How to Prepare a Competitive Research Proposal

Ginny L. Bumgardner MD PhD FACS
Associate Dean for Research Education

October 21, 2014
BRT 115

THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER
Session Objectives

✔ Learn the Components of the COM Research Scholarship Application

✔ Learn the Key Content Pertinent to COM Research Scholarship Application Sections

✔ Enhance Understanding of the Research Application Review Process

★ Bonus:
  ▪ Similar process applies to many other research sponsor applications
  ▪ Improve your scientific writing skills
College of Medicine MDSR Scholarship

- Includes the Roessler, Bennett, Barnes and Watts Research Scholarships
  - These awards are available to medical students for medical research performed under the guidance of the faculty of the College of Medicine.
  - The goal is to engage medical students in biomedical discovery and scholarly inquiry and to encourage students to consider a future academic career in biomedical research.

http://medicine.osu.edu/go/mdsr
Phase I documents due **DECEMBER 5th, 2014**

Phase I documents include:

- ✔ Phase I Cover Page
- ✔ Student’s NIH Biosketch
- ✔ Mentor/Mentee Commitment: Signed student & mentor compacts
- ✔ Research Compliance: IRB/ILACUC Protocols
- ✔ Categorization of Research Project (*Basic, Translational, Clinical*)

*All necessary documents available on the MDSR website*
Phase II documents due **JANUARY 9th, 2015**

**Documents include:**
- Phase II Cover Page
- Mentor Letter
- Abstract
- Personal Statement
- Research Plan
- Environment and Resources
- Experimental Duties
- Timeline
- References
- Mentor’s NIH Biosketch

*All necessary documents available on the MDSR website*
College of Medicine MDSR Scholarship

College of Medicine Medical Student Research Scholarship

(Including the Roessler, Bennett, and Barnes Research Scholarships)

These awards are available to medical students for medical research performed under the guidance of the faculty of the College of Medicine. The goal is to engage medical students in biomedical discovery and scholarly inquiry and to encourage students to consider a future academic career in biomedical research. Please note each faculty member may only mentor two medical students through the MDSR program during each given funding period.

Phase I documents are due by 5pm, Friday, December 5, 2014.
Phase II documents are due by 5pm, Friday January 9, 2015.

Phase 1 documents include:

* Download and save all documents prior to making edits, no handwritten items will be accepted.

- **Phase 1 Cover Page** [Phase 1 Cover Page.pdf]
- **1 Page Student Biosketch** [Applicant Biographical Sketch.docx]
- **MENTOR/MENTEE COMPACTS:** Each must be signed by both student and mentor the scanned and uploaded with the application.

[Medical Student Commitment and Compact.pdf]
[Commitment of Research Mentor.pdf]

**IRB and IACUC Protocol Approval:** If your research involves human subjects or patient data, you will need to provide the Institutional Review Board (IRB) protocol approval/exemption number and provide the amendment documentation that you have been added as key personnel. For research involving animals, you will need to provide the Institutional Lab Animal Care and Use Committee (IACUC) approval/exemption number. Approval by the appropriate regulatory body for these issues is the responsibility of the student's mentor.


[Phase 1 Instructions.pdf]
[Checklist for Medical Student Research IRB or IACUC approval.pdf]
[Medical Student Research Scholarship Application Checklist.pdf]
[Download Adobe Reader Free]
[Submit Phase 1 of the COM MDSR Research Scholarship]
COM Research Scholarship Phase I

- Cover Page:
  - Student Information
  - Title of the Proposed Research
  - Faculty Mentor Information
  - Phase I Checklist
  - Approval for 1 year Leave of Absence (LOA) *If applicable

- Downloadable & Fully Editable PDF
  - (Must be legible for reviewers, no handwritten documents)
***COM Research Scholarship Application Phase 1***

<table>
<thead>
<tr>
<th>PHASE I NECESSARY DOCUMENTS CHECKLIST</th>
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<tbody>
<tr>
<td>1. MEDICAL STUDENT RESEARCH APPLICATION COVER PAGE</td>
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<td>2. NIH BIOSKETCH OF STUDENT</td>
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<td>3. IRB/ILACUC PROTOCOL APPROVALS</td>
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<td>4. SIGNED STUDENT COMPACT</td>
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<td>6. CATEGORIZATION OF RESEARCH PROPOSAL</td>
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Application Sections
*Biosketch*

Biosketch Sections

- Educational Training
  - Institutions, include undergraduate degree and anticipated degrees

- Positions and Honors
  - Work experience, research experience, unpaid research internships

- Academic and Professional Honors and Awards
  - Honor societies, academic awards, scholarships

- Publications
  - Articles, reviews, poster presentations, oral presentations.

