

特別講演会

Defining natural boundaries of lipidomic variations



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日時: 10月8日(水) 16:00-17:30

会場: 北海道大学薬学部セミナー室

主催: 北海道大学薬学研究院, 日本薬学会北海道支部

共催: 北海道大学未来創薬・医療イノベーション拠点形成

Once viewed simply as a reservoir for carbon storage, lipids are no longer cast as bystanders in the drama of biological systems. The emerging field of lipidomics is driven by technology, most notably mass spectrometry, but also by complementary approaches for the detection and characterization of lipids and their biosynthetic enzymes in living cells (Wenk 2010 *Cell* 143(6):888-95).

Our recent results show extensive diversity in circadian regulation of plasma lipids and evidence for different circadian metabolic phenotypes in humans (Chua et al 2013 *Proc Natl Acad Sci U.S.A.* 110(35):14468-73). I will also introduce a strategy for capture of phospho-monoester lipids. Using this enhanced workflow we identified novel forms of sphingosine-1-phosphates, in tissue from human, mouse and fruit fly, respectively. (Narayanaswamy et al 2014, *Anal Chem.* 2014 Mar 18;86(6):3043-7).

Understanding better the fundamentals of natural variation in lipidomes as well as specific recognition of individual lipid species are the scientific aims of SLING, the Singapore Lipidomics Incubator. This centre is a global magnet for collaborating parties in lipidomics – from academia and industry – delivering new technologies and intellectual capital. SLING organizes the international Singapore Lipid Symposium (ISLS), a major symposium in lipidomic research in Asia Pacific and ‘i c lipid’, an intensive immersion course in mass spectrometry based lipidomics (<http://www.lipidprofiles.com/index.php?id=139>).

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