

Guilong Cheng



Current Position: Senior Scientist in Pfizer Global Analytical Research and Development in Groton, CT

Education: Ph.D. in Analytical Chemistry (2007) from the University of Arizona

Non-scientific Interests: Photography, travel, and tennis

When I joined the group of Professor Vicki Wysocki in the Chemistry Department at the University of Arizona in 2002, I had a strong interest in studying protein dynamics and protein-protein interaction using mass spectrometric techniques. During my first year in graduate school, I met Professor Elizabeth Vierling in the Department of Biochemistry and Molecular Biophysics, who later became my co-advisor and collaborator. Intrigued by the unique structural properties of the small heat shock proteins studied in the Vierling group, I spent the next four years investigating these proteins and their interactions with heat-labile substrates. Remarkably, we found that the dynamic nature of the small heat shock protein remains unchanged even when complexed with the substrate protein, which is in direct contrast to the mode of interaction in the case of amyloid protein aggregates. Moreover, under heat stress, the substrate protein was found to be protected in a partially unfolded, refoldable state in the presence of the small heat shock protein. The details of our findings are reported in this publication.

Read Dr. Cheng's article entitled: Insights into Small Heat Shock Protein and Substrate Structure during Chaperone Action Derived from Hydrogen/Deuterium Exchange and Mass Spectrometry

<http://www.jbc.org/cgi/content/full/283/39/26634>