

Costitxia debesea sp. nov.

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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
Class <i>Costixiia</i>	[Cos.tit.xi'i.a] N.L. fem. n. <i>Costitxia</i> , referring to the type genus <i>Costitxia</i> ; <i>-ia</i> , ending to denote a class; N.L. neut. pl. n. <i>Costixiia</i> , the <i>Costitxia</i> class	The description of the class is identical to that given for the type species of the genus.	<i>Bacteroidota</i>	<i>Costitxia</i>	seqco.de/i:43915
Order <i>Costixiales</i>	[Cos.tit.xi.a'les] N.L. fem. n. <i>Costitxia</i> , referring to the type genus <i>Costitxia</i> ; L. suff. <i>ales</i> , ending to denote an order; N.L. fem. pl. n. <i>Costixiales</i> , the <i>Costitxia</i> order	The description of the order is identical to that given for the type species of the genus.	<i>Costixiia</i>	<i>Costitxia</i>	seqco.de/i:43914

Proposed Taxon	Etymology	Description	Parent Taxon	Type	Registry URL
Family <i>Costitxiaceae</i>	[Cos.tit.xi.a.ce'ae] N.L. fem. n. <i>Costitxia</i> , referring to the type genus <i>Costitxia</i> ; L. suff. <i>aceae</i> , ending to denote a family; N.L. fem. pl. n. <i>Costitxiaceae</i> , the <i>Costitxia</i> family	The description of the family is identical to that given for the type species of the genus.	<i>Costitxiales</i>	<i>Costitxia</i>	seqco.de/i:43913
Family <i>Lloretiaceae</i>	[Llo.re.ti.a.ce'ae] N.L. fem. n. <i>Lloretia</i> , referring to the type genus <i>Lloretia</i> ; L. suff. <i>aceae</i> , ending to denote a family; N.L. fem. pl. n. <i>Lloretiaceae</i> , the <i>Lloretia</i> family	The description of the family is identical to that given for the type species of the genus.	<i>Elusimicrobiales</i>	<i>Lloretia</i>	seqco.de/i:43918
Genus <i>Costitxia</i>	[Cos.tit'xi.a] N.L. fem. n. <i>Costitxia</i> , <i>Costitxia</i> , named after the town of Costitx (Mallorca)	The description of the genus is identical to that given for the type species.	<i>Costitxiaceae</i>	<i>Costitxia debesea</i> ^{Ts}	seqco.de/i:43912
Genus <i>Lloretia</i>	[Llo.re'ti.a] N.L. fem. n. <i>Lloretia</i> , named after the town of Lloret de Vista Alegre (Mallorca)	The description of the genus is identical to that given for the type species.	<i>Lloretiaceae</i>	<i>Lloretia debesea</i> ^{Ts}	seqco.de/i:43917

Proposed Taxon	Etymology	Description	Parent Taxon	Type	Registry URL
Species <i>Costitxia debesea</i> ^{Ts}	[de.be.se'a] N.L. fem. adj. <i>debesea</i> , arbitrary name formed from the DBSE (Deep Blue Sea Enterprise)	This species <i>Costitxia debesea</i> sp. nov. is the type to the new genus <i>Costitxia</i> gen. nov. This genus is also the type for the new family <i>Costitxiaceae</i> fam. nov., order <i>Costitxiales</i> ord. nov. and class <i>Costitxiaia</i> class. nov. Metabolic inference indicated that this organism is mainly aerobic since the complete electron transport chain could be detected, including cytochrome bd complex with high affinity to oxygen. The genetic repertoire also suggests that could be facultative anaerobe due to a putative capability to respire nitrate/nitrite or iron, and heterotrophic bacteria according to the central carbon metabolism. The MAG presents Cas-systems and lack the flagellar machinery required for motility. Genes could not be detected for oxidase, catalase and lysine decarboxylase. The MAG originates from groundwater on the island of Mallorca. The type material is strain T4.018, with a genome sequence available under ENA accession GCA_963583855.	<i>Costitxia</i>	NCBI Assembly: GCA_963583855.1 ^{Ts}	seqco.de/i:43911
Species <i>Lloretia debesea</i> ^{Ts}	[de.be.se'a] N.L. fem. adj. <i>debesea</i> , arbitrary name formed from the DBSE (Deep Blue Sea Enterprise)	This species <i>Lloretia debesea</i> sp. nov. is the type to the new genus <i>Lloretia</i> gen. nov. This genus is also the type for the new family <i>Lloretiaceae</i> fam. nov. The MAG encodes for the complete set of complexes for the oxidative electron transport phosphorylation chain, suggesting an aerobic respiration. Despite aerobic respiration, the microorganism seems to be capable of dissimilatory nitrate reduction. Predicted central carbon metabolism indicated a heterotrophic-based lifestyle, encoding all the genes for glycolysis, non-oxidative pentose phosphate pathway, pyruvate oxidation and glycogen degradation, and also including the near-complete Krebs cycle. Genes could not be detected for oxidase, catalase and lysine decarboxylase, and also those involved in motility. The MAG originates from groundwater on the island of Mallorca. The type material is strain T5.010, with a genome sequence available under ENA accession GCA_963583845.	<i>Lloretia</i>	NCBI Assembly: GCA_963986085.1 ^{Ts}	seqco.de/i:43916