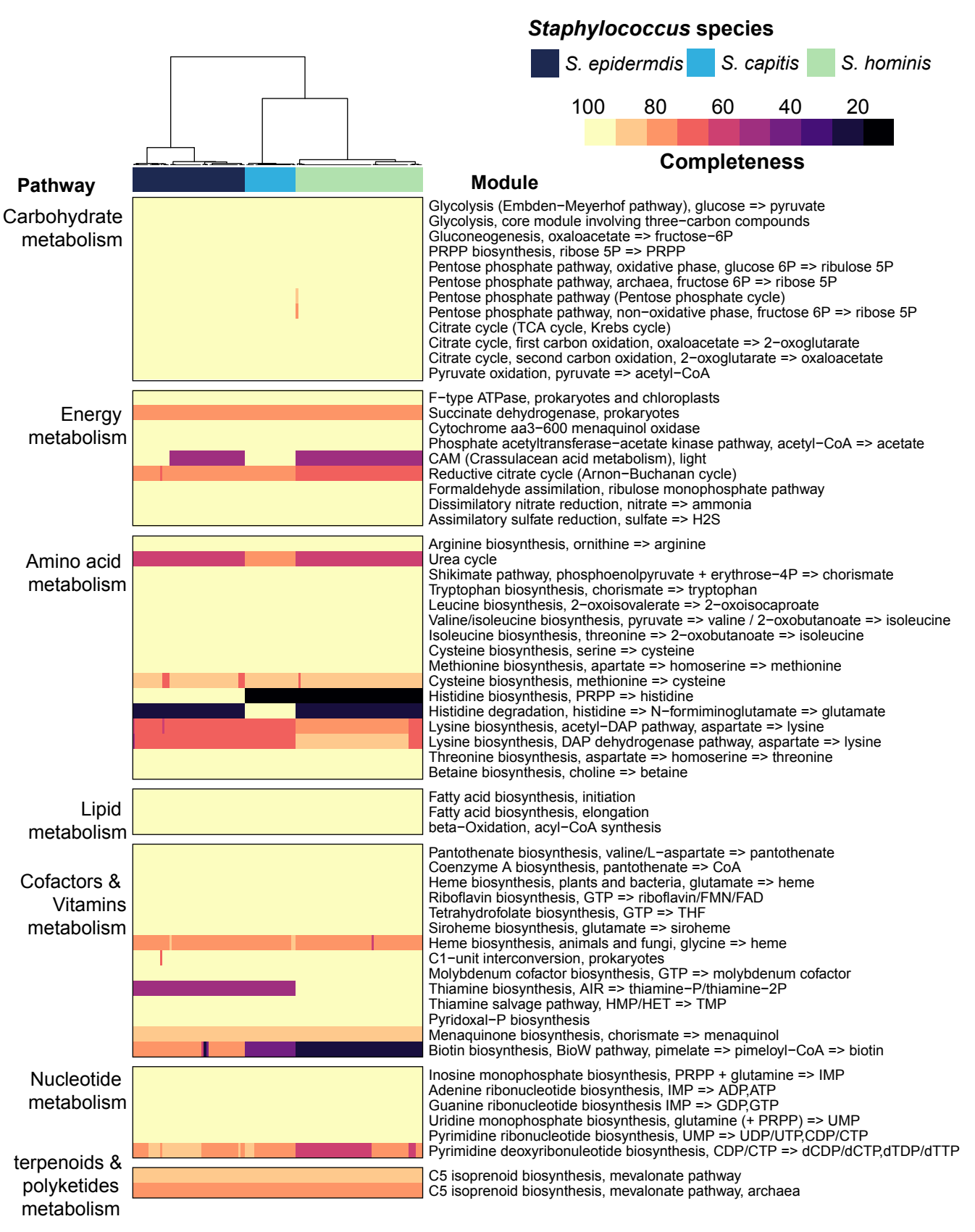
Staphylococcus species
S. epidermdis
S. capitis
S. hominis
100
80
60
40
20
Completeness
Pathway
Module
Carbohydrate metabolism
Glycolysis (Embden−Meyerhof pathway), glucose => pyruvate
Glycolysis, core module involving three−carbon compounds
Gluconeogenesis, oxaloacetate => fructose−6P
PRPP biosynthesis, ribose 5P => PRPP
Pentose phosphate pathway, oxidative phase, glucose 6P => ribulose 5P
Pentose phosphate pathway, archaea, fructose 6P => ribose 5P
Pentose phosphate pathway (Pentose phosphate cycle)
Pentose phosphate pathway, non−oxidative phase, fructose 6P => ribose 5P
Citrate cycle (TCA cycle, Krebs cycle)
Citrate cycle, first carbon oxidation, oxaloacetate => 2−oxoglutarate
Citrate cycle, second carbon oxidation, 2−oxoglutarate => oxaloacetate
Pyruvate oxidation, pyruvate => acetyl−CoA
Energy metabolism
F−type ATPase, prokaryotes and chloroplasts
Succinate dehydrogenase, prokaryotes
Cytochrome aa3−600 menaquinol oxidase
Phosphate acetyltransferase−acetate kinase pathway, acetyl−CoA => acetate
CAM (Crassulacean acid metabolism), light
Reductive citrate cycle (Arnon−Buchanan cycle)
Formaldehyde assimilation, ribulose monophosphate pathway
Dissimilatory nitrate reduction, nitrate => ammonia
Assimilatory sulfate reduction, sulfate => H2S
Amino acid metabolism
Arginine biosynthesis, ornithine => arginine
Urea cycle
Shikimate pathway, phosphoenolpyruvate + erythrose−4P => chorismate
Tryptophan biosynthesis, chorismate => tryptophan
Leucine biosynthesis, 2−oxoisovalerate => 2−oxoisocaproate
Valine/isoleucine biosynthesis, pyruvate => valine / 2−oxobutanoate => isoleucine
Isoleucine biosynthesis, threonine => 2−oxobutanoate => isoleucine
Cysteine biosynthesis, serine => cysteine
Methionine biosynthesis, apartate => homoserine => methionine
