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Publications: 48 Citations: 2275 h-index: 26

**Education**

2008 PhD, Johns Hopkins University, Baltimore, MD  
 2003 BA, University of Illinois at Urbana-Champaign, Urbana, IL

**Positions**

2020- Associate Professor, Boston College, Chestnut Hill, MA  
 2014-2020 Assistant Professor, Boston College, Chestnut Hill, MA  
 2011-2014 Postdoctoral Fellow, National Institute on Drug Abuse, Baltimore, MD  
 2008-2011 Postdoctoral Fellow, University of Maryland School of Medicine, Baltimore, MD  
 2003-2008 Graduate Student, Johns Hopkins University, Baltimore, MD

**Active Grants**

2023-2028 R01-MH117791, *Brainstem-forebrain networks and threat computation*  
 Role: PI  
 2023-2025 R21-MH133003, *An A8 dopamine-ventral pallidum threat circuit*  
 Role: PI

**Completed Grants**

2018-2023 R01-MH117791, *Early life stress, neuron-type function and a raphe-amygdala circuit for threat estimation*  
 Role: PI  
 2017-2019 R21-MH113053, *Retrorubral field control of fear*  
 Role: PI  
 2014-2018 R00-DA034010, *Neural encoding of reward and safety*  
 Role: PI  
 2012-2014 K99-DA034010, *Neural encoding of reward and safety*  
 Role: PI  
 2008-2011 T32-NS07375, *Cellular and integrative neuroscience*  
 Role: Postdoctoral Trainee  
 2005-2008 F31-MH075302, *Functional anatomy of appetitive and aversive conditioning*  
 Role: PI

**Completed Mentee Grants**

2018-2021 NSF 5106201, *Neural circuitry of threat probability in Pavlovian fear conditioning*  
 PI: Kristina Wright, Graduate Student  
 2019-2020 F31 MH118801, *Ventrolateral periaqueductal gray to central amygdala circuit for fear updating via prediction error*  
 PI: Rachel Walker, Graduate Student

## Awards & Activities

2023	Ad hoc Reviewer, National Science Foundation
2023-pres	Editorial Board Member, Learning & Memory (CSH Press)
2022	Reviewer, Human Frontiers Science Program
2022	Ad hoc Member, Neurobiology of Motivated Behavior Study Section
2020-pres	Pavlovian Society Member
2019-pres	Consulting Editor, Behavioral Neuroscience
2019-pres	External Reviewer, Canada Research Chairs Program
2019-pres	Ad hoc Reviewing Editor, eLife
2019-pres	Grant Reviewer, Netherlands Organisation for Scientific Research
2018-pres	Faculty Advisor, Nu Rho Psi Epsilon Chapter
2013	Grant Reviewer, French National Research Agency
2004-pres	Society for Neuroscience Member

## Peer Reviewer

Addictive Behaviors Reports, Behavioural Brain Research, Behavioral Neuroscience, Biological Psychiatry, Cerebral Cortex, Cerebral Cortex Communications, Current Biology, eLife, eNeuro, Frontiers in Human Neuroscience, Genes, Brains and Behavior, Journal of Experimental Psychology: General, Journal of Neurophysiology, Journal of Neuroscience, Journal of Neuroscience Research, Learning & Memory, Molecular Psychiatry, Nature Communications, Neurobiology of Learning and Memory, Neuropsychopharmacology, Neuroscience, Physiology & Behavior, Psychopharmacology, Science Advances, Scientific Reports, Translational Psychiatry

## Teaching

PSYC2285	Behavioral Neuroscience
PSYC3390	Neurobiology of Psychiatric Disorders
PSYC5587	Cellular Perspectives on Motivated Behavior

## Publications & Preprints

**McDannald MA** (2023). Pavlovian fear conditioning is more than you think it is. *Journal of Neuroscience*.

Wright KM, Cieslewski S, Chu A, **McDannald MA** (2023). Optogenetic inhibition of the caudal substantia nigra inflates behavioral responding to uncertain threat and safety. *Behavioral Neuroscience*.

Wright KM, Kantor CE, Moaddab M, **McDannald MA** (2023). Timing of behavioral responding to long duration Pavlovian fear conditioned cues. *bioRxiv*. doi.org/10.1101/2023.01.25.525456.

