

Education

Baylor College of Medicine

Houston, TX

Ph.D. in Molecular Physiology and Biophysics

2016 - Expected in 2021

- GRE: Verbal 151; Quantitative 170.
- Research: Understanding the gut microbiota and host interaction in the development of hypertension using integrated traditional experimental methods and AI (artificial intelligence).
- 2 co-author papers (including one co-first author paper); 4 international and multiple regional poster presentations; 2 travel and poster awards.
- Related coursework: Clinical Translational Research; Life Science Entrepreneurship (Rice University, audit); Intellectual Property law.
- Facilitated compassionate conversations within department and with school leadership for racial justices, international student rights, and increased Asian hatred during coronavirus pandemics
- Elected as program representative at Graduate Student Council (2021-2022).

Yale Interdisciplinary Center for Bioethics

New Haven, CT (remote)

Summer Institute in Bioethics

Summer, 2021 (incoming)

- Foundation lectures in Bioethics with overview of bioethical theories and history and most pressing global challenges in bioethics.
- Seminars in Bioethics with focuses on law, social justice, and policy analysis.

Renmin University of China

Beijing, China

B.S. in Physics, GPA: 3.32/4.0

2012 - 2016

- Honors: Honorable Mention (2015) - COMAP Mathematical Contest in Modeling; Second Prize in Province (2014) - China Undergraduate Mathematical Contest in Modeling.
- Facilitated and developed multiple volunteer programs with Renmin University of China, Beijing You'an Hospital, and China AIDS Walk to promote AIDS awareness.
- Served as peer education host for freshmen sexual education workshops.

University of California, Berkeley

Berkeley, CA

Summer Session

Summer, 2014

- Coursework: Introduction to Biostatistics; Introduction to Financial Accounting.

Experience

Boston Children's Hospital/Yale School of Medicine

Boston, MA/New Haven, CT

Research Assistant (full-time)

2015 - 2016

- Performed general lab setup and management; data analysis and visualization; reproductive physiology experiments; and super-resolution and confocal microscopy imaging.
- 2 co-author papers in eLife.

Skills

Programming

Python, R, MATLAB, LINUX, Shell, SQL, Bioinformatics

Machine Learning

Supervised & Unsupervised Learning, Dimensional Deduction, Clustering & Classification

Leadership

American Society for Microbiology - Texas Medical Center Chapter

Houston, TX

Co-Chair of MicroCast, Media Relations, and Social (approx. 5 hours per week)

2020

- Coordinated and co-hosted multiple COVID-19 seminars with more than 300 attendances to promote science communication.
- Organized online leadership orientation.
- Facilitated career development events for the students and postdocs.

Spectrum, a LGBTQ+ student group at BCM

Houston, TX

Co-founder (approx. 10 hours per week)

2017-2019

- Organized launch event and participation of multi-cultural showcase at BCM.
- Coordinated the collaboration with local LGBTQ+ youth organization at Montrose Center to promote careers in STEM for LGBTQ+ adolescents.
- Recruited volunteers to serve as judges for local LGBTQ+ Out For Education scholarship selection.
- Established affiliation with oSTEM.

China Youth Network, a youth advocacy group in sexual health and rights.

Beijing, China

Core Team Intern/Volunteer Leader (approx. 10 hours per week)

2012-2013

- Worked with China Family Planning Association and United Nations Population Fund to promote sexual health rights and policies in China.
- Organized volunteer recruitment in Beijing Metro area with more than 100 applicants.
- Reviewed and processed more than 300 college student organization grant applications around China for local youth sexual educational programs.
- Trained more than 100 peer education volunteers and leaders around China for sexual health advocacy.

Interests

I am a triathlete in training and an amateur chef. I also enjoy arts and experience different cultures.

Publications

JOURNAL ARTICLES

Restructuring the Gut Microbiota by Intermittent Fasting Lowers Blood Pressure

Huanan Shi, Bojun Zhang, Abo-Hamzy Taylor, James W. Nelson, Chandra Shekar R. Ambati, Joseph F. Petrosino, Bryan M. Bryan, David J. Durgan

Circulation Research 128 (2021) pp. 1240–1254. Am Heart Assoc, 2021

3D in situ Imaging of Female Reproductive Tract Reveals Molecular Signatures of Fertilizing Spermatozoa in Mice

Lukas Ded, Jae Yeon Hwang, Kiyoshi Miki, **Huanan F Shi**, Jean-Ju

Chung *Elife* 9 (2020) e62043. eLife Sciences Publications Limited, 2020

Young Versus Aged Microbiota Transplants to Germ-free Mice: Increased Short-chain Fatty Acids and Improved Cognitive Performance

Juneyoung Lee, Venugopal R Venna, David J Durgan, **Huanan Shi**, Jacob Hudobenko, Nagireddy Putluri, Joseph Petrosino, Louise D McCullough, Robert M Bryan

Gut microbes (2020) pp. 1–14. Taylor & Francis, 2020

CatSper ζ Regulates the Structural Continuity of Sperm Ca²⁺ Signaling Domains and Is Required for Normal Fertility

Jean-Ju Chung, Kiyoshi Miki, Doory Kim, Sang-Hee Shim, **Huanan F Shi**, Jae Yeon Hwang, Xinjiang Cai, Yusuf Iseri, Xiaowei Zhuang, David E Clapham

Elife 6 (2017) e23082. eLife Sciences Publications Limited, 2017

CONFERENCE ABSTRACT

Abstract P241: Intermittent Fasting Lowers Blood Pressure In A Rat Model Of Hypertension By Modulating The Gut Microbiota

Huanan Shi, Taylor Abo-Hamzy, Robert M Bryan, David J Durgan

Hypertension 76.Suppl_1 (2020) AP241–AP241. Am Heart Assoc, 2020

Mapping Neural Circuits Critical to Upper Airway Function and Breathing-swallowing Coordination

Huanan Shi, Russell Scott Ray

The FASEB Journal 33.1_supplement (2019) lb584–lb584. The Federation of American Societies for Experimental Biology, 2019

Forebrain Alzheimer's Disease Pathology Does Not Result in Disordered Breathing in Mice

Huanan Shi, Fatima Beatriz Saldana Morales, Vena Kay Martinez, Joanna Louisa Jankowsky, Russell Scott Ray

The FASEB Journal 33.1_supplement (2019) lb583–lb583. The Federation of American Societies for Experimental Biology, 2019