Research Trainees
Medical Student Research Program

THE OHIO STATE UNIVERSITY
College of Medicine

Medical Student
Research Handbook for
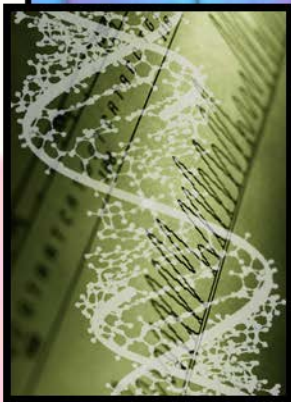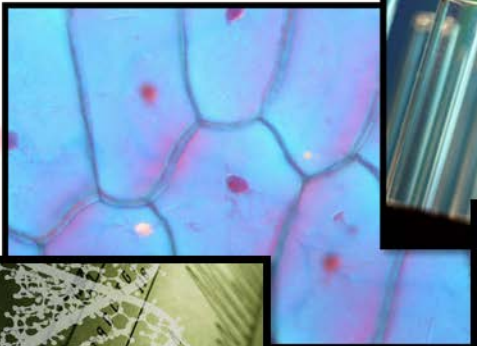# College of Medicine Leaders

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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.
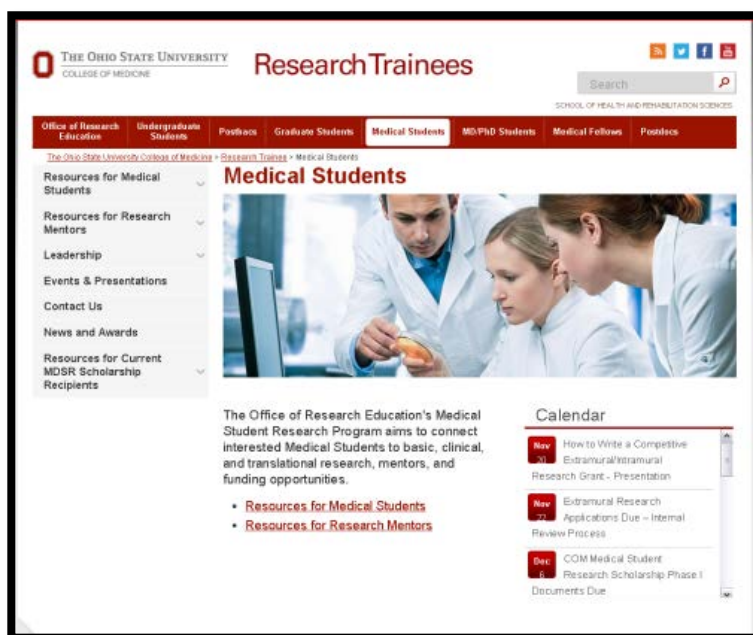
The Faculty Advisory Committee: COM faculty serve on the MDSR Faculty Advisory Committee (FAC) for a three year term by recommendation of the Department Chair. The MDSR FAC meets no more than twice per academic year to inform policy and participate in initiatives to enhance the quality of medical student 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
Late August	Medical Student Research Opportunities & How to Identify a Research Mentor	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	*Landacre 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
Early November	Landacre Research Mentorship Program Workshop	Fourth year medical students' mentorship program to guide first and second year medical students interested in research.
Mid November	How to prepare a Competitive Research Fellowship Application	Informational session on how to prepare a competitive research fellowship application
Early December	COM Medical Student Research Scholarship Phase I Documents Due	Phase 1 documents for the COM MDSR Scholarship application due to the MDSR office via the online submission process.
Mid 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	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)

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.

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

<u>Research Environment & Resources</u>: 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.

<u>Fellowship Applicant</u>: 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.

<u>Research Project</u>: 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 students 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.

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 <u>eight weeks</u>, 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.

