

## Comprehensive Analysis of Lipid Mediator Profiles by LC-MS

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Arachidonic acid cascade lipid mediators such as prostaglandins and leukotrienes originate from arachidonic acid of membrane phospholipid origin. The profiles of lipid mediators depend on the metabolic pathway, where the activities of various lipid mediator producing enzymes determine the pathway status. We aimed to provide a novel tool for the comprehensive understanding of arachidonic acid cascade lipid mediators especially in diseases by means of newly developed LC-MS quantitative profiling strategy. Since membrane phospholipid metabolism can affect lipid mediator production, we also developed a differential LC-MS strategy for phospholipids, which serves as a tool for understanding the linkage between phospholipid metabolisms and lipid mediator profiles. We will introduce such an approach in detail, including the concept, methodology and applications.