ANNUAL REPORT TO THE FACULTY FORUM
SCHOOL OF MEDICINE RESEARCH COMMITTEE

Fiscal Year 2008 – 2009
(July 1, 2008 – June 30, 2009)

I. Background

A. Composition

Committee for Fiscal Year 2008 – 2009

J. Christopher States, Ph.D. (Chair)	Pharmacology & Toxicology
Manuel Casanova, M.D.	Psychiatry & Behavioral Sciences
Wayne Zundel, Ph.D.	Pharmacology & Toxicology
Michele Kosiewicz, Ph.D.	Microbiology & Immunology
Irene Litvan, M.D.	Neurology
Craig J. McClain, M.D.	Medicine
Matthew Qiu, Ph.D.	Anatomical Science & Neurobiology
David Samuelson, Ph.D.	Biochemistry & Molecular Biology

B. Function

The mission of the School of Medicine Research Committee is to advise the Dean as requested concerning research policies and the allocation of research resources. The Research Committee (RC) is a standing committee of the School of Medicine and is composed of eight (8) members, elected by the Executive Faculty to staggered three-year terms. Four members are from preclinical departments and four are from clinical departments.

The School of Medicine Research Committee serves its mission by administering the following programs of the School of Medicine:

- Reviewing and approving School of Medicine Research Grants (Basic, Bridge and Collaborative Matching Grants)
- Reviewing and approving School of Medicine Travel Grants
- Approving summer projects for the medical student's Summer Research Scholar Program (SRSP)
- Assisting in planning Research!Louisville events
- Nomination of candidates for the President's Outstanding Scholarship, Research and Creative Activity Award
- Reviewing letters of intent for periodic extramural requests for proposals
- Providing advice and guidance to the Vice Dean for Research on programs and projects that impact the research environment at the School of Medicine

C. Budget – FY 2008 – 2009

Unrestricted Research and Travel Funds	$124,957
Bales Research Fund*	$388,475
Barkley Research Fund	$ 17,727
Bridge Grants	$ 60,000
Summer Research Scholar Program	$ 66,000
Carryover base budget from 2006 – 2007: $64,957	
Total 2008 – 2009 Budget	$657,159

*Bales Research Funding is restricted for research in cardiovascular disease, cancer, tuberculosis or multiple sclerosis research.

D. Contact Information

Information about any of the RC programs may be obtained from Martin Krämer, Health Sciences Center Research Office, Room 2028, K Building (852-7794) or at hscro@louisville.edu.

II. Small Grants Program

A. Description

The RC intramural grants program seeks to enhance the research productivity of medical school faculty funding new projects that may lead to competitive extramural funding (Basic Grants Program and Collaborative Grants Program) or by providing interim support for established investigators who have lost funding (Bridge Grants Program). Funds are distributed to faculty as competitive grants in four cycles per year. Proposals are reviewed by committee members and disposition is made by consensus. Investigators receive detailed, written critiques intended to constructively enhance their projects.

Proposals are sought from executive faculty, which includes full-time instructors, assistant professors, associate professors and professors. This excludes investigators with titles such as Research Scientist. In the Basic Grants Program, investigators are assigned to one of two priority levels:

Career Status I:	Newly appointed (within three years) executive faculty members with an academic rank of associate professor or lower and having no extramural funding
Career Status II:	All other executive faculty without current extramural funding

Approved proposals are given a funding priority (High, Moderate) based on the reviews. The maximum award amount is $15,000 and, other than faculty salaries and travel, there are no *a priori* budget restrictions. Grants that are approved but not funded can be maintained for additional review cycles up to a maximum of three. The RC uses a “grant

review triage system" that if both reviewers do not rate the grant proposal as "approved" for funding, the grant is not discussed, unless an RC member requests discussion and reviews are sent as submitted. Applicants can then either revise and resubmit their proposal or they can submit a new proposal (new title and new specific aims) based on the reviews.

In the Bridge Grant Program, applications are entertained only from investigators who were recent (within two years) principal investigators of national extramural grants and have temporarily lost funding. Examples of grants that confer eligibility for bridge funding are National Institute of Health, American Heart Association, National Science Foundation, and Veterans Administration. Investigators are eligible for this program regardless of academic rank, but the program will be self-contained and the investigators will not compete with others in the Basic Grants Program. Proposals are given a funding priority based on the reviews. The maximum award is $30,000.

The Collaborative Matching Grant Program is to provide initial support to faculty to establish a collaborative research program in new areas of investigations in order to enhance their research productivity. The likelihood that the support will lead to extramural funding will be the major criterion in evaluating the application. Any full-time member of the Executive Faculty of the School of Medicine is eligible to apply as Principal Investigator. Faculty previously supported by this program must have submitted a final report and shown evidence of attempts to secure extramural funding. Applications must involve collaboration between the Principal Investigator and another UofL faculty member(s) as Co-Investigator(s). The proposed research must be in the area of cancer, heart disease, tuberculosis or multiple sclerosis and represent a new area for the investigators utilizing their complementary expertise. Matching support from a Center, Institute, Department or other UofL unit is mandatory. Written evidence of financial commitment must be included in the form a letter in the appendix. The maximum award is $20,000 for one year to match equivalent or greater support from the unit.

Forms for grant applications are included in Appendix A.
Web address: http://research.louisville.edu/medicine/grants/som/

B. Activity

From July 2008 through June 2009, the Committee received 34 grant proposals. Seventeen grants were approved and recommended for funding.

Following is a list of faculty investigators who received an award in fiscal year 2008-2009 and includes their department, career status, title of each investigator's grant proposal title and award amount:

BASIC GRANT

G. Rafael Fernandez-Botran, Ph.D., Department of Pathology, Career Status II. *IL-4 and IL-4-δ2 in the modulation of Th1 response to Mycobacterium tuberculosis among HIV-infected individuals.* $15,000 award.

Cynthia Downard, M.D., Department of Surgery, Career Status I. *Control of Intestinal Microcirculation in Necrotizing Enterocolitis.* $15,000 award

Yan Li, Ph.D., Department of Surgery, Career Status I. *Curcuma aromatica prevention against hepatocelluar carcinoma.* $15,000 award.

Nobuyuki Matoba, Ph.D., Department of Pharmacology and Toxicology, Career Status I. *Production and Evaluation of Plant-made Anti-HIV Protein Actinohivin.* $15,000 award.

