## SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at:

Figure S1 | Effects of trypsin on the growth of bacteria or fungal. Control, cells growed without trypsin or Nor/Flu. Try1, cells growed with  $1.2 \times 10^{-6}$  mol/L trypsin; Try2, cells growed with  $2.41 \times 10^{-6}$  mol/L trypsin; Try3, cells growed with  $4.82 \times 10^{-6}$  mol/L trypsin; Nor/FLZ, cells growed with  $7.8 \times 10^{-5}$  mol/L norfloxacin (Nor, for bacteria) or 3 mM fluconazole (FLZ, for fungal).

Figure S2 | COG and GO classification of unigenes. (A), COG classification of unigenes; (B-C), GO categories of unigenes.

Table S1 | Common unigenes in public databases including NR, Swiss-Prot, Pfam, COG, GO and KEGG.

Table S2 | Unigenes in functional groups based on COG and NOG classifications.

Table S3 | Num of unigenes enriched in KEGG pathways.

Table S4 | Information of unigenes showed in the volcano plot spectrum in Fig. 5A.

Table S5 | Annotation of genes related to antioxidation.

 Table S6 | Information of 24 unigenes identified by RT-qPCR.

Table S7 | GO terms of antioxidant genes enriched (FDR < 0.01) by trypsin.

Table S8 | Full list of antioxidant genes in each pattern after treatment with trypsin.

Table S9 | PPI network parameters of antioxidant genes by Cytoscape.

Table S10 | PPI network parameters of up-regulated antioxidant genes by Cytoscape.

Table S11 | PPI network parameters of down-regulated antioxidant genes by Cytoscape.

Table S12 | PPI network parameters of CAT subnetwork by Cytoscape.