

Species *Candidatus Syngnamydia veneta*

Etymology

L. fem. adj. *veneta*, from Venezia, lagoon from which the samples were collected

Nomenclatural type

Unknown

Description

The provisional taxon “*Candidatus Syngnamydia venezia*” contains intracellular bacteria that may infect gill cells of *Syngnathidae* in marine environments. Members of the taxon exhibit morphologies resembling other members of the *Simkaniaceae*, but as appears to be the case for at least one other *Chlamydiae* infecting fish hosts (Vaughan et al, 2013; Schmidt-Posthaus et al, 2011), may not have a biphasic life cycle. The pleomorphic RBs are approximately 0.75 µm in width and 2 µm long, with longer forms of up to 3.5 µm likely replicating bodies shortly before division. In each RB, a rippled outer membrane bounds an electron-dense membrane-proximal layer surrounding a granular cytoplasm interspersed with electron-lucent regions, which can coalesce to form one or two clusters, the latter possibly indicative of dividing cells. The outer membrane appears to be quite malleable, the shape ranging from round to angular rods and appearing to fill the space provided by the stacking of the surrounding RBs. No clear EB or infectious particle with an electron-dense core was observed, raising the possibility that the RBs may themselves be able to initiate an infection, and lead to epitheliocystis in syngnathid hosts. The gill epithelial inclusions do not appear to cause tissue inflammation or hyperplasia and approximate flattened triaxial ellipsoids in form with a major axis ranging from 40–100 µm. The 16S rRNA gene of “*Candidatus Syngnamydia venezia*” has been deposited in GenBank (Accession No. KC182514). The 16S rRNA gene shows phylogenetic affinity towards the family *Simkaniaceae*.

Classification

Bacteria » *Chlamydiota* » *Chlamydia* » *Chlamydiales* » *Simkaniaceae* » *Candidatus Syngnamydia* » *Candidatus Syngnamydia veneta*

References

Effective publication: Fehr et al., 2013 [1]
Corrigendum: Oren, 2017 [2] (from “*Candidatus Syngnamydia venezia*”)

Registry URL

<https://seqco.de/i:696>

References

1. Fehr et al. (2013). *Candidatus Syngnamydia Venezia*, a Novel Member of the Phylum Chlamydiae from the Broad Nosed Pipefish, *Syngnathus typhle*. *PLoS ONE*. DOI:10.1371/journal.pone.0070853
2. Oren (2017). A plea for linguistic accuracy – also for *Candidatus* taxa. *International Journal of Systematic and Evolutionary Microbiology*. DOI:10.1099/ijsem.0.001715