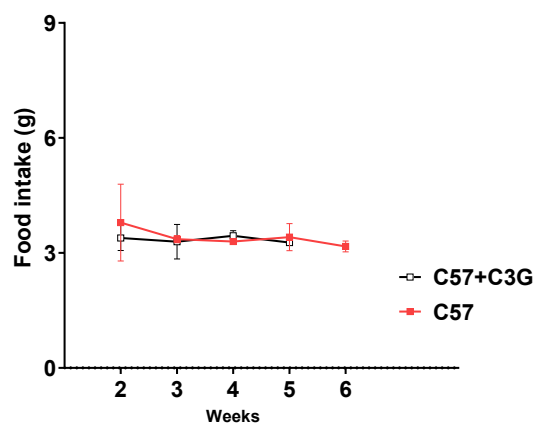
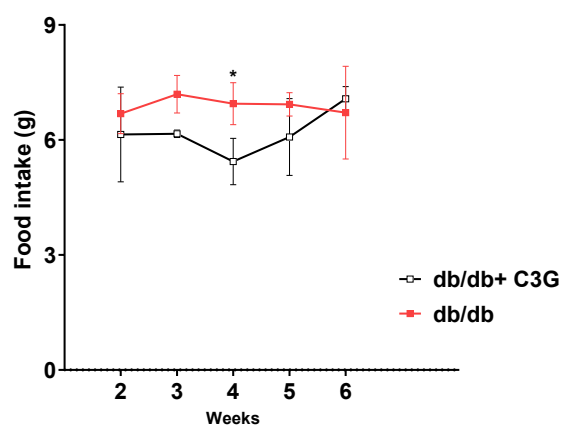


