

SAGE L. RUSH

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EDUCATION

University of Pennsylvania Graduate School of Education, Philadelphia, PA January 2017 – Present
Master of Science in Education

Program: Interdisciplinary Studies in Human Development

Anticipated Graduation Date: May 2019

GPA (thus far): 4.0

Franklin & Marshall College, Lancaster, PA September 2011 – May 2015

Bachelor of Arts in Neuroscience (Honors), with minor in Psychology

Phi Beta Kappa (Cumulative GPA: 3.8)

GRANTS & AWARDS

Charles N. Stewart Award, Outstanding accomplishment and demonstrated commitment to research in Neuroscience, Franklin & Marshall College, Spring 2015

Finalist, Raymond B. Huey Award for Best Student Presentation, The Society for Integrative & Comparative Biology Conference, Spring 2015

Leser Grant, Effect of anabolic-androgenic steroids on the prefrontal cortex in adolescent male rats, Franklin & Marshall College, Fall 2014

Student Travel Grant, Franklin & Marshall College, Fall 2014

Hackman Faculty-Student Grant, Franklin & Marshall College, Summer 2014

Dean's/Honor's List: Fall 2011-Spring 2015

PUBLISHED ABSTRACTS AND PAPERS

Sharma, A., A. Kaczurkin, T.M. Moore, L.M. Beard, R. Ciric, S. Shankar, C.F. Baldassano, **S. Rush**, J. Harowitz, A.F.G. Rosen, P. Cook, R.T. Shinohara, C. Davatzikos, D.H. Wolf, and T.D. Satterthwaite. 2018. Dimensions of anhedonia associate with cortical network alterations across psychiatric disorders. Presented at Society of Biological Psychiatry, 73rd Annual Meeting, New York, New York.

Jirsaraie, R., **S. Rush**, A. Kaczurkin, A. Rosen, A. Sotiras, R. Ciric, P. Cook, A. Sharma, D. Davila-Feliciano, K. Piiwaa, M. Elliott, D. Roalf, D. Bassett, R. Shinohara, E. Leibenluft, C. Davatzikos, D. Wolf, and T.D. Satterthwaite. 2018. Accelerated cortical thinning within structural brain networks is associated with irritability in youth. Presented at Society of Biological Psychiatry, 73rd Annual Meeting, New York, New York.

Roth, T.C., A.R. Krochmal, W.B. Gerwig, **S. Rush**, N. Simmons, J.D. Sullivan, and K. Wachter. 2016. Using pharmacological manipulation and high-precision radio telemetry to study the spatial cognition in free-ranging animals. *Journal of Visual Experiments*, 117.

Sharma A., R. Ciric, N. Katchmar, A. Daldal, **S. Rush**, K. Ruparel, C. Baldassano, J.W. Kable, D.S. Bassett, D.H. Wolf, T.D. Satterthwaite. 2016. Behavioral motivation relates to dissociable corticostriatal functional connectivity: A dimensional analysis of whole brain networks across psychiatric disorders. Presented at Society of Biological Psychiatry, 71st Annual Meeting, Atlanta, Georgia.

Krochmal, A.R., T.C. Roth, **S. Rush**, K. Wachter. 2016. Turtles outsmart rapid environmental change: the role of cognition in navigation. *Communicative and Integrative Biology*. Invited article.

Rush, S.L., K. Wachter, and T.C. Roth. 2015. Effect of experience on behavioral and neurological mechanisms of navigation in a rapidly changing environment. Presented at the Society for Integrative & Comparative Biology, Annual Meeting, West Palm Beach, Florida.

K. Wachter, **Rush, S.L.,** and T.C. Roth. 2015. Effect of habitat on hippocampal plasticity: a real world approach. Presented at the Society for Integrative & Comparative Biology, Annual Meeting, West Palm Beach, Florida.

WORK EXPERIENCE

University of Pennsylvania, Perelman School of Medicine

September 2017 – Present

Clinical Research Coordinator B (CRC-B)

Department of Psychiatry, Philadelphia, PA

- Promoted to CRC-B after ~2 years of experience.
- Oversee six research studies being conducted by Dr. Satterthwaite.
- Responsible for training and supervising new staff members to ensure accurate, ethical, and efficient data collection.
- Responsible for training staff on clinical research interviews, cognitive testing, MRI acquisition, data management/organization, and IRB submissions.