Howard Hughes Medical Institute, Summer Medical Fellows Program

The Summer Medical Fellows Program is primarily aimed at students who later intend to apply for the year-long Medical Fellows Program. Summer Medical Fellows spend <u>eight to 10 weeks</u> doing full-time research with an HHMI investigator, early career scientist, (*HHMI's early career scientists are among the nation's most promising researchers, appointed to the Institute at a critical stage of their careers.) HHMI professor (HHMI professors are accomplished research scientists who also are deeply committed to making science more engaging for undergraduates) or Janelia researcher. Fellows gain scientific knowledge and research skills and

interact with world-class investigators in a rich training environment. Fellows can gain insight into a career as a medical scientist and determine if they would like to continue their research training in a year-long program. This program is for medical, dental, and veterinary students attending schools located in the United States. Up to 20 fellowships are awarded annually. http://www.hhmi.org/programs/medical-research-fellows-program/summer-program

2014 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, 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); 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) or K-RITH (Global Health Related Research)

The Year-Long Medical Fellows Program opportunities at Janelia and K-RITH are targeted to 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.

K-RITH especially of interest to medical students interested in global health research

Students interested in conducting research in HIV, TB, or co-infection in a state-of-the-art research institute at the heart of the TB and HIV epidemics should apply for fellowship positions at K-RITH.

Fellows will spend the year living and working in Durban, South Africa.

Students should have previous research experience and a strong interest in infectious disease.

http://www.hhmi.org/programs/medical-research-fellows-program/year-long-program-at-janelia

Sarnoff Medical Student Research Fellowship Program

The <u>mission</u> 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.

<u>Medical Student Research Fellowship Program</u>

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 Fellowship Program provides one-year research fellowships for up to two of the best and brightest OSU medical students who want to help cure cancer.

To be eligible, an applicant must:

• Be an outstanding OSU medical student

• Propose a cancer related project

• Participate in Pelotonia

Applications for the next Medical Student Pelotonia Fellowships will be due spring 2014 and will be scored on the following criteria:

• Applicant strengths and research potential

• Mentor/advisor qualifications and training record

• Innovativeness and impact of project to cancer research

To find out more visit

http://cancer.osu.edu/research/researcheducation/pelotoniafellowshipprogram/pelotoniamedstudentprogram/pages/index.aspx

Please direct all Pelotonia questions to:

Jeff Mason

Pelotonia Fellowship Program Director

908 Biomedical Research Tower (BRT)

614-688-3518

jeffrey.mason@osumc.edu

Publicizing Medical Student Research Awards, Presentations, and Publications

Please share medical student research accomplishments for publication in the quarterly 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.

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 though the E-service request system and followed by providing the necessary documentation to the College of Medicine Compliance office.

http://medicine.osu.edu/research/clinical_research/research%20and%20hipaa/pages/obtain-access-for-research.aspx

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

1. Provide 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 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:

IRB Requirements for Medical Student Researchers

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://orrp.osu.edu/irb/

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://orrp.osu.edu/iacuc/

Tracking Medical Student Research

The Liaison Committee on Medical Education (LCME) Accreditation Determinations

The LCME bases its accreditation determination on the LCME survey report, supplemented as necessary by information contained in the medical education database and the institutional self-study. Details of the LCME's deliberations, acceptance of evidence, consideration of progress reports, and reporting of decisions are found in the LCME's *Rules of Procedure*.

The usual period of full accreditation is eight years. Schools may be asked to submit one or more status reports in the interval, to address steps taken to correct specific areas of noncompliance, or describe the results of program changes underway. Limited, focused surveys may be scheduled during the interim when an on-site visit is deemed necessary. In some instances, the period of renewed accreditation is contingent upon review of a status report, or site visit by a team of evaluators or the LCME Secretariat. All of these matters are described in *Rules of Procedure*.

IS-14. An institution that offers a medical education program should make available sufficient opportunities for medical students to participate in research and other scholarly activities of its faculty and encourage and support medical student participation.

