

BRANDY A. BRIONES

bbriones@princeton.edu

scholar.princeton.edu/briones

Princeton Neuroscience Institute, A84A
Washington Rd
Princeton, NJ 08540

315 Lemonick Ct
Princeton, NJ 08540
(310) 709-8729

EDUCATION

Princeton University

PhD, Psychology and Neuroscience (*joint degree program*)
MA, Psychology and Neuroscience

Princeton, NJ
8/14-Present
2017

University of California, Los Angeles

BS, Psychobiology

2014

HONORS AND FELLOWSHIPS

Resident Graduate Student Fellow, Princeton University Wilson College	2017-2018
National Science Foundation Graduate Research Fellowship	2015
Princeton Presidential Fellowship for Academic Excellence	2014
Maximizing Student Diversity (IMSD) Research Fellow and Scholar	2013-2014
Center for Academic Research Excellence (CARE) Summer Research Fellow	2013
Center for Academic Research Excellence (CARE) Fellow and Scholar	2012-2013
UCLA Program of Excellence in Education and Research in the Sciences Fellow	2010-2012
Dean's Honors List, UCLA College of Letters and Sciences	2009
California Scholarship Federation Graduate	2010
Robert C. Byrd Scholarship Recipient	2010
Valedictorian, Norco Senior High School	2010

RESEARCH EXPERIENCE

Princeton University

Graduate research, Advisor: Elizabeth Gould
Neural structural plasticity for repetitive behaviors in autism spectrum disorder

Princeton, NJ
2014-present

- Developed behavioral paradigms for studying repetitive behaviors
- Immunohistochemistry and dendritic spine analyses of dorsal striatum neurons in ASD mouse models
- Use of stereotaxic craniotomy manipulations (retroviral labeling, pharmacology, osmotic pump implantation) to understand behavior-induced plasticity

University of California, Los Angeles

Undergraduate research, Advisor: Thomas R. Minor
2014 Striatal-adenosine effects on conservation-withdrawal behavior in post-traumatic stress disorder

Westwood, CA
2010-

- Characterized depressive-like behaviors in a rat model of PTSD
- Test pharmacological effects (cannulae icv infusions) of adenosine A2AR agonists and antagonists on behavior
- Biochemical assay analyses of blood corticosterone and NPY

TEACHING EXPERIENCE

Princeton University

Teaching assistant, Psychology of Decision Making and Judgement
Undergraduate mentor

2015
2015-Present

OUTREACH AND PROFESSIONAL MEMBERSHIPS

Princeton University Graduate Student Government, Communications Director	2019-2020
Synapse Women NYC, Founding Member	2018
Graduate Women in Science and Engineering (GWise)	2016-
Science fair judge, Hopewell Elementary School, NJ	2016
Society for Neuroscience	2015-
Former Executive Board Member, Latinx Graduate Student Association	2014
Alpha Lambda Delta Phi Eta Sigma Honors Society	2014
Student Researcher Panel Speaker, UCLA EEB 97X Seminar for Freshmen	2013
Student Panel Speaker, Take A Stand Against Suicide	2013
American Heart Association CPR-First Aid, Public Relations Director/Instructor	2012-2014
UCLA Student Wellness Commission, Executive Board Member	2012-2014
Society for Advancement of Chicanos and Native Americans in Science	2012-
Active Minds, Inc., UCLA Chapter Directors Board	2011-2014

PRINCETON PSYCHOLOGY IN-HOUSE TALKS

Investigating the role of perineuronal nets and striatal plasticity in autism spectrum disorder	2018
Effects of habit learning on medium spiny neurons and astrocytes in the dorsal striatum	2016
A potential role for astrocyte-neuron interactions in navigation strategies	2015

