

**University of Houston - Biomedical Engineering Seminar
Friday, August 23, 2019 Noon, Rm 204 SEC**

**Protein:protein Interaction Based Allosteric Modulators of
Voltage-gated Na⁺ Channels**



Fernanda Laezza, M.D., Ph.D.

Abstract

The nexus of protein:protein interactions (PPI) within the voltage-gated Na⁺ (Nav) channel is the molecular determinant of neuronal excitability and a converging node in the etiology of neuropsychiatric disorders, neurodegenerative diseases and peripheral channelopathies. These PPI are highly specific and flexible, and could be ideal scaffolds for probe and drug development. I will present initial phases of a drug discovery campaign based on an integrated in vitro-to-ex vivo pipeline targeting the PPI interface at the level of the Nav channel and its regulatory proteins, the intracellular fibroblast growth factors (iFGF11-14). Compounds from this campaign could lead to a new class of Nav channel allosteric modulators with broad applications for CNS and PNS disorders.

Biosketch

Initially trained as a graduate student in Neuroscience at Emory University and then at Washington University in St Louis as a post-doctoral fellow, I joined the Faculty at the University of Texas Medical Branch UTMB as tenure-track Assistant Professor in 2008 and got promoted to tenured Associate Professor and Director of Graduate studies in the Department of Pharmacology & Toxicology in 2015 and 2017, respectively. In the past ten years, I have established a vigorous research program in the area of neuroscience and neuropharmacology laying groundwork for new approaches in ion channel drug discovery.