

Qinwei Zhuang

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Programming Language C++, Matlab, Python, R, Perl, Shell Script, and MySQL

Education History *Graduate Study (Kyoto-McGill Joint Ph.D.)* May 2019 -
McGill University, Montreal, QC, Canada
Kyoto University, Kyoto, Japan

- **Major:** Genomic Medicine (Data Science)

Graduate Study (Master) August 2017 - December 2018
Georgia Institute of Technology (Georgia Tech), Atlanta, GA

- **Major:** Bioinformatics (Research project focused on Computational Biology)
- **GPA:** 3.91/4.0

Undergrad Study August 2014 - May 2017
University of Missouri St. Louis (UMSL), St. Louis, MO

- **Major:** Biochemistry and Biotechnology
- **Minor:** Computer Science, Chemistry
- **Graduation honor:** magna cum laude
- **GPA:** 3.84/4.0

Undergrad Study Sept, 2012 - July, 2014
South China Normal university (SCNU), Guangzhou, Guangdong, China

- **Major:** Biotechnology
- **GPA:** 86/100 (Rank: 1/30)

Research Experience May 2019 - Present
Lab Supervisor: Dr. Guillaume Bourque (McGill University)
Project: Exploration of intra-and inter-species regulatory maps using comparative epigenomics, focusing on sexual dimorphism in mice and epigenomic markers in closely related primates.

Experimental Design and Model Reduction in Systems Biology
August 2017 - November 2018
Lab Supervisor: Dr. Peng Qiu (Georgia Tech)
Long-term goal: Developing non-invasive diagnosis of diseases like cancer via inferring protease composition in the microenvironment of tumor.

Uncovering significant genes for lymph node invasion of Breast cancer patients
January 2018 - April 2018
Class: Biostatistics (Georgia Tech)
Project Overview: Feature engineering was done by combining conventional statistical tests, elastic net (EN) and random forests in mining RNA-seq expression data of 1073 breast cancer patients, organized into lymph node invaded and non-invaded

groups.

Endorsement: Rated as one of the top projects by the instructor

Assessing human exposure risk via dermal contact with thermal paper

February 2013 - May 2014

Lab Supervisor: Dr. Ruifang Fan (SCNU) **Project Focus:** Detecting BPA in different paper products and evaluating the exposure risk via dermal contact among high-risk populations (i.e. grocery cashiers).

Publication

- ZMYM2 is essential for methylation of germline genes and active transposons in embryonic development. *Nucleic Acids Research*, 2023 (contributing author)
- Genetic variation in the Y chromosome and sex-biased DNA methylation in somatic cells in the mouse. *Mammalian Genome*, 2023 (contributing author)
- Distinct roles of androgen receptor, estrogen receptor alpha, and BCL6 in the establishment of sex-biased DNA methylation in mouse liver. *Scientific Reports*, 2021 (contributing author)
- Sex Chromosomes and Sex Phenotype Contribute to Biased DNA Methylation in Mouse Liver. *Cells*, 2020 (first author)
- Deconvolving multiplexed protease signatures with substrate reduction and activity clustering. *PLOS Computational Biology*, 2019 (first author)
- Experimental design and model reduction in systems biology. *Quantitative Biology*, 2018 (second author)
- Levels of bisphenol-A in different paper products in Guangzhou, China, and assessment of human exposure via dermal contact. *Environmental Science Processes & Impacts*, 2015 (listed author)

Activities and Prizes

The CIHR Institute of Gender and Health (CIHR-IGH) Travel Award Organization for the Study of Sex Differences (OSSD) May 2023
Travel Award for the 8th Canadian Conference on Epigenetics August 2022
Outstanding Poster Presentation Prize: Issued by the International Mammalian Genome Society July 2022
Travel Award for the 35th IMGC meeting: Issued by the International Mammalian Genome Society May 2022
FRQS Doctoral Training Award: Issued by Fonds de Recherche du Québec - Santé (FRQS) June 2022 - April 2024
JST SPRING Doctoral Training Award: Support for Pioneering Research Initiated by the Next Generation (Japan Science and Technology Agency (JST)) Fall 2021 - April 2023
JASSO scholarship (Kyoto University) Fall 2020
Traveling award for the IHEC annual meeting (McGill University) Spring 2020
Computational Biology Faculty Research Awards (Georgia Tech) Fall 2018
Computational Biology Faculty Research Awards (Georgia Tech) Summer 2018
Computational Biology Faculty Research Awards (Georgia Tech) Spring 2018
Academic peer tutor at Multicultural Student Service (UMSL), 2016 - 2017
Volunteering as mentor in Research Experience and Apprenticeship Program (REAP) 2016 SUMMER
Biochemistry and Biotechnology Program Outstanding Student Scholarship (UMSL) 2015-2016
Outstanding Student Prize of South China Normal University (SCNU) 2013 - 2014
Voluntary teaching in a remote area of Qingyuan, Guangdong Province, China.

July, 2013

Outstanding Student Prize of South China Normal University (SCNU) 2012 - 2013