The institution is expected to provide an appropriate number and variety of research opportunities to accommodate those medical students desiring to participate. To encourage medical student participation, the institution could, for example, provide information about available opportunities, offer elective credit for research, hold research days, or include research as a required part of the curriculum. Support for medical student participation could include offering or providing information about financial support for student research (e.g., stipends).

ED-12. The curriculum of a medical education program should include laboratory or other practical opportunities for the direct application of the scientific method, accurate observation of biomedical phenomena, and critical analysis of data

Opportunities in the curriculum could include hands-on or simulated (e.g., computer-based) exercises in which medical students either collect or use data to test and/or verify hypotheses or to address questions about biomedical principles and/or phenomena. The medical education program should be able to identify the location in the curriculum where such exercises occur, the specific intent of the exercises, and how the exercises contribute to the objectives of the course and the ability to collect, analyze, and interpret data.

ED-17-A. The curriculum of a medical education program must introduce medical students to the basic scientific and ethical principles of clinical and translational research; including the ways in which such research is conducted, evaluated, explained to patients, and applied to patient care.

The faculty of the medical education program should develop explicit learning objectives (knowledge, skills, behaviors, and attitudes) to meet the requirements of this standard.

There are several ways in which the medical education program can meet the requirements of this standard. They range from separate required coursework in the subject to the establishment of appropriate learning objectives and instructional activities within existing patient-focused courses or clerkships (or, in Canada, clerkship rotations) (e.g., discussing the application of new knowledge from clinical research in bedside teaching activities, offering mentored projects, or conducting journal club sessions in which medical students explore the development or application of clinical and translational research).
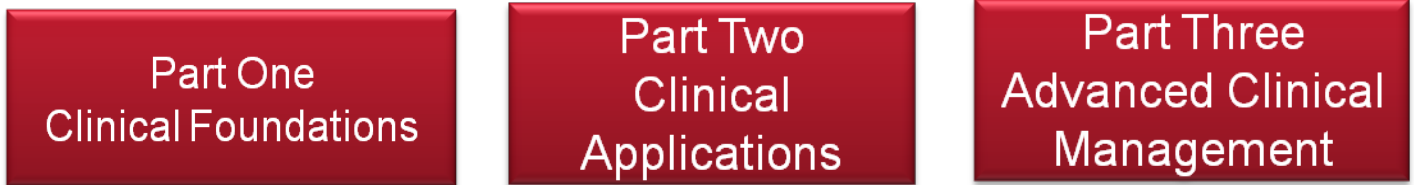
Reporting Medical Student Research to the Office of Medical Student Research

