Special Notice (SN) ARPA-H-SN-26-153

Proposers' Day Announcement for Advanced Research Projects Agency for Health (ARPA-H) / Health Science Futures (HSF) Office Opportunity: Brain Repair of Any Injured Neural Structure (BRAINS)

I. KEY INFORMATION

Table 1. Proposer's Day Key Information	
Proposers' Day	June 9th, 2026, at 12:00 PM ET
Live Q&A	June 24th, 2026, from 3:30 PM to 5:30 PM ET
Sidebars	June 25th, 2026, from 3:30 PM to 5:30 PM ET
Location	Virtual Only
Q&A / Sidebar Website for registration	http://solutions.arpa-h.gov/Events/BRAINS
Q&A / Sidebar Registration opens	June 9th, 2026, at 12:00 PM ET
Q&A / Sidebar Registration closes	48 hours before the event starts.
Technical Point of Contact	Jean Hebert, Program Manager, ARPA-H / HSF Office
Email	BRAINS@arpa-h.gov

II. INTRODUCTION

This Special Notice (SN) is intended to alert the scientific community to a newly approved Advanced Research Projects Agency for Health (ARPA-H) Exploratory Topic and notify potential proposers of an associated Proposers' Day (PD). Under the cognizance of Health Science Futures (HSF), ARPA-H is publishing an Innovative Solutions Opening (ISO) for the Brain Repair of Any Injured Neural Structure (BRAINS) Exploratory Topic no later than June 9th, 2026.

The HSF Mission Office of ARPA-H is sponsoring a virtual only PD for the planned proposer community in support of the BRAINS Exploratory Topic ISO.

Potential proposers are encouraged to view the Proposers' Day recording and attend the optional Sidebars. While not mandatory, ARPA-H is hosting the BRAINS Proposers' Day to achieve the following objectives:

- Draw attention of the scientific community to the BRAINS technical areas.
- Provide information about the effort to potential proposers, including details about the overall effort goals, solution summary, and full proposal structure for the forthcoming ISO, and how they might respond to ARPA-H's forthcoming ISO.

- Share the intended scope, timeline, and scale of the BRAINS Exploratory Topic and how the proposers, in collaboration with the ARPA-H team and resources, can accomplish the collective mission of accelerating healthcare outcomes for all Americans.

The PD recording will include brief overview presentations by government personnel. After the recording is released, a follow-up session will be organized featuring a question-and-answer period with the government team and contracting experts, plus (5)-minute private sidebar meetings between the ARPA-H team and potential proposers. A limited number of sidebar meetings will be available to participants, and sidebar meetings **must** be scheduled via the registration website. ARPA-H will collect participant questions throughout the event and publish answers to a publicly available Frequently Asked Questions (FAQ) in: https://arpa-h.gov/explore-funding/initiatives-and-sprints/BRAINS/faqs and on sam.gov.

Attendance at this event is not a requirement for submission of a solution summary, full proposal, or selection for funding.

Advance Registration is required for the live Q&A and sidebar meetings. Registration requests will only be accepted from the potential proposer community as participation is not intended for patients, patient advocates, media or a general interest audience.

III. BRAINS– EXPLORATORY TOPIC INFORMATION

While full details of the BRAINS Exploratory Topic will be provided in the forthcoming BRAINS ISO, the following is a brief description of the full effort. Proposers should refer to the forthcoming BRAINS ISO for more details.

Overview

Many forms of degenerative disease or damage (e.g. strokes, ataxias, tumors, congenital conditions, injury, aging, neurodegeneration, etc.) can afflict specific brain structures, leaving tens of millions of Americans permanently disabled, with no effective way to recover lost abilities or independence. Today, no therapy can replace damaged or degenerated brain tissue to restore lost function. Treatments are limited to physical, psychological, and occupational therapies, which provide only partial compensation of function for a fraction of patients. In the U.S. alone, brain damage from stroke, neurodegeneration, injury, cancer, congenital conditions, and aging leaves tens of millions disabled, with direct and indirect costs exceeding $1 trillion per year.

Attempts to grow new tissue ex vivo have focused primarily on organoid technologies and cell-based therapies, but these approaches are fundamentally unsuited for functional restoration because they lack essential cell types, proper cell ratios, vasculature, normal cytoarchitecture, physiology, and connectivity - thus failing to mimic the complexity needed for normal function and behavior. Overcoming these challenges would enable true functional restoration, dramatically improving outcomes for patients and families.

BRAINS will take the first technological steps toward regrowing in situ normal region-specific brain tissue from transplanted precursor tissue. The goal of the Exploratory Topic is to demonstrate the feasibility of reversing damage and disease in any part of the brain.

BRAINS is complementary to FRONT, which focuses exclusively on neocortical tissue. BRAINS targets all other brain regions, including but not limited to the hippocampus, amygdala, thalamus, hypothalamus, striatum, cingulate cortex, substantia nigra, brainstem, and cerebellum. Excluded regions are the neocortex and spinal cord. The brain regions of interest are collectively responsible for movement, balance, mood, autonomic body functions, memory formation, and other functions - thus addressing a wide range of disabilities caused by any form of brain damage (aging, congenital diseases, strokes, injuries, tumors, infections, etc.).

BRAINS aims to advance technology for generating precursor tissue products that can restore function to damaged regions of the brain. Cell and state-of-the-art organoid-based approaches will not be considered. Applicants are encouraged to consider approaches that closely mimic natural precursor tissue and natural development, however alternative approaches may be considered if there is a compelling case that functional tissue can be produced, integrate with the brain, and function normally.

