



**Office of Student Affairs CB 2340**

**Medical Scholars Program Handbook - November 2012**

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**\*Please note that changes/updates in the Medical Scholars Program will occur. The official version is that on the web ([www.georgiahealth.edu/som/students/](http://www.georgiahealth.edu/som/students/)) - go to Research Opportunities – click on Intramural programs.**

## OVERVIEW

Discovery is the essence of progress in biomedical research and the hope in medicine for uncovering the unknown to identify treatments and cures to human disease. The arena of discovery research is vast and is a remarkably rewarding experience for medical students. The Medical College of Georgia Medical Scholars Program offers the opportunity for all medical students in good academic standing to engage in research activities – basic science, translational, clinical, and educational – in close mentorship with faculty who are nationally and internationally distinguished scientists, clinicians, and academic scholars. The goals of the program are to:

- expand scholarly experiences as a strategy aimed at providing physicians who ultimately elect not to go into academic medicine with an understanding of how to identify and evaluate relevant medical and scientific data using quantitative and qualitative methods; how to frame a relevant hypothesis, and construct and test a valid research design; and how to communicate knowledge, new and old, to colleagues as well as to patients that have minimal understanding of either medicine or science.
- provide medical students with experience in scientific presentation and publication through participation in the annual Medical College of Georgia, Medical Scholars Research Day.
- provide medical students with the opportunity to present their research findings at local and national meetings.
- provide medical students interactive workshops with a focus on clinical and translational research design.
- expand scholarly experiences as a strategy aimed at increasing the number of medical students choosing careers as physician-scientists.

Most students choose to participate during the summer (10 weeks) following completion of their first-year of medical school. Your first step in the research process is to identify an area of research interest to you and a mentor who is working in your area of interest. A broad array of research interests/directions is available to pursue at the Medical College of Georgia, including:

- laboratory-based biomedical research
- patient-oriented research
- bioinformatics
- community health initiatives and health outreach
- global health initiatives outreach
- health services and policy development and evaluation research
- biomedical ethics and medical humanities, and
- medical education

Selection of a mentor is a key step to the success of your research project as well as to your overall enjoyment of the research experience. Your mentor will help you to identify a specific research question that makes a meaningful intellectual contribution and, additionally, will help you to craft a brief, but rigorous and well-defended, research proposal.

Later sections of this Handbook may be helpful to you for the identification of a research focus and for the identification of an appropriate mentor.

You should have identified your research question and finalized your choice of research mentor prior to the end of your first semester – **December 2012**. You will use the month of January 2013 to develop a formal research proposal in collaboration with your mentor.

Your research proposal application - which presents your research question/hypothesis, explains your experimental design, and tells how you will evaluate your results – needs to be submitted on-line through the Medical Scholars Program, Office of Student Affairs by **Wednesday 30 January 2013**. Your application needs to be accompanied by a supporting application from your mentor. Details about crafting a proposal and the process of applying are given in a later section - *Application Process*.

The Medical Scholars Program lasts 10 weeks. Accepted students are paid a modest stipend during this primary research time period. As the number of research slots that can be supported is limited, stipend support will be allocated on the basis of project merit and mentor consideration. Details about the application review process are given in a later section - *Proposal Evaluation and Selection*.

In addition to the time spent on their research project, students are expected to participate in weekly noontime sessions throughout the summer. These sessions are intended as interactive workshops for students to review primary literature, discuss research design approaches, and present their research ideas and work-in-progress.

Medical Scholars Program co-directors Drs. McKie ([kmackie@georgiahealth.edu](mailto:kmackie@georgiahealth.edu)) and Cameron ([rcameron@georgiahealth.edu](mailto:rcameron@georgiahealth.edu)) are available to assist you at any stage of your research endeavor - the planning (discussion of research interests and identification of potential mentors), the implementation (development of a research proposal), and the completion (written summary and poster presentation) of an MSP project. We strongly advise you to ***start early and plan ahead***.

