FAU

STILES-NICHOLSON BRAIN INSTITUTE

Florida Atlantic University

INTERGRATIVE BIOLOGY–NEUROSCIENCE (IBNS)

The FAU Integrative Biology – Neuroscience (IBNS) PhD program is a joint program of the Colleges of Science and Medicine with the Max Planck Florida Institute for Neuroscience (MPFI), the first U.S. institute of the world-renowned Max Planck Society. IBNS students may also pursue doctoral study with faculty at The Scripps Research Institute. The IBNS Ph.D. program offers students a curriculum, research resources and mentors suited to the study of molecular, cell and systems neuroscience. IBNS students explore cutting-edge questions in neuroscience through the use of multidisciplinary approaches, the use of leading invertebrate and vertebrate model systems, and with access to a suite of cuttingedge molecular, optical and physiological recording technologies. Learn more at: biology.fau.edu/academics/graduate/phd-biology-degree-programs-ibn.php

MAX PLANCK FLORIDA INSTITUTE FOR NEUROSCIENCE

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FAU STILES-NICHOLSON BRAIN INSTITUTE

Education Office | 777 Glades Road | Boca Raton, FL 33431

561.297.4989 | BIeducation@fau.edu

FACULTY MENTORS IBNS	AREA OF EMPHASIS
Rindy Anderson, Ph.D.	Communication, cognition, sexual selection, behavioral ecology
Randy D. Blakely, Ph.D	Synaptic Genetics, Neurochemistry and Pharmacology; Animal Models of Neuropsychiatric Disorders; Transporter Proteins and Psychoactive Drugs
M. McLean Bolton, Ph.D.	Disorders of neural circuit function
Steven Bressler, Ph.D.	Cognitive Neurodynamics: Investigation of cognitive processing through analysis of the large-scale dynamics of activity in the cerebral cortex using fMRI, EEG, MEG, and LFP data.
Lucia Carvelli, Ph.D.	Explores novel ion channels as targets for amphetamines and the ability of psychostimulants to exert multi-generational effects.
Jason Christie, Ph.D.	Mechanisms of synaptic signaling and computation
Ronald L. Davis, Ph.D.	Molecular and cellular basis for learning; diseases that affect learning and memory
Erik Duboué, Ph.D.	Effects of early stress on brain circuitry and function and the etiology of Post-Traumatic Stress Disorder
Gregg B. Fields, Ph.D.	Extracellular matrix biochemistry, synthetic protein design and construction
David Fitzpatrick, Ph.D.	Functional organization and development of neural circuits in the cerebral cortex, neural basis of visual perception
Tanja Godenschwege, Ph.D.	Molecular and cellular neuroscience, neurodevelopment, cellular basis of neurological disorders and drug discovery
Brock Grill, Ph.D.	Molecular mechanisms of nervous system development
Kathleen Guthrie, Ph.D.	Neural stem cells, adult neurogenesis and factors that affect survival and integration of new neurons; Activity-dependent remodeling of olfactory-limbic circuits; Neurotrophic factor effects on neuron morphology
Ceylan Isgor, Ph.D.	Neuromorphological, behavioral and molecular consequences of chronic, variable stress during peripubertal-juvenile period in rats
William Ja, Ph.D.	Molecular genetics of aging, behavior and disease
Kailiang Jia, Ph.D.	Molecular regulation of aging
Gregory Macleod, Ph.D.	Mitochondrial support of neurotransmission, pH influences on synaptic plasticity, neurotransmission and aging
Kirill Martemyanov, Ph.D.	Striatal signaling and drug addiction, G protein signal transduction pathways, molecular mechanisms of vision

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FACULTY MENTORS IBNS	AREA OF EMPHASIS
Courtney Miller, Ph.D.	Neurobiological underpinnings of memory disorders, with the goal of developing novel therapeutics
Sarah L. Milton, Ph.D.	Vertebrate anoxia tolerance, marine turtle physiology
Rodney Murphey, Ph.D.	Development and degeneration of synapses
Sathyanarayanan Puthanveettil, Ph.D.	Molecular and cellular basis of long-term memory storage and its disorders
Gavin Rumbaugh, Ph.D.	How synaptic proteins actively contribute to memory formation and storage
Wen Shen, Ph.D.	Neurophysiology, receptor pharmacology, synapsis, glutamate toxicity
Robert Stackman, Ph.D.	Behavioral Neuroscience, Learning and memory
Hiroki Taniguchi, Ph.D.	Development and function of inhibitory neural circuits
Rui Tao, D.V.M., Ph.D.	Neural circuits affected by drug abuse, Psychostimulant-induced hallucinations, Environmental factor-dependent effects of psychostimulants
Lawrence Toll, Ph.D.	Neuropharmacology of opioid and nicotinic receptors with respect to pain and drug abuse
Seth Tomchik, Ph.D.	Neuromodulation of memory circuits, neuronal circuits and behavior, imaging brain function in health and disease
Henriette van Praag, Ph.D.	Regulation and function of adult hippocampal neurogenesis
Robert Vertes, Ph.D.	Behavioral neuroscience, functional organization of the brainstem and its role in controlling the activity of the forebrain and neurophysiology of sleep
Yingxue Wang, Ph.D.	Neuronal Mechanisms of Episodic Memory
Jianning Wei, Ph.D.	Neurodegenerative disorders
Herbert Weissbach, Ph.D.	Effect of oxidative stress on normal and cancer cells
Jang-Yen Wu, Ph.D.	Neurotransmission and brain disorders
Baoji Xu, Ph.D.	How neural circuits are formed, modified, and maintained in the brain
Ryohei Yasuda, Ph.D.	Neuronal signal transduction

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