

# ERIC R. WENGERT PHD

## EDUCATION AND TRAINING

---

<b>Children's Hospital of Philadelphia</b> Postdoctoral Fellow Advisor: Ethan M. Goldberg MD PhD	<i>July 2021-present</i>
<b>University of Virginia</b> PhD in Neuroscience Advisor: Manoj K. Patel PhD Committee: Jaideep Kapur, Howard Goodkin, Mark Beenhakker, and Ali Guler Thesis: <i>Mechanisms and Treatment of SCN8A Epileptic Encephalopathy</i>	<i>July 2016 - May 2021</i> Overall GPA: 4.0
<b>Bucknell University</b> B.S. in Neuroscience Minor in Philosophy	<i>August 2012 - May 2016</i> Overall GPA: 3.99

## FELLOWSHIPS AND SCHOLARSHIPS

---

<b>F32 Ruth L. Kirschstein National Research Service Award</b> NIH Postdoctoral training fellowship	<i>October 2021</i>
<b>F31 Ruth L. Kirschstein National Research Service Award</b> NIH Predoctoral training fellowship	<i>June 2019</i>
<b>Presidential Fellowship for Collaborative Neuroscience</b> One-year predoctoral fellowship. Declined due to F31 NRSA fellowship.	<i>July 2019</i>
<b>Double-Hoo Research Award</b> Collaborative grant between one undergraduate and one graduate student at the University of Virginia	<i>May 2019</i>
<b>Robert R. Wagner Fellowship</b> One-year fellowship awarded to an outstanding graduate student at the University of Virginia	<i>June 2018</i>
<b>Bucknell Dean's Scholarship</b> Academic scholarship	<i>August 2012</i>
<b>Robison Memorial Scholarship</b> Academic scholarship	<i>April 2012</i>
<b>Lenfest College Scholarship</b> Academic scholarship	<i>April 2011</i>

## ACADEMIC AWARDS AND HONORS

---

<b>Cute Syndrome Foundation Cuties Award</b> Annual award given to honor an individual who is a Champion for Understanding, Treating, Investigating, and Empowering those with SCN8A epilepsy	<i>December 2021</i>
<b>UVA Neuroscience Graduate Program Outstanding Student Award</b>	<i>May 2021</i>
<b>Z Society Graduate Student Dinner Honoree</b>	<i>March 2019</i>
<b>Outstanding Faculty Research Presentation</b> University of Virginia Department of Anesthesiology Celebration of Research Symposium	<i>May 2018</i>

<b>Bucknell University Prize for Men</b> Awarded to the male of the graduating class with the highest cumulative GPA	<i>May 2016</i>
<b>Bucknell University Prize in Neuroscience</b> Awarded to the member of the graduating class demonstrating excellence in neuroscience	<i>May 2016</i>
<b>Bucknell University Award for Academic Excellence</b> Awarded to the Residential Advisor with the highest cumulative GPA	<i>May 2015 and 2016</i>
<b>President's Award for Distinguished Academic Achievement</b> Awarded to students achieving a perfect 4.0 cumulative GPA	<i>September 2013 and 2014</i>

## TEACHING EXPERIENCE

---

<b>Adjunct Professor Eastern Mennonite University</b> BIOL451/PSYC451 Neuropsychology	<i>January-May 2020</i>
<b>Neuroanatomy Instructor</b> Instructed first-year medical students at UVA in neuroanatomy	<i>annually in March 2018-2021</i>
<b>Guest Lecturer Fundamentals of Neuroscience</b> Delivered lecture to first-year neuroscience PhD students at UVA on ion channels, neurophysiology, and electrophysiology	<i>February 2019</i>
<b>Introduction to Neuroscience Teaching Assistant</b> Instructed first-year students at Bucknell in basic neuroscience concepts	<i>September 2013</i>

## PROFESSIONAL MEMBERSHIPS

---

<b>International Neuroethics Society</b> Member	<i>October 2021-Present</i>
<b>Sigma Xi</b> Member	<i>September 2021-Present</i>
<b>American Epilepsy Society</b> Member	<i>December 2017-Present</i>
<b>Phi Beta Kappa</b> Member	<i>May 2015-Present</i>

## SERVICE

---

<b>International SCN8A Alliance</b> Member, Board of Directors	<i>July 2021-Present</i>
<b>UVA Neuroscience Graduate Program Admissions Committee</b> Member	<i>December 2018-February 2019</i>

