enriched KEGG pathway Microbial metabolism in diverse environments Biosynthesis of secondary metabolites  $-\log_{10}(pvalue)$ Biosynthesis of amino acids -Carbon metabolism -Butanoate metabolism -Gene number Propanoate metabolism -Biofilm formation -Escherichia coli 15 Citrate cycle (TCA cycle) -Monobactam biosynthesis -0.2 0.1 0.3 0.4 GeneRatio