

XIU HUANG

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EDUCATION

YALE UNIVERSITY

Expected May, 2016
New Haven, CT

Ph.D., *Program in Computational Biology and Bioinformatics*

- Thesis: Statistical modeling of gene expression and next generation sequencing data towards understanding and identifying cancer biomarkers
- Advisors: Prof. Hongyu Zhao

HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY (HUST)

June, 2010
Wuhan, China

B.E., *Bioinformatics*

- Thesis: Analysis of massive protein mass spectrometry data and its application in human genome annotation.

SUMMARY OF SPECIALTIES

Computational Biology, Bioinformatics, ctDNA mutation calling, Microarray Data Analysis, Next-generation Sequencing Analysis, Cancer Genomics, Biomarker Discovery, Pathway Analysis, Bayesian Modeling

RESEARCH EXPERIENCE

Yale Center for Statistical Genomics and Proteomics

Aug 2011 - Present
New Haven, CT

Research Assistant

- Statistical method to call somatic mutations specifically designed for sequencing data of circulating tumor DNAs (ctDNAs)
- Statistical modeling of gene expression data to assess PHY906 as an adjuvant drug in treating cancer
- Statistical assessment of transcriptional profiles from paired normal samples of cancer patients to identify new biomarkers to better predict cancer survival

Department of Pharmacology, Yale University School of Medicine

Aug 2012 - Present
New Haven, CT

Research Assistant

- Assess PHY906 as an adjuvant cancer treatment to induce gene expression changes in different tissues of genetically engineered mouse model and xenograft mouse models carrying colon cancer
- Assess PHY906 induced circulating DNAs mutation profile changes in clinical trials colon cancer patients

Shanghai Center for Bioinformation Technology

July 2009 - May 2010
Shanghai, China

Research Intern

- Collection of mass spectrometry protein data and construction of databases for the Chinese Government National 973 Project

TEACHING EXPERIENCE

- MCDB 261 Introduction to Dynamical Systems in Biology (Spring, 2015)
- CBB 752 Bioinformatics: Practical Application of Data Mining & Simulation (Spring, 2016)

HONORS AND AWARDS

- Nominee of AAAS/Science Program for Excellence in Science (YALE), 2016
- Fellowship from the CSC-Yale World Scholars Program (YALE), 2010-2012

- Title of Outstanding Graduate from university (HUST), 2010
- Title of National Youth Ambassador (Jiangsu Province), 2009
- Scholarship for Self-reliance from university (HUST), 2009
- Title of Outstanding Student from university (HUST), 2007-2008
- Scholarship for Outstanding Study Performance from department (HUST), 2007-2008
- Scholarship for Outstanding Student Leader from department (HUST), 2006-2007

TECHNICAL STRENGTHS

Computer Languages	Proficient in R, C/C++, Perl, Unix shell script; familiar with Matlab, Python, Java and HTML
Databases	MySQL
Tools	Git, Vim, Emacs, Markdown, Jekyll and L ^A T _E X
Language	English (fluent) and Chinese (native)

PUBLICATIONS

6. **Xiu Huang**, David Stern, Hongyu Zhao. 2016. Transcriptional Profiles from Paired Normal Samples Offer Complementary Information on Cancer Patient Survival – Evidence from TCGA Pan-Cancer Data. To appear in the *Scientific Reports*.
5. Lam Wing, Zaoli Jiang, Fulan Guan, **Xiu Huang**, Rong Hu, Jing Wang, Scott Bussom, et al. 2015. PHY906(KD018), an Adjuvant Based on a 1800-Year-Old Chinese Medicine, Enhanced the Anti-Tumor Activity of Sorafenib by Changing the Tumor Microenvironment. *Scientific Reports* 5: 9384.
4. Zhang Jing, Xiang Li, Cong Li, Zhichao Lian, **Xiu Huang**, Guocheng Zhong, Dajiang Zhu, et al. 2014. Inferring Functional Interaction and Transition Patterns via Dynamic Bayesian Variable Partition Models. *Human Brain Mapping* 35 (7): 331431.
3. Sun Jiehuan, Xintao Hu, **Xiu Huang**, Yang Liu, Kaiming Li, Xiang Li, Junwei Han, Lei Guo, Tianming Liu, and Jing Zhang. 2012. Inferring Consistent Functional Interaction Patterns From Natural Stimulus FMRI Data. *NeuroImage*, March.
2. Xing Xiao-Bin, Qing-Run Li, Han Sun, Xing Fu, Fei Zhan, **Xiu Huang**, Jing Li, et al. 2011. The Discovery of Novel Protein-Coding Features in Mouse Genome Based on Mass Spectrometry Data. *Genomics* 98 (5): 34351.
1. Jiang Xiao, Wu Yuan-xi, Liu Xing-fu, **Xiu Huang**, and Yuan Jiao. 2009. Designing Open Experiments, Improving Comprehensive Abilities. *Experiment Science & Technology* 7 (2).

MANUSCRIPTS

2. **Xiu Huang**, Wing Lam, Jiehuan Sun, Yung-Chi Cheng, Hongyu Zhao. 2016. Somatic Mutation Calling for Sequencing Data of Circulating Tumor DNAs.
1. Jiehuan Sun, Jose Herazo-Maya, **Xiu Huang**, Naftali Kaminski, Hongyu Zhao. 2016. Distance-correlation based Gene Set Analysis in Longitudinal Studies. Submitted to the *Bioinformatics*.

PROFESSIONAL ACTIVITY

Reviewer for peer-reviewed journals

- Including *BMC Bioinformatics*, *BioMed Research International*, and *Human Genomics*

Academic presentations

- **Xiu Huang**, Ena Wang, Scott Bussom, Wing Lam, Zaoli Jiang, Francesco M Marincola, Yung-Chi Cheng and Hongyu Zhao. Individual Based Pathway Analysis (IBPA) and Its Application in Assessing PHY906s Adjuvant Anti-cancer Effect with CPT-11. *12th Meeting of Consortium for Globalization of Chinese Medicine (CGCM), 2013. Graz, Austria*