



The Ohio State University Neuroscience Research Institute



Inaugural Annual Retreat

Fawcett Center

November 19, 2021

AGENDA

Friday, November 19th, 2021

8:00 – 8:30am **Breakfast & Badge Pick-Up**

8:30 – 9:00am ***Opening Remarks***

NRI Updates

Benjamin Segal, MD
Director, Neuroscience Research Institute
Chair and Professor, Neurology
The Ohio State University

Erica Bell, PhD
Administrative Director, Neuroscience Research Institute
Associate Professor, Neurology
The Ohio State University

9:00 – 10:15am ***Keynote Lecture (Zoom)***

The NINDS approach to training for the future of neuroscience

Stephen Korn, PhD
Director
Office of Training & Workforce Development
National Institute of Neurological Disorders and Stroke, NIH

10:15 – 10:30am **Break**

10:30 – 12:00pm ***Plenary Session I***

Moderators:

Allison Bradbury, PhD
Assistant Professor, Pediatrics
Center for Gene Therapy
Nationwide Children's Hospital

Steve Kolb, MD, PhD
Associate Professor, Neurology & Biological
Chemistry and Pharmacology
The Ohio State University

Spinal Muscular Atrophy (SMA): From gene to effective therapies and beyond

Arthur Burghes, PhD
Professor, Biological Chemistry and Pharmacology
The Ohio State University

Multicentered IND-enabling efficacy and safety studies are highly promising for SMARD1/CMT2S gene therapy

Julieth Sierra Delgado, MD
Sr. Research Associate
Nationwide Children's Hospital

Nanotransfection-driven cell-reprogramming strategies for peripheral nerve injury

Jordan Moore, PhD Candidate
Biomedical Engineering
The Ohio State University

Alternatively activated neutrophils recruit alternatively activated monocytes capable of promoting axon regeneration

Andrew Sas, MD, PhD
Assistant Professor, Neurology
The Ohio State University

12:00 – 1:00pm

Lunch

1:00 – 2:15pm

Collaborative Breakout Sessions/Networking

1) Collaborations in Neuroimmunology Brainstorming Session

Moderators:

Benjamin Segal, MD
Director, Neuroscience Research Institute
Chair and Professor, Neurology
The Ohio State University

Phil Popovich, PhD
Chair and Professor, Neuroscience
The Ohio State University

Leah Pyter, PhD
Associate Professor, Psychiatry & Neuroscience
Institute for Behavioral Medicine Research
The Ohio State University

2) Collaborations in Neurobiology of Aging Brainstorming Session

Moderator:

Dave Arnold, MD
Professor, Neurology, Physical Medicine and
Rehabilitation, Neuroscience & Physiology and Cell
Biology
The Ohio State University

3) Informational Session for the Next-generation of Translational Neuroscientists

Moderators:

Dana McTigue, PhD
Associate Dean, Foundational Research
Professor, Neuroscience
The Ohio State University

Erica Bell, PhD
Administrative Director, Neuroscience Research
Institute
Associate Professor, Neurology
The Ohio State University

2:15 – 2:30pm

Break

2:30 – 4:30pm

Plenary Session II

Moderators:

Anthony Brown, PhD
Professor, Neuroscience
The Ohio State University

Olga Kokiko-Cochran, PhD
Assistant Professor, Neuroscience
The Ohio State University

Seed Grant Winner Updates

Microglia coordinate cellular interactions during spinal cord repair

Faith Brennan, PhD
Research Scientist, Neuroscience
The Ohio State University

Role of circulating extracellular vesicles (EV) and EV-cargo on a human biomimetic blood-brain-barrier model

Setty Magana, MD, PhD
Assistant Professor, Pediatrics & Neurology
Nationwide Children's Hospital/The Ohio State University

Gut microbiome contributions to psychiatric-like impairment after traumatic brain injury

Cole Vonder Haar, PhD
Assistant Professor, Neuroscience
The Ohio State University

Impacts of aging and voluntary running wheel exercise on peripheral nerves innervating muscle and adipose tissue in genetically diverse Het3 mice

Kristy Townsend, PhD
Associate Professor, Neurosurgery
The Ohio State University

Dave Arnold, MD
Professor, Neurology
The Ohio State University

Oral Presentations from Abstracts

Telomerase reverse transcriptase (TERT)-expressing cells mark a novel stem cell population in the adult mouse brain

Gabriel Jensen, PhD Candidate
Neurosurgery
The Ohio State University

Suppression of ictal brainstem oscillation and cortical phase-amplitude coupling precedes seizure-related sudden death

Bin Gu, PhD
Assistant Professor, Neuroscience
The Ohio State University

Aged CNS-resident cells promote a non-remitting course of experimental autoimmune encephalomyelitis

Jeff Atkinson, PhD
Postdoc, Neurology
The Ohio State University

Spinal cord injury impairs lung immunity in mice

Katherine Mifflin, PhD
Postdoc, Neuroscience
The Ohio State University

Nanotechnology-driven non-viral neurogenic and vasculogenic reprogramming of fibroblasts: potential applications in the treatment of Cerebrovascular Deficits

Diego Alzate Correa, PhD
Postdoc, Biomedical Engineering
The Ohio State University

Explainable machine learning aggregates polygenic risk scores and electronic health records for Alzheimer's disease prediction

Raymond Gao, PhD
Associate Professor, Ophthalmology & Visual Sciences
The Ohio State University

Survival motor neuron protein at the nexus of aging and sarcopenia

Maria Balch, PhD
Postdoc, Neurology
The Ohio State University

The Ohio State University Neuroscience Research Institute

Leaders



Benjamin Segal, MD
Professor and Chair, Neurology Department
Director, NRI
Co-Director, Neurological Institute



Erica Bell, PhD
Associate Professor, Neurology Department
Administrative Director, NRI

Overview

Our mission is to create a world-class infrastructure and collaborative community that facilitates interdisciplinary research of neurological disease and injury, to build bridges between innovative translational neuroscience research and clinical implementation, and to foster educational and professional development opportunities for junior investigators in the field.

The Neuroscience Research Institute (NRI) was created to enhance the quality and breadth of neurological-related research at Ohio State by providing an infrastructure with an emphasis on translating research discoveries into clinical interventions. Comprehensive resources include an integrative brain bank and biorepository, mentorship and career development opportunities for junior investigators, and world-class educational symposia. Another goal of the NRI is to foster cross-campus interdisciplinary collaborations with an emphasis in animal model, high-throughput assay and experimental therapeutic development.