



---

## EDUCATION

|             |   |
|-------------|---|
| <b>2015</b> | University of North Carolina Chapel Hill<br>Ph.D. in Neurobiology             |
| <b>2011</b> | University of North Carolina Wilmington<br>M.A. in Psychology                 |
| <b>2008</b> | James Madison University<br>B.S. in Psychology (major) and Statistics (minor) |

---

## PROFESSIONAL POSITIONS

|        |  |
|--------|--|
| 2025 – | Associate Professor with tenure, Department of Biology   |
| 2025 – | Associate Professor of Biomedical Engineering and Neurosurgery (by courtesy)                           |
| 2024 – | Director, Penn State Neuroscience Institute – University Park  |
| 2024 – | Associate Director for Neuroscience, Gerosciences and Dementia Prevention Consortium, Penn State       |
| 2023 – | Associate Director for Postdoctoral Training and Leadership, Center for Neural Engineering, Penn State |
| 2023 – | Assistant Professor, Department of Pharmacology, PSU College of Medicine (by courtesy)                 |
| 2022 – | Dorothy Foehr Huck and J. Lloyd Huck Early Career Chair in Neurobiology & Neural Engineering           |
| 2020 – | Assistant Professor, Departments of Biology and Biomedical Engineering (BME by courtesy), Penn State   |

PSU Affiliations: The Center for Neural Engineering; The Center for Neurotechnology in Mental Health Research; The Center for the Molecular Investigation of Neurological Disorders; The Center for Brain Behavior and Cognition; The Center for Healthy Aging; The Center for Reproductive Biology and Health; The Huck Institutes of the Life Sciences; College of Medicine; The Prevention Research Center

PSU Grad Programs: *Departmental*: Biology, Biomedical Engineering  
*Interdisciplinary*: Neuroscience Graduate Program; Cellular, and Integrative Biosciences Graduate Program (MCIBs); Integrative and Biomedical Physiology Graduate Program; Medical Scientists Training Program (through PSU College of Medicine)

Previous Positions:

|             |   |
|-------------|---|
| 2018 – 2020 | Assistant Research Professor, Department of Biobehavioral Health, Penn State  |
| 2016 – 2018 | Postdoctoral Fellow, Department of Biology, Penn State  |
| 2009 – 2011 | Post-baccalaureate Intramural Research Training Award Fellow, National Institute on Alcohol Abuse and Alcoholism, NIH |
| 2008        | Post-baccalaureate Intramural Research Training Award Fellow, National Institute on Environmental Health Science, NIH |

39. Kim, Griffith, Brockway, **Crowley**, & Medina (2025). Ultrasound actuated neuropeptide delivery across cerebrovascular interfaces using phase-change peptide nanoemulsions. *Journal of Colloid and Interface Science*

38. Seemiller & **Crowley [co-corresponding authors]** (2025). A blind spot in addiction research: hormonal contraceptives and adolescent reward seeking. *Neuropsychopharmacology*

37. Turner, Brockway, Hossain, Griffith, Greenawalt, Zhang, Gheres, **Crowley**, & Drew. Type-I nNOS neurons orchestrate cortical neural activity and vasomotion. *Reviewed Preprint, eLife*

36. Smith, Griffith, Sicher, Brockway, Proctor, & **Crowley [corresponding author]** (2024). Alcohol consumption confers lasting impacts on prefrontal cortical neuron intrinsic excitability and spontaneous neurotransmitter signaling in the aging brain in mice. *Accepted, Neurobiology of Aging* (9/17/2024)

35. Sicher, Liss, Vozella, Marsland, Seemiller, Springer, Starnes, Griffith, Smith, Deak, Roberto, Varodayan, & **Crowley [corresponding author]**. Voluntary adolescent alcohol exposure does not robustly increase adulthood consumption of alcohol in multiple mouse and rat models. *Accepted, Addiction Neuroscience* (7/29/2024)

34. Brockway & **Crowley [corresponding author]**. Emerging pharmacological targets for alcohol use disorder. *Accepted, Alcohol* (7/24/2024)

33. Seemiller, Flores-Cuadra, Griffith, Smith, & **Crowley [corresponding author]** (2024). Alcohol and stress exposure across the lifespan are key risk factors for Alzheimer's Disease and cognitive decline. *Neurobiology of Stress* 29: 1-12

32. Brockway, Moyer, Aloimonos, Clarity, Griffith, Smith, Dao, Hossain, Drew, Gordon, Kupferschmidt & **Crowley [corresponding author]** (2023). Somatostatin peptide signaling dampens cortical circuits and Promotes exploratory behavior. *Cell Reports* 42(8): 1-21

31. Sicher, Starnes, Griffith, Dao, Smith, Brockway, & **Crowley [corresponding author]** (2023). Adolescent binge drinking leads to long-lasting changes in cortical microcircuits in mice. *Neuropharmacology* 234: 1-16

30. Fleeman, Snyder, Kuhn, Chan, Smith, **Crowley**, Arnold, & Proctor. Predictive link between systemic metabolism and cytokine signaling in the brain of Apolipoprotein ε4 mice (2022). *Neurobiology of Aging* 123: 156-169

29. Griffith & **Crowley [corresponding author]** (2022). An innovative approach to examining the role of neurotransmitters in fear circuitry. *Neuropsychopharmacology* 47(13): 2175–2176

28. **Crowley & Medina [corresponding author]** (2022). Targeted and transient opening of the blood brain barrier in discrete neurocircuits and brain regions. *Neuropsychopharmacology* 48(1): 253–254

27. Suresh Nair, Dao, Lopez Melean, Griffith, Duerr, Starnes, Moyer, Sicher, Brockway, & **Crowley [corresponding author]** (2022). Somatostatin neurons in the bed nucleus of the stria terminalis play a sex-dependent role in binge drinking. *Brain Research Bulletin* 186: 38-46

26. Sicher, Duerr, Starnes, & **Crowley [corresponding author]** (2022). Adolescent alcohol and stress exposure rewires key cortical neurocircuitry. *Frontiers in Neuroscience* 16: 1-18

25. **Crowley & Joffe [co-corresponding authors]** (2021). Developing breakthrough psychiatric treatments by modulating G protein-coupled receptors on prefrontal cortex somatostatin interneurons. *Neuropsychopharmacology* 47(1): 389–390

24. Dao, Brockway, Suresh Nair, Sicher, & **Crowley [corresponding author]** (2021). Somatostatin neurons control an alcohol binge drinking prelimbic microcircuit in mice. *Neuropsychopharmacology* 46(11): 1906-1917

- Received the ACNP NEECA for best Early Career Paper of 2021
- See also: *Neuropsychopharmacology Research Highlight on this work:* <https://www.nature.com/articles/s41386-021-01103-5>

23. McSweeney, **Crowley**, Deng, Jian, Zou, Shi, Vitale, Liu, Luscher, & Mao (2020). An exon junction complex factor, RBM8a, is required for normal interneuron development. *Translational Psychiatry* 10(1): 1-17

22. Brockway & **Crowley [corresponding author]** (2020). Turning the 'tides on neuropsychiatric diseases: the role of peptides in the prefrontal cortex. *Frontiers in Behavioral Neuroscience* 14: 1-23

21. Dao, Nair, Magee, Moyer, Sendao, Brockway, & **Crowley [corresponding author]** (2020). Forced Abstinence from alcohol induces sex-specific depression-like behavior and neural adaptations in somatostatin neurons in cortical and amygdalar regions. *Frontiers in Behavioral Neuroscience* 14: 1-15

20. Torruella-Suarez, Vandenberg, Cogan, Tipton, Teklezghi, Dange, Patel, McHenry, Hardaway, Kantak, **Crowley**, DiBerto, Faccidomo, Hodge, Stuber, & McElligott (2020) Manipulation of central amygdala neurotensin neurons alter the consumption of rewarding fluids in mice. *Journal of Neuroscience* 40(3): 632-647

