

**Program: “International Symposium on Glyco-lipidologue”**

**1/21 (Tue)**

**1. Introduction of “Glycolipidologue”**

**9:30-9:40 What is “glycolipidologue”?**

Tadashi Suzuki (RIKEN)

**2. Special Session NGLY1-deficiency: surprising link between glycan and lipid metabolism**

**9:40-10:00 The race to cure NGLY1-deficiency**

Matt Wilsey/Kevin Lee (Grace Science Foundation (USA))

**10:00-10:25 Pathophysiology and therapeutics of NGLY1 deficiency using patient-derived iPSC**

Takayuki Kamei (T-CiRA)

**10:25-10:50 Animal models for NGLY1 deficiency**

Makoto Asahina (T-CiRA)

**10:50-11:10 Break**

**11:10-11:35 Functional genetic interaction between Ngly1 and a lectin-type ubiquitin ligase in mice**

Yukiko Yoshida (Tokyo Metro. Inst. Med. Sci.)

**11:35-11:55 Genetic Network Analysis of the NGLY1 Pathway**

Charles Boone (RIKEN/Toronto Univ. (Canada))

**11:55-12:25 Mammalian glycans and glycan-modifying enzymes in immune disease**

Nan Yan (UT Southwestern (USA))

**12:25-14:00 Lunch**

**14:00-15:40 Poster Session**

**3. Clarification of functions of glycans/lipids**

**15:40-16:05 Enzyme promiscuity in deciphering novel glycol- & lipid functions**

Yoshio Hirabayashi (RIKEN)

**16:05-16:30 Lipid-based mechanisms for axon guidance**

Hiroyuki Kamiguchi (RIKEN)

**16:30-17:15 Glycosylphosphatidylinositol: glycan and phospholipid in one molecule**

Taroh Kinoshita (Osaka Univ.) (Special Lecture)

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#### **4. Mass Spectrometry, database and beyond**

**10:00-10:25 LipidBank database**

Masanori Arita (RIKEN/Natl. Inst. Genet.)

**10:25-10:50 The GlyCosmos Portal for integrating glycoconjugate data**

Kiyoko Aoki-Kinoshita (Soka Univ.)

**10:50-11:10 Break**

**11:10-11:40 Mass spectrometry for comprehensive glycomics in biomedical research**

Kazuhiro Aoki (CCRC, Univ. Georgia (USA))

**11:40-12:05 Advanced lipidomics to unveil the potential link between lipid metabolism and biological phenotypes**

Makoto Arita (RIKEN/Keio Univ.)

**12:05-13:30 Lunch**

#### **5. Innovative tool/methods for glyco-lipidologues**

**13:30-13:55 Therapeutic in vivo synthetic chemistry: Metal-catalyzed cell surface glycosylation**

Katsunori Tanaka (RIKEN/Tokyo Inst. Technol.)

**13:55-14:20 Lipid regulation of membrane receptor proteins**

Yasushi Sako (RIKEN)

**14:20-14:50 Imaging cholesterol**

Toshihide Kobayashi (Univ. Strasbourg (France))

**14:50-15:10 Break**

**15:10-15:35 Molecular dynamics of membrane protein dynamics and stability**

Yuji Sugita (RIKEN)

**15:35-16:05 Toward glycan binding site prediction**

Wonpil Im (LeHigh Univ. (USA))

**16:05-16:35 NMR analysis of glycolipid in aqueous solution**

Yoshiki Yamaguchi (Tohoku Med. Pharm. Univ.)

\*This Symposium is a part of the RIKEN Symposium Series.