Ryan J. Post

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EDUCATION

Cornell University Ithaca, NY

Ph.D., Neurobiology August, 2014 – May, 2020 *(expected)*

Advisor: Melissa R. Warden, Ph.D. | Committee Members: Ronald M. Harris-Warrick, Ph.D. · Jesse H. Goldberg, M.D., Ph.D. · Conor Liston, M.D., Ph.D. · GPA: 3.67/4.00

Providence College Providence, RI

B.S., Biology · *B.A.*, Psychology · *Certificate*, Neuroscience August, 2010 – May, 2014

GPA: 3.80/4.00 · Honors: *Magna cum laude* · Liberal Arts Honors Program Certificate · Rev. Charles V. Reichart Award · Alpha Epsilon Delta Pre-Health Honors Society · Sigma Xi Scientific Research Society · Psi Chi Psychology Honors Society

RESEARCH EXPERIENCE

Warden Laboratory Melissa R. Warden, Ph.D.

Ph.D. Candidate August, 2014—Present

I study the neural substrates of motivated behavior in a mouse model, and how environmental context affects motivation. Currently, I am investigating medial prefrontal cortical inputs to the ventral tegmental area with optogenetic stimulation, rabies-assisted anatomical tracing, and fiber photometry experiments to assay the behavioral relevance and circuit connectivity of this projection. Cornell Research story.

Providence Affective Neuroscience Laboratory Christopher M. Bloom, Ph.D.

Lab Manager September, 2012 – May, 2014

Undergraduate Research Assistant April, 2011 – May, 2014

I co-developed and lead data collection on a project exploring the analgesic and anxiogenic effects manifest in adulthood due to juvenile exposure to predator odor in an animal model. I assisted in the conceptualization and data collection on multiple projects related to an animal model of human phobia centered on discriminated punishment. I have contributed as a first author on one publication and a secondary author on two others.

PUBLICATIONS

Post, R.J. and Warden, M.R. (2018). Melancholy, anhedonia, apathy: the search for separable behaviors and neural circuits in depression. *Current Opinion in Neurobiology*. 49: 192-200. DOI

Guru, A., **Post, R.J.**, Ho, Y.Y., and Warden, M.R. (2015). Making sense of optogenetics. *International Journal of Psychopharmacology*. 18(11): pyv079. DOI

Post, R.J., Dahlborg, K.M., O'Loughlin, L.E., and Bloom, C.M. (2014). Effects of juvenile exposure to predator odor on adolescent and adult anxiety and pain nociception. *Physiology and Behavior*. 131: 57-61. DOI

Bloom, C.M., **Post, R.J.**, Mazick, J., Blumenthal, B., Doyle, C., Peters, B., Dyche, J., and Davenport, D.G. (2013). A discriminated conditioned punishment model of phobia. *Neuropsychiatric Disease and Treatment*. 9: 1239-1248. DOI

Bloom, C.M., **Post, R.J.**, Anch, A.M., and Davenport, D.G. (2013). Behavioral assessment of visual deficits in the *taiep* mutant. *Degenerative Neurological and Neuromuscular Disease*. 3: 15-21. DOI

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FELLOWSHIPS

Cornell University

Cornell Neurotech Mong Junior Fellowship — August, 2017 – August, 2018

Presidential Life Sciences Fellowship — August, 2014 – August, 2015

Providence College

Rhode Island Summer Undergraduate Research Fellowship — Summer 2012, Summer 2013

St. Catherine of Siena Honors Scholarship — August, 2010 – May, 2014

TEACHING EXPERIENCE

As Instructor

The Mind: From the Biological to the Artificial, *BIONB 1220* — Fall, 2018

I developed and taught a course designed to instruct new Cornell undergraduates in the practice of academic writing through Cornell's First-year Writing Seminar program. In this interactive seminar, we discussed a diversity of topics including the phenomenon of memory, science communication, representations of mental illness in fiction, and the impact of artificial intelligence on human society.

