

**Preface****MMS Special Issue "Lipidomics"**Guest Editor: Makoto Arita<sup>1, 2, 3</sup>

Lipids are biomolecules that play a variety of roles as membrane components, energy sources, signaling molecules and their precursors. Since lipids are extremely diverse molecules, the precise determination of different molecular species of lipid is important for understanding their functions in physiology and disease, and for discovering novel bioactive lipids that may have therapeutic benefits. Recent advances on liquid chromatography-mass spectrometry (LC-MS)-based lipidomics technology enabled the detailed study of metabolism, distribution and dynamics of individual class of lipids. In general, dysregulated lipid metabolism is associated with many diseases such as obesity, atherosclerosis, stroke, hypertension and diabetes, thus there is a good possibility that cutting-edge lipidomics technology will lead to the discovery of new seeds for drug discovery and medical applications such as early diagnosis and treatment. This special issue focus on recent advances on lipidomics technology and its potential application to biology and medicine.

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