Neural Engineering at NINDS
NINDS supports Neural Engineering research through programs in the Divisions of Neuroscience, Translational Research, and Clinical Research. The combined portfolio spans early concept generation, technology development/optimization, translational studies and clinical trials. Funded projects focus on neuroscientific discovery and/or the development of clinical strategies (diagnostic or therapeutic) relevant to disorders of the nervous system. Funding Opportunity Announcements (FOAs) supporting Neural Engineering research are provided below.

Joint NINDS/NIMH Exploratory Neuroscience Research Grant (R21) (PA-21-219) This program supports exploratory and innovative research projects, which fall within the mission of the NINDS. Clinical Trials (CTs) may be supported if they are Mechanistic CTs or Basic Experimental Studies with Humans. Scientific Contact: karrah.benson@nih.gov

Smart Health and Biomedical Research in the Era of Artificial Intelligence and Advanced Data Science (SCH, R01) (NSF 21-530) This interagency NSF-NIH program supports the development of transformative high-risk, high-reward advances in computer and information science, engineering, mathematics, statistics, behavioral and/or cognitive research to address pressing questions in the biomedical and public health communities. Scientific Contact: sahana.kukke@nih.gov

Bioengineering Research Grants (BRG, R01) (PAR-22-242, PAR-22-243) The goal of the BRG program is to foster development of innovative technologies, methods, tools, models or designs that have the potential for significant impact on biomedical research by infusing principles and concepts from quantitative sciences. Scientific Contact: sahana.kukke@nih.gov

Translational Neural Devices (UG3/UH3, U44) (RFA-NS-21-021, RFA-NS-21-022) This program encourages investigators to pursue translational activities and small clinical studies to advance the development of therapeutic, and diagnostic devices for disorders that affect the nervous or neuromuscular systems. Scientific Contact: NINDS-Devices@nih.gov

NINDS Exploratory Clinical Trials (U01, R43/R44, R41/R42) (PAR-21-236, PAR-21-266, PAR-21-267) This program encourages applications for investigator-initiated clinical trials that address questions within the NINDS mission and may evaluate drugs, biologics, or devices, as well as surgical, behavioral and rehabilitation therapies. Scientific Contact for PAR-21-236: jeremy.brown@nih.gov; Scientific Contact for PAR-21-266 & PAR-21-267: emily.caporello@nih.gov

NeuroNEXT Clinical Trials (U01, U44) (PAR-21-223, PAR-21-224) This program encourages applications for exploratory clinical trials of investigational agents (drugs, biologics, surgical therapies or devices) that may contribute to the justification for and provide the data required for designing a future trial, for biomarker validation studies, or for proof of mechanism clinical studies. Scientific Contact: hyunjoo.cho@nih.gov
NIH StrokeNet Clinical Trials and Biomarker Studies for Stroke Treatment, Recovery, and Prevention (UG3/UH3) (PAR-20-285) This program encourages applications for multi-site exploratory and confirmatory clinical trials focused on promising interventions. Scientific Contact: janiss@ninds.nih.gov

Finding Funded Projects and Investigators
NIH RePORTER is an excellent tool to become familiar with what NINDS/NIH has previously funded in field of Neural Engineering.

Important Considerations When Preparing Your Application
When developing your research plan and assembling your application materials, consider how these factors can enhance the scientific merits of your work and be enhanced by achieving your scientific goals.
- Rigor and Transparency
- Diversity, Equity, Inclusion and Accessibility
- Data Management and Sharing

Funding Opportunity Announcements (FOAs) for Neural Engineering Research at NINDS

Concept Generation
Technology Development
Technology Optimization
Pre-IDE Studies
First in Human / EFS
Clinical Trials

NINDS Exploratory Research (R21) (PA-21-219)

NSF-NIH Smart and Connected Health (R01) (NSF 21-530)

Bioengineering Research Grant (R01) (PAR-22-242, PAR-22-243)

Translational Neural Devices (UG3/UH3 - U44) (RFA-NS-21-021, RFA-NS-21-022)

Exploratory CTs (U01 - R41/R42 - R43/R44) (PAR-21-236 - PAR-21-266 - PAR-21-267)

CT Networks: NeuroNext (U01 - U44) (PAR-21-223 - PAR-21-224)

StrokeNET (UG3/UH3) (PAR-20-285)