

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

Title of project	Target recognition and expression mechanism of intrinsically disordered protein
Head Investigator Name	SATO Mamoru, Yokohama City University, Graduate School of Nanobioscience, Professor
Abstract of Research Project	Intrinsically disordered proteins (IDPs) are characterized by lack of stable tertiary structure when the protein exists as an isolated polypeptide chain under physiological conditions. They adopt well-defined structures upon binding to their targets. IDPs are mostly found in eukaryotes and generally interact with several target molecules, thus playing important roles as protein hubs in intracellular protein networks. In this research project, scientists in the fields of structural biology, molecular biology and information biology cooperate together to detail the structural and functional mechanisms behind the behavior of IDPs—how they find, bind, fold with their partners, and carry out their functions. Our aim is to establish a new interdisciplinary research area that merges physics, chemistry and biology together.
Term of Project: 2009–2013	