The Friedman Brain Institute Announces 2021 FBI Research Scholars

On behalf of the Philanthropic Leadership Council of The Friedman Brain Institute, we are pleased to announce the 2021 recipients of The FBI Research Scholars Awards.

Fascettelli Research Scholar Award

Sunderam Research Award

Lipschutz Research Scholar Award

Setzer Research Scholar Award

Shah Family Research Scholar Award

Fella Fedorov, MD
MCN 100 Student

Katherine Guttmann, MD
Professor of Pediatrics and Radiation Medicine

Benjamin Glinski, PhD
Assistant Professor of Genetics and Developmental Biology

Madeline Fadel, MD
Assistant Professor of Neurology, Gastroenterology and Nutritional Sciences

Hai Lin Yoko-Kawase, MD
Assistant Professor of Neurology and Radiology

Joseph and Nancy DiSabato Research Scholar Award

Nessim Doppa, PhD
Assistant Professor of Genetics and Developmental Biology

Purns Rosasco, RNC, PhD, MD
Professor of Neurosurgery, Radiology, and Neurology

John P. Fulbright, PhD
Professor of Pediatrics and Neurology

Glycinating Enzymes as a Liquid biopsy for Brain Cancer.

As we embark on the next era of liquid biopsy, brain cancer is the next frontier in precision medicine. The goal of our project is to develop a simple, non-invasive, blood-based test, which will not only establish high-value diagnostic targets but will also facilitate early diagnosis and real-time monitoring of patients.

Multimodal Surveys Monitoring in the Neurotic Intensive Care Unit

Clinical changes in many neural diseases in the intensive care unit (ICU) are an unavoidable fact of life. These changes, which are often accompanied by limited time-frames, can be detected in various brain examinations, and may occur abruptly, and only be confirmed using expensive and challenging multimodal imaging techniques. In this project, we propose to develop non-invasive multimodal methods for monitoring brain function and structure, and to apply these methods to patients in the ICU.

Biomarker Data for the Neurodegeneration of Parkinson's Disease

Working with Parkinson's Disease (PD) patients, we focus on developing new markers for the early diagnosis of PD. This is important for developing new treatments and developing personalized medicine.

Targeting Autophagy for Alzheimer’s Disease

There is emerging evidence that autophagic dysfunction is involved in the pathogenesis of Alzheimer’s disease (AD). Early pathological changes, such as the accumulation of amyloid-beta plaques, which can be detected in autophagic vacuoles and lysosomal dysfunctions, are already well-known in AD. The reduction of autophagy in AD occurs in the complex network of autophagy pathway and the lack of effective inhibitors to modulate this pathway in vivo. In this project, we propose to study the role of autophagy in AD by testing small molecule inhibitors and modulation of different stages of the autophagy pathway in different models of AD. Our group aims to develop novel therapeutic strategies for AD and to understand the connection between the autophagic pathway and AD pathology.

Flux-Directed Adaptive Repopulation of Dental Root Gengiva to Respiratory SARS-CoV-2 Infection

Dental root gengiva are a highly adaptive primary periodontal population that undergo rapid transcriptional changes in response to stress, including inflammatory and viral stimuli. SARS-CoV-2 infection in the oral environment can cause a downregulation of the epithelial barrier, which is associated with inflammation, which is a major risk factor for various chronic diseases such as heart and lung disease. The goal of this project is to develop a strategy to adaptively reprogram the root gengiva to SARS-CoV-2 infection, while preserving its barrier function.

Circuit Neuroscience: A New Perspective on Psychiatric Disorders

Circuit neuroscience is a systems-level approach to understanding the brain’s organization and function. Our group aims to develop novel therapeutic strategies for psychiatric disorders, including schizophrenia, depression, and anxiety. We propose to study the role of circuit disorganization in these disorders by using high-throughput imaging techniques to understand the organization and function of the brain’s circuits.

Karz Family Research Scholar Award

Federico Pastor, MD
Assistant Professor of Neurology, Radiology, and Neurosurgery

Allison Wolens, PhD
Assistant Professor of Neurobiology and Neurosurgery

James Young, MD, PhD
Assistant Professor of Neurology

Helan Norgard, MD
Director, Center of Advanced Care Therapeutics, Dept. of Neurology, Radiology, and Neurosurgery

Icahn School of Medicine at Mount Sinai

Decoding Interneuron Inputs to Motor with Simultaneous Depth and Surface Recording of Human Brain Electrophysiology

Abnormal interneuron, or intercellular, transmission in the brain, observed across psychiatric and neurological conditions where rare symptoms are seen in both diseases, such as schizophrenia and autism. Our project aims to develop a non-invasive electrophysiological recording technique to identify interneuron dysfunction in psychiatric and neurological conditions. Our approach involves developing novel depth and surface recording techniques to identify interneuron dysfunction in psychiatric and neurological conditions.

Moodleado Research Scholar Award

Nemanja Ngirovo, PhD
Assistant Professor of Neurology and Radiology

Raul Z Goldstein, PhD
Assistant Professor of Neurology

Era Volbracht, MD
Assistant Professor of Psychiatry and Neurology

Mohammad Faraz, PhD
Assistant Professor of Psychiatry and Neurology

Multimodal neurophysiological tracing of convolutions in visual brain function in schizophrenia

It has been argued that the involvement of schizophrenia in schizophrenia is partly caused by difficulties in successfully engaging in networks. Yet, the mechanisms underlying these difficulties remain unclear. The goal of this project is to develop novel multimodal neurophysiological techniques to identify the involvement of schizophrenia in network function. The proposed research will examine whether a lack of coordinated activity exerts its negative effects on the brain’s neural population (i.e., fronto-striatal synchrony) in schizophrenia directly affects successful engagement in network communication, and is associated with deficits in intertemporal functioning.