**Supplementary materials**

**Comprehensive transcriptome profiling of T-2 toxin-induced** **nephrotoxicity in mice**

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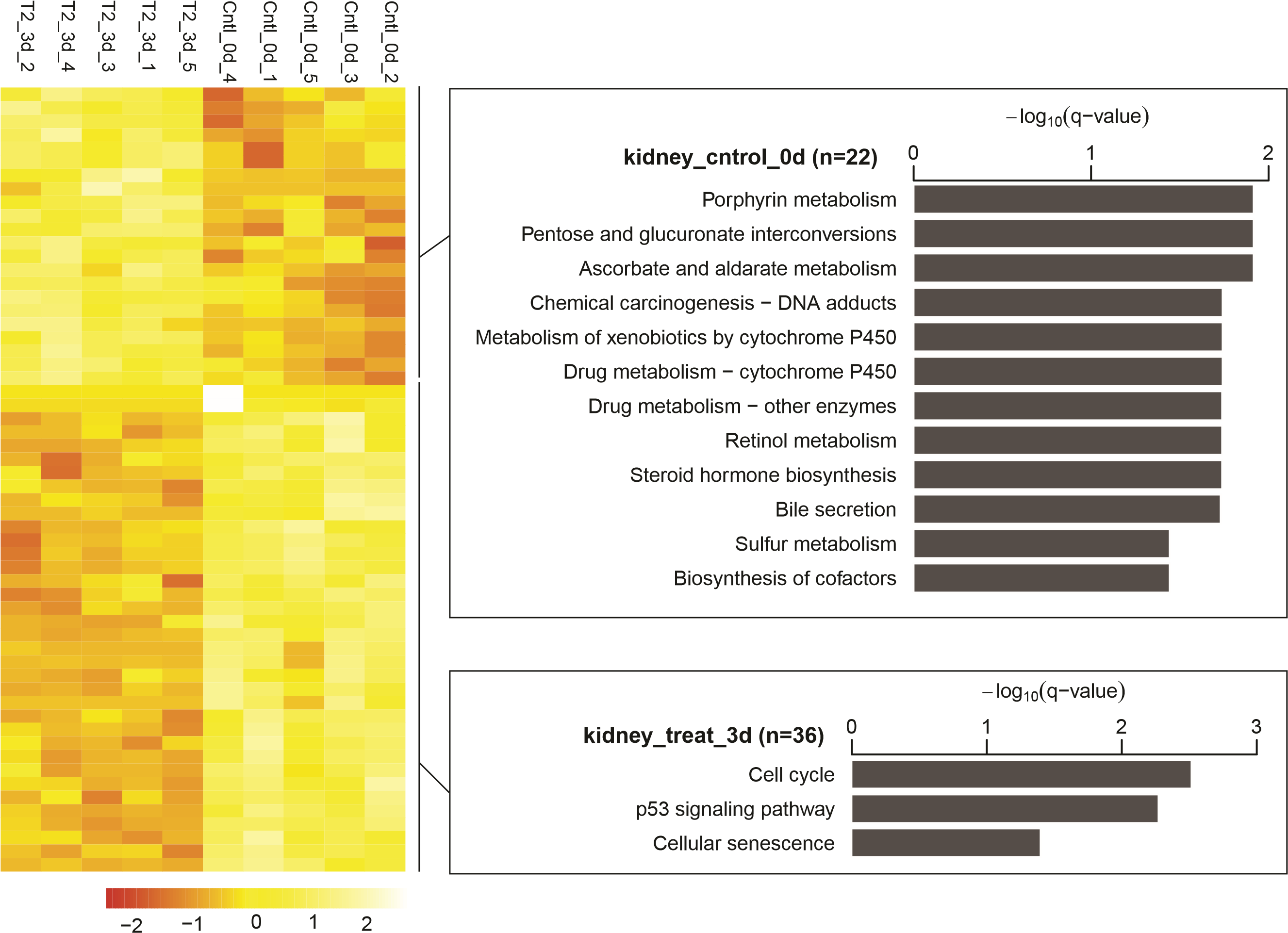
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**A**





**B**



**Figure S1** Transcriptome profiling of mice kidney at 3 d after T-2 toxin exposure.

(A) GO function enrichment of DEGs in TG\_3d group using Metascape software. The horizontal coordinate is the number of DEGs and the vertical coordinate is the categorical entry of GO.

