PIONEERS IN BIOMEDICAL RESEARCH SEMINAR

Presented by the Fralin Biomedical Research Institute and co-sponsored by the institute's Center for Health Behaviors Research and the Addiction Recovery Research Center

CHARLOTTE BOETTIGER, Ph.D.

Professor and Director
Behavioral & Integrative Neuroscience Program
Bowles Center for Alcohol Studies
UNC School of Medicine

In Person Seminar: Adolescent Alcohol, Behavioral Flexibility, and Excitatory:Inhibitory Balance in Control Circuitry

Impaired behavioral flexibility is frequently observed in both animal models of adolescent alcohol exposure and in adults with a history of alcohol and other substance use disorders. Here Dr. Boettiger will show evidence that in adult humans, self-reported binge alcohol exposure during adolescence is associated with two markers of a shift in excitatory:inhibitory (E:I) balance in a key node of executive control, the dorsolateral prefrontal cortex. The first measure is derived from resting-state EEG recording – the slope of the EEG power spectral slope, with a shallower slope linked to adolescent binge alcohol exposure. The second measure is derived from single voxel magnetic resonance spectroscopy measures of GABA and glutamate/glutamine (Glx). These E:I balance measures are in turn associated with laboratory based task measurements of behavioral flexibility, such that shifts towards excitation in the dorsolateral prefrontal cortex are associated with reduced behavioral flexibility.

FRIDAY, OCT. 20, at 11 a.m.

Room R3012, 2 Riverside Circle
Watch live via Zoom at https://FralinBioMed.info/PBR-Join.

FRALIN BIOMEDICAL RESEARCH INSTITUTE AT VTC
VIRGINIA TECH.