Christopher Paterson, M.D., Department of Ophthalmology and Visual Sciences, Career Status. *Ocular toxoplasmosis: mechanism of blood retinal barrier (BRB) breakdown and treatment*. $15,000 award

Paula Radmacher, M.D., Department of Pediatrics, Career Status II. *Validation of the bilirubin-induced neurologic dysfunction (BIND) score.* $10,000 award

Uma Sankar, Ph.D., Department of Pharmacology and Toxicology, Career Status I. *Hematopoietic Stem Cells as Targets for Cadmium Toxicity.* $15,000 award.

Jason W. Smith, M.D., Department of Surgery, Career Status I. *Adjunctive Direct Peritoneal Resuscitation Increases Rate of Closure in Damage Control Surgery patients in Hemorrhagic Shock.* $15,000 award.

Shigeo Tamiya, Ph.D., Department of Ophthalmology and Visual Sciences, Career Status II. *Prevention of epithelial-mesenchymal transition of retinal pigment epithelium by modulating ion transport.* $15,000 award.

COLLABORATIVE GRANT

Matthew Cave, M.D., Department of Medicine, Career Status I. *Biomarkers for hemangiosarcoma and toxicant associated steatohepatitis (TASH).* $20,000 award. Matched by Center for Environmental Genomics and Integrative Biology (CEGIB).

Barbara Clark, Ph.D., Department of Biochemistry and Molecular Biology, Career Status II. *Cholesterol Transport Proteins in Cancer.* $30,000 award. Matched by Department of Biochemistry and Molecular Biology.

C. William Helm, M.D., Department of Obstetrics and Gynecology, Career Status II. *Plasma microRNA biomarkers of ovarian cancer.* $20,000 award. Matched by CEGIB.

Yong Li, Ph.D., Department of Biochemistry and Molecular Biology, Career Status I. *MicroRNAs as Biomarkers for Multiple Myeloma.* $20,000 award. Matched by CEGIB.

William McGregor, Ph.D., Department of Pharmacology and Toxicology, Career Status II. *Inhibition of chemical carcinogenesis by neurokinin 1 receptor signaling.* $19,997 award. Matched by Department of Pharmacology and Toxicology.

Sumanth Prabhu, Ph.D., Department of Medicine, Career Status II. *MicroRNAs as Biomarkers in Human Heart Failure.* $20,000 award. Matched by CEGIB.

BRIDGE GRANT

Sanja Srivastava, Ph.D., Department of Medicine, Career Status II. *Atherogenic mechanisms of lipid peroxidation-derived aldehydes.* $29,854 award.

Janice Sullivan, M.D., Department of Pediatrics, Career Status II. *PPRU (NICHD) 5 U10 HD 045934-05.* $30,000 award.

C. Extramural

Data collected from SOM pilot research grants show a remarkable return on investment. During 2000-2007, the SOM awarded 36 Status I grants (for new investigators) totaling $542,000; this amount subsequently yielded an astonishing $12.25M in extramural funding. Equally successful were the Status II grants for experienced researchers: $275,000 to 21 investigators generated extramural income return of more than $9.3M. These yields far exceed those reported by the University of Minnesota and those of our benchmark institutions. We are proud to present the data that shows these exceptional results.

	Status I Junior Investigators			**Status II Established Investigators (Including Bridge grants)**		
Year	Number Awarded	Total Amount	Extramural Funding	Number Awarded	Total Amount	Extramural Funding
00-01	4	$57,000	$2,452,000	5	$ 72,000	$2,247,000
01-02	7	$106,000	$5,228,000	2	$30,000	$184,000
02-03	4	$60,000	$2,355,000	2	$19,000	$1,527,000
03-04	2	$30,000	$66,000	4	$59,000	$823,000
04-05	8	$120,000	$1,425,000	2	$20,000	$1,165,000
05-06	4	$51,000	$174,000	5	$260,000	$9,063,000
06-07	*7*	*$118,000*	*$553,000*	*1*	*$15,000*	*$244,000*
Total	***36***	***$542,000***	***$12,253,000***	***21***	***$275,000***	***$9,307,000***

Much of the success of these programs is attributable to the fact that the School of Medicine Research Committee reviewers recognize quality science, foster talent, and are cognizant of federal/foundation priorities for funding. (Courtesy of Beverly Daly and the CTSA grant).

III. Travel Awards Program

A. Description

The RC provides funds to help defray travel costs of medical school investigators who are presenting their work at national or international scientific meetings. A maximum of $300 is available to the presenting author of each paper, with a limit of one award per investigator per fiscal year. Highest priority applicants are faculty members followed by graduate students and post-doctoral fellows. In cases where the RC has previously funded travel, a peer-reviewed manuscript (published or accepted for publication) deriving from that work must accompany the new travel request. Travel, which can be related to the restricted research areas, can be funded from that source.

See Appendix B for the application to request travel funds.
Web address: http://research.louisville.edu/medicine/travel

B. Activity

From July 1, 2008, through June 30, 2009, the Committee received 18 travel grant requests. The breakdown for those funded includes:

Faculty members – 5
Graduate students – 11
Postdoctoral fellows – 2

IV. Summer Research Scholars Program (SRSP) and Student Research Day

A. Description

The RC funds stipends primarily for rising second year medical students to participate in research during the summer months. Entering and rising second year M.D./Ph.D. students are given priority. Project descriptions are solicited from faculty in January of each year. Proposals are reviewed by committee members and offered to students if approved.

Approved projects are placed on a website for medical students to review and prioritize the projects they are interested in during March and early April. Pairing of students with projects/mentors is accomplished by MD/PhD students who have identified their mentor; students interested in training grants; students who have been identified by a mentor when the project was submitted; students who participated as an incoming student and want to participate a second summer with the same faculty member; and via a lottery system. Students are expected to gain first-hand experience in all aspects of the design, execution and analysis of the work. In addition, students are required to attend the "Bench to Bedside" course (PHCI 501) offered by the School of Public Health. This one-hour course meets on a weekly basis and introduces the students to the basics and opportunities in clinical research. Students participating in the SRSP program present

their research in poster format at the Annual Student Research Showcase in the fall as part of Research!Louisville.

Student posters are judged by faculty and postdoctoral fellow volunteers, and winners are chosen from medical and graduate student divisions. Students who did not participate in the SRSP but who completed a research project at UofL through other mechanisms are invited to present their research as well. Medical student category winners receive $400 for first place, $200 for second place and $100 for third place. The winners of the first- and second-place awards are provided travel funds to present their research at a national meeting or at the National Student Biomedical Research Meeting in Galveston, Texas.

The Graduate Student Showcase at Research!Louisville is open to all graduate students working in health/life sciences-related areas in departments on the Health Sciences Campus and the Belknap Campus in which medical-related research is being conducted. First- and second-place winners receive $400 and $200, respectively, and receive up to $1,000 to present their work at a national meeting of the mentor's choice within one year of the Student Research Showcase. A third place award of $100 is presented but without funds to present at a national meeting. The Graduate Student awards are supported by the School of Interdisciplinary and Graduate Studies and travel is supported by the Office of the Executive Vice President for Research.

