The Psychology Department in the College of Science presents a colloquium by

Dr. Eric Porges
Institute on Aging, Center for Cognitive Aging and Memory, College of Medicine, University of Florida

“Neuroimaging and Cognitive Performance in Older Adults”

Gamma-aminobutyric acid (GABA), the brain’s principal inhibitory neurotransmitter, has been associated with perceptual and attentional functioning. Recent application of magnetic resonance spectroscopy (MRS) provides in vivo evidence for decreasing GABA concentrations during adulthood. It had been unclear, however, how age-related decrements in cerebral GABA concentrations contribute to cognitive decline, or whether previously reported declines in cerebral GABA concentrations persist during healthy aging. We report novel findings from a large, healthy, older population, where frontal and posterior GABA concentrations continue to decrease in later life and reduced frontal GABA concentrations are associated with decreased cognitive performance. This relationship with cognition remained significant after controlling for age, education, and brain atrophy. These results indicate that cognitive function is sensitive to cerebral GABA concentrations in the frontal cortex, and GABA concentration in frontal and posterior regions continue to decline across the lifespan. These effects suggest that proton MRS may provide a clinically useful method for the assessment of normal and abnormal age-related cognitive changes. Finally, we will present ongoing investigations applying this construct to social cognition and pain perception.

Thursday, October 27, 2016 at 4pm
Refreshments served at 3:45
415 Shillman Hall