

# Caleb S. Bailey

Curriculum Vitae

2022

BBSRB Rm. B0448D 741 S. Limestone Street, Lexington, KY 40536-0509

(859) 323-0575

[caleb.bailey@uky.edu](mailto:caleb.bailey@uky.edu)

## Education

- 2023 Anticipated Ph.D. Experimental Psychology, University of Kentucky
- 2021 Graduate Certificate in College Teaching & Learning, University of Kentucky
- 2020 M.S. Experimental Psychology, University of Kentucky
- 2017 B.S. Psychology, East Tennessee State University  
*Minor: Biology; Summa Cum Laude; Honors-in-Discipline Scholar*

## Professional Affiliations

- 2017-present Society for Neuroscience
- 2018-present Research Society on Alcohol
- 2019-present University of Kentucky Substance Use Priority Research Area (SUPRA)
- 2019-present Kentucky Psychological Association
- 2018-2021 Bluegrass Society for Neuroscience

## Awards and Fellowships

- 2022 Lipman Fellowship and the Research Fund for the Prevention of Alcohol and Drug Abuse
- 2022 Department of Psychology Cognitive Neuroscience Student Achievement Award
- 2021 Pre-doctoral Trainee *Interdisciplinary Training in Alcohol Research*  
(NIAAA T32 AA027488; Drs. Mark Prendergast and Mark Fillmore)
- 2021 Substance Use Priority Research Area Grant Award
- 2021 Arts & Sciences Dean's Competitive Fellowship Departmental Nominee
- 2020 Substance Use Priority Research Area Grant Award
- 2016 Supplemental Instructor of the Year Award
- 2016 ETSU Psychology Honors-in-Discipline Scholarship
- 2014 ETSU Provost Academic Performance Scholarship
- 2014 Dr. James S. Perry First Year Student in Psychology Award

## Research Experience

- 2020-present Scaling toxicity of COVID spike proteins (SARS-CoV-2 spike protein subunit 1) in ethanol treated organotypic hippocampal slice cultures (Dr. Mark A. Prendergast), Spinal Cord and Brain Injury Research Center, Department of Psychology, University of Kentucky.
- 2018-present Biochemical abnormalities and behavioral pathologies associated with fetal alcohol spectrum disorders using organotypic hippocampal slice culture and rodent behavior models (Dr. Mark A. Prendergast), Spinal Cord and Brain Injury Research Center, Department of Psychology, University of Kentucky.
- 2018-present Characterization of *in vitro* models of traumatic brain injury and ethanol insults using organotypic hippocampal slice cultures (Dr. Mark A. Prendergast; collaboration with Dr. Alexander G. Rabchevsky, Dr. Samir P. Patel, and Dr. Patrick Sullivan), Spinal Cord and Brain Injury Research Center, Department of Psychology, University of Kentucky.

### **Instructional Experience**

- 2022 Primary Instructor BIO199 Research Experience in Biology (Lecture/Lab)
- 2021 Primary Instructor PSY312 Brain and Behavior (Hybrid Course)
- 2020 Lab Instructor PSY456 Behavioral Neuroscience
- 2020 Primary Instructor PSY312 Brain and Behavior (Online)
- 2020 Lab Instructor PSY611 Graduate Psychological Research: Regression
- 2019 Lab Instructor PSY450 Learning
- 2019 Teaching Assistant PSY311 Learning and Cognition (Online)
- 2019 Teaching Assistant PSY 311 Learning and Cognition
- 2018 Lab Instructor PSY216 Applied Statistics
- 2016 Supplemental Instruction BIO1120 Biology for Science Majors II
- 2015 Supplemental Instruction BIO1120 Biology for Science Majors II

### **Manuscripts**

Bailey, C. S., Craig, A. J.\*, Jagielo-Miller, J. E., Count, C. T., Horelick, C. R.\*, & Prendergast, M. A. (in preparation). Tactile and spatial dimensional discrimination T-maze task for use in juvenile rats.

Jagiello-Miller, J. E., Patel, S. P., Bailey, C. S., Count, C. T., Rabchevsky, A. G., and Prendergast, M. A. (in preparation). *In vitro* mechanical distention of culture membranes: Modeling distress associated with traumatic brain injury in the Sprague Dawley rat hippocampus.

