

Supporting Information

Analysis of Metabolic Characteristics of Epristeride in Zebrafish Based on LC-Q-TOF MS and Its Potential Applications in Doping Control

Yirang Wang^{1†}, Zhongquan Li^{1†}, Jiahui Cheng^{1†}, Tingyuan Zheng^{1†}, Peijie Chen^{1,2}, Xiaojun Deng¹, Peichao Zhang^{3*}, Bing Liu^{1*}

¹Research Institute for Doping Control, Shanghai University of Sport, Shanghai 200438, China

²School of Exercise and Health, Shanghai University of Sport, Shanghai 200438, China

³The Center for Basic Research and Innovation of Medicine and Pharmacy (MOE), School of Pharmacy, Second Military Medical University (Naval Medical University), Shanghai, P. R. China.

* Corresponding Author: pczhang@smmu.edu.cn; liubing2019@sus.edu.cn

Table S1. MS annotation details for differential metabolites.

Metabolites	Average Rt(min)	Average m/z	Adduct type	MS/MS fragments		
Hexanoyl-L-carnitine	7.99	260.1852	[M+H] ⁺	201.1124	144.1021	85.0285
11-HDoHE	15.13	343.2238	[M-H] ⁻	325.2181	281.2285	141.0559
Decanoylcarnitine	13.19	316.2477	[M+H] ⁺	299.2686	239.1642	173.1543
Lysophosphatidylcholine (18:2)	16.33	520.3397	[M+H] ⁺	502.3294	184.0736	137.1341
Phenylethanolamine	6.08	120.0804	[M-H ₂ O+H] ⁺	118.0649	103.0541	91.0542
Guanosine	5.66	284.0986	[M+H] ⁺	152.0566	135.0298	97.0303
N,N-Dimethyldecylamine oxide	12.53	202.2159	[M+H] ⁺	184.2056	85.0995	62.0595
Taurine	2.39	126.0218	[M+H] ⁺	108.0116	80.9632	64.9693
Lysophosphatidylcholine (18:1)	17.14	522.3552	[M+H] ⁺	504.3449	184.0734	104.1068
Xanthine	5.46	153.0403	[M+H] ⁺	153.0408	136.0139	110.0349
4-Methyl-5-thiazoleethanol	6.53	144.0474	[M+H] ⁺	126.0374	113.0295	70.9952
Phenylalanine	16.85	400.3413	[M+H] ⁺	341.2688	329.366	85.0287
Vitamin B5 (Pantothenic acid)	6.04	220.1178	[M+H] ⁺	202.1074	184.097	90.0551
Linoleic acid (C18:2)	14.85	281.2469	[M+H] ⁺	263.2363	245.2255	69.0694
Lauroylcarnitine	14.56	344.2792	[M+H] ⁺	285.2057	183.1738	85.0281
Eudesmin	13.37	409.1616	[M+Na] ⁺	392.3412	289.1014	/
Palmitoylcarnitine	16.85	400.3413	[M+H] ⁺	341.2688	144.1014	85.0283
Guanine	5.57	152.0564	[M+H] ⁺	135.0302	110.0349	107.0347
Inosine	5.63	269.0881	[M+H] ⁺	179.0569	137.0464	119.0352
Tetradecanoylcarnitine	15.64	372.3104	[M+H] ⁺	356.0702	205.1224	129.0541