- Research Related Coursework and Activities
  - Include medical school and undergraduate courses if applicable to project
Purpose:

✓ How prepared is the trainee to conduct the proposed research project?

✓ How could the proposed research contribute to the candidate’s career development?

✓ If the trainee has had no research experience, what other experiences could help him/her to conduct this research project?
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IRB AND ILACUC PROTOCOL APPROVAL

- If your research involves human subjects or patient data, you will need to provide:
  - The Institutional Review Board (IRB) protocol approval/exemption number
  - The IRB amendment document adding you as key personnel on project

- For research involving animals, you will need to provide:
  - The Institutional Lab Animal Care and Use Committee (ILACUC) approval/exemption number.
  - Approval by the appropriate regulatory body for these issues is the responsibility of the student’s mentor.

Additional information is available through the Office of Environmental Health and Safety at http://ehs.osu.edu/ and The Office of Responsible Research Practices http://orrp.osu.edu/irb/
IHIS for Research Clearance

- All medical students performing research involving accessing patient data through IHIS, the Integrated Health Information System, must first obtain the appropriate clearance to access IHIS for research purposes. This process is initiated though the E-service request system and followed by providing the necessary documentation to the College of Medicine Research Compliance office.

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

★IHIS use is audited

*Resources available on the MDSR website*
The Office of Responsible Research Practices (ORRP) provides administrative support to the university research community and the review boards responsible for research oversight. The ORRP staff helps OSU faculty, staff, and student researchers navigate regulations governing research in a way that fosters **ethical conduct**, ensures compliance, and minimizes administrative burden.

- The **Institutional Animal Care and Use Committee (IACUC)** oversees the responsible use of **animals** in university research and instructional activities.
- The **Institutional Biosafety Committee (IBC)** reviews projects involving **recombinant DNA** and **biohazards**.
- The **Institutional Review Board (IRB)** reviews **human subjects** research proposals to ensure adequate protections are in place before humans participate in research.
# COM Research Scholarship Application
## Phase 1

### Phase I Necessary Documents Checklist

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What is the Medical Student Mentor/Mentee Compact?

- I acknowledge that I have the primary responsibility for the successful completion of my research project. While engaged in research I will maintain a high level of professionalism, self-motivation, engagement, scientific curiosity, and ethical standards. **Professionalism**

- I will meet regularly with my research advisor and provide him/her with updates on the progress and results of my activities and experiments. I will strive to meet established deadlines. I will be responsive to advice and constructive criticism. **Communication**

- I will attend and actively participate as a team member in laboratory meetings, seminars and journal clubs while a member of the research laboratory. **Expectations**

- I will comply with all institutional policies. **Professionalism**

- I will be a good lab citizen. I will agree to take part in shared laboratory responsibilities and will use laboratory resources carefully and frugally. I will maintain a safe and clean laboratory space. I will be respectful of, tolerant of, and work collegially with all laboratory personnel. **Professionalism & Safety**

- I will maintain a detailed, organized, and accurate laboratory notebook. **Professionalism & Expectations**

- I will discuss policies on work hours, sick leave and vacation with my research advisor. I will consult with my advisor and notify fellow lab members in advance of any planned absences. **Expectations & Communication**

- I will discuss policies on authorship and attendance at professional meetings with my research mentor. I will work with my mentor to submit all relevant research results that are ready for publication in a timely manner. I will prepare an abstract and poster of my research for the College of Medicine Trainee Research Day. **Professionalism & Science Communication**
What is the Medical Student Mentor/Mentee Compact?