B. Activity

Summer of 2009: A total of 92 projects were submitted as potential projects for the SRSP. Upon review, 49 projects were selected by the students. Support for the students was through the: a. SOM Research Committee's SRSP restricted and unrestricted funds (21 students; one of which was Bales); b. Three T-35 training grants (17 students); and c. Faculty mentors (10 students).

Student Research Showcase was held on October 13 and 14, 2009, during Research!Louisville. A total of 146 students participated as follows:

Medical Students – 61
Nursing - 0
Public Health Graduate Students – 5
Dental Students – 14
Masters Basic Science Students – 12
Doctoral Basic Science Students – 54

Competition winners are listed in Appendix C.

The Postgraduate Research Showcase was held October 13, 2009, also during Research!Louisville. A total of 82 postgraduates participated as follows:

Medical Residents – 20
Clinical Research Fellows – 6
Postdoctoral Research Fellows – 34
Research Associates – 12
Research Staff – 10

Winners for these categories are also listed in Appendix C.

V. President's Award for Research, Scholarship and Creative Activity

The RC forwarded the names of Nigel Cooper, Ph.D., in the category of Distinguished Faculty Award for Research; and John W. Eaton Ph.D., in the category of Distinguished Faculty Award of Career Achievement.

BASIC GRANT PROGRAM APPLICATION

UNIVERSITY OF LOUISVILLE

SCHOOL OF MEDICINE

Basic Grant Program Information

Purpose: The purpose of the School of Medicine Basic Grant Program is to provide initial support to junior faculty to establish a research program, or to provide support to more established faculty who have lost funding or who desire to pursue new areas of investigations in order to enhance their research productivity. The likelihood that the support will lead to extramural funding will be the major criterion in evaluating the application.

Because of the limited budget, applications from faculty members who already have sufficient extramural support will normally not be approved for funding.

Eligibility: Any full-time member of the Executive Faculty of the School of Medicine is eligible to apply. Faculty previously supported by this program must have submitted a final report and shown evidence of attempts to secure extramural funding.

Basic Grant Program:

Applications will be prioritized based on the Career Status of the applicant. Career Status I applicants, receiving highest priority, must be within three years of appointment, have academic rank of associate professor or lower, and have no extramural funding. All other applicants will be considered Career Status II.

The maximum award is $15,000 and the period of support is one year.

Timing:

The Research Committee will make every effort to assure expeditious review. Applications (either original or resubmission) are accepted four times per year. The review process and decision on funding will be completed within two months, according to the following schedule:

Submission Dates: July 1, October 1, January 1, April 1

Funding Dates: September 1, December 1, March 1, June 1

Review Criteria and Process:

The Chair will assign each application to two Research Committee members for review. Other members of the Executive Faculty of the School of Medicine may be requested to review the proposal on an as needed basis. Each reviewer will provide the Research Committee with a written review and will remain anonymous to the applicant. After Research Committee consideration, a proposal will be approved or disapproved based upon scientific merit and consistency with the Research Committee's mission.

Priority:

Proposals will be assigned a priority rank for funding consideration which will be used to differentiate among approved applications within grant programs. It should be recognized that some applications will likely be approved but not funded due to limited availability of funds.

Approved proposals will be considered for funding using the following criteria:

1. priority rating;
2. appropriateness of budget;
3. the career status of the Principal Investigator and
4. the availability of RC funds.

For Career Status II investigators applying for Basic Grants, a further criterion will be the record of the use of any previous intramural funding to enhance competitiveness for extramural funding.

The Chair of the Research Committee will provide the applicant with a written response and copies of the reviewers' critiques. If a proposal is approved with a budget reduction, the applicant has the option to accept the budget reduction or to revise and resubmit the application for the next available cycle. All proposals which are approved but not funded will be maintained in Active Status for additional review cycles, to a maximum of three, at the request of the investigator.

Temporal extension:

If, for unforeseeable reasons, the project cannot be completed (e.g. difficulties in recruitment of an adequate patient population) by the end of the project period, the RC reserves the right to extend this period. The Principal Investigator should request such an extension by writing a letter outlining detailed justification for such extension to the Chair of the Research Committee.

Final report:

The obligation to provide a Final Report will be satisfied within 60 days of the end of the grant period by submission of the following to the RC office:

1. A one to two-page summary describing the studies performed, the outcome and the relationship to the Specific Aims,

AND

2. A copy of the cover page and abstract or summary sheet from a grant application, research contract offer or other effort to secure extramural funding, submitted as a result of the project. If an application is not submitted within 60 days of project completion, brief written justification should be provided. Appropriate written justification should include a revised date for submission (and completion of this report to the RC) or a statement explaining why the project is being abandoned.

Acknowledgment:

Unless otherwise instructed by the Office of the Dean, any paper or abstract which is published as a result of RC support should acknowledge that: "This work was supported in part by a grant from the University of Louisville School of Medicine." A copy of such a paper or abstract should be sent to the RC office.

Submission:

Grants must be submitted as PDF files sent as email attachments to the HSC Research Office. Except for the cover pages, the rest of the grant must be by a directly-generated (not scanned) PDF file. To submit:

* Download the Cover Page and Basic Grant application DOC files from this website.

* Complete all sections by filling in the requested information and/or pasting in text as necessary.

* Except for the Cover Page, generate a PDF file directly from the DOC file using Adobe Acrobat. This should be available in the department or division office. Do not print and scan the grant as this may not produce illegible copies of data or graphs.

* For the cover page, print and sign the form. You may scan this signed cover page to produce the PDF of the signed document. (Alternatively you may insert a scanned copy of your signature into the DOC file and then directly generate the PDF file as indicated above.)

* Attached these PDF files to an email and send to the HSC Research Office at hscro@louisville.edu.

BASIC GRANT PROGRAM APPLICATION
UNIVERSITY OF LOUISVILLE
SCHOOL OF MEDICINE

A. Cover page:

1. Title of Project:

2. Principal Investigator (list the name of the one person responsible for the scientific and ethical conduct of the project):

2(a) Academic Rank and Position Title:

2(b). Department of Primary Appointment:

2(c) Telephone number:

2(d) Email address:

3. Collaborator(s):

4. Dates of Project (indicate beginning and ending dates for the project):

5. Performance Sites (list site(s), building and rooms, where the work will be performed):

6. Budget (indicate the total amount requested):

7. Compliance and Training: Will project use:

	Yes	No	Internal Review/ Registration No.	Status (approved, submitted, pending)
a. Human subjects?			IRB	
b. Experimental animals?			IACUC	
c. Ionizing radition devices/isotopes?				
d. Recombinant DNA?				
e. Pathogenic organisms?				
f. CDC/USDA Select Agents?				
g. Human blood, tissue, cell lines. OPIM?				
h. Highly toxic, carcinogenic, mutagenic agents?				

