

**ANNUAL REPORT TO THE FACULTY FORUM
SCHOOL OF MEDICINE RESEARCH COMMITTEE
Fiscal Year 2006-2007 (July 1, 2006 – June 30, 2007)**

I. Background

A. Composition

Committee for Fiscal Year 2006-2007

J. Christopher States, Ph.D. (Chair)	Pharmacology & Toxicology
Douglas Dean, Ph.D.	Ophthalmology & Visual Sciences
David Gozal, M.D.	Pediatrics
Craig J. McClain, M.D.	Medicine
Haval Shirwan, Ph.D.	Microbiology & Immunology
Suresh Tyagi, Ph.D.	Physiology & Biophysics
Stephanie Webb, Ph.D.	Biochemistry & Molecular Biology
Wayne Zundel, Ph.D.	Radiation Oncology

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 members, elected by the Executive Faculty to staggered three-year terms. Four members are from preclinical departments and four 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 and Bridge 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 2006-2007

Unrestricted Research and Travel Funds	\$ 60,000
Bridge Grants	\$ 60,000
One-time Allocations	<u>\$ 13,666</u>
(Barkley endowment – heart research-\$7,929)	
(Carryover base budget from 2005-06-\$5,737)	

2005-06 Research Committee Budget	\$ 133,666
Summer Research Scholar Program	<u>\$ 66,000</u>
2005-06 budget including SRSP	\$ 199,666

Budget change – At the beginning of fiscal year 2006-07, the RC made funding recommendations for Bales eligible grants and travel to the Dean which was reviewed on a case-by-case basis for funding from the *Bales Medical Research Fund. In January 2007, the Bales funds were made available to the RC once again. The balance of the Bales Fund made available to the RC for the February 2007 meeting was \$272,153.

*Bales Medical Research Fund – Restricted for research in cardiovascular disease, cancer, tuberculosis, or multiple sclerosis research

D. Contact Information

Information about any of the RC programs can be obtained from Ms. Mellen Rowe, Health Sciences Center Research Office, Room 2028, K-Building (852-7794).

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) 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. During this fiscal year the RC instituted 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 Institutes 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 \$15,000.

In August 2006, the Dean approved modifying the Bridge Funds to allow the RC to use “unexpended Bridge Funds” at the end of a fiscal year to fund grant applications that were approved but not funded due to limited funds in the Basic Grant category.

Both Basic and Bridge grant applications are included in Appendix A.

Web address: <http://research.louisville.edu/medicine/school-of-medicine-intramural-grants>

B. Activity

From July 2006 through June 2007, the Committee received 24 grant proposals including new and resubmitted grants for each cycle. (24 total grant submissions, but from 21 faculty members, 3 were resubmitted in this fiscal year) Seven were approved at first submission, but only six were funded when approved. Due to lack of funds one approved grant was carried over into the next cycle of grant applications for funding consideration. One grant that was approved and funded at first submission was submitted as a Bridge grant but was funded from the Bales funds. One grant that was approved upon first submission but not funded due to lack of funds was revised and resubmitted for a higher ranking and was then re-approved and funded upon resubmission. Eight of the 24 grant proposal submissions were asked to revise and resubmit; three of these were never resubmitted; one was approved and funded upon resubmission; one was approved upon resubmission was not funded due to lack of funds in that cycle and was then funded at the end of the fiscal year with unexpended Bridge Funds and three were resubmitted in fiscal year 2007 – 08. Three grant proposals were triaged and were not discussed and two grants were disapproved upon first submission. One grant from a senior faculty member, who had extramural funding, was not funded due to the RC wanting to reserve their limited funds for junior faculty.

Grants that are approved but not funded due to lack of funds can be maintained for additional review cycles up to a maximum of three.

Following is a list of faculty investigators who received an award in fiscal year 2006-2007 and includes the title of each investigator’s grant proposal title:

W. Breckinridge Carden, Ph.D., Assistant Professor, Anatomical Sciences & Neurobiology
Functional and Molecular Analysis of Long-Term Sleep Disruption by Ethanol
(September 2006)

G-Rafael Fernandez-Botran, Ph.D., Associate Professor, Pathology & Laboratory Medicine
GM2/GD3 Synthase and Immune Evasion by Tumors (September 2006)

Barry W. Row, Ph.D., Assistant Professor, Pediatrics
Impact of genetic absence of NADPH oxidase on susceptibility to intermittent hypoxia induced learning deficits and oxidative stress in mice (December 2006)

