

AMY SCALERA

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EDUCATION

Brandeis University, Waltham MA **May 2022**
Doctorate of Philosophy (Ph.D.), 2nd Year, Neuroscience **GPA: 3.74**
“Trafficking of extracellular vesicles in neurons”
Advisor: Dr. Avital Rodal

Lafayette College, Easton PA **May 2017**
Bachelor of Science (B.S), Neuroscience; Minor: Chemistry **GPA: 3.66**
“Examining the role of corticosterone on pair bonding in zebra finches”
Advisor: Dr. Michelle Tomaszycski

Honors: Cum Laude, Marquis Scholar, Dean’s List (Spring 2015; Spring 2016; Fall 2016); Psi Chi:
National Psychology Honors Society

RESEARCH EXPERIENCE

Graduate Student, Brandeis University **August 2017-Present**
Lab of Dr. Avital Rodal; examining the role of extracellular vesicles (EV) and their cargo proteins in neurons in both *Drosophila melanogaster* and a mammalian tissue culture model. We seek to understand how canonical regulators of endocytosis impact release of EVs.

Undergraduate Researcher, Lafayette College **October 2015-May 2017**
Lab of Dr. Michelle Tomaszycski; localizing oxytocin in the lateral septum of Zebra Finch brains by fluorescence immunocytochemistry and in situ hybridization. We tested the hypothesis that song quality affects activation of oxytocin receptors in brain regions involved in song.
Honors Thesis: Studying the effects of the stress hormone corticosterone on pair bonding in zebra finches using intramuscular injection and behavioral observation. I found that corticosterone reduced pair bonding.

Summer Undergraduate Research Program, Rutgers University **June 2016-August 2016**
Lab of Dr. Ron Hart; examining the role of the protein ATM in glucose transport in order to elucidate the effects of various mutations in the ATM gene, which is responsible for the disease, Ataxia Telangiectasia. We hypothesized that when ATM is inhibited, cells will show decreased glucose uptake and an increase in mitochondrial oxidation.

Nalven Scholar Research Program, Lafayette College **June 2015-August 2015**
Lab of Dr. James Dearworth; comparing the presence of various turtle species in the Bethlehem, Pennsylvania area and correlating their presence with water quality to determine Red Ear Slider nervous system adaptability. We expected the red-eared sliders to thrive in poorer environmental conditions, as this would provide reasoning for their invasiveness and adaptability.

PUBLICATIONS AND PRESENTATIONS

American Society for Cell Biology Poster Session, San Diego, CA **October 2018**
Neuronal periaxonal zone membrane remodeling machinery regulates the traffic of extracellular vesicle cargoes at *Drosophila* synapses

Scalera, A.L. & Tomaszycski, M.L. (2018). Exogenous corticosterone decreases pair bonding in both sexes of Zebra Finches. *General and Comparative Endocrinology*, 286, 121-127.

EXCEL Scholar Poster Session, Easton, PA **October 2015**
Ecological evidence for the Red-Eared Slider as a model for neurodegenerative disease

Lacawac Ecology Conference, Paupack, PA **September 2015**
Ecological evidence for the Red-Eared Slider as a model for neurodegenerative disease

TEACHING EXPERIENCE

Teaching Assistant, Brandeis University **January 2019-Present**
Guiding undergraduates through General Biology Laboratory (BIOL 18A) by teaching them concepts, providing help and instruction with experiments, grading assignments, and providing individual feedback and assistance to students.

Teaching Assistant, Brandeis University **August 2018-December 2018**
Assisting in teaching Cells and Organisms (BIOL 15B) by holding regular recitation sections where material is reviewed for smaller groups of students, grading exams, and providing individual assistance for students.

Psychology Lab Assistant, Lafayette College **August 2016-May 2017**
Aiding in Physiological Psychology lab by setting up, answering questions, helping to design a lab practical, grading, and running some of the labs.

Teaching Assistant, Lafayette College **August 2016-December 2016**
Helping with Neurobiology lab by setting up and assisting students with questions.

Peer Mentor, Lafayette College **August 2014-May 2015**
Aiding first year students in the Science Horizons Program by teaching them about research, coordinating team-building exercises and ice-breakers, and getting them acclimated to both the school and the Science Horizons program.

PROFESSIONAL EXPERIENCE

Posse Mentor, Brandeis University **August 2019-Present**
Coaching a group of ten undergraduate Posse Scholars academically, socially, and personally through one-on-one meetings and facilitating workshops to promote leadership skills.

Externship, Good Shepard Specialty Hospital **January 2017**

Observing physical and occupational therapy, learning the dynamic of a specialty hospital and the healthcare system, and observing meetings.

Externship, Mathematica Policy Research

January 2016

Learning company basics, helping with qualitative background research on the Primary Care Initiative, and observing meetings.

VOLUNTEER AND LEADERSHIP EXPERIENCE

Volunteer Mentorship, Brandeis University

November 2018-Present

Training two undergraduates and a rotation student from the Neuroscience PhD program in some of the techniques used in lab and providing instruction on the scientific knowledge and questions that drive our research.

Women in Science Initiative, Brandeis University

September 2018-Present

Planning and organizing events to help promote the role of women in science and support undergraduates in furthering their scientific development.

SKIP, Lafayette College

September 2015-May 2017

Volunteering through the Easton Area Community Center at an after school program for low-income children in Easton, providing homework assistance and fostering communication and learning through play.

Marquis Scholar Steering Committee, Lafayette College

February 2014-May 2017

Attending weekly meetings to discuss and plan various campus events and participating in assessment days for future Marquis Scholars.

Lafayette Leadership Education (LLE), Lafayette College

February 2015

Attended talks and panels and participated in events in order to learn about and become a better leader.

Kids in the Community (KIC), Lafayette College

August 2013-May 2015

Co-leading an after-school program for less fortunate children in Easton by organizing team-building activities, providing homework assistance and promoting a safe and healthy environment.

Girl Scout, Tewksbury NJ

September 2001-Present

Held numerous workshops for younger Girl Scouts, received Bronze (15 hours), Silver (40 hours), and Gold (80 hours) Awards.

SKILLS

Computer: Microsoft Word, PowerPoint, Excel; SPSS; ImageJ; Adobe Illustrator

Technical: Light Microscopy, Cloning, western blots, immunostaining, Tissue Culture, *Drosophila* husbandry and larval dissection

Language: Proficient in reading, writing and speaking Spanish