



**National Center of Neuromodulation for Rehabilitation (NC NM4R)
at the Medical University of South Carolina**

**Request for Application for Pilot Project Grants and Submission Guidelines
2020-2021 Funding Cycle**

Key Dates

- RFA Release Date:** October 7, 2019
Letter of Intent (LOI) Due: December 6, 2019
Invitation to Submit Sent: December 13, 2019
Send Budget for Review: January 27, 2020
Application Due Date: February 10, 2020 (5:00 pm EST)
Anticipated Award Date: July 1, 2020

Overview: The National Center of Neuromodulation for Rehabilitation (NM4R) at the Medical University of South Carolina (<http://musc.edu/ncnm4r>) is pleased to announce that it will fund four pilot grants for up to \$37,500 for a 12-month period. Submission of a Letter of Intent (LOI) is required. Only individuals who receive *An Invitation to Submit* may submit a full proposal for consideration. **The availability of funds for this opportunity is contingent on the Center receiving the Phase II extension of their current NIH award.**

Through these Pilot Grants, NC NM4R will provide short-term funding for studies designed to promote rehabilitation neuroscience research that uses neuromodulatory techniques and methodologies, or which may increase understanding of the underlying neurobiological mechanisms of NM4R. Projects must include a clear neurobiological rationale for the methods and techniques used in the proposal.

The goal of the Pilot Grants is to support projects that will generate critical data used to develop fundable and sustainable research lines through competitive NIH research grant applications or through similar extramural funding mechanisms.

Objective: The principal goal of the NC NM4R Pilot Studies Program is to provide short-term funding for scientifically meritorious, new, and innovative projects through a competitive program with open solicitation and peer review. The program will focus on enabling junior, mid-level, or senior faculty to explore an area that is distinct from their currently funded research, or expand their areas of biomedical research using neuromodulatory methodologies supported by the NC NM4R.

Eligibility: Principal Investigator should have a full-time faculty or post-doctoral appointment and a doctoral degree in science, research, or health related fields. S/he must be eligible to submit an NIH R01 application or equivalent at his/her institution. S/he should not have other resources adequate for pilot studies in this area.

Letter of Intent: The prospective applicant is **required** to submit an online Letter of Intent (LOI). <https://chp.musc.edu/research/nc-nm4r/funding-opportunities/pilot-funding/letter-of-intent>. LOIs will be reviewed and only those applicants that receive an Invitation to Submit full applications are asked to submit a Budget and full proposal.

Budget: Investigator(s) are required to submit preliminary budget to Cynthia Gittinger at gittinck@musc.edu by **January 27, 2020**. All preliminary budgets will be reviewed for accuracy and to guarantee budgetary compliance.

Inquiries:

George F. Wittenberg, MD, PhD, FASNR
Professor, Neurology
VA Pittsburgh HS, University of Pittsburgh
Laboratory/Office
3520 Fifth Ave., #201
Pittsburgh, PA 15213
Telephone: 412-648-4178
Email: GeoWitt@Pitt.edu

Heather A. Boger, PhD
Associate Professor
Dept. of Neuroscience
Medical University of South Carolina
173 Ashley Ave., BSB 410
Charleston, SC 29425
Telephone: 843-876-2230
Email: boger@musc.edu

Key Elements of the NC NM4R Pilot Project Program

Pilot Studies grants will support rehabilitation neuroscience research of new directions and/or innovative applications of neuromodulatory methods/technologies. They are designed to promote the growth of the rehabilitation neuroscience that utilizes neuromodulatory techniques and methodologies, by providing NM4R research resources and expertise towards the development of potential new projects that are fundable and sustainable through extramural funding mechanisms. Each project should include a scientific rationale for the proposed neuromodulatory methods/technologies and their neurobiological mechanisms of action. **The pilot project program is not designed to provide ongoing support for a long-term project or to provide supplemental support to ongoing funded research projects.**

Pilot Projects Must Aim To:

- Address an important question in basic, translational, and/or clinical research that impacts recovery from stroke, spinal cord injury, or other neurological damage.
- Generate critical preliminary data to support submission of a competitive extramural grant application that will directly utilize a neuromodulatory method or technology.
- Focus on a research or technological or methodological area that is distinct from investigators other research or expands the areas of biomedical rehabilitation research using neuromodulatory methodologies and technologies supported by the NC NM4R.
- Develop or acquire a new method or technology that will directly enhance, advance, or replace one or more currently available neuromodulatory methods or technologies supported by NC NM4R.
- Provide greater understanding of the neurobiological mechanisms underlying neuromodulatory methods/techniques.

