



Office of Medical Student Research Handbook



Table of Contents

Medical Student Research Program Website	3
o Resources for Medical Students	
o Resources for Research Mentors	
o Research Opportunity Postings	
o Scholarship Opportunities	
o Calendar of Events	
The Medical Student Research Office Programming	4
Medical Student Research Team Science Project	5
Funding Opportunities to Support Medical Student Research	6-15
o Summer or Short-Term Research Funding	
o Part Time Year-long Research	
o Year-long Research Funding Opportunities	
• Leave of Absence (LOA)	
o External Funding Opportunities	
How to Publicize Medical Student Awards, Presentations, and Publications	16
Citing Medical Student Authorship and Authorship Guideline Resources	16
Research Compliance and Medical Student Research at the OSU COM	17
o OSUWMC IHIS Access Requirements	
o Institutional Review Board (IRB) Requirements	
o Institutional Animal Care and Use Committee (IACUC) Requirements	
o College of Medicine Office of Research Contacts	
Evidence Based Inquiry in Research and L.S.I. Curriculum	18
What is The LSI Advanced Competency in Research?	19-20
Medical Student Research Program Outcomes.....	21-23
o The Landacre Research Honor Society	
o The MDSR Research Experience Evaluation	
o Medical Student Research Achievement Recognition	
o COM Research Scholarships Awarded	
Frequently Asked Questions	24-25
Medical Student Research Program Contact Information	26

Resources for Medical Students

- How to Find a Research Mentor
- Research Opportunities
- Faculty by Last Name and Research Area
- Scholarship Opportunities
 - Intramural
 - Extramural
- Fast Facts
- L.S.I.
 - EBIR
 - Advanced Competencies in Research
- MDSR Team Science Project

Resources for Research Mentors

- Post Your Research Opportunity
- Fast Facts
- Mentor Commitment
- Mentor Compact
- Scholarship Requirements
- Research Reporting
- Advanced Competency in Research
- Medical Student Publication Guidelines
- Handbook for Leadership

Leadership

- Office of Medical Student Research
- Faculty Advisory Council
- MDSRS Reviewers

Events and Presentations

Contact Us

News and Awards

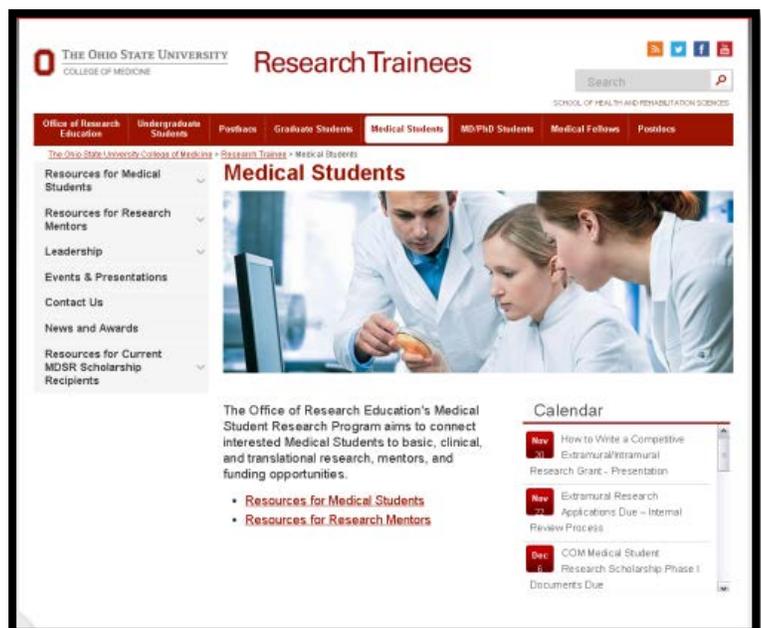
- MDSR Newsletter
- Landacre Honor Society
- MDSRS Awardees
- MDSRS Scholar Awards and Achievements

Resources for Current MDSR Scholars

- Kickoff
- Fast Facts
- Project Change/Extension Requests
- Project Guidelines/Application
- Mentor Mentee Evaluations
- Research Productivity Reports
- MDSRS Research Symposium

The Medical Student Research Program Website

MDSR Program Goals: The Medical Student Research Office strives to connect interested medical students with quality basic, clinical, or translational research experiences with a College of Medicine faculty member. Our office assists current medical students in the application process for extramural and intramural scholarships and through the grant management process for extramural applications. In conjunction with the Landacre Research Honor Society our office hosts a variety of events that encourage, facilitate and enhance quality research experiences for Medical Students at OSU and elsewhere. During each academic year, numerous events highlight research opportunities, funding sources and tips on grant preparation to help prepare OSU medical students for a successful research experience.



The Faculty Advisory Committee: COM faculty serve on the MDSR Faculty Advisory Committee (FAC) for a three year term by recommendation of the Department Chair. The MDSR FAC meets no more than twice per academic year to inform policy and participate in initiatives to enhance the quality of medical student research training experiences and outcomes. The MDSR FAC also provides input for new initiatives and strategies to enhance medical student research mentoring and overall value of the research scholarship experience. In this way, medical student research serves as a key component of medical student training at OSU. Faculty members interested in serving on the FAC should contact their Department Chair. Faculty members interested in taking part in the scholarship review process can contact the Medical Student Research Program at Research.Education@osumc.edu.

Timing	Activity	Activity Description & Goal
Early August	COM Medical Student Orientation “Medical School Research Opportunities”	A presentation during medical school orientation to introduce first year medical students to the MDSR program.
Mid-August	LSI Research Careers Presentation	Informational session during career week to introduce first year medical students to research careers.
Mid-August	LSI Evidence Based Inquiry & Research (EBIR) Learning Objectives	Informational session to introduce first year medical students to the EBIR curriculum
September	Exploring Medical Research in the Summer How to Prepare a Research Scholarship Application to Fund your Research	Informational session to help medical students identify a research mentor and funding opportunities available to medical students.
Early October	COM Medical Student Research Scholarship	The on-line application process opens for the COM MDSR research scholarship
Mid-October	Dean’s Fall Scholarship Dinner	Presentation of the Dean’s Research Scholarships to Medical Students Recognized for Outstanding Research Accomplishments
Mid-October	Medical Student Research Opportunities Fair	An open forum for medical students to meet and network with Faculty and Lab representatives from OSU COM and NWCH about potential research projects
Late October/Early November	Medical Student Research Symposium	Recipients of the MDSR Research Scholarship present their research posters (mandatory of all scholars)
Early December	COM Medical Student Research Scholarship Phase I Documents Due	Phase 1 documents for the COM MDSR Scholarship application are due to the MDSR office via the online submission process.
Early-January	COM Medical Student Research Scholarship Phase II Documents Due	Phase 2 documents for the COM MDSR Scholarship application due to the MDSR office via the online submission process.
Early January thru Early February	Landacre Research Honor Society Application Process	Medical students who meet the eligibility requirements are welcome to apply for induction to the Landacre Research Honor Society
Early April	COM Medical Student Research Scholarship Award Notifications	Medical students who have applied for scholarship funding through the MDSR office are notified of award status.
Mid-April	OSUWMC Trainee Research Day	Research Day features a keynote address by a world-renowned biomedical researcher, posters from hundreds of trainees, and a trainee speaker series
Late April/Early May	Landacre Honor Society Induction Ceremony	Medical Students who have met the research honor society eligibility criteria are officially inducted at an awards banquet
Late May/Early June	Medical Student Summer Research Kickoff	Kickoff session for all of the medical students awarded COM MDSR scholarships. (mandatory)



OSU Medical Student Research Program Team Science Pilot Project

Overview: The Ohio State University's College of Medicine's Medical Student Research Program (MDSRP) is launching a PILOT research scholarship program which will enhance medical students' research exposure, competency, and career opportunities.

Description: The MDSRP Team Science Pilot 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 population health or hypothesis-generating research. 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 and progress on all 3 projects. Read more about the project here <http://go.osu.edu/MDSRteamscience>

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.

