IMAGE-GUIDED NEUROMODULATION PILOT AWARD

Co-Sponsored by:
Columbia University Fu Foundation School of Engineering and Applied Science
New York Psychiatric Institute (NYSPI)/Columbia Psychiatry
Irving Institute for Clinical and Translational Research

Application Instructions

Fall 2022/Winter 2023
INTRODUCTION: PROGRAM SPONSORS

The Irving Institute for Clinical and Translational Research (Irving Institute), home to Columbia University’s Clinical and Translational Science Award (CTSA) Program hub, is one of over 50 medical research institutions across the nation that work together to speed the translation of research discovery into improved patient care. The Irving Institute’s Pilot and Collaborative Studies Resource (PCSR) oversees dynamic and innovative pilot award programs that fund novel, high-impact work and empower junior investigators and new multidisciplinary teams in translational and clinical research.

Columbia Engineering, the Fu Foundation School of Engineering and Applied Science, is committed to pushing the frontiers of knowledge and translating our discoveries to meet the needs of society. These aspirations have been fundamental since its early origins in 1864 as a school devoted to metallurgy and mining. Over the years, its faculty and students have made remarkable contributions to technological and social progress, and today, they carry on the tradition of innovation as engineering transforms nearly every aspect of life, from the purity of the water we drink, the quality and accessibility of our healthcare, and the sustainability of the natural and built environments, to our ability to connect with others anywhere in the world.

The New York State Psychiatric Institute (NYSPI)/Columbia Psychiatry, one of the largest departments in the country in terms of faculty size and research support, is currently among the top-ranked in the nation for Psychiatry by the US News & World Report. Its faculty includes over 400 psychiatrists, psychologists, social workers, nurses, and neurobehavioral scientists. Clinical facilities and laboratories are located in a large number of institutions and healthcare systems. Its goal is to increase research and clinical care that includes neuromodulation in our patient populations.

PILOT AWARD OVERVIEW

Applications are being accepted for the Image-Guided Neuromodulation Pilot Award Program. This year’s Imaging program will focus on innovative approaches and pilot studies in Neuromodulation, with priority given to projects involving imaging studies. Supported by the NYSPI/Columbia Psychiatry and the Columbia Fu Foundation School of Engineering and Applied Science (Columbia Engineering) in collaboration with the Irving Institute for Clinical and Translational Research, the program will support studies aiming to modify the nervous system using emerging technologies and techniques that could spawn innovation and improve clinical care. The application is open to all diseases and indications. This pilot award prioritizes early career investigators.

We anticipate funding up to four (4) grants of $45,000 each. These resources have been developed by leadership to provide funding to initiate and support interdisciplinary and collaborative research as highlighted at the Frontiers in Engineering and Medicine: Neuromodulation Symposium. Thus, applications should include collaborations between NYSPI/Columbia Psychiatry, Columbia Engineering, other Columbia University (CU) entities with faculty from multiple organizations represented.

The following faculty collaborations are eligible for this pilot award:

- Columbia Engineering and Psychiatry — highly encouraged
- Columbia Engineering and other Columbia Schools/Departments
- Psychiatry and other Columbia Schools/Departments

Pilot Study Projects

- This award provides funding to neuromodulation studies in areas including, but not limited to, substance use disorders, pain management, and Parkinson’s Disease. Image-guided neuromodulation studies will be given priority.
Image-Guided Neuromodulation Pilot Award

- Applications must include investigators with a primary appointment in Columbia Engineering and/or investigators with a primary appointment in the Department of Psychiatry. For assistance identifying a collaborator, please see the faculty contacts listed below.

- Proposed projects should lead to independent, external funding and publication.

- Special consideration will be given to projects that include research plans reflecting alignment with the Columbia University and Irving Institute commitment to Diversity, Equity, and Inclusion, and applications from Principal Investigators and/or teams from underrepresented groups.

ELIGIBILITY

- Principal Investigator(s) must have a faculty appointment at Columbia University of Assistant Professor (clinical or tenure track) or above.

- Investigators at all levels are eligible; however, early career investigators (e.g., Assistant Professors) will be prioritized.

- Applications must include investigators with a primary appointment in Columbia Engineering and/or investigators with a primary appointment in the Department of Psychiatry.

- The following faculty collaborations are eligible for this pilot award:
  - Columbia Engineering and Psychiatry — highly encouraged
  - Columbia Engineering and other Columbia Schools/Departments
  - Psychiatry and other Columbia Schools/Departments

- Although senior leaders and Resource directors of the Irving Institute may be consulted during the preparation of the application, they should not be included as co-investigators or collaborators.

- Teams may include outside consultants/collaborators (e.g., community stakeholders) with unique experience or expertise in innovative approaches not currently available at Columbia. However, subawards are not permitted.

- Teams are limited to no more than six investigators.

- During each application cycle, only one submission is permitted per principal investigator. Principal investigators may be listed as co-investigators or consultants on other applications.

- Special consideration will be given to applications from Principal Investigators and/or teams from underrepresented groups.

FUNDING:
This is a one-time award for the base amount of $45,000. We anticipate up to four applications being funded, depending on funding availability.

APPLICATION DEADLINE:
January 26, 2023

AWARD START DATE:
June 2023
Potential awardees will be chosen by May 2023.
APPLICATION INSTRUCTIONS:

1. **Access the web-based application system, Survey Monkey Apply:** [https://irvinginstitute.smapply.io/](https://irvinginstitute.smapply.io/)
   - Applicants using SurveyMonkey Apply for the first time should log in using their Columbia University UNI and password.

