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# Section 9: Research Opportunities

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## MEDICAL STUDENT RESEARCH PROGRAM

An essential component of the Ohio State University Medical Center's mission is to facilitate the education and training of the future leaders of biomedical research. Medical students who participate in research gain firsthand experience and skills in biomedical discovery which complements their clinical training and may impact their career direction. The medical student research program under the direction of **Ginny L. Bumgardner, MD, PhD**, Associate Dean for Research Education in the College of Medicine sponsors a number of research-related informational sessions and workshops designed to prepare students for a safe and successful research experience, alerts students to prestigious extramural funding opportunities, and assists students with preparation of competitive research fellowship applications. A number of activities to enhance the quality of each research experience, including tips for a successful research experience are provided by the MDSR office. The medical student research program also administers a limited number of competitive internal research scholarships (details below) which are available to support medical student research. The program manager for the medical student research program can be contacted at [research.education@osumc.edu](mailto:research.education@osumc.edu).

## Medical Student Research Scholarships

### INTRAMURAL OPPORTUNITIES

Medical student research scholarships (MDSRS) are awarded through an annual competitive application process. Details about these scholarships, a list of prospective mentors, and available research projects can be accessed on the medical student research website at: <http://go.osu.edu/MDSR>

Medical student research scholarships support medical research to be performed at this institution under the mentorship of COM appointed faculty. Students may pursue full-time research (40 hours per week) over the summer between their first and second year of medical school, fulltime year-long research through a leave of absence (LoA), or pursue part-time research during their curriculum as approved by their Academic Program Director.

The **Samuel J. Roessler Memorial Medical Scholarship Fund** was established by Anna J. Roessler in memory of her son. Awards are made to students at the College of Medicine for medical research performed at this institution and mentored by COM appointed faculty.

The **Barnes and Bennett Memorial Scholarships** support medical students performing biomedical research in diverse scientific disciplines.

The **Watts Mount Medical Research Scholarship** supports medical students pursuing community research projects. This scholarship encourages exploration of health-related problems in Ohio's communities in order to enhance awareness of and develop solutions for those problems through community research

The **Pelotonia Medical Student Research Fellowship Program** provides one-year research fellowships for up to two OSU medical students who want to help cure cancer. For more

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information click the following link: <https://cancer.osu.edu/research-and-education/pelotonia-funded-research/pelotonia-fellowship-program>

The **Carolyn L. Kuckein Student Research Fellowship** provides research support for a continuous period of a minimum of 8-10 weeks, 30 hrs/week, or an average of 4 hrs/wk for 12 months over 1-2 years. More information, contact [aoa@osumc.edu](mailto:aoa@osumc.edu), all application information may be found at [www.alphaomegaalpha.org/student\\_research.html](http://www.alphaomegaalpha.org/student_research.html)

### **EXTRAMURAL OPPORTUNITIES**

Medical students are highly encouraged to consider applying for extramural research scholarship opportunities. The COM Medical Student Research Scholarship Application is designed to prepare students for applications to prestigious extramural sponsors such as the Sarnoff Cardiovascular Research Foundation, the Doris Duke Clinical Research Fellowship Program, and the Fogarty International Clinical Research Scholars Program.

**Sarnoff Cardiovascular Research Foundation** offers research opportunities for outstanding medical students to explore careers in cardiovascular research. Applicants must be enrolled in accredited US medical schools. Sarnoff Fellows conduct intensive work in a research facility, located in the United States, for one year. Prior research experience is not a prerequisite. More information can be found at <http://www.sarnofffoundation.org>

**The Doris Duke Clinical Research Fellowship for Medical Students** provides support to individuals for one year of full-time clinical research training. The main goal of the program is to encourage medical students to pursue careers in clinical research. Applicants must be willing to take a year out from medical school and conduct fellowship research and training at one of twelve hosting medical schools. Each fellowship consists of structured clinical research and coursework. Fellows also attend an annual meeting at the end of the fellowship to present their research. <http://www.ddcf.org/what-we-fund/medical-research/>.