Benefits:

- Exposure to multiple thematically related research projects and team science
- Faculty mentorship and networking
- Foundation for a 4th year Advanced Competency in Research
- Potential clinical experiences which highlight translational research applications
- Potential co-authorship on research publications
- Engagement in interprofessional collaborations
- Introduction to physician-scientist career opportunities
- Summer stipend (\$3,000), research expenses (\$1,000) and approved travel (\$1,000)

Medical Student Research Funding

Summer Research Opportunities

COM Medical Student Research Scholarships include the Roessler, Bennett, Barnes and Watts Research Scholarships

Each research proposal (application) is reviewed by an average of three expert faculty members from the College of Medicine. The criteria for review have been adapted from the guidelines established by the National Institutes of Health for the review of pre-doctoral research fellowships. Reviewers will provide an overall impact score to reflect their assessment of the likelihood that the scholarship will provide the medical student with a meaningful research experience. Reviewers will consider each of the three review criteria below in determining scientific and technical merit and will give a separate score for each. An application does not need to be strong in all categories to be judged fundable, but must obtain an overall strong review.

Review Criteria: **Mentor Commitment:** Research mentor supervision and commitment to providing a quality research experience for the medical student is a pre-requisite of the application.

Research Environment & Resources: The availability of facilities and resources for the proposed training are committed in advance through the Mentor Compact agreement submitted with the Phase I documents.

Fellowship Applicant: The quality of the applicant's academic record, any prior research experience, and the potential to contribute to the success of his/her own research training.

Research Project: The merit and quality of the scientific proposal and its relationship to the candidate's research experience and proposed training plan.

Training Plan: The quality, value and consistency of the training plan with the student's stage of research development.

Overall Scholarship Research Training Potential: The value of the proposed scholarship experience as it relates to the potential to provide the student with individualized and supervised experiences that will develop his/her research skills and impact the student's career development. This may include preparation of the student's competitiveness for future extramural research applications/career development awards.

Research proposals in which the student's role is primarily technical or clerical (e.g., recruiting patients), primarily passive (e.g., shadowing a clinician). Such projects may provide a learning experience but are not considered valuable research experiences. <http://medicine.osu.edu/go/mdsr>

National Institute of Health Summer Internship Program in Biomedical Research (SIP)

Program Description: Summer programs at the National Institutes of Health (NIH) provide an opportunity to spend a summer working at the NIH with some of the leading scientists in the world, in an environment devoted exclusively to biomedical research. The NIH consists of the 240-bed Mark O. Hatfield Clinical Research Center and more than 1200 laboratories/research projects located on the main campus in Bethesda, MD and the surrounding area as well as in Baltimore and Frederick, MD; Research Triangle Park, NC; Hamilton, MT; Framingham, MA; and Detroit, MI. Internships cover a minimum of eight weeks, with students generally arriving at the NIH in May or June. The NIH Institutes and the Office of Intramural Training & Education sponsor a wide range of summer activities including lectures featuring distinguished NIH investigators, career/professional development workshops, and Summer Poster Day. **Program Information:**

<https://www.training.nih.gov/programs/sip> **Online Applications** accepted **mid-late November** through **March** <https://www2.training.nih.gov/apps/publicForms/sip/forms/sipApp.aspx> Notification of award by April or May.

Carolyn L. Kuckein Student Research Fellowship

The Opportunity: Research support for a continuous research period of a minimum of 8 to 10 weeks, 30 hours or more per week, or an average of 4 hours per week for 12 months over 1 to 2 years, for clinical investigation, basic laboratory research, epidemiology, social science/health services research, leadership, or professionalism. Funds from the fellowship are expected to be the major source of support for the student. Only one candidate from each school may be nominated. A student may only receive one fellowship during medical school. The name of the fellowship program honors Carolyn L. Kuckein, long-time administrator of AΩA and an honorary member of the society, who died in 2004.

The Awards: \$5000, one-half paid on announcement of the award, and one-half on approval by AΩA of a final report of the research. Up to \$1000 will be reimbursed for travel to present research results at a national meeting.

Eligibility: First-, second-, and third-year students from schools with active AΩA chapters or associations are eligible. PhDs and candidates for PhD or MD/PhD are not eligible.

www.alphaomegaalpha.org/student_research.html

Year Long Research Opportunities

National Institute of Health Medical Research Scholars Program

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.

Overview: Student scholars engage in a mentored basic, clinical, or translational research project on the main NIH campus in Bethesda, or at close by NIH facilities that matches their research interests and career goals.

Eligibility: The MRSP is designed for students who have completed their core clinical rotations but does not exclude students with strong research interests from applying prior to having completed their clinical rotations.

Housing: The MRSP is a residential program; participating scholars are required to reside in one of the available MRSP housing options.

Curriculum: MRSP scholars will experience the full continuum of biomedical research—the bench, the bedside, between both and beyond.

The MRSP offers:

- Lectures on seminal basic, translational and clinical research topics that highlight the continuum of discovery, as well as issues in bioethics, science policy and emerging technologies
- Training in clinical protocol development and the conduct of human subjects research
- Clinical teaching rounds focusing on NIH research patients
- Academic leadership and drug development training
- Dedicated research mentor and advisor
- NIH Clinical Center courses such as "Introduction to the Principles and Practice of Clinical Research" and the "Ethical and Regulatory Aspects of Clinical Research"
- Opportunity to attend Howard Hughes Medical Institute's (HHMI) scientific meetings at Janelia Farms Research Campus and the HHMI Headquarters

<http://www.cc.nih.gov/training/mrsp/index.html>

Howard Hughes Medical Institute (HHMI) Year-Long Medical Research Fellows Program at an Academic or Nonprofit Research Institution

The **HHMI Medical Research Fellows Program** gives students the opportunity to immerse themselves in a year of basic, translational, or applied biomedical research. Medical Fellows experience the excitement and intellectual rewards of research before making plans for residency or postgraduate training. The students select their own mentor at any academic or nonprofit research institution in the United States (excluding the National Institutes of Health) or abroad, provided the proposed mentor is affiliated with a U.S. fellowship institution, and work with the mentor to develop a research proposal. Mentor selection and the research project proposal are key components of the application. Working with an HHMI investigator, HHMI's early career scientists, <http://www.hhmi.org/programs/past-programs>, HHMI professors <http://www.hhmi.org/programs/hhmi-professors> is encouraged but not required. Medical Fellows conducting research in the following areas are encouraged through specified funding supported by organizations partnering with HHMI: Epilepsy research (Partner: Citizens United for Research in Epilepsy); Inherited retinal degenerative disease research (Partner: Foundation Fighting Blindness); Duchenne muscular dystrophy research (Partner: Duchenne Research Fund); Parkinson's disease research (Partner: Parkinson's Disease Foundation); Preclinical research in interventional radiology (Partner: Society of Interventional Radiology Foundation); Orthopaedic Research (Partner: Orthopaedic Research & Education Foundation) and Veterinary student research (Partner: Burroughs Wellcome Fund).

Program Benefits: HHMI Medical Fellows will

- Gain insight into a wide range of research areas and receive career advice from program alumni and other prominent physician-scientists;
- Interact with HHMI investigators at an HHMI science meeting and learn about their latest findings;
- Share their research and network with other trainees and renowned biomedical investigators at two Medical Fellows conferences during the year;
- Participate in scientific conferences in their field and present their work;
- Spend a year evaluating whether research should be part of their career.

Howard Hughes Medical Institute Year-Long Medical Research Fellows Program at Janelia (Neuroscience)

The Year-Long Medical Fellows Program opportunities at Janelia are targeted at students with specific research interests and backgrounds, and have additional application requirements.

Janelia Farm Research Campus

Students interested in neuronal network function or imaging at the cellular and molecular level are encouraged to apply for fellowship positions at HHMI's Janelia Farm Research Campus.

