Date: July 26th (Fri), 2013
Venue: Lecture Hall

Hokkaido University
Leading Graduate School
Veterinary Science for One Health

# The 5th Leading Seminar

## Development of basic tools for glycoscience and their application to cancer diagnosis

### -A 10-year strategy of the Research Center for Medical Glycoscience of AIST -


## Lecturer: Dr. Hisashi Narimatsu

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Abstract

We proposed a 10-year strategy for the development of a new scientific field, glycoscience. Initially, we developed basic technological tools to help scientists and engineers entering this field. As the first project, we exhaustively discovered glycogenes and carried out their functional analyses. The fruits of this work led to several follow-on projects: (1) technology for enzyme synthesis of glycans, (2) technology for structural analysis of glycans, and (3) analysis of biological functions of glycans. The basic tools, developed in the first 5 years of our 10-year strategy, were applied to the development of more useful products, e.g., disease biomarkers, particularly for cancer diagnosis. We are also close to achieving the practical use of a liver fibrosis marker and a cholangiocarcinoma marker for diagnosis. Moreover, we are pursuing development of biomarkers for diagnosis of other cancers. The successful research results for these 10 years have now been transferred to the world, in particular, Asian countries, and yielded collaborative research contracts with domestic and overseas research groups.



Keywords: Glycan, N-glycan, O-glycan, glycosyltransferase, glycogene, lectin, lectin array, mass-spectrometry, IGOT, biomarker, liver fibrosis, liver cancer, cholangiocarcinoma


【Schedule】

**15:00-17:00 Lecture at Lecture Hall**

**17:10- Discussion at Meeting Room**

Organizer : Lab. of Microbiology, D2, Takahiro Hiono