



EDUCATION

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

PROFESSIONAL POSITIONS

- 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 Huck Institutes of the Life Sciences; College of Medicine

PSU Grad Programs: *Departmental*: Biology, Biomedical Engineering.
Interdisciplinary: Neuroscience Graduate Program; Biomedical Engineering Graduate Program; Molecular, 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, PSU
- 2016 – 2018 Postdoctoral Fellow, Department of Biology, Penn State University
- 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

PUBLICATIONS [PubMed](#) [Google Scholar](#)

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*
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*
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*

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*
29. Griffith & **Crowley [corresponding author]** (2022). An innovative approach to examining the role of neurotransmitters in fear circuitry. *Neuropsychopharmacology*.
28. **Crowley** & Medina **[corresponding author]** (2022). Targeted and transient opening of the blood brain barrier in discrete neurocircuits and brain regions. *Neuropsychopharmacology*
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*
26. Sicher, Duerr, Starnes, & **Crowley [corresponding author]** (2022). Adolescent alcohol and stress exposure rewires key cortical neurocircuitry. *Frontiers in Neuroscience*
25. **Crowley** & Joffe **[co-corresponding authors]** (2021). Developing breakthrough psychiatric treatments by modulating G protein-coupled receptors on prefrontal cortex somatostatin interneurons. *Neuropsychopharmacology*
24. Dao, Brockway, Suresh Nair, Sicher, & **Crowley [corresponding author]** (2021). Somatostatin neurons control an alcohol binge drinking prelimbic microcircuit in mice. *Neuropsychopharmacology*
 - 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*
22. Brockway & **Crowley [corresponding author]** (2020). Turning the “tides on neuropsychiatric diseases: the role of peptides in the prefrontal cortex. *Frontiers in Behavioral Neuroscience*
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*
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*
19. Dao, Brockway, & **Crowley [corresponding author]** (2019). In vitro optogenetic characterization of neuropeptide release from prefrontal cortical somatostatin neurons. *Neuroscience*
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*
17. Feng, **Crowley**, Patel, Guo, Bugni, & Luscher (2019). Reversal of a treatment-resistant, depression-related brain state with the Kv7 channel opener retigabine. *Neuroscience*
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*
15. Lowery-Gionta*, **Crowley* [Co-First Authorship]**, Bukalo*, Silverstein, Holmes, & Kash (2018). Chronic stress dysregulates amygdalar output to the prefrontal cortex. *Neuropharmacology*
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*
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*
12. Al-Hasani, McCall, Shin, Gomez, Schmitz, Bernardi, Pyo, Park, Marcinkiewicz, **Crowley**, Krashes, Lowell, Kash, Rogers, & Bruchas (2015). Distinct subpopulations of nucleus accumbens dynorphin neurons drive aversion and reward. *Neuron*
11. Pleil, Lowery-Gionta, **Crowley**, Li, Marcinkiewicz, 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*

10. Vardy, Robinson, Li, Olsen, DiBerto, Sassano, Huang, Zhu, Urban, Rittiner, **Crowley**, Pleil, Song, Kash, Malanga, Krashes, & Roth (2015). A DREADD for multiplexing chemogenetic interrogation of neural circuits. *Neuron*
9. **Crowley** & Kash (2015). Kappa opioid receptor signaling throughout the brain: Involved circuitry and implications for treatment. *Progress in Neuro-psychopharmacology and Biological Psychiatry*
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*.
7. Kash, Pleil, Marcinkiecz, Lowery-Gionta, **Crowley**, Mazzone, Sugam, Hardaway, & McElligott (2014). Neuropeptide signaling in the BNST. *Molecules and Cells*
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*
5. DePoy, Daut, Wright, Camp, **Crowley**, Noronha, Lovinger, & Holmes (2014). Chronic alcohol alters reward behaviors and striatal plasticity. *Addiction Biology*
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*
3. **Crowley**, Cody, Davis, Lovinger, & Mateo (2013). Chronic methylphenidate exposure during adolescence reduces striatal synaptic responses to ethanol. *European Journal of Neuroscience*
2. Depoy, Daut, 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*
1. Mathur, **Capik**, Alvarez, & Lovinger (2011). Serotonin-mediated competitive long-term depression at corticostriatal synapses. *Journal of Neuroscience* // paper published under maiden name