Fellows at Janelia take part in cutting-edge research and work with small, interdisciplinary teams of chemists, biochemists, neurobiologists, geneticists, physicists, computer scientists, mathematicians, and engineers from around the world in a collaborative, creative, resource-rich environment.

This intense research training experience is targeted to highly talented students with a proven track-record of research accomplishment and a commitment to a basic research field being pursued by Janelia investigators.

Life at Janelia includes:

- A full agenda of seminars, conferences, and journal clubs;
- A chance to interact with outside faculty speakers, HHMI investigators, and other renowned researchers;
- State-of-the-art laboratory and conference facilities;
- Well-appointed on-campus housing; and many other amenities.

<http://www.hhmi.org/programs/medical-research-fellows-program>

Sarnoff Medical Student Research Fellowship Program

The mission of Sarnoff Cardiovascular Research Foundation is to engage medical students and young investigators in a personalized research experience with preeminent cardiovascular scientists, and to foster the next generation of leaders in the field.

Medical Student Research Fellowship Program

The Sarnoff Fellowship Program offers research opportunities for outstanding medical students to explore careers in cardiovascular research. Applicants must be enrolled in accredited U.S. 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.

What makes Sarnoff unique is our lifetime commitment to the Fellow. A member of our Scientific Committee guides the Fellow during the research year and throughout the Fellow's career. The Fellow interacts with other Fellows, Scholars and Foundation leaders at the Sarnoff Foundation's Annual Scientific Meetings, Sarnoff-sponsored regional events, and at other scientific conferences.

<http://www.sarnofffoundation.org/>

OSU Medical Student Pelotonia Fellowship Program

The Pelotonia Professional Student Fellowship Program provides one-year research fellowships for up to two of the best and brightest Ohio State professional (medical, dental, pharmacy) students who want to help cure cancer.

Many professional students have experience with research in some way on a part-time basis.

The goal of the Pelotonia Professional Student Fellowship Program is to expose professional students to the benefits of full-time research by allowing them to take one year off from their professional program to do a concentrated research experience. During this year, professional students have the opportunity to fully immerse themselves in the field of cancer research and to develop and work on their own independent projects. Past professional students have contributed greatly to the field of cancer research by presenting their research at national meetings and publishing their work in high-impact journals. Additionally, several Pelotonia professional students have gone on to pursue cancer research full time and are working on dual MD and PhD degrees.

Eligibility:

- Be an outstanding Ohio State professional student and be willing to dedicate one year to fulltime cancer research
- Propose a cancer-related project
- Participate in Pelotonia

Application: Applications for the next Professional Student Pelotonia Fellowships will be due early winter and are scored on the following criteria:

- Applicant strengths and research potential
- Mentor/adviser qualifications and training record
- Innovativeness and impact of project to cancer research

To find out more visit <https://cancer.osu.edu/research-and-education/pelotonia-funded-research/pelotonia-fellowship-program/professional-student-pelotonia-fellowship-program>

Please direct all Pelotonia questions to:

Jeff Mason

Pelotonia Fellowship Program Director

908 Biomedical Research Tower (BRT)

614-688-3518

jeffrey.mason@osumc.edu

Category of Research	Name of Opportunity	Organization	Website	Contact
All Types	Medical Alumni Society Grants	Medical Student Alumni Society	http://go.osu.edu/AlumniGrants	medalum@osumc.edu
All Types	HHMI Medical Research Fellows Program	The Howard Hughes Medical Institute	http://www.hhmi.org/programs/medical-research-fellows-program	medfellows@hhmi.org
All Types	Hannah H. Gray Fellows Program	The Howard Hughes Medical Institute	http://www.hhmi.org/programs/hanna-h-gray-fellows-program	fellows@hhmi.org
Anesthesia	Medical Student Anesthesia Research Fellowship (MSARF) Year-Long Program	The Foundation for Anesthesia Education and Research	http://faer.org/programs/msarf-year-long-program/	FAER@faer.org
Anesthesia	Medical Student Anesthesia Research Fellowship (MSARF) Summer Program	The Foundation for Anesthesia Education and Research Year-long Program	http://faer.org/programs/msarf-summer-program/	gingersmith@faer.org
Arthritis and Aging	Medical Student Training in Aging Research (MSTAR) Program	The American Federation for Aging Research (AFAR) and the National Institute on Aging (NIA)	http://www.afar.org/research/funding/mstar/	grants@afar.org
Basic Sciences, Clinical/Translational Research, and Research in Professionalism and Leadership	Carolyn L. Kuckein Student Research Fellowship	Alpha Omega Alpha Honor Medical Society	http://www.alphaomegalpha.org/student_research.html	d.lancaster@alphaomegalpha.org
Biomedical Research	Medical Student Summer Research Fellowships	University of Cincinnati and Cincinnati Children's Hospital	http://med.uc.edu/MSSRP	James Heubi, MD, james.heubi@cchmc.org

Category of Research	Name of Opportunity	Organization	Website	Contact
Brain Tumors	American Brain Tumor Association Medical Student Discovery Grant Program	American Brain Tumor Association	http://www.abta.org/brain-tumor-research/research-grants/	info@abta.org
Brain Tumors	American Brain Tumor Association Medical Student Summer Fellowship	American Brain Tumor Association	http://www.abta.org/brain-tumor-research/research-grants/?referrer=https://www.google.com/	grants@abta.org
Cancer Related Projects in ANY Field of Study	The James Pelotonia Fellowships	Pelotonia Fellowship Program	http://cancer.osu.edu/research/researcheducation/pelotoniafellowshipprogram/pages/index.aspx?ref=go	Jeffrey.Mason@osumc.edu
Cardiovascular	Sarnoff Cardiovascular Research Foundation Fellowship Program	Sarnoff Cardiovascular Research Foundation	http://www.sarnofffoundation.org/	dboyd@SarnoffFoundation.org
Cardiovascular and Stroke Research	American Heart Association Student Scholarship	American Heart Association	http://my.americanheart.org/professional/Research/FundingOpportunities/Funding-Opportunities_UCM_316909_SubHomePage.jsp	apply@grants.org
Cardiovascular, Pulmonary, Hematological and Sleep Disorders Research	The Heart, Lung and Blood Summer Research Program	Case Western Reserve Univ. Summer Research	http://casemed.case.edu/gradprog/summer.cfm	malana.bey@case.edu
Child Neurology	The Child Neurology Foundation CNF Shield's Research Grant	The Child Neurology Foundation (CNF)	http://www.childneurologyfoundation.org/providers-or-researchers/research-grant-opportunities/child-neurology-foundation-shields-research-grant/	Local: 952-641-6100 Toll Free: 1-877-263-5430 (1-877-CNF-KID0)
Childhood Cancer	Childhood Cancer Research Programs	Alex's Lemonade Stand Foundation	http://www.alexlemonade.org/grants/guidelines	(610) 649-3034
Clinical Rheumatology	Medical and Graduate Student Preceptorship (4 or 8 week terms)	Rheumatology Research Foundation	http://www.rheumresearch.org/preceptorships#StudentPrecep	foundation@rheumatology.org

