

14 Comstock Circle #218B
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Johanna Jianping O'Day



EDUCATION

PhD Student in Bioengineering Sep. 2015 – present
Stanford University, Stanford, CA GPA: 3.910
Bachelor of Science in Biochemistry May 2015
Boston College, College of Arts & Sciences, Chestnut Hill, MA GPA: 3.848
Study Abroad: Marine Ecology, Galápagos Academic Institute for the Arts & Sciences GPA: 4.000
Skills: Spanish, PADI Open Water Dive Certification, Marine Research Techniques Jan. 2014 – May 2014

DISTINCTIONS & AWARDS

d.school Creativity in Research Innovation Fellow 2017
Stanford Society of Women Engineers (SWE) Travel Grant, Stanford University 2016
Dean's Scholar, Boston College 2015
Alpha Sigma Nu Honor Society Member, Boston College 2015
Dean's List First Honors, Boston College 2011-2015
Kozarich Fellowship for Chemistry Research, Boston College 2014
Global Changemaker Scholar, Foundation of Global Scholars 2014
Sophomore Scholar, Boston College, departmental academic distinction 2012
Honors Chemistry Track, Boston College, advanced undergraduate coursework in Chemistry 2011-2015
Sr. Thea Bowman AHANA Scholar, Minority Distinction 2011
The President's Volunteer Service Award (Silver), completed 175+ volunteer hours 2011

RESEARCH EXPERIENCE

Graduate Research Sep. 2015 - present
Primary Advisor: Scott Delp July 2016 - present
Investigating the biomechanical and neural substrates of complex motor behaviors in Parkinson's disease
Record and analyze bilateral local field potentials from the subthalamic nuclei of patients with Parkinson's disease via deep brain stimulation electrodes and correlate with biomechanical markers obtained through wearable IMU sensors. Use this multidimensional data to understand distributed brain networks that are active during non-freezing and FOG behavior in Parkinson's disease and inform preventative therapy.

Laboratory Rotations 2015-2016

Advisor: Lisa Giocomo Neurobiology Laboratory, Stanford University, CA
Characterizing theta waves in HCN2-knockout mice Sep. 2015 – Dec. 2015
Investigating place cells and theta waves in HCN2-knockout mice with electrophysiology techniques.

Advisors: KC Huang, Justin Sonnenburg Bioengineering, Microbiology, Stanford University, CA
Effect of diet on spatial organization of gut bacteria Jan. 2016 – Apr. 2016
Investigating bacterial spatial organization in gut of conventional mice on different diets.

Advisor: Justin Gardner Psychology-Neuroscience, Stanford University, CA
Automation of ROI Selection for Retinotopy April 2016 – July 2016
Using MATLAB to automate accurate mapping of visual cortex using fMRI data and underlying anatomy.

Undergraduate Research

Advisor: Dr. Eranthie Weerapana Biochemistry Laboratory, Boston College, MA
Project 1: Lysine-mediated enzyme activities Jan. 2013 – Dec. 2013
Organic synthesis and molecular biological laboratory techniques employed in the creation and screening of lysine-specific molecular probe library. Presented work at biannual Undergraduate Research Fair.

Project 2: Structure Activity Relationship Studies May 2014 – Sep. 2014

Optimize specificity of a small molecular probe with cysteine reactivity through structural modifications using organic synthesis techniques and biological screens to monitor activity

Advisor: Dr. Joseph Burdo Neuroscience Laboratory, Boston College, MA

Project 1: Computational and mechanical models of reflex circuits Sep. 2014 – May 2015

Using Arduino circuit board and mechanical parts to construct electrical analog of neuronal circuitry and muscle systems involved in various human reflex pathways including corneal reflex.