Note: The P.I. is responsible for complying with University safety rules, policies and procedures.

8. Grant Program: Basic ☐ Bridge ☐

9. Career Status (see Instructions): I ☐ II ☐

10. Proposal Type: New proposal ☐ Resubmission ☐.

11. Previous RC Support within the last five years? Yes ☐ No ☐
If Yes, give the dates of the grant support periods, list the date(s) of submission of the Final Report(s) for this (these) prior support, and provide evidence of publications and/or extramural grant applications and/or funding resulting from this support. .

12. Research area: Indicate the area of research by checking the appropriate choice.

☐ Cancer

☐ Cardiovascular disease

☐ Tuberculosis

☐ Multiple Sclerosis

☐ Other

SIGNATURES:

Principal Investigator: _____ Date: _____

The Principal Investigator certifies that this is a new project which is not being considered for other intramural funding. The undersigned agrees to accept responsibility for the scientific and ethical conduct of the project. The undersigned further accepts responsibility for submission of an appropriate final report within 60 days of the end of the grant period if an award is made as a result of this application.

Department Chair: _____ Date _____

B. Abstract:

Provide an abstract of the proposal using no more than 200 words. Include a statement of hypothesis, Specific Aims, brief general description of methodology to be employed and a specific statement of how the data generated will be used to compete for extramural research funding.

C. Biographical Sketch:

Insert NIH form

D. Research Plan: (limit to a total of 8 pages).

1. Goals: Provide concise statements of:

    a) the long-term research goals of the investigator;

    b) how the proposed project will enhance competitiveness for extramural funding. This should take the form of a specific statement of intent, including the name of the intended agency and target date for submission of an application for a grant or contract offering.

2. Specific Aims and Hypotheses: Provide a concise statement of hypotheses to be tested; list specific aims of the project.

3. Background and Significance: Do not write an exhaustive review. Provide a summary of the current knowledge in this field. Highlight gaps in understanding and unresolved controversies.

4. Preliminary studies: If appropriate, provide pertinent data from the P.I.'s laboratory that support the proposal. Provide sufficient detail for the reviewer to understand the nature of these data and their relationship to the proposal.

5. Procedural detail:

    a. Experimental design: Describe the design of studies that are to be performed to address the Specific Aims. Discuss the choice and use of model systems, surgical techniques, interview techniques, physiological models, tissue culture systems, control groups, time courses, dose regimens, etc. For human studies, describe criteria used for subject selection. Describe how data obtained will be analyzed.

    b. Methodology: Describe the methods of laboratory analysis and data collection and analysis. If any work is to be performed by other laboratories or service facilities, (on a collaborative or fee-for-service basis), so state. If fee-for-service work is a part of the proposal, specify and justify the number of "units" of such a service required.

E. Facilities available: State where these studies will be performed. List major items of equipment available in the P.I.'s laboratory or through cooperative agreement. Document any such cooperative arrangement with a letter of agreement from the director of that laboratory which states that the equipment is available for the proposed use.

F. Collaborative arrangements: If the project requires the services of others, describe the role of these collaborators (or fee-for-service laboratories). Provide written assurance of the willingness and ability of these people to participate. In the case of fee-for-service work, also include a statement of charges for the services to be performed. Normally this will take the form of a letter from the individual collaborator or service.

G. Budget:

1. Budget itemization: Using the following categories, provide a detailed budget, and itemize any category totaling over $500.

a. Supplies

b. Equipment

c. Animal care and use: Where appropriate, itemize expenses for animal purchase shipping and care. Include costs per animal, as well as numbers of animals and days of maintenance.

d. Laboratory and other services: If fee-for-service work is required (e.g. flow cytometry, patient interviews, chart reviews and statistical analysis, protein sequencing, blood chemistry, pathology, radiology, etc.) so indicate. List the number of tests or other units of service required from the Methodology section, as well as the cost for each unit. Enter the total amount requested. If at all possible, such services should come from within the University community.

e. Other expenses: Itemize by category.

2. Budget justification: For any small equipment purchase, fee-for-service work and for each category of expense, provide a brief description of the intended use with sufficient detail to enable the reviewer to understand the relevance and necessity of the expense.

3. Budget exclusions: The Research Committee has no *a priori* restrictions on funding. However, all budget items must be fully justified, and the committee will critically evaluate each item with regard to necessity, potential duplication and alternative means of support. In general, funding for consultants' fees, clerical support, patient care and hospital costs will be difficult to justify. Faculty salaries are not funded. Travel is also not funded by the Small Grants Program (there is a specific RC Travel Awards Program).

H. Checklist

☐ Cover Page as part of electronic application and signed copy sent to the HSC Research Office

☐ Abstract

☐ NIH Biographical Sketch

☐ Research Plan (limit to a total of 8 pages)

☐ Facilities Available

☐ Collaborative Arrangements

☐ Itemized Budget

If applicable:

☐ Reprints submitted (4 copies)

☐ Appendix (required for support to respond to review of unfunded proposal) including 3 copies of:

- Summary statements/reviews/critiques from extramural agencies
- Previous grant proposal
- Narrative explanation of how critiques are addressed in the current proposal

Appendix A

BRIDGE GRANT PROGRAM APPLICATION

UNIVERSITY OF LOUISVILLE

SCHOOL OF MEDICINE

Bridge Grant Information

Purpose: The purpose of this program is to enhance the research productivity of medical school faculty by providing interim support for established investigators who have lost funding.

Eligibility: Any full - time member of the Executive Faculty of the School of Medicine is eligible to apply. Faculty previously supported by the Research Committee must have submitted a final report prior to becoming eligible for subsequent funding.

Bridge Grant Program: Applications will be entertained only from investigators who were principal investigators of national extramural grants within the last two years and have lost funding. Examples of grants that confer eligibility are National Institutes of Health, American Heart Association, National Science Foundation, and Veterans Administration. Applicants will be considered without regard to academic rank. The maximum award is $30,000 and the period of support is one year.

Priority: Applications will be reviewed based on the criteria discussed above. Proposals will be assigned a priority rank for funding consideration which will be used to differentiate among approved applications within grant programs. It should be recognized that some applications will likely be approved but not funded due to limited availability of funds.

