STAINING RAT BRAIN TISSUE FOR MARKERS OF LONG TERM LTP, A JOURNEYMAN HISTOLOGISTS TALE.  Jacob Blagg, George Weistroffer & Mark Baron, Department of Veterans Affairs. Long term potentiation (LTP) is important for inducing plastic change in the brain, with L-LTP indicating long lasting plasticity. Quantification of LTP via biomarkers is needed to evaluate the efficacy of a novel TMS treatment in a rodent model of parkinsonism. The molecule GluA2 is a good biomarker for LTP as it is expressed in higher densities when LTP occurs. Histological techniques were explored for staining GluA2 in brain tissue that was then imaged and analyzed to compare treated tissue with controls. This presentation will cover challenges encountered during the development of a staining protocol for LTP and how these challenges were addressed.  Author contact: Jacob Blagg [jacob.blagg@va.gov](mailto:jacob.blagg@va.gov)