

FALL 2023 BHI-CAHBIR Pilot Research Mini-Grant Program for RU-New Brunswick Faculty

The Rutgers Brain Health Institute (BHI) and the Center for Advanced Human Brain Imaging Research (CAHBIR) are pleased to announce the availability of \$35,000 Training and Pilot Research mini-grants to fund RU-New Brunswick faculty in initiating neuroimaging research at CAHBIR.

Objective: There are often barriers to initiating neuroimaging research, including the expense of collecting pilot data, and the need for methodological skills in designing experiments and analyzing data. The **Training and Research Pilot** mini-grants are aimed at aiding RU-New Brunswick faculty in developing research projects that make use of CAHBIR facilities, and to assist in the development of the skills necessary to successfully execute the MRI research.

Research & Training Pilot Mini-Grant: These grants serve the dual purpose of providing funds for pilot neuroimaging studies, while simultaneously providing training that will allow a lab to work more independently on future projects. A core piece of this training is a 10-hr workshop aimed at familiarizing researchers with MRI scanning, image processing and analyses. PIs can include several members of their lab as part of the workshop, although priority should be given to individuals who are likely to be present in the lab for several years. Additional support is provided through one-on-one sessions with CAHBIR staff aimed at implementing the funded research project and providing assistance with study design and data analysis. Researchers already possessing sufficient neuroimaging expertise are not required to attend the workshop and can allocate those funds toward data collection and other CAHBIR technical services.

Individuals may alternatively apply for \$100,000 full pilot awards, which require an R21 style proposal (See RFP at <https://sites.rutgers.edu/cahbir/pilots/>).

Human Brain Imaging Core facility capabilities: A state-of-the-art research-dedicated 3T Siemens Prisma scanner with 64 and 20 channel head/neck coils, MRI-compatible visual/auditory stimulation and behavior/physiological response equipment including eye tracking, mock scanner and a contrast agent injector. The core facility also provides expert technical support to users with all levels of experience. More information about CAHBIR is available at <https://sites.rutgers.edu/cahbir/>. Beginning in the spring of 2024, CAHBIR will also provide the ability to collect **EEG** and **rTMS** within CAHBIR lab space in the RWJMS Staged Research Building, and investigators may include use of these systems as part of their research proposals.

Eligibility: The contact PI for the application must be a full-time tenure track or tenured faculty in RU-NB. Funding is provided by the RU-NB chancellor's office. Individuals outside of RU-NB may serve as a co-PI or co-I. Individuals who have previously received funding for CAHBIR pilot awards may apply for additional funding but must provide a sufficient explanation for why a second pilot award is needed, and a description of progress from their original application.

Number of grants available: Up to 5 awards are available.

Application format and budget preparation: Applicants should provide a 3-page description of the proposed research that includes specific aims, and a significance statement. Within the research description, please describe explicitly how the pilot funding will promote future research and grant proposals. In addition to the 3-page research description, applications should include Literature Cited, Budget, and NIH Biosketches for key personnel. The application should be single-spaced, and use font/size Arial 11 with 0.5 inch page margins. All applications **must include** the Cover page and submission checklist linked here ([Cover Page Template](#)). The application should be combined into one PDF document with the Cover page in the front.

Budgets: Of \$35,000 awards, at least \$25,000 must be spent on CAHBIR services, which may include scanner reservations at a rate of \$695/hr, technical support (protocol design and set up or Luci/Zald consultation at \$200/hr, programming and analyses or specific training in using equipment at \$130/hr). A data archiving fee of \$30 per subject should be included for every scan. Additionally, because of the computational demands (on google cloud services and

Amarel), a one-time fee of \$250 should be budgeted if CAHBIR is assisting with analyses. Studies should budget for neuroradiological reads of incidental findings (\$70) based on expected rates of such findings in the population being studied (recommended budgeting of 5% of young healthy subject samples, and a minimum of 20% of older samples). A mock scanner is available for acclimating participants to the scanner environment (\$40 per hour) and is recommended for studies with children or highly anxious individuals and saves money from subjects who withdraw from MRI studies due to claustrophobia. \$500 per attendee should be budgeted for the MRI workshop provided annually by CAHBIR faculty). Other fees are listed below, but anyone proposing to use EEG or rTMS should consult with david.zald@rutgers.edu as those fees have not been set yet. The remaining \$25,000 can be used for participant recruitment costs, and support of research personnel (post-doc, graduate students, research coordinator, or lab supplies) involved in the grant project. No overhead costs, faculty salaries or equipment purchases are allowed on the grant award. The remaining \$10,000 can be used for participant recruitment costs and support of research personnel (post-doc, graduate students, research coordinator) involved in the grant project. No overhead costs, faculty salaries or equipment purchases are allowed on the grant award.

