SUPPLEMENTARY INFORMATION:

Cerebrospinal fluid lipidomics for biomarkers of Alzheimer's disease

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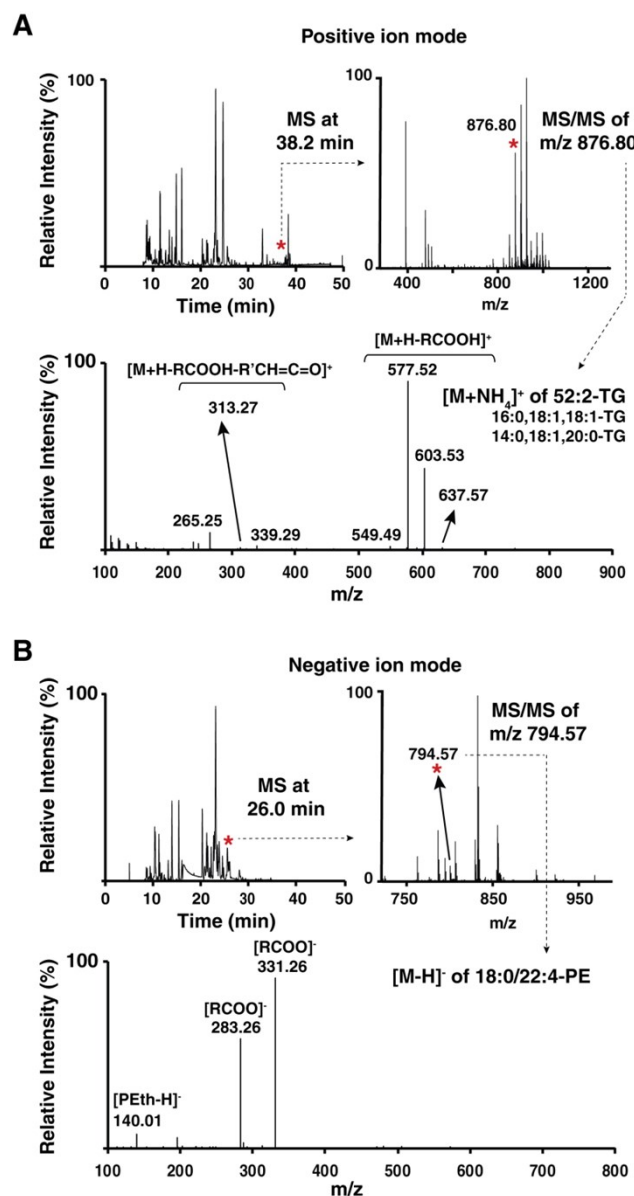
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Fig. S1. Base peak chromatograms and MS/MS spectra using LC-MS/MS. (A) A peak with m/z of 876.80 in positive ion mode at 38.2 min of a control sample was identified as 52:2-triacylglycerol (TG) detected in ammonium adduct with multiple isomers. R represents the fatty acid. (B) A peak with m/z of 794.57 at 26 min in negative ion mode of a control sample was identified as 18:0/22:4-phosphatidylethanolamine (PE). Carboxylate anions ([RCOO]⁻) correspond to the structures of two fatty acyl chains and deprotonated phosphoethanolamine ([PEth-H]⁻) confirms the head group of PE.
