Jieyu Zheng

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EDUCATION

University of Cambridge, Cambridge, U.K. Oct. 2018 - Jul. 2019

Master of Philosophy in Psychology and Education (First Class Pass). Supervisor: Wendy Browne

Thesis: Understanding Shame in Mathematical Achievement – A Systematic Review Using Meta-analysis

Peer reviewer for Cambridge Open Review Educational Research Journal (2019)

Cornell University, Ithaca, NY, U.S.A. Aug. 2016 - May 2018

Bachelor of Science in Biological Engineering, Magna Cum Laude (GPA:3.80/4.3)

College of Agriculture and Life Sciences (CALS) Dean's List (GPA above 3.50 Every Semester)

2018 Rhodes Scholarship in China Finalist

Shanghai Jiao Tong University (SJTU), Shanghai, China Sep. 2014 - Jun. 2016

Bachelor of Engineering in Food Science and Engineering

Zhiyuan Honor Degree and Scholarship (**Top 5%**)

GPA (overall): 3.91/4.3; Total-grade ranking before transfer to Cornell**: 1/162**

China National Scholarship (Top **1%**)

GRE: Verbal - 168 (**98%**) Quantitative - 170 (**98%**) Analytical Writing 5.0 (**93%**) Mar. 2016

RESEARCH EXPERIENCES

Mesolimbic Dopamine Signaling and Cognitive Flexibility in Rat Models | *Research Assistant* Sep. 2019 - Present

Supervisor: Trevor Robbins, Professor of Cognitive Neuroscience, University of Cambridge

- Maintained facilities and trained animals for four different behavioral tasks.
- Performed infusion, intravenous and subcutaneous injections on rats.
- Analyzed cognitive flexibility behavioral test results, fitted with reinforcement learning models, using R and Stan.
- Reported weekly progress and presented data at lab meetings.

High Fat Diet and Alzheimer's Disease-related Pathology | *Research Assistant* Oct. 2016 - May 2018

Advisor: Chris Schaffer, Associate Professor of Meinig School of Biomedical Engineering, Cornell University

- Obtained and analyzed stacked images of mouse cerebral vasculature via three-photon microscopy.
- Conducted immunohistological staining of brain tissues and obtained images via one-photon microscopy.
- Monitored behavioral assessments of mice and programmed analytical sheets.
- Analyzed stall counting data for EyesOnALZ, a crowdsourcing website for Alzheimer research.

***Ex vivo* Imaging of *Drosophila* Olfactory System Development** | *Research Assistant* May - Aug. 2017

Advisor: Liqun Luo, Professor of Biology, Investigator of Howard Hughes Medical Institute, Stanford University

- Set up *Drosophila melanogaster* crosses for dynamic process imaging.
- Conducted confocal and two-photon imaging of dissected and *ex vivo* cultured *Drosophila* pupal brain tissues.
- Processed and analyzed confocal images and two-photon images.
- Presented final results to the Zhiyuan Honor Research Scholarship Committee, awarded 1st prize.

Functions of CXCL12 during Recovery from Ischemic Strokes in Mice | *Research Assistant* Jan. - Oct. 2015

Advisor: Yongting Wang, Professor of Med-X Neuroscience and Engineering Centre, SJTU

- Generated four types of mutated plasmids as genetic therapy for ischemic stroke.
- Conducted virus packaging of mutated plasmids in preparation for cell and animal tests.
- Submitted Participation in Research Project (PRP) summary essay and presentation.

PUBLICATIONS

Jiang, L., Li, W., Mamtilahun, M., Song, Y., Ma, Y., Qu, M., Lu, Y., He, X., **Zheng, J.** . . . Wang, Y. (2017). Optogenetic Inhibition of Striatal GABAergic Neuronal Activity Improves Outcomes After Ischemic Brain Injury. *Stroke, 48*(12), 3375-3383.

Bracko, O., Cruz, J., N. Njiru, B., Swallow, M., **Zheng, J.**, Ali, M., … Schaffer, C. (2018). Stalled Blood Flow in Brain Capillaries Is Responsible for Reduced Cortical Perfusion and Impacts Cognitive Function in Mouse Models of Alzheimer's Disease. *Alzheimer's & Dementia*, *14*, P651–P652.

Bracko, O., Cruz, J., K. Vinarcsik, L., Ali, M., Swallow, M., **Zheng, J.**, … Schaffer, C. (2018). High Fat Diet Exacerbates Capillary Stalling in Alzheimer's Disease-related Pathology in the APP/PS1 Mice Model. *Alzheimer's & Dementia*, *14*, P749–P750.

ADDITIONAL EXPERIENCES

BEE 2600 Principles of Biological Engineering | *Undergraduate Teaching Assistant* Jan. - Dec. 2017

Advisor: Mingming Wu, Associate Professor of Department of Biological Engineering, Cornell University

- Designed a homework assignment about growth kinetics in a neurobiological background.
- Held weekly office hours and TA meetings and monitored Piazza, an online Q&A platform for the course.
- Graded homework and proctored examinations.

Executive Education Program at Møller Centre, University of Cambridge | *Client Relationship Assistant* Aug. 2019

Cornell Cooperative Extension for Students with Special Needs | *Mentor* Feb. - May 2018

Cornell Empathy, Assistance and Referral Service (EARS) | *Peer Counsellor* Aug. - Dec. 2017

Harvard College AUSCR Summit for Young Leaders in China | *Exceptional Teaching Fellow* Aug. 2018

BEE 4890 Social Entrepreneurship with the SOS Children's Village in Chile | *Project Manager* Aug. - Dec. 2017

China Thinks Big Venture Challenge Program | *Team Leader* Jan. 2015

SKILLS

Programming & Statistics: Matlab and C++; R, Stata, and SPSS

Language: Mandarin Chinese, English

- TOEFL: 115 (Jun. 2018; Reading 29, Listening 28, Speaking 28, Writing 30)
- Translation (in press): *NeuroTribes: The Legacy of Autism and the Future of Neurodiversity.* Author: Steve Silberman.

Sports:

- Swimming (former professional, former SJTU Triathlon Club member)
- Rowing (2018-2019 Clare Hall Boat Club Women's First Team, Cambridge Chinese Rowing Club member)