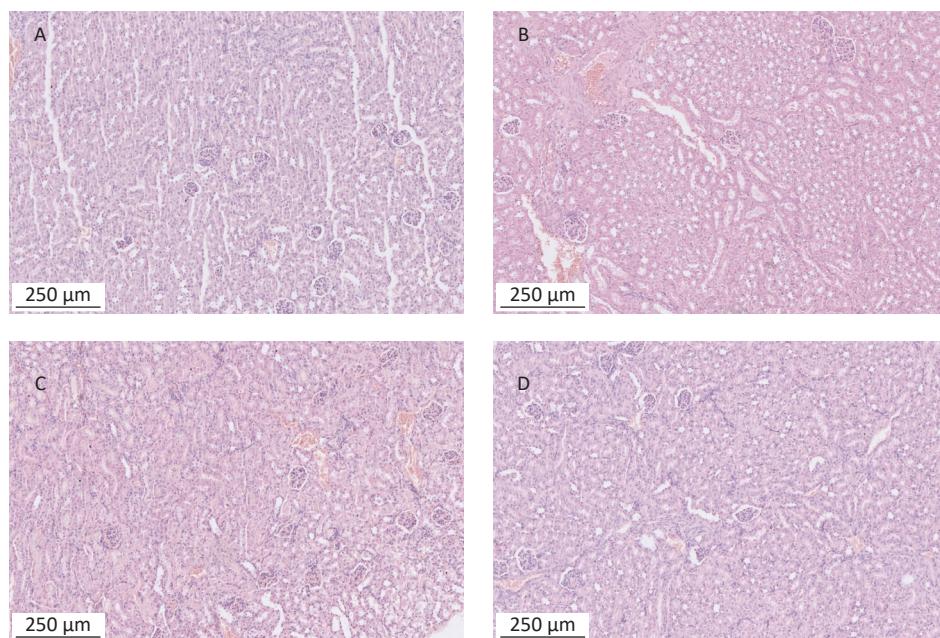
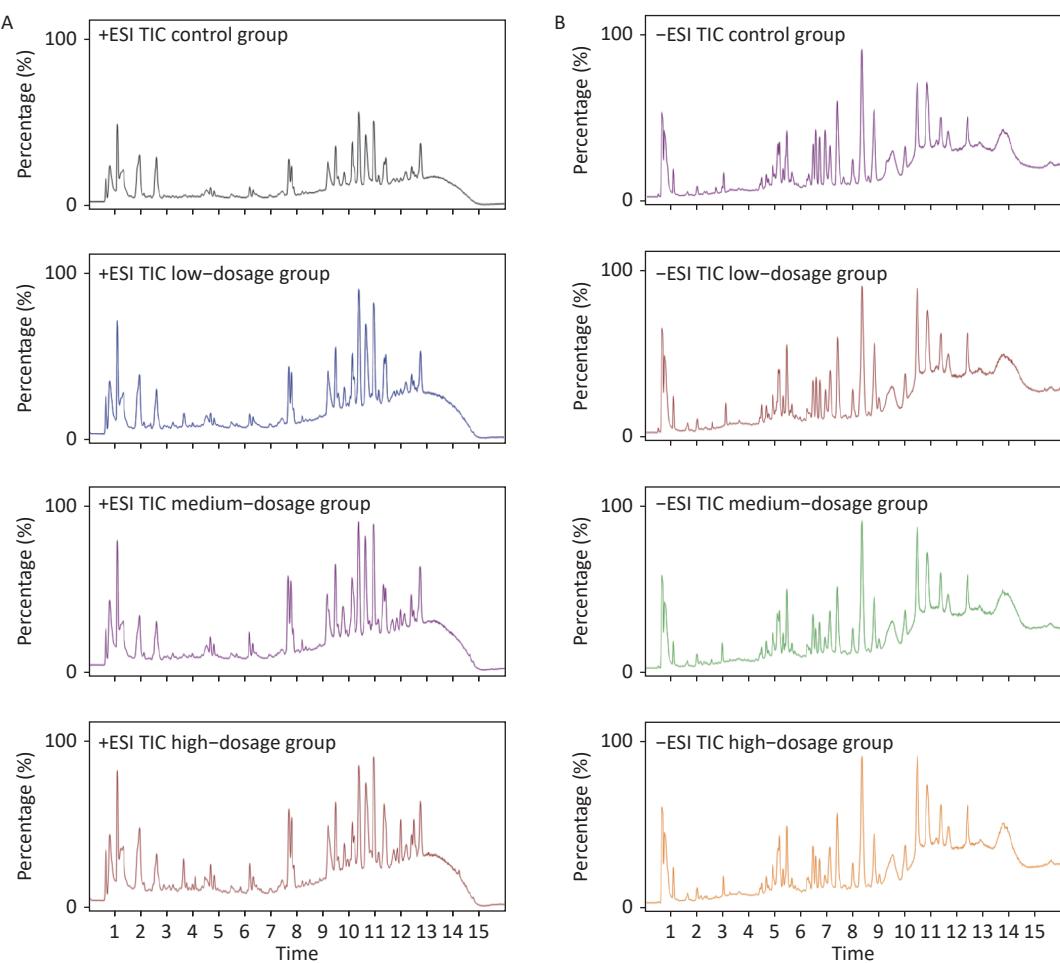