Application Process

Letter of Intent (LOI) Due: December 6, 2019

A Letter of Intent is required and will be used to determine which projects will be invited for full consideration of funding. Prospective applicants are required to submit a LOI (<https://chp.musc.edu/research/nc-nm4r/funding-opportunities/pilot-funding/letter-of-intent>) that includes the following information:

- Descriptive title of proposed research.
- Name, email address, and telephone number of the PI.
- Three to five descriptive keywords
- Complete listing of the investigating team with each individual's academic title, primary department, institution, and proposed role on the project.
- Hypotheses and objective of the project (max 500 words)
- Overview of the study design/methods (max 500 words)
- Relevance to the scientific field of Neuromodulation for Rehabilitation Research (max 100 words)

For Resubmissions, additional information is required: If this LOI is a first resubmission of a previously reviewed but not funded full grant application, a response to reviewers' comments needs to be included (max 500 words).

Pilot Grant Full Application

***Note: Only use Word documents and then save and upload as PDFs (fillable PDFs will not work). ***

1. NIH-formatted Biosketch

- Provide a NIH-formatted Biographical Sketch Format Page. Please use NIH Biographical Sketch Format Page (non-fellowship) found at: (<https://grants.nih.gov/grants/forms/biosketch.htm>) for all key personnel. Convert the Word document to PDF.

2. Project Summary and Relevance

- 30 lines of text for Project Summary, Arial font size 11, at least 0.5-inch margins, Convert the Word document to PDF.
- The Project Summary should serve as a succinct and accurate description of the proposed work when separated from the application. State the application's broad, long-term objectives and specific aims, relating them to those of the NC NM4R. Describe concisely the research design and methods for achieving the stated goals. This section should be informative to others working in the same or related fields and understandable to a scientifically or technically literate reader. Using no more than two or three sentences, describe the *Relevance* of this research to public health. The Relevance statement should be succinct and written using plain language that can be understood by a general, lay audience.

3. Research Plan

- 5-page limit (1 page for Specific Aims, 3 pages for Research Strategy and 1 page for Additional Review Criteria), Arial font size 11, at least 0.5-inch margins. Revised applications must include a 1-page Introduction at the beginning of the Research Plan (see **Resubmission**

of an **Application** section for further details). All sections of the Research Plan and any Letters of Support should be combined and converted into a single PDF.

- The Specific Aims should state concisely the goals of the proposed research and summarize the expected outcome(s), including the impact that the results of the proposed research will exert on the research field(s) involved. List succinctly the specific objectives of the research proposal, e.g., to test a stated hypothesis, solve a specific problem, challenge an existing paradigm or clinical practice, address a critical barrier to progress in the field, or develop a new technology. **The Specific Aims section must be limited to one page.**
- The Research Strategy section should describe how the data will be analyzed and used to make inferences regarding the Specific Aims. **The Research Strategy section must be limited to three pages.**
 - The Research Strategy should follow the standard NIH format which includes Significance, Innovation, and Approach. Further information can be found in [Section G.400 of General Application Guide for NIH and Other PHS Agencies](#), and in the [Instructions and Form Files for PHS 398](#).
 - The research proposal should be informative enough for reviewers to understand the proposed research without any supporting documents.
 - Applicants should include all the required details based on the grant category and its review criteria within the proposal without referring to additional pages/documents.
 - Include a scientific rationale for the proposed neuromodulatory methods/technologies and how and why they will be used in your study. Describe the known or neurobiological mechanisms of action of the neuromodulatory methods/technologies that will be utilized and how these studies may further the fields understanding.
- The Additional Review Criteria section should include a response, if applicable, to the four points listed below. **The Additional Review Criteria section must be limited to 1 page.**
 - State how you plan to use the NC NM4R methods and/or technologies in this proposal.
 - State how you plan to secure future extramural funding and how you plan to utilize the NC NM4R methods and/or technologies in future grant proposals. Please be sure to state funding agency, mechanism, and timeline.
 - Each proposal must include a realistic timeline for completing the proposed project, preparing, and submitting at least one manuscript to an appropriate professional journal, and preparing and submitting a competitive grant application by or shortly after the end of the award period.
- A Biostatistical Justification of sample size should be included for **animal studies and any aims that include human tissue samples, patients, or healthy volunteers.**
 - The Biostatistical Justification should be placed at the end of the Research Strategy and is not included in the page limit.
- The Literature Cited section should be placed at the end of the Research Strategy and is not included in the page limit.
- Support Letter(s) should be placed at the end of the Research Strategy and is not included in the page limit.

