Application Title: Sensory evoked potentials as a biomarker in CDKL5

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The Laboratories of Cognitive Neuroscience and clinical CDKL5 Center of Excellence at Boston Children’s Hospital are collaborating on a new study titled “Sensory Evoked Potentials as a Biomarker in CDKL5.” The purpose of this research study is to understand how the brains of children and young adults with CDKL5 disorder process sensory information in comparison to children and young adults who are typically developing. In order to better understand how these individuals process sensory information, they will participate in a test called an electroencephalogram (EEG) that detects electrical activity in the brain using small sponges that rest on the scalp. Cells in the brain called neurons communicate via electrical impulses that can be detected using this test. Through the use of the EEG and other related tests, we can examine how the brain responds to different sounds and images. This information will allow us to gain a greater understanding of how the brains of those with CDKL5 disorder process both visual and auditory information and how this may change over time. We hope that this information can be used to measure the effectiveness of future treatments developed for CDKL5 disorder.