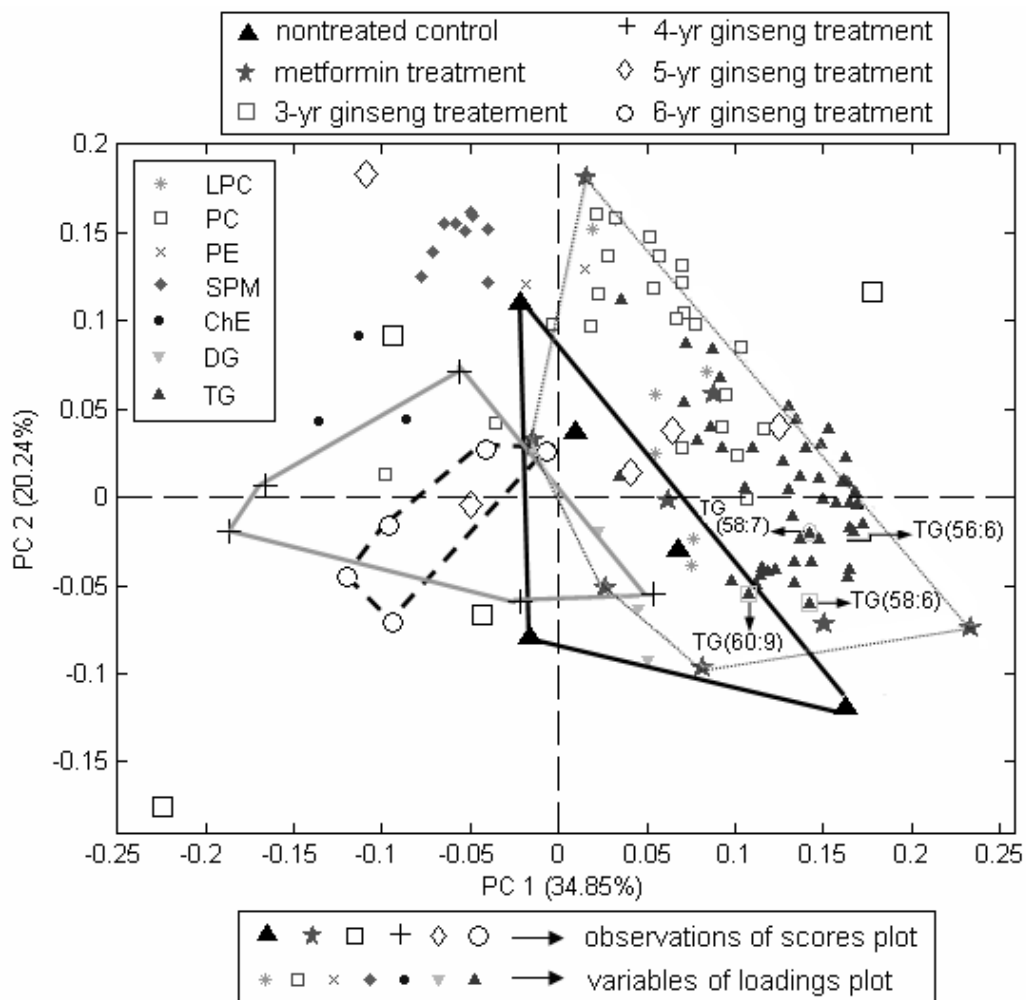


1 Supporting information

2 **Table S1** Detailed information of four lipid internal standards and quantified strategies used in the LC-MS lipidomics data analysis

Lipid internal standard	protonated ion	ammoniated ion	concentration			Quantified lipids	%RSD in QC
	$[M + H]^+$	$[M + NH_4]^+$	stock (mg/ml)	working ($\mu\text{g/ml}$)	final ($\mu\text{g/ml}$)		
LPC (19:0)	538.3881		1	200	20	LPC	9.8
PE (30:0)	664.4925		0.75	200	20	PE	14.2
PC (34:0)	762.6023		2.2	1000	100	PC, SPM	11.4
TG (51:0)		866.8211	2.5	800	80	DG, ChE, TG	13.5

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4

5 **Figure S1** Score and loading biplots of PCA of plasma lipidomics data from all study samples to
6 reveal general clusters of rats of nontreatment and receiving different treatments (scores) and to
7 examine which lipids contributed most to the clusters (loadings). Symbols of '▲' connected with
8 black bold solid lines stand for nontreated control group, symbols of '★' connected with square dot
9 lines stand for metformin treated group, symbols of '+' connected with gray bold solid lines stand for
10 4 yr old ginseng treated group, symbols of '○' connected with black bold dashed lines stand for 6 yr
11 old ginseng treated group. Symbols of '*', '□', '×', '◇', '•', '▼' and '▲' in smaller size represent lipid
12 species of LPC, PC, PE, SPM, ChE, DG and TG, respectively.