Cysteine biosynthesis, methionine => cysteine
Histidine biosynthesis, PRPP => histidine
Histidine degradation, histidine => N−formiminoglutamate => glutamate
Lysine biosynthesis, acetyl−DAP pathway, aspartate => lysine
Lysine biosynthesis, DAP dehydrogenase pathway, aspartate => lysine
Threonine biosynthesis, aspartate => homoserine => threonine
Betaine biosynthesis, choline => betaine
Lipid metabolism
Fatty acid biosynthesis, initiation
Fatty acid biosynthesis, elongation
beta−Oxidation, acyl−CoA synthesis
Cofactors & Vitamins metabolism
Pantothenate biosynthesis, valine/L−aspartate => pantothenate
Coenzyme A biosynthesis, pantothenate => CoA
Heme biosynthesis, plants and bacteria, glutamate => heme
Riboflavin biosynthesis, GTP => riboflavin/FMN/FAD
Tetrahydrofolate biosynthesis, GTP => THF
Siroheme biosynthesis, glutamate => siroheme
Heme biosynthesis, animals and fungi, glycine => heme
C1−unit interconversion, prokaryotes
Molybdenum cofactor biosynthesis, GTP => molybdenum cofactor
Thiamine biosynthesis, AIR => thiamine−P/thiamine−2P
Thiamine salvage pathway, HMP/HET => TMP
Pyridoxal−P biosynthesis
Menaquinone biosynthesis, chorismate => menaquinol
Biotin biosynthesis, BioW pathway, pimelate => pimeloyl−CoA => biotin
Nucleotide metabolism
Inosine monophosphate biosynthesis, PRPP + glutamine => IMP
Adenine ribonucleotide biosynthesis, IMP => ADP,ATP
Guanine ribonucleotide biosynthesis IMP => GDP,GTP
Uridine monophosphate biosynthesis, glutamine (+ PRPP) => UMP
Pyrimidine ribonucleotide biosynthesis, UMP => UDP/UTP,CDP/CTP
Pyrimidine deoxyribonuleotide biosynthesis, CDP/CTP => dCDP/dCTP,dTDP/dTTP
terpenoids & polyketides metabolism
C5 isoprenoid biosynthesis, mevalonate pathway
C5 isoprenoid biosynthesis, mevalonate pathway, archaea