### ***Potential Other Research Experiences***

The Medical College of Georgia offers the possibility to pursue biomedical research training in cardiovascular, diabetes, and obesity fields during the summer prior to beginning medical school through the Prematriculation Scholars Program, Dr. David Stepp - [dstepp@georgiahealth.edu](mailto:dstepp@georgiahealth.edu).

Students who wish to pursue more rigorous training in research beyond the Medical Scholars Program are encouraged to consider more comprehensive year-long research intensives sponsored by federal and non-federal agencies, including The National Institutes of Health and The Howard Hughes Medical Institute, (see Drs McKie or Cameron - [kmackie@georgiahealth.edu](mailto:kmackie@georgiahealth.edu); [rcameron@georgiahealth.edu](mailto:rcameron@georgiahealth.edu)) or should consider the MD/PhD flex program at the Medical College of Georgia, co-directors Drs. J Pollock and N Lambert - [jpollock@georgiahealth.edu](mailto:jpollock@georgiahealth.edu); [nlambert@georgiahealth.edu](mailto:nlambert@georgiahealth.edu).

Multiple other research opportunities, requiring external applications, are available as summer research intensive, including American Pediatric Society and Society for Pediatric Research, MD Anderson Cancer Center, National Institutes of Health, St. Jude Pediatric Oncology Education Program, Vanderbilt Medical Student Summer Research Training Program, etc. (see Drs McKie or Cameron - [kmackie@georgiahealth.edu](mailto:kmackie@georgiahealth.edu); [rcameron@georgiahealth.edu](mailto:rcameron@georgiahealth.edu))

## REQUIREMENTS OF MEDICAL SCHOLARS PROGRAM

- Students participants must have successfully completed all Phase I requirements and be in good academic standing.
- Students accepted to the Medical Scholars Program are obligated to a full-time 40h/week commitment. No activities that conflict with this effort are permitted without approval of the mentor and the Director of Medical Scholars Program. Specifically, students may not have other daytime, paid employment.
- The research project must be based on a specific hypothesis that addresses an original question. Clinical chart reviews and literature reviews are permitted, but only if they are designed about a specific and testable hypothesis. Findings should be subjected to statistical analysis and the conclusions of the research should support or lead to the rejection of the original hypothesis.
- The research mentor must be a full-time faculty member, clinical and/or basic science, at the Medical College of Georgia. Qualified clinicians and basic science investigators outside the Medical College of Georgia community may serve as research mentors, but they need to be sponsored by a full-time faculty member at the Medical College of Georgia whose expertise lies in the field of the research work being performed. The sponsor-arrangement requires approval by the Director, Medical Scholars Program.
- No more than two students can be associated with a single mentor. Multiple student participation on a single project (shared effort) is not permitted. The student is expected, with guidance from the mentor, to develop the hypothesis and specific aims of the project, as well as to participate in the experimental design of the study. Students are expected to assume responsibility for performing experiments and interpretation of data.
- For projects that lend themselves to statistical analysis, assistance will be provided through the Department of Biostatistics (Dr. Jennifer L. Waller, [JWALLER@georgiahealth.edu](mailto:JWALLER@georgiahealth.edu)) with financial support from the Medical Scholars Program.
- At the conclusion of the program, each student must submit a **Scholarly Abstract** of his or her findings to Dr. Kathleen McKie, Office of Student Affairs for inclusion in their education portfolio. The abstract, which needs to be approved by the research mentor, should include: the question that the research is intended to answer, the approach/experiments used to test the hypothesis, the results obtained, the interpretations drawn, and the significance of the findings to medicine.
- At the conclusion of the program, each student must present his or her research findings in poster format at the **Annual Medical Scholars Research Day, Monday, 23 September 2013** (subject to change). This forum provides an important arena for students to present their work to a cross-departmental and cross-school audience of students and faculty.

## SELECTING A MENTOR

The selection of a mentor is a key step in getting started along a research path – the mentoring relationship is not only crucial to the success of your research experience, but to the initial stages of your career. In addition, the mentor is an important element in the evaluation of your application to receive research stipend support.

