

## Supporting Information

### Oral administration of egg ovalbumin allergen induces dysregulation of tryptophan metabolism in sensitized Balb/c mice

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**Table S1 Fecal Scoring Criteria**

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Score	criteria
0	solid-state
1	funicular form
2	slurry
3	watery state

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Table S2. List of primers used in this study

Primer Target		Primer sequence
<i>ZO-1</i>	<b>Forward</b>	CGAGGCATCATCCCAAATAAGAA C
	<b>Reverse</b>	TCCAGAAGTCTGCCCCGATCAC
<i>Ocludin-1</i>	<b>Forward</b>	ACGGTCTTTGCACTTTGGTC
	<b>Reverse</b>	GGGAGAGGAGAAGCACAGTT
<i>Occludin</i>	<b>Forward</b>	TTGAAAGTCCACCTCCTTACAGA
	<b>Reverse</b>	CCGGATAAAAAGAGTACGCTGG
<i>Reg3g</i>	<b>Forward</b>	CAAGGTGAAGTTGCCAAGAA
	<b>Reverse</b>	CCTCTGTTGGGTTTCATAGCC
<i>AHR</i>	<b>Forward</b>	CGCTGCTTCCTCCACAACCTG
	<b>Reverse</b>	TAAGCTGCCCTTTGGCATCAC
<i>GAPDH</i>	<b>Forward</b>	CCTGTTGCTGTAGCCGTATTCA
	<b>Reverse</b>	CCAGGTTGTCTCCTGCGACTT