## INVITED RESEARCH TALKS

---

<b>Cute Syndrome Foundation Family, Researcher, Clinician Gathering</b>	<i>December 2021</i>
<b>Suter Science Seminar Series Guest Speaker</b> Eastern Mennonite University	<i>April 2021</i>
<b>Platform Presentation American Epilepsy Society</b> Research seminar presented for session on Translational Research/Genetics.	<i>December 2020</i>

## SCIENTIFIC OUTREACH

---

- Guest Speaker** *October 2021*  
Introduction to neuroscience presentation to high school seniors at Tech Freire Public Charter High School in Philadelphia.
- Cute Syndrome Foundation Invited Speaker** *December 2018-2021*  
Lecture delivered to families of children with SCN8A Epileptic Encephalopathy at annual research roundtable gathering
- Authentic Applications Speaker Series** *December 2019*  
Lecture delivered to Charlottesville High School math and science teachers
- Brain Awareness Week** *2017-Present*  
K-12 classroom neuroscience demonstrations

## TRAINEES

---

- Anusha Saga** *January 2018- May 2019*  
Third-year medical student at the University of Maryland School of Medicine
- Samantha Strohm** *September 2018- May 2020*  
First-year medical student at Eastern Virginia Medical School  
*Harrison Research Award recipient*
- Abrar Majidi Idrissi** *January 2019-May 2020*  
Second-year MS student at Marian University  
*Double-Hoo Research Award recipient*
- Nuha Reza** *September 2019-May 2021*  
First-year student MS at Eastern Mennonite University
- Raquel Miralles** *September 2020-May 2021*  
Second-year Neuroscience PhD Student at the University of Virginia
- Melody Cheng** *January 2022-Present*  
First-year student at the University of Pennsylvania

## POSTER PRESENTATIONS

---

- Eric Wengert**, Xin Tang, and Rudolf Jaenisch (2015). Gene expression, morphological, and functional characterization of human wild-type and isogenic Rett Syndrome astrocytes.
- Eric Wengert**, Anusha Saga, Payal Panchal, Bryan Barker, Ronald Gaykema, Miriam Meisler, and Manoj Patel (2018). Prax330 (GS-967) reduces persistent and resurgent sodium channel currents and neuronal excitability in a mouse model of SCN8A encephalopathy.
- Eric Wengert**, Samantha Strohm, and Manoj Patel (2019). Somatostatin-positive inhibitory interneuron excitability is impaired in SCN8A encephalopathy.
- Eric Wengert**, Pravin Wagley, Samantha Strohm, Nuha Reza, Ian Wenker, Ronald Gaykema, and Manoj Patel (2020). Targeted augmentation of nuclear gene output (TANGO) of SCN1A reduces seizures and rescues parvalbumin positive interneuron firing frequency in a mouse model of dravet syndrome. \*Selected for a platform presentation at the American Epilepsy Society annual conference

## PUBLICATIONS

---

### PEER-REVIEWED RESEARCH ARTICLES

---

Xin Tang, Julie Kim, Li Zhou, **Eric Wengert**, Lei Zhang, Zheng Wu, Cassiano Carromeu, Alysso R. Muotri, Fred H. Gage, and Gong Chen (2016). KCC2 rescues functional deficits of human neurons derived from Rett syndrome patients. *Proc Natl Acad Sci USA*. 2016 Jan 5.

Jacy Wagnon, Niccolo Mancacci, Bryan Barker, **Eric Wengert**, Manoj Patel, and Miriam Meisler (2018). Partial loss-of-function of sodium channel SCN8A in familial isolated myoclonus. *Human Mutation*. 2018 May 18.

Erin Baker, Christopher Thompson, Nicole Hawkins, Jacy Wagnon, **Eric Wengert**, Manoj Patel, Alfred George, Miriam Meisler, Jennifer Kearney (2018). The novel sodium channel modulator GS-458967 (GS967) is an effective treatment in a mouse model of SCN8A encephalopathy. *Epilepsia*. 2018 May 21.

Rosie Bunton-Stasyshyn\*, Jacy Wagnon\*, **Eric Wengert**, Bryan Barker, Alexa Faulkner, Pravin Wagley, Kritika Bhatia, Julie Jones, Marissa Maniaci, Jack Parent, Howard Goodkin, Manoj Patel, and Miriam Meisler (2019). Prominent role of forebrain excitatory neurons in SCN8A encephalopathy. *Brain*. 2019 Jan 2.