To help the MDSR office accurately capture the research being performed in your department by medical students by completing the form here **http://go.osu.edu/MDSR_ResearchReporting**
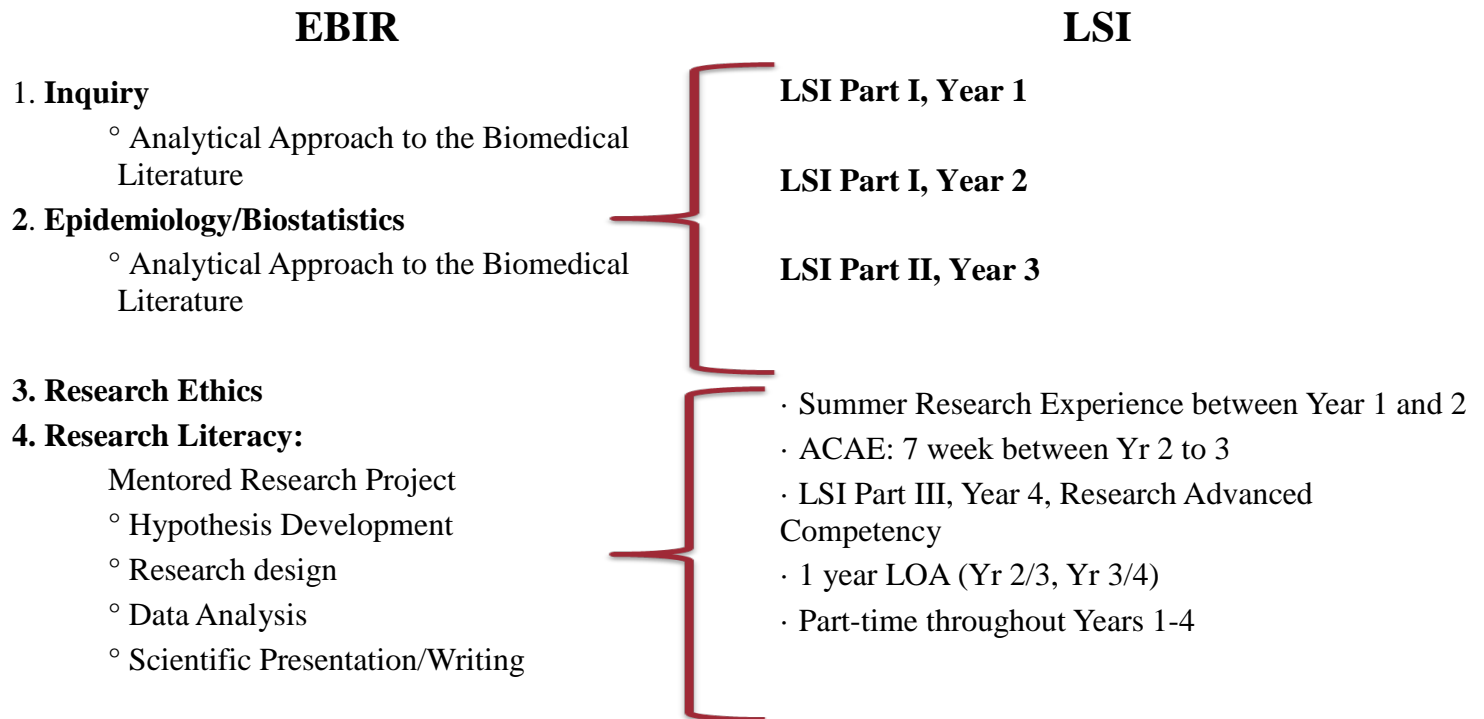
Evidence Based Inquiry in Research and L.S.I.

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

Part One Clinical Foundations	Part Two Clinical Applications	Part Three Advanced Clinical Management

Evidence Based Inquiry in Research 4 Components

EBIR

1. **Inquiry**
   ° Analytical Approach to the Biomedical Literature
2. **Epidemiology/Biostatistics**
   ° Analytical Approach to the Biomedical Literature

3. **Research Ethics**
4. **Research Literacy:**
   Mentored Research Project
   ° Hypothesis Development
   ° Research design
   ° Data Analysis
   ° Scientific Presentation/Writing

LSI

LSI Part I, Year 1

LSI Part I, Year 2

LSI Part II, Year 3

· Summer Research Experience between Year 1 and 2
· ACAE: 7 week between Yr 2 to 3
· LSI Part III, Year 4, Research Advanced Competency
· 1 year LOA (Yr 2/3, Yr 3/4)
· Part-time throughout Years 1-4

Advanced Competencies in Research in LSI

In 2014 Med 2 students will be offered Advanced Competency Alternate Experiences (ACAEs) over a period of up to seven weeks (May 5 – June 20, 2014); In 2014, Med 2 students will be offered ACAEs over a period of three weeks (May 4 – May 22, 2015).

The purpose of the Advanced Competency Alternate Experience (ACAEs) is to provide experiences for Med 2 students before entering Med 3 in 2014 and 2015 in specific areas where students wish to establish expertise and advanced competence.

Medical students with research experience have the opportunity to pursue an Advanced Competency in Research in Year 4.

