

1 Supplementary table S2: Metabolic pathways in epibiotic and periplasmic BALO predators.

Species	Periplasmic Predators		Epibiotic Predators	
	<i>B. bacteriovorus</i> HD100	<i>B. marinus</i> SJ	<i>B. exovorus</i> JSS	<i>M. aeruginosavorus</i> EPB
Glycolysis	Complete	Complete	Complete	Complete
Tricarboxylic Acid (TCA) Cycle	Complete	Complete	Complete	Complete
Pentose Phosphate Pathway				
-Oxidative	Not Produced	Not Produced	Not Produced	Not Produced
-Non-oxidative	Complete from D-ribose-5-phosphate	Complete from D-ribose-5-phosphate	Complete from D-ribose-5-phosphate	Complete from D-ribose-5-phosphate
Fatty Acid Biosynthesis				
i) Initiation	Complete	Complete	Complete	Complete
ii) Saturated Elongation	Partial	Partial	Partial	Complete
iii) Unsaturated Elongation	Very partial	Partial: missing fabA (E.C.5.3.3.14)	Partial	Complete
Fatty Acid Metabolism	Complete pathway for β -oxidation I	Complete pathway for β -oxidation I and oleate β -oxidation I	Complete fatty acid degradation	Only partial pathways for degradation
Vitamins and Cofactor Biosynthesis				
i) Biotin	Not Produced	Not Produced	Not Produced	Not Produced
ii) Riboflavin	Complete	Complete	Not Produced	Not Produced
iii) Thiamine	Not Produced	Not Produced	Not Produced	Not Produced
iv) Nicotinate	Complete (from L-aspartate)	Complete (from L-aspartate)	Complete (from L-aspartate)	Very partial
v) Pantothenate and CoA Biosynthesis	Produced	Produced	Complete	Absent
vi) Vitamin B6	Complete	Complete	Partial	Partial

vii)	Lipoic Acid	Produced	Complete	Lipoid Acid Produced	Partial
viii)	Folate	Not produced	Almost complete	Partial	Absent
ix)	Retinol	Not Produced	Not Produced	Not Produced	Not Produced
Amino Acid Biosynthesis					
i)	Alanine	Complete	Complete	Complete	Complete
ii)	Cysteine	Complete	Complete	Complete	Complete
iii)	Aspartic Acid	Complete	Complete	Complete	Complete
iv)	Glutamic Acid	Complete	Complete	Complete	Complete
v)	Phenylalanine	Not Produced	Not produced	Not Produced	Produced
vi)	Glycine	Complete	Complete	Complete	Complete
vii)	Histidine	Not Produced	Not Produced	Not Produced	Not Produced
viii)	Isoleucine	Not Produced	Not Produced	Not Produced	Not Produced
ix)	Lysine	Complete	Partial	partial	Partial
x)	Leucine	Not produced	Not Produced	Not Produced	Complete
xi)	Methionine	Not Produced	Possibly	Not Produced	Not Produced
xii)	Asparagine	Not produced	Complete	Not Produced	Complete
xiii)	Proline	Produced	Produced	Complete (using ProA)	Complete (from glutamate)
xiv)	Glutamine	Complete	Complete	Complete	Complete
xv)	Arginine	Not Produced	Not Produced	Not Produced	Not Produced
xvi)	Serine	Produced	Complete	Complete (from pyruvate)	Complete
xvii)	Threonine	Produced	Produced	Complete	Complete
xviii)	Valine	Not Produced	Not Produced	Not Produced	Not Produced
xix)	Tryptophan	Not Produced	Not Produced	Not Produced	Produced

xx)	Tyrosine	Not produced	Not Produced	Not Produced	Produced
de novo Purine Biosynthesis					
i)	Inosine			Absent	Absent
ii)	dATP	Complete	Complete	Complete	Complete
iii)	dGTP	Complete	Complete	Complete	Complete
de novo Pyrimidine Biosynthesis					
i)	cCTP	Complete	Complete	Complete	Complete
v)	dTTP	Complete	Complete	Complete	Complete
Respiratory Chains					
i)	Cytochrome B	Present	Present	Not Present	Present
ii)	Cytochrome C	Present	Present	Present	Present
iii)	Cytochrome D	Not Present	Not Present	Not Present	Present
iv)	Cytochrome O	Not Present	Present	Not Present	Not Present
v)	Succinate dehydrogenase	Present	Present	Present	Present
Aerobic Metabolism					
i)	Catalase	Present	Present	ND	Present
ii)	Superoxide dismutase	Present	Present	ND	Present
iii)	Peroxides	Present	Present	ND	Present
Transporters					
i)	Amino acids/peptides	Peptides, branched aa	Peptides, branched aa	Methionine, branched aa, peptides	Methionine
ii)	Sugars	Present	Not Present	Present	Present
iv)	Vitamins	Thiamine	B12	None	None

iii)	Cations	Mg ²⁺ , Co ²⁺ , Fe ³⁺	Mg ²⁺ , Co ²⁺ , metals, cations,	Fe ²⁺ , Mg ²⁺ , Co ²⁺ , Na+, "cations"	Fe ²⁺ , Mn ²⁺ , Co ²⁺ , NH ₄ ⁺ , Mg ²⁺
iv)	Anions	NO ₃ ⁻ , phosphate, phosphonate, chromate	Molybdate, phosphate, phosphonate, arsenate	NO ₃ ⁻ , phosphate, phosphonate	HCO ₃ ⁻ , NO ₂ ⁻ , NO ₃ ⁻ ; phosphate
v)	Others	Spermidine/putrescine, microcin, lipo- oligosaccharide, multidrug, solvent, short chain fatty acids, FtsX cell division	Microcin, lipo- oligosaccharide, lipopolysaccharide, lipoprotein, antibiotic, nucleoside	Lipopolysaccharide, multidrugs, solvent	Lipopolysaccharide, multidrug, microcin, solvent, FtsX cell division
Siderophores					
	i) Aerobactin	Produced	Produced	Not Produced	Not Produced
	ii) siderophore transporter	Absent	Present	present	Absent
Reserve Material					
	i) Polyhydroxyalkanoate	Not Produced	Not Produced	Not Produced	Not Produced
	ii) Glycogen	Not Produced	Not Produced	Not Produced	Not Produced
	iii) Polyphosphate	Produced	Produced	Produced	Not Produced

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