FUNDING

CURRENT FUNDING

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)

R01 NIA//NIAAA/NIH administrative supplement (Award #3R01AA029403-01A1) 2023-2024 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)

NIAAA/NIH 2019-2024

National Institutes of Health LRP (2nd renewal award)

Investigation of key pathways modulated by juvenile chronic variable social stress

Role: PI

TRAINEE EXTERNAL FUNDING (CURRENT)

F32 NRSA NIAAA/NIH (Award #F32AA031396-01A1) 2024-2027 total: \$207,264

Sex differences in transcriptomics, cell dynamics, and behavior after adolescent binge drinking in mice

PI: Dr. Laurel Seemiller

Role: Sponsor. Co-Sponsor: Dr. Patrick Drew

F31 NRSA NIAAA/NIH (Award #F31AA0304550-01) 2022-2025 total: \$142,452

Investigating the effects of adolescent binge drinking on prefrontal somatostatin circuitry

PI: Avery Sicher, Neuroscience PhD Program

Role: Sponsor. Co-Sponsor: Dr. Patrick Drew

SUBMITTED FUNDING

The Kaufman Foundation 2024-2026 (letter of intent)

Spatially and temporally resolved neuropeptide signaling in the brain

Role: PI (Co-Investigator: Dr. Janine Kwapis, PSU Biology)

R21 NIA/NIH 2024-2026

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

Role: co-Investigator (PI: Dr. Janine Kwapis, PSU Biology)

U01 NINDS/NIH 2025-2029

Seamless integration of ultrasound neuromodulation and multiscale recording platform for in vivo and ex vivo applications

Role: contact PI (MPI: Dr. Raj Kothapalli, PSU Biomedical Engineering; Dr. Patrick Drew, PSU Engineering Science and Mechanics)

Brain Research Foundation 2025-2027

Low-intensity pulsed ultrasound stimulation for brain disorders

Role: PI (selected as Penn State finalist)

R01 NIAAA/NIH 2024-2029

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

Role: contact PI (MPI: Dr. Nanyin Zhang, PSU Biomedical Engineering)

A0 percentile: 30%

R01 NIA/NIH 2023-2028

Immunometabolic dysfunction in the APOE4 brain

Role: co-I (PI: Dr. Elizabeth Proctor, PSU College of Medicine)

COMPLETED FUNDING

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 and POST DOC FELLOW-LED INTERNAL FUNDING

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.

2024

- *(committed)* Illinois Institute of Technology Department of Biology. August 2024
- *(committed)* The Research Society on Alcohol, Annual Meeting (symposium). June 2024
- *(committed)* Penn State Neuroscience Institute Annual Retreat. Hershey, PA May 2024

- (*committed*) The Center for Healthy Aging at Penn State. University Park, PA April 2024
- Alcohol and the Nervous System Gordon Research Conference. 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. State College PA February 2024

2023

- Penn State Addiction Center for Translation Symposium, Hershey, PA December 2023
- Penn State Biological Sciences Society, University Park PA October 2023
- Binghamton University Developmental Exposure to Alcohol Research Center, Binghamton, NY September 2023
- Center for Neural Engineering Annual Retreat, 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, San Diego, CA April 2023
- Department of Neurobiology & Anatomy, Drexel University, Philadelphia PA, March 2023

2022

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

2021

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

2020

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

2019

- Integrative Neuroscience Research Center Seminar, Marquette University, Milwaukee WI October 2019
- Department of Biology, Pennsylvania State University, 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. Gwen Burgess		2024-present
Dr. Laurel Seemiller		2022-present
Dr. Dakota Brockway		2023-2024