I will be committed to the research project of the medical student. I will help to plan and direct the student’s project, set reasonable and attainable goals, and establish a timeline for completion of the project. **Research mentorship**

I will be committed to meeting one-on-one with the student on a regular basis. I will provide for every student under my supervision an environment that is intellectually stimulating, emotionally supportive, safe, and free of harassment. **Research mentorship**

I will be committed to providing laboratory resources for the student as appropriate or according to my institution’s guidelines, in order for him/her to conduct research. **Research mentorship**

I will expect the student to share common laboratory responsibilities, utilize resources carefully, frugally. **Expectations**

I will not require the student to perform tasks that are unrelated to his/her training program and professional development. **Expectations**

I expect the medical student research trainee to exhibit professional behavior and conduct research in keeping with the principles and guidelines of professionalism as described in the OSU College of Medicine's Policy on Professional Behavior. **Professionalism**

Throughout the student’s time in my laboratory, I will be supportive, equitable, accessible, encouraging, and respectful. I will foster the student’s professional confidence and encourage critical thinking, and creativity. **Research mentorship**
Origins of the OSU COM Medical Student Research Mentor/Mentee Compact

- AAMC Compact Between Postdoctoral Appointees and Their Mentors
  - [https://www.aamc.org/initiatives/postdoccompact](https://www.aamc.org/initiatives/postdoccompact)

- AAMC Compact Between Biomedical Graduate Students and Their Research Advisors
  - [https://www.aamc.org/initiatives/gradcompact](https://www.aamc.org/initiatives/gradcompact)
COM Research Scholarship Phase II

- Phase II documents due **JANUARY 9th, 2015**
- Documents include:
  - ✔ Phase II Cover Page
  - ✔ Mentor Letter
  - ✔ Abstract
  - ✔ Personal Statement
  - ✔ Research Plan
  - ✔ Environment and Resources
  - ✔ Experimental Duties
  - ✔ Timeline
  - ✔ References
  - ✔ Mentor’s NIH Biosketch
Phase II Cover Page

*Downloadable & Fully Editable PDF

Student Application for Medical Student Research Scholarship

PHASE II COVER PAGE

Student Name: ____________________________

Mentor Name: ____________________________

Project Title: ____________________________

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<td>4. TRAINEE PERSONAL STATEMENT (150 words)</td>
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<td>5. RESEARCH PLAN (3 pages)</td>
</tr>
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<tr>
<td>b. BACKGROUND INFORMATION</td>
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<tr>
<td>c. PRELIMINARY STUDIES</td>
</tr>
<tr>
<td>d. EXPERIMENTAL DESIGN &amp; METHODS</td>
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# Application Sections

**PHASE II CHECKLIST**

1. COVER PAGE (include Student, mentor name)
2. MENTOR LETTER
3. ABSTRACT (150 words)
4. TRAINEE PERSONAL STATEMENT (150 words)
5. RESEARCH PLAN (3 pages)
   a. SPECIFIC AIMS
   b. BACKGROUND INFORMATION
   c. PRELIMINARY STUDIES
   d. EXPERIMENTAL DESIGN & METHODS
6. ENVIRONMENT & RESOURCES (150 words)
7. EXPERIMENTAL DUTIES ON PROJECT (150 words)
8. TIMETABLE (specific dates, weeks of duties)
9. REFERENCES (1 page)
10. NIH BIOSKETCH OF MENTOR
Mentor Letter & Abstract

- **Mentor Letter** = A *letter of recommendation* in which the mentor assesses your qualities, characteristics, and capabilities and recommends that you have the ability or capacity, time and environment to learn how to perform the particular tasks or functions associated with your research project.
  - Mentor letters can be submitted by mentor directly to research.education@osumc.edu
  - Or student may submit during Phase II submission

- **Abstract** = a brief summary of your research hypothesis/purpose, significance and plan
  - 150 Words
### Application Sections

#### PHASE II CHECKLIST

1. COVER PAGE (include Student, mentor name)
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Application Sections
*The Personal Statement*

- A unique and personal introduction of yourself to the application reviewer.
  - Past Research Experience & Outcomes
  - Interest in Specific Medical Problems/Issues
  - Research Training Needs/Interests
  - Career Goals

- Questions to ask yourself when writing your personal statement.
  - What is distinctive about me?
  - What events, people or family history have shaped my interest in medical research and/or medical problems/issues?
  - When did I first become interested in the field of research?
  - What do I hope to gain from this research training experience?
Examples:

Presently, standard operative procedures lack the technological capabilities to ensure that a target cancer has been excised in its entirety. Advancements are needed in the field of xxx to enhance diagnostic technologies. I believe that working in Dr. “X” group will give me a unique opportunity to interact in a research environment with both clinicians and graduate researchers. Additionally it will give me the opportunity to further learn research presentation skills that I began to develop during my previous research experience. Finally I believe this project could evolve into a long term and highly productive endeavor which will allow me to follow this project into the future.
Examples:

This is a subject that I am exceptionally passionate about due to my personal experiences. Trace amounts of cancer sometimes remain in the patient following resection, undetectable by current techniques, and may lead to future relapse. My “family member” had undergone a xxxx surgical procedure following the diagnosis of xxxx. Despite following standard care, involving frequent scans and biopsies, he/she experienced full relapse which had developed into Stage IV Cancer by the time it was detected. He/She passed away ....I believe that if detection techniques were better, as proposed by the goal of this research project, the cancer that remained following xxxx may have been found an removed, ....
## Application Sections

### PHASE II CHECKLIST

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Application Sections

*The Research Plan*

a. Specific Aims
b. Background & Significance
c. Preliminary Studies
d. Experimental Design & Methods
e. References
Research Plan
Specific Aims

✓ What are the main goals of your project?
  • Test the comparative efficacy of a new assay or method for …..enhancement of diagnosis, prognosis
  • Study a specific biochemical pathway important in pathophysiology of a disease process …..such as acute pancreatitis
  • To assess the comparative efficacy of a drug to treat hypertension…
  • To determine the efficacy of a new technology for diagnosis of myocardial ischemia…
  • To design and compare 2 educational strategies to improve patient compliance with medications

✓ What specific question(s) will be answered?
✓ How will your project approach the problem?
✓ State your hypothesis
Research Plan
Background & Significance

✓ What is the main problem that this project will address?

✓ What work has been done by others in the field?

✓ What gaps are there in solving this problem?

✓ What more needs to be known about the problem?

✓ What is the significance of the problem that you propose to study to human health?
Research Plan
Preliminary Studies

- Describe any previous work in your mentor’s laboratory or from the published literature that supports the rationale for this project

- Use Figures, diagrams, photos, histology etc as needed
Use of Figures, Diagrams, Tables, Photos

don’t forget the figure legends

- Preliminary Data

- Histology
- Equipment
- Paradigm/Mechanism
- Clinical Protocol

Western Blot

GAPDH

A
B
C
Use of Figures, Diagrams, Photos

- Preliminary Data
- Histology
- Equipment
- Clinical Protocol
- Paradigm
- Mechanism

*Figure 1 – Estimated timeline of testing procedure including expected time of each stage [21].
Application Sections

*Experimental Design & Methods*

Experimental Design & Methods:
- Describe the plan of experiments and controls
- Number of subjects or animals
- Describe the methods to be used
- Discuss what data/results will be collected
- Discuss how the data will be analyzed
- Discuss the plan for statistical analysis of results
- Address feasibility of what you propose to do
- Identify any *novel* approaches or methods you will use

A. REFERENCES: Key publications substantiating the significance of the problem, rationale for the project, approach, feasibility,…
Application Sections
*Environment/Resources and Experimental Duties*

- Environment and Resources
  - Lab Space
  - Access to database
  - Equipment
  - Experts in the field
  - Statistical Analysis
  - Personnel in the lab

- Experimental Duties
  - What will you personally do?
  - Who else, if anyone, will assist you and what role?
Application Sections
*Timeline*

- **Timeline**
  - How much time will you devote to the project?
  - When do you anticipate completing each milestone, goal or aim?
  - Week 1… Week 2… Week 3…, etc
  - Table of expected accomplishments
  - Be very specific
  - Include time for analysis and reporting
Scientific Writing

Should be easy to read, understand, and should present your ideas in an exciting, yet specific manner.

The abstract of your proposal is the single most important paragraph of your proposal. If the grant reviewer has a good idea of the direction of your proposal from reading the abstract, it creates an important first impression that you do indeed know what you want to accomplish, with whom, and with what specific approaches.