Timing: The Research Committee will make every effort to assure expeditious review. Applications (either original or resubmission) are accepted four times per year. The review process and decision on funding will be completed within two months, according to the following schedule:

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1. priority rating;
2. appropriateness of budget;
3. the career status of the Principal Investigator and
4. the availability of RC funds.

For Career Status II investigators applying for Basic Grants, and for investigators requesting Bridge Grants, a further criterion will be the record of the use of any previous Intramural funding to enhance competitiveness for extramural funding.

The Chair of the Research Committee will provide the applicant with a written response and copies of the reviewers' critiques. If a proposal is approved with a budget reduction, the applicant has the option to accept the budget reduction or to revise and resubmit the application for the next available cycle. All proposals which are approved but not funded will be maintained in Active Status for additional review cycles, to a maximum of three, at the request of the investigator.

Submission:

Grants must be submitted as PDF files sent as email attachments to the HSC Research Office. Except for the cover pages, the rest of the grant must be by a directly-generated (not scanned) PDF file. To submit:

* Download the Cover Page and Bridge Grant application DOC files from this website.

* Complete all sections by filling in the requested information and/or pasting in text as necessary.

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BRIDGE GRANT PROGRAM APPLICATION
UNIVERSITY OF LOUISVILLE
SCHOOL OF MEDICINE

A. Cover page:

1. Title of Project:

2. Principal Investigator (list the name of the one person responsible for the scientific and ethical conduct of the project):

2(a) Academic Rank and Position Title:

2(b). Department of Primary Appointment:

2(c) Telephone number:

2(d) Email address:

3. Collaborator(s):

4. Dates of Project (indicate beginning and ending dates for the project):

5. Performance Sites (list site(s), building and rooms, where the work will be performed):

6. Budget (indicate the total amount requested):

7. Compliance and Training: Will project use:

	Yes	No	Internal Review/ Registration No.	Status (approved, submitted, pending)
a. Human subjects?			IRB	
b. Experimental animals?			IACUC	
c. Ionizing radiation devices/isotopes?				
d. Recombinant DNA?				
e. Pathogenic organisms?				
f. CDC/USDA Select Agents?				
g. Human blood, tissue, cell lines. OPIM?				
h. Highly toxic, carcinogenic, mutagenic agents?				

Note: The P.I. is responsible for complying with University safety rules, policies and procedures.

8. Grant Program: Basic ☐ Bridge ☐

9. Career Status (see Instructions): I ☐ II ☐

10. Proposal Type: New proposal ☐ Resubmission ☐.

11. Previous RC Support within the last five years? Yes ☐ No ☐
If Yes, give the dates of the grant support periods, list the date(s) of submission of the Final Report(s) for this (these) prior support, and provide evidence of publications and/or extramural grant applications and/or funding resulting from this support. .

12. Research area: Indicate the area of research by checking the appropriate choice.

☐ Cancer

☐ Cardiovascular disease

☐ Tuberculosis

☐ Multiple Sclerosis

☐ Other

SIGNATURES:

Principal Investigator: _____ Date: _____

The Principal Investigator certifies that this is a new project which is not being considered for other intramural funding. The undersigned agrees to accept responsibility for the scientific and ethical conduct of the project. The undersigned further accepts responsibility for submission of an appropriate final report within 60 days of the end of the grant period if an award is made as a result of this application.

Department Chair: _____ Date _____

B. Biographical Sketch:

Insert NIH form

C. Previous research funding

For the period of the last five years, list grant activities, both for intramural and extramural funding. List project titles, agencies, roles (e.g. P.I., Co-I.), total direct costs and disposition (e.g. active, approved not funded, pending, etc.).

For research projects that are currently funded, submit evidence that there is no overlap between the funded project and the proposed research. Normally this requirement is best satisfied by submission of the Abstract and Specific Aims of the funded grant, and a brief statement by the P.I. highlighting the differences between the proposals.

D. Applications under consideration:

As electronic attachments or in appendixes accompanying the Cover Page, provide a copy of (1) the recently unfunded federal/national grant proposal(s) this intramural grant is intended to bridge, (2) summary statements and scores of the last review(s) of these proposals and (3) cover page and abstracts of all currently submitted grant applications.

E. Collaborative arrangements:

If the project requires the services of others, describe the role of these collaborators (or fee-for-service laboratories). Provide written assurance of the willingness and ability of these people to participate. In the case of fee-for-service work, also include a statement of charges for the services to be performed. Normally this will take the form of a letter from the individual collaborator or service.

F. Budget:

1. Budget itemization: Using the following categories, provide a detailed budget, and itemize any category totaling over $500.

a. Personnel

b. Supplies

c. Equipment

d. Animal care and use: Where appropriate, itemize expenses for animal purchase shipping and care.

e. Laboratory and other services: If fee-for-service work is required (e.g. flow cytometry, patient interviews, chart reviews and statistical analysis, protein sequencing,

blood chemistry, pathology, radiology, etc.) so indicate. If at all possible, such services should come from within the University community.

f. Other expenses: Itemize by category.

2. Budget justification: For any small equipment purchase, fee-for-service work and for each category of expense, provide a brief description of the intended use with sufficient detail to enable the reviewer to understand the relevance and necessity of the expense.

3. Budget exclusions: The Research Committee has no *a priori* restrictions on funding. However, all budget items must be fully justified, and the committee will critically evaluate each item with regard to necessity, potential duplication and alternative means of support. In general, funding for consultants' fees, clerical support, patient care and hospital costs will be difficult to justify. Faculty salaries are not funded. Travel is also not funded by the Small Grants Program (there is a specific School of Medicine Travel Awards Program).

G. Available alternative funds:

1. Provide information on all accounts for which the P.I. has signature authority where the funds could be used to bridge this temporary gap in grant support. Examples include RIF accounts, C- and S- accounts, or others.

2. Accompanying this application, a letter from the department chair must be included which indicates the amount of departmental support provided to bridge this gap in funding, such as funds provided from DRIF accounts, PSC, or others. If no such support is being provided, the chair must explain the circumstances.

H. Checklist

☐ Cover Page as part of electronic application and signed copy sent to the HSC Research Office

☐ NIH Biographical Sketch

☐ Previous research funding

Applications under consideration

- ☐ Copies of the recently unfunded federal/national grant proposal(s) this intramural grant is intended to bridge
- ☐ Summary statements of the last review(s) of these proposals
- ☐ Cover page and abstracts of all currently submitted grant applications

☐ Collaborative arrangements

☐ Itemized budget

☐ Available alternative funds

☐ Letter from the department chair indicating the amount of departmental support available

COLLABORATIVE MATCHING GRANT

PROGRAM APPLICATION

UNIVERSITY OF LOUISVILLE

SCHOOL OF MEDICINE

Collaborative Matching Grant Program Information

Purpose:

The purpose of the School of Medicine Collaborative Matching Grant Program is to provide initial support to faculty to establish a collaborative research program in new areas of investigations in order to enhance their research productivity. The likelihood that the support will lead to extramural funding will be the major criterion in evaluating the application.

