and Final Report Due – August 11, 2023

- MSRP Research Symposium – March 2024

MSRP FAQs

- Acceptance for participation in the MSRP is not competitive. All students submitting acceptable projects will be approved and receive a summer stipend.

- The MSRP is an educational program in which you will be registered for a course (MDT7090: MSRP Discovery Pathways) and receive academic credit on your transcript.

- Full-time (40 hours/week) participation for the entire 9-week block is anticipated. Under certain circumstances and with prior approval, this may be reduced to 8 weeks.

- Remediation of first-year courses during the summer often prevents full engagement in the program. Such individuals are unlikely to be able to participate and receive funding from the MSRP.

- Every Discovery Pathways track has a capstone project that must be completed for successful completion. Most students use the MSRP as the starting point for this capstone project. Your track leaders should provide additional information and guidance regarding this alignment.

MSRP FAQs

- Some faculty will reach out to us over the coming months to ask if they can be involved in the MSRP for this year. We will continue to populate the website with these newly available projects. Approximately once a month, we will send out a listing of new projects that have been added since the last announcement.

- Many mentors may have several project ideas. If they already have identified a student to participate in their listed projects, feel free to ask whether they have additional unlisted projects that might be available.

- Not all MSRP projects are initiated by the mentor. In previous years, there have been a handful of student-initiated projects. Even if not a fully formed idea, feel free to reach out to mentors in your topic area of interest to discuss ideas that you might have for a project. Crafting a project that is of the appropriate scope for the allotted time is critical and should be an essential part of this discussion.

MSRP FAQs

- Over the last several years, there has been a shift from laboratory-based to clinically-oriented projects. Coupled with this, an increasing number of students perform their projects away from the Gainesville or Jacksonville campuses. In my opinion, the richest experiences are those that facilitate substantial interaction with a research team. The intent of the MSRP is to build research skills. While periodic, remote interaction with a mentor will be a component of this process, learning from other research team members (e.g., doctoral students, fellows, and research coordinators) may be even more valuable.

- The majority of projects are of the appropriate scale for a single student, but some of the larger projects may be suitable for more than one participant. This is worth discussing with the mentor as you define the scope of work. If a project has the involvement of more than one student, we ask that each participant have their own focus area to differentiate their work from that of their colleagues.

- Obtaining regulatory approval (IRB for clinical work, IACUC for animal work) is time-consuming. Three or four months is not an unusual timeframe from submission to approval. Outlining your project with your mentor should include a discussion of the current status of any regulatory approvals that are needed and a timeline for completing these. I would estimate that in early June, when the MSRP starts, about 20% of students do not yet have regulatory approval for their project. Starting this early is essential to a productive experience.

MSRP FAQs

- Most students will receive a $2000 stipend to support their participation in the MSRP. This is considered a grant and may impact a student's financial aid package. In May, the financial aid office reviews each MSRP participant's package and makes modifications as needed.

- Several other funding mechanisms are available for MSRP participants.
  - Twenty students will be offered participation in the NIH, NHLBI-funded T35 program. Students in the T35 program will receive the standard NIH pre-doctoral salary, which is approximately $4500 for the 9-week block. A requirement for participation in the T35 is in-person attendance at a weekly enrichment session (likely Tuesday noon to 2PM). The primary criterion for selecting projects is a project that is in the topic area of interest to NHLBI (heart, lung, blood), with the strength of the proposal being a secondary factor.
  - Two students are funded through the Maren Research Award and receive a stipend of $4000 for the summer. The highest-scoring clinical and laboratory-based proposals are chosen to receive this award.

- The culmination of the program is the MSRP Symposium. This is mandatory for all MSRP participants and is held by Zoom in early March. Broken down into groups of 6 students with one faculty judge, each student uses a quick shot format to present their research (3-minute presentation, 3 minutes of questions). The top 15% of presentations are recognized as honorable mention. The 5 best presentations move into the finalist round that is held later that week to award the top prizes.