As Teaching Assistant

Drugs and the Brain, *BIONB 3920, "Writing in the Majors" Teaching Assistant* — Fall, 2017

In this role, I was responsible for grading weekly essays regarding experimental design and writing and grading exams. My major responsibility included leading two weekly discussion sections and coaching students in developing their own discussion-based presentations and term papers on novel research topics. *Course instructor: Ronald M. Harris-Warrick*

Introduction to Neuroscience, *BIONB 2220, "Writing in the Majors" Teaching Assistant* — Spring, 2016

In addition to writing and grading exams, I taught three weekly discussion sections for which I was responsible for designing and implanting active learning exercises that expanded upon lecture material. For each week, I created review slides of lecture material, wrote worksheets that challenged students to apply concepts learned in class to novel problems, and created various group activities that developed students' experimental design strategies. Throughout the semester, students wrote three research papers for which I provided detailed critical feedback. *Course instructor: Ronald M. Harris-Warrick*

Foundations of Biology, *BIOG 1140* — Fall, 2015

I taught discussion sections where my students and I used multiple active learning strategies to reinforce and expand upon the lecture material. The curriculum covers a great breadth of material, including basic genetics, cellular metabolism, evolution, and organismal biology. *Course instructors: E. Robert Turgeon & Michael J. Scanlon*

General & Organic Chemistry, *Laboratory Teaching Assistant* — 2011 – 2014

I assisted the Providence College chemistry faculty in teaching the lab sections of both General and Organic Chemistry. My responsibilities included molar dilution of necessary reagents, lab and stock room maintenance, and assisting students when asked. *Department chair: Paul T. Czech*

As Guest Instructor

Neural Circuits of Motivated Behavior, *BIONB 4370* — Spring, 2017

I taught a section on depression, focused on both the historical understanding of the disease recent neurobiological discoveries. *Course instructor: Melissa R. Warden*

As Tutor

Research Design & Statistical Analysis, *PSY 201 & 202* — November, 2013 – May, 2014

I held open office hours for students enrolled in Research Design & Statistical Analysis and offer one-on-one help in areas such as experimental design, comprehension of primary research literature, scientific writing, and basic statistical analyses including correlations, t-tests, ANOVA, non-parametric tests, and others. *Department chair: Mary O'Keeffe*

UNDERGRADUATE MENTORSHIP

Brittney Moncrieffe, 2019 – Present, Biology & Society

Vladlena Lee, 2016 – 2018, Neurobiology & Behavior, *Honors Thesis*: Lateral habenula and dopaminergic ventral tegmental area neurons encode the motivational state of mice. *Currently: Research assistant at Weill Cornell Medical College*

Kyle J. Pellegrino, 2016 – 2018, Neurobiology & Behavior, *Honors Thesis*: Monosynaptic tracing of ventral tegmental area-projecting infralimbic cortex neurons using G-deleted rabies virus. *Currently*: Research assistant at Rockefeller University

Nicholas W. Ringelberg, 2015 – 2016, Neurobiology & Behavior, *Currently: M.D.-Ph.D. student at UNC*

FORMAL PEDAGOGICAL INSTRUCTION

Teaching and Learning in the Diverse Classroom, Cornell Center for Teaching Innovation — Spring, 2019
Teaching in Higher Education, *ALS 6015* — Spring, 2019
First-year Writing Seminar Peer Collaboration Fellowship — Fall, 2018
Teaching Writing, *WRIT 7100* — Summer, 2018
Assessing Learning & Teaching Certificate, Cornell Center for Teaching Excellence — Fall, 2016
Creating an Engaging Classroom Certificate, Cornell Center for Teaching Excellence — Fall, 2016
University-wide Teaching Conference, Cornell Center for Teaching Excellence — Fall, 2016
Writing in the Majors Seminar, *WRIT 7101* — Fall, 2015

ACADEMIC AWARDS

John S. Knight Award for Writing Exercises and Handouts — April, 2019
2018 Stress Neurobiology Workshop Outstanding Poster Award — June, 2018
Hertz Foundation Graduate Fellowship Semifinalist — April, 2015
NSF Graduate Research Fellowship Honorable Mention — April, 2015
Providence College Rev. Charles V. Reichart Award — May, 2014

"Graduating student of Providence College…who best exemplifies…dedication to the advancement of the biological sciences as evidenced by his or her scholarship, intellectual curiosity, disciplined perseverance, and scientific integrity."