Ramesh Vijay, Ph.D., Assistant Professor, Pediatrics
Sleep phenotype in a mouse model of Alzheimer’s disease (December 2006)

C. William Helm, M.D., Associate Professor, Obstetrics, Gynecology & Women's Health
Xenograft model of ovarian carcinoma in nude mice with assessment of non-invasive imaging and tolerability of intraperitoneal cisplatin, sodium arsenite and mild hyperthermia. (March 2007)

Alexander Ovechkin, M.D., Ph.D., Assistant Professor, Neurological Surgery
Effectiveness of the locomotor training on recovery of pulmonary function after spinal cord injury (March 2007)

Richard L. Benton, Ph.D., Assistant Professor, Anatomical Sciences & Neurobiology
Transcriptional and proteomic analysis of spinal microvascular endothelial plasticity following focal ischemic spinal cord injury. (June 2007)

Adelnaby Khalyfa, Ph.D., Assistant Professor, Pediatrics
Gene Expression profiling in children with obstructive sleep apnea. (June 2007)

Fabian A. Crespo, Ph.D., Assistant Clinical Professor, Psychiatry & Behavioral Sciences
Cytokine polymorphisms and their role in progressive supranuclear palsy (June 2007)

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/request-for-travel-funds>

B. Activity

From July 1, 2006 through June 30, 2007, the Committee received 31 travel grant requests; three requests were not funded and/or denied. The breakdown for those funded includes:

Faculty members – 12
Graduate students – 13
Postdoctoral fellows – 6

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

A. Description

The RC funds stipends for incoming first year and 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.

Proposals judged as appropriate for M.D./Ph.D. research are offered to those students prior to being offered to other medical students. *Students who are interested in participating in the SRSP must submit the online registration form by a designated deadline.*

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; 2) students who have been identified by a mentor when the project was submitted; 3) students who participated as an incoming student and want to participate a second summer with the same faculty member and 4) 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 expected 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 of clinical research. Students participating in the SRSP program present their research in poster format at the Annual Student Research Day in the fall.

Student posters are judged by faculty and postdoctoral fellow volunteers on Student Research Day 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 \$500 for first place and \$300 for second place and present their work at the regional competition in Omaha, Nebraska. If they win there, they present at the national competition in Galveston, Texas. Students who win first place at Nationals are eligible to receive up to \$500 reimbursement (plus registration and membership fees, when required) towards the cost of attendance at a national meeting of their choice within one year of Student Research Day.

The Graduate Student Division 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 \$500 and \$300, respectively, and receive up to \$1000 to present their work at a national meeting of the mentor’s choice within one year of Student Research Day. A third place award of \$300 is presented but without funds to present at a national meeting. The Graduate Student awards are supported by the Graduate School and travel is supported by the Office of the Vice President for Research

B. Activity

Summer of 2006: A total of 128 projects were submitted as potential projects for the SRSP. Upon review, 114 projects were approved and 78 projects were selected by students. Support for the students was through the 1) SOM Research Committee’s SRSP restricted and unrestricted funds [49 students], 2) Three T-35 Training grants [18 students], 3) faculty mentors [4 students], 4) a one-time gift [4 students] and 5) one Cancer Education Grant [3 students]. The stipend amount funded through the Research Committee, mentors and the one-time gift was \$3,000 and the others were paid as stipulated on each grant.

Student Research Day was held on Tuesday, October 1, 2006 during Research!Louisville. A total of 179 students participated as follows:

First Year Medical Students – 24
Second – Fourth Year Medical Students – 60
Nursing/Public Health Graduate Students – 6
Dental Students – 10

Masters Basic-Science Students – 11
Doctoral Basic-Science Students – 68

Competition winners are listed in Appendix C

The RC coordinated the Postgraduate Research Day event held October 12, 2006, also during Research!Louisville. A total of 75 postgraduates participated as follows:

Medical Residents – 7
Clinical Research Fellows – 11
Postdoctoral Research Fellows – 42
Research Associates – 15

Winners for these categories are also listed in Appendix C.

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

(December 2006/January 2007) The RC forwarded the names of Dr. Aruni Bhatnagar, in the category of Basic and Applied Sciences; and Dr. Craig J. McClain in the category of Career Achievement, to the University-Wide Screening Committee. Dr. Bhatnagar received the President's Award in the Basic and Applied Sciences category.