

The Stanford Program for Integrated Neuroscience Technologies (**SPrint**), in collaboration with the NIH BRAIN Initiative, is calling for applications for **Pilot Projects**. This program will fund six **fully-funded projects**, which will be conducted by SPrint using multiple innovative Neuroscience Technologies. Projects that are selected will be fully conducted by SPrint staff. We encourage project proposals that are highly innovative and that integrate a combination of behavior, genetics, viral technologies, imaging, and/or brain organogenesis techniques. Guidelines and Selection Criteria are indicated below.

Technologies for dissemination and Pilot Projects include but are not limited to:

In vivo models of neurodegenerative disease (e.g., Alzheimer's and Parkinson's disease)
Animal behavior (e.g., Morris Water Maze, Fear Conditioning, Intellicage...)
In vivo models of stroke
Drug efficacy studies
Behavioral phenotyping
Whole brain clearing and imaging
Light sheet imaging
Proteomics and Transcriptomics
Array Tomography
Super-resolution volumetric imaging
STARmap (in tissue single cell transcriptomics)
Chemogenetics
Neural network mapping
Gene and viral vector technologies
Stereotaxic injection of viral technologies into mice or rats
Transplantation of stem cells in the brain of mice and rats
Human brain organogenesis

Projects that use any one or more of these individual technologies to supplement existing lines of research are encouraged. A project could be as straightforward as behavioral phenotyping of a novel transgenic model, a drug efficacy study in a disease model, or imaging brains following stereotaxic injection of a specific viral technology. More highly integrated projects could consist of viral expression of chemogenetic DREADD receptors in a specific cell type in the brains of mice, with behavioral analysis followed by terminal gene/protein mechanistic studies and whole brain clearing with light sheet imaging of cellular markers.

Eligibility Criteria

The focus of the proposal must be related to understanding the brain function in health and disease and relevant to the aims of the NIH BRAIN Initiative. Basic science or translational investigation related to Neuroscience are both welcomed.

Proposals must be submitted by either the principal investigator or a lead researcher/scientist in the research program.

One application per applicant.

Proposal Preparation

Proposals should be no more than 2 pages (11-point Arial font, single spacing, 0.5-inch margins) and must include the following sections:

- 1) Short Description of the proposed project indicating the **research hypothesis**
- 2) **Impact and Innovation** in the case where SPRINT technologies will supplement existing research questions – please explain here – make a case for how integrating the new technologies can increase the impact of the applicant’s research program
- 3) **Background**
- 4) **Approach** including experimental design and methodology (SPRINT technologies, as listed below, can be referred to generally as it is expected that these technologies might be new to the investigator). SPRINT scientists will work further with successful applicants to refine Approach within feasibility of resources.
- 5) **Future plans** to utilize this pilot data to obtain further funding or to advance research aims, including setting up remote collaborative agreements utilizing these capabilities if not present in-house.

and outside the two page limit:

- 6) **NIH-style biosketch** for Scientists and PI
- 7) **Other Funding** (current and last five years)

Selection Criteria

Proposals will be reviewed with the following considerations:

- 1) Relevance to NIH BRAIN Initiative
- 2) Feasibility – proposal fits within SPRINT neuroscience technologies
- 3) Innovation
- 4) Likelihood of future use of technologies at the home institute through the establishment in-house, setting up collaborations, or through core facilities
- 5) The project will produce new scientific knowledge or will facilitate future funding

Proposals will be evaluated regarding their scientific merit and feasibility by an appointed review committee.

Application Submission

Proposals should be submitted as a PDF file or Microsoft Word document to **sprintneuro@stanford.edu** with the file name and subject line as, **Last Name of Applicant SPRINT Pilot Project**. Successful submission will be confirmed by email notification.

Proposals are due by **December 9, 2022**. Review of applications will begin immediately and will continue on a rolling basis. Early applications are encouraged; however, all applications submitted by this deadline will be considered.

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