In reading an exciting, well-written proposal, one idea follows naturally to the next.
Common Reviewer Criticisms and where the applicant could have included this information…

- “there is mention of 2 interventions but the nature of this intervention is not provided…”

  Aim, Research Plan,

- It is unclear how the data will be analyzed

  Research Plan, Methods

- No indication of the number of subjects to be recruited

  Research Plan, Methods

- Interesting idea but difficult to appreciate a hypothesis or details of the applicant’s plan

  Hypothesis
Reviewer Comments

and where the applicant included this info…

- This proposal is very clear and well written. **Clarity**

- The student is already engaged in the project and participating in lab meetings. **Candidate**

- The project has very clear goals that can be achieved in the time frame specified. **Aims**

- It capitalizes on the strengths of the student in IT yet allows him to apply his knowledge to a novel problem of medical relevance and learn new skills in the process. **Training Plan**

- The student is an excellent candidate who brings tremendous skills to this project. **Candidate**
Reviewer Comments

and where the applicant could have included this info…

- The proposal is poorly written, repeated in some parts and suffers from lack of continuity (font, font size, grammatical errors throughout, lack of attention to details for presentation, lack of clarity) **Clarity**

- Does not identify the model in sufficient detail **Methods**

- It is not clear what is being compared **Research Plan**

- Where are the controls for the experiment? **Methods**

- …it is a bit unclear how Aim 1 will advance knowledge of the field (impact) **Significance**
Reviewer Comments

- Academic record was not provided *Biosketch*

- Previous research experience is a strength *Biosketch*

- It would have been helpful if the candidate has described past research experience in a little more detail *Biosketch*
Reviewer Comments
and where the applicant included/could have included this info…

- Training value of proposed experience is outstanding as a) concept is new, b) will compare other methods, c) uses novel methodologies…  
  \textit{Training Plan}

- Good project and simple goals \textit{Aims}

- The student proposes to perform a literature survey and write a review paper regarding……He proposes specific questions to address which are really the key issues surrounding treatment of this condition. There is no specific hypothesis to be tested or need for research materials. \textit{Not hypothesis based research}

- From this project, the student hopes to gain experience in reading and analyzing the literature on a specific topic. Although this is an important skill that all physicians should seek to develop, it would not seem to fall under the rubric of a “research skill \textit{Not hypothesis based research}
Reviewer Comments

- While the project is interesting some of the goals are over ambitious for a student to complete over the limited time period. **Feasibility**

- This is too much to handle in 10 weeks for the applicant. Too many variables and too many cell systems to handle... **Feasibility**

- The proposal is diffuse and needs focus. **Focus**

- Xxxx has the academic qualifications (her biosketch details her very strong academic record) and prior research experience (she was a research assistant in a nerve regeneration study and already is first author or co-author on 3 peer-reviewed publications with a fourth in review) to prepare her for the present research project. **Candidate**
Reviewer Comments

and where this information could have been included…

- No case report form is provided, so I am left with an unclear picture as to the actual structure of the survey. Survey research can be highly biased by the structure of the instrument itself so including the survey tool would have been quite helpful. *Methods or Appendix*

- To say that “a series of questions” will be asked of study participants is very vague. It would be helpful to have a copy of the questionnaire. *Research Plan*

- How are you planning to validate your survey instrument to make sure it is giving you reproducible results? *Statistical Methods, References*

- What are family- and patient-specific variables that may influence the answers they are giving you? *Background & Significance, Research Design, Methods…*

- How do you plan to control for or analyze these variables? *Methods*

- What kind of sample size will you need to successfully carry out your study? How did you arrive at that number? *Methods*
COM Scholarship Requirements

✓ All Research Regulatory Compliance Documentation submitted prior to disbursement of scholarship funds—*this is for your protection!*

✓ Attend the 2015 Kickoff event prior to the summer research (May/June)

✓ Electronic survey at 2-3 weeks to check in with Mentor & Mentee

✓ Final Mentor and Mentee evaluation

✓ Must present poster at annual OSUWMC Trainee Research Day (April)

✓ Final Report due approximately ten (10) business days after the last day of the project

*MDSR does not fund travel to conferences or poster printing*
How do I submit my application...