Post-Doctoral Fellows – formal advisory committee member or consultant

Dr. Bryan Cruz	The Scripps Research Institute (advisors: Drs. Marisa Roberto and Eric Zorrilla) <i>MOSAIC K99/R00 application: mentoring committee</i>	2023-present
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Current Graduate Students (Primary Mentor)

Victoria Nudell	MD/PhD MSTP with PSU College of Medicine Molecular, Cellular, and Integrative Biosciences PhD Program	2023-present
Julio Flores Cuadra	Neuroscience PhD Program <i>Physiological Adaptations to Stress T32 Fellow</i> <i>Huck Graduate Fellow</i> <i>Jointly mentored with Dr. Patrick Drew</i>	2022-present
Grace Smith	Biomedical Engineering MS Program <i>PSU University Graduate Fellow</i>	2022-present
Avery Sicher	Neuroscience PhD Program <i>NIH NRSA Fellow</i> <i>Physiological Adaptations to Stress T32 Fellow</i> <i>Huck Graduate Fellow</i>	2020-present

Graduate Students (Primary Mentor) - Graduated

Dakota Brockway	Neuroscience PhD Program Thesis: <i>The Role of Somatostatin in the Prefrontal Cortex</i> <i>Huck Graduate Fellow</i>	2018-2023
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Graduate Students (Dissertation Committee Member)

Rachel Kang	Biomedical Sciences, College of Medicine (PI: Proctor)	2023-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 Neuroscience PhD Program (PI: Drew) <i>co-mentored by Crowley for CDNE T32</i>	2023-present
Shubham Mirg	Biomedical Engineering (PI: Kothapalli) <i>co-mentored by Crowley for CDNE T32</i>	2023-present
Denver Greenawalt	MCIBS (PI: Drew) <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)	2021-present

	<i>co-mentored by Crowley for CDNE T32</i>	
Lauren Bellfy	MCIBS (PI: Kwapis)	2021- present
Tong Jiang	Biology (PI: Luscher)	2021-present
Laurel Seemiller	MCIBS (PI: Gould)	2020- 2022

Undergraduate Student (Primary Mentor)

Kaleah Tuttle	Biomedical Engineering (Clark Scholar)	2023-present
Roy Wu	Biochemistry and Molecular Biology	2023-present
Blake Baughman	Biology (Schreyer Honors College) <i>Co-advised with Mike Russel, BBH</i>	2023-present
Damini Nair	Biology (Schreyer Honors College)	2023-present
Emily McDonald	Biological Sciences & Health Professions	2023-present
Erin Wolfanger	Biology (Schreyer Honors College)	2023-present
Obi Nnabugwu	Biomedical Engineering (Clark Scholar)	2022-present
Matthew Springer	Biology (Schreyer Honors College)	2021-present

Undergraduate Students (Primary Mentor) - Graduated

Sophie Anderlind	Biology (Schreyer Honors College)	2022-2023
Andrew Kacala	Biology (Schreyer Honors College)	2021-2023
Ariana Almarez	Psychology (SROP with Cal State San Marcos)	2023
David Starnes	Biology (Schreyer Honors College) next: medical student, Cooper Rowan	2019-2023
Renee Laurenzana	Biological Sciences (SROP with Cal State San Marcos) next: Neuroscience PhD Program, ASU	2022
Nicole Lookfong	<i>summer student mentored with Dr. Yuval Silberman</i>	2021
Daniela Lopez Melean	Biology (Millennium Scholar)	2019-2022
Corey Zimmer	Biobehavioral Health	2019-2022
Brody Moyer	Biochemistry and Molecular Biology	2018-2022
Veronica Sendao	Biobehavioral Health next: Research assistant, Boston University	2018-2022
Malini Suresh Nair	Biology next: medical student, Wake Forest	2018-2019
Sarah Magee	Biology (Millennium Scholar) next: Neuroscience PhD Program, UNC	2016-2019
Alexandre Bourcier	Biology (Schreyer Honors College) next: medical student, UCLA	2016-2019

