

**ANNUAL REPORT TO THE FACULTY FORUM  
SCHOOL OF MEDICINE RESEARCH COMMITTEE**

**Fiscal Year 2013 – 2014  
(July 1, 2013 – June 30, 2014)**

I. Background

A. Composition

Committee for Fiscal Year 2013 – 2014

Chair: Kenneth Palmer, Ph.D.	Pharmacology & Toxicology
Aruni Bhatnagar, Ph.D.	Medicine - Cardiology
Michael Hughes, M.D.	Surgery – General
Sham Kakar, Ph.D.	Physiology
Maureen McCall, Ph.D.	Ophthalmology & Visual Sciences
David Samuelson, Ph.D.	Biochemistry & Molecular Biology
Lonnie Sears, Ph.D.	Pediatrics
Robin Krimm, Ph.D.	Anatomical Sciences & Neurobiology

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 2013 – 2014

Unrestricted Research and Travel Funds	\$109,543
Bales Research Fund*	\$378,798
Barkley Research Fund**	\$ 41,501
Bridge Grants	\$ 120,000
Summer Research Scholar Program	<u>\$ 66,000</u>
Total 2013 – 2014 Budget	<u>\$715,842</u>

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

### D. Contact Information

Information about any of the RC programs may be obtained from Anne Noe, Health Sciences Center Research Office, Room 2028, K Building (852-2553) or at [hscro@louisville.edu](mailto: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) or to provide salary support to junior faculty who are funded by an active NIH K23 award (K23 Salary Supplement). 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 three priority levels:

Career Status I: Must fulfill the criteria for ***BOTH* New Investigator and Early Stage Investigator**.

Career Status II: Must fulfill the criteria for **New Investigator only**.

Career Status III: All other investigators that do not fall into either Career Status I or II, or that have been funded by the School of Medicine Research Committee in the past five years.

Approved proposals are given a funding priority based on the reviews and career status. The maximum award amount is \$25,000 and, other than faculty salaries, equipment, and travel, there are no *a priori* budget restrictions. Grants that are not funded can be revised and resubmitted twice. The RC has instituted a new grant review system similar to NIH (score range: 1-9); applications receiving a score of  $\leq 3$  (or  $\leq 4$  for Career Status I applicants) are considered approved, and if funds are available, will be funded. Under circumstances where funds are limited, awards will be made based on score and Career Status (Career Status I is given the highest priority). Each application is reviewed in detail by two referees and discussed by the entire research committee. Reviews are provided to the applicants in the NIH format as submitted by the referees.

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 \$40,000 for one year.

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. Applications must involve collaboration between the Principal Investigator and another UofL faculty member(s) as Co-Investigator(s). The proposed research can be in any area of research, 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 of a letter in the appendix. The maximum award is \$50,000 for one year to match 50% 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 2013 through June 2014, the Committee received 44 grant proposals: 23 basic grants, 12 bridge grants, 9 collaborative, and 0 K-23 supplement grants. There were 10 basic, 6 bridge, 4 collaborative, and 0 K-23 grants approved and recommended for funding.

Following is a list of faculty investigators who received an award in fiscal year 2013-2014 and includes their career status, title of each investigator's grant proposal title and award amount:

### **BASIC GRANT**

1. Premminger, Jill Ph.D. Career Status II. *Acceptance of internet-based hearing healthcare in adults following hearing screening.* \$14,745.
2. Hong, Kyung Ph.D. Career Status II. *Origin and fate of resident c-kit+ Cardiac Stem Cells.* \$25,000.
3. Cole, Marcie Ph.D. Career Status I. *Preservation of cardiovascular function using conjugated linoleic acid (cLA) in combination with nitrite following myocardial ischemia (MI).* \$25,000.
4. Liu, Yongqing Ph.D. Career Status I. *Sphere-induced transdifferentiation of mouse fibroblasts into macrophage-like cells.* \$25,000.
5. Lundy, Robert Ph.D. Career Status III. *Limbic System Control of Central Taste Processing.* \$25,000.
6. Maldonado, Claudio Ph.D. Career Status III. *Fusogenic Lipid Therapy to Reduced Endothelial Cell Activation.* \$25,000.
7. Zelko, Igor Ph.D. Career Status II. *The role of epigenetics in predisposition to pulmonary arterial hypertension due to neonatal caloric restriction.* \$25,000.
8. Jala, Venkat Ph.D. Career Status III. *Requirement of CCL2-CCR2 axis in progression of inflammatory intestinal tumorigenesis.* \$25,000.
9. Moore, Joseph B. Ph.D. Career Status I. *Pluripotency Factor-Based Enrichment of Resident Cardiac Stem Cells.* \$25,000.
10. Borghius, Bart Ph.D. Career Status I. *The role of kainate receptors in parallel retinal pathways.* \$25,000.