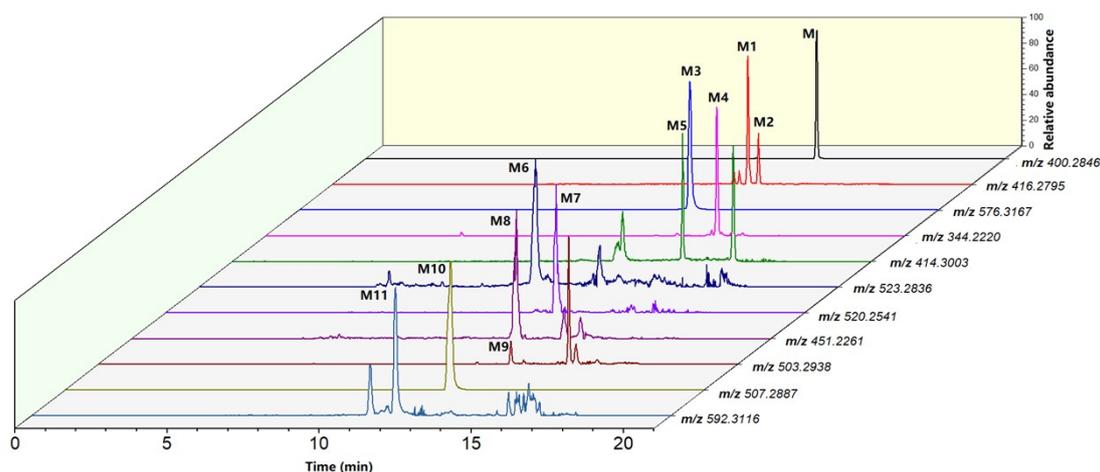
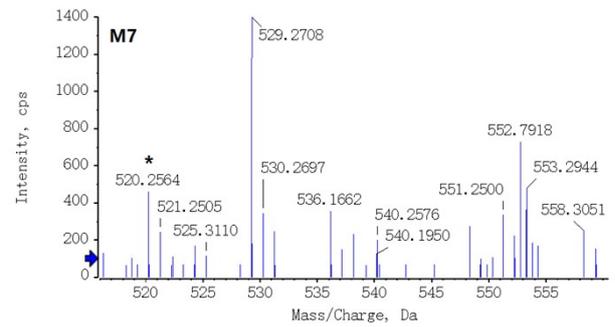
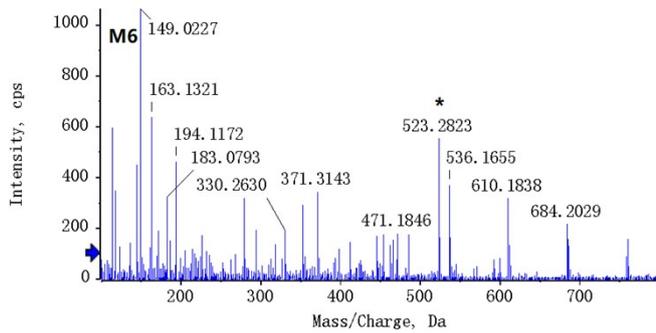
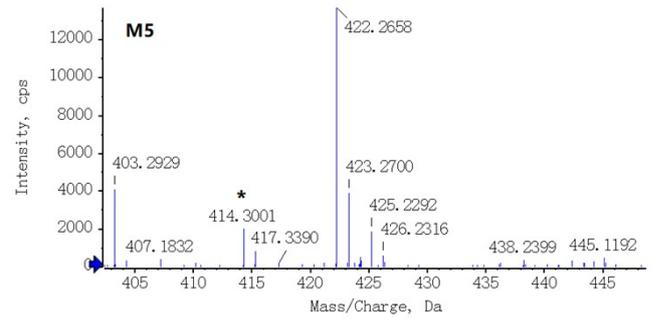
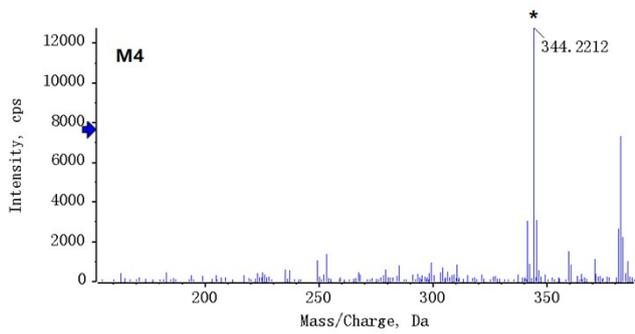
