The Genetic Analysis of Appetite Regulation and the Gut Brain Axis

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A study concerning “the gut-brain axis: interactions between enteric microbiota, central and enteric nervous systems” (NCBI, 2015) defines the gut-brain axis connection as, the gut-brain axis (GBA) consists of bidirectional communication between the central and the enteric nervous system, linking emotional and cognitive centers of the brain with peripheral intestinal functions. Recent advances in research have described the importance of gut microbiota in influencing these interactions. Research was conducted after investigating this medical connection, and wanted to find correlations between the genetic interactions involved. Qualitative Trait Loci (QTL) of Agouti-related Neuropeptide Expression in the Hypothalamus (Agrp), and Neuropeptide Y Expression in the Hypothalamus was conducted. While testing, genes specifically associated with Agrp and Npy (as stated in introduction and background) are analyzed within the data. This study is conducted using R software, specifically Rstudio.