1. MDSR Website
2. Resources for Medical Students
3. MDSR Research Scholarship
4. Download all necessary application components
5. Submit Phase I by December 5\textsuperscript{th}, 2014
6. Submit Phase II by January 9\textsuperscript{th}, 2015
Submission Process - MDSR website

2014 MDSR Research Scholarship Application, Phase 1

The Roessler, Bennett, and Barnes Scholarship awards are available to medical students of The Ohio State University College of Medicine for medical research performed under the guidance of its faculty.

Each application is reviewed by at least two expert faculty members and recommendations are made for these competitive awards.

Due to limited funds, awards cannot be made for all competitive applications and it is highly recommend to take the opportunity to apply to many other scholarship opportunities.

Before beginning this application review the checklist provided on the MDSR Scholarship page to ensure you have all the necessary documents and information.

You may save your work and continue the application at another time by selecting the "Save and Continue Later" link at the top of the form at any time.

http://medicine.osu.edu/go/mdsr
COM Research Award Data

Number of Awards Annually

<table>
<thead>
<tr>
<th>Year</th>
<th>Applications</th>
<th>Awards</th>
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<tr>
<td>2011</td>
<td>95</td>
<td>64</td>
</tr>
<tr>
<td>2012</td>
<td>112</td>
<td>91</td>
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<tr>
<td>2013</td>
<td>103</td>
<td>84</td>
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<tr>
<td>2014</td>
<td>110</td>
<td>106</td>
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</table>

- 95% Applications
- 56% Awards

Basic 24%
Clinical 56%
Translational 20%
Extramural Medical Student Research Funding Opportunities
NIH Medical Research Fellows Program

- NIH Medical Research Scholars Program (MRSP) is a comprehensive, year-long research enrichment program (replaced CRTP and NIH-HHMI Cloisters)
  - Read about other student projects @ link below!
  - The MRSP application cycle for 2013-2014 will open on October 1, 2014
  - Deadline is January 15, 2015

http://www.cc.nih.gov/training/mrsp/index.html
NIH Summer Internships

- The NIH Clinical Center (CC) Summer Internship Program offers summer internships to a variety of students including medical students.
- Each year, more than 7,000 students apply to the National Institutes of Health Summer Internship Program. From this pool, ~1100 summer interns were selected and approximately 50 students are selected to participate in the Clinical Center's internship experience.
- Important information about the program @ https://www.training.nih.gov/programs/sip

Applications
- Applications are accepted late-November through March 1
- Students will receive notice of application acceptance by April/May

http://www.cc.nih.gov/training/students/summer_internships.html
Howard Hughes Medical Institute (HHMI)

“At the Howard Hughes Medical Institute, we believe in the power of individuals to advance science through research and science education, making discoveries that benefit humanity. Learn more about our approach.”

- 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 eight to 10 weeks doing full-time research with an HHMI investigator, early career scientist, HHMI professor, or Janelia researcher.

- This program is for medical, dental, and veterinary students attending schools located in the United States. Up to 20 fellowships are awarded annually.

- Students must be able to conduct full-time research for at least eight consecutive weeks (10 weeks preferred).

- START EARLY!! You must contact a mentor on the HHMI list to prepare a research projects as part of your application.
HHMI Summer Medical Fellows Program Overview

The HHMI Summer Medical Fellows Program provides an 8–10 week research experience for medical, dental, and veterinary students in the laboratories of HHMI investigators, early career scientists, HHMI professors or Janelia researchers. This fellowship program is primarily aimed at those students who wish to use the summer research experience to explore continuing research through a year-long research training program. Subsequent applications to the year-long Medical Research Fellows Program are not limited to the laboratory in which the summer experience was obtained. Students from all medical, dental and veterinary schools in the U.S. are encouraged to apply for this beneficial educational opportunity. Up to 20 fellowships will be awarded in 2015.
2015 HHMI Summer Medical Fellows Program

TIMELINE:

• Online application in the HHMI Competition System: www.hhmi.org/competitions opens November 3, 2014

• Application deadline is February 16, 2015

• Award notifications will be made on March 20, 2015

• Deadline for acceptance of award is March 27, 2015

http://www.hhmi.org/programs/medical-research-fellows-program/summer-program
Students select mentor at any academic or nonprofit research institution in the United States (excluding NIH)

