Inhibitory Interneuron Dysfunction Drives Seizures in SCN8A Epilepsy

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SCN8A encephalopathy is a severe epilepsy syndrome. Patients exhibit intellectual disability, motor impairment, and seizures that are difficult to treat with anti-seizure medications. Gaining clarification of the precise mechanisms of disease is warranted to help generate novel treatment strategies. Although previously thought to be unaffected in SCN8A encephalopathy, this presentation will highlight new evidence that inhibitory interneurons are dysfunctional in SCN8A encephalopathy, and that their abnormal activity is sufficient to drive behavioral seizures. Overall, this mechanistic insight will importantly contribute to ongoing efforts to understand and treat SCN8A encephalopathy.

Eric Wengert graduated from Bucknell University in 2016 with a BS in Neuroscience, and is now a fifth-year neuroscience PhD student under the mentorship of Dr. Manoj Patel at the University of Virginia. Eric was briefly affiliated with EMU as an Adjunct Professor of Neuropsychology in the Biology department in 2020. After his anticipated graduation from UVA in May 2021, Eric will join the lab of Dr. Ethan Goldberg at the Children’s Hospital of Philadelphia as a Postdoctoral Fellow. Eric lives in Charlottesville with his wife Ellie and his cat Finley who regularly makes cameos on his Zoom calls.