

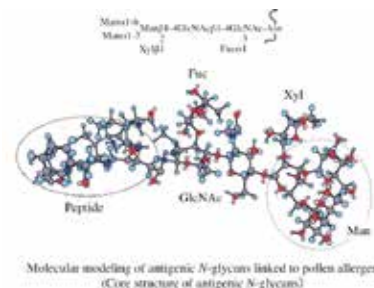


Assoc. Prof. MAEDA Megumi

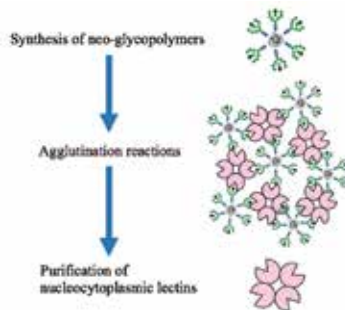


Analysis of the immunological activities of antigenic glycans of plant or insect origin

In many cases, allergens of plant or insect origin are glycoproteins to which antigenic glycans are linked and these allergens are often referred to as glycoallergens. We analyze the chemical structures and immunological activities of these plant glycoallergens. Recently, we have found that plant antigenic glycans suppress the production of Th2 type cytokine, IL-4, from Th2 immune cells. For the application of immunological activity of these plant glycans to the development of glycodrugs, we analyze their cellular immunological activities and synthesize neo-glycopolymers carrying the immunoactive glycans.



Application of a neo-glycopolymer carrying multivalent N-glycopeptides for identification of nucleocytoplasmic lectins



Recently, several novel plant lectins localized in the nucleus and/or cytoplasm of plant cells have been reported, and some of them have induced the gene expression under biotic and/or abiotic stress condition. The endogenous ligands and the physiological role of these carbohydrate-binding proteins have not been identified to date. We have synthesized glycopolymers carrying multivalent N-glycopeptides to identify and characterize the nucleocytoplasmic lectins.