Yi (Joy) Zhou

Curriculum Vitae

E-mail yi.zhou@stthom.edu

Education

08/2017 – 02/2023 **Ph.D. in Neuroscience** – Baylor College of Medicine
Dissertation title: *Propranolol modulates cerebellar circuit activity and reduces tremor in the Car8 model of motor dysfunction*

08/2014 – 05/2017 **B.A. in Cognitive Sciences & Psychology** – Rice University
Minor in Neuroscience
3.71 Graduation GPA

Professional Experience

08/2024 – Present **Assistant Professor** – University of St. Thomas
Department of Biology, Division of Natural Sciences
Anatomy & Physiology Course Coordinator
Courses: *BIOL 2445, Anatomy & Physiology I; BIOL 2446, Anatomy & Physiology II; BIOL 3339, Neuroscience*

08/2023 – 08/2024 **Adjunct Professor** – University of St. Thomas
Department of Biology, Division of Natural Sciences
Courses: *BIOL 2445, Anatomy & Physiology I; BIOL 2446, Anatomy & Physiology II*

08/2017 – 02/2023 **Ph.D. Graduate Student** – Baylor College of Medicine
Department of Neuroscience, Lab of Dr. Roy V. Sillitoe
Project title: *Propranolol modulates cerebellar circuit activity and reduces tremor in the Car8 model of motor dysfunction*

03/2015 – 08/2017 **Undergraduate Research Assistant** – Baylor College of Medicine
Department of Neuroscience, Lab of Dr. Roy V. Sillitoe
Project title: *Purkinje cell neurotransmission patterns cerebellar basket cells into zonal modules defined by distinct pinceau sizes*

05/2015 – 05/2016 **Student Assistant** – Rice University
Rice University School Mathematics Project
Responsibilities: *Assisted Rice University faculty members in editing grants and research reports and facilitating professional development programs for K-12 education*

Teaching Experience

08/2024 – Present **Assistant Professor** – University of St. Thomas
Department of Biology, Division of Natural Sciences
Course: *BIOL 2445, Anatomy & Physiology I*
Course structure: *Combination of traditional lecture and lab*
Credit hours: 4 per section
Course: *BIOL 2446, Anatomy & Physiology II*
Course structure: *Combination of traditional lecture and lab*
Credit hours: 4 per section
Course: *BIOL 3339, Neuroscience*
Course structure: *Traditional lecture*
Credit hours: 3 per section

03/2019 – Present **Recurring Guest Lecturer** – Baylor College of Medicine
Course: *Neural Systems II*
Lecture title: *Spinal reflexes*
Lecture given: March each year from 2019 - Present

08/2023 – 08/2024 **Adjunct Professor** – University of St. Thomas
Department of Biology, Division of Natural Sciences
Courses: *BIOL 2445, Anatomy & Physiology I; BIOL 2446, Anatomy & Physiology II*
Course structure: *Combination of traditional lecture and lab*
Credit hours: 4 per section

12/2021 – 12/2021 **Guest Lecturer** – Baylor College of Medicine
Course: *Anatomy of the Nervous System*
Lecture title: *Sensory and motor tracts*
Lecture given: 11/2021

08/2021 – 12/2021 **Graduate Teaching Assistant** – Baylor College of Medicine
Course: *Anatomy of the Nervous System*
TA for academic year 2021-2022

08/2020 – 12/2021 **Graduate Teaching Assistant** – Baylor College of Medicine
Course: *Strategies for Success in Graduate School*
TA for academic years 2019-2020 and 2020-2021

03/2019 – 03/2020 **Graduate Teaching Assistant*** – Baylor College of Medicine
Course: *Neural Systems II*
TA for academic years 2018-2019 and 2019-2020
*Voted best Teaching Assistant by graduate students

08/2016 – 12/2016 **Undergraduate Teaching Assistant** – Rice University
Course: *Fundamentals of Neuroscience*
TA for academic year 2016-2017