CONFERENCE ABSTRACTS

Briones BA, Pitcher MN*, Fleming WT*, Parel GT, Diethorn EJ, Haye AE, MacDowell CJ, Tawa EA, Zych AD, Buschman TJ, Gould E. (2019) Investigating the role of perineuronal nets and striatal plasticity in repetitive behaviors in mouse models of autism spectrum disorder. GRC Modulation of Neural Circuits and Behavior

Briones BA, Pitcher MN, Fleming WT, Diethorn EJ, Zych AD, Haye AE, Murthy S, Gould E. (2018) Perineuronal nets are increased on parvalbumin+ interneurons of the dorsomedial striatum in three mouse models of autism spectrum disorder. Society for Neuroscience. (*featured on spectrum news*)

Cope EC, Zych A, Katchur N, Park C, Murthy S, **Briones BA**, Gould E. (2018) Perineuronal nets in the hippocampus are atypical in mouse models of autism spectrum disorder. Society for Neuroscience

Briones BA, Tang VD, Haye AE, Gould E. (2018) Response learning stimulates dendritic spine growth on dorsal striatal medium spiny neurons. NTC Symposium: Dendritic Computation

Briones BA, Tang VD, Haye AE, Gould E. (2017) Effects of response learning on medium spiny neurons and immature neurons in the dorsal striatum. Society for Neuroscience

Briones BA, Tang VD, Haye AE, Gould E. (2017) Potential role of stress in the inhibitory effects of extended maze training on immature neurons in the dorsal striatum and hippocampus. Princeton University Stress Meeting

Briones BA, Gould E. (2016) Effects of response learning on medium spiny neurons and astrocytes in the dorsal striatum. Society for Neuroscience; Federation of European Neurosciences Societies

Brockett AT, **Briones BA**, Gould E. (2016) Pharmacogenetic manipulation of astrocyte Ca²⁺ signaling enhances astrocyte size and cognitive flexibility. Society for Neuroscience; Federation of European Neurosciences Societies

Briones BA, Plumb TN, Minor TR. Effects of Blocking Adenosine in the Dorsal Striatum on Behavioral Impairment. UCLA URC Sciences Poster Day (2014); Society for Advancement of Chicanos and Native Americans in Science (2013)

Briones BA, Stegal S, Joseph A, Minor TR. (2013) The Prevention of Learned Helplessness by Post-Stress Glucose Consumption. UCLA Psychology Undergraduate Research Conference

PUBLICATIONS

Briones BA, Gould E. (2019) Neurogenesis and Stress, Handbook of Stress vol 3: Stress, Physiology, Biochemistry and Pathology. Chapter 7 – *Adult Neurogenesis and Stress*. Jan 18; 79-92.

Briones BA, Tang VD, Haye AE, Gould E. (2018) *Response learning stimulates dendritic spine growth on dorsal striatal medium spiny neurons*. Neurobiol Learn Mem. Jun 23; 155:50-59.

Brockett AT, Kane GA, Monari PK, **Briones BA**, Vigneron PA, Barber GA, Bermudez A, Dieffenbach U, Kloth AD, Buschman TJ, Gould E. (2018) *Evidence supporting a role for astrocytes in the regulation of cognitive flexibility and neuronal oscillations through the Ca²⁺ binding protein S100 β* . PLoS One. 13(4):e0195726.

Cope EC, **Briones BA**, Brockett AT, Martinez S, Vigneron PA, Opendak M, Wang SS, Gould E. (2016) *Immature neurons and radial glia, but not astrocytes or microglia, are altered in adult Cntnap2 and Shank3 mice, models of autism*. eNeuro. Sep-Oct; 3(5).

Opendak M, **Briones BA**, Gould E. (2016) *Social behavior, hormones and adult neurogenesis*. Frontiers in Neuroendocrinology. Apr; 41:71-86.

Briones BA, Plumb TN, Minor TR. (2014) *Adenosine's autacoid function in the central nervous system and the behavioral state of conservation-withdrawal*. Journal of Autacoids and Hormones. Oct 18; 3(1).