

【Abstract of 2009 Grant – in – Aid for Scientific Research on Innovative Areas  
(Research in a proposed research area)】

<b>Title of project</b>	Integrative understanding of biological processes mediated by transient macromolecular complexes; New technology for visualizing physiologically metastable states
<b>Head Investigator Name</b>	SHIMADA Ichio, The University of Tokyo, Graduate School of Pharmaceutical Sciences., Professor
<b>Abstract of Research Project</b>	Structural biology, which provides three-dimensional structures of proteins, makes an important contribution to basic life sciences. In present structural biology, stable protein complexes or functional domains derived from the whole proteins are mainly investigated, simply due to the methodological limitations. In contrast, the protein complex formation that is not stable is frequently found and plays a crucial role in the biological processes. Therefore, the mission of this project is an establishment of the methodology that enables to visualize the transient macromolecular complexes under physiological conditions, in collaborations with researches in various scientific fields. The next-level mission is the application of the established methods to important events in biology to reveal the biological significances, along with the traditional methods of structural biology.
<b>Term of Project: 2009–2013</b>	