02/2014 – 07/2014 **Lead Bilingual Instructor** – J&H Shanghai Arts Academy
Course: *Kindergarten & 1st grade ESL*
Lead ESL instructor for a private school based in Shanghai and Yangzhou, China

Scientific Grants and Funding

09/2020 – 02/2023 **F31 National Research Service Award (NRSA)** – NIH/NINDS
Award Number: *F31 NS120470-03*
Score: *11th percentile, impact score 28*
Title: *Uncovering cerebellar mechanisms of tremor using the efficacy of propranolol to test circuit function*
Funding: $133,183 over a 3-year period

07/2022 – 02/2023 **Rush & Helen Record Neuroscience Fellow Award** – BCM
Department of Neuroscience's highest student honor for academic achievement
Funding: $15,000 over a 1-year period

Publications

1. **Zhou, J.**, Van der Heijden, M.E., Salazar Leon, L.E., Lin, T., Kizec, D.J., Perez, R.M., Pavešković, M., Brown, A.M., Sillitoe, R.V. (2022). Propranolol modulates cerebellar circuit activity and reduces tremor. *Cells, 11*(23), 3889
2. Liang, J., Alevy, J., Akhanov, V., Seo, R., Massey, C., Jiang, D., **Zhou, J.,** Sillitoe, R.V., Noebels, J.L., Samuel, M. (2022) Kctd7 deficiency induces myoclonic seizures associated with Purkinje cell death and microvascular defects. *Disease Models and Mechanisms,* 15(9).
3. Miterko, L.N., Lin, T., **Zhou, J.**, Van der Heijden, M.E., Beckinghausen, J., White, J.J., Sillitoe, R.V. (2021). Neuromodulation of the cerebellum rescues movement in a mouse model of ataxia. *Nature Communications*, 12, 1295.
4. **Zhou, J***., Brown, A.M.*, Miterko, L., Arancillo, M., Lin, T., White, J.J., Sillitoe, R.V. (2020) Purkinje cell neurotransmission patterns cerebellar basket cells into zonal modules that are defined by distinct pinceau sizes. *eLife*, 2020;9:e55569
*Equal contributions
5. Brown, A.M., White, J.J., Van der Heijden, M., **Zhou, J.**, Lin, T., Sillitoe, R.V. (2020) Purkinje cell misfiring generates high-amplitude action tremors that are corrected by cerebellar deep brain stimulation. *eLife* 2020;9:e51928
6. Brown, A.M., Arancillo, M., Lin, T., Catt, D.R., **Zhou, J.**, Lackey, E.P., Stay, T.L., Zuo, Z., White, J.J., Sillitoe, R.V. (2019). Molecular layer interneurons shape the spike activity of cerebellar Purkinje cells. *Scientific Reports*, 9, 1742.
7. Sathyanesan, A., **Zhou, J.,** Scafidi, J., Heck, D.H., Sillitoe, R.V., Gallo, V. (2019). Emerging connections between cerebellar development, behaviour and complex brain disorders. *Nature Reviews Neuroscience,* 20, 298-313.
8. Brown, A.M., White, J.J., **Zhou, J.,** Jefferson, T., Lin, T., & Sillitoe, R.V. (2018). In vivo loose-patch juxtacellular labelling of cerebellar neurons in mice. *Extracellular Recording Approaches.* (Textbook chapter)

Academic Honors and Awards

03/2025 **Nominee: Saint Thomas Aquinas Excellence in Teaching Award**
University of St. Thomas, Houston

07/2022 **Rush & Helen Record Neuroscience Fellow Award**
Department of Neuroscience, Baylor College of Medicine

12/2021 **Outstanding Neuroscience Poster Award, 3rd Place**
Baylor College of Medicine and UTHealth Neuroscience Research Center

10/2020 **Dean's Award of Excellence**
Graduate School of Biomedical Sciences, Baylor College of Medicine

02/2020 **Service Award in Neuroscience**
Department of Neuroscience, Baylor College of Medicine

02/2020 **Outstanding Educator Award for a Teaching Assistant**
Department of Neuroscience, Baylor College of Medicine

