Grace Anna Blair

Website: Graceblair.github.io

Education

University of North Carolina at Chapel Hill, Carolina Honors Program
Expected Graduation: December, 2014
Expected Degree: B.S. Biology

GPA: 3.948

Research Interests: Cognitive neural prosthetics (for both therapeutic and enhancement purposes), Plasticity and effects on learning and sensory experience, sensory integration

Noteworthy Coursework:

- Biology: Intro to Neurobiology, Honors Mathematical Approaches to Ecology and Evolution, Microbiology and Genetics
- Psychology: Honors Intro Cognitive Psychology, Honors Biopsychology , Statistical Principles of Psychological Research
- Math: Signals and Systems for Biomedical Engineering, Honors Differential Equations, Foundations of Programming, Multivariable Calculus
- Chemistry: Analytical Chemistry, Organic Chemistry

Research Experience

- Undergraduate Research Assistant, Stuber Lab, UNC Chapel Hill (September 2012-present): *Currently assisting with a project exploring the role of specific neuronal circuits in the VTA in mediating reward seeking using optogenetic techniques (in mice).*
- NIH, NIDA Biomedical Research Summer Internship, Baltimore, Maryland (June-August 2013): *Conducted an experiment to explore the role of dopamine in prediction of fear via a behavioral blocking paradigm.*
- NIH, NIDA Biomedical Research Summer Internship, Baltimore, Maryland (June-August 2012): *Conducted an experiment to explore the role of the OFC in aggregate prediction error during a superconditioning task. Presented results in the 2012 NIDA Summer Student Poster Day as well as the NIH 2012 Student Poster Day.*
- Research at the Ahmed Lab at UNC Chapel Hill (October 2011-June 2012) *Conducted research on the basis for sterility in C. elegans mutants*
- Conducted original Geology research in Eastern California: “Density of Bishop Tuff in Owen’s River Gorge, California” (2011) *As part of a geology seminar, samples were personally collected from Owen’s River Gorge; analysis was conducted at the geology lab of UNC Chapel Hill.*
- DHHS, NIH, NIA Biomedical Research Summer Internship, Baltimore, Maryland (June-August 2009): *Conducted a pilot test involving the effect of age on DNA methylation of mice. The program culminated in a poster presentation of my results.*

Publications/Accomplishments

- Alice M. Stamatakis, Joshua H. Jennings, Randall L. Ung, Grace A. Blair, Richard J. Weinberg, Rachael L. Neve, Frederick Boyce, Joanna Mattis, Charu Ramakrishnan, Karl Deisseroth, and Garret D. Stuber (2013) VTA dopamine neurons release GABA in the lateral habenula to promote reward. ***Neuron***. (In publishing)
- Maryland Distinguished Scholar Finalist (2010)

- Advanced Placement Distinguished Scholar (2010)

Technical Skills

- Research: Optogenetic techniques, stereotactic surgery, rodent models, execution/design of animal behavior
- Software: Matlab, Mathematica, Plexon Offline Sorter, EthoVision, Arduino, Blender (3D modeling)