A good mentor has the time and interest to train **you**. A good mentor is **accessible** and **willing** - willing to help you identify and discuss an appropriate research project - willing to help you craft an appropriate research plan - willing to help you problem-solve and trouble-shoot and to set and review project goals and expectations throughout your research time.

You should discuss possible research projects with multiple prospective mentors who work in a field of interest to you and carefully choose an active, ongoing research setting where the necessary techniques and resources are already established.

You should make every effort to meet with other members of the laboratory/environment under consideration: technical staff, other medical students, graduate students, summer undergraduate students, post-doctoral fellows, research faculty, etc – a stimulating research environment is a real positive additional factor to consider in selecting a mentor.

There are several database resources ([www.georgiahealth.edu/som/students/](http://www.georgiahealth.edu/som/students/)) to help you identify an appropriate research mentor:

- If your prospective mentor has had a student before, he/she will be listed in the Medical Scholars – 2007-2012 database. We encourage you to contact them and discuss with them their experience.
- If you have identified a general field of interest, but need some guidance to generate or focus possible research projects or identify appropriate mentors, thematic areas of interest for all Biomedical and Clinical Departments and Institutes at MCG are listed in the Biomedical & Clinical Department Research Programs database located in a later section of the Handbook. Each has a designated **faculty ambassador** that will meet with you to help define your research interest and identify possible mentors.
- If you have a specific research interest, but need some guidance to identify a specific faculty member who shares your research interest, view the list of MCG Faculty Research Interest Keywords. This database is also searchable by Department and Institute location as well as by faculty member name. Please note that faculty research interests, available research time, and funding are constantly evolving.

You are encouraged to discuss your mentor selection with several individuals, including MSP directors, Deans, Biomedical and Clinical Department or Institute Chairs, Graduate and Clinical Program Directors, as well as with other senior faculty before making a final choice of mentor. This is particularly important if you have selected a mentor who has not had a student previously, or is at the beginning stages of defining their research program. Please note that new primary investigators may indeed make for a great mentor (often the best), but confirm that he or she has significant time for you and that the research environment is appropriate.

## APPLICATION PROCESS

Once you have chosen a mentor, you should identify with extensive discussion between you and your mentor an achievable research goal that can be addressed during the program's ten week time period. It is critical that you undertake a research problem that enables you to develop a sense of "personnel ownership and commitment" and make a meaningful intellectual contribution. It is not necessary that the research problem or idea originate with you; the best projects for students are those that fit into the mentor's ongoing funded research efforts.

Research questions that use human subjects, or human derived materials, including charts and human specimens must be part of an active program already approved by Human Assurance Committee – no new proposal will be accepted – no exceptions.

After identifying a specific problem and feasible course of study, you with the help of your mentor need to craft and submit a brief research proposal describing your research plan.

The ***MSP STUDENT AND MENTOR APPLICATION FORMS***, which are common to all applicants, are available online at the Office of Student Affairs, CB 2340 ([www.georgiahealth.edu/som/students/](http://www.georgiahealth.edu/som/students/)). *(to be placed on-line 15 December 2012).*

### PROPOSAL SUBMISSION DEADLINE: WEDNESDAY 30 JANUARY 2013

#### Preview of 2013 MSP Student and Mentor Application Forms

Please prepare information for application and submit through the MSP website. The application form contains essay questions and needs to be filled out at one sitting. We suggest you complete these in Word format first and then copy and paste them into the form. Submission of form is final. For more information, please contact Richard Cameron at [rcameron@georgiahealth.edu](mailto:rcameron@georgiahealth.edu).

#### (I) A PREVIEW OF THE STUDENT APPLICATION

##### Student Information

- Name \*
- Birth Date \*
- Address \*
- Phone Number \*
- Cell Phone
- School Email \*
- Alternate Email

##### Citizenship

- If not a US Citizen, of what country are you a citizen?
- If you have a permanent resident alien "green card", please provide the number on the card:

**Educational Background:** please list the colleges/universities you have attended, prior to entering the Medical College of Georgia.