Eligibility:

Any full-time member of the Executive Faculty of the School of Medicine is eligible to apply as Principal Investigator. Faculty previously supported by this program must have submitted a final report and shown evidence of attempts to secure extramural funding.

Collaborative Matching Grant Program:

Applications must involve collaboration between the Prinicpal Investigator and another UofL faculty member(s) and Co-Investigator(s). The proposed research must be in the area of cancer, heart disease, tuberculosis or multiple sclerosis and represent a new area for the investigators utilizing their complementary expertise. Matching support from a Center, Institute, Department or other UofL unit is mandatory. Written evidence of financial commitment must be included in the form a letter in the appendix.

The maximum award from the SOM Research Committee is $20,000 for one year to match support from the unit, for a maximum total of $40,000.

Timing:

The Research Committee will make every effort to assure expeditious review. Applications (either original or resubmission) are accepted four times per year. The review process and decision on funding will be completed within two months, according to the following schedule:

Submission Dates: July 1, October 1, January 1, April 1

Funding Dates: September 1, December 1, March 1, June 1

Review Criteria and Process:

The Chair will assign each application to two Research Committee members for review. Other members of the Executive Faculty of the School of Medicine may be requested to review the proposal on an as needed basis. Each reviewer will provide the Research Committee with a written review and will remain anonymous to the applicant. After Research Committee consideration, a proposal will be approved or disapproved based upon scientific merit and consistency with the Research Committee's mission.

Priority:

Proposals will be assigned a priority rank for funding consideration which will be used to differentiate among approved applications within grant programs. It should be recognized that some applications will likely be approved but not funded due to limited availability of funds.

Approved proposals will be considered for funding using the following criteria:

1. priority rating;
2. appropriateness of budget;
3. Principal Investigator and
4. the availability of RC funds.

For Career Status II investigators applying for Collaborative Matching Grants, a further criterion will be the record of the use of any previous intramural funding to enhance competitiveness for extramural funding.

The Chair of the Research Committee will provide the applicant with a written response and copies of the reviewers' critiques. If a proposal is approved with a budget reduction, the applicant has the option to accept the budget reduction or to revise and resubmit the application for the next available cycle. All proposals which are approved but not funded will be maintained in Active Status for additional review cycles, to a maximum of three, at the request of the investigator.

Temporal extension:

If, for unforeseeable reasons, the project cannot be completed (e.g. difficulties in recruitment of an adequate patient population) by the end of the project period, the RC reserves the right to extend this period. The Principal Investigator should request such an extension by writing a letter outlining detailed justification for such extension to the Chair of the Research Committee.

Final report:

The obligation to provide a Final Report will be satisfied within 60 days of the end of the grant period by submission of the following to the RC office:

1. A one to two-page summary describing the studies performed, the outcome and the relationship to the Specific Aims,

AND

2. A copy of the cover page and abstract or summary sheet from a grant application, research contract offer or other effort to secure extramural funding, submitted as a result of the project. If an application is not submitted within 60 days of project completion, brief written justification should be provided. Appropriate written justification should include a revised date for submission (and completion of this report to the RC) or a statement explaining why the project is being abandoned.

Acknowledgment:

Unless otherwise instructed by the Office of the Dean, any paper or abstract which is published as a result of RC support should acknowledge that: "This work was supported in part by a grant from the University of Louisville School of Medicine." A copy of such a paper or abstract should be sent to the RC office.

Submission:

Grants must be submitted as PDF files sent as email attachments to the HSC Research Office. Except for the cover pages, the rest of the grant must be by a directly-generated (not scanned) PDF file. To submit:

* Download the Cover Page and Basic Grant application DOC files from this website.

* Complete all sections by filling in the requested information and/or pasting in text as necessary.

* Except for the Cover Page, generate a PDF file directly from the DOC file using Adobe Acrobat. This should be available in the department or division office. Do not print and scan the grant as this may not produce legible copies of data or graphs.

* For the cover page, print and sign the form. You may scan this signed cover page to produce the PDF of the signed document. (Alternatively you may insert a scanned copy of your signature into the DOC file and then directly generate the PDF file as indicated above.)

* Attached these PDF files to an email and send to the HSC Research Office at hscro@louisville.edu.

COLLABORATIVE MATCHING GRANT APPLICATION
UNIVERSITY OF LOUISVILLE
SCHOOL OF MEDICINE

A. Cover page:

1. Title of Project:

2. Principal Investigator (list the name of the one person responsible for the scientific and ethical conduct of the project):

2(a) Academic Rank and Position Title:

2(b). Department of Primary Appointment:

2(c) Telephone number:

2(d) Email address:

3. Collaborator(s):

4. Dates of Project (indicate beginning and ending dates for the project):

5. Performance Sites (list site(s), building and rooms, where the work will be performed):

6. Budget (indicate the total amount requested):

7. Compliance and Training: Will project use:

	Yes	No	Internal Review/ Registration No.	Status (approved, submitted, pending)
a. Human subjects?			IRB	
b. Experimental animals?			IACUC	
c. Ionizing radition devices/isotopes?				
d. Recombinant DNA?				
e. Pathogenic organisms?				
f. CDC/USDA Select Agents?				
g. Human blood, tissue, cell lines. OPIM?				
h. Highly toxic, carcinogenic, mutagenic agents?				

Note: The P.I. is responsible for complying with University safety rules, policies and procedures.

8. Grant Program: Basic ☐ Bridge ☐ Collaborative Matching ☐

9. Career Status (see Instructions): I ☐ II ☐

10. Proposal Type: New proposal ☐ Resubmission ☐.

11. Previous RC Support within the last five years? Yes ☐ No ☐
If Yes, give the dates of the grant support periods, list the date(s) of submission of the Final Report(s) for this (these) prior support, and provide evidence of publications and/or extramural grant applications and/or funding resulting from this support. .

12. Research area: Indicate the area of research by checking the appropriate choice.

☐ Cancer

☐ Cardiovascular disease

☐ Tuberculosis

☐ Multiple Sclerosis

☐ Other

SIGNATURES:

Principal Investigator: _____ Date: _____

The Principal Investigator certifies that this is a new project which is not being considered for other intramural funding. The undersigned agrees to accept responsibility for the scientific and ethical conduct of the project. The undersigned further accepts responsibility for submission of an appropriate final report within 60 days of the end of the grant period if an award is made as a result of this application.

