

# Functional Behavioral Neuroanatomy & Immunology

January 20-21, 2024

Dr. Robert Melillo

Dr. Peter Scire

## OUTLINE MODULE 5

**The Disconnected Brain** - The Role of Timing and Processing in The Brain, Systems Neuroscience, Neuroimmunology and Neuroplasticity. The Neurology of Feeding and Eating Disorders.

### SATURDAY – PART 1 |

#### 1 HOUR | Dr. Melillo

What is a Functional Disconnection Syndrome?  
Research on Functional Connectivity

#### 2 HOURS | Dr. Melillo

Neuroanatomy of the thalamus and thalamocortical loops  
Review prefrontal cortex, neostriatal loops  
Cortico-striato-cerebello-thalamo loops and Human behavior  
Thalamo Cortical Oscillations

#### 1.5 HOURS | Dr. Melillo

Polyvagal System  
Evolution and development of the autonomic system  
Central autonomic network and regulation of the autonomic system  
RVLM, CVLM, Amygdala, Hypothalamus, Insula cortex  
Parabrachial Nucleus, Vagal Complex  
Sympathetic/Parasympathetic Functions

#### 1.75 HOURS | Dr. Melillo

Role of Autonomic and Vagal system in Immune  
Kevin Tracy neuroinflammatory reflex

#### 1 HOUR | Dr. Peter Scire

Complete Review Lab testing for Immune system  
Review of Results and Normal Values

## **SUNDAY – PART TWO |**

### **1.5 HOURS | Dr. Robert Melillo**

Hemispheric functions of eating and eating disorders

Anorexia

Bulimia

Right Brain vs Left Brain Anxiety

Stuttering Neurophysiology

### **1.5 HOURS | Dr. Peter Scire**

Early Limbic Connections and the Hypothalamus

Relationship to feeding HPA Axis

Relationship to Functional Disconnection Syndrome

### **1.75 HOURS | Dr. Robert Melillo**

Hemispheric regulation of the Immune System

Review research on left vs Right hemisphere regulation and relationship to

Sympathetic/Parasympathetic regulation

Autonomic Assessment Tools

### **1.5 HOURS | Dr. Robert Melillo**

Vagal Stimulation Tools

Review 32 Different Ways to Stimulate the Vagal System

Most Cutting-Edge Vagal Stimulation Tools and Research

How to Implement this with Patients