- School Name
- Major
- Degree
- Graduation Date

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### **Mentor Information**

- Name \* (Title, First, Last, Suffix)
- Department \*
- Mentor Email \*
- Mentor Phone Number
- Location where work will be performed \*

### **Research Plan Narrative**

- Project Title \*
- Project Aims \* (Maximum of 250 words) Briefly state Project Specific Aims.
- Project Background and Significance \* (Maximum of 500 words) Summarize previous studies in the field and point out what additional studies, especially your proposed work, would add knowledge to the field.
- Research Methods and Design \* (Maximum of 500 words) Outline exactly what you propose to do during the summer with some brief experimental details.
- Relevance of Research to Medicine \* (Maximum of 250 words)
- Please discuss what you hope to learn from participation in the Medical Scholars Program and how your participation will benefit you in meeting your future education and career goals (Maximum of 250 words). \*
- Selective References \* (enter up to 10 references) List journal articles that are referenced in the research proposal/application - i.e., the published work that supports the ideas/approach of proposed work.
- Have you had any previous research experience(s)? \* Yes or No
- *A later section of this Handbook provides additional detail that may be helpful to you in crafting your research narrative.*

### **Suggested Proposal Review Group** (please check your primary choice)

- Children's Summer Scholars Program – Chair, Dr. Bernard Maria.
- Dean's Summer Scholars Program – Chair, Dr. Donna Londino (Augusta).
- Dean's Summer Scholars Program – Chair, Dr. Barbara Schuster (Athens).

## **(II) A PREVIEW OF THE MENTOR APPLICATION**

### **Mentor Information**

- Name (Principal Investigator)
- Department
- Email
- Office Address
- Phone
- Lab Location (site of work performance)
- Lab Phone

### **Student Information**

- Name
- Student Email
- Project Title

**Mentor Support Statement:** In the Support Statement, the mentor should discuss the following elements:

- description of ongoing research activities.
- identification of current research support pertinent to student's project.
- description of what the student is expected to accomplish and the mentor's role in the process.
- assurance that the student will have appropriate space to work, reasonable access to supplies, and access to the mentor's time.
- assurance that the mentor will help craft and review the Scholarly Abstract for the student's education portfolio as well as the poster for presentation at the Annual Medical Scholars Research Day – Monday 23 September 2013 (subject to change).

### **Institutional Compliance Committee Information**

(check – yes or no – to those Institutional Compliance Committees that apply and complete requested information)

A) Human Subjects, including records patient derived tissue/blood/fluids or questionnaires.

- HAC File #
- Approval Date
- Completion Date of Education Requirement(s)

B) Animal Subjects

- IACUC File #
- Approval Date

C) Institutional Biological Safety

- IBC Protocol # for research involving biological materials
- Approval Date

D) Institutional Chemical Safety

- ICC PI Authorization #
- Approval Date

E) Radioactive Materials/ Radiation Producing Devices

- Approval Date

F) MCH Health INC RESOURCES (patients, personnel, facilities, services, etc)

## RESEARCH REVIEW COMMITTEES

The number of research slots that can be supported by the College of Medicine is limited; thus, stipend support is allocated on the basis of project merit and mentor consideration.

Applications submitted to the Medical Scholars Program are reviewed by biomedical science and clinical faculty comprising three Research Review Committees of distinct expertise.

Please indicate in your application, a recommendation for the Review Committee that you and your mentor think best suited to evaluate your research application.