Providence College Commencement Featured Student — May, 2014
Alpha Epsilon Delta Pre-Health Honors Society — *Elected* April, 2012

Executive member: Historian (April, 2012 – April, 2013)
Executive member: Secretary (April, 2013 – April, 2014)

Sigma Xi Scientific Research Society — *Elected* April, 2012
Psi Chi Psychology Honors Society — *Elected* October, 2012

SELECTED ACADEMIC PRESENTATIONS

Neuroscience 2018 · Society for Neuroscience, San Diego · November 3-7, 2018 · *Title*: The prefrontal cortex-ventral tegmental area projection modulates helplessness and locomotor activity, but not reward-seeking behavior.

2018 Stress Neurobiology Workshop · Banff Centre, Banff, AB · June 8-11, 2018 · *Title*: The prefrontal cortical projection to the ventral tegmental area impacts helplessness- and locomotion-related behaviors, but not hedonic behaviors, in chronically stressed mice. ***Outstanding Poster Award***

2016 Neurobiology & Behavior Symposium · Neurobiology & Behavior Dept., Cornell University · December 9, 2016 · *Title*: The effect of chronic stress on anhedonia and motivated behavior.

Providence College Neuroscience Alumni Series · Biology Dept., Providence College · March 31, 2016 · *Invited by* Charles R. Toth · *Title*: Neuromodulatory circuits of depressive behavior.

6th Annual Rhode Island Summer Undergraduate Research Fellows Conference · Rhode Island IDeA Network of Biomedical Research Excellence, University of Rhode Island · August 2, 2013 · *Title*: Early stress and later psychopathology: effect of juvenile exposure to predator odor on adolescent and adult anxiety and pain nociception.

67th Annual Eastern Colleges Science Conference · Eastern Colleges Science Conference, Providence College · April 20, 2013 · *Title*: Myosin VI is bound to motile pigment granules in the squid photoreceptor and may act as a dynamic anchor to link granules to cortical actin.

5th Annual Rhode Island Summer Undergraduate Research Fellows Conference · Rhode Island IDeA Network of Biomedical Research Excellence, University of Rhode Island · July 27, 2012 · *Title*: A novel model of human phobia: the discriminated conditioned punishment model. · *Title*: Non-suicidal self-injury: the interactive stressor model.

OUTREACH

GRASSHOPR Program

Fellow September, 2015 – Present

Organizing Committee Member August, 2016 – Present

Co-president June, 2017 – Present

Cornell's GRASSHOPR program allows graduate students and post-doctoral associates to design and teach short courses on any topic to local schoolchildren. I designed and taught a four-part course that uses interactive activities to introduce the basic functions of the brain to middle school students. I am currently the organization's co-president with the goals of expanding our reach and developing tools that will allow future graduate students to design their courses.

Big Red Barn Kids' Science Day

Student Presenter April, 2017

The Big Red Barn Kids' Science Day allows graduate students to hold workshops for elementary school children to encourage a fascination with science. I ran a workshop where children built an electrically-conductive model neuron and connected it to an LED circuit to demonstrate rate coding.

ACADEMIC SERVICE

Guest reviewer, *Nature Communications*

Guest reviewer, *Neuron*

UNIVERSITY & DEPARTMENT SERVICE

Neurobiology & Behavior Graduate Students, Vice President & Recruitment Organizer 2017 – Present

Diversity Recruitment Weekend, Student Host April, 2017

Cornell Undergraduate Research Board, Spring Forum Judge April, 2016

Graduate & Professional Student Assembly, NBB Field Representative August, 2015 – May, 2016