(B) Heatmap representation of Z score-transformed FPKM of genes predominantly expressed in TG\_3d group (left). The genes are ranked in descending order according to their FPKM. Overrepresented pathways are shown on the right. The top ranked pathways are shown with q-values.

Pentose and glucuronate interconversions

Ascorbate and aldarate metabolism

Drug metabolism − other enzymes

p53 signaling pathway

Cell cycle

Porphyrin metabolism

Rrm2

Cdk1

Ccnb1

Cdc20

Ccna2

Ugt2a2

Alas2

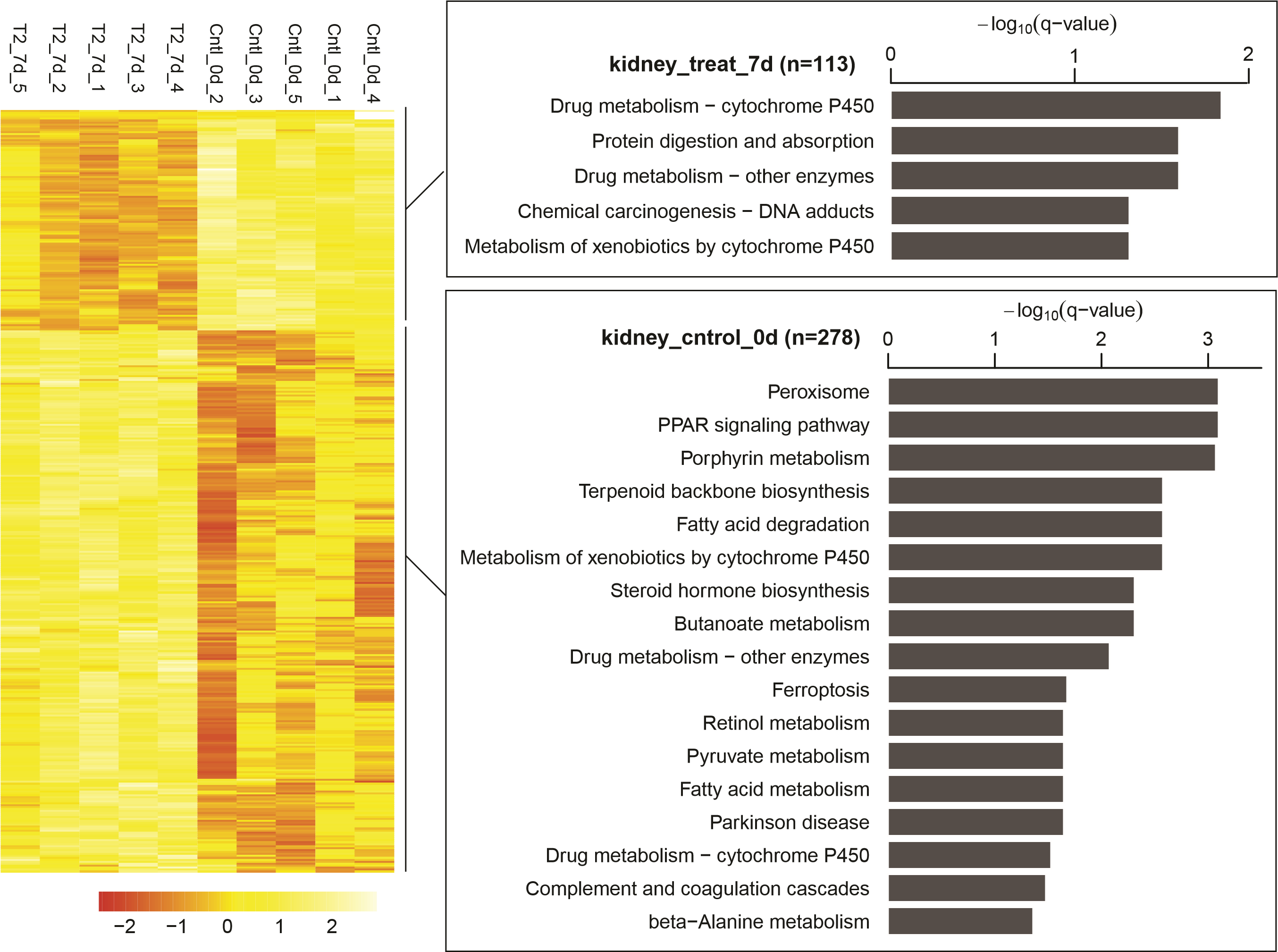
Ugt2b35

**Figure S2** Sankey diagram of KEGG pathway from overrepresentation analysis based on overlapping up-regulated and down-regulated genes in mice kidney at 3d after T-2 toxin exposure.