Strickland JS, **McDannald MA** (2022). Brainstem networks construct threat probability and prediction error from neuronal building blocks. *Nature Communications* 13, 6192.

Chu A, Michel CB, Gordon NT, Hanrahan KE, DuBois AM, Williams DC, **McDannald MA** (2022). A fear conditioned cue orchestrates a suite of behaviors. *bioRxiv*. doi.org/10.1101/2022.08.05.502178.

Walker RA, Suthard RL, Perison TN, Sheehan NM, Dwyer CC, Lee JK, Enabulele EK, Ray MH and **McDannald MA** (2022). Dorsal Raphe 5-HT Neurons Utilize, But Do Not Generate, Negative Aversive Prediction Errors. *eNeuro* 0132-21.2022.

Ray MH, Moaddab M, and **McDannald MA** (2022). Threat and bidirectional valence signaling in the nucleus accumbens core. *Journal of Neuroscience* 42 (5) 817-833.

**McDannald MA** (2021). Decision making: Serotonin goes for goal. *Current Biology*. 31(11): R726-727.

- Moaddab M, and **McDannald MA** (2021). Retrorubral field is a hub for diverse threat and aversive outcome signals. *Current Biology* 31(10): 2099-2110.
- Iordanova MD, Yau JOY, **McDannald MA** and Corbit LH (2021). Neural substrates of appetitive and aversive prediction error. *Neuroscience and Biobehavioral Reviews* 123: 337:351.
- Moaddab M, Ray MH and **McDannald MA** (2021). Ventral pallidum neurons dynamically signal relative threat. *Communications Biology* 4(1): 43.
- Strickland JS, DiLeo A, Moaddab M, Ray MH, Walker RA, Wright KM and **McDannald MA** (2021). Foot shock facilitates reward seeking in an experience-dependent manner. *Behavioural Brain Research* 399: 112974.
- Moaddab M, Wright KM, and **McDannald MA** (2020). Early adolescent adversity alters periaqueductal gray/dorsal raphe threat responding in adult female rats. *Scientific Reports* 10(1): 18035.
- Ray MH, Russ AN, Walker RA and **McDannald MA** (2020). The nucleus accumbens core is necessary to scale fear to degree of threat. *Journal of Neuroscience* 40(24): 4750-4760.
- Walker RA, Wright KM, Zhou TC and **McDannald MA** (2020). The ventrolateral periaqueductal gray updates fear via positive prediction error. *European Journal of Neuroscience* 51(3): 866-880.
- Wright KM, Zhou TC, Pimpinelli D and **McDannald MA** (2019). Cue-inhibited ventrolateral periaqueductal gray neurons signal fear output and threat probability in male rats. *eLife* 2019;8: e50054.
- Wright KM and **McDannald MA** (2019). Ventrolateral periaqueductal gray neurons prioritize threat probability over fear output. *eLife* 2019;8: e45013.
- Ray MH, Hanlon E and **McDannald MA** (2018). Lateral orbitofrontal cortex partitions mechanisms for fear regulation and alcohol consumption. *PLOS ONE* 13(6): e0198043.
- Walker RA, Andreansky C, Ray MH and **McDannald MA** (2018). Early adolescent adversity inflates threat estimation in females and promotes alcohol use initiation in both sexes. *Behavioral Neuroscience* 132(3): 171-182.
- Moaddab M, Mangone E, Ray MH and **McDannald MA** (2017). Adolescent alcohol drinking renders adult drinking BLA-dependent: BLA hyper-activity as contributor to comorbid alcohol use disorder and anxiety disorders. *Brain Sciences* 7(11): 151.
- Lopatina N, Sadacca BF, **McDannald MA**, Steyer CV, Peterson JF, Cheer JF, and Schoenbaum G. (2017). Ensembles in medial and lateral orbitofrontal cortex construct cognitive maps emphasizing different features of the behavioral landscape. *Behavioral Neuroscience* 131(3): 201-212.
- DiLeo A, Wright KM and **McDannald MA** (2016). Sub-second fear discrimination in rats: Adult impairment in adolescent heavy alcohol drinkers. *Learning & Memory* 23: 618-622.
- Lopatina N, **McDannald MA**, Steyer CV, Peterson J, Sadacca BF, Cheer JF and Schoenbaum G (2016). Medial orbitofrontal neurons preferentially signal cues predicting changes in reward during unblocking. *Journal of Neuroscience* 36(32): 8416-8424.
- Lopatina N, **McDannald MA**, Steyer CV, Sadacca BF, Cheer JF and Schoenbaum G (2015). Lateral orbitofrontal neurons acquire responses to upshifted, downshifted, or blocked cues during Pavlovian unblocking. *eLife* 10.7554/eLife.11299.
- Wright KM, DiLeo A and **McDannald MA** (2015). Early adversity disrupts the adult use of aversive prediction errors to reduce fear in uncertainty. *Frontiers in Behavioral Neuroscience* 9: 277.
- DiLeo A, Wright KM, Mangone E, **McDannald MA** (2015). Alcohol gains access to appetitive learning through adolescent heavy drinking. *Behavioral Neuroscience* 129(4): 371-9.

