

# Katherine Furman

Ann Arbor, MI – (908) 442-3838 – furmank@umich.edu

---

## Education

---

- August 2019 – Present      **Ph.D. - University of Michigan** | PhD in Neuroscience  
Neuroscience Graduate Program, Ann Arbor, MI
- Currently: Fall 2019 Rotation with Joanna Spencer-Segal, MD, PhD
- August 2015 – May 2019      **B.S. - New York University** | College of Arts and Sciences, New York, NY | *Cum Laude*  
Bachelor of Science Degree in Neural Science with High Honors, May 2019
- Honors Thesis: “Assessing behavioral relevance of pup ultrasonic vocalizations as a function of maternal experience” Advisor: Robert Froemke, PhD
  - Neural Science Honors Scholar
  - University Honors Scholar
  - Chemistry Minor
- September 2011 – May 2015      **A.S. - Raritan Valley Community College** | Branchburg, NJ | *Magna Cum Laude*  
Associate of Science Degree in General Science, May 2015
- Dually enrolled throughout all four years of high school
  - Member of Phi Theta Kappa Honor Society

## Research Experience

---

- January 2018 – May 2019      **BP-ENDURE Research Fellow** | NYU Skirball Institute for Biomolecular Medicine
- **Laboratory of Dr. Robert C. Froemke, PhD**
  - Senior thesis project used a Conditioned Place-Preference paradigm to assess the preference of female mice for infant-related auditory cues, including pup ultrasonic vocalizations, dependent on maternal experience
  - Funded by NIH Blueprint Program for Enhancing Neuroscience Diversity through Undergraduate Research Experiences & NYU Dean’s Undergraduate Research Fund
- June 2018 – August 2018      **BP-ENDURE Summer Research Fellow** | Yale University Department of Psychiatry
- **Laboratory of Dr. Marina R. Picciotto, PhD**
  - Used fiber photometry to measure effects of cholinergic systems on inhibitory neuron activity in subtypes of interneurons in the basolateral amygdala of mice during stress-related behaviors
  - Funded by NIH Blueprint Program for Enhancing Neuroscience Diversity through Undergraduate Research Experiences (BP-ENDURE)
- June 2017 – August 2017      **BP-ENDURE Summer Research Fellow** | University of Michigan Molecular & Behavioral Neuroscience Institute
- **Laboratory of Dr. Jill B. Becker, PhD**
  - Used Fast-Scan Cyclic Voltammetry in anaesthetized rats to investigate sex-differences in selective estrogen receptor subtype involvement in cocaine-induced dopamine release in the nucleus accumbens
  - Funded by NIH Blueprint Program for Enhancing Neuroscience Diversity through Undergraduate Research Experiences (BP-ENDURE)
- January 2016 – December 2017      **Student Research Assistant** | NYU Center for Neural Science
- **Laboratory of Dr. Cristina Alberini, PhD**
  - Main project involved characterizing expression of insulin-like growth factor II mRNA through in-situ hybridization, with the goal of understanding mechanisms by which it promotes memory consolidation

- Subprojects include extensive use of Neurolucida360 to analyze dendritic spine density of hippocampal cell cultures

