

## A FMRI PILOT STUDY ON POWER-LINE MAGNETIC FIELDS AND BRAIN ACTIVATION

10 subjects will be tested in our 1.5 T MRI scanner (Siemens Avanto, Erlangen, Germany) at rest, and while performing Stroop and finger tapping tasks, by July, 2007. They will complete a 1.5 hr session: 30 minutes of testing, 30 minutes of exposure (active or sham) and another 30 minutes of testing. ASL (Arterial spin labeling) images will be collected at rest, and BOLD (blood oxygenation level dependent) images for finger tapping and Stroop tasks. The exposure (active or sham) will consist of a 1800  $\mu$ T, 60 Hz magnetic field (MF) generated at the level of the head by the MR system itself. Five subjects will complete a sham–active session and five a sham–sham session. Subject awareness of the exposure will be tested using the Field Status Questionnaire (FSQ). BOLD and ASL images will be processed using dedicated software (Brain Voyager, Brain Innovation, The Netherlands, <http://www.brainvoyager.com>). Activation maps will be compared using within-subjects analysis including a between-subjects factor (group). To date, two subjects have performed a finger tapping task before and after 15 minutes of exposure. Activation maps show less motor cortex activation following exposure, but no statistical comparison has been performed yet. Preliminary Results will be presented at the meeting.