



PILOT & FEASIBILITY AWARDS PROGRAM

Request for Proposals (RFP)

Solicitation Release Date	October 10, 2018
Electronic Submission Deadline:	November 30, 2018, 5 PM EST
Approximate Award Date:	January 2, 2018

The Center for Engineering a Human Brain Organoid-based Platform to Study Neurotropic Viruses is issuing a Request for Proposals. Applicants are invited to propose a one year Pilot and Feasibility project that utilizes human cell culture systems to model viral infections of the central nervous system.

SCIENTIFIC SCOPE of the Pilot and Feasibility (P/F) Awards Program

The **Center for Engineering a Human Brain Organoid-based Platform to Study Neurotropic Viruses** is focused on modeling of infectious diseases that affect the human central nervous system (CNS), such as those associated with Zika virus (ZIKV) and West Nile virus (WNV). Using human induced pluripotent stem cells (iPSCs), we are developing 3D brain organoid models to recapitulate features of human brain development and the maturing CNS to study the effects of neurotropic viruses on glial and neuronal development and function. Our Center is a collaborative research program with investigators at several sites including the University of Pennsylvania, Florida State University, Georgia State University and Emory University.

The Center is funded by an NIAID funding opportunity titled Human Tissue Models for Infectious Diseases (HTMID), with the purpose of establishing multidisciplinary research Centers focused on developing innovative *in vitro* human tissue models for basic and translational research on infectious diseases.

The mission of our Center is to optimize the generation of highly consistent cerebral organoids that capture key features of human brain development to study viral-mediated neural pathology. This research will facilitate the use human iPSC-based cell culture models as a platform for biological discovery and testing of therapeutic compounds.

Pilot & Feasibility projects will be considered for support if they relate to this mission.

Eligible projects may be in areas such as:

- Development of models for co-culture of immune cells with neural cells
- Modeling neural pathology related to viral infection or therapeutics
- Introduction of capillary flow into three dimensional organoid systems

- Live imaging of viral infections in neural culture systems

Investigators may contact the Director or Project Manager to determine whether their proposed project is appropriate for this funding mechanism.

PURPOSE of P/F PROGRAM

- Enable young, developing scientists and/or clinicians to pursue innovative and promising pilot projects that might otherwise not have support, and which ultimately might lead to independent support.
- Allow the development of new technologies that join advances in virology, neurobiology and/or immunology with new strategies for culturing stem cells
- Allow investigators to develop novel approaches of interrogating patient biospecimens with pathogens
- Allow investigators to pursue new strategies of interrogating pathogens.

ELIGIBILITY

- All tenure and research track faculty at the University of Pennsylvania or Penn-associated hospitals, clinical faculty and clinical fellows. PI may have adjunct position
- New/Young Investigators are particularly encouraged to apply and to use P/F funding to gather the data needed for subsequent NIH applications.
- Although P/F projects may be related to ongoing or previous work, they **cannot** overlap any funded project. Ongoing work refers to established projects already funded by NIH or other mechanisms.
- P/F grants are not intended to be used as bridging support.

EXPENSES FOR WHICH FUNDS MAY BE USED

Funds may be used for the following:

- Research supplies.
- Technician support
- Core Facility costs

Non-allowable expenses:

- Salaries (Investigator, Post-Doctoral)
- Travel

MAXIMUM AWARD

One project will be funded with a budget line that is expected to be approximately \$25,000, direct costs, with one year of support. Budget details should be based on this projected funding level.

APPLICATION PROCEDURE

The application deadline is **November 30, 2018**. All applications must be compiled and submitted as a single PDF to jschnoll@penncare.upenn.edu.

The documents to be submitted should be assembled in the order listed below.

FORMAT OF APPLICATION

- Cover letter (template attached)
- Budget and Justification (1 page, template attached)
- Biographical Sketch (NIH format)
- Other Support – Please include a paragraph explaining how this research proposal is a departure from your ongoing work, and from the work of your previous or current mentors or collaborators.
- **Specific Aims** (1 page)
- **Research Plan** limited to **2 pages, single-spaced**.
- References. These are not included in the 2-page limit, but should be limited to essential citations.
- If your application is selected for the award, we will request additional information prior to award of the funds.

EVALUATION OF APPLICATIONS

Our Center Co-Directors and lead investigators will review each P/F application. The Center Directors supported by the HTMID funding opportunity will then review the highest priority proposals at a meeting of the HTMID Executive Committee for final selection. Funding decisions are based upon scientific merit and the appropriateness of the project to the goals of the HTMID funding opportunity (<https://grants.nih.gov/grants/guide/rfa-files/RFA-AI-16-022.html>).

RESPONSIBILITIES OF AWARDEES

- Awardees are expected to participate in monthly teleconferences of Center investigators and present progress in at least one meeting during the funding period, as well as a final close-out presentation at the end of funding.
- Awardees will be required to attend the annual meeting of HTMID centers, which will occur in Summer 2019. Meeting will either be in Bethesda, MD, or Philadelphia, PA.
- A progress report will be required at the completion of the funding period.
- **Support must be acknowledged on all publications resulting from the research. This may take the form of "Supported in part by the Center for Engineered Human CNS Tissue Models for Neurotropic Viruses, NIAID Grant U19 AI131130."**

CONTACTS

Guo-li Ming, Director, gming@penncare.upenn.edu

Kim Christian, Project Manager, kchristi@penncare.upenn.edu

Jordan Schnoll, Administrative Coordinator, jschnoll@penncare.upenn.edu

Cover Page

Center for Engineering a Human Brain Organoid-based Platform to Study Neurotropic Viruses

2019 Pilot Grant Program

Project Title:

PI

Name:

Rank:

Department:

Campus address:

Phone:

Email:

Co-PI (if applicable)

Name:

Rank:

Department:

Campus address:

Phone:

Email:

Business Administrator:

Name:

Email:

Human Subjects Involved: Yes No

Submit application via email to Ms. Jordan Schnoll:
jschnoll@penmedicine.upenn.edu

Proposed Budget Page
Pilot and Feasibility Grant Program

PI:

Proposed Budget:

- A. Personnel
- B. Equipment
- C. Supplies
- D. Other/Core services

Amount requested (not to exceed \$25,000):

Budget Justification: