

SEMINAR ANNOUNCEMENT

We would like to invite you to attend this seminar hosted by Prof. Wanjin Hong:

Date: 17 December 2014, Wednesday

Time: 11:00AM – 12:00PM

Venue: Level 3, IMCB Seminar Room 3-46, Proteos, Biopolis

Speaker: Prof. Motonari Uesugi, Institutes for Integrated Cell-Material Sciences (WPI-iCeMS) and for Chemical Research (ICR), Kyoto University, Japan

Title: Small Molecule Tools for Cell Biology and Cell Therapy

In human history, bioactive small molecules have had three primary uses: as medicines, agrochemicals, and biological tools. Among them, what our laboratory has done in the past was the discovery and use of biological tools. In addition to tool discovery, our laboratory has recently become interested in exploring another application of small molecules: small molecule tools for cell therapy. Although small molecule drugs will continue to be important, cell therapy will be a powerful approach to curing difficult diseases that small molecule drugs are unable to handle. However, there are a number of potential problems in bringing cell therapy technologies to the clinic, including high cost, potential contamination, low stability, and tumorigenesis. Stable, completely defined small molecules, which are usually amenable to cost-effective mass production, may be able to help the clinical application of cell therapy. This presentation provides a quick overview of the recent results we obtained regarding several unique molecules. These molecules were originally discovered by phenotypic cell-based screenings of our in-house chemical libraries. Molecular understanding of their mechanisms of actions led to the design of small molecule tools that can be used both for basic cell biology research and for cell therapy applications.

Biography:

Motonari Uesugi is a Professor of The Institute for Integrated Cell-Material Sciences and Institute for Chemical Research, Kyoto University. After completing postdoctoral training in Harvard Chemistry Department, Dr. Uesugi started his independent career in Baylor College of Medicine, Houston, where he has established an interdisciplinary laboratory in the area of chemical biology. He was tenured in Baylor in 2005, and moved to Kyoto University as a full professor in 2005. He is a recipient of Gold Medal Award, Tokyo TechnoForum 21 (2006), The Pharmaceutical Society of Japan Award for Divisional Scientific Promotions (2011) and German Innovation Award Gottfried Wagener Prize (2011). Dr. Uesugi and his co-workers aim to gain a fundamental understanding of biological events through the study of small molecules. He provided the first edX course from Japan, "The Chemistry of Life," to create a new educational path for millions of learners worldwide.

ALL ARE WELCOME (No registration required)