**A**



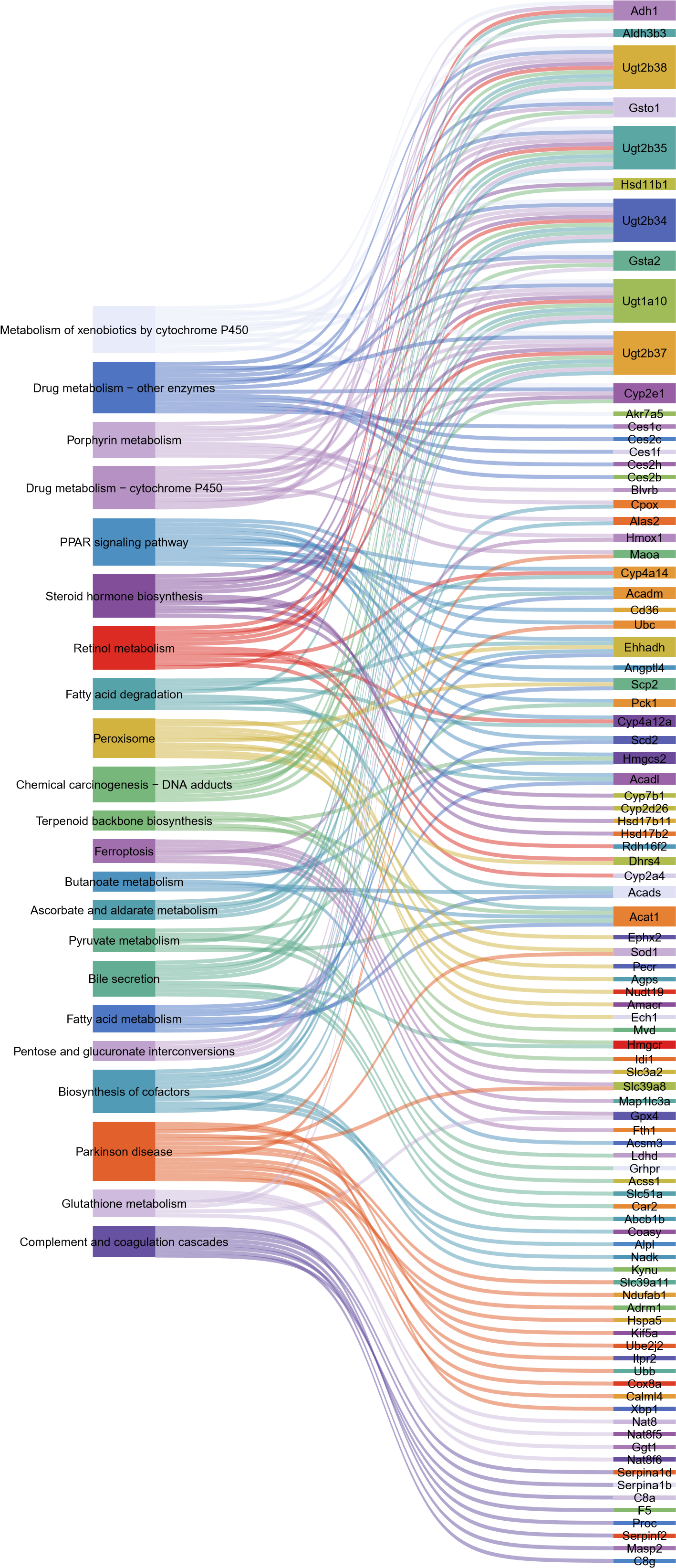


**B**

**Figure S3** Transcriptome profiling of mice kidney at 7 d after T-2 toxin exposure.

(A) GO function enrichment of DEGs in TG\_7d group using Metascape software. The horizontal coordinate is the number of DEGs and the vertical coordinate is the categorical entry of GO.