Other previous trainees

Keith Griffith	Research Technician next: MD/PhD MTSP, PSU College of Medicine	2021-2024
Grace Smith	Research Technician next: PSU Biomedical Engineering program	2021-2022
Nigel Dao	Research Technician next: NYU PhD program (PI: Adam Carter)	2018-2021
Malini Suresh Nair	Research Technician 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 University of Colorado	2020-2021
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UNDERGRADUATE STUDENT-LED FUNDING AND AWARDS

All undergraduate awards have always been used 100% to support student stipends

2023

- Norman Freed Undergraduate Research Award in the Eberly College of Science: Awarded to Andrew Kacala (\$600)
- Eberly post session: 1st place in life sciences, Awarded to Andrew Kacala
- Engineering Undergraduate Scholarship, Awarded to Obi Nnabugwu (Crowley: faculty mentor), \$5,000
- Eberly Exhibit Award, 1st 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, 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 (SEN), 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

2023-present BIO/BBH 469 Cellular and Molecular Neuroscience (*Course Director and Instructor: Spring 2023, Fall 2023, Spring 2024*)

2023-present PHSIO 510 Integrative & Cellular Physiology I (Instructor)

- 2023-present PHSIO 510 Physiological Adaptations to Stress (Instructor)
 2021-2023 NEURO 521 Systems Neuroscience (*Course Director: Spring 2021, Spring 2022, Spring 2023*)
 2020-present NEURO 521 Systems Neuroscience (*Instructor: Instructor: Spring 2020, Spring 2021, Spring 2022, Spring 2023*)

GRADUATE TRAINING GRANT PARTICIPATION

- 2022-current Program Committee, Cross Disciplinary Neural Engineering T32
 NINDS Award #T32NS115667
 2022-current Training Faculty, Medical Scientists Training Program T32 (MD/PhD program)
 NIGMS Award #T32GM118294
 2021-current Training Faculty, Cross Disciplinary Neural Engineering T32
 NINDS Award #T32NS115667
 2020- current Training Faculty, Physiological Adaptations to Stress T32
 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)
 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)
 Undergraduate course, Instructors of record: Dr. David Vandenberg, Dr. Janine Kwapis, Dr. Nina Lauharatanahirun
 2016-2021 BIO/BBH 469: Neurobiology (multiple lectures each year)
 Undergraduate course, Instructor of record: Dr. Beni Luscher

AWARDS & HONORS

- 2023 **Whitaker Center “Women of Impact: Woman to Watch in STEM” Award**
Recognizes a professional woman under 40 who has significant accomplishments and success in her STEM field
NIAAA Young Investigator Award
 Special NIAAA Meeting "*Alcoholism and Stress: a Framework for future treatment strategies*"
(Volterra Meeting, May 2023)
Brain Research Bulletin
 Journal cover art selection (*Special Issue – Addiction III: From Mouse to Man*)
 2022 **Neuropsychopharmacology Editors Early Career Award (NEECA)**
Selected as the top paper published in NPP in the previous year by the Editors
 American College on Neuropsychopharmacology (ACNP)
Senior Investigator Travel Award
 American College on Neuropsychopharmacology (ACNP) (*provides financial support for 2022 meeting*)
 2021 **American College on Neuropsychopharmacology (ACNP)**
 Senior Investigator Travel Award Recipient (*provides financial support for 2021 meeting and allows for attendance at 2022-2025 meetings*)
 2019 **NIH Center for Scientific Review**
 Early Career Reviewer Program (NAL – October 2019)
Neuroscience
 Journal cover art selection (*Issue #419C*)
 2018 **NARSAD Young Investigator Award**
 Brain and Behavior Research Foundation (*funding 01/2019-01/2021*)
 2017 **Nominee, 2017 Dean’s Climate and Diversity Award**