Students work with Mentor to develop a research project proposal

Working with HHMI PI encouraged but not required

HHMI investigator, early career scientist, or HHMI professor

http://www.hhmi.org/programs/medical-research-fellows-program/year-long-program
HHMI Medical Research Year-Long Fellows Program

Medical Fellows conducting research in the following areas may be 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)

http://www.hhmi.org/programs/medical-research-fellows-program/year-long-program
HHMI Medical Research Year-Long Fellows Program at Janelia (Neuroscience) or K-RITH (Durban, South Africa)

Two-step application process:

1) An initial prescreening portion of the application is due by November 3 followed by interviews for selected candidates at Janelia in early December.

2) Applicants progressing after interviews will be matched with a Janelia mentor, develop a research proposal with that mentor, and complete the remainder of the Medical Research Fellows Program application by January 12, 2015.
   • Award notifications will be made on March 13, 2015
   • Deadline for acceptance of awards is March 20, 2015
   • Fellowship year may start no earlier than May 1, 2015, and no later than September 1, 2015
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.
The Sarnoff Fellowship Program offers research opportunities for outstanding medical students to explore careers in cardiovascular research.

- Sarnoff Fellows conduct intensive work in a research facility, located in the United States, for one year.
- Prior research experience is not a prerequisite.

Timeline:

- **January 7, 2015, 3:00 pm ET - Application deadline**
- **February 15, 2015 - Finalist notification via e-mail**
- **February 27-February 28, 2015 - Finalist interviews in Boston, MA**
- **March 13, 2015 - Award notification via e-mail**
- **March 20, 2015, 1:00 pm ET - Award Acceptance Deadline**
- **Summer/Fall 2015 - Fellowship begins between May 1 and October 1**

- [Current Scholars](#)
- [http://www.sarnofffoundation.org/](http://www.sarnofffoundation.org/)

**Rohit Mital - 2012-13 Fellow**
- Med School: Ohio State
- Sponsor: Clay Marsh, MD
- Host Inst: Rockefeller University
- Preceptor: Sohail Tavazoie, MD, PhD
Medical Student Research Program
Internal Review for HHMI, Sarnoff etc

- Assistance with internal review of NIH, HHMI and Sarnoff applications
- Internal review due date November 21st, 2014
- E-mail to research.education@osumc.edu
- E-mail subject “Internal Review for …. Fellowship”
2015 Carolyn L. Kuckein Student Research Fellowship

• Research support for a continual period of a minimum of 8-10 weeks, 30 hrs/week, or an average of 4 hrs/wk for 12 months over 1-2 years.

• Supports clinical investigation, basic laboratory research, epidemiology, social science/health services research, leadership or professionalism.

• Students DO NOT have to be AOA members in order to apply. All 1st, 2nd, and 3rd year medical students are eligible to apply. (PhD or MD/PhD candidates are NOT eligible)

• Award is $5000, one half paid on announcement of award, one half on approval of final report. Up to an additional $1000 reimbursed for travel to present on research at a national meeting.
2015 Carolyn L. Kuckein Student Research Fellowship

• OSU students submit their application to the OSU chapter of AOA, and then the committee selects one application to send to the national office for consideration. **50 Fellowships are granted nationwide.**

• Applications are due to OSU chapter by **December 31, 2014** and must include a 3 page summary of the proposed research project, the applicants CV, a letter of support from the faculty supervisor, the mentor's biographical sketch, and the completed application form with checklists.

Date of award announcement: **on or about April 15, 2014**
More information, contact **aoa@osumc.edu**, all application information may be found at **www.alphaomegaalpha.org/student_research.html**
OSU 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 are due January 15th for Medical Students starting July 1.**

- Applications will be scored on the following criteria:
  - Applicant strengths and research potential
  - Mentor/advisor qualifications and training record
  - Innovativeness and impact of the project

Jeff Mason, Program Director
Pelotonia Website
jeffrey.mason@osumc.edu
Questions ?????

MDSR Program Office Contact Information:
Research.Education@osumc.edu
1190A Graves Hall
333 W 10th Ave
Columbus, OH 43210
http://medicine.osu.edu/go/mdsr
See you tonight at the Research Opportunities Fair!