

New species (and genus) belonging to Cloacimonadota

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Table 1: Complete list of names proposed in the current register list.

Proposed Taxon	Etymology	Description	Parent Taxon	Type	Registry URL
Genus <i>Digestoria</i>	[Di.ges.to'ri.a] L. fem. adj. <i>digestoria</i> , promoting digestion; N.L. fem. n. <i>Digestoria</i> , a microbe promoting digestion, referring to its role in anaerobic digestion	Bacteria associated with this genus belong to the <i>Cloacimonadota</i> phylum and have been found mainly in anaerobic digestion systems so far.	<i>Incertae sedis</i> (Bacteria): The taxonomy of the phylum <i>Cloacimonadota</i> is not yet fully elucidated. We therefore propose the name of this genus, but refrain from proposing names for higher taxonomic ranks at this time.	<i>Digestoria delfosseii</i> ^{Ts}	seqco.de/i:52909
Species <i>Cloacimonas fortuita</i>	[for.tu.i'ta] L. fem. adj. <i>fortuita</i> , accidental, fortuitous, by chance; referring to the accidental isolation of the strain	<i>Cloacimonas fortuita</i> was co-isolated from an enrichment culture of a methanogenic reactor containing anaerobic wastewater sludge, alongside its archaeal syntrophic partner <i>Methanothrix</i> and other minor bacterial species. The genome of this species is 1.98 Mb in length, with a GC content of 36.6%, and encodes 1591 genes, including 1529 protein-coding genes. Based on the functional annotation, it is presumed to perform syntrophic propionate oxidation via an alternative pathway. Genome of this species and its relative <i>C. acidaminovorans</i> have an Average Nucleotide Identity of 78.3%, which is below the species-level cut-off (95%) but above the genus-level threshold (>70%). Therefore, we would like to claim a new species within the known <i>Cloacimonas</i> genus.	<i>Cloacimonas</i>	NCBI Assembly: GCA_056337045.1 ^{Ts}	seqco.de/i:52907
	[del.fos.se'i] N.L. gen. n. <i>delfosseii</i> , of Delfosse,	The genome of <i>Digestoria delfosseii</i> in OTU_1 is complete and closed, 2.3 Mbp long, with a GC content of 54.3%, and it contains two rRNA operons. The species represents a distinct lineage defined by ANI \geq 95% to its known relatives. Therefore, only the novel genus and species are formally established, while all higher-level ranks remain unnamed			

Species Proposed <i>Digestoria</i> Taxon <i>delfosse</i> ^s	named in Etymology former group	pending further phylogenomic resolution of the phylum. <i>D. delfosse</i> encodes a complete glycolysis pathway with exception for pyruvate kinase, previously shown to be	<i>Digestoria</i> Parent Taxon	NCBI Assembly: GCA_017095.1 Ts	seqco.de/i/55908 Registry URL
	leader, Dr. Philippe Delfosse	replaced by pyruvate orthophosphate dikinase in <i>Cloacimonadota</i> genomes, and the microorganism can oxidize pyruvate further to acetyl-CoA and acetate. It is capable of beta-oxidation and protein degradation (i.e., encoding multiple peptidases) with a complete metabolism of histidine to glutamate.			