## Awards & Scholarships

---

September 2019	<b>NIH T-32 Early Stage Training in the Neurosciences Fellowship   U of M Neuroscience Graduate Program</b> <ul style="list-style-type: none"> <li>○ Awarded trainee fellowship by Neuroscience Graduate Program Directors for financial support in the first year of graduate school</li> </ul>
May 2019	<b>Best Research Talk Award   NYU Undergraduate Research Conference</b> <ul style="list-style-type: none"> <li>○ Awarded by members of NYU Faculty of Arts and Sciences</li> <li>○ Title: <i>"Nature Versus Nurture: Maternal Responses to Infant Distress Cues"</i> Authors: <b>Katherine L. Furman</b>, Robert C. Froemke</li> </ul>
April 2019	<b>NSF Graduate Research Fellowship Program – Honorable Mention</b> <ul style="list-style-type: none"> <li>○ As a senior undergraduate, received an Honorable Mention as recognition for an excellent NSF GRFP application</li> </ul>
April 2019	<b>NYU University Honors Scholar</b> <ul style="list-style-type: none"> <li>○ Recognized as a University-wide Honors Scholar, recognition given to those students within the top 40% of their graduating class</li> </ul>
April 2019	<b>Sherrington Award for Neural Science Research   NYU Center for Neural Science</b> <ul style="list-style-type: none"> <li>○ First place thesis prize for undergraduate research in Neural Science</li> <li>○ Thesis title: "Assessing behavioral relevance of pup ultrasonic vocalizations as a function of maternal experience" Advisor: Robert Froemke</li> <li>○ Selected by faculty members within the Center for Neural Science as the sole recipient of this prestigious award among all undergraduate honors theses submitted</li> </ul>
June 2017 – May 2019	<b>NIH Blueprint Program for Enhancing Neuroscience Diversity through Undergraduate Research Experiences (BP-ENDURE)   NYU/Hunter College - New York, NY</b> <ul style="list-style-type: none"> <li>○ Extremely competitive program, through which trainees receive 2 years of research funding from an NIH initiative to promote training and success in neuroscience among undergraduates from diverse backgrounds</li> <li>○ Received two years of funded travel to present at the Society for Neuroscience, as well as other conferences and professional opportunities</li> <li>○ Attended weekly professional development seminars</li> </ul>
February 2019	<b>Dean's Opportunity Fund for Graduate School   NYU College of Arts &amp; Science</b> <ul style="list-style-type: none"> <li>○ Selected from a competitive applicant pool to receive funding for graduate school application-related fees</li> </ul>
February 2019	<b>First Place Prize – ERN Video Competition   Emerging Researchers National Conference</b> <ul style="list-style-type: none"> <li>○ Animated, filmed, and produced a 3-minute video detailing senior thesis work.</li> <li>○ Selected for a first place prize from hundreds of applicants across the country.</li> <li>○ Awarded travel funding to the Emerging Researchers National Conference, as well as AAAS Membership.</li> <li>○ Video Title: <i>How do mothers learn to respond to their child's cry?</i> (Can be viewed here: <a href="https://vimeo.com/289799744">https://vimeo.com/289799744</a>)</li> </ul>

- Fall 2018      **Student Travel Award Program** | ABRCMS 2018
- Selected from a competitive application pool to receive travel funding for the 2018 Annual Biomedical Research Conference for Minority Students in Indianapolis, IN
  - Awarded by ABRCMS internal selection committee
  - Oral Presentation Title: *“Behavioral preference for pup ultrasonic vocalizations in female mice”* Authors: Katherine L. Furman, Ioana Carcea, Robert C. Froemke
- Fall 2018      **Dean’s Undergraduate Research Conference Grant** | NYU College of Arts & Science
- Awards travel funding for undergraduate researchers to present at conferences
  - Applied and was awarded funding for airfare and registration for ABRCMS 2018
- May 2018      **Best Poster Presentation Award** | NYU Undergraduate Research Conference
- Awarded by members of NYU Faculty of Arts and Sciences
  - Poster Title: *“Behavioral preference for pup ultrasonic vocalizations in female mice”* Authors: **Katherine L. Furman**, Ioana Carcea, Robert C. Froemke
- Spring 2018      **Dean’s Undergraduate Research Fund** | NYU College of Arts & Sciences
- Awards research grants to students with outstanding research proposals, displaying the skills necessary to pursue their own research
  - 2018 Robert Selander Research Scholar, an honor awarded to young researchers with excellent research proposals
  - Project Title: *“Oxytocin-Dependent Behavioral Preference for Pup Calls in Female Mice”* (mentored by Robert C. Froemke)
- September 2016 – May 2019      **Irving H. Jurow Scholarship** | New York University
- Awarded to students of the College of Arts and Sciences who display outstanding academic achievement
- Fall 2017      **Barry M. Goldwater Scholarship** | Departmental Nominee
- Nominated by the NYU Center for Neural Science as one of two outstanding candidates for the Barry M. Goldwater Scholarship

