

# Register list for 3 new *Electrothrix* species names including *Electrothrix* gen. 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
Genus <i>Electrothrix</i>	[E.lec'tro.thrix] Gr. neut. n. <i>ēlektron</i> , amber (which is the origin of the term electric); Gr. fem. n. <i>thrix</i> , hair; N.L. fem. n. <i>Electrothrix</i> , electric hair	Multicellular filaments, up to several centimeters in length, with 15 to >70 characteristic longitudinal ridges and shared periplasm across cells; electron-conducting; typically spanning the suboxic zone in surface sediments; individual cells are 0.4–8 μm × 2–3 μm in size; polyphosphate inclusions; no sulfur inclusions; gliding motility; mostly marine, including coastal, salt marsh and salt lake inhabiting.	<i>Desulfobulbaceae</i>	<i>Electrothrix communis</i> <sup>Ts</sup>	<a href="https://seqco.de/i:32140">seqco.de/i:32140</a>
Species <i>Electrothrix rattekaaiensis</i>	[rat.te.kaai.en'sis] N.L. fem. adj. <i>rattekaaiensis</i> , from Rattekaai, referring to the location of sample collection	Filamentous bacteria of centimeter length that inhabit the surface of brackish/intertidal sediment and conduct electrons from sulfide-oxidizing cells to oxygen-reducing cells. Gliding motility. Gram-negative, with 15 distinct ridges running longitudinally along the filament. Width of individual cells is 1.2 μm. Can assimilate acetate and propionate; CO <sub>2</sub> fixation via the Wood-Ljungdahl pathway. Contains c-type cytochromes, type IV pili (PilA) and Na <sup>+</sup> antiporters. Polyphosphate and polyglucose storage. Distinguishable by morphology and genome.	<i>Electrothrix</i>	NCBI Assembly: GCA_032595675.1 <sup>Ts</sup>	<a href="https://seqco.de/i:33364">seqco.de/i:33364</a>
Species <i>Electrothrix aestuarii</i>	[ae.stu.a'ri.i] L. gen. n. <i>aestuarii</i> , of a tidal flat/estuary, referring to the habitat it was collected from	Filamentous bacteria of centimeter length that inhabit the surface of brackish/intertidal sediment and conduct electrons from sulfide-oxidizing cells to oxygen-reducing cells. Gliding motility. Gram-negative, with 15 distinct ridges running longitudinally along the filament. Width of individual cells is 1.2 μm. Can assimilate acetate and propionate; CO <sub>2</sub> fixation via the Wood-Ljungdahl pathway. Contains c-type cytochromes, type IV pili (PilA) and Na <sup>+</sup> antiporters. Polyphosphate and polyglucose storage. Distinguishable by morphology and genome.	<i>Electrothrix</i>	NCBI Assembly: GCA_032595685.1 <sup>Ts</sup>	<a href="https://seqco.de/i:33363">seqco.de/i:33363</a>

Proposed Taxon	Etymology	Description	Parent Taxon	Type	Registry URL
Species <i>Electrothrix communis</i> <sup>Ts</sup>	[com.mu'nis] L. <b>fem. adj.</b> <i>communis</i> , common	Filamentous bacteria of centimeter length that inhabit the surface of brackish/intertidal sediment and conduct electrons from sulfide-oxidizing cells to oxygen-reducing cells. Gliding motility. Gram-negative, with 15 distinct ridges running longitudinally along the filament. Width of individual cells is 0.8 μm. Can assimilate acetate and propionate; CO <sub>2</sub> fixation via the Wood-Ljungdahl pathway. Contains c-type cytochromes, type IV pili (PilA) and Na <sup>+</sup> antiporters. Polyphosphate and polyglucose storage. Distinguishable by morphology and genome.	<i>Electrothrix</i>	NCBI Assembly: GCA_030644725.1 <sup>Ts</sup>	<a href="https://seqco.de/i:32139">seqco.de/i:32139</a>