(1) *CHILDREN'S SUMMER SCHOLARS REVIEW COMMITTEE – Department of Pediatrics, Child Health Discovery Institute, Georgia Prevention Center – Co-Chairs: Drs. Bernard Maria, Martha S. Tingen, Gregory Harshfield.*

(2) *DEAN'S SUMMER SCHOLARS REVIEW COMMITTEE, AUGUSTA - Basic Biomedical, Clinical & Translational, and Education Research – Chair: Dr. Donna L. Londino.*

(3) *DEAN'S SUMMER SCHOLARS REVIEW COMMITTEE, ATHENS - Basic Biomedical, Clinical & Translational, and Education Research – Chair: Drs.. Barbara Schuster and Cheryl Adele Dickson.*

The individual Review Committees will establish a priority ranking for all application proposals under their consideration with the Dean, Medical College of Georgia establishing funding priorities and the funding line.

You and your faculty mentor will be informed of Review Committee decision on **Monday 25 FEBRUARY 2013.**

*Evaluations of research proposals are not made available to the student or to the research mentor.*

## INFORMATION FOR MENTORS OF MEDICAL SCHOLARS PROGRAM STUDENTS

The Medical College of Georgia considers research experiences as a valuable component of medical student education, regardless of student's ultimate career choice – academic medicine, private practice medicine, or biomedical research scientist.

The Medical Scholars Program at the Medical College of Georgia offers the opportunity for all medical students in good academic standing to engage in research activities. The Program is offered as a six credit elective – *Course MEDI5088* – for completion in the fall semester. Faculty effort in the training of MSP students is reported in the Curriculum Inventory Report and may be used to demonstrate participation in the teaching mission of the Medical College of Georgia.

The following suggestions are offered to ensure a better understanding of the expectations of the research mentor's role:

- The research project must be based on a specific hypothesis that addresses an original question. Clinical chart reviews and literature reviews are permitted, but only if they are designed about a specific and testable hypothesis. Findings should be subjected to statistical analysis (if appropriate) and the conclusions of the research should support or lead to the rejection of the original hypothesis.
- The student's project should be of a scope to ensure the likelihood that the student will be able to obtain results that confirm or negate his/her hypothesis within the Program's timeframe – 10 weeks.
- It is not necessary that the research problem or idea originates with the student, but it is critical that the student undertakes a research problem that he/she can develop a sense of "personnel ownership and commitment" and make a meaningful intellectual contribution. The student should not be viewed as only "a pair of hands" or "help" for another's research efforts.
- During the research period, the student and the mentor should meet at least weekly to problem-solve and trouble-shoot student efforts, and to set and review project goals and expectations.
- The mentor should facilitate the student's participation in regular laboratory meetings, journal clubs or other research activities that enhance the student's scientific and communication awareness.
- The mentor should discuss with the student how the projects goals and accomplishments should be organized and presented in the Scholarly Abstract as well as in the research poster presented at the Annual Medical Scholars Research Day.
- The mentor should be available to attend their student's presentation at the Medical Scholars Research Day to provide any necessary feedback to others in attendance.
- The mentor is responsible for all research direction and efforts as well as experimental results.

## POST-AWARD REQUIREMENTS

Students chosen for a 2013 Medical Scholar (Dean's Summer Scholars or Children's Summer Scholars), award will be notified of Institutional Compliance concerns, but it is the *responsibility of the student and his/her mentor* to ensure approval of all Medical College of Georgia compliance requirements. Projects will become ineligible for funding and study unless all compliance documentation is provided by the program's starting date. The approval process takes considerable time, so craft and submit your protocols early. Mary Anne Park ([MPARK@georgiahealth.edu](mailto:MPARK@georgiahealth.edu)) and staff are available to assist you with compliance issues.

Post award requirement that need to be completed in order to participate are multiple:

### For All Medical Scholars

- Complete a Temporary Employment Application found at <https://portal.georgiahealth.edu/portal/page/portal/forms/Administration/HR/benefits-data/2011%20Temporary%20Application.pdf>.
- Complete a Criminal History/Background Investigation Form found at [https://portal.georgiahealth.edu/portal/page/portal/forms/Administration/HR/Employment/CriminalHistory\\_2.18.11PDF.pdf](https://portal.georgiahealth.edu/portal/page/portal/forms/Administration/HR/Employment/CriminalHistory_2.18.11PDF.pdf).
- Complete the Right-to-Know Basic Awareness module found at <http://www.usg.edu/ehs/training/>.
- Bring these forms to Mary Anne Park in CJ 1117. She will be responsible for forwarding on to Human Resources.