2. **Fill out all parts of the web-based Application Form:** Contact information for all team members, the project title, abstract, current funding sources, submitted applications, human/animal research approvals, 12-month budget, and budget justification.
   - **Budget:** This is a one-time award for the base amount of $45,000.
     - Each item must be justified in the budget section of the application and directly support your protocol.
     - Faculty salary cannot be funded by this pilot.
     - Expenses may include imaging, technologist/staff salary, fringe, supplies or research related services.
       Please calculate any salaries using Columbia University’s current fringe rate for non-government (unrestricted) projects. The FY23 rate is 33%.
     - Major equipment (> $5,000), publication fees, and travel are not permitted. Subawards are not permitted.

3. **Upload the body of the application as a single PDF** that does not exceed four (4) single-spaced, typed pages (provide at least one-half inch margins (½”) - top, bottom, left, and right - for all pages; 11- or 12-point font required; Arial typeface preferred), **excluding references.** It should include:
   - **A) Specific Aims and Goals** – What are you planning to do? What are the intended outcomes? List your specific aims.
   - **B) Innovation** – Why is it worth doing? Has it been done before?
   - **C) Research Strategy** – What is your research plan? Include a milestone timeline.
   - **D) Future Plans** – What are your plans for publications, patents, grants, and/or other modes of dissemination? Identify the target NIH or other extramural funding mechanism (e.g., R01, etc.).
   - **E) References** – Reference page(s) do not count towards the four-page limit.

4. **Upload NIH-style biosketches** for each investigator including collaborators and/or consultants as a single PDF, include eRA Commons usernames. Maximum of 5 pages per investigator.

5. **Submit the application** by selecting the “Submit Your Application” button in the online application system, [https://irvinginstitute.smapply.io/](https://irvinginstitute.smapply.io). All applications must be submitted by 5:00 PM EST on January 26, 2023.
   - Please note that only the Owner (i.e., creator) of the application will be able to submit. Collaborators can be given edit permissions but are not able to submit the application. If you have any issues at the time of submission, please contact Kayla Zalcgendler at kz2397@cumc.columbia.edu.

REVIEW PROCESS:

Reviewers will use a scoring system based on a 5-point scale (1=highest) and judge each application on the basis of scientific merit, innovation, and potential for external funding or publication, as well as alignment with goals, priorities and directions of the pilot award program, as described above.
**PROGRAM CONTACTS:**

<table>
<thead>
<tr>
<th>Area</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questions about the application process,</td>
<td>Kayla Zalcgendler, MSPH</td>
</tr>
<tr>
<td>budget, and Survey Monkey Apply</td>
<td>Senior Program Manager, Pilot and Collaborative Studies Resource</td>
</tr>
<tr>
<td></td>
<td><em>Irving Institute for Clinical and Translational Research</em></td>
</tr>
<tr>
<td></td>
<td><em><a href="mailto:kz2397@cumc.columbia.edu">kz2397@cumc.columbia.edu</a></em></td>
</tr>
<tr>
<td>Questions about the scientific content</td>
<td>Diana Martinez, MD</td>
</tr>
<tr>
<td>and assistance finding a collaborator</td>
<td>Professor, Psychiatry</td>
</tr>
<tr>
<td></td>
<td><em><a href="mailto:dm437@cumc.columbia.edu">dm437@cumc.columbia.edu</a></em></td>
</tr>
<tr>
<td></td>
<td>Akiva Mintz, MD</td>
</tr>
<tr>
<td></td>
<td>Professor, Radiology</td>
</tr>
<tr>
<td></td>
<td><em><a href="mailto:am4754@cumc.columbia.edu">am4754@cumc.columbia.edu</a></em></td>
</tr>
<tr>
<td></td>
<td>Eric Vieira, PhD</td>
</tr>
<tr>
<td></td>
<td>Director of Strategic Collaborations</td>
</tr>
<tr>
<td></td>
<td>Columbia Engineering</td>
</tr>
<tr>
<td></td>
<td><em><a href="mailto:eric.vieira@columbia.edu">eric.vieira@columbia.edu</a></em></td>
</tr>
</tbody>
</table>

**INSTITUTIONAL AND FUNDER APPROVALS**

All projects involving human subjects and/or vertebrate animal research that are chosen for potential Irving Institute pilot funding, are conditionally selected until appropriate approvals are received. These include [IRB and/or IACUC approval](#) and in many cases [NIH-NCATS prior approval](#). IRB/IACUC approval is not required at the time of application but is required to receive NIH-NCATS prior approval. Submission to the IRB/IACUC must be completed within thirty (30) days of notification of potential pilot funding. For conditionally selected projects that require NIH-NCATS prior approval, all documentation must be submitted to the Irving Institute immediately after IRB/IACUC approval is received and within seventy-five (75) days of notification of potential funding. **Dispersal of funds cannot occur until all required approvals are obtained.**

**FINANCIAL MANAGEMENT**

Awardees understand and acknowledge that the home department will create an unrestricted chartstring designated for this pilot award. The home department of the awardee must make purchases on behalf of the awardee and charge them to the designated pilot chartstring. The Irving Institute will then reimburse the home department on a quarterly basis after detailed financial reports for the pilot chartstring have been submitted.

**AWARDEES PROGRESS REPORTING**

As part of our ongoing evaluation of our CTSA Programs mandated by the NIH, we will periodically request information from awardees about the progress of your research. Awardees will submit interim and final progress reports and meet with program leadership to review progress toward meeting study milestones. After the funding period end, we will continue to ask at least once a year for a brief update about the ongoing progress of the pilot research and associated products.