Department Chair: _____ Date _____

For Collaborative Matching Grant Program only:

Speed type for matching funds commitment: _____

Authorization of matching funding should this application be funded by the SoMRC:

_____

Signature Printed Name

.

B. Abstract:

Provide an abstract of the proposal using no more than 200 words. Include a statement of hypothesis, Specific Aims, brief general description of methodology to be employed and a specific statement of how the data generated will be used to compete for extramural research funding.

C. Biographical Sketch:

Insert NIH form

D. Research Plan: (limit to a total of 8 pages).

1. Goals: Provide concise statements of:

    a) the long-term research goals of the investigator;

    b) how the proposed project will enhance competitiveness for extramural funding. This should take the form of a specific statement of intent, including the name of the intended agency and target date for submission of an application for a grant or contract offering.

2. Specific Aims and Hypotheses: Provide a concise statement of hypotheses to be tested; list specific aims of the project.

3. Background and Significance: Do not write an exhaustive review. Provide a summary of the current knowledge in this field. Highlight gaps in understanding and unresolved controversies.

4. Preliminary studies: If appropriate, provide pertinent data from the P.I.'s laboratory that support the proposal. Provide sufficient detail for the reviewer to understand the nature of these data and their relationship to the proposal.

5. Procedural detail:

    a. Experimental design: Describe the design of studies that are to be performed to address the Specific Aims. Discuss the choice and use of model systems, surgical techniques, interview techniques, physiological models, tissue culture systems, control groups, time courses, dose regimens, etc. For human studies, describe criteria used for subject selection. Describe how data obtained will be analyzed.

    b. Methodology: Describe the methods of laboratory analysis and data collection and analysis. If any work is to be performed by other laboratories or service facilities, (on a collaborative or fee-for-service basis), so state. If fee-for-service work is a part of the proposal, specify and justify the number of "units" of such a service required.

E. Facilities available: State where these studies will be performed. List major items of equipment available in the P.I.'s laboratory or through cooperative agreement. Document any such cooperative arrangement with a letter of agreement from the director of that laboratory which states that the equipment is available for the proposed use.

F. Collaborative arrangements: If the project requires the services of others, describe the role of these collaborators (or fee-for-service laboratories). Provide written assurance of the willingness and ability of these people to participate. In the case of fee-for-service work, also include a statement of charges for the services to be performed. Normally this will take the form of a letter from the individual collaborator or service.

G. Budget:

1. Budget itemization: Using the following categories, provide a detailed budget, and itemize any category totaling over $500.

a. Supplies

b. Equipment

c. Animal care and use: Where appropriate, itemize expenses for animal purchase shipping and care. Include costs per animal, as well as numbers of animals and days of maintenance.

d. Laboratory and other services: If fee-for-service work is required (e.g. flow cytometry, patient interviews, chart reviews and statistical analysis, protein sequencing, blood chemistry, pathology, radiology, etc.) so indicate. List the number of tests or other units of service required from the Methodology section, as well as the cost for each unit. Enter the total amount requested. If at all possible, such services should come from within the University community.

e. Other expenses: Itemize by category.

2. Budget justification: For any small equipment purchase, fee-for-service work and for each category of expense, provide a brief description of the intended use with sufficient detail to enable the reviewer to understand the relevance and necessity of the expense.

3. Budget exclusions: The Research Committee has no *a priori* restrictions on funding. However, all budget items must be fully justified, and the committee will critically evaluate each item with regard to necessity, potential duplication and alternative means of support. In general, funding for consultants' fees, clerical support, patient care and hospital costs will be difficult to justify. Faculty salaries are not funded. Travel is also not funded by the Small Grants Program (there is a specific RC Travel Awards Program).

H. Checklist

☐ Cover Page as part of electronic application and signed copy sent to the HSC Research Office

☐ Abstract

☐ NIH Biographical Sketch

☐ Research Plan (limit to a total of 8 pages)

☐ Facilities Available

☐ Collaborative Arrangements

☐ Itemized Budget

If applicable:

☐ Reprints submitted (4 copies)

☐ Appendix (required for support to respond to review of unfunded proposal) including 3 copies of:

- Summary statements/reviews/critiques from extramural agencies
- Previous grant proposal
- Narrative explanation of how critiques are addressed in the current proposal

Appendix B

REQUEST

FOR

TRAVEL FUNDS

Travel Grant Information

Applications for the support of travel may be submitted by medical school faculty, graduate students enrolled full time in departments of the medical school, and postdoctoral fellows. The priority for funding is faculty > graduate students > postdoctoral fellows. Staff, clinical fellows and medical students are not eligible for this funding. Medical students should contact the Student Affairs Office for travel funding requests.

Travel awards will only be considered when available funds exceed current research commitments. The Research Committee would like to conserve funds for the support of research activities. Therefore other sources of funding should be found whenever possible. In order to facilitate the handling of requests, please adhere to the following guidelines:

1. The maximum amount of funding by the Research Committee is $300. Only one trip can be funded by the Committee per applicant per fiscal year.
2. Only one author who is presenting a paper (on research performed at the University of Louisville) will be funded by the Research Committee.
3. The Research Committee expects peer-reviewed publication of research presented with Research Committee support. In cases where the applicant has had travel previously funded by the Research Committee, a manuscript (published or accepted for publication) deriving from that work must accompany the new travel request.
4. Applications may be submitted at any time prior to the initiation of travel. In most cases, the Chair of the Research Committee will review and act on travel requests.
5. In several societies, abstract submission by a member guarantees acceptance. However, the Committee requires that a copy of the confirmation notice from the meeting organizers be submitted in order for funds to be awarded.

Appendix B

REQUEST FOR TRAVEL FUNDS

Complete each line
Return as an attachment to the HSC Research Office at
hscro@louisville.edu
For assistance, contact the HSC Research Office at 852-7794

DATE_____

NAME_____

POSITION_____

DEPARTMENT_____

TELEPHONE_____ EMAIL _____

NAME OF MEETING_____

INCLUSIVE DATES_____

LOCATION OF MEETING_____

ABSTRACT AUTHORSHIP AS SUBMITTED

_____

ABSTRACT TITLE

_____

INCLUDE A COPY OF THE ABSTRACT AS AN ATTACHMENT

INCLUDE A COPY OF THE ABSTRACT ACCEPTANCE OR PROGRAM CONFIRMATION NOTICE AS AN ATTACHMENT

Have you received previous support from the SOM Research Committee? YES _____NO _____

If so, when_____

If so, include as attachments:

- Citation(s) of published article(s) from the meeting
- Copy of published manuscript(s) or manuscript(s) accepted for publication with acceptance notice.

