

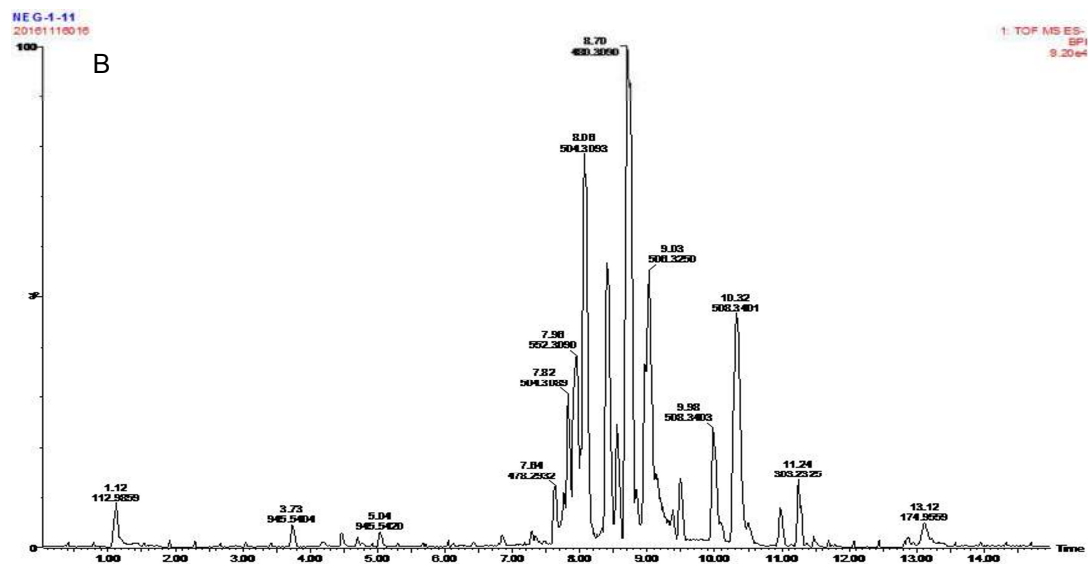
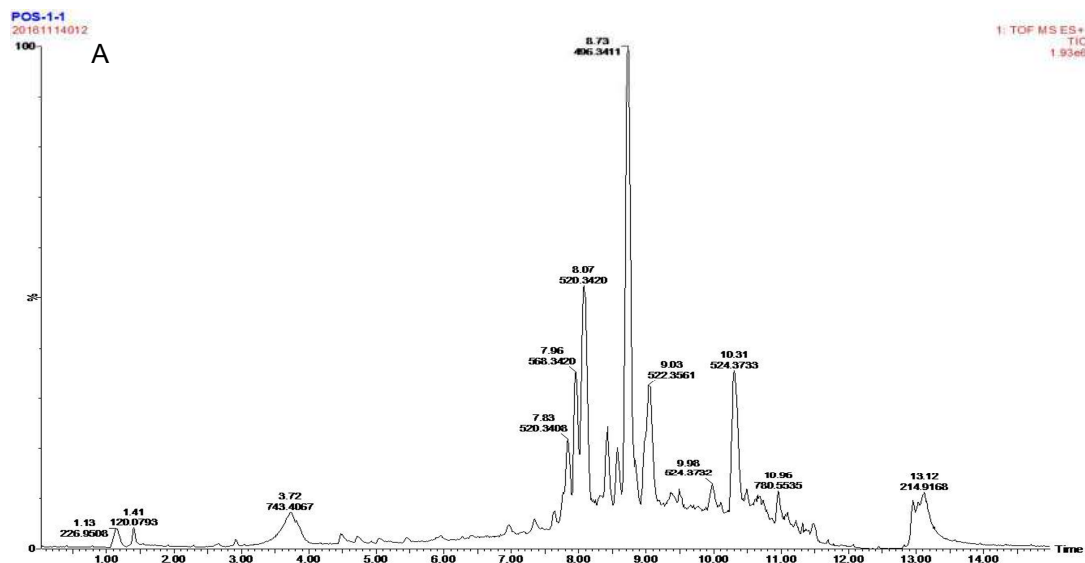
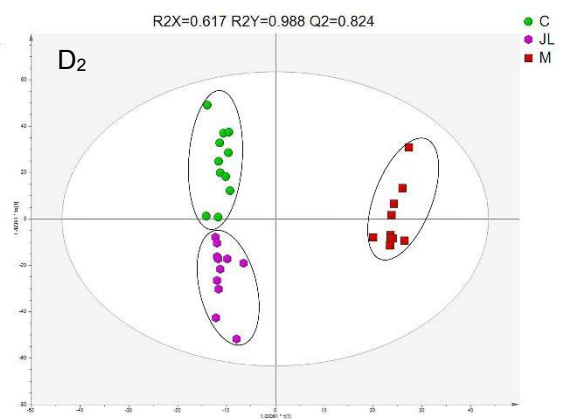
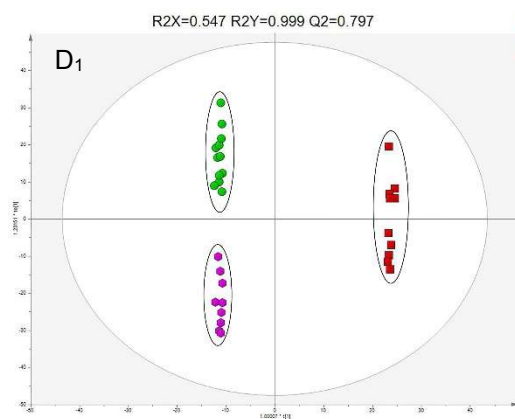
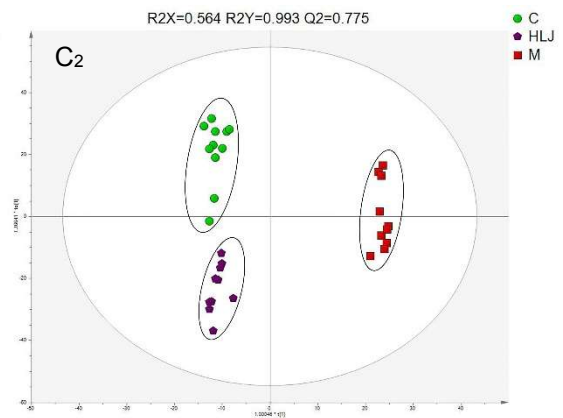