19. Dao, Brockway, & **Crowley [corresponding author]** (2019). In vitro optogenetic characterization of neuropeptide release from prefrontal cortical somatostatin neurons. *Neuroscience* 419: 1-4

18. **Crowley [corresponding author]**, Magee, Bourcier, Dao, & Lowery-Gionta (2019). Animal models of alcohol use disorders and the brain: from casual drinking to dependence. *Translational Issues in Psychological Sciences* 5(3): 222-242

17. Feng, **Crowley**, Patel, Guo, Bugni, & Luscher (2019). Reversal of a treatment-resistant, depression-related brain state with the Kv7 channel opener retigabine. *Neuroscience* 406: 109-125

16. **Crowley**, Magee, Feng, Jefferson, Morris, Dao, Brockway, & Luscher (2019). An antidepressant dosage of ketamine normalizes binge drinking-induced defects in glutamatergic synaptic transmission and ethanol drinking behavior. *Neuropharmacology* 149: 35-44

15. Lowery-Gionta\*, **Crowley\*** [Co-First Authorship], Bukalo\*, Silverstein, Holmes, & Kash (2018). Chronic stress dysregulates amygdalar output to the prefrontal cortex. *Neuropharmacology* 139: 68-75

14. Caruso, **Crowley**, Reiss, Caulfield, Luscher, Cavigelli, & Kamens (2018). Adolescent social stress increases anxiety-like behavior and alters synaptic transmission, without influencing nicotine responses, in a sex-dependent manner. *Neuroscience* 373: 182-198

13. **Crowley**, Bloodgood, Hardaway, Kendra, McCall, Al-Hasani, McCall, Yu, Schools, Krashes, Lowell, Whistler, Bruchas, & Kash (2016). Dynorphin controls the gain of an amygdalar anxiety circuit. *Cell Reports* 14(12): 2772-2783

12. Al-Hasani, McCall, Shin, Gomez, Schmitz, Bernardi, Pyo, Park, Marcinkiewcz, **Crowley**, Krashes, Lowell, Kash, Rogers, & Bruchas (2015). Distinct subpopulations of nucleus accumbens dynorphin neurons drive aversion and reward. *Neuron* 87(5): 1063-1077

11. Pleil, Lowery-Gionta, **Crowley**, Li, Marcinkiewcz, McCall, Maldonado-Devincci, Morrow, & Kash (2015). Effects of chronic ethanol exposure on neuronal function in discrete regions of the prefrontal cortex and extended amygdala. *Neuropharmacology* 99: 735-749

10. Vardy, Robinson, Li, Olsen, DiBerto, Sassano, Huang, Zhu, Urban, Rittiner, **Crowley**, Pleil, Song, Kash, Malanga, Krashes, & Roth (2015). A new DREADD facilitates the multiplexed chemogenetic interrogation of behavior. *Neuron* 86(4): 936-946

9. **Crowley** & Kash (2015). Kappa opioid receptor signaling throughout the brain: Involved circuitry and implications for treatment. *Progress in Neuro-psychopharmacology and Biological Psychiatry* 62:51-60

8. Hardaway\*, **Crowley\*** [Co-First Authorship], Bulik, & Kash (2015). Integrated circuits and molecular components for stress and feeding: Implications for eating disorders. *Genes, Brains, and Behavior* 14(1): 85-97

7. Kash, Pleil, Marcinkiewcz, Lowery-Gionta, **Crowley**, Mazzone, Sugam, Hardaway, & McElligott (2014). Neuropeptide signaling in the BNST. *Molecules and Cells* 38(1): 1-13

6. Masneuf\*, Lowery-Gionta\*, Colacicco, Pleil, Li, **Crowley**, Stamatakis, Flynn, Holmes, & Kash (2014). Glutamatergic mechanisms associated with stress-induced amygdala excitability and anxiety related behavior. *Neuropharmacology* 85: 190-197

5. DePoy, Daut, Wright, Camp, **Crowley**, Noronha, Lovinger, & Holmes (2014). Chronic alcohol alters reward behaviors and striatal plasticity. *Addiction Biology* 20(2): 345-348

4. Parisiadou, Yu, Sgobio, Xie, Lui, Sun, Gu, Lin, **Crowley**, Lovinger, & Cai (2014). LRRK2 regulates synaptogenesis and dopamine receptor activation of striatal projection neurons through modulation of PKA activity. *Nature Neuroscience* 17(3): 367-376

3. **Crowley**, Cody, Davis, Lovinger, & Mateo (2013). Chronic methylphenidate exposure during adolescence reduces striatal synaptic responses to ethanol. *European Journal of Neuroscience* 39(4): 548-556

---

2. Depoy, Daunt, Brigman, MacPherson, **Crowley**, Gunduz-Cinar, Pickens, Cinar, Saksida, Kunos, Lovinger, Bussey, Camp, & Holmes (2013). Chronic alcohol produces neuroadaptations to prime striatal learning. *Proceedings of the National Academy of Sciences* 110(36): 14783-14788
1. Mathur, **Capik**, Alvarez, & Lovinger (2011). Serotonin-mediated competitive long-term depression at corticostriatal synapses. *Journal of Neuroscience* 31(20): 7402-7411 // paper published under maiden name

---

## PREPRINTS

XX. Brockway, Griffith, Kacala, Bellfy, Seemiller, Ulrich, Ricotta, Hossain, Kwapis, Drew, & **Crowley** [corresponding author]. Alcohol consumption disrupts cortical somatostatin peptide signaling in mice. Available on *BioRxiv*

XX. Seemiller, Ünsal, Xie, Hossain, Tuttle, Johnson-Dendy, McDonald, Drew, Zhang, & Crowley [corresponding author]. Adolescent alcohol consumption alters sex-specific behaviors associated with prefrontal functional connectivity in mice. Available on *BioRxiv*

---

## BOOK CHAPTERS

1. Sicher & **Crowley** (2024). Alcohol dysregulation of developing cortical GABA circuits. In *Effects of alcohol on the brain across the lifespan: recent advances from preclinical studies*. Editors: Valenzuela, Linsenbardt, Weiner. Springer.

---

## FUNDING

### CURRENT FUNDING

**W.M. Keck Foundation** 2025-2028 total: \$2,400,000 including institutional match

*The (neural) stuff of nightmares*

Role: MPI (Contact PI: Dr. Patrick Drew, PSU Engineering Science and Mechanics; MPI: Dr. Nanyin Zhang, PSU Biomedical Engineering)

**R01 NIAAA/NIH** 2025-2030 total: \$2,903,521

*Sex dependent shifts in behavioral profiles and cortical signaling following adolescent binge drinking*

Role: contact PI (MPI: Dr. Nanyin Zhang, PSU Biomedical Engineering; Co-I: Dr. Justin Silverman, PSU Statistics; Dr. Nikki Beloate, PSU Biomedical Engineering)

**R01 NIAAA/NIH** (Award #R01AA029403-01A1) 2022-2027 total: \$1,604,953

*Prelimbic somatostatin peptide signaling in binge ethanol consumption*

Role: PI (Co-I: Dr. Patrick Drew, PSU Engineering Science and Mechanics)

**Center for Biodevices** total: \$60,000

*Precision Blood-Brain-Barrier Permeabilization using Acoustically Actuated Phase-Changing Nanoemulsions*

Role: Co-PI (contact PI: Dr. Scott Medina, PSU Biomedical Engineering)

**R01 NIA//NIAAA/NIH administrative supplement** (Award #3R01AA029403-01A1) 2023-2027 total: \$304,741

*Prelimbic somatostatin peptide signaling in binge ethanol consumption*

*Alzheimer's-Focused Administrative Supplements for NIH Grants that are Not Focused on Alzheimer's Disease*

