

Obscuribacter gen. nov. and Obscuribacter phosphatis 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 |
|-----------------------------------|---|--|---------------------------|---|---|
| Order <i>Obscuribacterales</i> | [Ob.scu.ri.bac.te.ra'les] N.L. masc. n. <i>Obscuribacter</i> , type genus of the order; - <i>ales</i> , ending to denote an order; N.L. fem. pl. n. <i>Obscuribacterales</i> , the Obscuribacter order | The description is the same as given by (Soo et al., 2014). | <i>Vampirovibrionia</i> | <i>Obscuribacter</i> | seqco.de/i:31957 |
| Genus <i>Obscuribacter</i> | [Ob.scu.ri.bac'ter] L. masc. adj. <i>obscurus</i> , dark; N.L. masc. n. <i>bacter</i> , a rod; N.L. masc. n. <i>Obscuribacter</i> , a bacterium found in the dark | The description is the same as given to the type species by Soo et al. (2014). | <i>Obscuribacteraceae</i> | <i>Obscuribacter phosphatis</i> ^{TS} | seqco.de/i:31955 |

| Proposed Taxon | Etymology | Description | Parent Taxon | Type | Registry URL |
|--|---|---|----------------------|--|---|
| Species <i>Obscuribacter phosphatis</i> ^{Ts} | [phos.pha'tis] N.L. gen. n. <i>phosphatis</i> , of phosphate, accumulating phosphate | The description is the same as provided by Soo et al. (2014): EBPR_351 representing the order Obscuribacterales is conspicuous among the Melainabacteria genomes because of its larger size (5 Mb) and associated metabolic versatility. <i>Obscuribacter phosphatis</i> contains the genes necessary for polyphosphate metabolism, including a low-affinity inorganic phosphate transporter (PiT), polyphosphate kinase 1 (used to synthesize or degrade polyP while consuming or generating, respectively, ATP directly), polyphosphate kinase 2 (degrades polyP producing GTP from GDP), exopolyphosphatase (degrades polyP in a nonreversible reaction that does not generate ATP directly), polyphosphate:AMP phosphotransferase and adenylate kinase (Seviour and Nielsen 2010). <i>Obscuribacter phosphatis</i> has the capacity for aerobic and anaerobic respiration, and fermentation, allowing it to function during both the oxic and anoxic phases of EBPR (Blackall et al. 2002). It contains genes encoding a complete respiratory chain including Complexes I, II, III, and IV and an F-Type ATPase. | <i>Obscuribacter</i> | NCBI Assembly: GCA_001899315.1 ^{Ts} | seqco.de/i:23547 |