University of Pennsylvania, Perelman School of Medicine

May 2015 – September 2017

Clinical Research Coordinator A (CRC-A)

Department of Psychiatry, Philadelphia, PA

- Conducting numerous studies examining brain development in healthy individuals and those with neuropsychiatric illnesses including psychosis spectrum disorders, depression, bipolar, anxiety, and borderline personality disorder.
- Administer diagnostic interviews to subjects 11-30 years old to examine prodromal psychosis symptoms, major depressive disorder, bipolar disorder, substance use disorders, ADHD, and anxiety.
- Administer computerized neurocognitive tests and MRI scans. Also responsible for recruiting, screening, and enrolling eligible participants.
- Handle all regulatory and administrative tasks relevant to Dr. Satterthwaite's grants including all IRB submissions and grant expense justification forms.

RESEARCH EXPERIENCE

Effect of anabolic-androgenic steroids on the prefrontal cortex in adolescent male rats,

Independent Research (Honors Thesis)

Fall 2014 – Spring 2015

Franklin & Marshall College, Lancaster, PA

- The goal of my thesis was to determine the effect that anabolic steroids have on prefrontal cortex dendritic morphology in adolescent male rats under supervision of Dr. Timothy Roth.
- Developed an original research question, submitted and defended an Institutional Animal Care and Use Committee (IACUC) proposal, and prepared a manuscript.
- Supplemented rats with either testosterone propionate or vehicle control for one month and then tested aggressive behavior with a modified version of the resident-intruder paradigm.
- Euthanized the animals and extracted the brains for Golgi impregnation, sectioned the brains and analyzed total dendritic length and spine densities in the prefrontal cortex.

Effect of emotion regulation on adjustment to stress

Spring 2015

Franklin & Marshall College, Lancaster, PA

- Researched the effects of two emotion regulation strategies – cognitive reappraisal and acceptance – on long-term adjustment to stressful life events under mentorship of Dr. Allison Troy.

- Recruited, ran, and debriefed highly stressed participants.
- Entered data in SPSS and analyzed physiological data (i.e., galvanic skin response and electrocardiography) using Mindware software.

Effect of experience on behavioral and neurological mechanisms of navigation in a rapidly changing environment Fall 2013 – Fall 2014

Franklin & Marshall College, Lancaster, PA and Washington College, Chestertown, MD

- Researched the behavioral, perceptual, and neurological mechanisms of spatial navigation in a rapidly changing environment using a population of Eastern painted turtles under mentorship of Dr. Timothy Roth and in collaboration with Dr. Aaron Krochmal.
- Completed fieldwork in Chestertown, MD using radiotelemetry to monitor the movements of turtles as they were forced to take land and search for new aquatic habitats. Also, responsible for running controlled laboratory experiments in Lancaster, PA.

Effect of habitat on hippocampal plasticity Fall 2013 – Fall 2014

Franklin & Marshall College, Lancaster, PA

- Investigated the effect of a rural-urban gradient on neural plasticity within the hippocampi of dark-eyed juncos under mentorship of Dr. Timothy Roth.
- Monitored the movements of urban and rural dark-eyed juncos using radiotelemetry.
- Processed, sectioned, and Golgi stained dark-eyed junco brains and analyzed dendritic branching in hippocampi of juncos and house sparrows.

Melior Discovery Summer 2013

Exton, PA

- Observed and assisted laboratory experiments that investigated novel synthetic drugs to alleviate Parkinson's Disease symptoms using rats and mice as the primary animal models under mentorship of Dr. Amy Dicamillo.

Effect of sulfur toxicity on marine environments Summer 2012

Franklin & Marshall College, Lancaster, PA

- Served as supporting research assistant in data collection for trace metal cycling research under mentorship of Dr. Jennifer Morford.
- Completed fieldwork in New Hampshire to collect trace samples from the marine environment.

TEACHING & TUTORING EXPERIENCE

Volunteer, Children's Hospital of Philadelphia (CHOP) May – November 2016

Adolescent Medicine & Nephrology Unit, Philadelphia, PA

- Provide one-on-one patient and sibling support to caregivers, tutor patients in school subjects, support playroom activities, and engage in play and activities at the bedside with a patient.

Peer Tutor, Quantitative & Science Center Fall 2014 – Spring 2015

Franklin & Marshall College, Lancaster, PA

- Tutored peers in psychology topics, including biopsychology, psychopathology, emotion, learning, and sleep. Also held interactive study sessions to prepare students for assignments and exams.

Biopsychology Laboratory Teaching Assistant, Psychology/Neuroscience Department Fall 2014

Franklin & Marshall College, Lancaster, PA

- Assisted professor in preparing weekly laboratory experiments and aided students in completing laboratory tasks and understanding concepts related to both the course work and the experiments.

COMPUTER SKILLS

RedCap | Oracle | all Microsoft Office programs | SPSS