Cooch N, Stalnaker TA, Chaudry S, **McDannald MA**, Liu TZ, Wied H, Schoenbaum G (2015). Orbitofrontal lesions eliminate signaling of biological significance in cue-responsive ventral striatal neurons. *Nature Communications* 6: 7195.

**McDannald MA** (2015). Serotonin: Waiting but Not Rewarding. *Current Biology* 25(3): R103-104.

**McDannald MA**, Esber GR, Wegener MA, Wied H, Liu TL, Stalnaker TA, Jones JL, Trageser J and Schoenbaum G (2014). Orbitofrontal neurons acquire responses to 'valueless' Pavlovian cues during unblocking. *eLife* 10.7554/eLife.02653.

Berg BA, Schoenbaum G and **McDannald MA** (2014). The dorsal raphe nucleus is integral to negative prediction errors in Pavlovian fear. *European Journal of Neuroscience* 40: 3096-3101.

Stalnaker TA, Cooch NK, **McDannald MA**, Liu T, Wied H and Schoenbaum G (2014). Orbitofrontal neurons infer the value and identity of predicted outcomes. *Nature Communications* 5: 3926.

**McDannald MA**, Jones JL, Takahashi Y and Schoenbaum G (2014). Learning theory: a driving force in understanding orbitofrontal function. *Neurobiology of Learning and Memory* 108: 22-27.

**McDannald MA**, Setlow B and Holland PC (2013). Effects of ventral striatal lesions on first- and second-order appetitive conditioning. *European Journal of Neuroscience* 38: 2589-2599.

Jones JL, Esber GR, **McDannald MA**, Gruber AJ, Hernandez A, Mirenzi A, Schoenbaum G (2012). Orbitofrontal Cortex Supports Behavior and Learning Using Inferred but not Cached Values. *Science* 338(6109): 953-956.

**McDannald MA**, Takahashi Y, Lopatina N, Pietras B, Jones JL and Schoenbaum G (2012). Model-based learning and the contribution of the orbitofrontal cortex to the model-free world. *European Journal of Neuroscience* 35: 991-996.

Chang SE, **McDannald MA**, Wheeler DS, Holland PC (2012). The effects of basolateral amygdala lesions on unblocking. *Behavioral Neuroscience* 126 (2): 279-289.

Purgert RJ, Wheeler DS, **McDannald MA**, Holland PC (2012). Role of amygdala central nucleus in aversive learning produced by shock or by unexpected omission of food. *Journal of Neuroscience* 32 (7): 2461-2472.

Schoenbaum G, Liu TL, Takahashi Y, **McDannald MA** (2011). Does the orbitofrontal cortex signal value? *Annals of the New York Academy of Sciences*. 1239(1): 87-99.

**McDannald MA**, Whitt JP, Calhoun GG, Piantadosi PT, Karlsson RM, P O'Donnell and Schoenbaum G (2011). Impaired reality testing in an animal model of schizophrenia. *Biological Psychiatry* 70 (12): 1122-1126.

