

Species *Candidatus Rhabdochlamydia porcellionis*

Etymology

porcellionis

Nomenclatural type

Unknown

Description

'*Candidatus Rhabdochlamydia porcellionis*' comprises intracellular bacteria within membrane-bound vacuoles in the cytoplasm of hepatopancreatic cells of the terrestrial isopod *Porcellio scaber*. Cells are non-motile, non-cultivable on cell-free media and have the Gram-negative microscopic appearance of a cell wall without a discernible peptidoglycan layer. Morphology of '*Candidatus Rhabdochlamydia porcellionis*' corresponds to the description of '*Chlamydia isopodii*' (Shay et al., 1985) and a '*Rickettsiella*-like organism' (Drobne et al., 1999). Bacteria exhibit a chlamydia-like developmental cycle, in which the cells appear in three morphological forms (reticulate, intermediate and mature elementary bodies) that are packed in membrane-bound vacuoles in the cytoplasm of the host cell. Reticulate bodies with coccoid morphology can be small (up to 1 µm in diameter), which multiply by binary fission, or larger (1–4 µm in diameter), with granular inclusions in the cytoplasm. Morphology of intermediate bodies is coccoid (350–650 nm in diameter), with an electron-dense area in the centre of the cell. Mature elementary bodies have a five-layered cell wall, variable rod-shaped morphology (250–700 nm in length and 100–150 nm in diameter) and oblong structures in the cytoplasm. On the basis of its 16S rRNA gene sequence, '*Candidatus Rhabdochlamydia porcellionis*' forms a distinctive lineage within the order *Chlamydiales*, close to the family *Simkaniaceae*, with an oligonucleotide that is complementary to a unique region of the 16S rRNA gene (5'-GAAATGCAAAGGACAGCATC-3'). Assignment to '*Candidatus Rhabdochlamydia porcellionis*' is based on the sequence of the 16S rRNA gene (GenBank accession no. AY223862) and the distinctive morphology of the elementary bodies.

Classification

Bacteria » *Chlamydiota* » *Chlamydiia* » *Parachlamydiales* » "Rhabdochlamydiaceae" » "Rhabdochlamydia" » *Candidatus Rhabdochlamydia porcellionis*

References

Effective publication: Kostanjsek et al., 2004 [1]
Assigned taxonomically: Kostanjsek et al., 2004 [1]

Registry URL

<https://seqco.de/i:264>

References

1. Kostanjsek et al. (2004). '*Candidatus Rhabdochlamydia porcellionis*', an intracellular bacterium from the hepatopancreas of the terrestrial isopod *Porcellio scaber* (Crustacea: Isopoda). *International Journal of Systematic and Evolutionary Microbiology*. DOI:10.1099/ijs.0.02802-0