## Publications & Presentations

---

- Research Talk;  
May 3<sup>rd</sup>, 2019      **NYU College of Arts & Sciences Undergraduate Research Conference** | New York, NY  
*“Nature versus Nurture: Maternal Responses to Infant Distress Cues”* **Katherine L. Furman**, Robert C. Froemke
- Research Talk;  
April 26<sup>th</sup>, 2019      **NYU Center for Neural Science Undergraduate Research Festival** | New York, NY  
*“Nature versus Nurture: Maternal Responses to Infant Distress Cues”* **Katherine L. Furman**, Robert C. Froemke
- Research Talk;  
February 21<sup>st</sup>, 2019      **Emerging Researchers National (ERN) Conference** | Washington, DC  
*“Behavioral preference for pup ultrasonic vocalizations in female mice”* **Katherine L. Furman**, Adam Mar, Ioana Carcea, Robert C. Froemke (invited to present, but unable to attend)
- Research Talk;  
November 15<sup>th</sup>, 2018      **Annual Biomedical Research Conference for Minority Students** | Indianapolis, IN  
*“Behavioral preference for pup ultrasonic vocalizations in female mice”* **Katherine L. Furman**, Adam Mar, Ioana Carcea, Robert C. Froemke
- Poster Presentation;  
November 6<sup>th</sup>, 2018      **Society for Neuroscience 48<sup>th</sup> Annual Meeting** | San Diego, CA

*"Assessing behavioral preference for mouse pup calls as a function of maternal experience and oxytocin signaling"* **Katherine L. Furman**, Adam Mar, Ioana Carcea, Robert C. Froemke

- Poster Presentation;  
November 3<sup>rd</sup>, 2018      **8<sup>th</sup> Annual ENDURE Meeting @ Society for Neuroscience** | San Diego, CA  
*"in-vivo optical recording of BLA inhibitory interneuron activity during stress-related behaviors"* **Katherine L. Furman**, Steven Pittenger, Richard Crouse, Marina R. Picciotto
- Research Talk;  
August 2<sup>nd</sup>, 2018      **Summer Research Symposium** | Yale University – New Haven, CT  
*"Which types of inhibitory neurons influence depressive behaviors?"* Oral presentation by Katherine L. Furman
- Poster Presentation;  
August 2<sup>nd</sup>, 2018      **Summer Research Symposium** | Yale University – New Haven, CT  
*"in-vivo optical recording of BLA inhibitory interneuron activity during stress-related behaviors"* **Katherine L. Furman**, Steven Pittenger, Richard Crouse, Marina R. Picciotto
- Poster Presentation;  
May 5<sup>th</sup>, 2018      **Undergraduate Research Conference** | NYU College of Arts & Sciences  
*"Behavioral preference for pup ultrasonic vocalizations in female mice"* **Katherine L. Furman**, Ioana Carcea, Robert C. Froemke
- Poster Presentation;  
April 27<sup>th</sup>, 2018      **Undergraduate Research Festival** | NYU Center for Neural Science  
*"Sex-differences in the effect of estradiol on cocaine-induced dopamine release: Role of selective estrogen receptors"* **Katherine L. Furman**, Katie E. Yoest, Jennifer A. Cummings, Brandon J. Aragona, Jill B. Becker
- Poster Presentation;  
April 25<sup>th</sup>, 2018      **Under-Graduate Research Conference** | Hunter College - New York, NY  
*"Sex-differences in the effect of estradiol on cocaine-induced dopamine release: Role of selective estrogen receptors"* **Katherine L. Furman**, Katie E. Yoest, Jennifer A. Cummings, Brandon J. Aragona, Jill B. Becker
- Poster Presentation;  
November 11<sup>th</sup>, 2017      **Society for Neuroscience 47<sup>th</sup> Annual Meeting** | Washington, D.C.  
*"Sex-differences in the effect of estradiol on cocaine-induced dopamine release: Role of selective estrogen receptors"* **Katherine L. Furman**, Katie E. Yoest, Jennifer A. Cummings, Brandon J. Aragona, Jill B. Becker
- Poster Presentation;  
August 9<sup>th</sup>, 2017      **Summer Research Symposium** | University of Michigan - Ann Arbor, MI  
*"Sex-differences in the effect of estradiol on cocaine-induced dopamine release: Role of selective estrogen receptors"* **Katherine L. Furman**, Katie E. Yoest, Jennifer A. Cummings, Brandon J. Aragona, Jill B. Becker