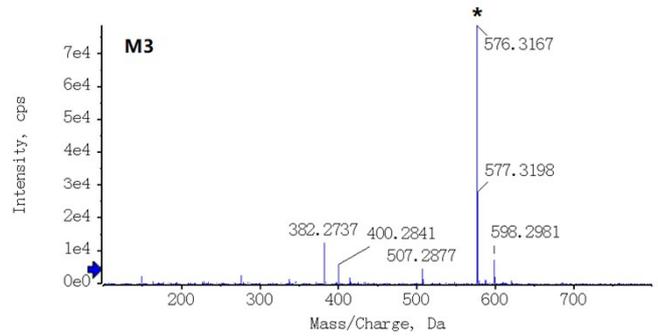
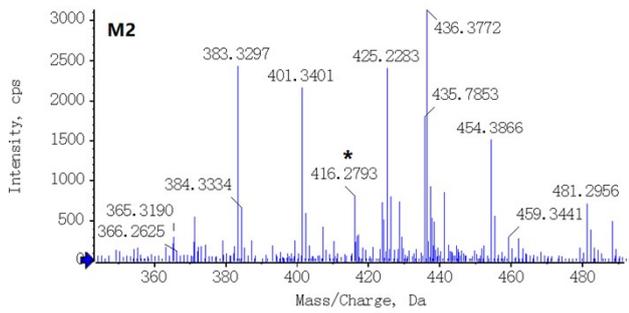
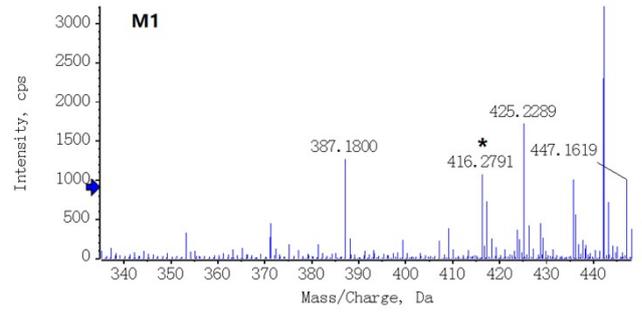
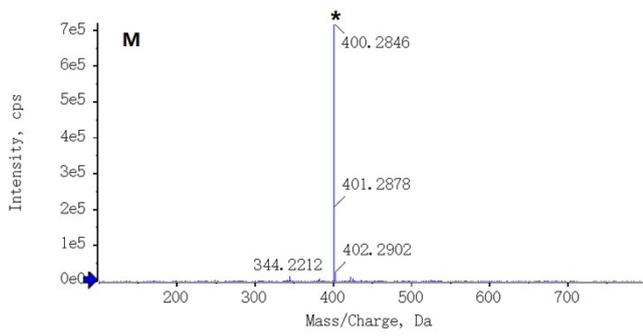


