

**Supplementary File S4.** KEGG pathway analysis of octopus ink proteome by DAVID version 6.8.

No	KEGG Pathway	p-Value	No	KEGG Pathway	p-Value
1	Carbon metabolism	$2.20 \times 10^{-12}$	12	Biosynthesis of nucleotide sugars	$1.10 \times 10^{-02}$
2	Biosynthesis of amino acids	$7.70 \times 10^{-09}$	13	2-Oxocarboxylic acid metabolism	$1.40 \times 10^{-02}$
3	Fructose and mannose metabolism	$1.90 \times 10^{-07}$	14	Cysteine and methionine metabolism	$2.80 \times 10^{-02}$
4	Glycolysis / Gluconeogenesis	$1.10 \times 10^{-06}$	15	Arginine and proline metabolism	$3.30 \times 10^{-02}$
5	Metabolic pathways	$2.50 \times 10^{-06}$	16	beta-Alanine metabolism	$3.50 \times 10^{-02}$
6	Pentose phosphate pathway	$3.60 \times 10^{-05}$	17	Fatty acid degradation	$4.70 \times 10^{-02}$
7	Pyruvate metabolism	$3.10 \times 10^{-04}$	18	Amino sugar and nucleotide sugar metabolism	$5.50 \times 10^{-02}$
8	Proteasome	$6.90 \times 10^{-04}$	19	Arginine biosynthesis	$7.00 \times 10^{-02}$
9	Drug metabolism - other enzymes	$5.00 \times 10^{-03}$	20	Pantothenate and CoA biosynthesis	$8.70 \times 10^{-02}$
10	Citrate cycle (TCA cycle)	$9.30 \times 10^{-03}$	21	Metabolism of xenobiotics by cytochrome P450	$9.80 \times 10^{-02}$
11	Glyoxylate and dicarboxylate metabolism	$9.30 \times 10^{-03}$			