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
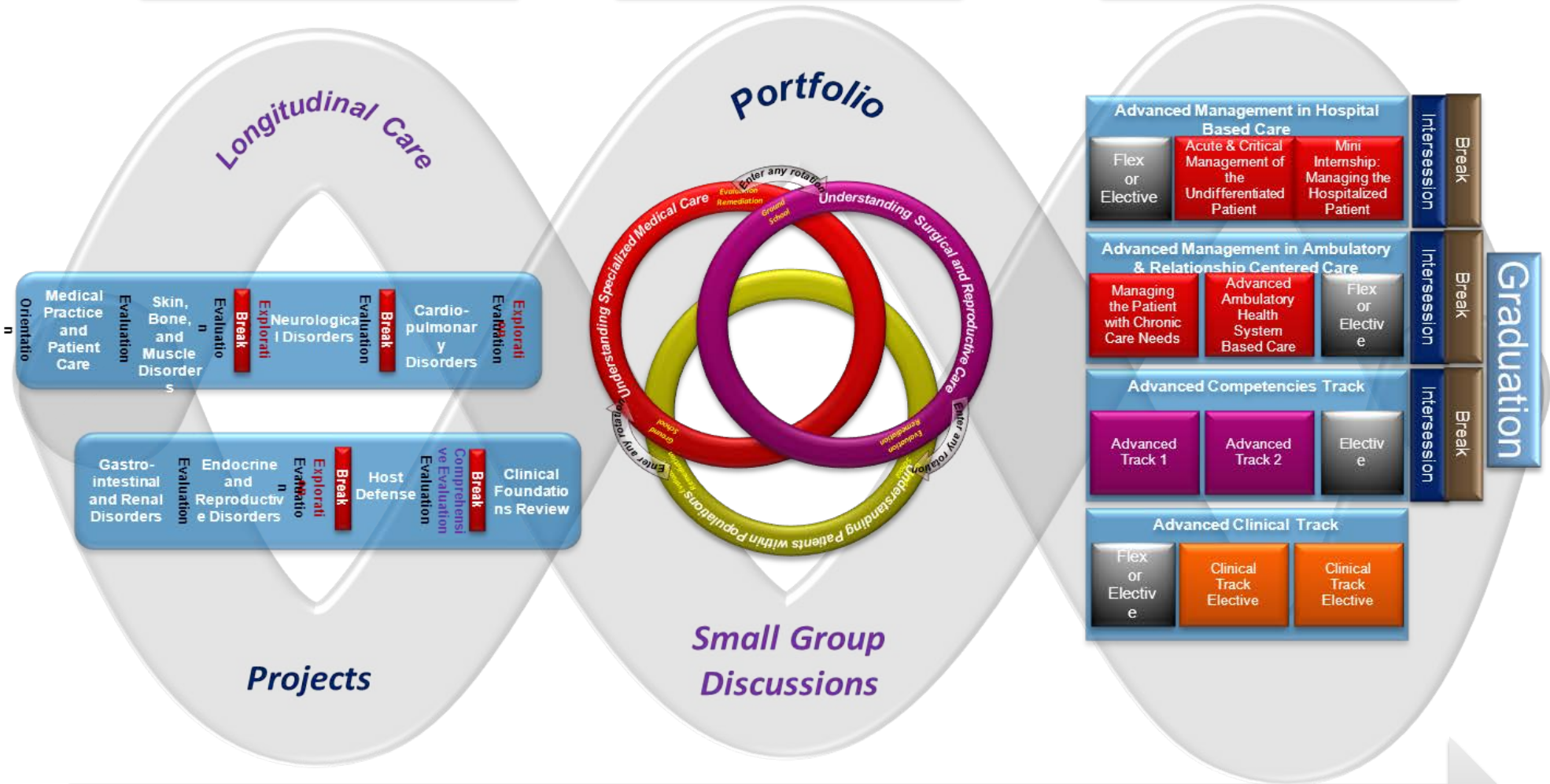- Awareness and Integration of Ethical Conduct of Research

Potential Timing of Research Experiences

Med VI Advanced Competency in Research

•Leave of Absence for year long research experience (LOA)

Med III

•ACAE: Advanced Competency Alternative Experience
•Leave of Absence for year long research experience or
•Year Long part time research project (LOA)

