

SHIHUI HUANG

American University, Washington, D.C.

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202-618-0579

EDUCATION

American University, Washington, DC Expected Graduation December 2020

Bachelor of Art (BA), Psychology

Minor: Physics; Pre-medical Program

GPA: 3.95/4.0

Dean's List: All Semesters

Virginia Polytechnic Institute and State University (Virginia Tech) August 2017-May 2018

GPA: 3.96/4.0

Dean's List: All Semesters

RESEARCH EXPERIENCE

Undergraduate Researcher, Psychopharmacology Laboratory January 2020-Present

Neuroscience Department, American University, Washington, D.C.

- Supervisor: Dr. Anthony L. Riley – Professor, Faculty Advisor and Principle Investigator of the Psychopharmacology Laboratory. Director of Asbury Animal Colony.
- Current Project Involvement: assessing the reversal effect of 6c (a potent protein kinase C inhibitor) on amphetamine-induced neurotoxicity in female C57BL/6 mice by evaluating changes in catecholamine levels, synthesis, and reuptake.
- Previous Project: assessing the effect of ethanol pre-exposure on the rewarding and aversive effects of α -pyrrolidinopentiophenone (α -PVP) in adult male Sprague-Dawley rats using a combined conditioned taste avoidance/ conditioned place preference assay: Implications of abuse liability.
- Responsibilities: prepare brain sample for testing; monitor animal health, animal handling and training; prepare animal for and assist in surgery and injections; load instructions into study software (e.g. Condition Place Preference); transport animal to and from activity testing apparatuses; collect and interpret data to report and discuss with supervisors.

Undergraduate Researcher, Synthetic Organic Chemistry Laboratory April-August 2019

Chemistry Department, American University, Washington, D.C.

- Supervisor: Dr. Monica Konaklieva—Principle investigator.
- Research Project: investigate the design of new lipoprotein metabolism modulator to increase the catalytic function of lipoprotein lipase (LPL).
- Responsibilities: prepare several derivatives for one of the compounds with groups that will increase efficacy toward LPL enzyme; perform and analyze H-NMR, Mass Spectrometry, and Thin-Layer Chromatography (TLC) testing; develop purification techniques for newly synthesized compounds.

PUBLICATIONS

Nelson, K.H., Manke, H.N., Bailey, J.M., Vlachos, A, Maradiaga, K.J., Weiss, T.D, **Huang, S.**, Rice, K.C., and Riley, A.L., Effects of delta-9-tetrahydrocannabinol (THC), ethanol (EtOH) or 3,4-methylenedioxymethamphetamine (MDMA) pre-exposure on the rewarding and aversive effects of α -pyrrolidinopentiophenone (α -PVP): Implications for abuse vulnerability in male Sprague-Dawley rats. (*in progress*).

ORAL PRESENTATIONS

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., (2020). 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*. August 7, 2020. Virtual Conference.

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., (2020). 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*, June 26, 2020. Virtual Conference. Late-breaking abstract.

POSTER PRESENTATIONS

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., (2020). 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*, Aug 3-7, 2020. Virtual Conference.

Relevant Courses

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| ▪ General Biology I & II | ▪ General Chemistry I & II |
| ▪ Organic Chemistry I & II | ▪ Calculus I & II |
| ▪ Principle of Physics I & II | ▪ Modern Physics |
| ▪ Waves and Optics | ▪ Statistical Mechanics |
| ▪ Cell Biology | ▪ Early Brain & Cognitive Development |
| ▪ Drugs and Behaviors | ▪ Drugs in America (seminar) |

UNDERGRADUATE EXPERIENCE

Audio Visual Technician September 2017-August 2019
American University, Washington, D.C.

- Provide classroom and event support for the university community, including helping with build-in audio/visual equipment, document cameras, multiple computer inputs, etc.

Peer Advisor May 2018-April 2019
Psychology Department, American University, Washington, D.C.

- Assist club meetings, laboratory visiting weeks, stress management activities etc.
- Facilitated communications on psychology related opportunities.

Conference Assistant May 2018
World Health Organization Annual Conference, Washington D.C.

- Assisted women's health conference track manager to execute 15 sessions attended by 500+ doctors, policy makers, insurance professionals, etc.
- Coordinated with speakers, ensured availability and functionality of audio / visual equipment, and managed the beginning and closing of each session.
- Collected feedback from attendees about newly adopted mobile app and setup.

Laboratory Assistant October 2016-March 2017
Virginia Tech, VA

- Assisted a project that used yeast as model organism to analyze the molecular basis in the expression of mitotic checkpoint genes.
- Acquired skills including using immunoblotting and quantitative fluorescence microscopy to characterize the abundance and variation on mRNAs and proteins.
- Assisted other researchers with record-keeping and reagent preparation.

ACTIVITIES AND SCHOLARSHIP

- Covid-19 Testing Volunteer, **DC Health**, Washington, D.C. June 2020 – August 2020
- Register residents for Covid-19 nasal swab testing and prescreen residents who have preregistered for a test. Scan registration bar codes and link test samples for each resident for medical professionals who provide nasal swab testing.
- Organizer, **Stop the Bleed—Bleeding Emergency Training** November 2019
- Initiated, sponsored, and secured funding for the first annual *Stop the Bleed* training on the American University campus for 40+ students. <https://www.stopthebleed.org/>
 - Recruited other student and faculty volunteers; coordinated with Children’s National Medical Center for class schedule and set-up
 - Promoted bleeding control training to students and faculty members and participate in student out-reach events
- Finalist for **American University CAS Mathis Research Fellowship** May 2019
- Nominated for summer research project of the synthesis of new derivatives of two imidazole-containing compounds.
 - Supervisor: Dr. Monica Konaklieva
- Volunteer, **Cornerstones**, Reston, Virginia September 2018-December 2019
- Collecting and sorting food donations from weekend farmer’s market; providing lower-income clients with groceries and supplies; assisting clients to community services and resources in Fairfax county; attending workshops sponsored by Community Service Board, Fairfax County, VA
- International Volunteer, **One-Step International Program** Summer, 2018
- Save and Rescue Team at Elephant Centre, Chiang Mai, Thailand
 - Responsible for all aspects of elephants’ daily needs, including food preparation, feeding, waste management, exercise, and bath
 - Teaching English-speaking visitors basic facts about Asian elephants and bareback riding techniques
 - Performed daily care for two elephants which parasites wounds. The care consisted of debridement, packing the wound, and application of topical ointment
 - Supported weekly elementary school activities
- All-Conference Tennis, **Old Dominion Athletic Conference** 2015
- Captain of the Varsity Girl Tennis
- Member of **Chinese National Table Tennis Team**, Beijing, China 2013

SKILLS AND TRAINING

- Rodent handling; Sub-cutaneous Injections; Anesthesia (isoflurane)
- Temperature readings (Bio Medic Data Systems, handheld wand) (rats)
- Temperature probe implant surgery (subcutaneous microchip, Bio Medic Data Systems, Seaford, DE) (rats)
- Dose Calculations; Drug and Solution Mixing
- Conditioned Place Preference Procedure (Photobeam Activity System (PAS), Sam Diego Instruments Place Preference System, San Diego, CA) (rats)
- Conditioned Taste Aversion Procedure (rats)

- Brain Extraction and Brain Tissue Dissection (dorsal and ventral striatum) (mice)
- Thin-Layer Chromatography, Column Chromatography, Mass Spectrometry, and H-NMR
- Statistical Analysis in JMP
- Language: Native Mandarin and Taiwanese speaker, native-like fluency in English
- Microsoft Office