Ronghao Zhang

Updated 2024-08-19

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EDUCATION

Georgia Tech & Emory University   **August 2023 – May 2028**
Graduate/Professional   Atlanta, GA

- Ph.D. student in Biomedical Engineering, Wallace H. Coulter Department of Biomedical Engineering
- Graduate research assistant in the Emanuel Lab, Department of Cell Biology, Emory University School of Medicine

Case Western Reserve University   **August 2019 – May 2023**
Undergraduate   Cleveland, OH

- *Summa Cum Laude, Bachelor of Science in Systems Biology, Bachelor of Arts in Computer Science*
- Undergraduate research assistant in Garvin & Gonzalez-Vicente Lab, Department of Physiology and Biophysics, Case Western Reserve University School of Medicine.

RESEARCH INTEREST

Systems and Computational Neuroscience

- Neural basis of sensory signal processing and perception
- Mechanism of sensory dysfunction and potential therapeutics in neurological diseases
- Brain Computer Interface and neuroprosthetics for rehabilitation

PUBLICATIONS

[Pre-Print] **Zhang, R.**, Shi, S., Jadhav, D.A., Kim, N., Brostek, A., Forester, B.R., Shukla, R., Qu, C., Kramer B., Garvin, J.L., Kleyman, T. R., Gonzalez-Vicente, A. (2024) Abnormal activation of the mineralocorticoid receptor in the aldosterone-sensitive distal nephron contributes to fructose-induced salt-sensitive hypertension. *bioRxiv*, https://doi.org/10.1101/2024.08.19.608663.

Forester, B.R., **Zhang, R.**, Schuhler, B., Brostek, A., Gonzalez-Vicente, A., Garvin, J.L. (2024) Knocking Out Sodium Glucose-Linked Transporter 5 Prevents Fructose-Induced Renal Oxidative Stress and Salt-Sensitive Hypertension. *Hypertension*, *81*(6), 1296-1307. https://doi.org/10.1161/HYPERTENSIONAHA.123.22535.

Zhang, R., Jadhav, D.A., Kim, N., Kramer, B., Gonzalez-Vicente, A., on behalf of the Kidney Precision Medicine Project. (2024) Profiling Cell Heterogeneity and Fructose Transporter Expression in the Rat Nephron by Integrating Single-Cell and Microdissected Tubule Segment Transcriptomes. *Int. J. Mol. Sci.*, *25*(5), 3071. https://doi.org/10.3390/ijms25053071.

Brostek, A., Hong, N. J., **Zhang, R.**, Forester, B. R., Barmore, L. E., Kaydo, L., Kluge, N., Smith, C., Garvin, J. L., and Gonzalez-Vicente, A.(2022) Independent Effects of Sex and Stress on Fructose-Induced Salt-Sensitive Hypertension. *Physiological Reports*, *10*(19), e15489. https://doi.org/10.14814/phy2.15489.

PRESENTATIONS

April 2023 — Poster presentation *Addition of fructose to a high-salt diet increases the expression of aldosterone-response genes in the kidney* at American Physiology Summit, Long Beach, CA, U.S.

April 2023 — Poster presentation *Single-cell transcriptional phenotypes linked to anatomical localization of fructose transporters in rat proximal tubule segments* at American Physiology Summit, Long Beach, CA, U.S.

April 2023 — Oral Presentation *Fructose-induced aldosterone response in distal tubules* at Cleveland Kidney Center Renal Chalk Talks, Cleveland, OH, U.S.

AWARDS & HONORS

Dean's High Honor | *Case Western Reserve University*   **Latest Award: June 2022**

- Awarded for the following semesters: Fall 2019, Spring 2020, Fall 2020, Spring 2021, Fall 2021, and Spring 2022.

Outstanding Junior Award | *Case Western Reserve University*   **April 2022**

Phi Beta Kappa Prize | *Case Western Reserve University*   **September 2021**

Heartsaver CPR & AED Certificate | *American Heart Association*   **January 2020**

MENTORING EXPERIENCE

Mentor, Petit Scholar Research Program   **January 2024 - Current**

- Supervised Undergraduate scholar, Ruorong Qi, for her independent study in tactile abberations under diseases condions.

Undergraduate Teaching Assistance   **August 2021 - May 2022**

- **BIOL373** Introduction to Neurobiology (*Fall 2022*)
- **BIOL300** Dynamics of Biological Systems: A Quantitative Introduction to Biology (*Spring 2022*)
- **ENGR131** Elementary Computer Programming - MATLAB (*Fall 2021*)
- **BIOL214** Genes, Evolution and Ecology (*Fall 2021*)

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Certificate of Completion | *Coursera – Command Line Tools for Genomic Data Science*   **March 2022**

Phi Beta Kappa Prize | *Case Western Reserve University*   **September 2021**

Heartsaver CPR & AED Certificate | *American Heart Association*   **January 2020**

TECHNICAL SKILLS

- **Programming Languages**: R, MatLab, Unix Command Lines, Java, MySQL
- **Tools**: LaTex, Unity, GitHub & Git
- **Operating Systems**: Windows, MacOS, Linux with Ubuntu
- **Others**: surgeries on rodents, quantitative biological experiments, mRNA purification