Fascitelli Research Scholar Award

Dalia D. Forte, PhD
ASSISTANT PROFESSOR, Psychiatry

Melissa A. Longpre, MPH
ASSISTANT PROFESSOR, Pharmacology

Marcela C. Forte, PhD
ASSISTANT PROFESSOR, Pharmacology

Molecular Profiling of Pediatric-Onset Focal Epilepsies.

Refractory childhood-onset epilepsies (FE) are a tremendous burden on affected children and their families. Given the large number of children with these diseases, it is critical to identify potential biomarkers and therapies. This work will be groundbreaking and lead to better diagnostics and treatments for these conditions.

Scherr Family Foundation Research Scholar Award

Identifying pre- and anti-enchathalactic strains from human multiple sclerosis-associated microbiota.

Multiple sclerosis (MS) is an insidious disease affecting the brain and spine and the most common cause of serious disability in young people. The human gut is home to trillions of microbes collectively known as the gut microbiome. Perturbations in the composition of the gut microbiome is one of several factors that contribute to MS. We are using mice to investigate how gut-derived bacteria from MS patients cause inflammation leading to MS. We are studying the gut microbiome in a mouse model of MS and in human gut microbiome samples from MS patients. This work will shed light on the role of the gut microbiome in the development and progression of MS.

Zhou Research Scholar Award

A novel in vivo reporter model to assess specificity and efficacy of RNA editing therapy and delivery tools.

RNA editing is a cellular mechanism that has been extensively studied in the past few decades. However, the development of RNA editing therapies has been hampered by the lack of suitable reporter models. This project aims to develop a novel in vivo reporter model to assess the specificity and efficacy of RNA editing therapies.

Lipschultz Research Scholar Award

Investigation and rescue of aberrant hippocampal ensembles in AD-associated mouse models.

Alzheimer’s disease (AD) is the most common neurodegenerative disease affecting the aging brain. However, an understanding of molecular substrates and drivers of AD in early disease, and ability to predict progression of cases are lacking. This knowledge gap may lead to more accurate clinical phenotypes that could impact disease course. Our team will generate an in vivo reporter model to study the specific and delivery tools for RNA editing therapies.

Nash Family Research Scholar Award

Differential examination of vegetative state and minimally conscious state with computational analysis of facial movements on electromyography.

The aim of our research is to identify facial movements that differ across various categories of disorders of consciousness (DoC) such as vegetative state/vegetative wakefulness syndrome (VS/VWS) and minimally conscious state (MCS) on clinical examiners with computerized analysis in collaboration with Dr. Tanya. Haeusler and Stephen Hiep who are the experts on the modality. Additionally, we will seek to identify electromyographic (EMG) characteristics of VS/VWS and MCS with idiopathic unicerebral blindness. The ultimate goal of this project is to better understand DoC and develop an accurate diagnostic tool of 8 which is a prerequisite for prognostication of patients with DoC.

Ram Sundaram and Preethi Krishna Research Scholar Award

A novel role for Ficolin-Stimulating Hormone in Alzheimer’s Disease, comorbid health conditions, in Down Syndrome.

Down Syndrome (DS) is the most common chromosomal disorder in humans, and this still presents a significant challenge in our understanding of the disease. Recent studies have highlighted the co-occurrence of multiple health conditions in individuals with DS, including Alzheimer’s disease. We aim to investigate the role of Ficolin-Stimulating Hormone (FISHED) in the development and progression of Alzheimer’s disease in individuals with DS. Our findings could provide insights into the pathophysiology of Alzheimer’s disease in DS and potentially identify new therapeutic targets for this disorder.