

Jiayi Wu Cox

12 James Street, Winchester, MA 01890 • jiayiwu@bu.edu

IMMIGRATION STATUS: Permanent U.S resident / Green card holder

RESEARCH SKILLS

machine learning, Linux, Python, R, PLINK, animal model, cell culture, protein expression, immunoblot

RESEARCH EXPERIENCE

Boston University School of Medicine, Boston (Advisor: Dr. Lindsay Farrer) June.2016-Present

Ph. D candidate in Program of Genetics and Genomics (expected 2020)

Projects:

- Machine learning (LASSO, SVM, deep neural network, etc) in combination with genome-wide association study (GWAS) to find the clinical features and genetic risk variants of drug addiction.
- Epigenetic analysis (e.g mQTL) searching for genetic risk loci in response to blood lipid lowering drug.
- RNA-seq analysis of mice binge eating cohort for the association of phenotype and gene expression.

Biogen, Cambridge, MA

June.2018-Aug.2018

Intern, Statistical Genetics (Mentor: Dr. Paola Bronson)

- Contributed to several potential publications by helping collaborators and providing key research results.
- Increased the productivity of research by developing an efficient HLA analysis pipeline, linear mixed effect model pipeline and data visualization pipeline. Supported research decision making by making statistical model comparisons.
- Presented cutting edge journal and my internship work to scientists in computational biology group.

Tufts University School of Medicine, Boston (Advisor: Dr. Athar Chishti)

Sept.2013-May.2015

Master of Science in Program of Pharmacology and Experimental Therapeutics

Projects:

- Animal model and molecular biological experiment on genetic engineered Calpain-1 knockout mice to find the metabolic phenotypes and relationship to insulin signaling pathway.
- Molecular biochemical experiment on explaining the glucose homeostasis of a red cell binding protein.

PUBLICATION

Hamid Abdolmaleky, Adam Gower, Chen Wong, **Jiayi Cox**, Xiaoling Zhang, Sam Thiagalingam, Rahim Shafa, Vadivelu Sivaraman. Aberrant transcriptomes and DNA methylomes define pathways that drive pathogenesis and loss of brain laterality/asymmetry in schizophrenia (SCZ) and bipolar disorder (BD). *Neuropsychiatric Genetics* (under review).

Jiayi Wu, Devanshi Patel, Jaeyoon Chung, Samantha Lent, Virginia Fisher, Achilleas Pitsillides, Lindsay Farrer, Xiaoling Zhang. An Efficient Analytic Approach in Genome-wide Identification of Methylation Quantitative Trait Loci Response to Fenofibrate Treatment. *BMC Proceeding* (accepted)

Elise Lim, Hanfei Xu, Peitao Wu, Daniel Posner, **Jiayi Cox**, Gina Peloso, Achilleas Pitsillides, Anita DeStefano, L Cupples, Ching-Ti Liu. Network analysis of drug effect on triglyceride-associated DNA methylation. *BMC Proceeding* (accepted)

Stacey L. Kirkpatrick, Lisa R. Goldberg, Neema Yazdani, R. Keith Babbs, **Jiayi Wu**, Eric R. Reed, David F. Jenkins, Amanda Bolgioni, Kelsey I. Landaverde, Kimberly P. Luttik, Karen S. Mitchell, Vivek Kumar, W. Evan Johnson, Megan K. Mulligan, Pietro Cottone, Camron D. Bryant. Cytoplasmic FMR1-interacting protein 2 is a major genetic factor underlying binge eating. *Biological Psychiatry*. 2017 May 1;81(9):757-769.

AWARDS/HONORS/FELLOWSHIPS

GMS Travel Award

April. 2017

Transformative Training Program in Addiction Science (TTPAS) Fellowship, Boston University

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A fellowship for scholars in both bench science and computational biology field	Sept.2016-present
NIDA scholarship for Short Course on The Genetics of Addiction, Jackson Laboratory	Sept. 2016
The Cross-disciplinary Scholars in Science and Technology (CSST) Fellowship, University of California Los Angeles (UCLA)	July.2012-Sept.2012
Given to several students from top universities in China and Japan in the year 2012	
First Class Individual Scholarship, Sichuan University	2009-2012

LEADERSHIP

- Boston University Machine Intelligence Community 2017-present
- New England Science Symposium (NESS) Plenary Committee Member 2016
- New England Science Symposium (NESS) Poster Presenter 2015
- Volunteer in Blum Patient and Family Resource Center, Dana-Farber Cancer Institute 2014