

SHIHUI HUANG, B.A.

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Dept. of Neuroscience, American University, Washington, D.C. 20016

EDUCATION

American University Washington, DC.

Doctoral Student, Neuroscience

2021-Present

Advisor: Anthony L. Riley, Ph.D.

American University Washington, DC.

B.A., Psychology Summa Cum Laude

2020

Minor: Physics; Pre-medical Program

DOCTORAL RESEARCH

American University Washington, DC.

Advisor: Anthony L. Riley, Ph.D.

2021-Present

Psychopharmacology lab, Department of Neuroscience

- Studying the effects of HIV-associated neurocognitive disorders on the propensity of opioid use disorders and related neurobiological changes
- Assessing the effects of chronic drug exposure on interoceptive regulation of drug use

UNDERGRADUATE RESEARCH

American University Washington, DC.

Advisor: Anthony L. Riley, Ph.D.

2019-2021

Psychopharmacology lab, Department of Neuroscience

- Studied the effect of ethanol pre-exposure on the rewarding and aversive effects of α -PVP in a combined conditioned taste avoidance/conditioned place preference design

American University Washington, DC.

Advisor: Monica Konaklieva, Ph.D.

2019

Synthetic organic Chemistry Lab, Department of Chemistry

- Synthesized new lipoprotein metabolism modulators to increase the catalytic function of lipoprotein lipase (LPL) to reduce LPL mutations associated with Alzheimer's disease

AWARDS AND COMMUNITY SERVICES

Graduate Student Leads Scholarship 2022-Present

DC Center for AIDS Research, Diversity, Equity and Inclusion Pipeline Initiative Program

Summer Research Award 2023

Center for Neuroscience and Behavior, American University

Travel Award 2023

Behavior, Biology and Chemistry: Translational Research in Addiction Meeting.

STEM Educational Community Outreach and Volunteering 2022-Present

Elementary Schools and High Schools

Graduate Student Research Award 2022

American University

Summer Research Fellowship 2022

DC Center for AIDS Research Pilot Grant

Travel Award 2022

Behavior, Biology and Chemistry: Translational Research in Addiction Meeting

Travel Award 2021

Center for Neuroscience and Behavior, American University

Volunteer 2020-2021

Covid-19 Test and Vaccine, DC Health

Robyn Rafferty Mathias Undergraduate Summer Fellowship 2019

American University

PUBLICATIONS

Huang, S., Cervený, S.E., Ruprecht, A.L., Davidson, T.L., Riley, A.L. (2023). Serial feature positive and feature negative discrimination in a taste avoidance preparation: Implication for interoceptive control of drug use. *Behavioural Pharmacology*, 34 (6): 350-361. [10.1097/FBP.0000000000000741](https://doi.org/10.1097/FBP.0000000000000741)

Huang, S., Ghasem Ardabili, N., Davidson, T.L., Riley, A.L. (2023). Effect of high-fat diet consumption on the rewarding and aversive effects of morphine. *Physiology and Behavior*, 270: 114317. [10.1016/j.physbeh.2023.114317](https://doi.org/10.1016/j.physbeh.2023.114317)

Jones, R.A., Huang, S., Manke, H.N., Riley, A.L. (2023). Conditioned taste avoidance and conditioned place preference induced by the third generation synthetic cathinone eutylone in female Sprague Dawley rats. *Experimental and Clinical Psychopharmacology*. [10.1037/pha0000657](https://doi.org/10.1037/pha0000657)

Bowman, S.K., Huang, S., Vasquez, M.E., Rice, K.C., Riley, A.L. (2022). Impact of fluoxetine pre-exposure on MDMA-induced taste avoidance in male and female rats. *Experimental and Clinical Psychopharmacology*. Advance online publication [https://doi-org.proxyau.wrlc.org/10.1037/pha0000610](https://doi.org/proxyau.wrlc.org/10.1037/pha0000610)

Manke, H.N., Nelson, K.H., Huang, S., Bailey, J.C., Bowman, S.K., Jones, R.A., Cervený, S.E., Rice, K.C., Riley, A.L. (2022). Methylone pre-exposure differentially impacts the aversive effects of MDPV and MDMA in male and female Sprague-Dawley rats: Implications for abuse vulnerability. *Pharmacology, Biochemistry and Behavior*. 220, 173470 [10.1016/j.pbb.2022.173470](https://doi.org/10.1016/j.pbb.2022.173470)