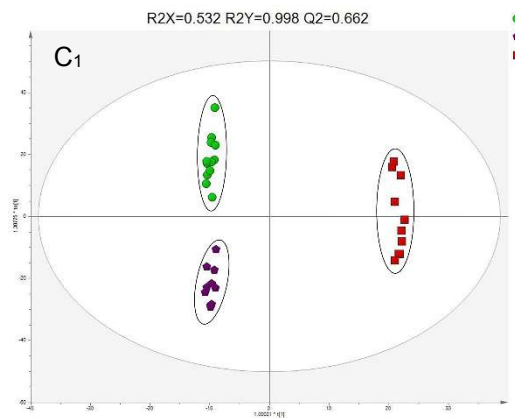
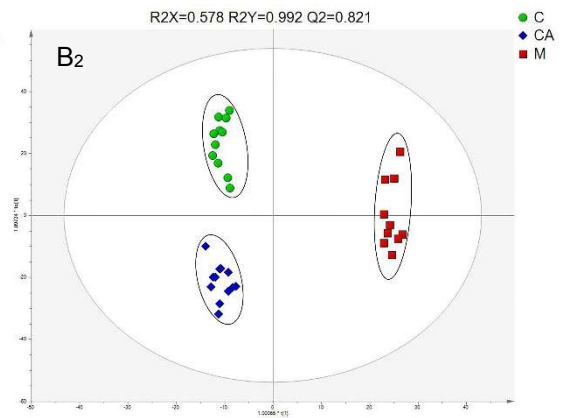
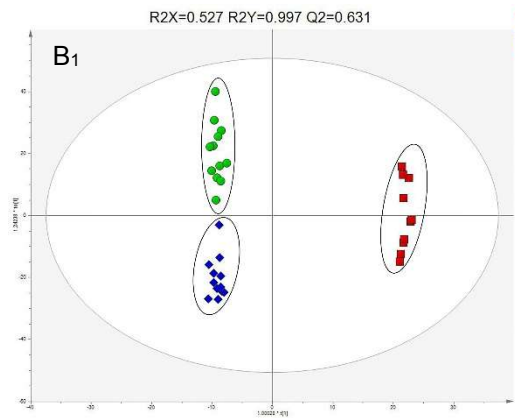
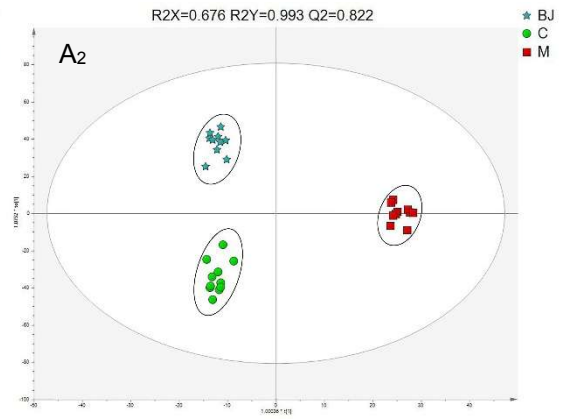
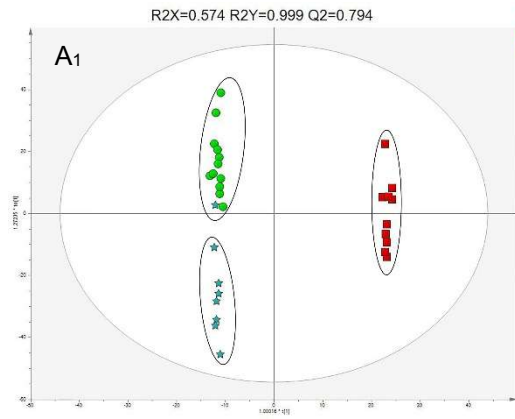