### **COLLABORATIVE GRANT**

1. Dean, Douglas Ph.D. Career Status III. *ZEB1 and oral cancer stem cells.* \$50,000.
2. Chesney, Jason M.D. Career Status III. *Development of a Choline Kinase Inhibitor.* \$50,000.
3. Garbett, Nichola Ph.D. Career Status II. *Profiling the plasma albuminome for clinical monitoring of melanoma.* \$50,000.
4. Kosiewicz, Michelle Ph.D. Career Status III. *Identification of protective metabolites in male microbiota from lupus-prone mice.* \$50,000.

### **BRIDGE GRANT**

1. Li, Yong Ph.D. Career Status III. *Convergence of MicroRNAs and p53 Signaling in Multiple Myeloma: environmental connections.* \$40,000.

2. Lederer, Eleanor Ph.D. *Analysis of PTG and Dopamine Receptor Signaling in Proximal Tubules*. \$40,000.
3. Rokosh, Greg Ph.D. Career Status III. *Regulation of Cell Cycle for Cardiac Regeneration*. \$40,000.
4. Moore, J. Patrick Ph.D. Career Status III. *Role of PACAP in pituitary-gonad axis development*. \$40,000.
5. Wattenberg, Brian Ph.D. Career Status III. *The molecular control of the ORM DL proteins, asthma-associated metabolic regulators of sphingolipid metabolism*. \$36,953.
6. Samuelson, David Ph.D. Career Status III. *Identifying candidate modifier elements of a breast cancer risk allele*. \$40,000.

## **K23 SALARY SUPPLEMENT GRANT**

None.

### III. Travel Awards Program

#### A. Description

The RC provides funds to help defray travel costs of medical school students and investigators who are presenting their work at national or international scientific meetings. A maximum of \$500 is available to the presenting author of each paper, with a limit of one award per investigator per fiscal year. Highest priority applicants are 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, 2013, through June 30, 2014, the Committee received 23 travel grant requests. The breakdown for those funded includes:

Graduate students – 12  
Postdoctoral fellows – 11

### IV. Summer Research Scholars Program (SRSP) and Student Research Day/Research!Louisville

#### 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 the Health Sciences Center Research Office staff and forward to the RC in cases of conflict to be reviewed.

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 2013: A total of 80 projects were submitted as potential projects for the SRSP. Upon review, 63 projects were selected by the students. Support for the students was through the: a. SOM Research Committee’s SRSP restricted and unrestricted funds (32 students; 10 of which were funded by Bales Endowment); b. two T-35 training grants (12 students); c. NCI R25 training grant (14 students); and d. Distinction in Research (5 students).

Student Research Showcase was held on September 24, 2013, during Research!Louisville. A total of 209 students participated as follows:

Medical Students – 71  
Nursing - 5

Public Health Graduate Students – 7  
Dental Students – 17  
NCI R25 Undergraduate Students - 19  
Masters Basic Science Students – 41  
Doctoral Basic Science Students – 49

The Postgraduate Research Showcase was held September 25, 2013, also during Research!Louisville. A total of 101 postgraduates participated as follows:

Medical Residents – 23  
Clinical Research Fellows – 5  
Postdoctoral Research Fellows – 36  
Research Associates – 20  
Research Staff – 17

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

The Research Office forwarded the name of David Hein, Ph.D., in the category of Distinguished Faculty Award of Career Achievement.