### NOTE:

- Everyone must present their **ORIGINAL** Social Security Card on the day they are hired. NO COPIES will be accepted.
- Naturalized US citizens are required to bring their **ORIGINAL** Naturalization paperwork along with their original Social Security Card.
- If you have a Green Card, the **ORIGINAL** of your Green Card is also required on hiring day.

Human Resources will make no exceptions. Non-compliance could result in a 2 week delay in you being hired.

### For Medical Scholars With A Project That Uses Human Subjects, Or Human Derived Materials, Including Charts And Human Specimens

- Copy of CITI Completion Report.
- A curriculum vitae or resume that contains a current date.

- Proof that your project has been approved by the Human Assurance Committee (HAC), with you as a subinvestigator. Work with your PI for this or contact Mary Anne Park at 1-0193 for assistance.
- Send the Completion Report and CV to Mary Anne Park at [mpark@georgiahealth.edu](mailto:mpark@georgiahealth.edu) so that you can be entered into the eIRB system. When your HAC information approval is available, send to Mary Anne Park.

NOTE: Also complete following training modules:

- Right-to-Know Chemical Specific module
- Hazardous Waste module
- Bloodborne Pathogens module

Go to <http://www.usg.edu/ehs/training/> to find these modules.

- Send the completion certificates to Mary Anne Park at [mpark@georgiahealth.edu](mailto:mpark@georgiahealth.edu), but also provide a copy to your PI for the lab's records.

#### **For Medical Scholars With A Project That Involves Use Of Animals**

- Complete the Occupational Health and Safety Questionnaire found at <https://webapps.georgiahealth.edu/pls/apex/f?p=animal:questions>. If you receive a call from Mrs. Monica Meyer, please respond to her immediately.
- Go to the following link and follow the instructions for completion of the required modules: <http://www.georgiahealth.edu/research/iacuc/training.html>.
- Send Mary Anne Park an email once all have been completed.

NOTE: Also complete following training modules:

- Right-to-Know Chemical Specific module
- Hazardous Waste module
- Bloodborne Pathogens module

Go to <http://www.usg.edu/ehs/training/> to find these modules.

- Send the completion certificates to Mary Anne Park at [mpark@georgiahealth.edu](mailto:mpark@georgiahealth.edu), but also provide a copy to your PI for the lab's records.

#### **For All Medical Scholars - Institutional Safety Training**

Institutional Biosafety training, Institutional Chemical Safety training, Institutional Environmental Health and Radiation Safety training are also mandated prior to you getting started in any research project. The Medical Scholars Program will organize a group training session for all participants prior to program start date (April 2013). If your class schedule is such that there is

no way you will be able to attend one of these classes, please notify Mary Anne Park so a special class to meet the needs of those who cannot attend the regular class can be planned.

**\*\*\* Should you have any questions about any of these requirements, do not hesitate to contact Mary Anne Park at 1-0193 or [mpark@georgiahealth.edu](mailto:mpark@georgiahealth.edu).**

## **SCHOLARLY ABSTRACT**

At the conclusion of the program, each student needs to submit a Scholarly Abstract of his or her findings to Dr. Kathleen McKie, Office of Student Affairs for inclusion in their education portfolio.

The Scholarly Abstract, which must be approved by the research mentor, should include: the question that the research was intended to answer, the approach used to test the hypothesis, the results obtained, the interpretations drawn, and the significance of the findings to medicine.

Instructions on how to prepare a Scholarly Abstract will be presented by Dr. Christie Palladino, ([cpalladino@georgiahealth.edu](mailto:cpalladino@georgiahealth.edu)), in a summer session noontime conference.