## Service & Outreach

---

- September 2019 – Present      **Girls Who Code** | Capstone Project Mentor, University of Michigan Chapter
- Girls Who Code is an organization which seeks to teach young girls how they can use programming as a valuable skill in their lives and careers, while providing representation of women succeeding in STEM careers
  - As a Capstone Project Mentor, I meet weekly with a group of girls to coach them through a programming Capstone Project

October 2019- September 2020	<b>Neuroscience Graduate Student Organization – Outreach Chair</b>   University of Michigan <ul style="list-style-type: none"> <li>○ Serve on the Executive Board of the Neuroscience Graduate Student Organization, which helps to plan events and activities for Neuroscience Graduate Students.</li> <li>○ As Outreach Chair, I lead the planning of neuroscience-related outreach events for the University of Michigan and greater Ann Arbor communities.</li> </ul>
May 2017 – May 2019	<b>Society for Undergraduate Neural Science</b>   Vice President, NYU Chapter <ul style="list-style-type: none"> <li>○ Work with a team of executive board members to plan and organize events of various categories, including academic, professional development, social, and travel events for undergraduates interested in Neuroscience</li> <li>○ Correspond with faculty advisors and guest-speakers</li> <li>○ Outreach to the NYU and NYC Neuroscience community</li> </ul>
September 2017 – May 2019	<b>Neural Science Peer Mentor</b>   NYU Center for Neural Science <ul style="list-style-type: none"> <li>○ Act as a peer mentor, sharing knowledge and experiences of my own to educate and advise six different freshman and sophomore mentees</li> </ul>
Spring 2018	<b>High School Neuroscience Mentor</b>   Lyons Community School, Brooklyn NY <ul style="list-style-type: none"> <li>○ This program allows experienced scientists to help assist high school students from an underserved community in carrying out scientific research projects of their own in the classroom</li> <li>○ Oversaw five students’ progress on designing, completing, and writing up their work in a scientific manner</li> </ul>
September 2017 – May 2019	<b>NYU Peer Undergraduate Mentoring Program (PUMP)</b>   NYU College of Arts & Science <ul style="list-style-type: none"> <li>○ Act as a peer mentor, sharing knowledge and experiences of my own to educate and advise freshman and sophomore mentees</li> </ul>
Spring 2017 – Spring 2019	<b>Undergraduate Research Festival Planning Committee</b>   NYU Center for Neural Science <ul style="list-style-type: none"> <li>○ Helped found the event, and served on the planning committee for the first, second and third annual Center for Neural Science Undergraduate Research Festival</li> <li>○ Coordinated and Planned the conference with a team of peers and faculty advisors</li> <li>○ Served as a liaison between presenters and administrators</li> </ul>
August 2016 – May 2017	<b>Sophomore Cohort President</b>   NYU College Cohort Program <ul style="list-style-type: none"> <li>○ Elected into office by a group of peers</li> <li>○ Planned community-building events for a cohort of NYU sophomores</li> <li>○ Worked cooperatively with a team of co-presidents</li> <li>○ Responsibly handle a semester’s event budget</li> </ul>

## Memberships & Affiliations

---

- Society for Neuroscience
- American Association for the Advancement of Science (AAAS)