



The Singapore Bioimaging Consortium (SBIC)
presents a seminar on

“Visceral and Chemosensory Controls of Brain Reward Systems”

Speaker: Professor Ivan E de Araujo
Friedman Brain Institute
Diabetes, Obesity and Metabolism Institute
Icahn School of Medicine at Mount Sinai
New York

Host : Dr Fu Yu

Date : Monday, 18 November 2019

Time : 11.00am – 12noon

Venue : SBIC Seminar Room
11 Biopolis Way
Level 2, Helios Building, Singapore 138667
(Please enter via Level 1)

Abstract

The presentation will discuss recent evidence supporting a role for the gut-brain axis in controlling brain circuits involved in reward, emotion and motivation. It will be argued in particular that gut-innervating vagal sensory neurons function as reward neurons. Via asymmetric ascending pathways of vagal origin, gut signals reach brain reward regions via dedicated visceral nuclei in pons. This gut-brain reward axis functions in parallel to an analogous oral cavity-brain reward axis, resulting in a gastrointestinal vs. orosensory topographic organization for food reward within the striatum. The extent to which these findings are mirrored by recent human neuroimaging studies will be also discussed, as well as potential clinical applications including novel targets for stimulation therapies in eating and affective disorders.

About the Speaker

Born in Sao Paulo, Brazil, Prof Ivan de Araujo was raised in Brasilia where he majored in Philosophy and Mathematics. After postgraduate studies on Artificial Intelligence at the University of Edinburgh, he then completed a doctorate on functional neuroimaging of feeding supervised by Edmund T Rolls at the University of Oxford in 2003. He then went on to work with Sidney Simon and Miguel Nicolelis at Duke University, where he made use of multi-site electrophysiological methods to characterize the neuronal populations that mediate appetite and satiation in rodents. During his tenures at Yale University (2007-2018), and now at Mount Sinai in New York City, the de Araujo laboratory has been studying the neurobiology of feeding behavior, with emphasis on identifying the sensory (gut-brain reward pathways) and motor (predation, mastication, salivation) circuits mediating this fundamental behavior.

--- Admission is free and all are welcome ---