

Katherine Furman

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Education

August 2019 –
Present

Ph.D. - University of Michigan | PhD in Neuroscience
Neuroscience Graduate Program, Ann Arbor, MI

- Fall 2019 Rotation with Joanna Spencer-Segal, MD, PhD
- Currently: Winter 2020 Rotation with Christian Burgess, 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 Conditioned Place-Preference and Operant Conditioning paradigms 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	NIH T-32 Early Stage Training in the Neurosciences Fellowship U of M Neuroscience Graduate Program <ul style="list-style-type: none"> ○ Awarded trainee fellowship by Neuroscience Graduate Program Directors for financial support in the first year of graduate school
May 2019	Best Research Talk Award NYU Undergraduate Research Conference <ul style="list-style-type: none"> ○ Awarded by members of NYU Faculty of Arts and Sciences ○ Title: <i>"Nature Versus Nurture: Maternal Responses to Infant Distress Cues"</i> Authors: Katherine L. Furman, Robert C. Froemke
April 2019	NSF Graduate Research Fellowship Program – Honorable Mention <ul style="list-style-type: none"> ○ As a senior undergraduate, received an Honorable Mention as recognition for an excellent NSF GRFP application
April 2019	NYU University Honors Scholar <ul style="list-style-type: none"> ○ Recognized as a University-wide Honors Scholar, recognition given to those students within the top 40% of their graduating class
April 2019	Sherrington Award for Neural Science Research NYU Center for Neural Science <ul style="list-style-type: none"> ○ First place thesis prize for undergraduate research in Neural Science ○ Thesis title: "Assessing behavioral relevance of pup ultrasonic vocalizations as a function of maternal experience" Advisor: Robert Froemke ○ Selected by faculty members within the Center for Neural Science as the sole recipient of this prestigious award among all undergraduate honors theses submitted
June 2017 – May 2019	NIH Blueprint Program for Enhancing Neuroscience Diversity through Undergraduate Research Experiences (BP-ENDURE) NYU/Hunter College - New York, NY <ul style="list-style-type: none"> ○ 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 ○ Received two years of funded travel to present at the Society for Neuroscience, as well as other conferences and professional opportunities ○ Attended weekly professional development seminars
February 2019	Dean's Opportunity Fund for Graduate School NYU College of Arts & Science <ul style="list-style-type: none"> ○ Selected from a competitive applicant pool to receive funding for graduate school application-related fees
February 2019	First Place Prize – ERN Video Competition Emerging Researchers National Conference <ul style="list-style-type: none"> ○ Animated, filmed, and produced a 3-minute video detailing senior thesis work. ○ Selected for a first place prize from hundreds of applicants across the country. ○ Awarded travel funding to the Emerging Researchers National Conference, as well as AAAS Membership. ○ Video Title: <i>How do mothers learn to respond to their child's cry?</i> (Can be viewed here: https://vimeo.com/289799744)

- 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 3rd, 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 26th, 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 21st, 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 15th, 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 6th, 2018 **Society for Neuroscience 48th 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 3rd, 2018 **8th 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 2nd, 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 2nd, 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 5th, 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 27th, 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 25th, 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 11th, 2017 **Society for Neuroscience 47th 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 9th, 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** | Executive Committee Member, 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 an Executive Committee member, I help organize the club, and meet weekly with a group of girls to coach them through a programming Capstone Project

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

Memberships & Affiliations

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