Figure S1. Extracted ion chromatograms of episteride and its proposed metabolites in positive ESI mode.



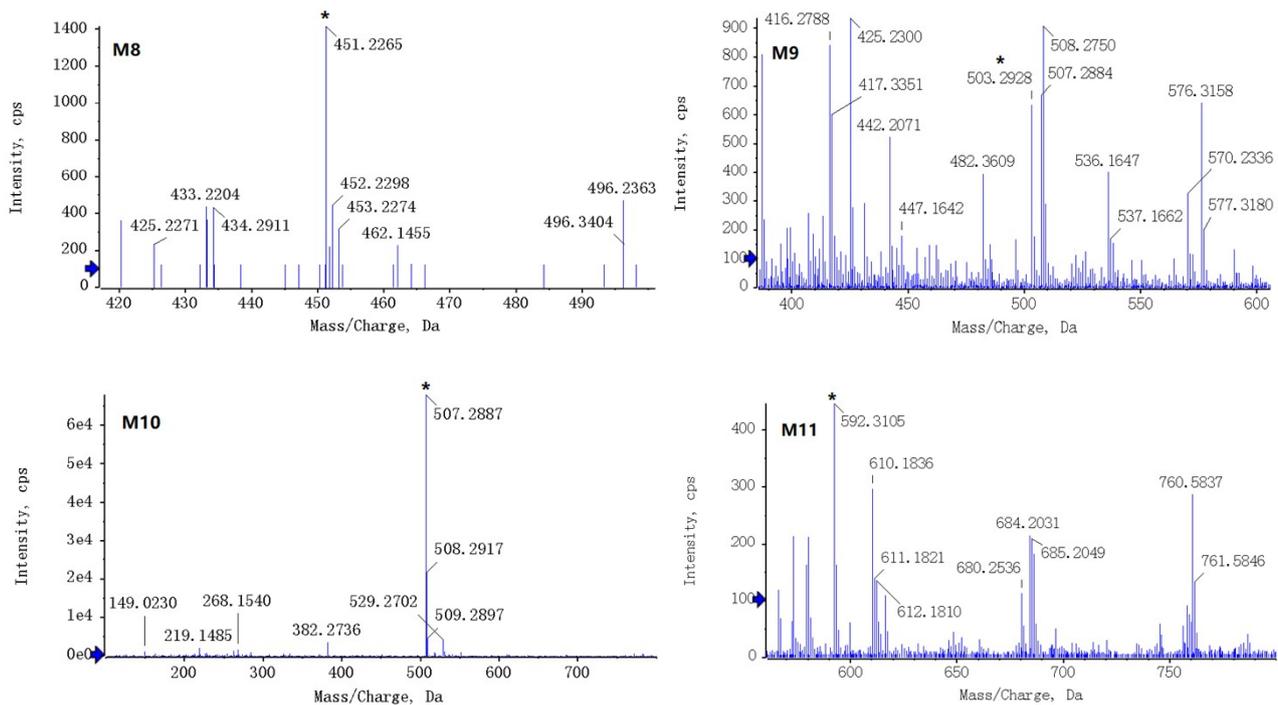


Figure S2. Full MS/MS spectra of epristeride and its proposed metabolites in positive ESI mode.

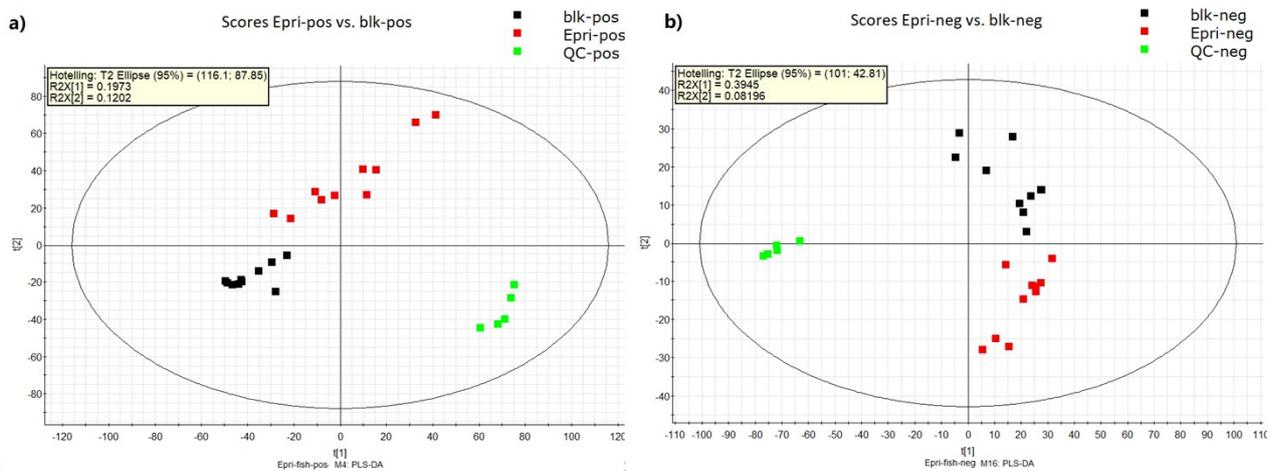


Figure S3. Score plots for the ESI+ (a) and ESI- (b) datasets including study samples, pooled QC injections, and solvent blanks.