### **Publications**

Bailey, C. S., Jagielo-Miller, J. E., Keller, P. S., Glaser, E. P., Wilcox, A. L.\*, & Prendergast, M. A. (2022). Ethanol sustains phosphorylated tau protein in the cultured neonatal rat hippocampus: Implications for fetal alcohol spectrum disorders. *Alcohol (Fayetteville, N.Y.)*, *103*, 45–54.  
<https://doi.org/10.1016/j.alcohol.2022.07.007>

### **Presentations**

Bailey, C. S. (2022). Tauopathic characterization of fetal alcohol spectrum disorders: What we've done and where we're headed. Academic talk presented at the 4<sup>th</sup> Annual Substance Use Research Event Conference, Lexington, KY.

Bailey, C. S., Jagielo-Miller, J. E., Wilcox, A. L\*., Keller, P. S., Glaser, E. P., Count, C. T., Prendergast, M. A. (2022). Multimetric Translation of an Organotypic Hippocampal Slice Culture Model of Fetal Alcohol Spectrum Disorders in Rats. Poster presented at the 4<sup>th</sup> Annual Substance Use Research Event Conference, Lexington, KY.

Jagiello-Miller, J. E., Patel, S. P., Bailey, C. S., Count, C. T., Rabchevsky, A. G., and Prendergast, M. A. (2022). Ethanol Pre-Exposure Differentially Impacts Cell Survival Based on Injury Severity in an Organotypic Hippocampal Slice Culture Model of Traumatic Brain Injury. Poster presented at the 4<sup>th</sup> Annual Substance Use Research Event Conference, Lexington, KY.

Glaser, E., Steward, A., Jagielo-Miller, J., Bailey, C., Prendergast, M., Gensel, J. (2022). Effects of Acute Ethanol Intoxication on Spinal Cord Injury Outcomes. Poster presented at the 4<sup>th</sup> Annual Substance Use Research Event Conference, Lexington, KY.

Bailey, C. S., Jagielo-Miller, J. E., Keller, P. A., Wilcox, A. L.\*, and Prendergast, M. A. (2021). Ethanol prevents constitutive decrement of tau phosphorylation immunofluorescence in the cultured neonatal rat hippocampus: Implications for Fetal Alcohol Spectrum Disorders. Poster accepted for presentation at 50th Annual Society for Neuroscience, Chicago, IL.

Jagiello-Miller, J. E., Patel, S. P., Bailey, C. S., Count, C. T., Rabchevsky, A. G., and Prendergast, M. A. (2021). Ethanol exaggerates cell death at high but not low impact force in an organotypic hippocampal slice culture mechanical distension model of traumatic brain injury. Poster accepted for presentation at 50th Annual Society for Neuroscience, Chicago, IL.

Bailey, C. S., Jagielo-Miller, J. E., Wilcox, A. L.\*, Count, C. T., and Prendergast, M. A. (2021). The effect of JNK-1 inhibition on alcohol-induced tau protein modification. Poster presented virtually at the 3rd Annual Substance Use Research Event Conference, Lexington, KY.

Glaser, E., Steward, A., Bailey, C., Jagielo-Miller, J., Prendergast, M., Gensel, J. (2021). Effects of acute ethanol intoxication on spinal cord injury outcomes. Poster accepted for presentation at Neuroscience Clinical Translational Research Symposium, Lexington, KY.

Bailey, C. S., Jagielo-Miller, J. E., and Prendergast, M. A. (2020). Ethanol-induced tau protein modifications in lateral genu of hippocampus. Poster accepted for presentation at 43rd Annual Research Society on Alcoholism, New Orleans, Louisiana (cancelled).

Jagiello-Miller, J. E., Bailey, C. S., Gebhardt, J. E.\*, and Prendergast, M. A. (2020). Effect of concurrent ethanol insult and transection TBI on hippocampal cell death in organotypic slice cultures. Poster accepted for presentation at 43rd Annual Research Society on Alcoholism, New Orleans, Louisiana (cancelled).

Bailey, C. S., Jagielo-Miller, J. E., and Prendergast, M. A. (2020) Ethanol-induced tau protein modifications in lateral genu of hippocampus. Poster accepted for presentation at the Substance Use Research Day, Lexington, KY.