Med II

•Summer Research Project 8-10 weeks

Med I

Medical Student Research Program Outcomes

<u>The Landacre Research Honor Society</u>

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 for the qualifying research

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

Landacre Annual Inductees

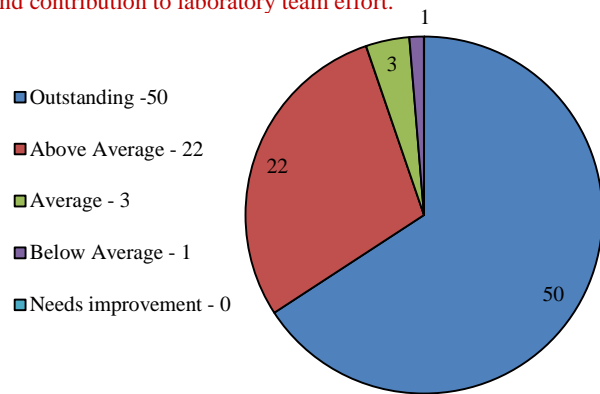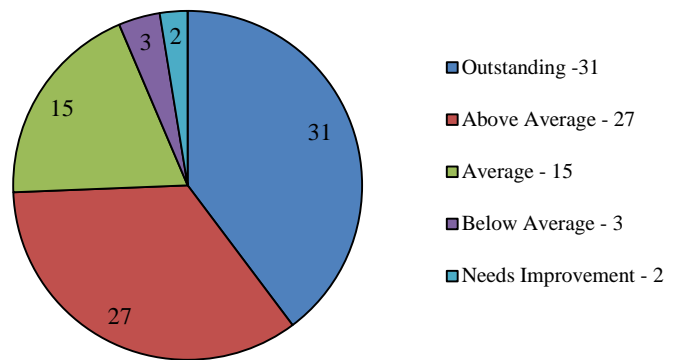| Year	Inductees
2004	27
2005	36
2006	42
2007	93
2008	84
2009	104
2010	72
2011	38
2012	73
2013	52
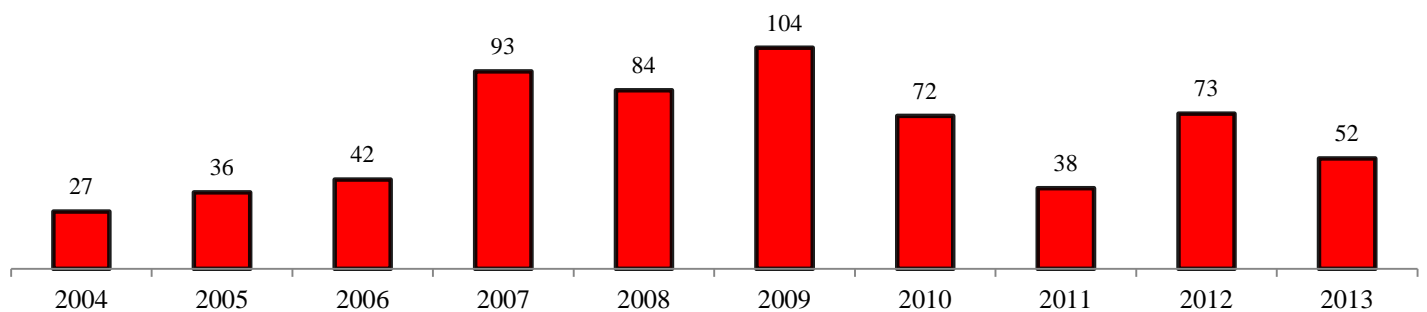
Medical Student Research Experience Evaluation

A confidential report of the experiences between mentors and their mentees
The research experiences that can be gained from a mentor-mentee relationship offer benefits for both mentors and mentees. 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.

