

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

**Fiscal Year 2015 – 2016
(July 1, 2015 – June 30, 2016)**

I. Background

A. Composition

Committee for Fiscal Year 2015 – 2016

Chair: Suresh Tyagi, Ph.D.	Physiology
Pascal Alard, Ph.D.	Microbiology & Immunology
Lori Caloia, M.D.	Family & Geriatric Medicine
Robin Krimm, Ph.D.	Anatomical Sciences & Neurobiology
Maureen McCall, Ph.D.	Ophthalmology & Visual Sciences
David Powell, Ph.D.	Medicine-Renal
Lonnie Sears, Ph.D.	Pediatrics
Vaclav Vetvicka, Ph.D.	Pathology

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 2015 – 2016

Base Budget	\$93,007
<u>Bales Research Fund*</u>	<u>\$137,319</u>
Total Base Budget for FY16	\$235,075**

One time Allocations

Carryover Base from FY15	\$43,485
Accumulated Bales Balance	\$30,651
<u>Barkley Research Fund***</u>	<u>\$ 0</u>
Total One Time Allocation	\$74,136

Total 2014 – 2015 Budget **\$309,211**

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

**This figure includes \$66,000 for 2016 Summer Research Scholars including \$15,000 for SRSP from Bales

***Barkley Research is restricted to cardiovascular disease.

D. Contact Information

Information about any of the Research Committee programs may be requested from Anne Noe, Health Sciences Center Research Office, Room 2028, K Building (852-2553) 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) 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 ≤ 3 (or ≤ 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 can be found here:
<http://research.louisville.edu/medicine/grants/som/>

B. Activity

From July 2015 through June 2016, the Committee received 29 grant proposals: 16 basic grants, 8 bridge grants, 8 collaborative, and 0 K-23 supplement grants. There were 4 basic, 3 bridge, 2 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 2015-2016 and includes their career status, title of each investigator's grant proposal title and award amount:

BASIC GRANT

1. Joshua Hood, Career Status I, "Melittin Modified Exosome Immunotherapy for Melanoma", \$21,250.
2. Matthew Nystoriak, Career Status I, "Role of KV beta subunits in coronary metabolic vasodilation", \$21,250.
3. Dawn Caster, Career Status I, "Nephtitogenic Autoantibodies in Systemic Lupus", \$19,600.
4. Kate Meriwether, Career Status I, "The vaginal and urinary microbiome in premenopausal women with interstitial cystitis/painful bladder syndrome: a cohort study", \$14,331.

BRIDGE GRANT

1. Huang Zhang, Career Status III, "Targeted delivery of therapeutic agents to inflammatory sites by a nano vector", \$34,000.
2. Nolan Boyd, Career Status III, "Implantable Cell-based Device for Circulating Toxin Removal", \$20,000.
3. Quitang Li, Career Status III, "Cell specific functions of IKK2/NF-kappaB in retinal neovascularization", \$31,200.

COLLABORATIVE GRANT

1. Evelyn Gozal, Career Status III, "Oxidative stress-induced platelet-endothelial interactions as a cause of microvascular dysfunction in the diabetic lung", \$42,500.
2. Jonathan Freedman, Career Status III, "Metals and Carcinogenesis", \$41,761.

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.

B. Activity

There were no funds available for travel awards during FY16.

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 2015: A total of 68 projects were submitted as potential projects for the SRSP. Upon review, 48 projects were selected by the students. Support for the students was through the: a. SOM Research Committee's SRSP restricted and unrestricted funds (26 students; 6 of which were funded by Bales Endowment); b. two T-35 training grants (12 students); c. NCI R25 training grant (9 students); and d. Distinction in Research (5 students).

Student Research Showcase was held on October 27, 2015, during Research!Louisville. A total of 165 students participated as follows:

- Medical Students – 76
- Dental Students – 25
- Masters Basic Science Students – 21
- Doctoral Basic Science Students – 72

Nursing, Public Health, and R25 Undergraduate Student and Postgraduate Research Showcase was held October 28, 2015, also during Research!Louisville. A total of 179 postgraduates participated as follows:

- Medical Residents – 19
- Clinical Research Fellows – 12
- Postdoctoral Research Fellows – 28
- Research Associates – 45
- Research Staff – 28
- Nursing - 5
- Public Health Graduate Students – 16
- NCI R25 Undergraduate Students - 26

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

The Research Office forwarded the name of Jon Klein, M.D., Ph.D., in the category of Distinguished Faculty Award of Basic & Applied Sciences.