With BRAINS, ARPA-H aims to catalyze rapid progress that would not otherwise occur. By the end of this 18-month Exploratory Topic, BRAINS will deliver validated methods for generating region-specific precursor brain tissue and demonstrate proof-of-concept of surgical engraftment in preclinical models, paving the way for future clinical trials aimed at restoring lost abilities and independence to patients in need.

Technical Approach

Using natural brain development as a blueprint, BRAINS will seed efforts for two (2) technical areas, which are essential for later steps in functionally replacing damaged brain tissue. In TA1 teams will design developmental mimicking or tissue engineering methods capable of generating precursor tissue for a part of the brain other than neocortex. In TA2 teams will provide proof-of-concept for surgical engraftment into adult brains of non-human fetal precursor tissues for their selected brain area. Teams must propose to address all milestones and metrics of either one TA or both.

TA1: Defining and generating precursor tissue for any brain region, including identification of all cellular and extracellular components via omics and histology, and protocols for generating human iPSC-derived precursor cells. TA1 Milestones:

- Detailed specifications of target tissue via characterizing natural precursor tissue (all cell types, density, spatial organization, non-cellular components).
- Establish protocols for generating the relevant precursor cell types.
- Elaborate a detailed tissue generation method.
- Generate prototype precursor tissue with demonstrated metrics of equivalence to natural tissue.

TA2: Optimizing surgical engraftment of precursor tissue into adult brains, with proof-of-concept in animal models, measuring survival, vascularization, tissue structure, connectivity,

and functional integration. In choosing the type of damage or lesion, consideration should be given to how useful it will be for future functional assessment of the tissue graft in demonstrating reacquisition of lost function (without proposing to demonstrate function in this initial effort). TA2 Milestones:

- Establish method for surgically transplanting donor tissue demonstrated using a fetal, non-human donor into a conspecific host.
- Demonstrate grafted donor tissue survival and vascularization within 48 hours of transplantation.
- Demonstrate grafted donor tissue matures in situ, forming appropriate internal structure and connections to appropriate targets.

Exploratory Topic Structure

BRAINS is an Exploratory Topic with two (2) intake groups; each will take 18 months from kickoff to completion and will consist of two (2) 9-month phases. At end of Phase I, there will be a performer down-selection based on go-no-go milestones.

At the end of Phase I, it is expected that Performers have:

1) Detailed plan and cell protocols for making precursor tissue.
2) Surgical method with initial proof-of-concept.

At the end of Phase II, it is expected that Performers have:

1) Validated precursor tissue.
2) Validated surgical delivery with donor tissue (survival, vascularization, appropriate connections).

Table 2. BRAINS Structure and General Overview

Technical Areas	Phase I: 9 months			Phase II: 9 months		
TA1: Generate precursor tissue	Q1	Q2	Q3	Q4	Q1	Q2
Characterize natural tissue						
Establish precursor cell production protocols						
Elaborate a detailed tissue generation method						
Prototype precursor tissue produced						
TA2: Engraftment POC with native fetal tissue						
Develop surgical method						
Demonstrate graft survival and vascularization						
Demonstrate graft structure and connectivity						

IV. BRAINS– PROPOSERS' DAY INFORMATION

Proposers' Day Participation and Deliverables

This SN and PD include one specific opportunity for prospective proposers to identify team members for potentially expanded future efforts:

Live Q&A

A live Q&A session will be led by the Business Innovation Division (BID) after BRAINS PD. BRAINS PD participants are encouraged to use this time to discuss any BRAINS contracting questions you have with our contracting experts. ARPA-H will collect participants' questions and BID responses and make them available in the Frequently Asked Questions (FAQ) in: https://arpa-h.gov/explore-funding/initiatives-and-sprints/BRAINS/faqs and on Sam.gov.

Q&A / Sidebar Registration Information

Participants must register in advance through the registration website. The registration will remain open until 48 hours before the start of the event. Note that there will be no same-day registration. An online registration form and various other meeting details can be found at the registration website: http://solutions.arpa-h.gov/Events/BRAINS.

All inquiries should be addressed to BRAINS@arpa-h.gov. Please refer to the BRAINS (ARPA-H-SN-26-153) in all correspondence. Prior to submitting an e-mail inquiry, please check the General FAQ's (https://arpa-h.gov/explore-funding/initiatives-and-sprints/BRAINS/faqs) or sam.gov to see if your question is answered there.

V. POINTS OF CONTACT

Technical Point of Contact

Jean Hebert, Program Manager, ARPA-H / HSF Office
Email: BRAINS@arpa-h.gov

All inquiries should reference "BRAINS Proposers' Day (ARPA-H-SN-26-153)" in the subject line of the email.

VI. Q&A / SIDEBAR ATTENDENCE INFORMATION

Attendees will receive the link to the Q&A / Sidebar once they are verified and registration is confirmed.

VII. DISCLAIMER

This SN is issued solely for information and potential new effort planning purposes; the SN does not constitute a formal solicitation for proposals or solution summaries. Responses to this notice are not offers and cannot be accepted by the Government to form a binding award. Submission of any information in response to the SN is voluntary and is not required to propose to subsequent ARPA-H ISOs or research solicitations on this or any other topic. ARPA-H will not provide reimbursement for costs incurred in responding to this SN. Respondents are advised that ARPA-H is under no obligation to acknowledge receipt of the information received or provide feedback to respondents with respect to any information submitted under this SN.