Category of Research	Name of Opportunity	Organization	Website	Contact
Community Health	Arnold P. Gold- Student Summer Research Fellowship	Arnold P. Gold- Student Summer Research Fellowship	http://www.humanism-in-medicine.org/index.php/programs_grants/gold_foundation_programs/student_summer_fellowships	ifinisterre@gold-foundation.org
Cystic Fibrosis	Cystic Fibrosis Foundation Student Traineeship	Cystic Fibrosis Foundation	https://www.cff.org/Our-Research/For-Researchers/Training-Grants/Student-Traineeships/	grants@cff.org
Dermatology	Numerous awards available, see website	Dermatology Foundation	https://dermatologyfoundation.org/rap/	dfrap@dermatologyfoundation.org
Dermatology	Young Investigator Grant programs, as well as a Follicular Lymphoma Pathways Grant for senior investigators	Lymphoma Research Foundation	http://www.lymphoma.org/site/pp.asp?c=bkLTKaOQLmK8E&b=8490965	researchgrants@lymphoma.org
Diabetes	NIH Funded Diabetes Research Opportunity	NIH	http://www.niddk.nih.gov/research-funding/process/apply/about-funding-mechanisms/t32/t32-msrt/Pages/T32-medical-student-research-training-supplement.aspx	ryssikok@niddk.nih.gov
Diabetes and Digestive and Kidney Disease	UCincinnati MSSRP Summer Research Program	UCincinnati MSSRP	https://med.uc.edu/MSSRP	james.heubi@cchmc.org ; sandra.geideman@cchmc.org
Diabetes and Obesity	Diabetes Research Centers Medical Student Research Program in Diabetes and Obesity	NIH/NIDDK	http://medicalstudentdiabetesresearch.org/	niddk.diabetes.student.research@vanderbilt.edu
Diabetes and Obesity, Kidney Disease, and Digestive Disease	Vanderbilt University School of Medicine Medical Student Research Training Program	Vanderbilt University	http://www.mc.vanderbilt.edu/diabetes/srtp/	stu.res@vanderbilt.edu

Category of Research	Name of Opportunity	Organization	Website	Contact
Endocrinology	The Endocrine Society Summer Research Fellowship	The Endocrine Society	https://www.endocrine.org/awards/research-fellowship-awards/summer-research-fellowships	awards@endocrine.org
Eye-Related Health	Vision Research Student Fellowship Program for Female Scholars	Prevent Blindness Ohio	http://ohio.preventblindness.org/young-investigator-student-fellowship-awards-female-scholars-vision-research	info@pbohio.org
Gastroenterology	AGA Investing in the Future Student Research Fellowship	American Gastroenterological Association (AGA)	http://www.gastro.org/grants/aga-investing-in-the-future-student-research-fellowship	awards@gastro.org.
Hamatology	Research Training Award for Fellows	American Society of Hematology	http://www.hematology.org/Awards/Career-Training/435.aspx	training@hematology.org
Healthcare and Medical Education	Medical Student Service Leadership Project Award	Alpha Omega Alpha	http://www.alphaomegaalpha.org/student_service_leadership.html	candice@alphaomegaalpha.org
Hematology	Hematology Research Experience for Medical Students	Minority Medical Student Award Program	http://www.hematology.org/Awards/MMSAP/2624.aspx	atawards@hematology.org
HIV Vaccine Development	HIV Vaccine Research Grants	The Research and Mentorship Program (RAMP)	http://www.hvtn.org/en/science/scholar-awards/ramp-scholars.html	judren@fredhutch.org
Human Health-Related Clinical and Translational Research	CCTS TL1 Mentored Research Training Program	The OSU Center for Clinical and Translational Science (CCTS)	http://ccts.osu.edu/education-and-training-programs/mentored-research-training-program-tl1	Stuart Hobbs stuart.hobbs@osumc.edu
International	Doris Duke International Clinical Research Fellowship (ICRF)	The Doris Duke Charitable Foundation	http://globalhealth.duke.edu/education-and-training/medical/doris-duke	lmb83@duke.edu
Kidney Disease	Michigan Kidney Center Summer Research Program	University of Michigan Kidney Translational Core Center	http://kidneycenter.med.umich.edu/summer-program	Julia Herzog by email at jnherzog@umich.edu
Kidney Disease	Student Research Training Program in Kidney Disease	Vanderbilt School of Medicine	http://www.mc.vanderbilt.edu/mkpdc/events/2014/internship/	nancy.lightsey@vanderbilt.edu

Category of Research	Name of Opportunity	Organization	Website	Contact
Medical History and Medical Humanities	William B. Bean Student Research Award	The American Osler Society	http://www.americanosler.org/bean-award.php	aosrenee@gmail.com
Nephrology	The American Society of Nephrology	The American Society of Nephrology	http://www.asn-online.org/grants/fellowships/	grants@asn-online.org
Neurology	AAN – Medical Student Summer Research Scholarship	American Academy of Neurology	http://tools.aan.com/science/awards/?fuseaction=home.info&id=58	Cheryl Alementi at (612) 928-6073
Neuroscience	The Medical Research Fellows Program at Janelia	The Medical Research Fellows Program at Janelia	http://www.hhmi.org/programs/medical-research-fellows-program	mmedfellows@hhmi.org
Neurosurgery	American Academy of Neurology (AAN Medical Student Summer Research Fellowship)	Neurosurgery Research & Education Foundation (NREF)	http://www.aans.org/Grants%20and%20Fellowships/Medical%20Students%20Summer%20Research%20Opportunities.aspx	grants@nref.org
Oncology	Conquer Cancer Medical Foundation of ASCO Medical Student Rotation for Underrepresented Populations	Conquer Cancer Medical Foundation of ASCO	http://www.conquercancerfoundation.org/medical-student-rotation-award-underrepresented-populations	grants@conquercancerfoundation.org
Oncology	Children's Hospital Los Angeles Summer Oncology Fellowship	Children's Hospital Los Angeles	http://www.chla.org/site/c.ipINKTOAJsG/b.4434829/k.8F5A/Summer_Oncology_Fellowship.htm	323-361-2238
Oncology	Medical Education Program	The University of Buffalo Jacobs School of Medicine and Biological Sciences	http://medicine.buffalo.edu/education/md/curriculum/research-opportunities/summer-research-fellowship.html	sandypos@buffalo.edu
Oncology	The Leah Menshouse Springer Summer Opportunities Programs	Siteman Cancer Center	http://www.siteman.wustl.edu/contentpage.aspx?id=254	SCCSummerOpportunities@wudosis.wustl.edu.

Category of Research	Name of Opportunity	Organization	Website	Contact
Oncology or Related Biomedical Sciences	Memorial Sloan-Kettering Cancer Center Medical Student Summer Fellowship Program	Memorial Sloan-Kettering Cancer Center	http://www.mskcc.org/mskcc/html/2637.cfm	sumstudent@mskcc.org
Parkinson's Disease	PDF-HHMI Medical Fellows Initiative	Parkinson's Disease Foundation	http://www.pdf.org/en/grant_funding_fellow#hhmi	grants@pdf.org
Parkinson's Disease	Parkinson's Disease Foundation Summer Fellowship	Parkinson's Disease Foundation	http://www.pdf.org/en/grant_funding_fellow#summer	grants@pdf.org
Psychiatry	Summer Psychiatry Research Fellowship for Underrepresented Medical Students	University of California, San Diego	http://psychiatry.ucsd.edu/education/research-programs/Pages/SummerPsychiatryResearchFellowship.aspx	psychsrchresidency@ucsd.edu
Radiation Oncology	ASTRO Minority Summer Fellowship	American Society for Radiation Oncology (ASTRO)	http://www.astro.org/minoritysummerfellowship	natalie.cain@astro.org
Radiology	Radiology Society of North America	Radiology Society of North America	http://rsna.org/Research_Medical_Student_Grant.aspx	Scott Walter, Assistant Director, Grant Administration, swalter@rsna.org
Radiology	Department of Radiology Medical Student Summer Research Program	Univ. of Cincinnati Radiology Department	https://med.uc.edu/radiology/research/medical-student-research	Tosha Feldkamp at tosha.feldkamp@uchealth.com
Rheumatology and Oral and Ocular Medicine	Sjorgen's Syndrome Foundation	Sjorgen's Syndrome Foundation	http://www.sjogrens.org/home/research-programs/student-fellowships	research@sjogrens.org
Small Basic Science, Applied, or Clinical Research Projects	Radiology Society of North America	AMA Foundation	http://www.ama-assn.org/ama/pub/about-ama/ama-foundation/our-programs/medical-education/seed-grant-research.shtml	seedgrants@ama-assn.org
Wilderness and Environmental Medicine	Wilderness Medical Society Charles S. Houston Grant	Wilderness Medical Society	http://wms.org/research/default.asp?t=g	joslinj@upstate.edu or abyrne@origineditorial.com

Publicizing Medical Student Research Awards, Presentations, and Publications

Please share medical student research accomplishments for publication in the MDSR newsletter and for posting on the MDSR website. Medical students and research mentors can contact the Medical Student Research Program to share and highlight medical student research accomplishments at Research.Education@osu.edu. Previous editions of the newsletter and award announcements can be viewed at <http://go.osu.edu/MDSRnews>



Citing Medical Student Authorship

College of Medicine Acknowledgment: All publications that include current OSU medical students as co-authors should acknowledge the student, the MDSR program, the Ohio State University College of Medicine and any relevant research scholarship sponsorship.

*See examples below.

MDSR Scholarship Award Acknowledgment: Students should acknowledge the specific “Named” COM research scholarship which supported the student’s publications and/or presentations (e.g., Barnes, Bennett, Roessler, Watts, etc.). *See examples below.

Example of how to cite medical student authorship on a publication:

Acknowledging medical student contributions & the OSU College of Medicine in publications:

Title: Cardiovascular Risks and Drug Interactions

Authors: First Author *, Medical Student Name †, Third Author *, etc. and PI (research mentor) *

Footnote: *The Ohio State University Department of xxxxx, and † Medical Student Research Program, The OSU College of Medicine, the OSU xxx Institute or Center, The Ohio State University Wexner Medical Center, Columbus, OH

How to reference COM financial (scholarship) support:

Support: This work was supported in part by the OSU College of Medicine (Barnes, Bennett or Roessler....) research scholarship (medical student initials), NIH or other funding support (collaborator initials), NIH or other funding support (PI initials) etc.

Authorship Guideline Resources

Web resources:

1. http://go.osu.edu/authorship_issues
2. <http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html>

IHIS Requirements for Medical Student Research at the OSU COM

All medical students performing research involving access of patient data through IHIS (the Integrated Health Information System) must first obtain the appropriate clearances. This process is initiated through the E-service request system and followed by providing the necessary documentation to the College of Medicine Compliance office. <http://go.osu.edu/MDSRIHIS>

The research mentor must provide the following information for each student requesting access.

1. Provide Institutional Review Board (IRB) Approval Numbers:
2. Describe the individual's research role for each study listed: (*May Include: Data Collection, Consenting, Specimen Collection, Research Billing, Performing Research Specific Tests, etc...*)
3. Does the study have a signed protocol specific Health Insurance Portability & Accountability Act (HIPAA) Authorization Form Obtained Prior to Accessing Individual Patient Information
4. Does this study have an approved waiver of HIPAA Authorization:
 - a. If Yes, please attach a signed copy of the approved waiver
5. Describe plan to ensure PHI is secure and confidential:

Institutional Review Board (IRB) Requirements for Medical Student Researchers

In (IRB) Requirements: All medical students participating in research which requires IRB protocols must be added to the protocol as key personal and receive all the proper training required of all staff.

All MDSR COM Scholarship projects are required to supply the MDSR office with documentation that the scholarship recipient has been officially added to any and all relevant IRB protocols. If your research has been determined to be exempt, the MDSR Office needs documentation of the exempt status.

<http://orrrp.osu.edu/irb/>

Institutional Animal Care and Use Committee (IACUC) Requirements for Medical Student Researchers

(IACUC) Requirements: All medical students participating in research which requires IACUC protocols must be added to the protocol as key personal and receive all the proper training required of all staff.

All MDSR COM Scholarship projects are required to supply the MDSR office with documentation that the scholarship recipient has been officially added to any and all relevant IACUC protocols. If your research has been determined to be exempt, the MDSR Office needs documentation of the exempt status.

<http://orrrp.osu.edu/iacuc/>

College of Medicine Office of Research Contacts

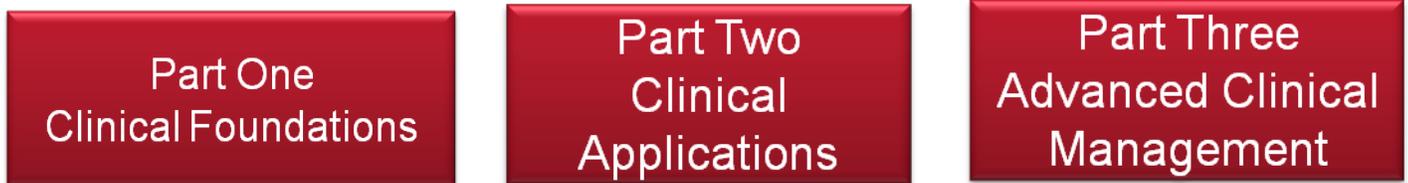
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614-685-1734 Office
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Regulatory Manager
College of Medicine Office of Research
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614-685-1739 Office
Abigail.Larsen@osumc.edu

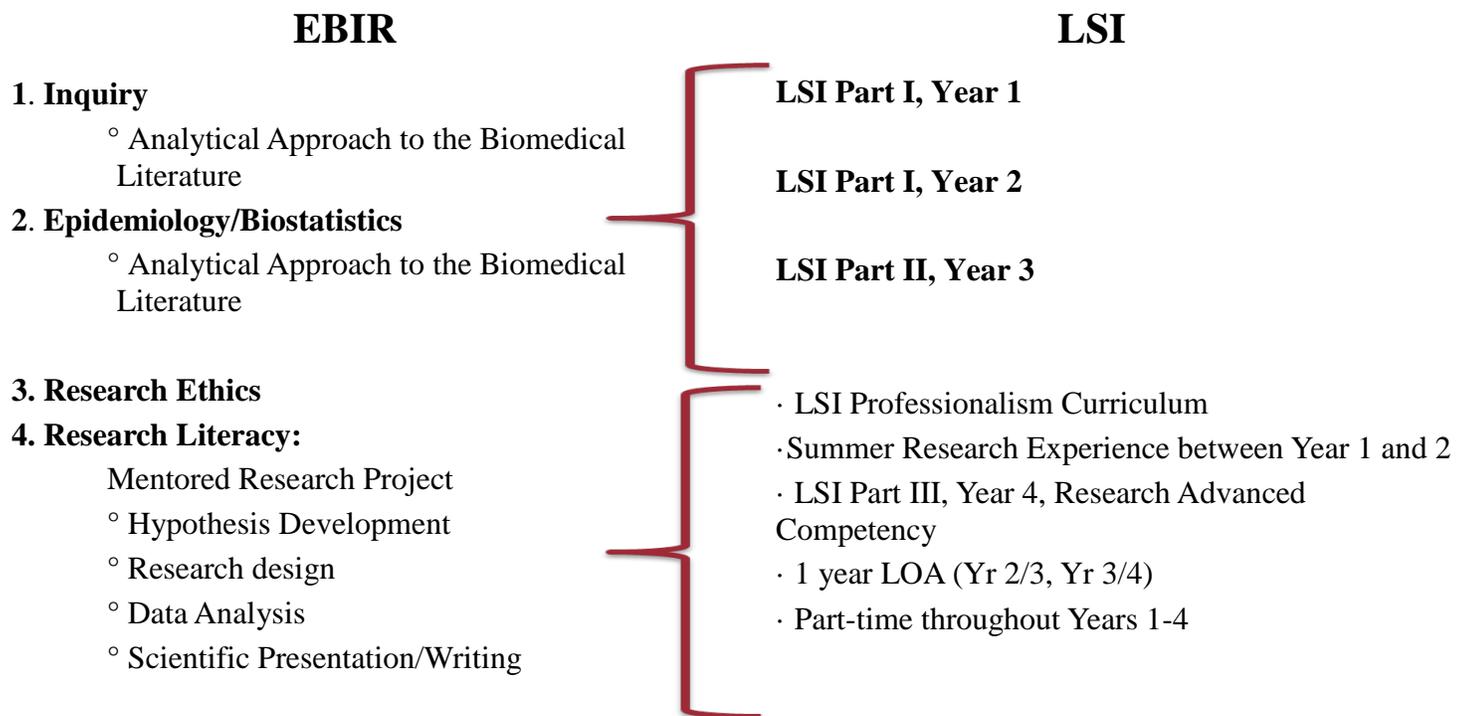
Evidence Based Inquiry in Research (EBIR) and L.S.I.