### **Minority Medical Student Award Program**

Medical students from the United States and Canada in their early years of medical school, interested in hematology are encouraged to apply for the Minority Medical Student Award Program (MMSAP). The MMSAP engages students in hematology-related research for eight to 12 weeks; the students have the opportunity to work alongside an ASH member who serves as their research mentor. Participants receive a \$5,000 research stipend as well as a \$1000 travel allowance to attend the ASH annual meeting and other program benefits. <http://www.hematology.org/Awards/MMSAP/2624.aspx>

### **NIH in Bethesda, Maryland**

The National Institutes of Health (NIH) Medical Research Scholars Program (MRSP) is a comprehensive, year-long research enrichment program designed to attract the most creative, research-oriented medical, dental, and veterinary students to the intramural campus of the NIH in Bethesda, MD. This program is designed for US citizens and permanent residents currently enrolled in an accredited program who have completed their core clinical rotations. This does not exclude students who have not yet completed the rotations. For more information <http://www.cc.nih.gov/training/mrsp/index.html>

### **NIH**

The Medical Student Research Program in Diabetes is sponsored by the National Institutes of Health through the NIDDK and allows medical students to conduct research under the

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direction of an established scientist in the areas of diabetes, hormone action, physiology, islet cell biology or obesity at an institution with one of the NIDDK-funded Research Centers during the summer between the first and second year or second and third year of medical school. The Program helps students gain an improved understanding of career opportunities in biomedical research and a comprehensive understanding of diabetes, its clinical manifestations and its unsolved problems.

Please see website for more information about the program and for an application.

<http://medicalstudentdiabetesresearch.org/>

## Advanced Research Education Opportunities

### LSI-Advanced Competency Track for Clinical and Translational Science Research

The purpose of these advanced competencies is to provide experiences for medical students that can be interdisciplinary and encompass activities that offer more depth, organization, and knowledge than previously designated electives but are specific in their breadth and can establish expertise in order to establish “competence” in a specific area. Achieving an advanced certificate or a similar recognition is encouraged. To provide medical students with advanced training opportunities in biomedical research as an extension of the LSI Evidenced Based Inquiry and Research (EBIR), each student will identify a specific biomedical research topic and focused area of research. At the completion of the Advanced Competency in Clinical and Translational Research, the student will have gained an advanced comprehension of the foundational and clinical science underlying a particular topic relevant to human health and disease as well as the research skills necessary to directly engage in discovery. For more information, contact the Medical Student Research Program at [Research.Education@osumc.edu](mailto:Research.Education@osumc.edu).

### Team Science Pilot Projects

The MDSR Team Science Project is an opportunity for selected medical students to work as a team of three students with a team of three PIs over the summer on a thematically related area of research. Each student will have a separate project which may be laboratory-based (translational), clinical research, community-based or health services related population health. Students will work with their individual mentors but also will interact with all of the team members during the summer to learn about the purpose, approaches, progress and outcomes on all three projects.

**Student Eligibility:** This opportunity is for first year medical students, interested in performing research full-time during the summer and considering longitudinal research experiences such as continuation of research on a part-time basis during the second year of medical school, pursuing a year-long research leave of absence between Med 2 and Med 3 or between Med 3 and Med 4 years and/or pursuing an LSI Advanced Competency in Research. Interested students can apply individually; student teams will be formed based on PI student selection.

<http://go.osu.edu/MDSRteamscience>

## Recognition of Medical Student Research Accomplishments

### MDSR Newsletter

The Medical Student Research Program, in conjunction with the College of Medicine and the Landacre Research Honor Society strive to host a variety of events that initiate and enhance quality research experiences. During each academic year, events, student publications, researcher

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highlights, research funding opportunities and educational trainings will be announced through the newsletters. <http://go.osu.edu/MDSRnews>

### **Landacre Research Honor Society**

The Landacre Research Honor Society, the College's medical student research honor society, encourages medical students to pursue excellence in academic achievement and individual research. Activities include the welcome and informational session for first-year medical students, a biomedical research opportunities information session for medical students, a Landacre-sponsored Research Opportunities Fair, and other research related workshops. The faculty liaison for the Landacre Research Honor Society is **Ginny L. Bumgardner, MD, PhD**, Associate Dean for Research Education in the College of Medicine. More information can be found on the Landacre website: <http://go.osu.edu/Landacre>

Membership is open to all medical students at the College who have demonstrated excellence in medical research, as evidenced by fulfilling the following criteria and completing the attached application. All applicants who fulfill the induction criteria and complete the application will be considered for induction into the Landacre Honor Society.