Role: PI (Co-I: Dr. Patrick Drew, PSU Engineering Science and Mechanics; Dr. Marty Sliwinski, PSU Human Development and Family Studies; Dr. Elizabeth Proctor, Neurosurgery)

### CURRENT TRAINEE EXTERNAL FUNDING

*For undergraduate student funding, see teaching and mentoring (Penn State total over \$50,000)*

**F30 NIAAA/NIH** 2025-2029 requested total: \$183,704

*Investigating Estrogen-Mediated Signaling in Binge Drinking Microcircuits of the Prefrontal Cortex*

PI: Victoria Nudell  
Role: Sponsor (Co-Sponsor, Dr. Leon Coleman, UNC)

**American Heart Association Predoctoral Fellowship 2025-2027 \$65,548**

*Investigating the impact of alcohol binge drinking on somatostatin neural activity and brain hemodynamics during sleep*

PI: Julio Flores Cuadra, Neuroscience PhD Program  
Role: Sponsor. Co-Sponsor: Dr. Patrick Drew

**F32 NRSA NIAAA/NIH (Award #F32AA031396) 2024-2027 total: \$220,224**

*Sex differences in somatostatin cell dynamics and exploratory behavior after adolescent binge drinking*

PI: Dr. Laurel Seemiller  
Role: Sponsor. Co-Sponsor: Dr. Patrick Drew

**F31 NRSA NIAAA/NIH (Award #F31AA0304550) 2022-2026 total: \$142,452**

*Investigating the effects of adolescent binge drinking on prelimbic somatostatin circuitry*

PI: Avery Sicher, Neuroscience PhD Program  
Role: Sponsor. Co-Sponsor: Dr. Patrick Drew

**F31 NRSA NIEHS/NIH 2024-2028 (Award #F31ES036154) total: \$108,092**

*Nasal uptake of polystyrene nano plastics into the murine central nervous system*

PI: Denver Greenawalt  
Role: Co-Sponsor. Sponsor: Dr. Patrick Drew

---

### **SUBMITTED FUNDING**

**R21 NIA/NIH 2025-2027 requested total: \$440,827**

*Epigenetic and cellular mechanisms of age-related impairments in memory updating*

Role: Co-Investigator (PI: Dr. Janine Kwapis, PSU Biology)  
Status: A1 percentile: 12

**R01 NIDA/NIH 2025-2030 requested total: \$2,346,803.00**

*Impact of nicotine exposure on prefrontal sleep circuit dynamics*

Role: MPI (Contact-PI: Dr. Patrick Drew, PSU Engineering Science and Mechanics)  
Status: submitted 10/2024

---

### **SUBMITTED TRAINEE EXTERNAL FUNDING**

**F32 NIAAA/NIH 2025-2028 requested total: \$224,868**

*Examining somatostatin receptor pathways following binge drinking: a focus on PFC → PAG projections*

PI: Dr. Gwendolyn Burgess  
Role: Sponsor (Co-Sponsor: Dr. Patrick Drew)  
A0 impact score: 40

**F31 NIA/NIH 2025-2028**

*Environmental Triggers of Oxidative Stress Promote Neuronal Vulnerability in the APOE4 Brain*

PI: Rachel Kang  
Role: Co-Sponsor (Sponsor: Dr. Elizabeth Proctor, PSU College of Medicine)

---

### **COMPLETED FUNDING**

**NIAAA/NIH 2019-2024**

National Institutes of Health LRP (2<sup>nd</sup> renewal award)

*Investigation of key pathways modulated by juvenile chronic variable social stress*

Role: PI

**P50 NIAAA/NIH** (Award #P50AA017823) 2021-2023 *subaward total: \$140,700*

Binghamton University Developmental Exposure to Alcohol Research Center

*Title: Impact of Adolescent Alcohol on Prefrontal Circuits*

Role: PI of PSU subaward (Binghamton on-site co-PI: Dr. David Jentsch)

**R21 NIAAA/NIH** (Award# AA028088-01) 2020-2022 *total: \$392,244*

*Title: Investigation of a novel prelimbic cortical peptidergic population in binge drinking behavior*

Role: PI

**NIH Office of the Director** (Administrative Supplement #AA028088-02S1) 2021-2023 *total: \$80,250*

*Investigation of a novel prelimbic cortical peptidergic population in binge drinking behavior*

Role: PI

**Benkovic Research Initiative** 2022-2023 *total year 1: \$150,000*

*Novel methods for non-invasive neuropeptide administration to the brain*

Role: PI (Co-PI: Scott Medina, PSU Biomedical Engineering)

**The Brain and Behavior Research Foundation** 2019-2022 *total: \$70,000*

NARSAD Young Investigator Award (Award #27200)

*Title: Investigating the role of prelimbic somatostatin neurons in binge ethanol consumption*

Role: PI

**Penn State Consortium to Combat Substance Abuse** 2019-2021

*Investigation of key opioid pathways modulated by adolescent chronic variable social stress*

Role: PI

**NIAAA/NIH** 2017-2019

National Institutes of Health LRP Awardee

*Investigation of Key Pathways Modulated by Juvenile chronic variable social stress*

Role: PI

**Penn State Social Science Research Institute** 2016-2019

*Investigation of the role of somatostatin neurons in alcohol consumption*

Role: PI

**UNC School of Medicine** 2015

Dissertation Completion Fellowship

Role: Fellow

Awarded at the recommendation of the Graduate School for Excellence in Research

**NIAAA/NIH NRSA** (Award #1F31AA022280-01) 2013-2015

Ruth L. Kirschstein NRSA

*Alcohol Regulation of kappa opioid receptor systems in the extended amygdala*

Role: Fellow (Mentors: Dr. Thomas Kash, Dr. David Lovinger)

**National Institute on Alcohol Abuse and Alcoholism**

*June 2009-August 2011*

Intramural Research Training Award

Role: Fellow (Mentor: Dr. David Lovinger) area: systems neuroscience

**National Institute of Environmental Health Sciences**

*May 2008-September 2008*

Intramural Research Training Award

Role: Fellow (Mentor: Dr. Lawrence Lazarus) area: chemistry

---

## GRADUATE STUDENT INTERNAL FUNDING

**T32 Award NIGMS/NIH** Physiological Adaptations to Stress (Award #T32GM108563) 2025-2027

PI: Yiyan Xie, Neuroscience PhD Program

Role: Mentor (co-advised with Dr. Nanyin Zhang)

**T32 Award NINDS/NIH** Cross-Disciplinary Neural Engineering (Award #T32NS115667) 2024-2026

PI: Victoria Nudell, MSTP with Molecular, Cellular, and Integrative Biosciences PhD Program

Role: Primary Mentor. Co-Mentor: Dr. Grayson Sipe

**T32 Award NINDS/NIH** Cross-Disciplinary Neural Engineering (Award #T32NS115667) 2023-2025

PI: Shubham Mirg, Biomedical Engineering

Role: Co-Mentor. Primary Mentor: Dr. Raj Kothapalli

**T32 Award NIGMS/NIH** Physiological Adaptations to Stress (Award #T32GM108563) 2023-2025

PI: Julio Flores Cuadra, Neuroscience PhD Program

Role: Mentor (co-advised with Dr. Patrick Drew)

**T32 Award NINDS/NIH** Cross-Disciplinary Neural Engineering (Award #T32NS115667) 2023-2025

PI: Michael Wenke, Neuroscience MD/PhD Program (MSTP with PSU College of Medicine)

Role: Co-Mentor. Primary Mentor: Dr. Patrick Drew

**T32 Award NINDS/NIH** Cross-Disciplinary Neural Engineering (Award #T32NS115667) 2022-2024

PI: Md Shakhawat Hossain, Biomedical Engineering PhD Program

Role: Co-Mentor. Primary Mentor: Dr. Patrick Drew

**T32 Award NIGMS/NIH** Physiological Adaptations to Stress (Award #T32GM108563) 2021-2023

PI: Avery Sicher, Neuroscience PhD Program

Role: Mentor

*Second year declined to accept F31 NRSA funding*

---

## INVITED PRESENTATIONS, SEMINARS, ETC.

### 2026

- Alcoholism and stress: a framework for future treatment strategies (co-chair, NIAAA Young Investigator Award Symposium), Volterra, Italy (May 2026)

