

Species *Candidatus Xiphinematincola pachtaicus*

Etymology

N.L. masc. adj. *pachtaicus*, based on the specific epithet of *Xiphinema pachtaicum*, originally described as *Longidorus pachtaicus*

Nomenclatural type

Unknown

Description

Non-sporulating, straight or slightly curved rods with rounded ends, 0.8–1.2 µm wide and 2.5–6.0 µm long measured in the nematode tissue (TEM). The bacteria multiply by binary or uneven binary division, producing spherical and coccobacillary forms varying in size. Longer cells, up to 9.0 µm, may occur due to the delayed cell division. The cell-wall structure is typical of Gram-negative bacteria. The cell wall includes the cytoplasmic and outer membranes, extensive periplasm, and a peptidoglycan layer adjacent to the cytoplasmic membrane. The peptidoglycan layer is usually reduced and observable only in some cells. Clusters of the bacterial cells in the nematode tissues are surrounded by a shell originating from the host cell membrane.

Preferably inhabits ovaries of adult female, clustering around the developing oocytes and locating inside the epithelial wall cells of the ovaries and with lower density occur in intestinal epithelial cells. Transmitted vertically through nematode generations.

Found in *X. pachtaicum* collected in the rhizosphere of sour orange trees, Avenida Menendez Pidal, Córdoba, Spain (37.860029, -4.796813). Can be recognized among other existing putative species of this genus by comparison of sequences of 16S rRNA and the concatenated set of housekeeping genes 16S rRNA, *atpD*, *lepA* and *recA* (GenBank sequence numbers) and their unique ecology.

Classification

Bacteria » *Pseudomonadota* » *Betaproteobacteria* » *Burkholderiales* » *Burkholderiaceae* » *Candidatus Xiphinematincola* » *Candidatus Xiphinematincola pachtaicus*

References

Proposed: Palomares-Rius et al., 2021

Registry URL

<https://seqco.de/i:706>

References

1. Palomares-Rius et al. (2021). 'Candidatus Xiphinematincola pachtaicus' gen. nov., sp. nov., an endosymbiotic bacterium associated with nematode species of the genus *Xiphinema* (Nematoda, Longidoridae). *International Journal of Systematic and Evolutionary Microbiology*. DOI:10.1099/ijsem.0.004888