Project Title: ESTROGEN AND BRAIN DEVELOPMENT: OUTCOMES FOR GIRLS WITH IDIOPATHIC CENTRAL PRECOCIOUS PUBERTY

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Project Abstract: Early pubertal maturation (e.g., going through puberty earlier than one’s same age, same gender peers) is associated with internalizing and externalizing disorders in adolescence and into adulthood among girls; however, very little is known about psychosocial adjustment and psychopathology among girls with the most extreme cases of early pubertal development, those diagnosed with idiopathic central precocious puberty (CPP). Furthermore, it is unclear what effect Gonadotropin Releasing Hormone agonist (GnRHa) therapy has on psychosocial adjustment and psychopathology among CPP patients. Based on animal models, it is theorized that the timing of the developing brain’s exposure to pubertal levels of estrogen may exert an organizing influence on the brain which may be one pathway to psychosocial adjustment problems and psychopathology among early maturing girls. The goal of this cross-sectional pilot research is to investigate indicators of psychosocial adjustment as well as structural and functional brain differences between girls with treated (n=10) and untreated CPP (n=20) and matched healthy controls (n=20). These three groups of girls differ in age at introduction of pubertal levels of estrogen providing a natural experiment to begin to evaluate the role of estrogen in brain development and psychopathology in humans. The results of this pilot project will provide information on rates of recruitment, preferred methodologies, and outcome variables in order to prepare for subsequent extramural funding applications.

Study Details/Student Benefits:
- Short term project (May – July with optional potential to continue involvement through Dec 2015)
- Funded through UF Clinical and Translational Science Institute
- IRB approved
- Moving forward with recruitment asap.

Student Responsibilities:
- Consenting participants for screening phase and research phase of study along with the PI and study coordinator.
- Assisting with screening for eligibility along with the PI.
- Participating in data collection activities, including but not limited to scheduling, collecting survey data from the caregiver and patient/participant, facilitating MRI phase along with imaging postdoc, facilitating the seamless flow of the participant through all phases of the research protocol.
- Optional: Interpretation of results along with PI and other collaborators
- Optional: Drafting manuscript(s) for publication with PI and other collaborators
- Optional: Participating in data management and analysis

Timeline:
- Feb – May 2015: Participant recruitment and screening
- April – August 2015: Data collection
• August – September 2015: Data management and analysis
• September – December 2015: Manuscript preparation/submission