

PIONEERS IN BIOMEDICAL RESEARCH SEMINAR

Presented by the Fralin Biomedical Research Institute at VTC and co-sponsored by the institute's Center for Human Neuroscience Research



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Virtual Seminar: Electrophysiology of Basal Ganglia and Thalamus in Children Undergoing DBS for Dystonia

To improve the targeting of DBS in children with varying etiologies of dystonia including secondary acquired dystonia, Dr. Sanger and his team implant up to 12 temporary stereo EEG depth electrodes through which they can perform test stimulation and electrophysiological monitoring while children are awake and unrestrained in a neuromodulation monitoring unit. This new surgical procedure provides the opportunity to investigate patterns of electrical activity in potential DBS targets, with high-resolution recording from up to 120 contacts in the basal ganglia and thalamus. Dr. Sanger will report data from 38 children and young adults, including single spike recordings, power spectral densities, cross-coherence, and stimulus-averaged evoked potentials. His lab's results do not support generalized inhibition of thalamic motor areas by basal ganglia in our patients. Furthermore, in contrast with historical data from nonhuman primates, almost all of his patients with dystonia have very low activations of internal pallidum at rest. The lab's results provide evidence for a complex interaction between internal pallidum and the motor subnuclei of the thalamus in children with dystonia.

FRIDAY, DEC. 9 at 11 a.m.

Watch live via Zoom at <https://FralinBioMed.info/PBR-Join>



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