12/2015 **President's Honor Roll**
Rice University

Scientific Presentations

Oral Presentations

02/2022 *Propranolol modulates cerebellar circuit activity and reduces tremor in the Car8 mouse model of motor dysfunction*
Jan & Dan Duncan Neurological Research Institute, Houston, TX

11/2020 *Dissecting the cerebellar pathology of tremor using propranolol*
Parkinson's Disease and Movement Disorders Center (PDCMDC) Human Genetics Meeting, Houston, TX

Poster Presentations

1. **Zhou, J.**, Van der Heijden, M.E., Salazar Leon, L.E., Lin, T., Kizec, D.J., Perez, R.M., Pavešković, M., Brown, A.M., Sillitoe, R.V. *Propranolol modulates cerebellar circuit activity and reduces tremor.* (2021) 27th Annual Neuroscience Poster Session, Baylor College of Medicine, UTHealth Neuroscience Research Center, and Rice University, Houston, TX. *Won 3rd place poster at this event
2. **Zhou, J***., Brown, A.M.*, Miterko, L., Arancillo, M., Lin, T., White, J.J., Sillitoe, R.V. *Purkinje cell neurotransmission patterns cerebellar basket cells into zonal modules that are defined by distinct pinceau sizes.* (2019) Rush and Helen Record Neuroscience Forum, Galveston, TX

Leadership and Service Experience

01/2026 – Present **Merit and Missions Scholar Program Faculty Leader** – University of St. Thomas, Houston

Faculty leader for the Merit and Missions Scholar Program, a scholarship competition for high-achieving local high school students to participate in interdisciplinary faculty-led mini-projects. Part of an inter-departmental team of Biology and Psychology faculty leaders.

08/2025 – Present **Faculty Senate Representative: Biology** – University of St. Thomas, Houston

Representative for the Biology Department in Faculty Senate on a 2-year term. Responsible for representing the ideas and concerns of constituents, as well as keeping constituents informed of the university's ongoing projects, discussions, and policy decisions.

08/2025 – Present **Beta Beta Beta (Tri-Beta) Biological Honors Society Faculty Sponsor** – University of St. Thomas, Houston

Faculty sponsor for the University of St. Thomas chapter of the Tri-Beta Honors society student organization.

08/2024 – Present **Anatomy & Physiology Course Coordinator** – University of St. Thomas, Houston

Coordinator and point person for all Human Anatomy & Physiology courses at the University of St. Thomas. Organizes and ensures consistency of syllabi and lab activities between faculty members

08/2024 – 05/2025 **HOSA Future Health Professionals Faculty Sponsor** – University of St. Thomas, Houston

Faculty sponsor for the University of St. Thomas chapter of the HOSA pre-health track student organization

12/2024 – Present **Assessment Task Force Member** – University of St. Thomas, Houston

Faculty member of an inter-departmental task force to assess institutional effectiveness of 32 academic programs in preparation for university SACSCOC accreditation reaffirmation

08/2020 – 08/2022 **Student Council Representative** – Baylor College of Medicine

Peer-elected student council member representing the Department of Neuroscience, serving 2 terms in academic years 2020-2021 and 2021-2022

08/2020 – 08/2022 **Career Development Student Chair** – Baylor College of Medicine

Peer-elected student chair for the career development committee, serving 2 terms in academic years 2020-2021 and 2021-2022

08/2018 – 08/2022 **Neuroscience Bootcamp Volunteer** – Baylor College of Medicine

Co-organizer and presenter for the yearly student-led orientation "bootcamp" program within the Department of Neuroscience

08/2020 – 08/2022 **Breakthrough Mentor** – Americorps

Mentor for college-bound STEM-interested high school students in the local Houston Independent School District system

12/2019 – Present **Prison Ministry Volunteer** – Kairos International

Volunteer for special programs for the Memorial Unit of the Texas Department of Criminal Justice

08/2014 – 08-2017 **Rice Neuroscience Society Volunteer** – Rice University

Member and panelist speaker for student-led events geared towards academic career development in the neurosciences