

lipidomics of organelles, cells and tissue – a novel and independent approach to quantitative genomics and proteomics

It is well known that biological membranes are composed of a bewildering variety of different lipid species but it is not clear why Nature has created so many different forms. Powerful new methods are rapidly advancing the field of membrane lipid research, thus complementing the broad range of information about biological systems that can be obtained from genomic and proteomic approaches. In particular, mass spectrometry for systems level scale analysis of lipids (lipidomics) makes this field a most promising area of biomedical research. Electrospray ionization mass spectrometry allows for the qualitative and quantitative measurement of cellular lipidomes, including signaling lipids such as the phosphoinositides which can be directly measured from largely unprocessed and very small cell and tissue samples. These methodologies are not only an important technical advancement for the investigation of membrane lipid metabolism in a variety of physiological conditions, but also represent a powerful tool for the diagnosis of human diseases.

by

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Date: 16 April 2004, Fri

Time: 4 pm

Venue: LT 20

Host: Dr Low Boon Chuan

All are welcome