(B) Heatmap representation of Z score-transformed FPKM of genes predominantly expressed in TG\_7d group (left). The genes are ranked in descending order according to their FPKM. Overrepresented pathways are shown on the right. The top ranked pathways are shown with q-values.



**Figure S4** Sankey diagram of KEGG pathway from overrepresentation analysis based on overlapping up-regulated and down-regulated genes in mice kidney at 7 d after T-2 toxin exposure.



**A**



**B**



**C**

**Figure S5** Enrichment analysis of transcriptional regulators involved in T-2 toxin exposure at 1 d (A), 3 d (B) and 7d (C).

Ugt2b38

Cyp4a14

Cyp2e1

Cyp2a4

Cdhr2

Rhov

Slc2a9

Pik3c2g

Myo10

Myh4

Hsp90ab1

Fkbp5

Rhoc

Arf4

Ank3

Ugt1a10

Cyp4a12a

Ugt2b35

b37

~~Ugt2~~

Ugt2b34

H2bc4

Ubc

Ubb

H2ac18

Echdc2

Nr1i2

Acads

Acadm

Acadl

Pecr

Nudt19

Ehhadh

Ech1

Dhrs4

Amacr

Ephx2

H2aj

**Table S1** Effects of T-2 toxin on the body weight of mice at different periods a.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Treatment | 0d Weight (g) | 1d Weight (g) | 3d Weight (g) | 7d Weight (g) | Growth rate (0d vs 7d) |
| CG | 20.76±0.65 | 20.81±0.63 | 21.48±0.82 | 22.97±0.63 | 9.56%±0.05 |
| TG | 20.65±0.51 | 20.43±0.52 | 20.95±0.68\*\*\* | 22.12±0.68\*\*\* | 7.19%±0.04 |

a Data expressed as mean ± SD for each group.

\*\*\**p* < 0.0001.

**Table S2** Reference genome alignment analysis using HISAT.

|  |  |  |  |
| --- | --- | --- | --- |
| Sample name | Total clean read | Total mapping genome ratio | Uniquely mapping genome ratio |
| CG\_0d\_1 | 23.86 | 96.75 | 74.45 |
| CG\_0d\_2 | 23.87 | 96.81 | 76.11 |
| CG\_0d\_3 | 23.86 | 96.79 | 73.26 |
| CG\_0d\_4 | 19.59 | 96.67 | 74.92 |
| CG\_0d\_5 | 23.84 | 96.15 | 75.68 |
| CG\_1d\_1 | 23.84 | 96.38 | 75.32 |
| CG\_1d\_2 | 23.84 | 96.55 | 74.08 |
| CG\_1d\_3 | 23.83 | 96.36 | 74.25 |
| CG\_1d\_4 | 23.83 | 96.34 | 76.01 |
| CG\_1d\_5 | 23.84 | 96.35 | 75.12 |
| CG\_3d\_1 | 23.84 | 96.32 | 75.87 |
| CG\_3d\_2 | 23.84 | 96.44 | 75.50 |
| CG\_3d\_3 | 23.84 | 96.48 | 74.86 |
| CG\_3d\_4 | 23.80 | 96.31 | 75.97 |
| CG\_3d\_5 | 23.85 | 96.39 | 76.08 |
| TG\_1d\_1 | 23.84 | 96.33 | 75.81 |
| TG\_1d \_2 | 23.79 | 96.09 | 75.27 |
| TG\_1d \_3 | 23.78 | 96.04 | 75.44 |
| TG\_1d \_4 | 23.84 | 96.33 | 74.17 |
| TG\_1d \_5 | 23.85 | 96.50 | 75.80 |
| TG\_3d\_1 | 23.80 | 96.23 | 75.58 |
| TG\_3d \_2 | 23.81 | 96.51 | 75.47 |
| TG\_3d \_3 | 23.79 | 96.25 | 75.90 |
| TG\_3d \_4 | 23.78 | 96.29 | 76.07 |
| TG\_3d \_5 | 23.80 | 96.27 | 75.45 |
| TG\_7d\_1 | 23.78 | 96.25 | 74.36 |
| TG\_7d \_2 | 23.79 | 96.17 | 75.44 |
| TG\_7d \_3 | 23.80 | 96.27 | 74.75 |
| TG\_7d \_4 | 23.75 | 96.42 | 73.68 |
| TG\_7d \_5 | 23.83 | 96.09 | 75.33 |