COSTS TO ATTEND MEETING

TRANSPORTATION_____

LODGING_____

MEALS_____

REGISTRATION FEE_____

OTHER (identify)_____

TOTAL_____

APPROVAL OF MENTOR (required of students and postdocs)

YES _____ DATE _____

MENTORS NAME _____ DEPARTMENT_____

****

RESEARCH COMMITTEE USE ONLY

Approval_____Date_____

Bales Eligible? _____ Yes ____No If yes, category:_____

Disapproval_____Date_____

Appendix B

CHECKLIST

SCHOOL OF MEDICINE TRAVEL GRANT

To be sent as attachments to the HSC Research Office at hscro@louisville.edu

☐ Completed travel application form

☐ Copy of meeting abstract

☐ Copy of the Abstract Acceptance or Program Confirmation notice

For those having received previous travel funding:

☐ Website address of published article(s) from the meeting

☐ Copy of published manuscript(s) or manuscript(s) accepted for publication with acceptance notice.

STUDENT RESEARCH SHOWCASE

WINNERS

October 13, 2009
Student Showcase

Dental Students

First Place: Caleb Bastain
Bayesian Reliability Analysis of Endosseous Implant Bucco-lingual Bone Loss
Mentor: Allan Farman, Surgical and Hospital Dentistry

Second Place: Jessica Bondy
Altered developmental programming of the mouse mammary gland in female offspring following perinatal dietary exposures
Mentor: David Scott, Ph.D., Oral Health and Systemic Disease Research Group

Third Place: Andrew Currie
DNA Methylation of Marker Genes During Dedifferentiation of Parotid Cells
Mentor: Douglas Darling, Ph.D., Department of Periodonitics, Endodontics and Dental Hygiene

Masters Basic Science Students

First Place: Akshata Moghe
Reactivation of the Epigenetically Silenced Tumor Suppressor Gene - Tissue Factor Pathway Inhibitor-2 (TFPI-2) by Curcumin Causes Cell Death in Hepatocellular Carcinoma Cells
Mentor*:* Shirish Barve, Ph.D., Division of Gastroenterology/Hepatology

Second Place: Tim Horrell
Analytical Methods for Determining Coherence in the Gamma Band of EEG
Mentor: Ayman El-Baz, Ph.D., Department of Bioengineering

Third Place: Madhuvanti Patil
Transmethylation Pathway-dependent Epigenetic Changes Involving Histone Modifications Play a Critical Role in the Regulation of IL-2 Gene Expression in Primary Human CD4+ T Lymphocytes
Mentor*:* Shirish Barve, Ph.D., Division of Gastroenterology/Hepatology

Doctoral Basic Science Students

First Place: Colleen Tucker
A Role for Regulatory T Cells in Gender-biased Disease Susceptibility in Systemic Lupus Erythematosus
Mentor: Michele Kosiewicz, Ph.D., Department of Microbiology and Immunology

Second Place: Elizabeth Novak
QseBC and Autoinducer-2 Control Biofilm Formation and in vivo Virulence in Aggregatibacter Actinomycetemcomitans
Mentor: Don Demuth, Ph.D., Oral Health & Systemic Disease Research Group

Third Place: Patricia Ward
Locomotor Training Improves Urodynamic Function in Spinally Contused Rats
Mentor: Charles Hubscher, Ph.D., Anatomical Sciences and Neurobiology

Michael K. Tanner Memorial Award for Excellence in Graduate Student Sciences

Winner: Abishek Srivastava
Costimulation Tunes Anti-tumor Immunity: A Novel Platform for the Development of Therapeutic Vaccines
Mentor: Haval Shirwan, Ph.D., Department of Microbiology and Immunology

Medical Residents

Winner: Martin Espinosa Ginic
Obese Hospitalized Patients with CAP are at Lower Risk for Clinical Failure and Death: Results from the CAPO International Cohort Study
Mentor: Julio Ramirez, M.D., Division of Infectious Diseases

Clinical Research Fellows

Winner: Dong Xiang
Targeting Her-2/neu+ Antigen to B Cells: A Novel Immunotherapy for Breast Cancer
Mentor: Jun Yan, Ph.D., Department of Biochemistry and Molecular Biology

Postdoctoral Research Fellows

First Place: Cynthia Gomes
Requirement of Nucleolar Transcription in Neuronal Morphogenesis
Mentor: Michal Hetman,M.D., Ph.D., Department of Neurological Surgery and Department of Pharmacology & Toxicology

Second Place: Sara Nunes
Angiogenic Potential of Isolated Microvessel Fragments is Independent of Their Tissue Origin Mentor: James Hoying, Ph.D., Division of Cardiovascular Therapeutics

Third Place: Sujata Saraswat
Modulating the ER Stress Response after SCI Improves Functional Recovery
Mentor: Scott Whittemore, Ph.D., Department of Neurological Surgery

Research Associates

Winner: Sarah Norberto
LHRH-Mediated Drug Delivery for Ovarian Cancer Treatment
Mentor: Sham Kakar, Ph.D., Department of Physiology and Biophysics

Student Engineering Collaboration

First Place: Jainting Wang
Molecular Beacon-like Fluorophore-gold Nanoparticle Complex for Highly Specific Breast Cancer Imaging
Mentor: Kyung Kang, Ph.D., Department of Chemical Engineering

Second Place: Tim Horrell
Analytical Methods for Determining Coherence in the Gamma Band of EEG
Mentor: Ayman El-Baz, Ph.D., Bioengineering

October 14, 2009
Student Showcase

Medical Students

First Place: Carlo Bartoli
Novel J-Stents Reduce the Risk of Embolic Stroke In Vitro
Mentor: Guruprasad Giridharan, Ph.D., Cardiovascular Innovation Institute (**CII**)

Second Place: Chad Hargrove
Modeling Collateral Sprouting of Spared Axons after Injury
Mentor: Jeff Petruska, Ph.D., Anatomical Science/Neurobiolgy

Third Place: Wendye Walter
Investigation of Binding Specificity of Antiviral Lectin Griffithsin
Mentor: Kenneth Palmer, Ph.D., Pharmacology

Public Health Graduate Students

First Place: Juliet Ndukum
Comparisons Between Molecular Profiles of Perturbed Cells Using NMR Produced Sparse Biological Time Series Data
Mentor: Susmita Datta, Ph.D., Department of Bioinformatics and Biostatistics

Second Place: Sula Hood
Gender Differences in Facilitators and Barriers to Type-2 Diabetes Adherence in African Americans
Mentor: Diane Chlebowy, Ph.D., RN, School of Nursing