

Supplementary Table 6 Functional classification of *C. novyi-NT* genes expressed in specific growth phases

This table lists the number of genes expressed in each growth phase at levels at least 2-fold higher than any of the other growth phases listed.

Manatee functional class	Predicted function within its class					
		Early-log	Mid-log	Late-log	Spore	Total in <i>C. novyi-NT</i> genome
Amino acid biosynthesis		3	14		1	83
	Aromatic amino acid family		2			14
	Aspartate family		3		1	25
	Glutamate family	1	2			17
	Histidine family		4			9
	Other					2
	Pyruvate family		3			9
	Serine family	2				7
Biosynthesis of cofactors, prosthetic groups, and carriers		9	4		2	102
	Biotin	1				5
	Folic acid					11
	Glutathione				1	2
	Heme, porphyrin, and cobalamin	5	2			33
	Menaquinone and ubiquinone					1
	Other	1				11
	Pantothenate and coenzyme A		1		1	9
	Pyridine nucleotides		1			9
	Pyridoxine	1				3
	Riboflavin, FMN, and FAD					4
Thiamine	1				14	
Cell envelope		2	7		13	219
	Biosynthesis and degradation of murein sacculus and peptidoglycan					3
	Biosynthesis and degradation of surface polysaccharides and lipopolysaccharides				4	60
	Biosynthesis of murein sacculus and peptidoglycan				6	43
	Other	1	6		2	84
	Surface structures	1	1		1	29
Cellular processes		4	5		7	226
	Adaptations to atypical conditions				5	38
	Cell division		1			24
	Chemotaxis and motility		1			72
	Detoxification				2	7
	DNA transformation					3
	Other					7
	Pathogenesis	1	1			14
	Sporulation and germination	1				23
	Toxin production and resistance	2	2			38
Central intermediary metabolism		6	6		2	55
	Amino sugars		2			3
	Nitrogen fixation					2
	Nitrogen metabolism	1				5
	Other	4	4		2	42
	Phosphorus compounds	1				2
	Sulfur metabolism					1
DNA metabolism		3	4		1	110
	Chromosome-associated proteins					3
	Degradation of DNA					5
	DNA replication, recombination, and repair	3	4		1	91
	Other					1
Restriction/modification					10	
Energy metabolism		21	14	3	7	247
	Aerobic	1				1
	Amino acids and amines					6
	Anaerobic	2				5
	ATP-proton motive force interconversion	6				23
	Biosynthesis and degradation of polysaccharides		4		1	17
	Chemoautotrophy	1				1
	Electron transport	5	2		5	77
	Entner-Doudoroff					2
	Fermentation	1	2			33
	Glycolysis/gluconeogenesis	1	1	1	1	26
	Methanogenesis					1
	Other	2	1	1		13
	Pentose phosphate pathway					7
	Photosynthesis		1			8
	Pyruvate dehydrogenase					3
	Sugars	2	2			17
	TCA cycle		1	1		7

Fatty acid and phospholipid metabolism			4			48
	Biosynthesis		3			32
	Degradation		1			15
	Other					1
Hypothetical proteins		6	20	1	21	377
	Conserved	4	16	1	10	238
	Unknown	2	4		11	139
Mobile and extrachromosomal element functions		1	3		4	66
	Other		3			10
	Prophage functions				1	20
	Transposon functions	1			3	36
Protein fate			4		3	115
	Degradation of proteins, peptides, and glycopeptides		2		3	69
	Protein and peptide secretion and trafficking					16
	Protein folding and stabilization		2			19
	Protein modification and repair					11
Protein synthesis		1	2		1	157
	tRNA aminoacylation					1
	Nucleoproteins					1
	Other					2
	Ribosomal proteins: synthesis and modification	1	1		1	78
	Translation factors					18
	tRNA aminoacylation		1			29
	tRNA and rRNA base modification					28
Purines, pyrimidines, nucleosides, and nucleotides		4	5			61
	2'-Deoxyribonucleotide metabolism	2				7
	Nucleotide and nucleoside interconversions					6
	Other					3
	Purine ribonucleotide biosynthesis	2	2			16
	Pyrimidine ribonucleotide biosynthesis					12
	Salvage of nucleosides and nucleotides		3			16
	Sugar-nucleotide biosynthesis and conversions					1
Regulatory functions		5	4	1		137
	DNA interactions	2	1			35
	Other	3	3	1		85
	Protein interactions					9
	RNA interactions					7
	Small molecule interactions					1
Signal transduction						18
	PTS					1
	Two-component systems					17
Transcription		1	1	1		63
	Degradation of RNA					6
	DNA-dependent RNA polymerase					9
	Other	1				2
	RNA processing					12
	Transcription factors		1	1		34
Transport and binding proteins		18	28		1	256
	Amino acids, peptides and amines	4	9			62
	Anions					6
	Carbohydrates, organic alcohols, and acids	4	4		1	32
	Cations and iron carrying compounds	6	5			51
	Nucleosides, purines and pyrimidines		1			5
	Other	1	4			28
	Unknown substrate	3	5			72
Unknown function		7	14	1	9	328
	Enzymes of unknown specificity	4	5		2	65
	General	3	9	1	7	263
Total		72	123	7	57	2325