

Supplementary File 4. The effect of *Trichuris suis* infection in pigs on the functional profile of the colon microbiota. P value and FDR (false discovery rate) were calculated using MetaStats. The number (Mean  $\pm$  SEM) denotes the percentage of open reading frames (ORF) assigned to a COG functional class/category.

Class	COG Description	P	FDR	Control	Infected
A	RNA processing and modification	0.023	0.085	0.01 $\pm$ 0.00	0.01 $\pm$ 0.00
B	Chromatin structure and dynamics	0.090	0.102	0.01 $\pm$ 0.00	0.02 $\pm$ 0.01
C	Energy production and conversion	0.754	0.426	5.58 $\pm$ 0.08	5.61 $\pm$ 0.05
D	Cell cycle control, cell division, chromosome partitioning	0.133	0.127	1.35 $\pm$ 0.01	1.38 $\pm$ 0.01
E	Amino acid transport and metabolism	0.060	0.093	9.57 $\pm$ 0.12	9.17 $\pm$ 0.06
F	Nucleotide transport and metabolism	0.635	0.419	3.98 $\pm$ 0.07	3.94 $\pm$ 0.05
G	Carbohydrate transport and metabolism	0.036	0.085	8.54 $\pm$ 0.13	8.02 $\pm$ 0.05
H	Coenzyme transport and metabolism	0.643	0.419	4.32 $\pm$ 0.05	4.29 $\pm$ 0.04
I	Lipid transport and metabolism	0.094	0.102	2.74 $\pm$ 0.03	2.67 $\pm$ 0.02
J	Translation, ribosomal structure and biogenesis	0.627	0.419	8.69 $\pm$ 0.22	8.55 $\pm$ 0.15
K	Transcription	0.068	0.093	5.61 $\pm$ 0.08	5.81 $\pm$ 0.03
L	Replication, recombination and repair	0.048	0.085	8.57 $\pm$ 0.02	8.75 $\pm$ 0.05
M	Cell wall/membrane/envelope biogenesis	0.031	0.085	7.78 $\pm$ 0.00	7.48 $\pm$ 0.07
N	Cell motility	0.935	0.464	0.89 $\pm$ 0.14	0.89 $\pm$ 0.04
O	Posttranslational modification, protein turnover, chaperones	0.805	0.435	3.84 $\pm$ 0.02	3.83 $\pm$ 0.02
P	Inorganic ion transport and metabolism	0.044	0.085	3.98 $\pm$ 0.03	4.17 $\pm$ 0.05
Q	Secondary metabolites biosynthesis, transport and catabolism	0.674	0.419	0.90 $\pm$ 0.00	0.90 $\pm$ 0.02
R	General function prediction only	0.019	0.085	10.62 $\pm$ 0.08	11.10 $\pm$ 0.08
S	Function unknown	0.178	0.150	4.86 $\pm$ 0.12	5.09 $\pm$ 0.08
T	Signal transduction mechanisms	0.904	0.464	3.65 $\pm$ 0.16	3.66 $\pm$ 0.03
U	Intracellular trafficking, secretion, and vesicular transport	0.738	0.426	1.92 $\pm$ 0.07	1.95 $\pm$ 0.05
V	Defense mechanisms	0.186	0.150	2.59 $\pm$ 0.05	2.69 $\pm$ 0.04
W	Extracellular structures	0.007	0.085	0.00 $\pm$ 0.00	0.00 $\pm$ 0.00
Y	Nuclear structure	0.194	0.150	0.00 $\pm$ 0.00	0.00 $\pm$ 0.00
Z	Cytoskeleton	0.099	0.102	0.01 $\pm$ 0.00	0.03 $\pm$ 0.01