Enrichment Session

Available to all MSRP Students, mandatory for NIH T35 fellows
T35 fellows much participate in-person

Week	Date	Time	Location	Topic
1	Tuesday, June 8	12pm-2pm	Learning Studio 135	Orientation and writing IRB/IACUC proposals Orientation for T35 students only
2	*Project Overview – Slide Set*			
3	Tuesday, June 22	12pm-2pm	Learning Studio 135	Responsible Conduct of Clinical Research
4	Tuesday, June 29	12pm-2pm	Learning Studio 135	Orientation and Overview of Research Opportunities (Basic/Translational, Investigator-Initiated Clinical, Industry Clinical, Outcomes, Big Data)
5	Tuesday, July 6	12pm-2pm	Learning Studio 135	Statistical Primer
6	*Project Update – Slide Set*			
7	Tuesday, July 20	12pm-2pm	C1-11	Rigor & Reproducibility
8	Tuesday, July 27	12pm-2pm	C1-11	Research Career Roundtable Discussion
9	Tuesday, August 3	12pm-2pm	Learning Studio 125	Training on writing abstracts, manuscripts, and generating a draft poster suitable for the College of Medicine Celebration of Research
10	*Final Project Summary – Slide Set*			

Graduation with Honors in Research

- *A letter of nomination from the faculty mentor*

- *A scholarly capstone product (a published paper, or a manuscript that is ready for submission to a scientific/medical journal)*

- *A summary of research activities (written by the medical student) that describes their role in the research/discovery project(s)*

- *Two due dates – MS4 September and February*

- *Applications are reviewed by a committee to determine those who meet this distinction*

32 Honors in Research in class of 2022

AI Boot Camp:
Bridging the AI Initiative with student training

Three Day Symposium (held in mid-June) to introduce the fundamentals of AI/Machine Learning

Three Day Symposium (held in mid-June) to introduce the fundamentals of AI/Machine Learning

Learning objectives:

- Read and write Python code for performing computation
- Manipulate, process, and visualize data using Python
- Describe the different types of AI and machine learning
- Recognize the potential for AI to improve healthcare
- Identify and apply the computational tools important for AI research
- Demonstrate team science principles
- Characterize breadth of AI faculty research in COM
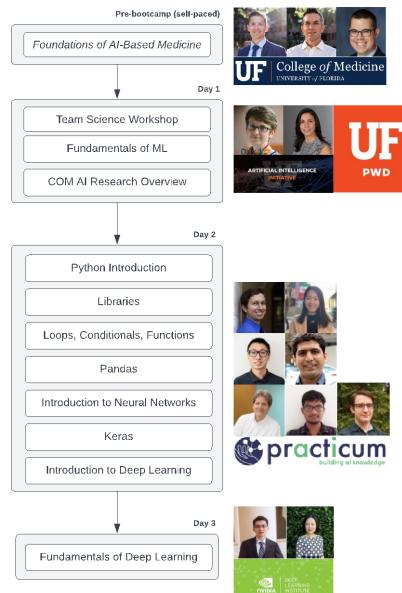- Extend foundational concepts and tools for continuing AI education

Key Components

- Hands-on material split into sequence of modules
- Pair programming
- Interactive, collaborative atmosphere
- Contextualization with conceptual AI lectures
- Tools for continuing education and research

Campus-wide AI Integrations

- *Foundations of AI-Based Medicine* course (COM)
- *Practicum AI* (UF Research Computing)
- *Fundamentals of Deep Learning* (NVIDIA Deep Learning Institute)
- COM AI faculty instruction
- *Fundamentals of AI* (UF Professional & Workforce Development)

Pre-bootcamp (self-paced)

Foundations of AI-Based Medicine

Day 1

Team Science Workshop

Fundamentals of ML

COM AI Research Overview

Day 2

Python Introduction

Libraries

Loops, Conditionals, Functions

Pandas

Introduction to Neural Networks

Keras

Introduction to Deep Learning

Day 3

Fundamentals of Deep Learning

For those interested in AI Opportunities

- Three-day conference in Orlando (April 20-23)
- On April 19th there will be a one-day boot camp, aimed at trainees
- Some travel support available for medical students
- https://ai.cme.ufl.edu/
- Katherine Blackburn (katherineblackbu@ufl.edu)