### 2025

- The Franklin Institute, Philadelphia, PA (October 2025)
- Center for Healthy Aging, Penn State (March 2025)
- Consortium on Substance Use and Addiction, The Social Science Research Institute (May 2025)

### 2024

- Annual Meeting of the American College of Neuropsychopharmacology (ACNP; invited symposium) Phoenix, AZ, December 2024
- University of Helsinki Neuroscience Center (invited talk) Helsinki, Finland October 2024
- Penn State Osher Lifelong Learners Institute (invited talk). Fall 2024
- Illinois Institute of Technology Department of Biology (invited talk). August 2024
- Penn State College of Medicine Discover Seminar Series (invited by Associate Dean's Office of Interdisciplinary Research). June 2024
- The Research Society on Alcohol, Annual Meeting (symposium, co-chair). Minneapolis MN June 2024
- Penn State Alumni Association (invited talk). May 2024
- Computational Properties of the Prefrontal Cortex. National Institute on Mental Health, NIH (symposium/invited debate). Bethesda, MD May 2024
- Penn State Neuroscience Institute Annual Retreat (invited talk). Hershey, PA May 2024
- The National Institute on Alcohol Abuse and Alcoholism, NIH (invited talk). Rockville, MD April 2024
- The Center for Healthy Aging at Penn State (invited talk). University Park, PA April 2024

- Gerosciences and Dementia Prevention Consortium annual retreat (invited talk). March 2024
- Alcohol and the Nervous System Gordon Research Conference (invited symposium). Galveston TX February 2024
- Eberly College of Science Penn State 30th Anniversary of the Ashtekar Frontiers of Science Lecture Series: Exploring Scientific Progress Over Three Decades: The Human Brain and the Human Mind (invited talk). State College PA February 2024

## 2023

- Penn State Addiction Center for Translation Symposium (invited talk). Hershey, PA December 2023
- Penn State Biological Sciences Society (invited talk). University Park PA October 2023
- Binghamton University Developmental Exposure to Alcohol Research Center (invited talk). Binghamton, NY September 2023
- Center for Neural Engineering Annual Retreat (invited talk). State College PA, August 2023
- The Research Society on Alcohol, Annual Meeting (symposium). Bellvue WA June 2023
- NIAAA Special Topics Meeting: Alcoholism and Stress: A Framework For Future Treatment Strategies (Young Investigator Award Symposium) Volterra, Italy, May 2023
- Society of Biological Psychiatry Annual Meeting (symposium), San Diego, CA April 2023
- Department of Neurobiology & Anatomy, Drexel University (invited talk). Philadelphia PA, March 2023

## 2022

- Annual Meeting of the American College of Neuropsychopharmacology (ACNP; invited symposium) Phoenix, AZ, December 2022
- Medical Scientists Training Program, PSU College of Medicine (invited talk) Hershey PA, October 2022
- Department of Nutrition seminar series, PSU (invited talk). University Park PA, October 2022
- Medical University of South Carolina Addiction Research Seminar Series (joint with Department of Neuroscience; invited talk). Charleston SC, October 2022
- Department of Kinesiology seminar series, PSU (invited talk). University Park PA, September 2022
- Center for Biodevices, PSU (invited talk). University Park PA, September 2022
- B. Brodie Lectureship in Pharmacology, PSU College of Medicine (invited talk). Hershey PA, March 2022
- National Institute on Mental Health (invited talk). Bethesda MD, March 2022
- Department of Biomedical Engineering seminar series, PSU (invited talk). University Park PA, February 2022

## 2021

- Uniformed Services University of the Health Sciences (US Army Medical School; invited talk), Bethesda MD, November 2021
- Molecular, Cellular, and Integrative Biosciences Annual Retreat, PSU (invited talk). University Park PA, August 2021
- Center for Neural Engineering, PSU (invited talk). University Park PA, April 2021

## 2020

- Developmental Exposure Alcohol Research Center (DEARC; invited talk) Binghamton University, Binghamton NY, November 2020
- University of Delaware Neuroscience Group (invited talk). September 2020
- Penn State Addiction Center for Translation, (invited talk). Hershey PA, January 2020

## 2019

- Integrative Neuroscience Research Center Seminar, Marquette University (invited talk). Milwaukee WI October 2019
- Department of Biology, Pennsylvania State University (invited talk). University Park, PA. November 2019.

## 2018

- Department of Biobehavioral Health, University Park, PA. March 2018
- Guest speaker at Westfield High School, Chantilly, VA. November 2018

## 2017

- Center for the Investigation of Neurological Disorders Annual Retreat, University Park, PA. June 2017

## 2016

- Symposium at the Second Annual Penn State Addiction Symposium, Hershey, PA. December 2016
- Center for the Investigation of Neurological Disorders Annual Retreat, University Park, PA. 2016
- Center for the Investigation of Neurological Disorders Symposia, University Park, PA. 2016

## 2015

- Symposium at the annual meeting on the Therapeutic Potential of Kappa Opioids in Pain and Addiction, Chapel Hill, NC. 2015

## 2014

- Arizona State University, Phoenix, AZ. 2014
- Nanosymposium, Annual Meeting for the Society for Neuroscience, Washington, DC. 2014

---

## TEACHING & MENTORING ACTIVITIES

---

### SUPERVISION OF STUDENTS AND FELLOWS

#### Post-Doctoral Fellows

|   |              |
|---|--------------|
| Dr. Avery Sicher                                      | 2025-present |
| Dr. Gwen Burgess                                      | 2024-present |
| Dr. Laurel Seemiller <i>NIH/NIAAA F32 NRSA Fellow</i> | 2022-present |
| Dr. Dakota Brockway                                   | 2023-2024    |

#### Post-Doctoral Fellows – formal advisory committee member or consultant

|                   |  |              |
|-------------------|--|--------------|
| Dr. Erika Beyrent | Penn State (PI: Drew)<br><i>F32 NRSA Mentoring committee</i><br><i>Award #F32NS143952</i>  | 2024-present |
| Dr. Bryan Cruz    | The Scripps Research Institute<br>(advisors: Drs. Marisa Roberto and Eric Zorrilla)<br><i>MOSAIC K99/R00 mentoring committee</i><br><i>Award #K99AA031718-01</i> | 2023-present |

#### Current Graduate Students (Primary Mentor)

|                     |   |              |
|---------------------|---|--------------|
| Keith Griffith      | MD/PhD MSTP with PSU College of Medicine<br><i>Jointly mentored with Dr. Patrick Drew</i>   | 2026-present |
| Andrew Hamacher     | Neuroscience PhD Program  | 2025-present |
| Yiyan Xie           | Neuroscience PhD Program<br><i>Jointly mentored with Dr. Nanyin Zhang</i>   | 2025-present |
| Victoria Nudell     | MD/PhD MSTP with PSU College of Medicine<br>Molecular, Cellular, and Integrative Biosciences PhD Program<br><i>Cross Disciplinary Neural Engineering T32 Fellow</i> | 2023-present |
| Julio Flores Cuadra | Neuroscience PhD Program<br><i>Physiological Adaptations to Stress T32 Fellow</i><br><i>Huck Graduate Fellow</i><br><i>Jointly mentored with Dr. Patrick Drew</i>   | 2022-present |
| Grace Smith         | Biomedical Engineering MS Program<br><i>PSU University Graduate Fellow</i>  | 2022-present |