EBIR TASKFORCE ENDURING UNDERSTANDINGS:

- Clinical encounters should lead to important questions
- Unanswered clinically relevant questions should stimulate research
- Biomedical Research contributes to existing evidence and impacts clinical care
- Patient participation in research through clinical trials offers patients advanced treatment opportunities
- Patients expect physicians and other caregivers to lead research which will improve health
- Development of critical thinking skills is necessary for physicians to become successful lifelong learners, even if they never wish to perform research themselves



Evidence Based Inquiry in Research 4 Components



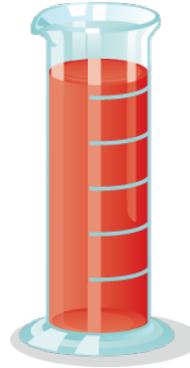
Advanced Competencies in Research in LSI

The Office of Medical Student Research offers an Advanced Competency in Research (AC). The AC can be completed longitudinally (spanning the entire year) or during an 8 week block.

The purpose of the Advanced Competency is to provide experiences for Med 4 students in specific areas where students wish to establish expertise and advanced competence. <https://go.osu.edu/ACAE>

Year 4: LSI Part III - Advanced Competency in Research

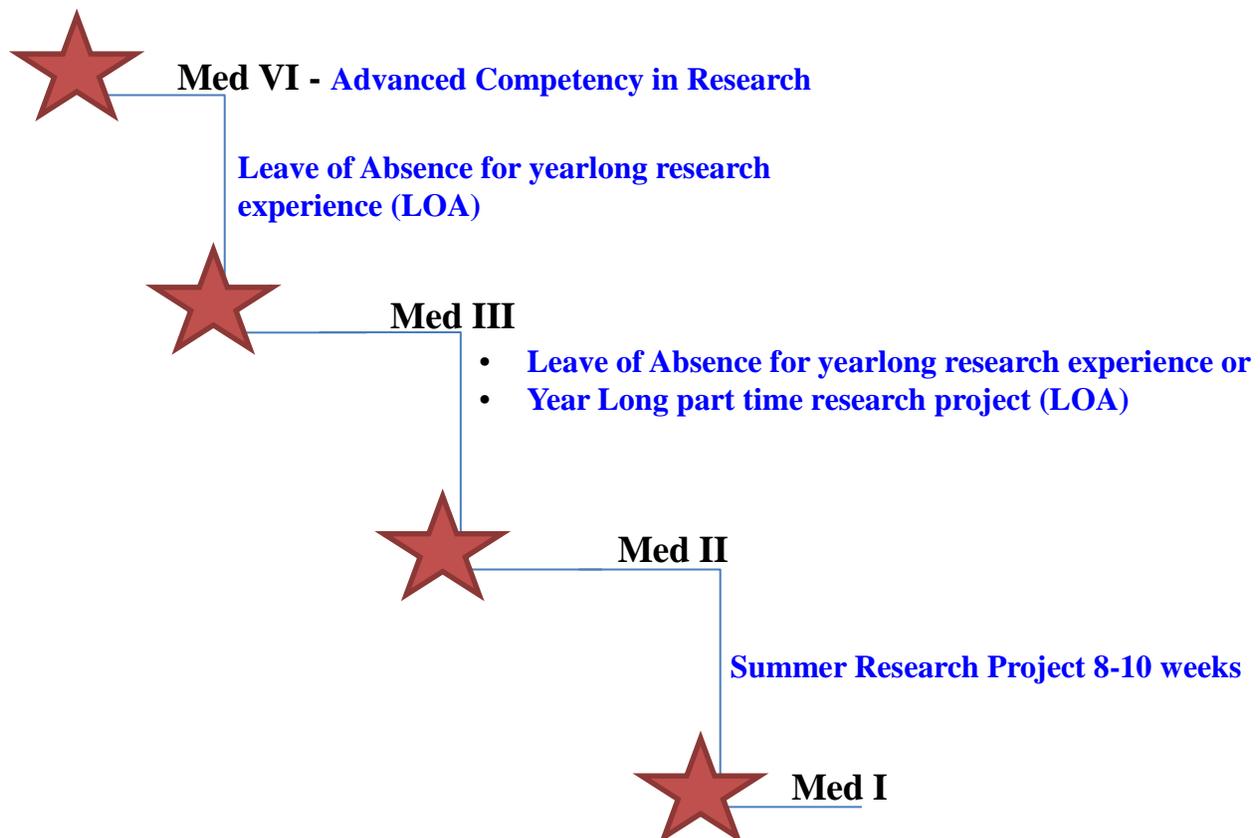
- Mentored Research Project
 - Background & Significance
 - Hypothesis Development
 - Research Design
 - Experimental Methods
 - Data Analysis
 - Science Oral Presentation
 - Scientific Writing
 - Publication
 - Research Grant Awards
- Scientific Interactions in Lab Meetings, Seminars, National Meetings (Debate & Critical Thinking)
- Team Interactions & Collaboration
- Awareness and Integration of Ethical Conduct of Research



