

## Request for Applications (RFA) for Proteomics Pilot Awards

### **Purpose and Overview**

The purpose of this RFA is to stimulate the development of high-quality, innovative cancer research projects that use LC-MS/MS-based proteomics through a pilot award funding mechanism. These pilot awards will provide support for novel, cancer-focused studies that utilize the MUSC Mass Spectrometry Facility located in the MUSC Proteomics Center. Examples of current ongoing studies include protein identification and characterization, differential protein expression/abundance, protein interactions, drug mechanism of action, and the identification of regulated sites of post-translational modification.

Recent acquisition of the Orbitrap Fusion Lumos Mass Spectrometer (nanoLC-MS/MS) through the NIH High End-Instrumentation Grant Program provides state-of-the-art capabilities for the identification of complex post-translational modifications using multiple modes of peptide fragmentation (HCD, CID, ETD, EThcD, UVPD) that can be coupled to quantitative proteomic approaches (SILAC, TMT, and LFQ). Facility staff will provide assistance with experimental design; assessment of feasibility; aspects of sample preparation and method development; project-specific data acquisition; project-specific database searching and processing; and generation of reports and initial figures.

HCC leadership anticipates making up to 15 awards of \$5,000-10,000 per project, without the option to renew. Awardees are required to submit a timeline showing when their samples will be ready for analysis. A final progress report will be required upon project completion, including an outline of project results and contribution of the proteomics data toward publications or grant proposals. PIs are expected to seek regulatory [e.g., IACUC, IRB] approvals in a timely manner. Any extensions will require prior approval. Please note that the funding cannot be released until all applicable human and animal subject protocols have been approved and copies have been sent to Ms. Toni Smith ([smithto@musc.edu](mailto:smithto@musc.edu)). All publications derived from this funding must cite the HCC's Cancer Center Support Grant (P30 CA138313), the MUSC Mass Spectrometry Facility, and the NIH Director's Instrumentation Program (S10 OD025126).

### **Eligibility & Evaluation Criteria**

#### *Eligibility*

- The proposed research must be cancer relevant.
- The PI must be associated with the Hollings Cancer Center.

#### *Evaluation*

Each application will be assigned at least two reviewers (internal and external) who have substantial expertise in cancer research and in reviewing grants.

Review criteria will include:

- Standard NIH criteria (significance, innovation, approach and investigative team);
- Active participation in HCC programs; and
- The scientific plans for each project must describe how the data obtained will be critical to future publications or applications to external funding agencies.

Applicants are required to contact Dr. Lauren Ball regarding feasibility, experimental design and scope, anticipated results, and cost for this RFA (Dr. Lauren Ball, Director, Mass Spectrometry Facility: [ballle@musc.edu](mailto:ballle@musc.edu)).

## Timelines

Full applications are **due by 5:00pm on Friday, May 31, 2019**. Please send one PDF file of the application packet *via* email to Brett Bechtol (bechtolb@musc.edu). Applications will be peer-reviewed, followed by notifications of awards.

## Application Checklist

- **Application Format:** Use standard 11-point Arial font, single space, and half-inch margins throughout the application. Number all pages consecutively.
- **Face Page:** Complete attached Face Page form.
- **Abstract:** (200-word limit)
- **Prior Internal Funding History (Mandatory; half-page limit)**

Answer “Yes” or “No” to the question: “Have you ever received HCC pilot project funding before?”

If “Yes”:

  - a) State the internal funding mechanism(s) and project(s) period of execution dates.
  - b) List (including the dates) extramural application(s) submitted and extramural grants awarded that were derived from the pilot award.
- **Specific Aim(s):** State concisely the hypothesis to be tested and the specific aim(s) for the one-year project period. (1 page)
- **Research Strategy** (3 pages max)
  - a. Significance
  - b. Innovation
  - c. Approach
- **Budget:** Use PHS 398 from page 4 (<http://grants.nih.gov/grants/funding/phs398/phs398.html>) followed by a written justification. Budget cap is \$10,000 direct costs. Include direct costs only; there are no indirect costs associated with this award. No faculty or staff salaries should be included. Any faculty effort related to this award must be listed. Include justification for all budget requests. Every budgeted item must be classified into a category (*e.g.*, supplies, Mass Spec Core charges). Travel expenses will not be allowed. The HCC reserves the right to reduce award amounts.
- **Literature Cited:** Select only those references pertinent to the proposed research. This is not included in the page limit.
- **NIH Biosketches:** Biosketches for PI and any co-PIs. Personal statements must include the specific role of the team member.
- **Letters of Support:** A letter of support from Dr. Lauren Ball verifying that you have discussed feasibility, project scope and the number of LC-MS/MS analyses, anticipated results, and costs must be included. Letters of support from the appropriate Department Chairs and/or HCC Program Leaders are required and should be sent in confidentiality to Brett Bechtol (bechtolb@musc.edu).

## Program Expectations

- Presentation of results to HCC leadership
- Inclusion of results in publication(s), and R01 or R01-equivalent grant submissions

**Medical University of South Carolina/Hollings Cancer Center**  
**DEVELOPMENT OF IDEA AWARD RFA**  
**FACE PAGE**

TITLE OF PROJECT		
PI NAME <i>(Last, First, Middle)</i>	DEGREE(S)	
ACADEMIC TITLE	DEPARTMENT & INSTITUTION	
IRB/IBC/IACUC APPROVAL Type of APPROVAL _____ APPROVAL # _____ <input type="checkbox"/> PENDING <input type="checkbox"/> TO BE SUBMITTED <input type="checkbox"/> Not applicable	CO-INVESTIGATORS (Name, Department, and Institution) Include a separate page if necessary.	
Is this project part of a current pending submission for a federally funded grant? <input type="checkbox"/> YES <input type="checkbox"/> NO		
I certify that the proposal is complete and the above list includes all MUSC contributors to the proposed project. <input type="checkbox"/> YES <input type="checkbox"/> NO I understand that all non-MUSC contributors (consultants, contributors, etc.) to this proposed project must complete and submit, prior to award of funds, the required External Contributor Financial Conflict of Interest (FCOI) Certification Form located at the following link: <a href="http://academicdepartments.musc.edu/research/orsp/orsp_coi.html">http://academicdepartments.musc.edu/research/orsp/orsp_coi.html</a> . <input type="checkbox"/> YES <input type="checkbox"/> NO		
<b>VERIFICATION OF BUDGET APPROVAL BY APPLICABLE DEPARTMENTAL BUSINESS MANAGERS</b>		
1. SIGNATURE OF BUSINESS MANAGER	DEPARTMENT	DATE
2. SIGNATURE OF BUSINESS MANAGER	DEPARTMENT	DATE
3. SIGNATURE OF BUSINESS MANAGER	DEPARTMENT	DATE
SIGNATURE OF PRINCIPAL INVESTIGATOR	DATE	