Singh T\*, Jones JL\*, **McDannald MA**, Haney RZ, Cerri DH and Schoenbaum G (2011). Normal aging does not impair orbitofrontal-dependent reinforcer devaluation effects. *Frontiers in Aging Neuroscience* 3 (4).

**McDannald MA**, Lucantonio F, Burke KA, Niv Y, and Schoenbaum G (2011). Ventral striatum and orbitofrontal cortex are both required for model-based, but not model-free, reinforcement learning. *Journal of Neuroscience* 31(7): 2700-2705.

**McDannald MA** and Galarce EM (2011). Measuring Pavlovian fear with conditioned freezing and conditioned suppression reveals different roles for the basolateral amygdala. *Brain Research* 1374: 82-89.

Singh T, **McDannald MA**, Takahashi YK, Haney RZ, Kooch NK, Lucantonio F, Schoenbaum G (2011). The role of the nucleus accumbens in knowing when to respond. *Learning & Memory* 18 (2): 85-87.

Singh T, **McDannald MA**, Haney RZ, Cerri DH, Schoenbaum G (2010). Nucleus accumbens core and shell are necessary for reinforcer devaluation effects on Pavlovian conditioned responding. *Frontiers in Integrative Neuroscience* 4(126): 1-7.

**McDannald MA** (2010). Contributions of the amygdala central nucleus and ventrolateral periaqueductal grey to freezing and instrumental suppression in Pavlovian fear conditioning. *Behavioural Brain Research* 211(1): 111-117.

Galarce EM, **McDannald MA**, and Holland PC (2010). The basolateral amygdala mediates the effects of cues associated with meal interruption on feeding behavior. *Brain Research* 1350: 112-122.

**McDannald MA** and Schoenbaum G (2009). Towards a model of impaired reality testing in rats. *Schizophrenia Bulletin* 35(4) 664-667.

**McDannald MA**, Saddoris M, Gallagher M, and Holland PC (2005). Lesions of orbitofrontal cortex impair rats' differential outcome expectancy learning but not CS-potentiated feeding. *Journal of Neuroscience* 25 (18): 4626-4632.

**McDannald M**, Kerfoot E, Gallagher M and Holland PC (2004). Amygdala central nucleus function is necessary for learning but not expression of conditioned visual orienting. *European Journal of Neuroscience* 20 (1): 240-8.

Changizi MA, **McDannald MA** and Widders D (2002). Scaling of differentiation in networks: Nervous systems, organisms, ant colonies, ecosystems, businesses, universities, cities, electronic circuits, and legos. *Journal of Theoretical Biology* 218 (2): 215-237.

## Presentations

Moaddab M, Jeon H and **McDannald MA**. Fear and reward intersect in the ventral pallidum. 2018 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2018. Online.

Wright KM, Cieslewski S and **McDannald MA**. Optogenetic inhibition of caudal substantia nigra globally inflates fear in multi-cue Pavlovian discrimination. 2018 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2018. Online.

Ray MH, Russ AN, Enabulele E, Lee E and **McDannald MA**. Roles for the nucleus accumbens core, and its Gad1 subpopulation, in adaptive scaling of fear. 2018 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2018. Online.

Zacharias RA, Park SH, Suthard R, Perison T and **McDannald MA**. Comparisons of vPAG cell body and midline/intralaminar thalamus terminal inhibition in positive prediction error signaling. 2018 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2018. Online.

**McDannald MA**, Zacharias RA and Wright KM. Ventrolateral periaqueductal gray neurons signal positive aversive prediction errors. 2017 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2017. Online.

Wright KM and **McDannald MA**. Ventrolateral periaqueductal gray neurons signal threat probability. 2017 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2017. Online.

Zacharias RA, Andreansky C, Ray MH and **McDannald MA**. Early life stress differentially impacts adult fear discrimination and increases alcohol drinking in male and female rats. 2017 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2017. Online.

Ray MH, Hanlon E, and **McDannald MA**. Lateral orbitofrontal cortex regulation of aversive prediction errors. 2017 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2017. Online.

**McDannald MA**, Wright KM, and DiLeo A. Sub-second fear discrimination in rats: Adult impairment in adolescent heavy alcohol drinkers. 2016 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2016. Online.