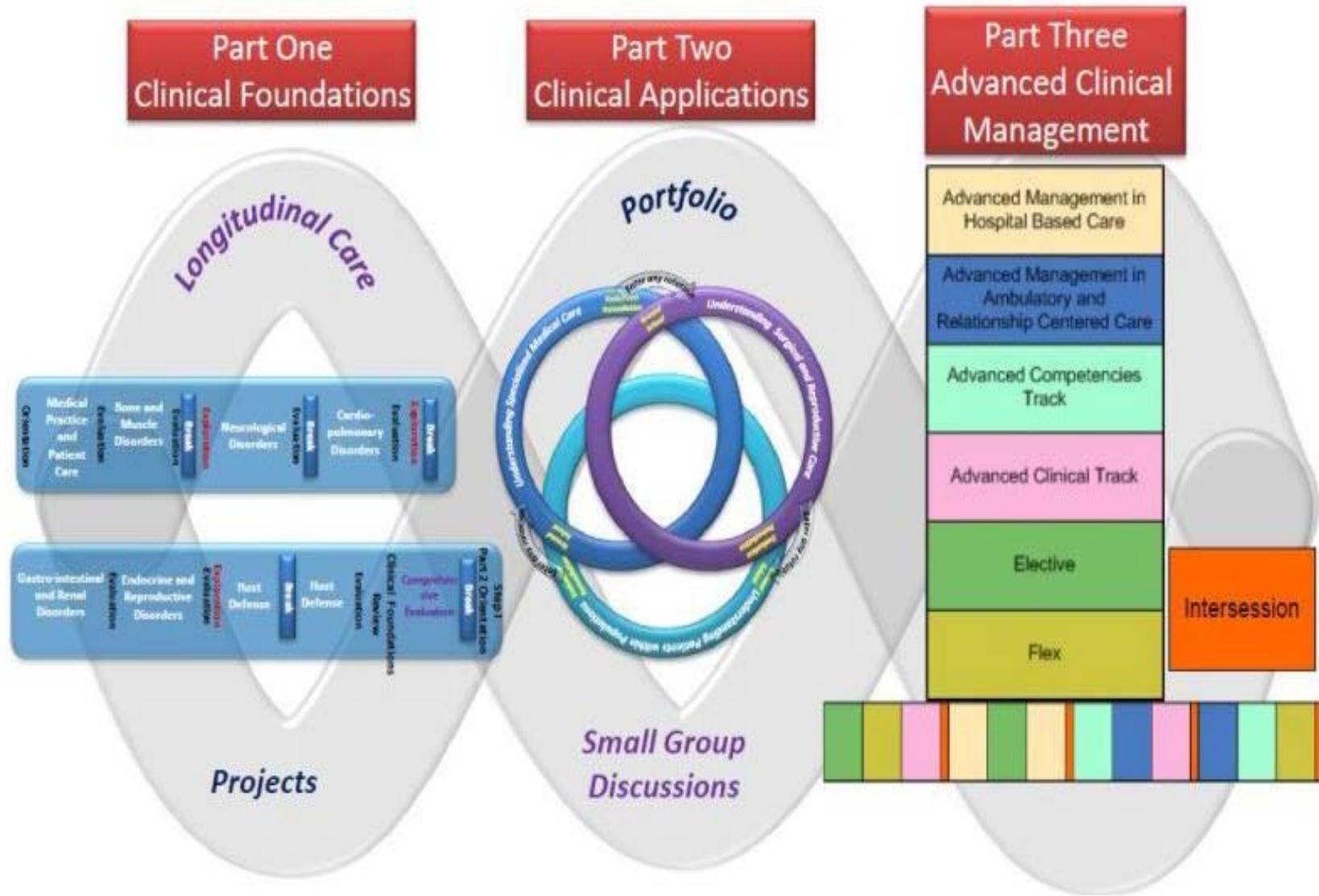
Levels of Mastery

- Expert: 450-650 points
- Proficient: 251-449 points
- Competent: 101-250 points
- Intermediate: 51-100 points
- Introductory: 40-50 points

Potential Timing of Research Experiences



leadserveinspire



Medical Student Research Program Outcomes

The Landacre Research Honor Society

The Landacre Honor Society was founded in 1956 by Dr. Russell Hayes and Dr. Bernard Marks in honor of Dr. Francis Leroy Landacre, professor and first chair of the Department of Anatomy. Dr. Landacre's original research was in neuroanatomy concerning the origin of cranial ganglia and neural crest cells of lower vertebrates. His exceptionally high standards in both academic achievement and research are the tenets of the society's promotion and support of medical student research activities.

In 2011, the Landacre Research Interest Group was created as a division of the Landacre Honor Society to further facilitate student research at OSU. The Interest Group and Honor Society have similar goals and the two organizations work together to coordinate research events. The difference is that the Landacre Honor Society since 2011 now has specific eligibility criteria and focuses on recognizing outstanding student research, an accomplishment typically achieved by third and fourth-year medical students. The Interest Group is geared towards encouraging and assisting first and second-year students to pursue their research interests and all interested medical students are eligible for membership. A full list of induction requirements for Landacre Honor Society Induction can be found on the Landacre Honor Society website.

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

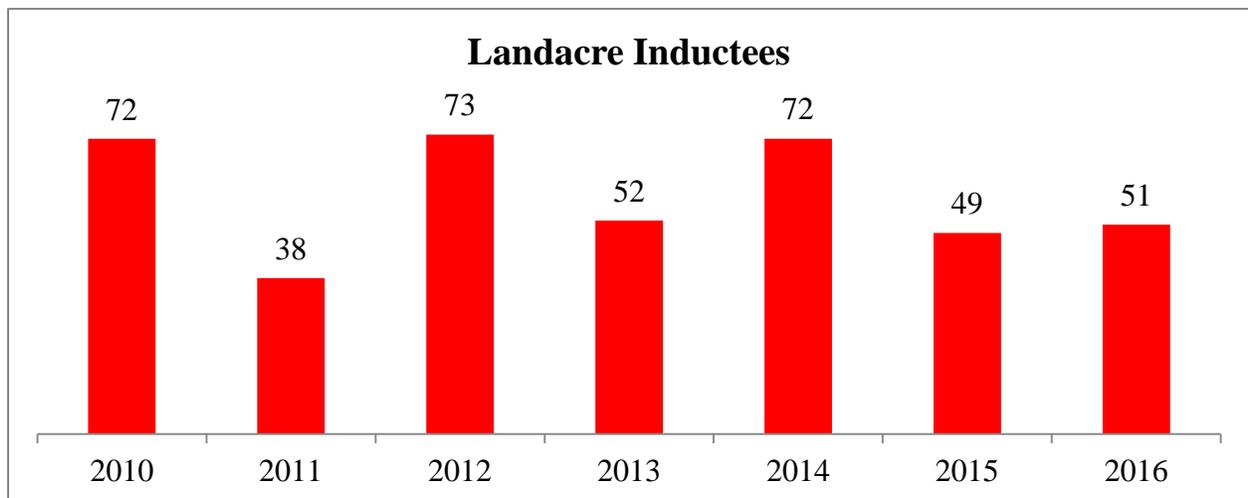
Qualifying Research

- 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) 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:
 1. Authorship of a peer-reviewed, published journal article
 2. First authorship of a competitively reviewed abstract accepted for oral or poster presentation at a national conference
- If the qualifying student is not the first author, the student's research mentor must write a letter of recommendation describing the student's significant contribution to the qualifying research.
- Receipt of a nationally competitive grant/award for the qualifying research

The qualifying student must present the qualifying research at OSUWMC Trainee Research Day.



Medical Student Research Achievement Recognition

High achieving medical students are considered for recognition and scholarship awarded annually at the Student Achievement Celebration Banquet.

Landacre Research Honor Society inductees receive a pin during the annual induction ceremony banquet and receive a purple Honors tassel to wear at graduation.

Students who successfully complete an advanced competency in research receive a pin and a purple and gold cord to wear at graduation.

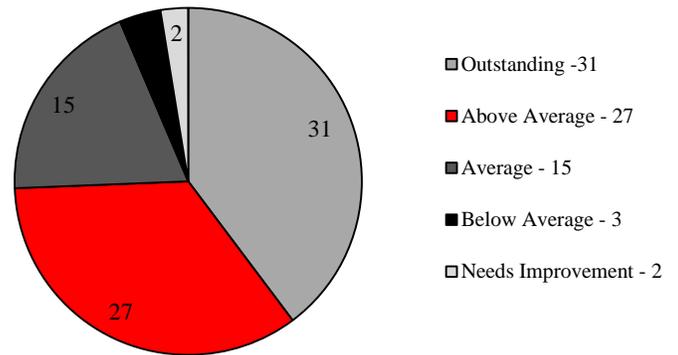
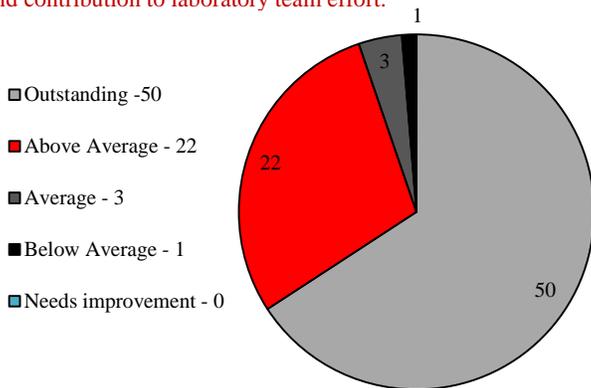


Medical Student Research Experience Evaluation

A de-identified report from mentor and mentee evaluations is compiled annually to facilitate improvements in the program. After each mentored research experience both mentor and student receive an electronic mentor or mentee survey consisting of approximately twenty-three questions; including a Likert scale and opened ended responses. Sample data collected and free text responses are shown below.

Mentors were asked to rate their research advisee's participation and contribution to laboratory team effort.

Medical students were asked to rate how the research experience met their expectations previous to starting the project.