Graduate Students (Primary Mentor) - Graduated

|                 |   |           |
|-----------------|---|-----------|
| Avery Sicher    | Neuroscience PhD Program<br><i>NIH NRSA Fellow</i><br><i>Physiological Adaptations to Stress T32 Fellow</i><br><i>Huck Graduate Fellow</i>  | 2020-2025 |
| Dakota Brockway | Neuroscience PhD Program<br>Thesis: <i>The Role of Somatostatin in the Prefrontal Cortex</i><br><i>Huck Graduate Fellow</i><br>Next: Postdoctoral Fellow, University of Pittsburgh<br>NIAAA DART-T32 fellow<br>Advisor: Dr. Max Joffe | 2018-2023 |

Graduate Students – Dissertation Chair

|                |   |              |
|----------------|---|--------------|
| Gretchen Pifer | Biology (PI: Kwapis)  | 2024-present |
| Rachel Kang    | Biomedical Sciences, College of Medicine (PI: Proctor)<br><i>co-sponsored by Crowley for NIH F31 NRSA</i> | 2023-present |

Graduate Students (Dissertation Committee Member)

|                             |   |               |
|-----------------------------|---|---------------|
| Jade Sency                  | Integrative & Biomedical Physiology (PIs: Gross/Sipe)   | 2025-present  |
| Yifan Tao                   | Engineering Science & Mechanics (PI: Ozbolat)   | 2025-present  |
| Sindhuja Baskar             | Neuroscience (PI: Sipe)   | 2025-present  |
| Zili Yan                    | Biomedical Engineering (PI: Zhang)  | 2024-present  |
| Doris Olekanma              | Neuroscience (PI: Skibicka)   | 2024-present  |
| Gretchen Pifer              | Biology (PI: Kwapis)  | 2024-present  |
| Jiajing (Tim) Teng          | Integrative and Biomedical Physiology (PI: Rolls)   | 2023-present  |
| Fatemeh Salehi Shahrababaki | Biomedical Engineering (PI: Drew)   | 2023-present  |
| Michael Wenke               | MD/PhD MSTP with PSU College of Medicine<br>Neuroscience PhD Program (PI: Drew)<br><i>co-mentored by Crowley for CDNE T32</i> | 2023-present  |
| Shubham Mirg                | Biomedical Engineering (PI: Kothapalli)<br><i>co-mentored by Crowley for CDNE T32</i>   | 2023-present  |
| Denver Greenawalt           | MCIBS (PI: Drew)<br><i>co-sponsored by Crowley for NIH F31 NRSA</i>   | 2023-present  |
| Chad Brunswick              | Neuroscience (PI: Kwapis)   | 2022-present  |
| Chad Smies                  | Biology (PI: Kwapis)  | 2022-present  |
| Md Shakhawat Hossain        | Biomedical Engineering (PI: Drew)<br><i>co-mentored by Crowley for CDNE T32</i>   | 2021- present |
| Lauren Bellfy               | MCIBS (PI: Kwapis)  | 2021- 2025    |
| Tong Jiang                  | Biology (PI: Luscher)   | 2021- 2025    |
| Laurel Seemiller            | MCIBS (PI: Gould)   | 2020- 2022    |

Undergraduate Student (Primary Mentor)

|                     |   |              |
|---------------------|---|--------------|
| Sam Martell         | Biology (Schreyer Honors College)                 | 2024-present |
| Dylan Kearse        | Biomedical Engineering and Mechanical Engineering | 2024-present |
| Kate Rarrick        | Biomedical Engineering (Schreyer Honors College)  | 2024-present |
| Bryce Johnson Dendy | Science   | 2024-present |
| Kaleah Tuttle       | Biomedical Engineering (Clark Scholar)            | 2023-present |
| Damini Nair         | Biology (Schreyer Honors College)                 | 2023-present |
| Erin Wolfanger      | Biology (Schreyer Honors College)                 | 2023-present |
| Amir Siddiqui       | Biology and Psychology                            | 2023-2025    |
| Roy Wu              | Biochemistry and Molecular Biology                | 2023-2024    |

Undergraduate Students (Primary Mentor) - Graduated

|                |  |           |
|----------------|--|-----------|
| Emily McDonald | Biological Sciences & Health Professions | 2023-2024 |
|----------------|--|-----------|

|   |  |  |
|---|--|--|
| Obi Nnabugwu<br>Matthew Springer  | Biomedical Engineering (Clark Scholar)<br>Biology (Schreyer Honors College)<br>next: medical student, Geisinger Commonwealth School of Medicine  | 2022-2024<br>2021-2024                                   |
| Sophie Anderlind  | Biology (Schreyer Honors College)<br>next: Research Project Manager  | 2022-2023  |
| Andrew Kacala   | Biology (Schreyer Honors College)  | 2021-2023  |
| David Starnes   | Next: medical student, Thomas Jefferson<br>Biology (Schreyer Honors College)   | 2019-2023  |
| Nicole Lookfong<br>Daniela Lopez Melean<br>Corey Zimmer<br>Brody Moyer<br>Veronica Sendao | next: medical student, Cooper Rowan<br><i>summer student mentored with Dr. Yuval Silberman</i><br>Biology (Millennium Scholar)<br>Biobehavioral Health<br>Biochemistry and Molecular Biology<br>Biobehavioral Health | 2021<br>2019-2022<br>2019-2022<br>2018-2022<br>2018-2022 |
| Malini Suresh Nair  | next: Research assistant, Boston University<br>Biology   | 2018-2019  |
| Sarah Magee   | next: medical student, Wake Forest<br>Biology (Millennium Scholar)   | 2016-2019  |
| Alexandre Bourcier  | Biology (Schreyer Honors College)<br>next: medical student, UCLA   | 2016-2019  |

#### Undergraduate Students (Primary Mentor) – Summer Research Opportunities Big10 Program

|                  |  |      |
|------------------|--|------|
| Sarah Shibuya    | Biomedical Engineering (Rose Hulman Institute of Technology)<br>Next: Neuroscience PhD Program, Notre Dame | 2024 |
| Ariana Almarez   | Psychology (Cal State San Marcos)  | 2023 |
| Renee Laurenzana | Biological Sciences (Cal State San Marcos)<br>next: Neuroscience PhD Program, ASU                          | 2022 |

#### Staff

|                    |  |              |
|--------------------|--|--------------|
| Varya Zlotnik      | Research Technician<br>Next: Master's student, University of Amsterdam | 2023-present |
| Sophie Anderlind   | Research Project Manager   | 2023-present |
| Keith Griffith     | Research Technician<br>next: MD/PhD MTSP, PSU College of Medicine      | 2021-2024    |
| Grace Smith        | Research Technician<br>next: PSU Biomedical Engineering program        | 2021-2022    |
| Nigel Dao          | Research Technician<br>next: NYU PhD program (PI: Adam Carter)         | 2018-2021    |
| Malini Suresh Nair | Research Technician<br>next: Wake Forest Medical School MD Program     | 2020-2021    |