Wright KM and **McDannald MA**. The retrorubral field is necessary for accurate fear discrimination in Pavlovian conditioning. 2016 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2016. Online.

- Zacharias RA and **McDannald MA**. A causal role for the ventrolateral periaqueductal gray in aversive prediction error signaling. 2016 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2016. Online.
- Wright KM, DiLeo A and **McDannald MA**. Early adversity disrupts the adult use of prediction errors to reduce fear in uncertainty. 2015 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2015. Online.
- Lopatina N, **McDannald MA**, Sadacca BF and Schoenbaum G. Signaling prediction for size versus value of rewards in rodent orbitofrontal cortex during Pavlovian unblocking. 2014 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2014. Online.
- McDannald MA**, Schoenbaum G and Berg BA. The dorsal raphe nucleus is integral to negative prediction errors in Pavlovian fear. 2014 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2014. Online.
- Galarce EM, Lin WC, **McDannald MA** and Wilbrecht L. Early life food insecurity decreases flexibility in multiple choice reversal learning in adulthood. Flux Congress 2014, Hollywood, CA.
- McDannald MA**, Wegener M, Lucantonio F, Burke KA, Niv Y, Trageser J and Schoenbaum G. Different critical roles for ventral striatum and orbitofrontal cortex in learning driven by changes in value versus identity. National Institute on Drug Abuse 2012 Awards/Poster Session. Poster #23.
- McDannald MA**, Wegener M, Wied H, Liu TL, Stalnaker TA, Jones JL, Esber GR, Trageser J and Schoenbaum G. Signaling reward prediction for value and identity in rodent orbitofrontal cortex during Pavlovian unblocking. 2012 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2012. Online.
- Chang SE, Wheeler DS, **McDannald MA**, Setlow B and Holland PC. Comparing the effects of nucleus accumbens lesions on various measures of incentive. 2012 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2012. Online.
- McDannald MA**, Lucantonio F, Burke KA, Niv Y and Schoenbaum G. Different critical roles for ventral striatum and orbitofrontal cortex in learning driven by changes in value versus identity. 2010 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2010. Online.
- Chang SE, Wheeler DS, **McDannald MA**, Holland PC. The effects of basolateral amygdala lesions on unblocking. 2010 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2010. Online.
- Whitt JP, **McDannald MA**, Calhoun G, Karlsson R, O'Donnell P and Schoenbaum G. Impaired reality testing in an animal model of schizophrenia. 2010 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2010. Online.
- Singh T, **McDannald MA**, Haney RZ, Cerri DH and Schoenbaum G. An essential role for nucleus accumbens core in behaviors guided by outcome expectancies. 2010 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2010. Online.
- McDannald MA** and Holland PC. Conditioned suppression can be mediated by conditioned freezing or conditioned anxiety: Evidence from central amygdala and ventrolateral periaqueductal grey lesions. Program No. 191.4. 2009 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2009. Online.
- Galarce EM, **McDannald MA** and Holland PC. BLA but not CEA is involved in the control of meal interruption cues on feeding behavior. Program No. 943.2. 2007 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2007. Online.
- McDannald MA**, Galarce EM, Johnson J, Crombag HS and Holland PC. Effects of cues associated with surprising meal interruption on food consumption in mice. Program No. 934.24. 2007 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2007. Online.

Saddoris M, **McDannald MA**, Holland PC, Gallagher M. Gustatory cortex and basolateral amygdala show different patterns of expression for the representations of rewarding taste outcomes using the immediate early genes Arc and Homer1a. Program No. 934.29. 2007 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2007. Online.

**McDannald MA**, Lee JH, Petrovich GD, Haberman RP, Gallagher M, Holland PC. Distinct populations of basolateral amygdala neurons are activated by appetitive and aversive Stimuli. Poster No. 7. Bethesda, MD: National Institute of Mental Health Predoctoral Research Festival, 2006.

Saddoris MP, **McDannald M**, Gallagher M, Holland PC. Lesions of orbitofrontal cortex interfere with differential-outcome expectancy learning but not CS-potentiated feeding of rats. Program No. 771.9. 2004 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2004. Online.

