

## **Brain Phospholipid Profiling in a Mouse Model of Anxiety Disorder**

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Nowadays lipidomics is a rapidly expanding research field thanks to the important biomolecular attributions of the lipids. Glycerophospholipids (PLs) are the major component of biological membranes and play a key role in a variety of biological processes including membrane trafficking and signal transduction.

Here we introduce an analytical method for comprehensive phospholipid (PL) analysis of biological samples using hydrophilic-interaction liquid chromatography coupled with electrospray ionization-mass spectrometry (LC-MS). Chromatographic and mass spectrometric parameters were optimized to enable a separation of main PL classes. The developed LC-MS method was applied for the characterization of mouse brain PLs, and resulted in the identification of PL species showing significant differences between in high anxiety-related behavioral phenotype (AX) and low anxiety-related behavioral phenotype (nAX) mouse model.