

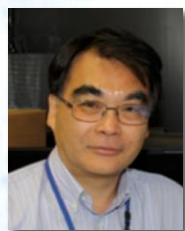


Conférence

Centre de recherche du CHU de Québec-Université Laval



Centre de recherche



Dr Jun Hirabayashi

National Institute of Advanced Industrial Science and Technology, Ibaraki, Japan.

Invité par : Dre Sachiko Sato

Date : Mardi 21 mars 2017

Heure : 10h00

Lieu : Local E00-320, Site CHUL



«Development of a novel technology, lectin microarray, for high-throughput glycan analysis and its diverse applications»

Glycans are called the third class of biopolymers, in analogy to nucleic acids and proteins. Although it is a fact that all kinds of cells of all kinds of organisms including humans and bacteria are covered by a dense layer of carbohydrates, often called “glycocalix”, elucidation of glycan functions has long been hampered simply by the difficulty in analyzing their structures. On the other hand, a series of naturally occurring carbohydrate-binding proteins, i.e., “lectins” (*legre* meaning select or sort in Latin) have been shown to work for discrimination and separation of such complex features of glycans/glycoconjugates, hereby they are regarded as “decipherers of glycocodes”. It is also true that many plant lectins can work as useful tools to investigate glycan structures of animal cells and their secreted proteins. Recent analysis revealed that the number of protein families (i.e., in terms of Pfam) that include members having carbohydrate-binding activity (not only classic lectins but also lectin domains lurking in extensive glycan-related enzymes) exceeds 50. Lectin microarray provides a novel platform with a simplified experimental procedure, which does not require glycan liberation. It is now being applied to cancer biomarker investigation, stem cell qualification and biologics inspection. For this realization, however, development of a precedent technology, i.e., reinforced frontal affinity chromatography was necessary. How the lectin microarray was developed will be described as well as its diverse applications.

Note :

Prière d’aviser vos étudiants gradués et stagiaires postdoctoraux afin d’avoir la participation de tous.

Visioconférence

Non disponible