**McDannald M**, Groshek F, Holland PC. The amygdala and dopaminergic modulation of conditioned orienting in rats. Program No. 206.9. 2004 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2004. Online.

## Talks

- 2023 Nov “(Unintentional) Contrarion neural and behavioral mechanisms for threat learning”. The University of Vermont, Burlington, Vermont, USA.
- 2021 Oct “The brainstem strikes back: threat computation in traditional fear output regions”. The Center for Depression, Anxiety and Stress Research, McLean Hospital, Belmont, Massachusetts, USA.
- 2021 Apr “Expanding the threat network”. Department of Biological Sciences, Konkuk University, Seoul, South Korea.
- 2020 Sept “Mapping neural circuits for threat”. Department of Psychological Sciences, Purdue University, West Lafayette, Indiana, USA.
- 2020 Jan “Retrorubral field is a hub for diverse threat and aversive outcomes signals”. 53<sup>rd</sup> Annual Winter Conference on Brain Research. Big Sky, Montana, USA.
- 2019 June “Threat estimation in the ventrolateral periaqueductal gray and retrorubral field”. 28th Annual International Behavioral Society Neuroscience Meeting, Cairns, Australia.
- 2018 May “Fear and reward intersect: Ventral striatal / ventral pallidal contributions to accurate and rapid fear discrimination”. 12th Annual Canadian Neuroscience Meeting, Vancouver, British Columbia, Canada.
- 2018 Mar “Ventral striatum, but not orbitofrontal cortex, is necessary for rapid fear discrimination”. 22<sup>nd</sup> Associative Learning Symposium, Gregynog, Wales, UK.
- 2017 Apr “A causal role for the ventrolateral periaqueductal gray in aversive, positive prediction error signaling”. 21<sup>st</sup> Associative Learning Symposium, Gregynog, Wales, UK.
- 2016 May “The dorsal raphe, early life stress and fear reduction via prediction errors”. Le Centre de recherche en neurosciences de l’Université du Québec à Montréal, Montreal, Quebec, Canada.
- 2016 Mar “Alcohol gains access to appetitive learning through adolescent heavy drinking.” Symposium on Reward Seeking. Eastern Psychological Association 2016 Meeting. New York City, New York, USA.
- 2015 Aug “The dorsal raphe, early adversity and fear reduction via prediction errors”. Computational Neuroscience Program, Brandeis University, Waltham, Massachusetts, USA.
- 2015 June “The dorsal raphe, early adversity and fear reduction via prediction errors”. The Center for Depression, Anxiety and Stress Research, McLean Hospital, Belmont, Massachusetts, USA.
- 2014 Nov “A central role for the dorsal raphe nucleus in overcoming fear”. Psychology Department, University of California – Berkeley, Berkeley, California, USA.

**PhDs Supervised**

2015-2020 Rachel A. Walker, Ph.D., NRSA Fellow  
 2016-2021 Madelyn H. Ray, Ph.D., Dean of Summer Session Teaching Fellowship 2020  
 2016-2021 Kristina M. Wright, Ph.D., NSF Fellow, WIL Graduate Woman in Learning 2019  
 2019- Amanda Chu, WIL Graduate Woman in Learning 2022  
 2021- Emma Russell

**Dissertation/Thesis Committee Member**

2022 May Danielle Lafferty, PhD, Department of Psychology & Neuroscience, Boston College  
 2020 Dec Krissy Lyon, PhD, Program in Neuroscience, Harvard Medical School  
 2019 May Nicholas Worley, PhD, Department of Psychology, Boston College  
 2019 May Seh Hong Lim, PhD, Anatomy & Neurobiology, Boston University School of Medicine  
 2019 Mar Morgan Rogers-Carter, PhD, Department of Psychology, Boston College  
 2019 Jan Allison Foilb, PhD, Department of Psychology, Boston College  
 2018 Apr Sara Keefer, PhD, Department of Psychology, Boston College  
 2018 May Andrew Fabiano, MA, Department of Psychology, Boston College  
 2017 May Patrick Davis, PhD, Sackler School of Graduate Biomedical Sciences, Tufts University  
 2016 June Morgan Freret, PhD, Program in Neuroscience, Harvard Medical School