

## **FACULTY MENTOR**

Neal R. Swerdlow, MD, PhD; Distinguished Professor; Vice Chair, Education & Training

## **PROJECT TITLE**

Acute effects of NMDA receptor antagonist, memantine, on auditory learning and neurophysiologic biomarkers in schizophrenia

## **PROJECT DESCRIPTION**

"Cognition is profoundly affected in severe neuropsychiatric disorders. Our lab is seeking students interested in cognitive neuroscience and psychiatric research with experience in programming, mathematical modeling, and statistics. Our research combines neurophysiology, pharmacology, and behavior to study the biology of cognition and psychosis in clinical populations. Current projects integrate experimental medicine and translational EEG methods to develop novel biomarkers and treatment approaches for cognitive disorders, like schizophrenia and Alzheimer's disease.

Students are expected to think critically and apply concepts learned in their coursework to real world problems. Daily functions may include: applying signal processing algorithms to the analysis of human neurophysiologic data; working in a collaborative setting and help coordinate study participants through experimental protocols; data entry, organization & management; data analysis and interpretation. "

## **INTERNS NEEDED**

1 -2 students; 1 MS and/or 1 BS.

## **PREREQUISITES**

Qualified applicants should be in good academic standing and have completed relevant course work in neuroscience, engineering, or computer science. Students should have familiarity with one or more programming language such as Python, MATLAB, and R. Experience with EEGLAB is desired, but not necessary.

