

- **Project Title:** Scaling of Human Brain Component

**Investigator:** Kerri Lewis

**Department:** Anthropology

**Project Summary:**

The question of whether or not the human has garnered some interest in recent years. One line of research in this area concerns the relative size of regions of interest (ROI) in the brains of primates, and tends to focus on interspecific analyzes. In asking and answering questions of interspecific scaling, it is necessary to understand intraspecific scaling. Using over 100 published datasets, I analyzed 48 ROIs in the brains of healthy human adults to understand both [1] relative scaling in the human brain and [2] variability in human brains. I produced allometric equations (OLS and RMA), correlation coefficients, and measures of variation. While for some ROIs there appears to be consistency across studies, more often my findings demonstrate that there exists a high level of variability among datasets that measure the same ROI. The study addresses a number of inconsistencies in the framework of measurement error and statistical bias. Addressing these issues is crucial to our understanding of human brain evolution. This work is ongoing. REP funds paid for my summer salary, permitting uninterrupted research brain is simply a large primate brain.

**Publications:** Jennifer A. Summers-"Application of a novel endonuclease sensitivity assay to identify new genes that affect DNA repair and chromosome stability"-May, 2008

Rachel D. Roberts-"Development of new assays to identify *Saccharomyces cerevisiae* genes required for efficient repair of a single site-specific DNA double-strand break"-May, 2008

**Student Number:** 3