	glmS glnA 4 aspS cysS fmt lysS tyrS ydiF crr	Alanine, aspartate and glutamate metabolism Aminoacyl–tRNA biosynthesis Aminobenzoate degradation Amino sugar and nucleotide sugar metabolism Arginine biosynthesis Bacterial secretion system beta–Lactam resistance Biosynthesis of amino acids Ricoynthesis of antibiotics
	glmS.1 pgm glnA.1 secB secF secG secM	Biosynthesis of antibiotics Biosynthesis of secondary metabolites Biosynthesis of siderophore group nonribosomal peptides Biotin metabolism Butanoate metabolism Carbon metabolism
	tolC tolC.1 cysE dapB dapD dapE dapF	Cationic antimicrobial peptide (CAMP) resistance Citrate cycle (TCA cycle) Cyanoamino acid metabolism Cysteine and methionine metabolism D-Glutamine and D-glutamate metabolism
	eno fbaA glnA.2 glyA rpe rpiA accB aceE	DNA replication Fatty acid biosynthesis Fatty acid metabolism Folate biosynthesis Fructose and mannose metabolism Galactose metabolism
	aceF adk dapB.1 dapF.1 eno.1 entD	Glycerophospholipid metabolism Glycine, serine and threonine metabolism Glycolysis / Gluconeogenesis Glyoxylate and dicarboxylate metabolism Homologous recombination Lipoic acid metabolism
	glmS.2 glyA.1 ispD ispE ispF ispH pgm.1 rffH.1 rpe.1 rpiA ₋ 1	Lipoic acid metabolism Lipopolysaccharide biosynthesis Lysine biosynthesis Lysine degradation Metabolic pathways Methane metabolism Microbial metabolism in diverse environments
	sucA sucB accB.1 aceE.1 aceF.1	Microbial metabolism in diverse environments Mismatch repair Monobactam biosynthesis Nicotinate and nicotinamide metabolism Nitrogen metabolism One carbon pool by folate
	cysE.1 dapB.2 dapF.2 eno.2 entD.1 fbaA.2 glyA.2 gpsA hemB	Oxidative phosphorylation Pantothenate and CoA biosynthesis Pentose and glucuronate interconversions Pentose phosphate pathway Peptidoglycan biosynthesis Phenylalanine metabolism
	hemE hemG hemH ispD.1 ispE.1 ispF.1 ispH.1 pgm.2 ribE	Phosphotransferase system (PTS) Polyketide sugar unit biosynthesis Porphyrin and chlorophyll metabolism Propanoate metabolism Protein export Purine metabolism
	rpe.2 rpiA.2 sucA.1 sucB.1 ubiA ubiE ubiX ynbB	Pyrimidine metabolism Pyruvate metabolism Quorum sensing Riboflavin metabolism Ribosome
	entD.2 fabZ ydiF.1 accB.2 aceF.2	RNA degradation RNA polymerase Starch and sucrose metabolism Streptomycin biosynthesis Sulfur metabolism Sulfur relay system
	aceF.2 cysE.2 eno.3 fbaA.3 foID glyA.3 rpe.3 rpiA.3 sucA.2 sucB.2	Terpenoid backbone biosynthesis Thiamine metabolism Tryptophan metabolism Two-component system Ubiquinone and other terpenoid-quinone biosynthesis
	lpxA tolC.2 aceE.3 aceF.3 sucA.3 sucB.3 glyA.4	
	cysE.3 murD murl dnaG dnaQ dnaX holB holC	
	holD rnhA ssb accB.3 fabA fabH fabZ.1	
	accB.4 fabA.1 fabH.1 fabZ.2 folA folC folE folK folD	
	foIP alsK fbaA.4 pgm.3 gpsA.1 pgsA ynbB.1	
	glyA.5 aceE.4 aceF.4 crr.1 eno.4 fbaA.5 pgm.4	
	glnA.3 glyA.6 dnaQ.1 dnaT dnaX.1 holB.1 holC.1 holD.1 priA	
	priA priB ssb.1 lipA lipB hldD hldE kdsA	
	lpxA.1 waaC waaF waaG waaU dapB.3 dapD.1 dapE.1	
	dapF.3 sucA.4 sucB.4 accB.5 aceE.5 aceF.5 adk.2 cmk	
	coaE cysE.4 dapB.4 dapD.2 dapE.2 dapF.4 dcd dnaQ.2	
	dnaX.2 dut eno.5 fabA.2 fabH.2 fabZ.3 fbaA.6 folA.1	
	folC.1 folD.1 folE.1 folK.1 folP.1 glmS.3 glnA.4 glyA.7	
	guaA hemB.1 hemE.1 hemG.1 hemH.1 hldD.1 hldE.1 holB.2 holC.2	
	holD.2 iscS ispD.2 ispE.2 ispF.2 ispH.2 kdsA.1 lipA.1 lipB.1	
	IpxA.2 murD.1 murl.1 nadD nadE nrdA pgm.5 pgsA.1 rffH.2	
	ribE.1 rpe.4 rpiA.4 rpoC sucA.5 sucB.5 thiL thyA	
	tmk ubiA.1 ubiE.1 ubiX.1 waaC.1 waaF.1 waaG.1 waaU.1 ydiF.2	
	eno.6 fbaA.7 glyA.8 accB.6 aceE.6 aceF.6	
	alsK.1 cysE.5 dapB.5 dapD.3 dapE.3 dapF.5 eno.7 fbaA.8 foID.2	
	glnA.5 glyA.9 paaK pgm.6 rpe.5 rpiA.5 sucA.6 sucB.6	
	ydiF.3 dam dnaQ.3 dnaX.3 holB.3 holC.3 holD.3 ssb.2	
	dapB.6 nadD.1 nadE.1 can glnA.6 fmt.1 folA.2	
	folD.3 glyA.10 thyA.1 ppa acpS coaE.1 rpe.6	
	fbaA.9 pgm.7 rpe.7 rpiA.6 murD.2 murJ paaK.1 crr.2	
	ptsl rffH.3 hemB.2 hemE.2 hemG.2 hemH.2 accB.7	
	ydiF.4 lepB lspA secB.1 secF.1 secG.1 secM.1 adk.3	
	dnaQ.4 dnaX.4 guaA.1 holB.4 holC.4 holD.4 nrdA.1 pqm.8	
	pnp rpoC.1 spoT cmk.1 dcd.1 dnaQ.5 dnaX.5	
	holB.5 holC.5 holD.5 nrdA.2 pnp.1 psuK rpoC.2 thyA.2	
	tmk.1 accB.8 aceE.7 aceF.7 gloB lepB.1 rseP secB.2	
	secG.2 ribE.2 rpIA rpIC rpID rpIK rpIM	
	rpIN rpIO rpIP rpIQ rpIR rpIS rpIT rpIY	
	rpmB rpmC rpmD rpmE rpmG rpmH rpmI rpmJ	
	rpsF rpsI rpsJ rpsL rpsM rpsN rpsO rpsP	
	rpsQ rpsR rpsS rpsT rpsU ykgO eno.8 pnp.2	
	rne rpoC.3 crr.3 pgm.9 pgm.10 rffH.4 cysE.6	
	iscS.1 mnmA tusA tusB tusC tusD tusE	
	ispD.3 ispE.3 ispF.3 ispH.3 iscS.2 thiL.1 sucA.7 citX	
	csrA glnA.7	