#### High School Students (Health Professions Department, State College High School, Supervised in conjunction with Ms. Kathleen Seeland)

|           |  |           |
|-----------|--|-----------|
| Lydia Fry | Currently: undergraduate student<br>University of Colorado | 2020-2021 |
|-----------|--|-----------|

| Graduate Student and Postdoctoral Fellows – Independent Awards |          |                  |                                |                        |
|--|----------|------------------|--------------------------------|------------------------|
| Name   | Position | Current Position | Grants/Funding During Training | Selected Honors/Awards |
| <b>Graduate Students</b>                                       |          |                  |                                |                        |

|                             |                             |  |   |  |
|-----------------------------|-----------------------------|--|---|--|
| Victoria Nudell             | MD/PhD student 2023-present | Current lab member   | 1. T32GM149380-01 (PSCOM MSTP)<br>2. T32NS115667 (Cross-Disciplinary Neural Engineering T32 Fellow)                   | 1. 2024-2026 NIH NINDS T32 Fellow<br>2. Research Society on Alcohol - 2024 Travel Award for the Yale SCORE Sex & Gender Satellite Meeting  |
| Julio Flores Cuadra         | PhD student 2022-present    | Current lab member   | 1. T32GM108563 Physiological Adaptations to Stress T32 Fellow<br>2. American Heart Association Predoctoral Fellowship | 1. 2023-2025 NIH NIGMS T32 Fellow<br>2. 2022 Huck Distinguished Graduate Fellowship, Penn State<br>3. American Heart Association Predoctoral Fellowship  |
| Grace Smith                 | MS Student 2022-present     | Current lab member   | University Graduate Fellow  | 1. 2022 University Graduate Fellowship, Penn State   |
| Avery Sicher                | PhD student, 2020-present   | Current lab member   | 1. T32GM108563 Physiological Adaptations to Stress T32 Fellow<br>2. F31AA0304550 NIH NRSA Fellow                      | 1. 2023-2024 Huck Graduate Student Association President<br>2. 2024 Penn State Neuroscience Institute Outstanding Trainee Award<br>3. 2023 2nd Place Oral Research Presentation, Huck Life Sciences Symposium, Penn State University<br>4. 2023 Student Merit Travel Award, Research Society on Alcoholism<br>5. 2022 Student Merit Travel Award, Research Society on Alcoholism<br>5. NIAAA F32 Fellow<br>6. 2021-2022 NIH NIGMS T32 Fellow |
| Dakota Brockway, PhD        | PhD Student 2018-2023       | NIAAA T32 Postdoctoral Fellow, University of Pittsburgh School of Medicine |   | 1. Huck Distinguished Graduate Fellowship, Penn State  |
| <b>Postdoctoral Fellows</b> |                             |  |   |  |
| Laurel Seemiller, PhD       | 2022-present                | Current lab member   | 1. F32AA031396 NIH NRSA Fellow  | 1. 2024 NIH Outstanding Scholar in Neuroscience Award (OSNAP)<br>2. 2023 Postdoc Travel Award, Penn State Office of Postdoctoral Affairs<br>3. 2023 Trainee Professional Development Award, Society for Neuroscience<br>4. 2023 Junior Investigator Award, Research Society on Alcohol<br>5. 2023 NIH NIAAA F32 Fellow   |

## UNDERGRADUATE STUDENT-LED FUNDING AND AWARDS

Total over \$65,000 in undergraduate student-led funding and grants at Penn State. All undergraduate awards have always been used 100% to support student stipends

2025

- Erikson Award, Awarded to Kate Rerrick (\$5,000)
- Student Engagement Network Award, awarded to Damini Nair (\$2,500)
- Irene and Eric Simon Brain Research Foundation Summer Fellowship, Awarded to Damini Nair (\$2,500)

## 2024

- College of Engineering Multi-Campus Research Experience for Undergraduates (MC-REU) program, Awarded to Kaleah Tuttle (Crowley: faculty mentor) \$5,000
- Student Engagement Network Award, Awarded to Amir Siddiqui (Crowley: faculty mentor) \$1,500
- Student Engagement Network Award, Awarded to Kaleah Tuttle (Crowley: faculty mentor) \$1,000
- Summer Undergraduate Research Experience (SURE), Awarded to Bryce Johnson Dendy (supervised by Dr. Seemiller, post-doc; Crowley: faculty co-mentor), \$8,000

## 2023

- Norman Freed Undergraduate Research Award in the Eberly College of Science: Awarded to Andrew Kacala (\$600)
- Eberly post session: 1<sup>st</sup> place in life sciences, Awarded to Andrew Kacala
- Biology Student Research Showcase Undergraduate Poster Contest: 1st place winner of 2023, Awarded to Damini Nair
- Engineering Undergraduate Scholarship, Awarded to Obi Nnabugwu (Crowley: faculty mentor), \$5,000
- Eberly Exhibit Award, 1<sup>st</sup> place for Data Visualization, awarded to Andrew Kacala for *The Role of Binge Alcohol Consumption On Somatostatin Cell Density and Signaling*, \$175
- Summer Undergraduate Research Experience (SURE), Awarded to Emily McDonald (supervised by Dr. Seemiller, post-doc; Crowley: faculty co-mentor), \$4,800
- Erikson Award, Awarded to Matthew Starnes (Crowley: faculty mentor), \$3,500
- The Edmund and Virginia Hunsicker Collins Undergraduate Research Award Awarded to David Starnes (Crowley: faculty mentor), \$2,000

## 2022

- Eberly College of Science Undergraduate Research Award, Awarded to Andrew Kacala (Crowley: faculty mentor), \$1250
- Eberly College of Science Undergraduate Research Award, Awarded to David Starnes (Crowley: faculty mentor), \$1250
- Engineering Equity Scholar's Program, Awarded to Obi Nnabugwu (Crowley: faculty mentor), \$3,500
- Schreyer Honor's College Summer Research Fund, Awarded to David Starnes (Crowley: faculty mentor), \$750
- Schreyer Honor's College Summer Research Fund, Awarded to Andrew Kacala (Crowley: faculty mentor), \$750

## 2021

- Eberly Undergraduate Research Support (2021), Awarded to David Starnes (Crowley: faculty mentor), \$1,000
- Erickson Award, Awarded to Brody Moyer (Crowley: faculty mentor), \$3,500
- Student Engagement Network Award, Awarded to David Starnes (Crowley: faculty mentor), \$2,000
- Schreyer Honor's College Summer Research Fund, Awarded to David Starnes (Crowley: faculty mentor), \$750

## 2019

- Student Engagement Network Award, Awarded to Malini Suresh Nair (Crowley: faculty mentor), \$1,000
- Anita M. Collins Undergraduate Research Fund, Awarded to Malini Suresh Nair (Crowley: faculty mentor), \$478
- Rock Ethics Institute Rise Up Award, Awarded to Alexandre Bourcier (Crowley: faculty mentor), \$1,000
- Anita M. Collins Undergraduate Research Fund, Awarded to Alexandre Bourcier (Crowley: faculty mentor), \$1,800
- Schreyer Honor's College Summer Research Fund, Awarded to Alexandre Bourcier (Crowley: faculty mentor), \$1,800
- Edward C. Hammond Jr. Memorial Scholarship, Awarded to Alexandre Bourcier (Crowley: faculty mentor), \$2,000

---

## TEACHING EXPERIENCE

### COURSE INSTRUCTOR OF RECORD

|              |   |
|--------------|---|
| 2026, spring | BIOL/BBH 469 Cellular and Molecular Neuroscience – <i>Course Director and Instructor</i><br><i>Undergraduate enrollment: 90</i> |
| 2025, spring | PHYSIO510 Physiological Adaptations to Stress – <i>Instructor</i><br><i>Graduate enrolment: 15</i>                              |
| 2025, spring | BIOL/BBH 469 Cellular and Molecular Neuroscience – <i>Course Director and Instructor</i><br><i>Undergraduate enrollment: 80</i> |
| 2024, spring | BIOL/BBH 469 Cellular and Molecular Neuroscience – <i>Course Director and Instructor</i><br><i>Undergraduate enrollment: 70</i> |
| 2023, fall   | PHYSIO517 Integrated Cellular Physiology – <i>Instructor</i><br>Graduate enrollment: 17   |
| 2023, fall   | BIOL/BBH 469 Cellular and Molecular Neuroscience – <i>Course Director and Instructor</i><br><i>Undergraduate enrollment: 83</i> |
| 2023, spring | BIOL/BBH 469 Cellular and Molecular Neuroscience – <i>Course Director and Instructor</i><br><i>Undergraduate enrollment: 56</i> |
| 2024         | PHSIO 510 Integrative & Cellular Physiology I – <i>Instructor</i>   |
| 2023         | PHSIO 510 Integrative & Cellular Physiology I – <i>Instructor</i>   |
| 2024         | PHSIO 510 Physiological Adaptations to Stress – <i>Instructor</i>   |
| 2023         | PHSIO 510 Physiological Adaptations to Stress – <i>Instructor</i>   |
| 2023         | NEURO 521 Systems Neuroscience – <i>Course Director</i>   |
| 2022         | NEURO 521 Systems Neuroscience – <i>Course Director</i>   |
| 2021         | NEURO 521 Systems Neuroscience – <i>Course Director</i>   |
| 2024         | NEURO 521 Systems Neuroscience – <i>Instructor</i>  |
| 2023         | NEURO 521 Systems Neuroscience – <i>Instructor</i>  |
| 2022         | NEURO 521 Systems Neuroscience – <i>Instructor</i>  |
| 2021         | NEURO 521 Systems Neuroscience – <i>Instructor</i>  |
| 2020         | NEURO 521 Systems Neuroscience – <i>Instructor</i>  |