| Mock Budget- one year | Number | Cost |
|--|---------------------|----------------|
| Workshop (\$500 per attendee) | 2 attendees | \$1,000 |
| CAHBIR Technical Support: Protocol design/setup/Consultation (\$200 hr) | 2 hours | \$400 |
| CAHBIR Technical Support: Programming/analysis/training (\$130 hr) | 30 hours | \$3,900 |
| Scanner Reservation (\$695 hr), includes MRI technologist | 30 hours | \$19,500 |
| Mock Scanner (\$40 per hour) | - | - |
| Data Archiving (\$30 per subject) | 30 | \$900 |
| Computing Fees | 1 time fee | \$250 |
| Neuroradiologist read of incidental findings (\$70 per read) | 3 | \$210 |
| Within scanner eye tracking or psychophysiology (\$20 per hour) | 30 | \$600 |
| Phlebotomy (\$100 hr not including supplies) | - | - |
| EEG (TBD: please consult with David Zald for budgeting) | - | - |
| rTMS (TBD: please consult with David Zald for budgeting) | - | - |
| Participant Fees (\$20 hr) | 30 subjects (2 hrs) | \$1200 |
| Research Assistant Effort | | \$6,990 |
| Lab supplies | - | - |
| Total pilot grant award | | \$35,00 |

RAPSS submission and IRB approvals are not required at the time of initial mini-grant application submission.

The principal investigators of meritorious applications, selected from the scientific review, will be asked to obtain IRB approval for the proposed pilot project **within four months** of being informed of the scientific review results. If a mini-grant is funded, the first \$5,000 can be

released to pay for MRI workshop attendance and other CAHBIR services prior to receiving IRB approval. Funds cannot be used for any other purposes prior to obtaining IRB approval. The remaining \$30,000 will be released following approval of the IRB protocol.

CAHBIR staff will provide assistance in developing documents for the IRB, especially as it relates to MRI procedures, risks, incidental findings, and analyses. The process of IRB approval once a protocol is submitted can take 8 weeks or longer. Regardless of the speed of the IRB, it will be the responsibility of the applicant to obtain the IRB approval within four months of award notice; therefore, it will be critical to begin the IRB application and submission process as soon as your project is selected and respond in a timely manner to address issues raised by the IRB. Because the funding for these mini-grant awards is not open ended, studies that do not obtain IRB approval within 4 months may not be able to receive further funding and will be asked to forfeit previously unspent funds.

Review process: All mini-grants will undergo a review process organized by BHI/CAHBIR. They will have an initial review to judge scientific quality and be assigned a priority score by reviewers. Reviewers may be internal or external to Rutgers but will not be from the same primary department as the applicant. They then will be reviewed by an internal BHI/CAHBIR committee to allocate funds consistent with the long-term strategies for developing human brain imaging research at Rutgers. A main factor in determining funding will be perceived likelihood that the pilot data generated will lead to external funding. Applicants will receive brief written reviewer critiques.

Post-award reporting: The pilot awardees will be asked to provide a progress report within a year of the award notice. With sufficient progress, investigators may request either a no-cost extension or a funded supplement at that time. All pilot awardees will be required to submit a final progress report within 6 months of the end of the award. This report must include the status of manuscripts arising from the pilot award and grant applications submitted, as well as results obtained and significance of those results. The pilot awardees will also be asked to provide evidence of related extramural grant applications within a year of completion of the award, and outcomes within a two-years of the award to gage the success of the program. Awardees must acknowledge the BHI-CAHBIR pilot grant program in publications or presentations that result from the pilot grant project. Awardees must also report any extramural awards received as a result of the pilot grant project.

Submission deadline: Applications are due by **November 1, 2023**. Awards will be announced by December 15, 2023. Submissions received after November 1 will only be funded if funds remain after evaluation of on-time applications.

Questions: Questions about the proposals should be directed to david.zald@rutgers.edu