

## Mengmeng (Chrissie) Zhang

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**Lab Phone:**  
**Email:**

### EDUCATION

**Aug. 2008 ~ Dec. 2012 PhD student**

Department of Chemistry and Biochemistry, University of Texas at Austin  
Degree: **PhD** in Biochemistry

**Aug. 2006 ~ Aug. 2008 Graduate student**

Department of Biological Sciences, Clemson University  
Degree: **MS** in Biological Sciences

**Sep. 2002 ~ Jul. 2006 Undergraduate student**

Department of Bioengineering, Shanghai Jiao Tong University, China  
Degree: **Bachelor of Engineering**

### SKILLS

Structural and chemical biology: protein expression and purification, bacteria and insect cell expression system, X-ray crystallography, structure-based drug design, assay development, high-throughput screening, docking

Biochemistry and biophysics: enzymology, enzyme kinetics, thermodynamics

Molecular and cell biology: molecular cloning, western, mammalian cell culture techniques, time-lapse imaging, fixed-cell imaging

Software: MATLAB, ImageJ, Pymol, Coot, HKL2000, CCP4, Gold, KinTek Explorer, and various structural bioinformatics tools (e.g. xtalpred, SERP, PSIPRED, HHPRED, etc.)

### HONORS AND AWARDS

- Jun. 2012 Ravel Fellowship, Department of Chemistry and Biochemistry, University of Texas at Austin  
2011~2012 President William Powers Graduate Fellowship (awarded to **top 0.1%** of the graduate students)  
Sept. 2011 Ravel Fellowship, Department of Chemistry and Biochemistry, University of Texas at Austin  
Feb. 2011 Iota Sigma Pi's Excellence in Science Award  
Nov. 2010 Ravel Award, Department of Chemistry and Biochemistry, University of Texas at Austin  
Jul. 2010 Professional Development Award  
2008~2009 Welch and Ayres Fellowship of University of Texas at Austin  
2003~2005 Excellence in Academics Scholarship of Shanghai Jiao Tong University (Received every year)

### PUBLICATIONS

1. Sackton, K., Dimova, N., Zeng, X., Tian, W., **Zhang, M.**, Sackton, T., Meaders, J., Pfaff, K., Yu, H., Luo, X., King, R. W. Synergistic Inhibition of Mitotic Exit by Two Small Molecule Inhibitors of the Anaphase-Promoting Complex. (*Nature*, in press)
2. **Zhang, M.**, Yogesha, S. D., Mayfield, J. E., Gill, G. N., Zhang, Yan. (2013) Viewing Serine/Threonine Protein Phosphatases through the Eyes of Drug Designers. *FEBS Journal* 280(19):4739-60 (invited review).
3. **Zhang, M.**, Wang, X.J., Chen, X., Bowman, M.E., Luo, Y., Noel, J.P., Ellington, A.D., Etzkorn, F.A. and Zhang, Y. (2012) Structural and kinetic analysis of the prolyl isomerization/phosphorylation cross-talk in the CTD code. *ACS Chemical Biology* 7(8):1462-70.
4. Wei, Z., Wang, L., **Zhang, M.**, Xuan, J., Wang, Y., Liu, B., Shao, L., Li, J., Zeng, Z., Li, T., Liu, J., Wang, T., Zhang, M., Qin, S., Xu, Y., Feng, G., He, L., Xing, Q. (2011) A pharmacogenetic study of

risperidone on histamine H3 receptor gene (HRH3) in Chinese Han schizophrenia patients. **Journal of Psychopharmacology** 26(6):813-8 (Undergrad work)

