

**TITLE:** Serum neurotensin and zonulin levels in a large sample of children with autism spectrum disorder

**FACULTY MENTOR NAME, EMAIL PHONE NUMBER**

Amber Muehlmann, [muehlman@ufl.edu](mailto:muehlman@ufl.edu), 294-4935

**FACULTY MENTOR DEPARTMENT**

Psychiatry

**RESEARCH PROJECT DESCRIPTION**

Neurotensin and zonulin are two peptides that function within the gastrointestinal tract to modulate gut motility and barrier integrity, respectively. Recently, blood levels of both neurotensin and zonulin have been shown to be elevated in small samples of children with autism spectrum disorder (ASD). These elevated blood levels may be linked to the high rates of GI complaints in children with ASD but may also contribute to abnormal brain function. Receptors for both neurotensin and zonulin are found in the brain. Based on the location of these receptors in the brain, we hypothesize that blood neurotensin and zonulin levels may be related to some of the phenotypic traits of ASD (e.g. repetitive behavior and anxiety). We will obtain serum samples from the Simon Simplex Collection, a repository of phenotype data and serum samples from thousands of children with ASD and evaluate whether these phenotypic characteristics correspond to differences in circulating neurotensin and zonulin levels in the ASD sample. Medical students will participate in sample preparation, immunoassay experiments, and data analysis. Funding for the project is provided by the UF College of Medicine Clinical Research Seed Money award.