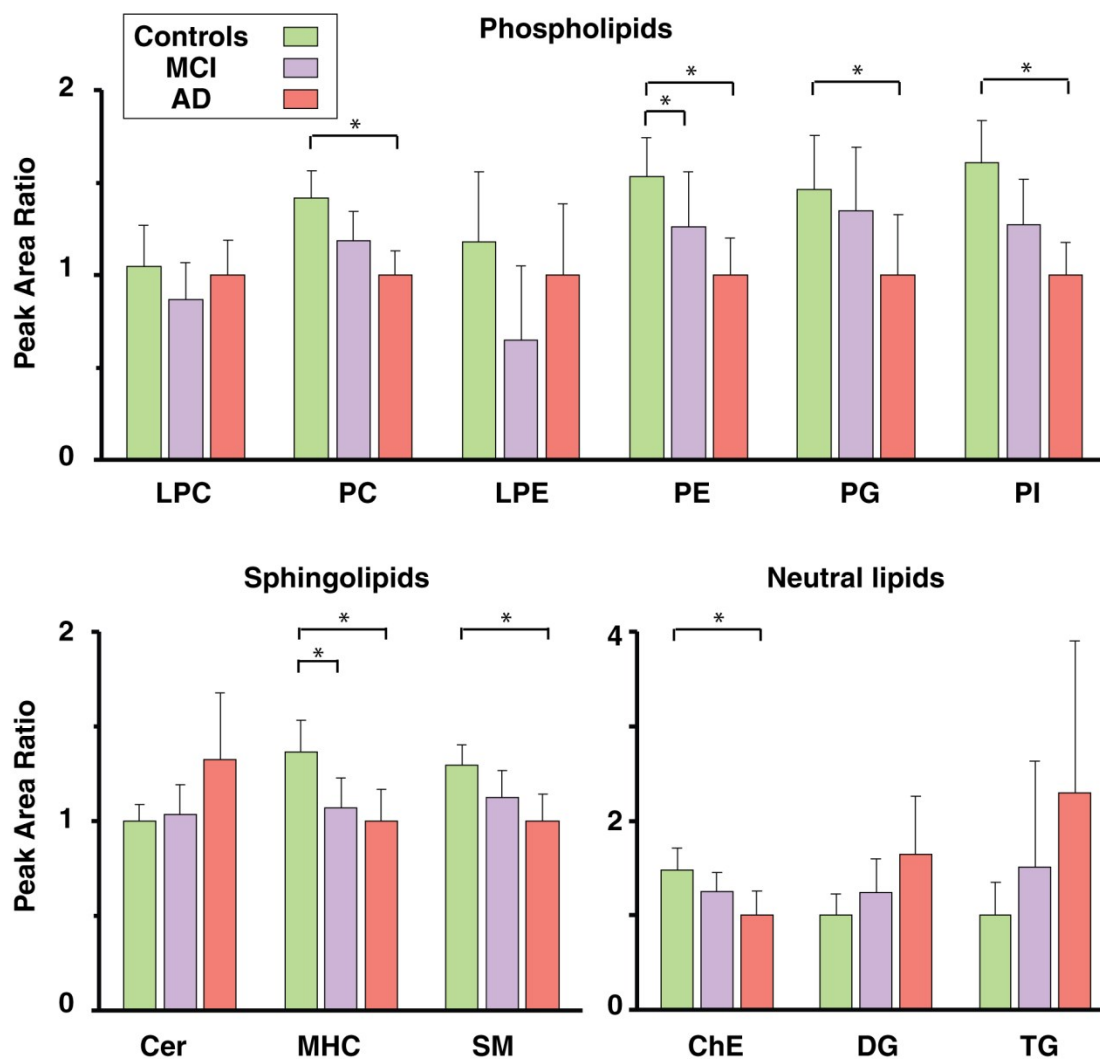
Fig. S2. Relative peak area of CSF lipids in MCI and AD. Bar graphs representing relative changes of each class of lipids in mild cognitive impairment (MCI, purple) and Alzheimer's disease (AD, red) in respect to controls (green) are illustrated. Error bars are indicated in each group. Classes that showed significant difference ($P<.05$) in MCI or AD compared to controls are marked with asterisk.

LPC, lysophosphatidylcholine; PC, phosphatidylcholine; LPE, lysophosphatidylethanolamine; PE, phosphatidylethanolamine; PG, phosphatidylglycerol; PI, phosphatidylinositol; Cer, ceramide; MHC, monohexosylceramides; SM, sphingomyelin; ChE, cholesteryl ester; DG, diacylglycerol; TG, triacylglycerol.