Figure S1. Typical total ion chromatograms of mouse serum sample analyzed by UPLC/Q-TOF-MS. (A) positive ESI mode and (B) negative ESI mode.



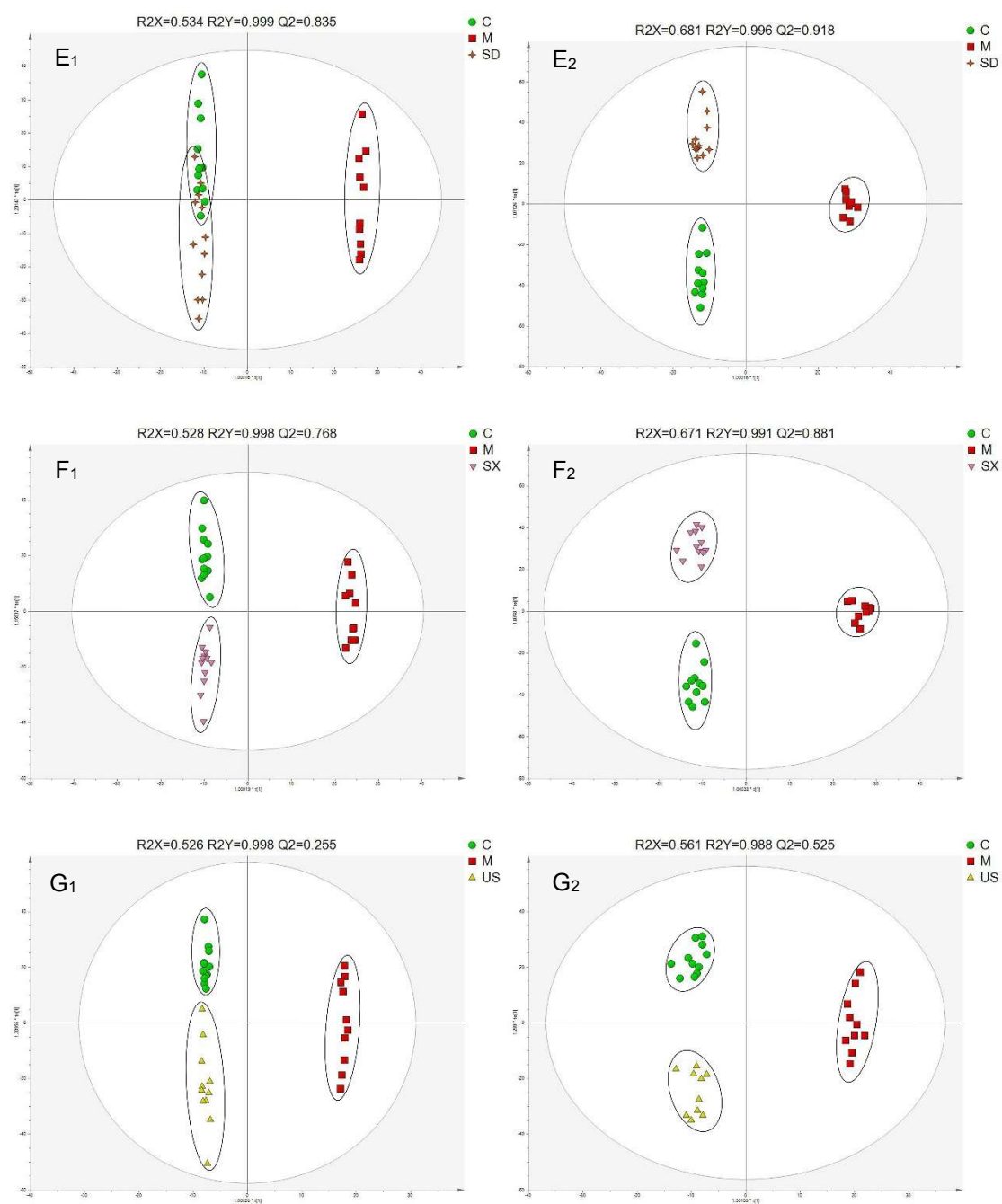


Figure S2. OPLS-DA score plots of three groups of serum metabolomes. ESI⁺ mode: (A₁) to (G₁); ESI⁻ mode: (A₂) to (G₂).

Table S1 The annotated metabolites and their fragment ions detected by UPLC-Q/TOF-MS

analysis

RT_m/z	Identity	Ion Mode	Fragment ions detected
7.30_468.3084	LysoPC(14:0)	[M+H] ⁺	450.2968; 184.0736; 104.1070
8.65_476.2746	LysoPE(16:0)	[M+Na] ⁺	458.7196; 415.2127; 335.0718
10.80_510.3913	LysoPC(O-18:0)	[M+H] ⁺	492.2522; 184.0724
7.84_520.3404	LysoPC(18:2)	[M+H] ⁺	502.3316; 184.0733; 104.1064
9.05_522.3568	LysoPC(18:1)	[M+H] ⁺	504.3450; 184.0727; 104.1071
8.01_524.2754	LysoPE(20:4/0:0)	[M+Na] ⁺	465.1195; 262.1111; 244.6862
7.49_540.3062	LysoPC(18:3)	[M+Na] ⁺	184.0732; 104.1062
7.76_548.2756	LysoPE(22:6/0:0)	[M+Na] ⁺	184.0732; 104.1062
8.34_568.3380	LysoPC(20:3)	[M+Na] ⁺	491.2267; 184.0722; 104.1063
9.39_570.3533	LysoPC(22:5)	[M+H] ⁺	184.0721; 104.1059
7.22_282.2789	Oleamide	[M+H] ⁺	59.0746; 72.9394
8.16_301.2158	Alpha-Linolenic acid	[M+H] ⁺	124.9979; 148.5315; 162.9452
8.84_303.2316	Eicosapentaenoic acid	[M+H] ⁺	285.2206; 258.6465
8.84_285.2208	Retinal	[M+H] ⁺	257.1878