Jagiello-Miller, J. E., Bailey, C. S., Gebhardt, J. E.\*, and Prendergast, M. A. (2020). Influence of ethanol intoxication at the time of a traumatic brain injury in an in vitro organotypic hippocampal slice culture model. Poster accepted for presentation at the Substance Use Research Day, Lexington, KY.

Wilcox, A.\*, Bailey, C. S., Jagielo-Miller, J. E., Prendergast, M. A. (2020). Protein modifications in the hippocampus as a function of time and alcohol insult. Poster accepted for presentation at Kentucky Psychological Association Conference, Louisville, KY.

Bailey, C. S., Deehan, G. A., Bradley, C. A., Smith, A. L., Palmatier, M. I. (2018). Extracellular dopamine release induced by co-presentation of nicotine and flavor conditioned reinforcers: Effect of nicotine dose. Poster accepted for presentation at the Society of Neuroscience, San Diego, CA.

Palmatier, M. I., Smith, A. L., Bradley, C. A., Patterson, A. K., Malone, S. G., Bailey, C. S., Deehan, G. A. (2018). Flavor conditioned reinforcers dose-dependently increase motivation and

extracellular dopamine in rats. Poster accepted for presentation at the Society for Research on Nicotine and Tobacco, Baltimore, MD.

Bailey, C. S., Patterson, A. K., Bradley, C. A., Malone, S. G., Palmatier, M. I. (2017). Investigating the temporal relationship between chronic mild stress and alcohol intake in rats. Poster accepted for presentation at the Society for Neuroscience, Washington, D.C.

Smith, A. L., Bradley, C. A., Patterson, A. K., Sanders, E. M., Malone, S. G., Golson, J. M., Bailey, C. S., Palmatier, M. I. (2017). Flavor conditioned reinforcers promote dependence-like behavior in rats self-administering nicotine. Poster accepted for presentation at the Society for Neuroscience, Washington, D.C.

\*indicates undergraduate mentee

### **Training and Career Development**

- 2022 Behavioral Theories of Alcoholism – PSY766 (3 credits) *University of Kentucky*
- 2021 Preparing Future Faculty Teaching Practicum – GS699 (3 credits) *University of Kentucky*
- 2020 College Teaching and Learning – EPE672 (3 credits) *University of Kentucky*
- 2020 Grant Writing – GS650 (3 credits) *University of Kentucky*
- 2020 Preparing Future Faculty – GS650 (2 credits) *University of Kentucky*
- 2020 Multilevel Modeling of Longitudinal Data – PSY790 (3 credits) *University of Kentucky*
- 2019 Seminar in College Teaching – GS610 (1 credit) *University of Kentucky*

### **Service**

- 2022 Student Research Mentor, Summer Undergraduate Research Fellowship
- 2022 Student Research Mentor, Undergraduate Neuroscience Summer Fellowship
- 2021 Student Research Mentor, Undergraduate Neuroscience Summer Fellowship
- 2020 Student Research Mentor, SUPRA SUPER Student Grant Award
- 2019 Student Research Mentor, NIAAA Summer Training in Alcohol Research (S.T.A.R.)
- 2018 Student Research Mentor, NIAAA Summer Training in Alcohol Research (S.T.A.R.)
- 2018-present STEM Cats Volunteer Research Mentor

### **Students Mentored**

- 2021-present Ashley Craig, Summer Undergraduate Research Fellowship Trainee; Independent Research, Undergraduate
- 2021-present Cassie Dossett, Undergraduate Neuroscience Summer Fellowship Trainee; Independent Research, Undergraduate
- 2021-present Camden Horelick, Independent Research, Undergraduate
- 2020-present Cassidy Count, Ph.D. Student
- 2021-2022 Elise Littleton, Independent Research, Undergraduate
- 2018-2021 Abigail Wilcox, Substance Use Priority Research Area Grant and Undergraduate Neuroscience Summer Fellowship Trainee; Independent Research, Undergraduate
- 2018-2021 Caroline Heltsley, Independent Research, Undergraduate
- 2018-2020 Jessica Gebhardt, S.T.A.R. Grant Mentee, Undergraduate and M.S. Student