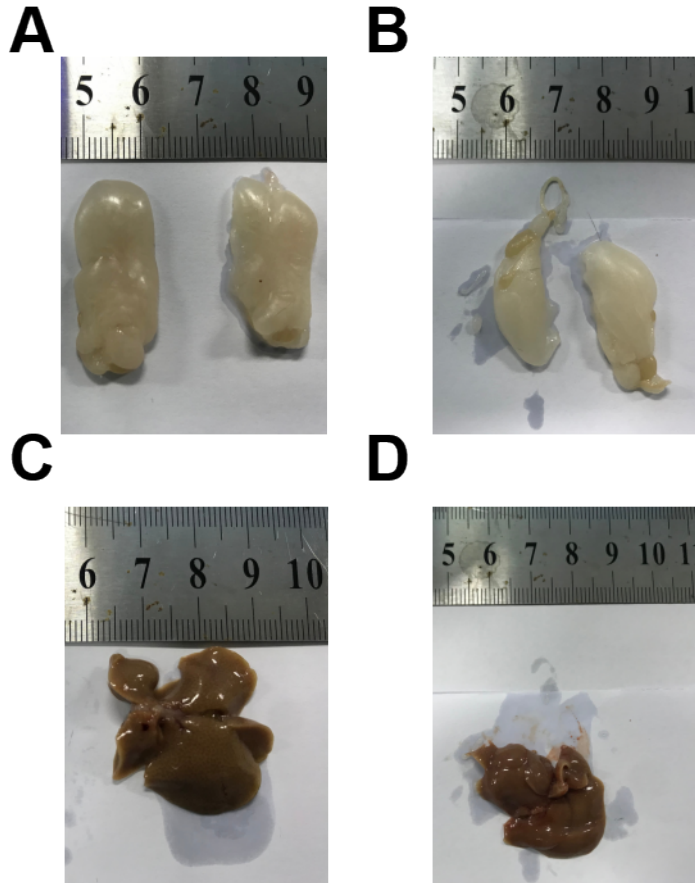
**A**



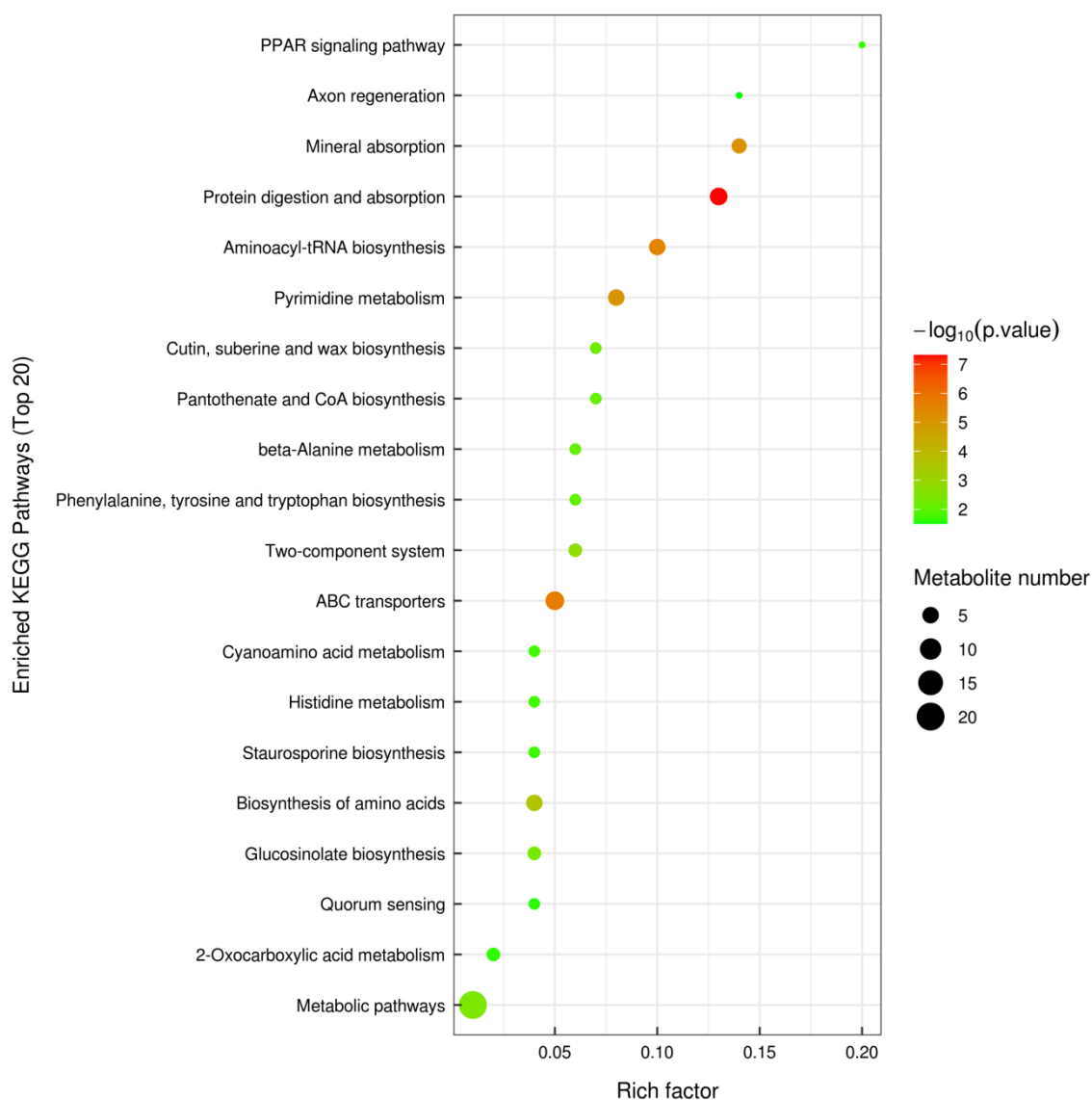
**B**



**Fig. S1** Food intake of mice (A, C57 vs C57+C3G; B, db/db vs db/db+C3G) during 6-week experimental course.



**Fig. S2** Comparison of epididymal fat pads (A db/db group, B db/db +C3G group) and liver conditions (C db/db group, D db/db +C3G group).



**Fig. S3** KEGG enrichment analysis. The X-axis rich factor is the number of differential metabolites annotated to one specific pathway divided by all identified metabolites annotated to this pathway. Dot size represents the number of differentially abundant metabolites annotated to this pathway.

**Table S1** Composition of the diet fed to mice.

Component	Content	Component	Content
Crude Protein, %	19.30	Potassium, g/kg	5.90
Crude Fat, %	6.24	Sodium, g/kg	2.20
Crude fiber, %	3.32	Magnesium, g/kg	1.80
Calcium, %	1.22	Total energy, MJ/kg	15.5
Total phosphorus, %	0.86	Protein energy, %	20.8
Lysine, %	1.36	Fat energy, %	15.2
Methionine +	0.86	Carbohydrate	64
Cystine, %		Energy, %	

**Table S2** Statistical analysis of the *Firmicutes/Bacteroidetes* ratio.

	<b>C57</b>	<b>C57+C3G</b>	<b>db/db</b>	<b>db/db+C3G</b>	<b>P-VALUE</b> <b>C57 VS C57+C3G</b>	<b>Q-VALUE</b> <b>db/db VS db/db+C3G</b>
<b>the Firmicutes/Bacteroidetes ratio (AVERAGE)</b>	0.28	0.38	0.94	0.70	0.07	0.24