### GRADUATE TRAINING GRANT PARTICIPATION

|               |  |
|---------------|--|
| 2025-current  | Training Faculty, Psychosocial Determinants and Biological Pathways to Healthy Aging T32<br>NIA Award #T32AG049676 |
| 2022-current  | Program Committee, Cross Disciplinary Neural Engineering T32<br>NINDS Award #T32NS115667                           |
| 2022-current  | Training Faculty, Medical Scientists Training Program T32 (MD/PhD program)<br>NIGMS Award #T32GM118294             |
| 2021-current  | Training Faculty, Cross Disciplinary Neural Engineering T32<br>NINDS Award #T32NS115667                            |
| 2020- current | Training Faculty, Physiological Adaptations to Stress T32<br>NIGMS Award #T32GM108563                              |

### GUEST LECTURES

|              |  |
|--------------|--|
| 2022-present | Training Faculty, Cross Disciplinary Neural Engineering T32 (weekly meetings/ 1-2 lectures per semester)                     |
| 2021-present | Training Faculty, Physiological Adaptations to Stress T32 (participate in team teaching)                                     |
| 2022         | Neuro 590 (PSU College of Medicine) (one lecture per semester)<br>Graduate course, Instructor of record: Dr. Yuval Silberman |
| 2021-2022    | Engineering/Neuro 526 Cellular and Molecular Neuroscience (multiple lectures each year)                                      |

|              |  |
|--------------|--|
|              | Graduate course, Instructor of record: Dr. Patrick Drew  |
| 2016-present | BIO/BBH 470: Functional and Integrative Neuroscience (multiple lectures each year)<br>Undergraduate course, Instructors of record: Dr. David Vandenbergh, Dr. Janine Kwapis, Dr. Nina Lauharatanahirun |
| 2016-2021    | BIO/BBH 469: Neurobiology (multiple lectures each year)<br>Undergraduate course, Instructor of record: Dr. Beni Luscher  |

---

## AWARDS & HONORS

|      |   |
|------|---|
| 2024 | <b>Associate Member</b><br>American College on Neuropsychopharmacology<br><b>American College on Neuropsychopharmacology</b><br><i>Award for presenting at the ACNP 63<sup>rd</sup> Annual Meeting (\$1000)</i>   |
| 2023 | <b>Whitaker Center “Women of Impact: Woman to Watch in STEM” Award</b><br><i>Recognizes a professional woman under 40 who has significant accomplishments and success in her STEM field</i><br><b>NIAAA Young Investigator Award</b><br>Special NIAAA Meeting "Alcoholism and Stress: a Framework for future treatment strategies"<br>(Volterra Meeting, May 2023)<br><b>Brain Research Bulletin</b><br>Journal cover art selection ( <i>Special Issue – Addiction III: From Mouse to Man</i> ) |
| 2022 | <b>Neuropsychopharmacology Editors Early Career Award (NEECA)</b><br><i>Selected as the top paper published in NPP in the previous year by the Editors</i><br>American College on Neuropsychopharmacology (ACNP)<br><b>Senior Investigator Travel Award</b><br>American College on Neuropsychopharmacology (ACNP) ( <i>provides financial support for 2022 meeting</i> )  |
| 2021 | <b>American College on Neuropsychopharmacology (ACNP)</b><br>Senior Investigator Travel Award Recipient ( <i>provides financial support for 2021 meeting and allows for attendance at 2022-2025 meetings</i> )  |
| 2019 | <b>NIH Center for Scientific Review</b><br>Early Career Reviewer Program (NAL – October 2019)<br><b>Neuroscience</b><br>Journal cover art selection ( <i>Issue #419C</i> )  |
| 2018 | <b>NARSAD Young Investigator Award</b><br>Brain and Behavior Research Foundation ( <i>funding 01/2019-01/2021</i> )   |
| 2017 | <b>Nominee, 2017 Dean’s Climate and Diversity Award</b><br>Awarding Organization: Eberly College of Science, Penn State University  |
| 2014 | <b>Best Poster Award</b><br>Awarding Organization: <i>International Congress on Alcoholism and Stress</i>   |
| 2013 | <b>Student Merit Award</b><br>Awarding Organization: <i>Research Society on Alcoholism</i><br><b>Ruth L. Kirschstein National Research Service Award</b><br>Awarding Organization: <i>National Institute on Alcohol Abuse and Alcoholism</i>  |
| 2012 | <b>Student Merit Award</b><br>Awarding Organization: <i>Research Society on Alcoholism</i>  |
| 2010 | <b>Graduate Research Award</b><br>Awarding Organization: <i>University of North Carolina – Wilmington</i><br><b>Student Merit Award</b><br>Awarding Organization: <i>Research Society on Alcoholism</i>   |
| 2008 | <b>Award for Outstanding Undergraduate Scholarship</b><br>Awarding Organization: <i>James Madison University Department of Psychology</i><br><b>Travel Award</b><br>Awarding Organization: <i>Association for Behavior Analysis – International</i>   |

|      |   |
|------|---|
| 2007 | <b>Best Poster Award</b><br>Awarding Organization: <i>Eastern Psychological Association</i>   |
|      | <b>Award for Outstanding Undergraduate Scholarship</b><br>Awarding Organization: <i>James Madison University Department of Psychology</i> |
|      | <b>Travel Award</b><br>Awarding Organization: <i>Association for Behavior Analysis – International</i>                                    |
| 2006 | <b>Award for Outstanding Undergraduate Scholarship</b><br>Awarding Organization: <i>James Madison University Department of Psychology</i> |

---

## RECOGNITION AND MEDIA

### INTERVIEWS

Healthy Minds with Jeffrey Borenstein, season 10 on PBS (airing fall 2025)

Newsweek: Neuroscientists Warn of 'Cascading' Alzheimer's Risk From These Two Habits [link](#)

*Top 3 trending articles, ranked by Apple News, May 2024*

### INVITED EDITORIAL

- State College Town and Gown: Neurons never retire: how your brain adapts with age (*print and digital*) [link](#)
- The Conversation: Even 1 drink a day elevates your cancer risk – an expert on how alcohol affects the body breaks down a new government report [link](#)  
*Selected as headline article in 1/10/2025 newsletter, over 40,000 reads*
- State College Town and Gown: Alcohol and sleep: how drinking affects your brain's ability to rest (*print and digital*) [link](#)
- The Conversation: Binge drinking is a growing public health crisis – a neurobiologist explains how research on alcohol use disorder has shifted [link](#)  
*Selected as headline article in 5/13/2024 newsletter; over 40,000 reads*

*Also published in Discover Magazine: How Binge Drinking Shifted Research On Alcohol Use Disorders*  
[link](#)

### VIDEO

What are some of the biggest questions in neuroscience today? ([link](#) to Penn State Eberly Twitter)

### PENN STATE PRINT MEDIA

Heard on Campus: Science, Health and Wellness PowHer Hour [link](#)

Early adult binge drinking has lasting impact on aging brain in mice [link](#)

Nikki Crowley named director of Neuroscience Institute at University Park [link](#)