- 2014 Awarding Organization: Eberly College of Science, Penn State University
Best Poster Award
- 2013 Awarding Organization: *International Congress on Alcoholism and Stress*
Student Merit Award
Awarding Organization: *Research Society on Alcoholism*
Ruth L. Kirschstein National Research Service Award
- 2012 Awarding Organization: *National Institute on Alcohol Abuse and Alcoholism*
Student Merit Award
Awarding Organization: *Research Society on Alcoholism*
- 2010 **Graduate Research Award**
Awarding Organization: *University of North Carolina – Wilmington*
Student Merit Award
Awarding Organization: *Research Society on Alcoholism*
- 2008 **Award for Outstanding Undergraduate Scholarship**
Awarding Organization: *James Madison University Department of Psychology*
Travel Award
Awarding Organization: *Association for Behavior Analysis – International*
- 2007 **Best Poster Award**
Awarding Organization: *Eastern Psychological Association*
Award for Outstanding Undergraduate Scholarship
Awarding Organization: *James Madison University Department of Psychology*
Travel Award
Awarding Organization: *Association for Behavior Analysis – International*
- 2006 **Award for Outstanding Undergraduate Scholarship**
Awarding Organization: *James Madison University Department of Psychology*

SERVICE & OUTREACH

EXTERNAL

- 2024 Alcohol and the Central Nervous System Gordon Research Conference – poster judge 2/2024
- 2023 NIH Reviewer- Study Section: Special Emphasis Panel, Fellowship Applications ZAA1 GG (32); 2/2023
NIH Reviewer- Study Section: NIDA Special Emphasis Panel; ZDA1 MXS-T (O2); 6/2023
- 2022 NIH Reviewer- Study Section: Special Emphasis Panel ZAA1 DD (04)); 3/2022 and 11/2022
- 2022 Reviewer, Swiss National Science Foundation
- 2021 NIH Reviewer- Study Section: Special Emphasis Panel [ZAA1 DD (04)]
- 2019 Early Career Reviewer, NIH Center for Scientific Review (Study Section: NAL)
- 2017 Guest speaker, Westfield High School, Chantilly Virginia
- 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

INTERNAL

- 2023 FacuTEA Panel, College of Engineering Center for Engineering Outreach and Inclusion
- 2023 Search committee member, Eberly College of Science Associate Dean for Research
- 2023 PSU Presidential Goals Task Force (*Growing Interdisciplinary Research Excellence Work Group*). Leads: Justin Schwartz, Executive Vice President and Provost; Lora Weiss, Senior Vice President for Research; Kevin Black, Dean, College of Medicine
- 2023 “Launch Committee” mentoring committee for junior faculty; Department of Nutrition, College of Health and Human Development
- 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)

- 2022 The Huck Institutes of the Life Science HITS (Huck Innovative and Transformative Seed Funds) grant reviewer and panelist
- 2022 Junior Faculty Advisory Committee to PSU Interim Vice President & Provost Justin Schwartz *selected as Eberly College of Science representative*
- 2021 Search committee member, Department of Biology tenure-track neurobiologist
- 2021 Biomedical Engineering Graduate Program Admissions Committee
- 2021 Biology Graduate Program Admissions Committee
- 2019 -present Neuroscience Graduate Program Admissions Committee
- 2021 Biology Department Graduate Admissions Committee
- 2017 PSU Smoke Free Task Force (*silent observer*)
- 2017 PSU Communications and Onboarding Working Group (Research Computing and Cyberinfrastructure Advisory Council to the Provost)
- 2016-Present PSU Program for Translation Research on Adversity and Neurodevelopment (P-TRAN)
- 2016-Present PSU Undergraduate Neighbor-Neighbor Outreach

DEI-RELATED TRAINING AND ACTIVITIES

- 2022-2023 PSU Summer Research Opportunities Program Mentor
- 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
- Journal of Neuroscience
- Nature Communications
- Neurobiology of Stress
- Neuropharmacology
- Neuropsychopharmacology
- Physiology and Behavior
- Psychopharmacology

Society Memberships 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)