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EDUCATION

Ph.D. in Biophysics	2008
The Ohio State University, Columbus, OH	
M.S. in Biophysics	2002
Nankai University, Tianjin, P.R. China	
B.S. in Physics	1999
Nankai University, Tianjin, P.R. China	

HONORS AND AWARDS

International Union for Pure and Applied Biophysics Travel Award	2011
American Heart Association Postdoctoral Fellowship	2010-2012
AAAS/Science Program for Excellence in Science	2009-2013
Outstanding Research Accomplishment Biophysics Program, The Ohio State University	2007, 2008
American Heart Association Predoctoral Fellowship	2006-2008

RESEARCH EXPERIENCE

Postdoctoral Fellow, Harvard Medical School	2008-2013
Department of Cell Biology, Boston, MA Laboratory of Dr. Samara Reck-Peterson “Molecular Mechanism of Cytoplasmic Dynein Motility and Regulation”	
Graduate Student, The Ohio State University	2002-2008
Department of Physics, Columbus, OH Laboratory of Dr. Dongping Zhong “Characterization of Protein Hydration Dynamics using Ultrafast Fluorescence Spectroscopy”	

RESEARCH PUBLICATIONS

(* denotes equal contribution)

1. Cheng, L.*, Desai, J.*, Miranda, C. J., Duncan, J. S., **Qiu, W. H.**, Nugent, A. A., Kolpak, A. L., Wu, C. C., Drokhlyansky, E., Delisle, M. M., Chan, W.-M., Propst, F., Reck-Peterson, S. L., Fritzsche, B., Engle, E. C. (2014) Human CFEOM1 mutations attenuate KIF21A autoinhibition and cause oculomotoraxon stalling. Manuscript accepted for publication in *Neuron*.

- Qin Y.Z, Yang, Y., Zhang, L.Y., Fowler J.D., **Qiu, W.H.**, Wang, L.J., Suo, Z.C., and Zhong, D.P. (2013). Direct probing of solvent accessibility and mobility at the binding interface of polymerase (Dpo4)-DNA complex. *J. Phys. Chem. A* 117, 13926–13934.
2. **Qiu, W. H.***, Derr, N.D.*, Goodman, B. S., Villa, E., Wu, D., Shih, W., Reck-Peterson, S.L. (2012) Dynein achieves processive motion using both stochastic and coordinated stepping. *Nat. Struct. Mol. Biol.* 19, 193-200. [Nature Research News & Views Highlight: Nature 482, 44–45 (2012).]
 3. Su, X.L., **Qiu, W. H.**, Gupta, M.L., Pereira-Leal, J.B., Reck-Peterson, S.L., Pellman, D. (2011). Mechanisms underlying the dual-mode regulation of microtubule dynamics by Kip3/Kinesin-8. *Mol. Cell* 43, 751-763.
 4. **Qiu, W. H.***, Li, T. P.*, Zhang, L. Y., Kao, Y.-T., Wang, L. J., and Zhong, D. P. (2008). Ultrafast quenching of tryptophan fluorescence in proteins: Interresidue and intrahelical electron transfer. *Chem. Phys.* 350, 154-164.
 5. Zhang, L. Y., Wang, L. J., Kao, Y. T., **Qiu, W. H.**, Yang, Y., Okobiah, O., and Zhong, D. P. (2007). Mapping hydration dynamics around a protein surface. *Proc. Natl. Acad. Sci. USA* 104, 18461-18466.
 6. **Qiu, W. H.**, Wang, L. J., Lu, W. Y., Boechler, A., Sanders, D. A. R., and Zhong, D. P. (2007). Dissection of complex protein dynamics in human thioredoxin. *Proc. Natl. Acad. Sci. USA* 104, 5366-5371.
 7. **Qiu, W. H.**, Kao, Y. T., Zhang, L. Y., Yang, Y., Wang, L. J., Stites, W. E., Zhong, D. P., and Zewail, A. H. (2006). Protein surface hydration mapped by site-specific mutations. *Proc. Natl. Acad. Sci. USA* 103, 13979-13984.
 8. Kim, J., Lu, W. Y., **Qiu, W. H.**, Wang, L. J., Caffrey, M., and Zhong, D. P. (2006). Ultrafast hydration dynamics in the lipidic cubic phase: Discrete water structures in nanochannels. *J. Phys. Chem. B* 110, 21994-22000.
 9. Zhang, L. Y., Kao, Y. T., **Qiu, W. H.**, Wang, L. J., and Zhong, D. P. (2006). Femtosecond studies of tryptophan fluorescence dynamics in proteins: Local solvation and electronic quenching. *J. Phys. Chem. B* 110, 18097-18103.
 10. **Qiu, W. H.***, Zhang, L. Y.*, Okobiah, O., Yang, Y., Wang, L. J., Zhong, D. P., and Zewail, A. H. (2006). Ultrafast solvation dynamics in human serum albumin: Correlations with conformational transitions and site-selected recognition. *J. Phys. Chem. B* 110, 10540-10549.
 11. **Qiu, W. H.**, Zhang, L. Y., Wang, L. J., and Zhong, D. P. (2006). Ultrafast hydration dynamics in protein conformational transitions. In *Femtochemistry VII*, A. W. Castleman, Jr. and M. L. Kimble, eds. (Amsterdam: Elsevier), pp. 411-414.
 12. **Qiu, W. H.**, Zhang, L. Y., Kao, Y. T., Lu, W. Y., Li, T. P., Kim, J., Sollenberger, G. M., Wang, L. J., and Zhong, D. P. (2005). Ultrafast hydration dynamics in melittin folding and aggregation: Helix formation and tetramer self-assembly. *J. Phys. Chem. B* 109, 16901-16910.
 13. Lu, W. Y., **Qiu, W. H.**, Kim, J., Okobiah, O., Hu, H. X., Gokel, G. W., and Zhong, D. P. (2004). Femtosecond studies of crown ethers: supramolecular solvation, local solvent structure and cation pi interaction. *Chem. Phys. Letters* 394, 415-422.

14. Lu, W. Y., Kim, J., **Qiu, W. H.**, and Zhong, D. P. (2004). Femtosecond studies of tryptophan solvation: correlation function and water dynamics at lipid surfaces. *Chem. Phys. Letters* 388, 120-126.

Seminars

1. Willamette University, Salem, Oregon, 11/01/2013
Shining Light on the Mechanism of Molecular Motors.
2. 17th International Biophysics Congress, Beijing, China, 11/01/2011.
Two Color Direct Observation of the Dynein Stepping Mechanism.
3. Harvard Medical School Cytoskeleton Club Meeting, 03/01/2011.
Single Molecule Study of the Dynein Stepping Mechanism.
4. Molecular Life Sciences Interdisciplinary Graduate Program (IGP) Symposium, Columbus, OH, 05/17/2008. **(Invited Student Presentation)**
Ultrafast quenching of tryptophan fluorescence in proteins: Interresidue and intrahelical electron transfer.
5. Molecular Life Sciences Interdisciplinary Graduate Program (IGP) Symposium, Columbus, OH, 05/12/2007. **(Invited Student Presentation)**
Dissection of complex protein dynamics in human thioredoxin.
6. 59th International Symposium on Molecular Spectroscopy, Columbus, Ohio, 06/22/2004.
Femtosecond studies of *human* thioredoxin: Dissection of complex dynamics in the protein.

REFERENCES

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