4. Budget Justification and Statement of Intent

- Please Note: Preference will be given to applications from institutions that agree to 8% indirect cost rate. This demonstrates commitment by the institution to the applicant, represents leveraging of federal funds on behalf of rehabilitation community, and is consistent with investment in junior investigators. It will be at the discretion of the receiving institution to execute the option to waive F&A costs so that full funding of \$37,500 can be applied towards the pilot project or direct costs will be \$34,722 with F&A of \$2,778.
- Statement of Intent to Enter into a Consortium Agreement: Applicants external to the Medical University of South Carolina must submit a Statement of Intent to Enter into a Consortium Agreement along with their budget. The Statement of Intent must be signed by the Institution's Signing Official and should include information contained on the Statement of Intent template which follows this RFA.
- For the budget, please use PHS 398 Form Page 4: Detailed Budget for Initial Budget Period in MS Word Version (1 page) at <http://grants.nih.gov/grants/funding/phs398/phs398.html>. Use continuation pages as needed for the budget justification. The NC NM4R Executive Committee reserves the right to reduce requested award amounts.
- Personnel Support: Salary and fringe benefits are allowed for protected time for the PI to conduct the proposed research and/or technical support, such as: Investigator, Mentor, Postdoctoral Fellows, Research Specialists, and Study Coordinators.
- Non-personnel Research Expenses: Allowable expenses include research supplies, animal purchase and per diem, institutional core service fees, research subject compensation and transportation, and data analysis/statistical support. All expenses must be directly related to the proposed research.
- Unallowable Costs: General office supplies, computers and laptops, tuition, membership dues and fees, publication costs, subscription costs, mailing costs, and rent.
- Facilities and Administrative Costs: Facilities and administrative costs, also known as indirect costs, are not permitted for internal MUSC applicants.
- In-kind budgetary items will be considered as cost-share, and the PI's primary department will be required to provide a letter of support confirming the commitment.
- Funding to external investigators will be provided based on monthly invoices under a Sub-contract/Consortium Agreement to the Receiving Institution. Post-award management of pilot project funds awarded to internal MUSC applicants will be managed by the NC NM4R Grant Administrator and the College of Health Professions Research Administration team. An individual UDAK will be established for funded pilot projects, and instructions for the process of funding personnel and ordering supplies will be provided upon official notification of award. **Internal applicants are not allowed to include F&A in their pilot budgets.** Also note that the source of funding for internal pilots is considered cost share and Affiliate salary will not charge to the project; only the MUSC portion will be charged.

For questions or assistance with submission, please contact Cynthia Gittinger at gittinck@musc.edu or 843-792-6236.

Application Review Criteria and Process

Each application will be reviewed by a two to three reviewers with appropriate expertise. Applications will be scored on the 1-9 point NIH scale and recommendations for funding will be primarily based on these scores. Scoring will focus on four areas: 1) quality of the research (scientific merit, innovation, and impact); 2) relevancy to the mission of the NC NM4R and direct involvement of one or more the NC NM4R resources in the research plan; and 3) qualifications of the research team to lead the research effort toward securing extramural funding. The reviewers will provide a concise, one-page written review of the application's strengths and weaknesses, as well as recommendations for improvement. The Summary Statement will be sent to the the NC NM4R Program Director, Co-Director, Pilot Program Directors, and the Steering Committee for final decision, and also forwarded to the applicant. In order to maximally fund external applications through the Pilot Studies Program, an extensive effort will be made to utilize the MUSC institutional funds for supporting the top applications from MUSC investigators.

Criteria for funding will include: 1) reviewers' recommendations as defined in the Summary Statement; 2) likelihood that the research effort will be productive and lead to extramural funding; 3) utilization of one or more of the NC NM4R resources; and 4) alignment with the mission and aims of the NC NM4R. We aim to fund four proposals per year. Funding recommendations will be made by the Executive Committee, then must be approved by the External Advisory Board and then by NIH program staff. Investigators who are not funded on the initial submission will have the opportunity to submit one revision application in the following RFA cycle.

Resubmission of an Application

Applicants will have the opportunity to submit a revised application in response to review comments. Revised applications should be submitted during the following NC NM4R RFA cycle. Investigators submitting an amended application will be expected to address the review critiques using the NIH-modeled Introduction to Resubmission Application, limited to 1 page. The Introduction must summarize all substantial additions, deletions, and changes to the application. The Introduction also must include a response to the issues and criticism raised in the Summary Statement. Please indicate major scientific revisions in the text of the application by bracketing, indenting or changing typography. Do not underline or shade the changes. If the changes are so extensive that essentially all of the text would be marked, explain this in the Introduction. Additional guidance can be found in the NIH Application Guide (<https://grants.nih.gov/grants/how-to-apply-application-guide.html>).

