

Ryan T. Maloney

Department of Neuroscience
Brown University
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Education

2011-Present	PhD Program in Neuroscience (In Progress)	Brown University
2007-2011	BS/MS Program in Neuroscience	Brandeis University

Research Experience

2011-Present	Thesis Work	Berson Lab, Brown University
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I am seeking to characterize thalamic relay neurons driven by intrinsically photosensitive retinal ganglion cells in order to better understand the processing of absolute luminance in the thalamocortical visual system and identify and manipulate parallel channels in the dLGN.

2009-2011	Undergraduate Researcher	Marder Lab, Brandeis University
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I investigated the distribution and physiological affect of the neuropeptide AST-B on the crustacean stomatogastric nervous system in *C. borealis* and *H. americanus* using a variety of techniques, including extracellular and sharp electrode intracellular recording, immunohistochemistry, and confocal microscopy.

Publications and Presentations

Maloney, R. T., Cruickshank, S., Berson, D. M. (2017, May 8). Properties of retinogeniculate synapses of intrinsically photosensitive retinal ganglion cells. Paper Presentation: ARVO Annual Meeting. Baltimore.

Maloney, R. T., Yoon, J. S., Berson, D. M. (2015, May 7). A Viral Method for Optogenetic Control of Intrinsically Photosensitive Retinal Ganglion Cells. Poster session: ARVO Annual Meeting. Denver.

Szabo, T. M., Chen, R., Goeritz, M. L., **Maloney, R. T.**, Tang, L. S., Li, L., Marder, E. (2011). Distribution and physiological effects of B-type allatostatins (myoinhibitory peptides, MIPs) in the stomatogastric nervous system of the crab, *Cancer borealis*. *Journal of Comparative Neurology*, 519(13), 2658–2676.

Maloney, R.T., Goeritz, M., Szabo, T., Marder, E. Localization and Effects of B-Type Allatostatin Peptides in the Stomatogastric Nervous System. Poster session: Society for Neuroscience Meeting 2010 Nov. 13-17; San Diego, CA.

Certificates and Awards

2011-Present	Sheridan Certificate Program (1, 2, 3, 4 & 5)	Brown University
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I have completed 5 year long certificate programs at the Sheridan Center, covering teaching fundamentals, course design, professional development, critical observation of teaching, and mentoring.

2015 ARVO MIT Outstanding Poster Finalist ARVO 2015 Annual Meeting
I was one of five visual neuroscience finalist posters selected among graduate students and postdocs as an outstanding poster.

2015 Retina Research Foundation Travel Award ARVO 2015 Annual Meeting
I was selected for a competitive travel award to the ARVO 2015 Annual Meeting.

Teaching Experience

2014-2016 Instructor, Computer Modeling of the Brain Summer@Brown, Brown University
I designed and taught a 3 week course meeting every day for 3 hours for high school students (12 students in 2014, 21 students in 2015 and 2016) as part of the Summer@Brown program. In this course, students learned to create simple models of neurons in MATLAB in the context of a variety of topics in Neuroscience.

2014-2016 Guest Lecture: Learning and Memory Summer@Brown, Brown University
Each year, I gave guest lectures on the neuroscience of learning and memory for Neuroscience in Health and Disease, a Summer@Brown class for \approx 30 high school students.

2015 Guest Lecture: Cellular Anatomy Department of Neuroscience, Brown University
I taught the cellular anatomy lecture in NEUR1650, Structure of the Nervous System, a neuroanatomy course designed for undergraduate and graduate students. I covered the different parts of neurons and glia and their functional roles, as well as different methodologically techniques to stain and image the different parts of neurons.

2012-present Neuroscience Outreach Department of Neuroscience, Brown University
I have given a number of lectures on gross anatomy (x3), the visual system (x1), and optical illusions (x2) as part of Brown University's outreach to local high schools and the RI Brain Bee.

2013 Guest Lecture: Brain Stem Department of Neuroscience, Brown University
I taught the brain stem lecture in NEUR1650, Structure of the Nervous System, a neuroanatomy course designed for undergraduate and graduate students. I covered major structures and landmarks in the brainstem, as well as discussed the functions of many brain areas and their clinical relevance.

2013 TA: Neurobiology of Learning and Memory Department of Neuroscience, Brown University
I served as TA for NEUR 1540, Neurobiology of Learning and Memory, and undergraduate course covering primary research into the processes of learning. In addition to office hours and grading, I also guest lectured three classes on emotional memory and fear learning and one class on computer models of memory

Mentoring Experience

2014-Present Undergraduate Mentor Berson Lab, Brown University
I have mentored two undergraduates, James Yoon and Maikerly Reyes, teaching them ocular virus injections, eye dissections, immunohistochemistry, and chronic drive and headpost surgeries. As part of their mentorship, I have additionally taught them about the visual system and engaged in regular review of the primary literature with them.

2010 Mentoring Summer Student Marder Lab, Brandeis University
I supervised a visiting summer student from Puerto Rico and taught her basic electrophysiology and histology with respect to our research on the lobster Stomatogastric Ganglion.

Professional Development

2015 Co-Facilitator, Certificate IV Program Sheridan Center, Brown University
I co-led the Certificate IV program, training graduate students to observe and provide constructive feedback to their peers.

2014-Present Head TC for the Sciences Sheridan Center, Brown University
As Head TC for the Sciences, I help organize and facilitate the Certificate IV program for peer observation at the Sheridan Center.

2015 & 2016 Co-Facilitator, Certificate I Program Sheridan Center, Brown University
I co-led the Certificate I program in the Springs of 2015 and 2016, organizing lectures and workshops on the topics of grading and evaluating student learning and teaching as persuasive communication.

2013-Present Sheridan Certificate I Discussion Leader Sheridan Center, Brown University
I facilitated discussions with graduate students in the Certificate 1 Program, where I provided more in depth knowledge of the material covered in the lectures and readings for the program and facilitated a dialogue among students in different fields, with the aim of them developing as teachers through reflective practice and learning from other disciplines.

Research Skills

- Programming Languages: Matlab, Python, C++
- Intracellular recordings
- *In vivo* and *in vitro* extracellular recordings
- Immunohistochemical Staining Technique
- Ocular Viral and Dye Injections
- Confocal Microscopy

Service

- Neuroscience Graduate Student Liaison; Sheridan Center for Teaching and Learning
- Student Organizer, Neuroscience Graduate Program Retreat