10.32_283.2636	Stearic acid	[M-H] ⁻	265.1415; 224.0720; 196.0360; 168.0441
8.85_301.2167	Eicosapentaenoic acid	[M-H] ⁻	257.2279
8.02_303.2323	Cis-8,11,14,17-Eicosatetraenoic acid	[M-H] ⁻	259.2415
1.22_124.0071	Taurine	[M-H] ⁻	106.9849; 60.7649
8.74_255.2324	Palmitic acid	[M-H] ⁻	237.2283; 211.7911
7.30_227.2011	Myristic acid	[M-H] ⁻	182.9917; 168.9812; 154.1260

Literatures for fragment ions identified

1. Xu X.B.; Gao B.B.; Guan Q.J.; Zhang D.D.; Ye X.H.; Zhou L.; Tong G.X.; Li H.; Zhang L.; Tian J.K.; Huang J.Y. Metabolomic profile for the early detection of coronary artery disease by using UPLC-QTOF/MS. *J Pharm Biomed Anal* **2016**, 129:34-42.
2. Ding M.J.; Zong Z.M.; Zong Y.; Ou-Yang X.D.; Huang Y.G.; Zhou L.; Wang F.; Cao J.P.; Wei X.Y. Isolation and identification of fatty acid amides from shengli coal. *Energy Fuels* **2008**, 22(4):2419-2421.
3. Du L.N. Research of metabolic characteristic of Respiratory syncytial virus pneumonia with syndrome of obstruction of the lung by phlegm heat based on UPLC-MS technology and evaluation of JinXin Oral Liquid [D]. Nanjing University of Chinese Medicine, 2015.
4. Jin Z.N. The hypolipidaemic effect of *Curcuma longa* L. and the full characterization and separation of curcuminoids based on a combinatorial LC-MS/MS technologies [D]. Huazhong University of Science and Technology, 2015.