

# Center for Molecular Signaling Research Project Internal Grant Funding

## I. General Guidelines

**Purpose:** Grants from the Center for Molecular Signaling (CMS) are intended to foster interdisciplinary collaboration, to catalyze and support research, to promote the training of new researchers in the area of molecular communication and signaling, and to develop new approaches and research directions in this area. Applications for funding will be reviewed on the basis of scientific merit, the potential for future extramural funding, and consistency with the scientific focus of the CMS on intra and inter-cellular signaling.

### Eligibility

- Faculty members from the WFU Reynolda campus who are members of the Center for Molecular Signaling
- Since the CMS is a Reynolda campus-based center, WFUHS faculty who are CMS members should submit proposals in collaboration with one or more Center participants from the Reynolda campus.
- All grant requests must be approved by the chairpersons of the applicants' departments prior to submission, noted by the chairpersons' signatures on the cover sheet of the proposal (or an e-mail).

**Topics:** Topics must be related to molecular signaling, broadly defined to cover the study of signaling at multiple levels, including long distance signaling to coordinate organismal physiology and behavior (e.g. neurotransmitters and hormones), intracellular signaling molecules and events (e.g. secondary messengers and protein modification including phosphorylation and oxidation), and intra-molecular conformational changes in proteins for regulation of the activity of enzymes, transcription factors, and other molecular motors. The four primary research foci of the CMS are: redox signaling, bioactive signaling molecules, computational modeling of signaling networks, and imaging of signaling events. To support collaborative research with the medical school, matching funds from medical school centers may be possible (Center for Redox Biology and Medicine or Center on Diabetes, Obesity and Metabolism) may be available. Please contact Gloria Muday ([muday@wfu.edu](mailto:muday@wfu.edu)) for information on matching funds. Please note interest in matching funds on the application cover.

### Aspects of the project that will positively contribute to its suitability for funding:

- Relevance to the Center's focus on cellular and molecular signaling
- Clarity and significance of study question
- Sound scientific methodology, appropriate to study question
- Collaboration between two or more different researchers, departments, schools, or centers
- Positive impact on training of graduate and undergraduate students
- Development of new directions or approaches for molecular signaling studies
- Long term vision to develop additional funding sources to continue the project

**Deadlines:** Applications are due by October 18, 2017. The proposals should be sent to: Susan Tague at (taguesc@wfu.edu). If you have questions during the preparation of the proposal, please contact Gloria Muday (muday@wfu.edu).

**Amount:** Funds are available to support Level 1 (up to \$10,000) and a more limited number of Level 2 awards (up to \$20,000). Projects are renewable when there is evidence of significant progress on the project and a need for continuing funding. Renewal applications in future calls for proposals should follow the same guidelines as new projects.

**Review:** Applications are evaluated on relevance to the goals of the center and the quality of the proposed questions. Additional factors that will affect which proposals are funded are desires to balance funding across the four primary research areas of the Center and to support new researchers (junior faculty, post-docs, graduate students, and undergraduate students) working in the area of molecular signaling. While explicit collaboration between two or more Center members is not required, it is highly encouraged.

**Award period:** Awards will standardly run for twelve months, from January 2018 to December 30, 2018. When a grant is awarded, the CMS Business Manager, Barbara Meredith, will establish an account for the funds and disburse them on the written authority of the investigator listed as the Project Financial Administrator, or a designated representative, through the usual budget mechanisms.

**Reporting:** Final reports are required at the end of each funding year. Any substantial changes in the proposed research plan must be discussed with and approved by the Center Director, Dr. Gloria Muday or Co-Director, Dr. Rebecca Alexander. Within 90 days after termination of the grant, a final report must be submitted. The final report should include scientific findings, abstracts or publications resulting from the project; a brief description of how the funding was spent, and whether the funding was instrumental in the preparation and/or funding of extramural grant applications.

**Unused funds:** Any balance unexpended upon grant expiration must be returned to the Center unless a no-cost extension is requested by the investigator and approved by the Center Director. All unexpended funds must be returned to the Center within six (6) weeks of the termination of the project.

## **II. Instructions for Proposal**

- A. General guidelines. Use standard fonts and margins (11 point font or larger and 1 inch margins). The header should include the primary Reynolda-campus investigator's name formatted as follows: Last Name, First Name, with page numbers included. A

PDF or Word document of the proposal must be submitted electronically to Susan Tague (taguesc@wfu.edu) by the deadline (October 18, 2017).

- B. The proposal should contain a one-page *cover page* which includes:
- a. Project title
  - b. All primary investigators' names and departments
  - c. Name of the Reynolda campus investigator who will assume role of Primary Investigator.
  - d. Signature of all investigators' department chairpersons (or e-mail noting their support of this project).
  - e. If the proposal should be considered for matching funds with other centers or internal funding mechanisms.

- C. The *research plan*, limited to a total of five (5) pages, excluding references, must include the following:

**Abstract:** A brief summary of the proposed activity suitable for publication. Clearly address in separate statements the 1) intellectual merit, and 2) the broader impacts. Not to exceed one paragraph.

**Objectives:** State precisely what the research should accomplish, what hypothesis it will test, the rationale for undertaking it, and how this fits into the priorities of the center

**Background and Significance:** Summarize the most pertinent previous work and the current state of the field, including your own preliminary data. Identify the gaps that the proposed project is intended to fill.

**Methods:** Discuss the experimental design and methods proposed to accomplish project objectives in sufficient detail to allow assessment of their feasibility and applicability. Indicate the type of data to be generated, and how they will be analyzed (e.g., proposed statistical design and analysis).

**Future plans:** Provide plans for future efforts, including publication of results or submission to external sponsors. Include a proposed project timeline.

**References (not included in the page limit)**

- D. *Additional pages*, limited to three (3), should detail:

**Budget:** Include a brief but descriptive budget and budget justification. If this budget is not adequate to fund the proposed research, indicate the source and amount of additional funds.

1. Equipment: Justify why the equipment is necessary for the proposed study.
2. Supplies: List major categories
3. Personnel: Funds for graduate student stipends or supplements, technical support staff, and post-doctoral stipends and supplements will be considered. Remember

- to include appropriate fringe benefits for appropriate personnel (typically personnel classified as faculty or staff).
4. Other: Necessary travel, computer charges, audiovisual costs, hazardous waste disposal costs, etc.

**Research support and environment:**

1. Describe facilities (equipment) and relevant space (labs) with and in which the project will be conducted.
2. List all active, pending, and planned extramural and intramural grants. Include dates of duration and total and direct costs.
3. If other support is available, explain the need for additional intramural research support funds from the CMCS.
4. List past internal support funds from within WFU or WFUHS for the past four years.

E. *Study personnel* documentation

Include either NIH formatted biosketches (four page limit each) or NSF formatted (with additional references allowed beyond the standard 10) for all study investigators. On a sheet included before the biosketches, list all key personnel (investigators, associates, technicians, students, university staff, etc.) involved with the project, their department/institution and role in the project.