

Tomoya Sameshima



Current Position: Graduate student in the Laboratory of Bio-Analytical Chemistry in the Graduate School of Pharmaceutical Sciences at the University of Tokyo

Education: M.S. (2007) from the Graduate School of Pharmaceutical Sciences at the University of Tokyo in Japan

Non-scientific Interests: Learning about world history; cooking

I am a graduate student in the laboratory of Prof. Takashi Funatsu and am trained in fluorescence spectroscopic and microscopic techniques (FRET, FCS, TIRFM, etc.). As a Ph.D. candidate, I became interested in protein structure and function; therefore, I have been conducting research into the reaction mechanism of chaperonin GroEL and its cofactor GroES. It is generally believed that GroEL only forms an asymmetrical complex with GroES under physiological conditions. The notion, which is stated in many textbooks on biochemistry, is widely accepted. However, using FRET assay, I revealed that asymmetrical (bullet-shaped) and symmetrical (football-shaped) complexes coexist in the reaction cycle of GroEL. I believe that this discovery has a great impact on the understanding of GroEL-mediated protein folding.

Read Tomoya Sameshima's article entitled: Football- and Bullet-shaped GroEL-GroES Complexes Coexist During the Reaction Cycle

<http://www.jbc.org/cgi/content/full/283/35/23765>