Aquirickettsia rohweri gen. nov. 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
Genus *Aquirickettsia*	[A.qui.ric.ketts'i.a] **L. fem. n.** *aqua*, water; **N.L. fem. n.** *Rickettsia*, a bacterial genus; **N.L. fem. n.** *Aquirickettsia*, an aquatic *Rickettsia*	The genus *Aquirickettsia* (corrected from *Aquarickettsia* by Oren and Garrity, 2021) was placed in the family Midichloriaceae using a maximum-likelihood tree (PhyML, 1,000 bootstrap replicates) built using the full-length 16S rRNA gene recovered from the metagenome-assembled genome of *A. rohweri*. A Bayesian phylogeny generated from a concatenated amino acid alignment of 92 orthologous, single-copy marker genes fruther supported this placement. The clade (bootstrap support 91) contained other uncultured and uncharacterized bacteria associated with marine invertebrates, including symbionts of the soft coral *Gorgonia ventalina*, the stony corals *Orbicella annularis*, *Orbicella faveolata* and *Acropora cervicornis*, the sponge *Cymbastela concentrica*. It also included symbionts of two freshwater hosts, the ciliate *Euplotes woodruffi* and the cnidarian *Hydra oligactis*. The name refers to the genus's association with aquatic organisms. (Klinges et al., 2019)	*Midichloriaceae*	*Aquirickettsia rohweri*^{Ts}	seqco.de/i:50452
Species *Aquirickettsia rohweri*^{Ts}	[roh'we.ri] **N.L. gen. n.** *rohweri*, named after Dr. Forest Rohwer, whose group first described this taxon in corals	This species is circumscribed by a high-quality metagenome-assembled genome (1.28 Mb, 97.3% complete, with 0.39% contamination, and 1,469 predicted genes) from the coral *Acropora cervicornis*. Its 16S rRNA gene showed species-level homology with sequences from endosymbionts of *Trichoplax adhaerens*, as well as with sequences from both sponge and coral hosts. It is named after Dr. Forest Rohwer, who first described this taxon in corals. It lacks genes to synthesize most sugars and amino acids but possesses several genes linked to pathogenicity including Tlc, an antiporter that exchanges host ATP for ADP, and a complete Type IV secretion system. Despite its inability to metabolize nitrogen, *A. rohweri* possesses the NtrY-NtrX two-component system involved in sensing and responding to extracellular nitrogen. The authors	*Aquirickettsia*	NCBI Assembly: GCF_003953955.1 ^{Ts}	seqco.de/i:50453

Proposed Taxon	Etymology	Description	Parent Taxon	Type	Registry URL
		hypothesize that *A. rohweri* reduces coral health by consuming host nutrients via predation, weakening and eventually killing host cells. They also hypothesize that nutrient enrichment, which is increasingly common on coral reefs, encourages unrestricted growth of *A. rohweri* in its host by providing abundant N-rich metabolites to be scavenged. (Klinges et al., 2019)			