Grant Fairchild

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Education

The University of Nevada, Reno *2017-Present*
PhD in Integrative Neuroscience

The University of Alabama; Honors College *Fall 2011-Spring 2015*
Bachelor of Science in Biology, *magna cum laude*
Bachelor of Arts in Philosophy with Minor in Computer-Based Honors, *magna cum laude*
GPA (Overall/Biology Major/Philosophy Major): 3.800/3.978/4.198 (4.0 scale)
GRE Scores (Verbal/Quantitative): 170/168 (taken 7/7/2015)

Research Experience

Graduate Research Assistant in the lab of *Summer 2017-Present*
Dr. Jacqueline Snow
Researching differences in eye movements directed at real, graspable tools vs. images of tools

Undergraduate Researcher in the lab of *Summer 2011-Spring 2015*
Drs. Guy Caldwell and Kim Caldwell
Performed research all 8 semesters during undergraduate, plus full-time during summers of 2011, 2012, 2013, and 2014
Researched proliferation of neurite branching in model organism *C. elegans*, initially under a Senior undergraduate mentor and then independently
Responsible for project examining influence of microRNAs on neurodegeneration in model organism *C. elegans*
Served as webmaster of lab website from Sophomore to Senior year

Honors, Awards, and Scholarships

Graduate Dean's Fellowship *Fall 2017-Spring 2018*
Graduate School, University of Nevada, Reno

2015 Randall Outstanding Undergraduate Research Award *Spring 2015*
University of Alabama

Honored at Annual CBH Honors Celebration Dinner *Springs of 2013, 2014, and 2015*
Computer-Based Honors Program

Howard Hughes Medical Institute Undergraduate Researcher *Summer 2012*
Howard Hughes Medical Institute

Dr. J. Henry Walker Memorial Scholarship in Biology *Spring 2012*
University of Alabama Department of Biological Sciences

Beta Beta Beta National Biological Honor Society

Phi Sigma Tau International Honor Society in Philosophy

National Merit Finalist/Presidential Scholarship *Fall 2011*

President's List *Fall 2011-Spring 2012*

Eagle Scout *Spring 2011*

Leadership Experience

Editorial Director of The Journal of Science and Health at The University of Alabama (JOSHUA) *Fall 2014-Spring 2015*
Editor from fall 2012-spring 2013 and from fall 2013-spring 2014

President of 3DBG *Fall 2013-Spring 2014 and*
University of Alabama's board gaming club *Fall 2014-Spring 2015*

Publications, Poster Presentations, and Oral Presentations

"Identification of miRNAs that modify α-synuclein-induced neurodegeneration" *Ongoing*
First Author on upcoming paper

2014 UA System Honors Undergraduate Research Conference *Spring 2014*
Oral Presentation

2014 UA Undergraduate Research and Creative Activity Conference *Spring 2014*
Oral Presentation, received 3rd place in Science and Mathematics division

American Society for Cell Biology 2013 Annual Meeting *Winter 2013*
Poster Presentation

CBH Live! 2013 *Winter 2013*
Oral Presentation

2013 UA System Honors Undergraduate Research Conference *Spring 2013*
Oral presentation, received 2nd place in Biological Sciences category

2013 UA Undergraduate Research and Creative Activity Conference *Spring 2013*
Oral Presentation, received 3rd place in Science and Mathematics division

CBH Live! 2012 *Winter 2012*
Oral Presentation

"An Introductory Review of the Role of Synaptic Plasticity in Memory" *Spring 2012*
Sole author, published in The Journal of Science and Health at the University of Alabama (JOSHUA)

2012 UA System Honors Undergraduate Research Conference *Spring 2012*
Poster Presentation

2012 UA Undergraduate Research and Creative Activity Conference *Spring 2012*
Poster Presentation

Laboratory and Computer Skills

HTML
Fortran
C++
MySQL
MATLAB
RNA interference
Polymerase Chain Reaction (PCR)
Western blotting
Gel electrophoresis
Use of human cell culture
Transformation of plasmids into bacterial strains
Proper use of ordinary light microscopes, basic fluorescence microscopes, and Nikon E800 Epifluorescence Microscope
Preparation of agar plates
Filter sterilization
Transferring worms
Distinguishing between different phenotypes, ages, and genders of worms

Decontaminating worm strains through bleaching
Freezing down worms and bacteria for long-term storage
Treatment of worms with the neurodegenerative compound 6-OHDA
Use of basal slowing response assay
Analysis of dopaminegic neurite branching
Analysis of α-synuclein-induced neurodegeneration
General sterile technique
Utilization of Pubmed and microRNA databases
Analysis and writing of scientific papers
Presenting at lab meeting
Lab website upkeep