Isabel D'Alessandro

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EDUCATION
Wellesley College-Wellesley, MA (2014-Present)
Candidate for Bachelor of the Arts, June 2018
Major: Neuroscience, Minor: Computer Science | GPA: 3.91

RESEARCH EXPERIENCE
Wellesley College   Aug 2016-Present
Research Assistant, Lab of Dr. Sara Wasserman
Project: Sensory integration of thermal, visual, and olfactory stimuli by Drosophila in flight
Skills: Drosophila genetics, behavioral experiments, rig design/building

Stanford University   Jun 2017-Aug 2017
Amgen Scholar, Stanford Summer Research Program, Lab of Dr. Miriam Goodman
Project: Characterization of MEC-4 and DEGT-1 mechanosensitive DEG-ENaC channel currents in response to amiloride-analogous drug applications
Skills: two-electrode voltage-clamp recordings, molecular biology

Harvard Medical School/Brigham and Women's Hospital   Jun 2016-Aug 2016
Summer Research Fellow, Lab of Dr. Francisco Quintana
Funding through the Multiple Sclerosis Society- Buegeleisen Family MS Undergraduate Research Fellowship
Project: The role of Basigin as an actrocyte regulator in multiple sclerosis and EAE
Skills: cell culture, plasmid construction/cloning, transduction, viral transfection, qPCR, gel electrophoresis, EAE induction in mice, cell sorting

Wellesley College   Jan 2015 –May 2016
Research Assistant, Lab of Dr. Michael Wiest
Project: Role of medio-dorsal frontal and posterior parietal neurons during auditory detection performance in rats
Skills: microelectrode array LFP recordings, rat husbandry, data processing(MATLAB)

Princeton Neuroscience Institute   Jun 2015- Aug 2015
Summer Research Fellow, Lab of Dr. Mala Murthy
Summer Undergraduate Research Program in Molecular and Quantitative & Computational Biology
Project: The role of acoustic signal recognition in the control of *Drosophila* female behavior
Skills: computational neuroscience, modeling (MATLAB), data analysis, electrophysiology, optogenetics, Drosophila genetics

AWARDS

2017   Cosyne (Computational & Systems Neuroscience Conference) Undergraduate Travel Grant
          Recipient
2016   Buegeleisen Family MS Undergraduate Research Fellowship Recipient
2015   Wellesley College First Year Chemistry Award

POSTERS, ABSTRACTS AND PRESENTATIONS

Poster: **D'Alessandro**, I., Fechner, S., Goodman, M.B. Characterization of the drug response properties of mechanosensitive ion channel subunits. Poster presented at: Stanford Summer Research Program Poster Session; 2017 Aug; Stanford, CA.

Presentation: Characterization of the subunit composition and drug response properties of mechanosensitive ion channels. Oral presentation at Stanford Summer Research Program Symposium; 2017 Aug; Stanford, CA.

Abstract: Clemens, J., Deutch,D., **D'Alessandro, I.,** Murthy, M. Behavioral and neural tuning for acoustic communication signals in Drosophila.[abstract]. In: Computational and Systems Neuroscience Conference; 2016 February 25-28; Salt Lake City, UT: Abstract nr II-85.

Poster: **D'Alessandro,** A., Clemens, J., Murthy, M. The Role of Acoustic Signal Recognition in the Control of Dropshila Female Behavior. Poster session presented at: Princeton Summer Undergraduate Research Program in Molecular and Quantitative & Computational Biology Poster Session; 2015 Aug; Princeton, NJ.

ACADEMIC SERVICE/OUTREACH EXPERIENCE

Wellesley Quantitative Analysis Institute Intern   Sept 2017 – Present
Python/ MATLAB Tutor for the Sciences
Hold weekly office hours for students in science courses that rely on computation (upper level physics, chemistry), and work on developing MATLAB and Python tutorials for these classes.

Brains Minds and Machines: The Science of Intelligence Course   Sept 2016- May 2017
Teaching Assistant, Curriculum Developer
Developed lab activities (MATLAB GUIs) for new course being offered Spring 2017 at Wellesley College through the Neuroscience and Computer Science departments (NEUR/CS 125) on the subject of human and machine intelligence. Assisted in the teaching of the lab during the semester.

Science Club for Girls   Sept 2014-Present
Mentor Scientist, Curriculum Developer
Lead weekly lessons for a class of 12 2nd-4th grade girls about a variety of topics in STEM and direct interactive experiments. Wrote and piloted a 4th grade biochemistry curriculum now being taught at Science Club for Girls sites across the country. Currently developing a neuroengineering curriculum to be taught Spring 2018.

SeedKit   Sept 2016-Present
Curriculum Developer, Executive Board Member
Develop curricula, and design experiments as part of Seedkit(Science Education Equity Development Kit), a startup which aims to create 'labs in a box', practical experimental laboratory resources that are low-cost, reusable, sustainable, and self-contained for secondary school students in low-resource classrooms

Pforzheimer Learning and Teaching Center   Aug 2015- June 2017
Academic Peer Tutor
Served as a general peer academic advisor for a group of 153 Wellesley College students and provided particular academic mentorship for first-year students; plan and deliver workshops throughout the year

ACTIVITIES AND LEADERSHIP
Wellesley College Neuroscience Club, *President*   Aug 2015- Present
Organize meetings, lectures, journal clubs, and other events for students interested in Neuroscience at Wellesley College; provide mentorship to students in the Neuroscience program

Wellesley Science Club for Girls, *President, Mentor Scientist*   Aug 2014- Present

Direct day-to-day operations of the Wellesley College Science Club for Girls chapter; assist in the creation and execution of new curricula; participate actively in teaching; responsible for the Fall 2017 launch of a new program site in Framingham featuring entirely student-created curricula

Wellesley Partners in Health Engage, *Education and Community Building Lead*   Aug 2014- May2017
Organize lectures, meetings, and other events to educate and engage the community at Wellesley College surrounding issues of global health inequity; direct advocacy and outreach efforts for the campus chapter of Partners in Health Engage, an organization focused on supporting the work of the global health-focused nonprofit Partners in Health at a grassroots level

SKILLS

Technical: Working knowledge of Python, Java, JavaScript, R, Ruby, HTML/CSS, MATLAB, bash/ command line
Language: Spanish (proficient)