

# Kevin J. Mastro

Department of Neurology  
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## CURRENT POSITION

**2017-Present** | Harvard Medical School, Boston Children's Hospital, Boston, MA  
Postdoctoral Fellow, Department of Neurobiology  
Advisors: Drs Beth Stevens and Bernardo Sabatini

## EDUCATION

**2017** | University of Pittsburgh  
Center for Neuroscience at the University of Pittsburgh  
Dissertation: Behavioral and synaptic plasticity of genetically distinct populations of GPe neurons in health and disease  
Contributions to Science:  
1.Established the first genetic strategy to differentiate subpopulations of neurons in the external segment of the globus pallidus (GPe) (Mastro et al., 2014)  
2.Demonstrated the neuronal subpopulations differ across a range of parameters: electrophysiological properties, topographic organization and axonal projection patterns (Mastro et al., 2014)  
3.Cell-specific manipulations in the GPe provides long-lasting relief from immobility in a rodent model of Parkinson's disease and the inhibition of one of the subpopulations is necessary for the induction and maintenance of this recovery in motor function (Mastro et al., 2017).

**2012** | University of Connecticut  
B.S. in Biological Sciences and Psychology, Research Track (graduated cum laude with honors)  
Minor in Behavioral Neuroscience  
Honors Thesis: *Simultaneous recordings of single unit activity in CA1 and CA2 in the Ventral and Dorsal subregions of the hippocampus*  
Extracurricular Activities: College Admissions Liaison and tour guide with University of Connecticut Admissions Office; President of Kappa Kappa Psi (Service Fraternity); Principal drum major of the University of Connecticut marching band

## PUBLICATIONS

**2019** | Willard, A. M., Isett, B. R., Whalen, T. C., **Mastro, K. J.**, Ki, C. S., Mao, X., & Gittis, A. H. (2019). State transitions in the substantia nigra reticulata predict the onset of motor deficits in models of progressive dopamine depletion in mice. *eLife*, 8, e42746.

**2017** | **Mastro, K. J.**, Zitelli, K. T., Willard, A. M., Leblanc, K. H., Kravitz, A. V., & Gittis, A. H. (2017). Cell-specific pallidal intervention induces long-lasting motor recovery in dopamine-depleted mice. *Nature Neuroscience*, 20(6), 815-823.

**2015** | **Mastro, K.J.** and Gittis, A.H., 2015. Striking the right balance: cortical modulation of the subthalamic nucleus-globus pallidus circuit. *Neuron*, 85(2), pp.233-235.

**2014** | **Mastro, K.J.**, Bouchard, R.S., Holt, H.A. and Gittis, A.H., 2014. Transgenic mouse lines subdivide external segment of the globus pallidus (GPe) neurons and reveal distinct GPe output pathways. *The Journal of neuroscience*, 34(6), pp.2087-2099

## TEACHING EXPERIENCE

<b>2019, 2020</b>	Teaching Fellow, Neurophysiology (MCB 115) Responsibilities: Lead lab sections, organized and delivered lectures, held office hours Department of Neuroscience, Harvard University, Cambridge, MA 02138
<b>2016, 2017</b>	Teaching Assistant: Neuroanatomy for Medical Students (Year 1) Responsibilities: Assisted in labs and dissections, taught weekly workshops, held office hours Department of Neurobiology University of Pittsburgh, Pittsburgh, PA USA
<b>2014</b>	Teaching Assistant: Neurophysiology (NROSCI 2012) Responsibilities: Organized and taught weekly discussion groups (~65 students), assisted in lectures, held office hours, produced testing material and grading Department of Neuroscience University of Pittsburgh, Pittsburgh, PA USA
<b>2012-Present</b>	<b>Mentor undergraduate students:</b> Fall, spring and summer research terms Responsibilities: Organize projects, provide individual instruction, and promote intellectual curiosity and autonomy Department of Biological Sciences, Carnegie Mellon University, Pittsburgh, PA

## SELECTED AWARDS AND HONORS

<b>2019-2021</b>	Tommy Fuss Center for Neuropsychiatric Disease, Fuss Center, Boston, MA USA
<b>2019-2020</b>	William Randolph Hearst Fund Award, Harvard Medical School, Boston, MA USA
<b>2014-2017</b>	Ruth L. Kirschstein Predoctoral Individual National Research Service Award (NRSA) National Institute of Neurological Disorders and Stroke (NINDS), Bethesda, MD USA
<b>2014</b>	McClelland Prize for Most Outstanding Poster Center for Neural Basis of Cognition, University of Pittsburgh & Carnegie Mellon University, Pittsburgh, PA USA
<b>2012</b>	Gelinas Alumni Scholarship for Research in Biomedical sciences Gelinas Academic and Research Committee, Webster, MA USA
<b>2012</b>	Honors Scholar, Biological Sciences & Psychology University of Connecticut, Storrs, CT USA
<b>2012</b>	Alumni Association Award for Excellence in Academics and Leadership University of Connecticut, Storrs, CT USA
<b>2011</b>	Induction in Psi Chi, International Honor Society in Psychology University of Connecticut, Storrs, CT USA
<b>2010</b>	Behavioral Neuroscience Travel Grant Department of Psychology, University of Connecticut, Storrs, CT USA
<b>2010</b>	Undergraduate Psychology Research Grant Department of Psychology, University of Connecticut, Storrs, CT USA
<b>2010</b>	Sophomore Honors Certificate Honors College, University of Connecticut, Storrs, CT USA
<b>2008</b>	University of Connecticut Award University of Connecticut, Storrs, CT USA
<b>2008</b>	Gelinas Undergraduate Scholarship for Excellence in Mathematics and Science Gelinas Academic and Research Committee, Webster, MA USA

## SERVICE ACTIVITIES

### University Service

<b>2018-Present</b>	STEM Committee, Non-Resident Tutor Adams House, Harvard University, Cambridge, MA 02138
<b>2016</b>	Graduate Program Admissions, Executive Member Center for Neuroscience, University of Pittsburgh, Pittsburgh, PA USA
<b>2016</b>	Student Invited Colloquium, Chair Center for Neural Basis of Cognition, University of Pittsburgh & Carnegie Mellon University, Pittsburgh, PA USA
<b>2015</b>	Social Community, Co-Chair Center for Neural Basis of Cognition, University of Pittsburgh & Carnegie Mellon University, Pittsburgh, PA USA
<b>2015</b>	Annual CNUP Retreat, Executive Member

	Center for Neuroscience, University of Pittsburgh, Pittsburgh, PA USA
<b>2012-2014</b>	Pitt/UPMC Health Sciences LGTQI Alliance, Executive Member University of Pittsburgh, Pittsburgh, PA

Educational Outreach

<b>2012-2017</b>	Science Fair Judge Participate actively in local, region to national (i.e. ISEF) science fairs Greater Pittsburgh Area, PA USA
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<b>2012-2017</b>	Brain Outreach Program, Member Provides hands-on tutorials for middle to high school students throughout the Greater Pittsburgh Area, University of Pittsburgh, Pittsburgh, PA USA
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