The Scholarly Abstract will be placed in the Program Guide to the Annual Medical Scholars Research Day and should be submitted to the Medical Scholars Program ([rcameron@georgiahealth.edu](mailto:rcameron@georgiahealth.edu)) by **Monday 12 August 2013**.

## **ANNUAL MEDICAL SCHOLARS RESEARCH DAY**

At the conclusion of the program, each student must present his or her research findings in a poster format at the **Annual Medical Scholars Research Day, Monday 23 September 2013 (subject to change)**. This forum provides an important arena for students to present their work to a cross-departmental and cross-school audience of students and faculty.

Please note that your Poster need not present a completed project. Ten weeks is a short period of time and it is unlikely that all will proceed as you planned at the outset, so your findings may best be discussed as “work in progress” – this is quite acceptable.

Instructions on how to prepare and present a Research Poster will be presented by Dr. Patricia L. Cameron, ([pcameron@georgiahealth.edu](mailto:pcameron@georgiahealth.edu)), in a summer session noontime conference.

**MEDICAL SCHOLARS PROGRAM  
CALENDAR ACADEMIC YEAR 2012-2013**

- Research Interest Meeting: 13 November 2012 – research interest presentations by faculty from Basic and Clinical Departments and Institutes
- Proposal Application Deadline: Wednesday 30 January 2013.
- Proposal Approval Notification: Monday 25 February 2013.
- Program Begins: Monday 20 May 2013.
- Program Ends: Friday 26 July 2013.
- Program Abstract Submission Deadline: Monday 12 August 2013.
- Program Poster Submission Deadline: Friday 6 September 2013.
- Annual Medical Scholars Day: Monday 23 September 2013 (subject to change)

## MEDICAL SCHOLARS PROGRAM STEERING COMMITTEE

**Peter F. Buckley, MD.**

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## **ADDITIONAL INFORMATION FOR INSTITUTIONAL COMPLIANCE (click on indicated compliance committee for information and procedures).**

*Please review thoroughly with your mentor all compliance information by clicking on the following web sites. Mary Anne Park, MSN, Clinical Associate Professor, Department of Surgery, CJ 1117, 706-721-0193, [MPARK@georgiahealth.edu](mailto:MPARK@georgiahealth.edu) is the MSP Compliance Coordinator and is available to assist all students and mentors with compliance issues.*

### **Human Assurance Committee (IRB)**

The Human Assurance Committee (HAC) is the primary Institutional Review Board charged with reviewing all research studies involving [human subjects](#). This includes, but is not limited to Humans, Records, Surveys, Tissues or other human derived materials. This applies to all research conducted at MCG, MCG Health Inc, and Charlie Norwood VA Medical Center or by faculty, staff or students of those institutions. The HAC also reviews off-campus research conducted by faculty, staff or students of those entities and non-MCG researchers using MCG facilities.

### **Institutional Animal Care and Use Committee**

To comply with federal laws governing the humane care and treatment of laboratory animals, the Medical College of Georgia requires that all uses of invertebrate and vertebrate animals for research, education, or for any other purpose be approved by the Institutional Animal Care and Use Committee (IACUC). The IACUC consists of members of the faculty, administration, and community. Any use of animals at MCG without IACUC approval is a violation of MCG policy and federal law.

### **Institutional Biosafety Committee**

The purpose of the Medical College of Georgia Institutional Biosafety Committee (IBC) is to ensure institutional compliance with laws and regulations governing research with biohazardous materials to include pathogenic microorganisms, infectious materials, recombinant DNA, and select agents; to establish policies, procedures, and practices to ensure that research at MCG does not present unacceptable risks to the health or safety of faculty, staff, students, visitors, or the general public; and finally, to assist researchers in safely conducting research with biohazardous materials.

### **Institutional Chemical Committee**

In an effort to meet the challenges, the [Institutional Chemical Safety Committee](#) works with the Chemical Safety Office to provide a forum for the exchange of ideas in development of safe work practices in laboratories and fostering cooperative efforts between laboratory workers and support services. Their objective is to ensure safety of all employees, students, and visitors at the Medical College of Georgia and to achieve full regulatory compliance campus wide.