5. **Zhang, M.**, Cho, E. J., Burstein, G., Siegel, D., Zhang, Y. (2011) Selective inactivation of a human neuronal silencing phosphatase by a small molecule inhibitor. **ACS Chemical Biology** 6(5): 511-519 (Cover and Podcast of May issue).
6. Zhang, Y., **Zhang, M.**, Zhang, Y. (2011) Crystal Structure of Ssu72, an essential eukaryotic phosphatase specific for the C-terminal domain of RNA polymerase II, in complex with a transition state analogue. **Biochemical Journal** 434(3): 434-444.
7. **Zhang, M.**, Gill, G. N., Zhang, Y. (2010) Bio-molecular architects: a scaffold provided by the C-terminal domain of eukaryotic RNA polymerase II. **Nano Reviews** DOI: 10.3402/nano.v1i0.5502.
8. **Zhang, M.**, Liu, J., Kim, Y., Dixon, J. E., Pfaff, S. L., Gill, G. N., Noel, J. P., Zhang, Y. (2010) Structural and functional analysis of the phosphoryl transfer reaction mediated by the human small C-terminal domain phosphatase, Scp1. **Protein Science** 19(5): 974-86.

(Manuscript in preparation)

9. Luo, Y., Tibbetts, A., Yogesha, S. D., **Zhang, M.**, Matthews, W., Appling, D., Zhang, Y. Deciphering yeast Pta1-Ssu72 interface interaction using Drosophila Ssu72-symplekin complex structure model.

## **RESEARCH EXPERIENCE**

### **Sept. 2014 ~ Present                      Research Assistant III**

Wyss Institute, Harvard University

PI: Dr. Peng Yin

Project: DNA biotechnology development

### **Feb. 2013 ~ Jul. 2014                      Postdoctoral Research Fellow**

Department of Cell Biology, Harvard Medical School

PI: Dr. Randall King

Project: Identification of small molecule inhibitors of anaphase-promoting complex (APC) using cell-based HTS imaging assays.

**Expertise involved:** Cell biology, chemical biology, cancer biology

### **Dec. 2008 ~ Dec. 2012                      Graduate Research Assistant**

Department of Chemistry and Biochemistry, University of Texas at Austin, TX

Supervisor: Dr. Yan (Jessie) Zhang

Project: Structure-based drug discovery of small C-terminal domain phosphatase 1 (Scp1).

**Expertise involved:** Biochemistry, biophysics (thermodynamics and kinetics), structural biology, chemical biology, enzymology

### **Aug. 2006 ~ Jul. 2008                      Graduate Research Assistant**

Oncology Research Institute, Greenville Hospital System University Medical Center, SC

Supervisor: Dr. George (Xianzhong) Yu

Project: In vivo activation of macrophage tumoricidal activity through targeted delivery of interferon regulatory factor (IRF) family genes

**Expertise involved:** Immunology, oncology, microbiology

### **Sept. 2004 ~ Jun. 2006                      Undergraduate Research Assistant**

Institute for Nutritional Science, Chinese Academy of Science, Shanghai, China

Supervisor: Dr. Lin He (Member of Chinese Academy of Science)

Project: Association analysis between histamine receptor polymorphism and risperidone efficacy

**Expertise involved:** Pharmacogenetics

## **MEMBERSHIP, AFFILIATION AND OTHER PROFESSIONAL ACTIVITIES**

**Mar. 2014~ present**

Structural Biology Consultant for Dr. Pinhua Liu group at Boston University

**Apr. 2009 ~ Apr. 2011**

Sponsored membership, AAAS

**Sep. 2007 ~ 2008**

Vice president, Microbiology Society of Clemson University

**CONFERENCE PRESENTATIONS**

**Poster:** HMS Cell Biology Retreat (Oct. 18 ~19, 2013)

**Talk:** 67<sup>th</sup> ACS Southwest Regional Meeting in Austin (Nov. 9 ~ 12, 2011)

**Poster:** 16<sup>th</sup> Protein Phosphorylation and Cell Signaling meeting (Aug. 18 ~ 22, 2010), Salk Institute, La Jolla, CA

**Poster:** 3<sup>rd</sup> Texas Enzyme Mechanisms Conference (Jan. 8 ~ 9, 2010), University of Texas at Austin, Austin, TX