LABORATORY SKILLS

Column chromatography, NMR Spectroscopy, Cell culture, Organic Synthesis, UV-VIS, Agarose Gel Electrophoresis, SDS-PAGE, Western Blotting, Mouse care/handling, Electrophysiology, EMG recording

COMPUTING SKILLS

Programming: MATLAB, Java
Other: Latex, OpenSim, MotionGenesis

TEACHING EXPERIENCE

Teaching Assistant, Ethics in Bioengineering BIOE131, Stanford, CA Mar. 2017 – Jun. 2017
My responsibilities included creating quizzes, grading writing assignments and holding weekly office hours.

MathGenesis Teacher, Math Genesis Camp, Menlo Park, CA Jun. 2017 – July 2017
Taught math at middle school summer camp with Stanford Mechanical Engineering Professor Paul Mitiguy.

Student Teacher & Volunteer, Stanford Splash Program Sep. 2015 – present
Planned and taught simple biology laboratories and helped with event setup and registration.

Substitute Teacher, Old Rochester Regional Public Schools, MA Jan. 2013 – June 2013
During winter and summer university recesses, substitute taught grades K-6 and worked one-on-one with children who had varying degrees of Asperger's & Autism

GRADUATE INVOLVEMENT

Student Mentor, Stanford Biosciences Student Association, Stanford, CA Sep. 2016 – present
Service as a graduate mentor to first year graduate students in Biosciences each year.

Student Mentor, Stanford Women Engineers Corporate Mentorship Program, CA Sep. 2016 – present
Service as a graduate mentor in career planning and education to female undergraduate students in engineering.

Lucile Packard Children's Hospital Volunteer, Stanford, CA Aug. 2016 – Jan. 2016
Volunteer 2 hours weekly as a bedside volunteer to entertain and provide resources to children in the hospital.

Science Fair Judge, Santa Clara County Science Fair, Santa Clara, CA April 2016

Editor & Blogger, The Dish on Science (Online Blog), Stanford University, CA Jan. 2016 – present
Edit and write articles with other graduate students to improve science communication with the public.

Student Member & Volunteer, Stanford Women in Engineering, Stanford, CA Sep. 2015 – present
Attend monthly seminars with other women engineers, work on career development and outreach events.

Soup Kitchen Volunteer, St. Anthony's Dining Room, Palo Alto, CA Sep. 2015 – present

Catholic Community Volunteer, Stanford Catholic Community, Stanford, CA Sep. 2015 – present

UNDERGRADUATE INVOLVEMENT

Executive Board Member, Church in the 21st Century Jan. 2013 – May 2015

Planned popular campus-wide events for students at Boston College to help integrate faith into their daily lives.

Student Professor, Boston College Splash Program: taught classes on marine life Sep. 2012 – May 2015

Volunteer, Boston College Campus School Marathon Team Sep. 2011 – May 2015
Trained for Boston Marathon to fundraise for the Boston College Campus School (for special needs children).

Co-Founder, Every Bite Counts Club: repackage leftover dining hall food for donation Sep. 2012 – May 2015

Student Member, American Chemical Society Chapter Sep. 2014 – May 2015

Student Mentor, BC Women in Science & Technology Jan. 2013 – May 2015
Demonstrate and teach scientific laboratory practices to female high school students.

Tour Guide, Boston College Student Admission Program (Volunteer) Jan. 2012 – May 2015
Led weekly tours throughout campus for prospective students and trained other tour guides.

OTHER EXPERIENCE

Lifeguard, Southcoast YMCA, Mattapoisett, MA June 2014 – Aug. 2015
Maintain and ensure safety of those utilizing outdoor swimming pool

Track Coach, Mattapoisett Track Club, Mattapoisett, MA June 2008 – Aug. 2013
Coached children ages 3-12 in various track and field events during the summer

REFERENCES

Professor Scott Delp, *Stanford Bioengineering*
Doctor Helen Bronte-Stewart, *Stanford Neurology*
Professor Joseph Burdo, *Boston College Biology*
Professor Eranthie Weerapana, *Boston College Chemistry*
Professor Christine Goldman, *Boston College Chemistry*