### **Environmental Health & Safety / Radiation Safety**

The mission of the Medical College of Georgia Environmental Health and Safety Division (EH&S) is to provide environmental safety services to staff, patients, students and visitors. The six sections of EH&S -- Administration, Biological Safety, Chemical Safety, Environmental Health & Occupational Safety, Fire Safety, and Radiation Safety -- ensure full compliance with all local, state and federal laws.

***\*\* Please note that your proposal must have documentation of approval (protocol number) for all required institutional compliances – research involving human subjects / research involving animal subjects / research involving recombinant DNA and biohazards / research involving use of radioisotopes / research involving use of high hazard chemicals - BEFORE any project can begin and BEFORE any stipend funds will be released.***

## Some Criteria to Consider When Crafting Your Research Narrative

The following points comprise some general criteria that may help you in crafting your research application.

### Specific Aims

- describe the research problem or question that you intend to answer.
- describe the approach that you will use to test your hypothesis.

### Background and Significance

- discuss the state of knowledge in your field of investigation.
- identify existing gaps in the knowledge of your field of study.
- discuss how your investigations will fill the existing gaps and further advance the field of study.

### Research Methods and Design

- discuss in sufficient detail how you will accomplish each Specific Aim.
- identify appropriate methodology, but do not let the specifics of the methodology to become the focus of your proposal.
- discuss the strengths and weaknesses of your approach.
- discuss how you will analyze your data as it relates to your hypothesis.

### Anticipated Results

- discuss anticipated outcomes and potential difficulties that you might encounter in your study and how you will overcome those difficulties.
- discuss how you will interpret the outcome of your study as it relates to your hypothesis.

### Relevance of Research to Medicine

- discuss how your research lends itself to progress in the field of medicine: e.g., elucidation of a basic mechanism of disease; health care practice or policy; community health care or policy; world health care or policy; etc.

### Selective References

- selected references should convey the context and validity of your research question and experimental design – it is not intended to be a literature review.

### Personal Statement

- discuss what you hope to learn from participation in the program and how your participation will benefit you in meeting your future educational and career goals.

\*\* Review carefully your proposal application to ensure that it contains all requested elements prior to submitting it as a single document. Applications with missing components will not be reviewed.

## Some Criteria To Research Proposal Evaluation

The following points comprise some general criteria for a proposal review and may help you in crafting your research application:

### Faculty mentor consideration:

Is the research setting appropriate:

- are necessary instrumentations available on-site or within MCG Core Facilities?
- are the experimental techniques/approaches established?
- are the reagents on-hand or readily available?
- are the appropriate numbers of clinical subjects available?
- are Institutional Compliance issues addressed?

Is the faculty oversight and interaction time with the student sufficient?

Is the faculty mentor's experience/background appropriate for the project?

### Student consideration:

Has the student demonstrated scholarship and promise for achievement in medicine?

Are the intellectual and/or personal motivations for wanting to participate in the program thoughtful and meaningful to scholarship in medicine?

Will participation in the program provide a meaningful educational value to the student?

Does the project have the potential for the student to make a meaningful intellectual contribution to the field of study?

### Specific Aims and Hypothesis:

Is the hypothesis appropriately framed?

Are Specific Aims appropriate to the investigation of given hypothesis?

### Background:

Is the research question discussed in context to the existing status of the field?

Does the study address an important problem?

Do research findings have the potential to advance the field of study?

Is the literature cited relevant to problem of study and representative to the field of study?

### Research Methods and Design:

Are the methods of analysis appropriate to the experimental objectives of proposed study?

Is sufficient detail provided to indicate an understanding of the advantages and disadvantages of experimental approach?

Are anticipated and alternative possible outcomes indicated and discussed with respect to the hypothesis?

### Overall Approach:

Is the proposed project feasible?

Is the ten-week timeline appropriate to accomplish research objectives?