#### Qualifying Research

The data-gathering portion, at a minimum, of the qualifying research must be performed while the student is enrolled at OSUCOM.

- Research performed while a student is on a leave of absence (LOA) from OSUCOM for the purpose of performing research is eligible.
- The qualifying research may be conducted at an outside institution, provided the student was enrolled at OSUCOM or on a leave of absence (LOA) for the purpose of performing research at the time the research was conducted.
- The qualifying research must be hypothesis driven and related to a biomedical topic.

#### Qualifying Student

The qualifying student must have made a significant contribution to the qualifying research, as demonstrated by achievement of at least one (1) of the following:

- Authorship of a peer-reviewed, published journal article
- First authorship of a competitively reviewed abstract accepted for oral or poster presentation at a national conference
- Receipt of a nationally competitive grant for the qualifying research.

\*All qualifying students must present the qualifying research at the OSU COM Trainee Research Day the year of induction.

### **Student Achievement Celebration, The Dean's Research Scholarships**

Each year medical students with outstanding research accomplishments are recognized during the Annual Student Achievement Celebration. The students are nominated based on their work that resulted in publications national presentation, nationally competitive award/grants and/or research scholarship obtained during medical school. <http://go.osu.edu/MDSRnews>

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## **MEDICAL SCIENTIST TRAINING PROGRAM (MSTP)**

**MSTP Director—Lawrence Kirschner, MD, PhD**

**MSTP Associate Director—Tamar Gur, MD, PhD**

**MSTP Program Director—Ashley Bertran, MLHR**

The College of Medicine encourages individual research by qualified medical students and provides elective periods for such projects. For students wishing to take graduate school courses or to conduct research under the auspices of a graduate department, concurrent enrollment in both the College and the Graduate School is possible.

Typically, students seeking an MD and PhD in the MSTP complete all dual-degree program requirements in an average of eight years. This innovative curriculum includes fifteen months of preclinical course work followed by three to four years of research and research didactics. Clinical rotations and electives round out the last two years. This program is designed for students seeking a very rigorous academic career path that combines research and scholarly pursuit with patient care.

The Medical Scientist Student Organization (MSSO) offers various activities for MSTP students. Students interested in MSTP training are also encouraged to attend. Sponsored by the Medical Scientist Training Program, the MSSO meets twice monthly year round. Students have the opportunity to share research with their fellow dual-degree peers.

Applicants to the College with high academic standing and an interest in joint MD/PhD degrees are encouraged to apply for the Medical Scientist Training Program Fellowship as part of the initial admissions application process. Awarded competitively, these fellowships support up to ten entering students each year. Sponsored by the College of Medicine and the Graduate School, the fellowship provides full tuition, fees, and stipend for the entire program. Students who develop research career interests while in medical school may elect to apply to the MSTP Program as an Advanced Training Applicant (ATA) in order to pursue physician scientist dual-degree training. ATA applications may be obtained through the MSTP Office (1072 Graves Hall).

More information is available at the program's website at:

<https://medicine.osu.edu/mstp/pages/index.aspx>

### **MSTP Leadership and Academic Achievement Scholarship**

The purpose of the MSTP Leadership and Academic Achievement Scholarships is to recognize MSTP students who have performed exceptionally well academically and/or excelled with regard to leadership and service to their programs.

For more information, visit:

[https://medicine.osu.edu/students/financial\\_services/scholarships/Pages/CollegeofMedicine.aspx](https://medicine.osu.edu/students/financial_services/scholarships/Pages/CollegeofMedicine.aspx)