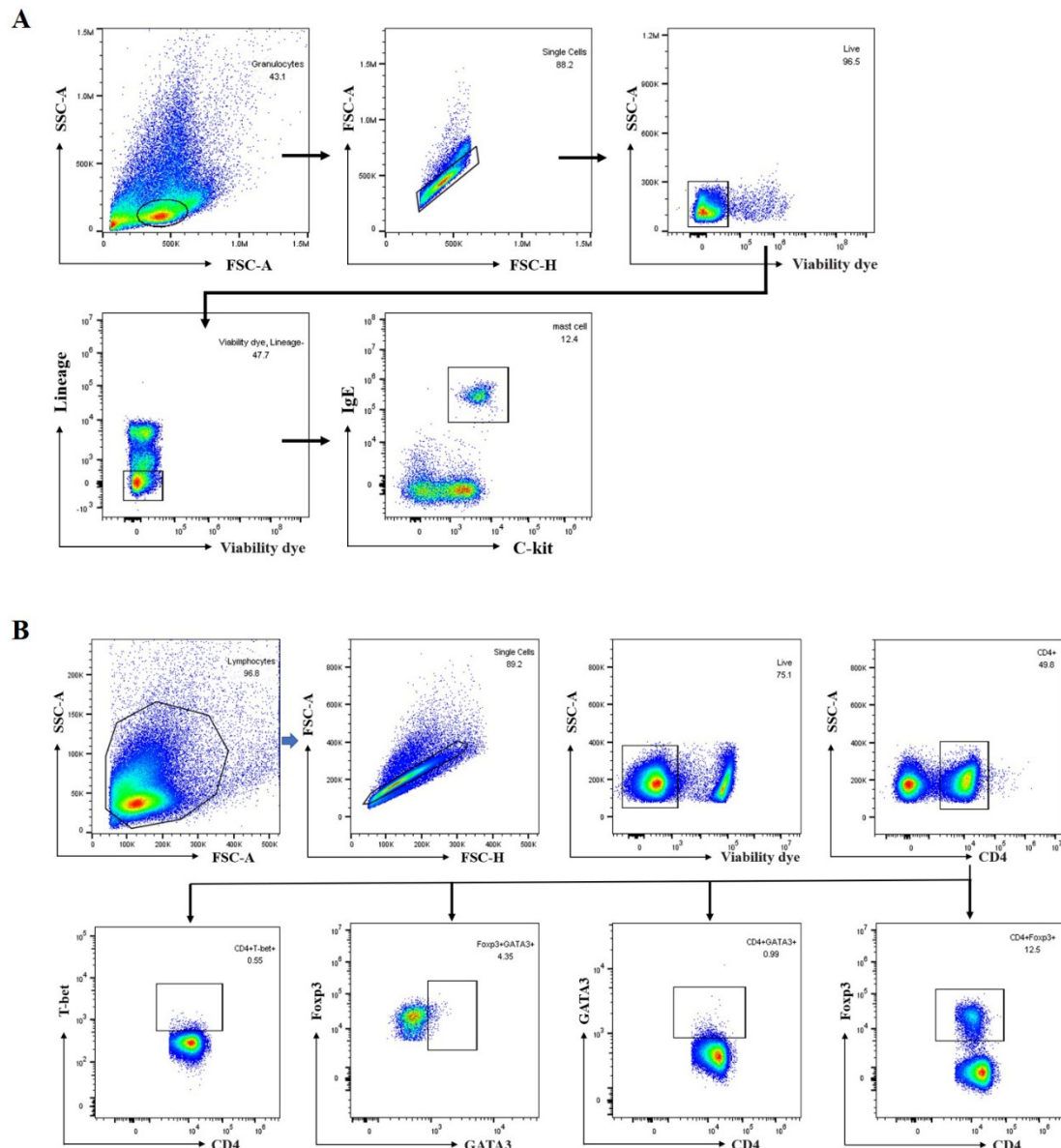


Figure S1 Gating strategy for flow cytometric analysis.

(A) Gating strategy of mast cells in small intestinal lamina propria. (B) Gating strategy of T helper cells in MLNs.

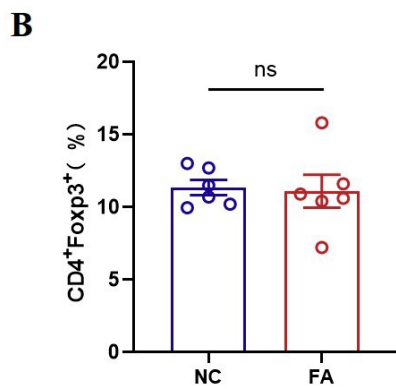
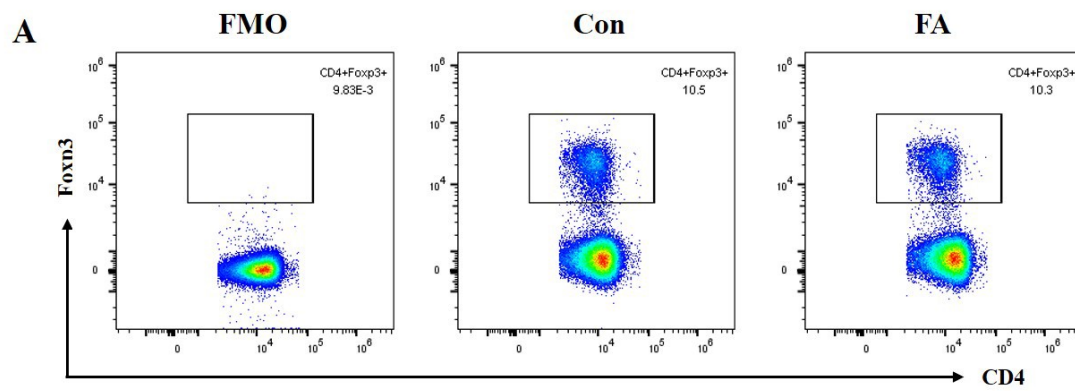


Figure S2 (A) Flow cytometric analysis and (B) frequencies of CD4<sup>+</sup>Foxp3<sup>+</sup> T cells in the MLNs.