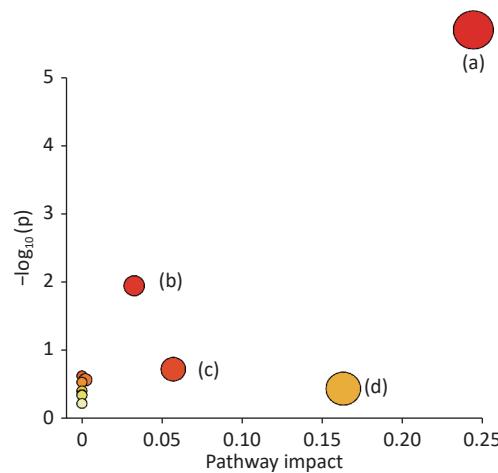
**Supplementary Figure S1.** Histopathological images of liver tissues from mice exposed to  $\alpha$ -amanitin. Tissues excised 48 h after administration of a single dose ( $\mu\text{g/kg bw}$ ) of  $\alpha$ -amanitin. (A) Control group (no  $\alpha$ -amanitin), (B) low-dose group ( $0.1 \mu\text{g/kg bw}$ ), (C) medium-dose group ( $0.2 \mu\text{g/kg bw}$ ), and (D) high-dose group ( $0.3 \mu\text{g/kg bw}$ ). Each image was visualized using a  $100 \times$  magnification factor. Black arrow, inflammatory infiltration; red arrow, necrosis and edema.



**Supplementary Figure S2.** Histopathological images of kidney tissues from mice exposed to  $\alpha$ -amanitin. Tissues were excised 48 h after administration of a single dose ( $\mu\text{g/kg bw}$ ) of  $\alpha$ -amanitin. (A) Control group (no  $\alpha$ -amanitin), (B) low-dose group ( $0.1 \mu\text{g/kg bw}$ ), (C) medium-dose group ( $0.2 \mu\text{g/kg bw}$ ), and (D) high-dose group ( $0.3 \mu\text{g/kg bw}$ ). Each image was visualized using a  $100 \times$  magnification factor.



**Supplementary Figure S3.** Representative total ion chromatograms (TIC ESI+ [A] and ESI- [B] ) produced from UPLC-Q/TOF-MS analyses of samples extracted from mice from different treatment groups.



**Supplementary Figure S4.** Summary of pathway analysis using MetaboAnalys: (a) α-linolenic acid metabolism, (b) fatty acid biosynthesis, (c) spermidine and spermine biosynthesis, and (d) retinol metabolism.

**Supplementary Table S1.** Serum analytes in  $\alpha$ -amanitin-treated mice (mean  $\pm$  SD,  $n = 10$ )

Group	ALT (U/L)	AST (U/L)	ALP (U/L)	GGT (U/L)	BUN (mmol/L)	Cr ( $\mu$ mol/L))
C	37.10 $\pm$ 2.75	53.80 $\pm$ 8.18	88.02 $\pm$ 7.30	4.41 $\pm$ 1.34	8.01 $\pm$ 0.94	32.65 $\pm$ 1.79
L	143.43 $\pm$ 33.75 <sup>a</sup>	126.61 $\pm$ 26.90 <sup>a</sup>	170.52 $\pm$ 36.47 <sup>a</sup>	17.85 $\pm$ 5.72 <sup>a</sup>	41.69 $\pm$ 11.32 <sup>a</sup>	69.54 $\pm$ 14.58 <sup>a</sup>
M	272.29 $\pm$ 47.75 <sup>ab</sup>	322.30 $\pm$ 49.09 <sup>ab</sup>	334.45 $\pm$ 51.26 <sup>ab</sup>	58.01 $\pm$ 11.19 <sup>ab</sup>	97.47 $\pm$ 10.81 <sup>ab</sup>	132.72 $\pm$ 3.40 <sup>ab</sup>
H	406.64 $\pm$ 34.61 <sup>abc</sup>	516.27 $\pm$ 118.70 <sup>abc</sup>	472.43 $\pm$ 45.13 <sup>abc</sup>	87.34 $\pm$ 6.62 <sup>abc</sup>	122.43 $\pm$ 10.55 <sup>abc</sup>	156.41 $\pm$ 15.39 <sup>abc</sup>

**Note.** <sup>a</sup> $P < 0.05$  compared to group C. <sup>b</sup> $P < 0.05$  compared to group L. <sup>c</sup> $P < 0.05$  compared to group M. ALT, alanine aminotransferase; AST, aspartate minotransferase; ALP, alkaline phosphatase; GGT,  $\gamma$ -glutamyl transpeptidase; BUN, blood urea nitrogen; Cr, serum creatinine. C: Control group, 0  $\mu$ g/kg bw; L: low-dose group, 0.1 mg/kg bw; M: medium-dose group, 0.2 mg/kg bw; H: high-dose group, 0.3 mg/kg bw.