

# Jiayi Wu Cox

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**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.

**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 Cox**, 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)

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

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

- Founder of 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