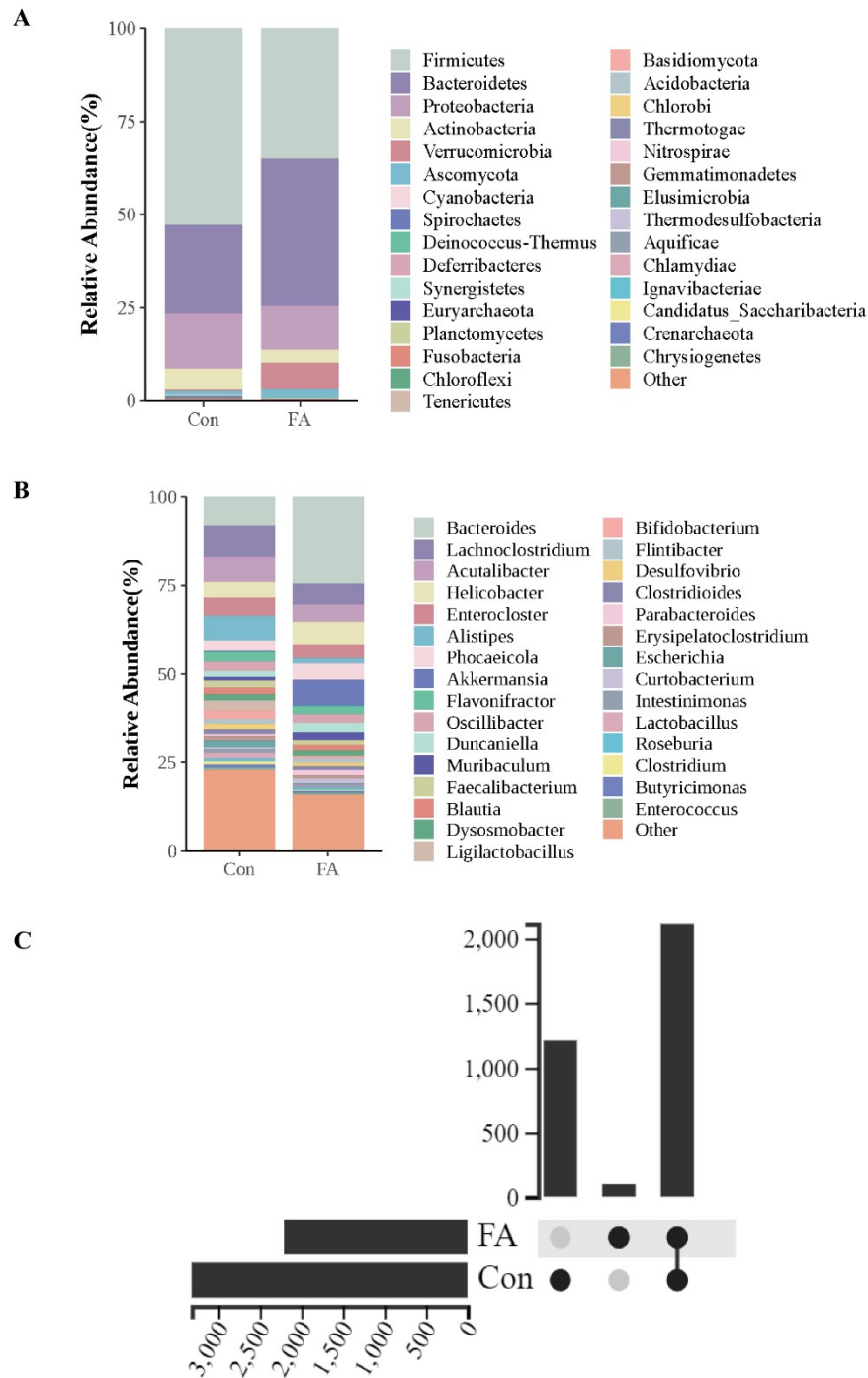


Figure S3 Oral OVA challenge induces the imbalance of gut microbiota  
 (A) Gut bacterial composition at phylum level in the FA and Con groups.  
 (B) Gut bacterial composition at genus level in the FA and Con groups. (C)  
 Statistical data on unique and shared strains in the FA and Con groups