Biology postdoc awarded National Institutes of Health fellowship [link](#)

Heard on campus: Nikki Crowley on 30 years of neuroscience advances [link](#)

Nikki Crowley honored with Women in STEAM Award by the Whitaker Center [link](#)

Uncovering the role of somatostatin signaling in the brain [link](#)

Mouse models of adolescent binge drinking reveal key long-lasting brain changes [link](#)

Crowley receives Huck Early Career Chair appointment [link](#)

New research on effects of binge drinking earns biologist early career award [link](#)

Penn State biologist receives NIH grant to help unlock biology of binge drinking [link](#)

Neuroscience grad student awarded grant to study adolescent binge drinking [link](#)

---

## SERVICE & OUTREACH

### EXTERNAL

|           |  |
|-----------|--|
| 2025, Oct | NIH Reviewer – Study Section: NAL  |
| 2025 -    | Associate Editor, Alcohol  |
| 2024, Mar | NIH Reviewer – Study Section: Special Emphasis Panel, Fellowship Applications ZAA1 GG (32) |
| 2024, Mar | United Kingdom Research and Innovation Funds - Reviewer                                    |

|           |  |
|-----------|--|
| 2024, Mar | Alcohol and the Central Nervous System Gordon Research Conference – poster judge           |
| 2023-2025 | Guest Editor, Alcohol  |
| 2023, Jun | NIH Reviewer – Study Section: NIDA Special Emphasis Panel; ZDA1 MXS-T (O2)                 |
| 2023, Feb | NIH Reviewer – Study Section: Special Emphasis Panel, Fellowship Applications ZAA1 GG (32) |
| 2022, Nov | NIH Reviewer – Study Section: Special Emphasis Panel ZAA1 DD (04)                          |
| 2022, Mar | NIH Reviewer – Study Section: Special Emphasis Panel ZAA1 DD (04)                          |
| 2022, Feb | Reviewer, Swiss National Science Foundation  |
| 2021, Feb | NIH Reviewer – Study Section: Special Emphasis Panel [ZAA1 DD (04)])                       |
| 2019, Oct | Early Career Reviewer, NIH Center for Scientific Review (Study Section: NAL)               |
| 2017      | Guest speaker, Westfield High School, Chantilly Virginia                                   |

## **INTERNAL**

### **University service**

|              |  |
|--------------|--|
| 2024, 2025   | Faculty Scholars Medals - Entrepreneurship, Technology Transfer, and Economic Development (Office of the Senior Vice President for Research)   |
| 2024         | Search committee member, Director of the Huck Institutes for the Life Sciences (Office of the Senior Vice President for Research)  |
| 2024-2023    | Director, Penn State Neuroscience Institute – University Park  |
|              | Penn State Presidential Goals Task Force ( <i>Growing Interdisciplinary Research Excellence Work Group</i> ). Leads: Justin Schwartz, Executive Vice President and Provost; Lora Weiss, Senior Vice President for Research; Kevin Black, Dean, College of Medicine |
| 2023-present | “Launch Committee” mentoring committee for junior faculty; Department of Nutrition, College of Health and Human Development  |
| 2022-present | Undergraduate neuroscience degree program development (Eberly/HHD/LA collaboration)  |
| 2022         | Junior Faculty Advisory Committee to Penn State Interim Vice President & Provost Justin Schwartz <i>selected as Eberly College of Science representative</i>   |
| 2017         | PSU Smoke Free Task Force ( <i>silent observer</i> )   |
| 2017         | PSU Communications and Onboarding Working Group (Research Computing and Cyberinfrastructure Advisory Council to the Provost)   |

### **College or Institute service**

|               |  |
|---------------|--|
| 2025-         | Steering Committee member, Center for Biodevices, Huck Institutes of the Life Sciences   |
| 2025-         | Junior faculty mentoring committee; Department of Biomedical Engineering, College of Engineering                                       |
| 2024,2025     | Huck Institutes of the Life Sciences - Institutes and Centers Leadership Working Group   |
| 2024-present  | Curriculum Advisory Committee, Neuroscience PhD Program  |
| 2024-present  | Eberly College of Science Development Committee  |
| 2022, 2024    | The Huck Institutes of the Life Science HITS (Huck Innovative and Transformative Seed Funds) grant reviewer and panelist               |
| 2024-present  | Associate Director for Neuroscience, Gerosciences and Dementia Prevention Consortium   |
| 2024-present  | Reviewer, Clinical and Translational Sciences Institute TL1 Translational Research Training Program applications (College of Medicine) |
| 2024-present  | Huck Life Sciences Symposium, judge, graduate and undergraduate  |
| 2023          | FaculTEA Panel, College of Engineering Center for Engineering Outreach and Inclusion   |
| 2023          | Search committee member, Eberly College of Science Associate Dean for Research   |
| 2023-present  | Associate Director for Postdoctoral Training and Leadership, Center for Neural Engineering   |
| 2023-present  | Program Committee, Cross Disciplinary Neural Engineering T32 Training Award (NINDS Award #T32NS115667)                                 |
| 2020-present  | Molecular, Cellular, and Integrative Biosciences Qualifying Exam Committee   |
| 2020-present  | Neuroscience Graduate Program Qualifying Exam Committee  |
| 2019 -present | Neuroscience Graduate Program Admissions Committee   |
| 2016-present  | PSU Program for Translation Research on Adversity and Neurodevelopment (P-TRAN)  |
| 2016-present  | PSU Undergraduate Neighbor-Neighbor Outreach   |
| 2010-2015     | UNC Biological & Biomedical Science's Student Liaison Committee  |

|           |   |
|-----------|---|
| 2013      | UNC Perl Prize Committee                            |
| 2012-2015 | UNC School of Medicine Graduate Student Recruitment |
| 2009-2010 | NIH Scientific Careers Community Outreach           |

#### Department service

|              |  |
|--------------|--|
| 2025 x 2     | Search committee chair, Department of Biology (tenure-track neurobiologist)  |
| 2021-present | Marker Lecture committee member  |
| 2021-2022    | Search committee member, Department of Biology (tenure-track neurobiologist) |
| 2021-present | Biomedical Engineering Graduate Program Qualifying Exam Committee member     |
| 2021-2023    | Biology Department Sustainability committee member                           |
| 2021         | Biomedical Engineering Graduate Program Admissions Committee member          |
| 2021         | Biology Department Graduate Admissions Committee member                      |

#### **DEI-RELATED TRAINING AND ACTIVITIES**

|              |  |
|--------------|--|
| 2023         | FaculTEA Panel, College of Engineering Center for Engineering Outreach and Inclusion |
| 2022-present | PSU Summer Research Opportunities Program Mentor                                     |
| 2022-present | Founding Member, Rainbow Engineering Network   |
| 2021-present | Member, Rainbow Science Network  |
| 2021         | Millennium Scholars Program Faculty Advisory Network                                 |
|              | Penn State Safer People Safer Places: Transgender and Gender Inclusion 101           |
|              | Penn State Safer People Safer Places: Foundations Workshop                           |

---

## PROFESSIONAL ACTIVITIES

#### Editorial Experience

Alcohol (2023-2024 special issue on sex differences, co-edited with Dr. Erin Calipari)

#### Ad Hoc Journal Reviewer

Addiction Neuroscience  
 Alcohol  
 Biological Psychiatry  
 Journal of Neuroscience  
 Nature Communications  
 Neurobiology of Stress  
 Neuropharmacology  
 Neuropsychopharmacology  
 Physiology and Behavior  
 Psychopharmacology

#### Society Memberships

American College on Neuropsychopharmacology (2024-present)  
 Society for Biological Psychiatry (2019-present)  
 International Congress on Alcoholism and Stress (2011-present)  
 Society for Neuroscience (2010-present)  
 Research Society on Alcoholism (2010-present)  
 Society for Behavior Analysis (2006-2009)  
 Eastern Psychological Association (2006-2009)