- Outstanding -50
- Above Average - 22
- Average - 3
- Below Average - 1
- Needs improvement - 0

- Outstanding -31
- Above Average - 27
- Average - 15
- Below Average - 3
- Needs Improvement - 2

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.
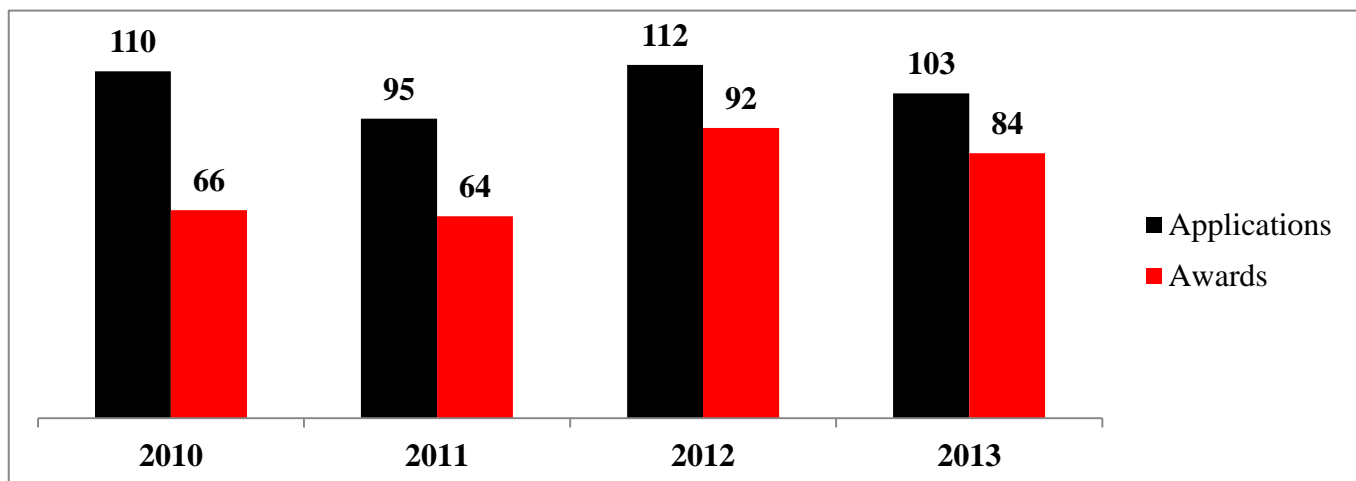
Frequently Asked Questions

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. If my 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*

4. What are the research expectations for medical students? *Attendance at Annual Kickoff Event, Compliance documentation, midpoint survey completion, final progress report, see full list here http://go.osu.edu/MDSRrequirements*

5. 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*

6. 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*

7. 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*

8. 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

9. What resources are available to assist my medical student with poster creation and presentation? *A training session on "How to Present a Scientific Poster" is held each year prior to Trainee Research Day, and poster printing resources can be found here http://go.osu.edu/posterprinting*

10. How should my medical student be listed as a co-author on a publication? *Page 9 of the handbook also see http://go.osu.edu/MDSRrequirements*

11. How does MDSR assess the quality of the research experience? *The annual Mentor Mentee Research Evaluation survey that is administered following the funding period.*

12. How many medical students participate in research typically? *Roughly fifty percent (50%) of the first year medical students participates in research funded through the MDSR COM Research Scholarship, *additional students participate in research funded by alternate sources not captured by this number.*

13. How does the COM recognize medical student research accomplishment? *Eligibility for ACAE and Advanced Competencies in Research, Dean's Fall Research Scholarship (new in 2013), MDSR newsletter and admission into the Landacre Honor Society.*

14. How should I submit my medical student research data? *http://go.osu.edu/MDSR_ResearchReporting*

15. How do I publicize my medical student's research accomplishments? *The MDSR newsletter; email Research.education@osumc.edu*

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

OSUWMC Trainee Research Day:
Researchday.osu.edu

The Landacre Research Honor Society:
http://go.osu.edu/Landacre

MDSR Program Contact Information:

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