Comments from students:

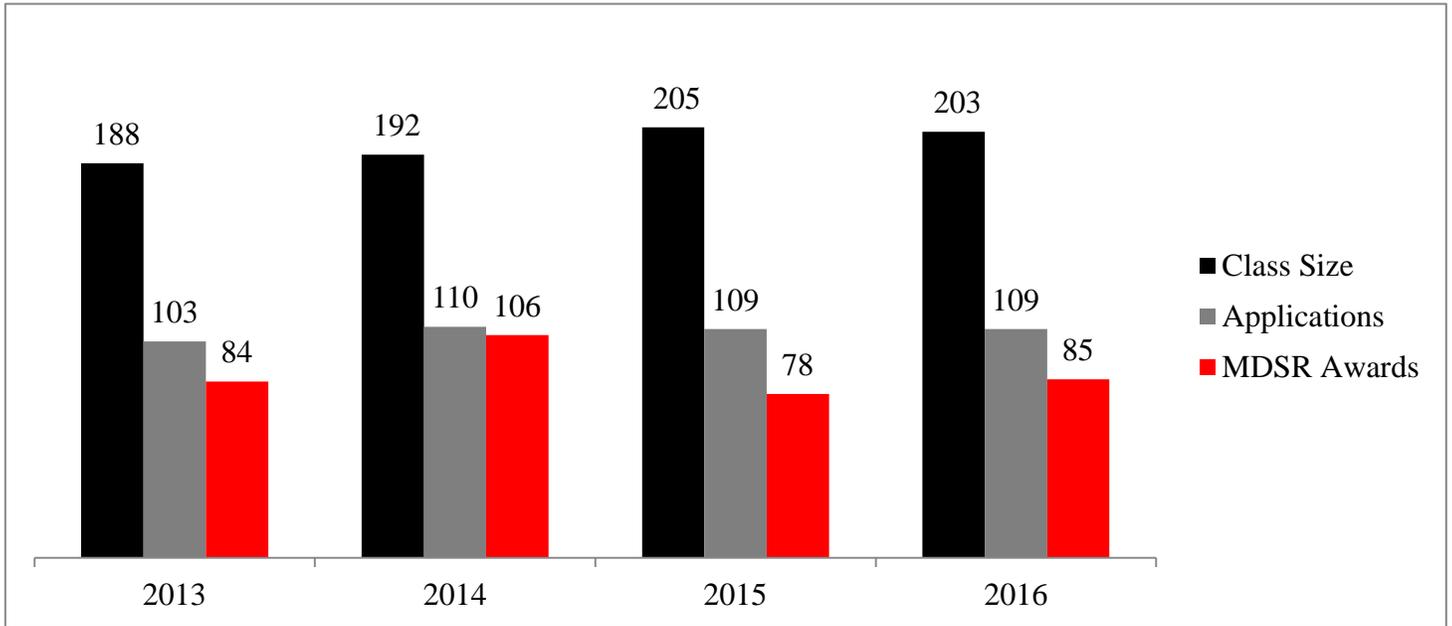
“I was active in all parts of the research program from recruitment, to running the protocol, and collecting and analyzing the data.”

“My mentor was amazing...she met with me on a weekly basis, was always there for me when I needed guidance, and did whatever she could to make sure I got the most out of my research experience. She was an outstanding mentor and I could not have asked for a better research experience.”

“I was able to accomplish everything that she envisioned for me, and more! I definitely was able to experience the entire research process from beginning to end. I was extremely satisfied with my experience and look forward to doing more research in the future!”

MDSR Research Scholarship Funding History

The chart below includes summer research projects (8-10 weeks), year-long part-time research projects and year-long leave of absence research projects (LOA's) that have been funded by the MDSR program through the Roessler, Bennett, and Barnes Research Scholarships.



Frequently Asked Questions

1. What intramural and extramural research resources are available for medical students including funding opportunities (categorized by summer and one year opportunities)? <http://go.osu.edu/MDSRscholarships>
2. Where is the application for COM research scholarship applications? And what are the review criteria? <http://go.osu.edu/MDSRreview> and <http://go.osu.edu/MDSRfunding>
3. How do I know if I need Institutional Review Board (IRB) or Institutional Animal Care and Use Committee (IACUC) approval? *Your mentor and their lab will determine if your project necessitates an IRB or IACUC approval. This determination should have been made at the application process. If your project has changed from the original proposed and funded application and you now need IRB or IACUC approval, your mentor, lab coordinator or research assistant should submit the protocol to the appropriate approval body. You are responsible for all on-line or in-laboratory training to keep compliant with any proposed amendments or protocols.*
Resource: <http://go.osu.edu/mdsrIRBhelp>
4. How do I obtain proper IHIS access? *See page 10 of the handbook and contact the office of medical student research office for further assistance. Research.education@osumc.edu*
5. When do I find out if I have been awarded a COM research scholarship? *All funding decisions are emailed the first week in April; please see the MDSR events page for exact dates.*
6. How many students can each faculty member mentor? *The MDSR office only supports up to 2 medical students per faculty member.*
7. What happens if mandatory scholarship requirements are not met? *Students who do not complete required activities or attend planned events (orientation, symposium, etc.) must forfeit their award.*
8. If a medical student receives a COM research scholarship, what are the scholarship requirements? *Attendance at Annual Kickoff Event, Compliance documentation, midpoint survey completion, final progress report, see full list here <http://go.osu.edu/MDSRrequirements>*
9. When do medical students have time to do research in the new LSI? *Please see MDSR Potential Timing of Research Experiences <http://go.osu.edu/researchtiming>*
10. What type of research training do medical students receive from MDSR office? *The Calendar of Events on page 3 of the handbook and <http://go.osu.edu/MDSRevents>*
11. What type of research training do medical students receive in the new LSI? *Evidence Based Inquiry and Research (EBIR) Pt 1, 2, 3, Advanced Competency in Research*
12. What travel funds are available for medical students to attend scientific meetings to present results of their research? *Trainee Research Day: <http://researchday.osu.edu/>, and through the College of Medicine Office of Student Life: <http://go.osu.edu/travelfunding>*
13. What resources are available to assist a medical student with poster creation and presentation? *A training session on “How to Present a Scientific Poster” is held each year prior to Medical Student Research Symposium, and poster printing resources can be found here <http://go.osu.edu/mdsymposium>*

14. How should a medical student be listed as a co-author on a publication? *Page 9 of the handbook also see <http://go.osu.edu/MDSRrequirements>*
15. How does MDSR assess the quality of the research experience? *The annual Mentor Mentee Research Evaluation survey which is administered following the funding period assists the MDSR program Office to assess areas for improvement.*
16. How many medical students participate in research? *Approximately fifty percent (50%) of Med I students participates in summer research between Med I and Med II funded through the MDSR COM Research Scholarships, (additional students participate in research funded by alternate sources not captured by scholarship data). By graduation more than 80% of medical students report participating in research during medical school.*
17. How does the COM recognize medical student research accomplishment? *Eligibility for Advanced Competencies in Research, Dean's Fall Research Scholarship, MDSR newsletter and admission into the Landacre Honor Society.*
18. How should medical students submit MDSRS updates, publications and presentations? http://go.osu.edu/MDSR_ResearchReporting
19. How do I publicize medical student research accomplishments? *The MDSR newsletter; email Research.education@osumc.edu*
20. How many hours should a medical student be in the lab (performing research) per week if they receive the MDSR Scholarship? *Full-time research (40 hours per week) or part-time year-long research (5 or 10 hours per week)*
21. What is the MDSR Team Science Project and how can I get involved? *The Team Science Project is a new initiative to promote Team Science and medical student exposure to the breadth of research in a thematic area. (see page 15) <http://go.osu.edu/MDSRteamscience>*
22. How can a faculty research mentor recruit more medical students? *Faculty are encouraged to post their research opportunity on the MDSR website, opportunities can be posted and updated here <http://go.osu.edu/MDSRmentors>*
23. What should I do if I cannot reach my mentor and I have emailed them numerous times? *Please keep in mind that faculty are extremely busy; if you have exhausted every avenue please contact the Office of Medical Student Research.*

Medical Student Research Program Contact Information

Medical Student Research Program Website:

<http://medicine.osu.edu/go/mdsr>



Medical Student Research Newsletter:

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



Medical Student Research Events:

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



MDSR Annual Research Symposium

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



The Landacre Research Honor Society:

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



MDSR Program Contact Information:

Ginny L. Bumgardner, MD, PhD

Associate Dean of Research Education

Director of Medical Student Research

Director of COM Masters of Medical Science Program

Co-Director of OSU HHMI Med-into-Grad Scholars Program

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