Isabel D'Alessandro

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EDUCATION

WELLESLEY COLLEGE (2014-Present) Wellesley, MA
Candidate for BA, May 2018
Major: Neuroscience, Minor: Computer Science
Relevant Courses Include: Cellular and Molecular Biology w/ Lab, Organismal Biology w/lab, Introduction to Neuroscience w/Lab, Calculus (I, II), Computer Programming and Problem solving w/Lab, Fundamentals of Chemistry w/Lab, Statistics w/Lab, Data Structures w/Lab, Chemical Analysis and Equilibrium w/ Lab, Neurons, Networks & Behavior w/ Lab, Combinatorics & Graph Theory

SAINT THOMAS AQUINAS HIGH SCHOOL (2010-2014) Dover, NH
Advanced College Preparatory Diploma, *Valedictorian*
Achievements/ Honors: High Honor Roll for four years, National Honor Society, Spanish National Honor Society, National Merit Finalist, Harvard Book Award, Department Awards (Biology, Social Studies, English)

RESEARCH

Jun'16-Aug'16 **Summer Research Fellow- Harvard Medical School/Brigham and Womens Hospital** Boston, MA
Project: The role of Basigin as an actrocyte regulator in multiple sclerosis and EAE
Principal Investigator: Francisco Quintana, PhD
Skills: cell culture, plasmid construction/cloning, transduction, viral transfection, qPCR, gel electrophoresis, EAE induction in mice, cell sorting

Jan'15 -Present **Research Assistant- Wellesley College Neuroscience Dept.** Wellesley, MA
Project: Role of medio-dorsal frontal and posterior parietal neurons during auditory detection performance in rats
Principal Investigator: Michael Wiest, PhD.
Skills: computational neuroscience, modeling (MATLAB), electrophysiology

Aug'15-Dec'15 **Research Assistant-Wellesley College Chemistry Dept.** Wellesley, MA
Project: Development of a multi-purpose nanovehicle for targeted imaging and treatment of solid tissue tumors
Principal Investigator: Nolan Flynn, PhD
Skills: synthesis, functionalization, purification, and analysis of gold nanoparticles, Western Blot,UV-Vis, DLS

Dec'15-Feb'16 **Research Assistant- Massachusetts Institute of Technology** Cambridge, MA
Project: Determining signatures of neurodegenerative diseases
Principal Investigator: Ernest Fraenkel, PhD
Skills: bioinformatics(PCA, autoencoders, kernel PCA),Python, R, bash

Jun'15-Aug'15 **Summer Research Fellow - Princeton Neuroscience Institute** Princeton, NJ
Project: The role of acoustic signal recognition in the control of *Drosophila* female behavior
Principal Investigator: Mala Murthy, PhD
Skills: computational neuroscience, modeling (MATLAB), data analysis, electrophysiology, optogenetics, *Drosophila* genetics

Jul,'13-Aug.'13 **Research Assistant- University of New England** Biddeford, ME
Shadowed in a neurobiology lab studying neuropathic pain using mice models

Skills: behavioral analysis, animal care, confocal microscopy

WORK EXPERIENCE

Sept'14-Present **Science Club for Girls, *Mentor Scientist, Curriculum Developer*** Newton, MA

Lead weekly lessons for a class of 12 2nd-4th grade girls about human biology and chemistry and direct interactive experiments; wrote and piloted a biochemistry curriculum in Newton, to be taught at Science Club for Girls sites across the country starting in the spring

Aug'15-Present **Pforzheimer Learning and Teaching Center, *Academic Peer Tutor*** Wellesley, MA

Serve as a general peer academic advisor for 153 students in my residence hall and provide particular academic mentorship for first-year students; plan and deliver academic workshops throughout the year

May'11-Aug'13 **Merrimack Valley Hospital, Volunteer/ Intern** Haverhill, MA

Directed patients to various hospital departments, processed patient data, shadowed doctors in a variety of departments

ACTIVITIES AND LEADERSHIP

- **Wellesley College Neuroscience Club**, *Treasurer('15-16), President('16-'17)*
- **Wellesley Volunteers** – *Treasurer* ('14-'15)
- **Wellesley College Science Club for Girls**- *Mentor Scientist('14-'16), President('16-'17)*
- **Partners in Health Engage**, Education and *Community Building Lead* (8/14-Present)
- **Wellesley College Mental Health Educator** ('14-'15)
- **House Council** (8/14-Present)
- **Wellesley College Biochemistry Society** ('14-Present)

AWARDS

- Wellesley College First Year Chemistry Award
- Buegeleisen Family MS Undergraduate Research Fellowship Recipient

SKILLS/ ADDITIONAL INFORMATION

Computer: Proficient in Microsoft Word, Excel, PowerPoint, Internet Research. Working knowledge of Python, Java, JavaScript, R, Ruby, HTML/CSS, JQuery, MATLAB, bash/command line. Experience using JMP, SPSS, Image J, PowerLab

Language: Proficient in Spanish (speaking, reading, writing)

Laboratory: cell culture, spectroscopy, fluorescent microscopy, classification of organisms, fluorescent antibody tests, gel electrophoresis, isolation and analysis of DNA, light microscopy, PCR, oscilloscopes, restriction digest, differential staining, titrations, tissue sectioning, computational modeling, *Drosophila* genetics, behavioral assays, electrophysiology, bioinformatics, good laboratory practices