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Jiahai Zhou, Ph.D.

Research Interests

- ◇ Develop approaches for expression and purification of protein and protein complex.
- ◇ Understand the molecular mechanism of novel enzymes in biosynthetic pathway.
- ◇ Seek fundamental insights of how small ligands interact and regulate the function of bio-molecule.

Professional Experience

2006–present: Investigator, State Key Laboratory of Bioorganic Chemistry & Natural Products, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences (CAS)

2001–2006: Postdoctoral Research Fellow, Life Sciences Institute and Department of Biological Chemistry, University of Michigan Medical School, U.S.A.

2000–2001: Assistant Investigator, State Key Laboratory of Bioorganic Chemistry & Natural Products, Shanghai Institute of Organic Chemistry, CAS

1993–1995: Research Assistant, Nanjing Chemical Plant

Education

1995-2000: Ph.D., Shanghai Institute of Organic Chemistry, Shanghai, China

- ◇ Department: *State Key Laboratory of Bioorganic Chemistry & Natural Products*
- ◇ Major: Bioorganic Chemistry and Chemical Biology
- ◇ Director: Prof. Hai-Bao Chen
- ◇ Thesis title: "Protein Engineering of Rubisco"

1989-1993: B.S., Nanjing University, Nanjing, China

- ◇ Department: Young Gifts
- ◇ Major: Analytical chemistry
- ◇ Director: Prof. Zu-Xun Zhang
- ◇ Thesis title: "The Theory of Quasi-steady-state Quasi-reversible for Linear Sweep Voltammetry at Ultramicrodisk Electrode"

Honors and Awards

2006: Postdoctoral/Graduate Travel Award, ASBMB, USA

Selected Publications

1. Lai, L., Xu, Z., **Zhou, J.**, Lee, K. and Amidon, G.L. "Molecular basis of prodrug activation by human valacyclovirase, an α -amino acid ester hydrolase." *J. Biol. Chem.*, **2008**, 283: 9318-9327.
2. Xiao, J., Xia H., **Zhou J.**, Azmi, I., Davies, B.A., Katzmann, D.J. and Xu Z. "Structural basis of Vta1 function in the multi-vesicular body sorting pathway." *Dev. Cell*, **2008**, 14: 37-49.
3. Xiao, J., Xia, H., Yoshino-Koh, K., **Zhou, J.** and Xu Z. "Structural characterization of the ATPase reaction cycle of endosomal AAA-protein Vps4." *J. Mol. Biol.*, **2007**, 374: 655.
4. **Zhou, J.**, Liu, C.Y., Back, S.H., Clark, R.L., Peisach, D., Xu, Z. Kaufman R.J., "The crystal structure of human IRE1 luminal domain reveals a conserved dimerization interface required for activation of unfolded protein response." *PNAS*, **2006**, 103: 14343-14348.
5. **Zhou, J.**, Xu, Z. "The structural view of bacterial translocation-specific chaperone SecB: implications for function." *Mol. Microbiol.*, **2005**, 58: 349-357.
6. **Zhou, J.**, Xu, Z. "Structural determinants of SecB recognition by SecA in bacterial protein translocation." *Nat. Struct. Biol.*, **2003**, 10: 942-947.