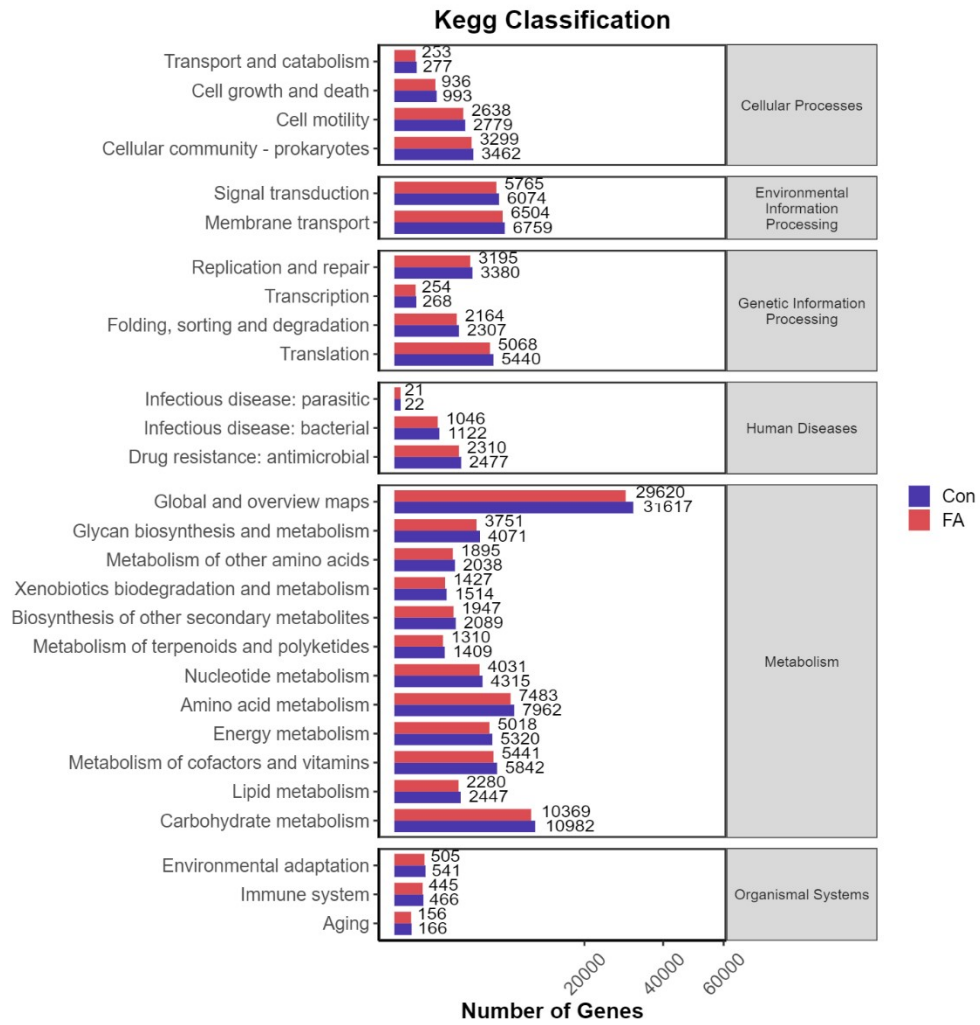


Figure S4 The mapping of bacterial gene catalogues in the KEGG database.

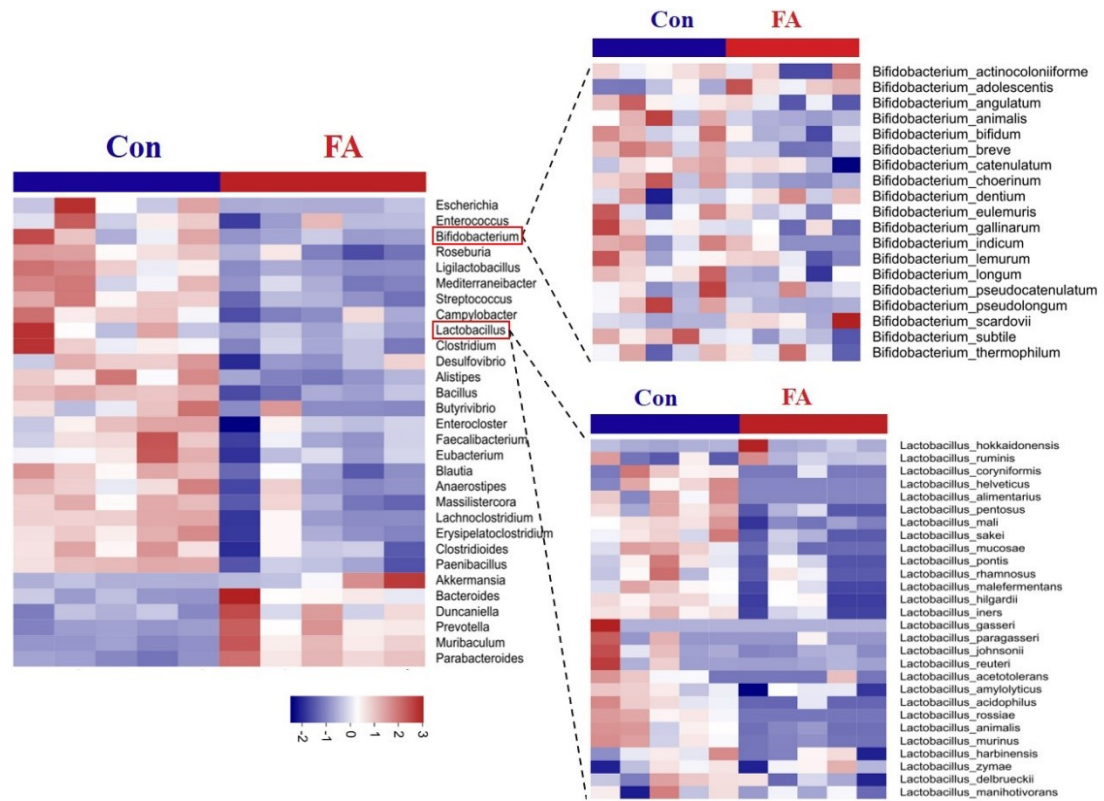


Figure S5 The abundance of Lactobacillus and Bifidobacterium in the FA and Con groups