**Eric Wengert**, Anusha Saga, Payal Panchal, Bryan Barker, Ronald Gaykema, and Manoj Patel (2019). Prax330 reduces persistent and resurgent sodium channel currents and neuronal excitability in a mouse model of SCN8A encephalopathy. *Neuropharmacology*. 2019 July 3.

**Eric Wengert\***, Cathrine Tronhjem\*, Jacy Wagnon, Katrine Johannesen, Hayley Petit, Ilona Krey, Anusha Saga, Payal Panchal, Samantha Strohm, Jorn Lange, Sussanne Kamphausen, Guido Robboli, Johannes Lemke, Elena Gardella, Manoj Patel, Miriam Meisler, and Rikke Moller (2019). Biallelic inherited SCN8A variants, a rare cause of developmental and epileptic encephalopathy. *Epilepsia* 2019 October 18.

Ian Wenker, Frida Teran, **Eric Wengert**, Pravin Wagley, Payal Panchal, Elizabeth Blizzard, Priyanka Saraf, Jacy Wagnon, Howard Goodkin, Miriam Meisler, George Richerson, and Manoj Patel (2021). Postictal death is associated with tonic phase apnea in a mouse model of SUDEP. *Annals of Neurology*. 2021 Feb 18.

**Eric Wengert\***, Ian Wenker\*, Elizabeth Wagner, Pravin Wagley, Ronald Gaykema, Jung-Bum Shin, and Manoj Patel (2021). Adrenergic mechanisms of seizure-induced sudden death in a mouse model of SCN8A encephalopathy. *Frontiers in Neuroscience*. 2021 March 4.

**Eric Wengert**, Raquel Miralles, Kyle Wedgwood, Samantha Strohm, Payal Panchal, Abrar Majidi Idrissi, Ian Wenker, Pravin Wagley, Jeremy Thompson, Ronald Gaykema, and Manoj Patel (2021). Somatostatin-positive interneurons contribute to seizures in SCN8A epileptic encephalopathy. *The Journal of Neuroscience*. 2021 Sept 20.

Jeremy Thompson, Raquel Miralles, **Eric Wengert**, Pravin Wagley, Wenxi Yu, Ian Wenker, and Manoj Patel (2021). Astrocyte reactivity in a mouse model of SCN8A epileptic encephalopathy. *Epilepsia Open*. 2021 Nov 26.

**Eric Wengert**, Pravin Wagley, Anne Christiansen, Samantha Strohm, Nuha Reza, Ian Wenker, Ronald Gaykema, Gene Liau, and Manoj Patel (2021). Targeted augmentation of nuclear gene output (TANGO) of Scn1a rescues parvalbumin interneuron excitability and reduces seizures in a mouse model of Dravet syndrome. *Brain Research*. 2021 Nov 26.

Keisuke Kaneko, Christopher Currin, Kevin Goff, Ala Somarowthu, **Eric Wengert**, Tim Vogels, and Ethan Goldberg (2022). Developmentally-regulated impairment of parvalbumin interneuron

synaptic transmission in an experimental model of Dravet syndrome. Revised manuscript in preparation for *Cell Reports*.

Mohan Manjgowda\*, Jonathan Joy-Gaba\*, **Eric Wengert**, Anusha Saga, Daniel Warthen, Ronald Gaykema, Manoj Patel, and Michael Scott (2022). DNA methyltransferase 1 and 3a expression in the frontal cortex regulates palatable food consumption. Manuscript in review at *Scientific Reports*.

#### PEER-REVIEWED REVIEW ARTICLES

---

**Eric Wengert** and Manoj Patel (2020). The role of the persistent sodium current in epilepsy. *Epilepsy Currents*. 2020 Nov 25.

#### SCIENTIFIC COMMENTARY ARTICLES

---

**Eric Wengert** (2021). Mentor as you'd want to be mentored. *Science*. 2021 Feb 19.

**Eric Wengert** and Manoj Patel (2021). One size doesn't fit all: Variant-specific effects in SCN8A encephalopathy. *Epilepsy Currents*. 2021 March 16.

**Eric Wengert** (2021). Learning to unplug. *Science*. 2021 Aug 20.

#### PATENTS

---

Alpha-1 adrenergic receptor agonists to prevent seizure-induced sudden death. U.S. Provisional Pat. Ser. No. 63/136,439, filed 2021 Jan 12.