Riley, A.L., Manke, H.N., Huang, S., (2022). The role of the aversive effects of drugs in their use and abuse. *Behavioural Neurology* <https://doi.org/10.1155/2022/8634176>

Nelson, K.H., Manke, H.N., Bailey, J.M., Vlachos, A., Maradiaga, K.J., Huang, S., Weiss, T.D, Rice, K.C., and Riley, A.L., (2021). Ethanol pre-exposure differentially impacts the rewarding and aversive effects of α -pyrrolidinopentiophenone (α -PVP): Implications for drug use and abuse. *Pharmacology Biochemistry and Behavior*, 211, 173286
<https://doi.org/10.1016/j.pbb.2021.173286>

ORAL AND POSTER PRESENTATIONS

Huang, S., Cervený, S.E., Steere, E.R., Valsan, A., Riley, A.L. (2023). Chronic morphine impairs interoceptive control: Implications for dysregulated drug intake. *Behavior, Biology and Chemistry (BBC): Translational Research in Addiction Meeting*. 2023. Poster presentation.

Huang, S., Manke, H.N., Bowman, S.K., Ruprecht, A., Cervený, S.E., Davidson, T.L., Riley, A.L., Drugs as discriminative stimuli in controlling taste aversion learning: Signaling approach vs. avoidance. Annual APA Convention. 2022. Poster presentation.

Huang, S., Manke, H.N., Bowman, S.K., Ruprecht, A., Cervený, S.E., Davidson, T.L., Riley, A.L., Drugs as discriminative stimuli in controlling taste aversion learning: Signaling approach vs. avoidance. *Behavior, Biology and Chemistry (BBC): Translational Research in Addiction Meeting*. 2022. Poster presentation.

Manke, H., Nelson, K., Huang, S., Bailey, J., Bowman, S., Jones, R., Cervený, S., Rice, K., and Riley, A. Methylone pre-exposure differentially impacts the aversive effects of MDMA, MDPV and fluoxetine in male and female rats. College on Problems of Drug Dependence, 2022.

Riley, A, and Huang, S. HIV and SUD. DC CFAR Developmental Core Collaborative Series. 2021. Virtual conference talk.

Nelson, K.H., Manke, H.N., Bailey, J.M., Vlachos, A., Maradiaga, K.J., Weiss, T.D., Huang, S., Rice, K.C., Riley, A.L., Ethanol pre-exposure differentially impacts the rewarding and aversive effects of α -pyrrolidinopentiophenone (α -PVP): Implications for drug use and abuse. American Psychological Association (APA) Annual Meeting, Division 28 Data blitz. 2020. Virtual oral presentation.

Nelson, K.H., Manke, H.N., Bailey, J.M., Vlachos, A., Maradiaga, K.J., Weiss, T.D., Huang, S., Rice, K.C., Riley, A.L. Ethanol pre-exposure differentially impacts the rewarding and aversive effects of α -pyrrolidinopentiophenone (α -PVP): Implications for drug use and abuse. College on Problems of Drug Dependence (CPDD) Annual Meeting, Late-breaking abstract. 2020. Virtual conference talk.

Nelson, K.H., Manke, H.N., Bailey, J.M., Vlachos, A., Maradiaga, K.J., Weiss, T.D., Huang, S., Rice, K.C., Riley, A.L. Ethanol pre-exposure differentially impacts the rewarding and aversive effects of α -pyrrolidinopentiophenone (α -PVP): Implications for drug use and abuse. International Behavioral Neuroscience Society (IBNS) Annual Meeting. 2020. Virtual poster presentation.

ACADEMIC POSITIONS

Teaching Assistant 2023
 The Neuron, American University.

Teaching Assistant 2021-2023
 Behavioral Neuroscience with Laboratory, American University.

Teaching Assistant

2021-2022

Neurobiology with Laboratory, American University

SKILLS AND TECHNIQUES

Mice and rat jugular catheterization surgery

Mice intravenous self-administration (Lafayette mice operant chamber and ABET II software)

Rat intravenous self-administration (Med-associate operant chamber and Med-PC)

Cell culture

DNA transformation and transfection

Enzyme-linked Immunoassay (ELISA)

Western blotting

Immunohistochemistry

Florescent microscopy

Brain extraction and dissection (rats and mice)

Conditioned place preference procedure (Photobeam Activity System, Sam Diego Instruments)

Conditioned taste aversion procedure (rats and mice)

Statistical programming in R

SPSS