

## Genus *Candidatus* Atelocyanobacterium

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### Etymology

[A.te.lo.cy.a.no.bac.te'ri.um] *Atelocyanobacterium*

### Nomenclatural type

Unknown

### Description

Diazotrophs play a fundamental role in biogeochemical processes by providing bioavailable nitrogen [Sohm et al., 2011](#); [Karl et al., 2012](#)), which determines the primary production in the ocean [Postgate, 1982](#); [Gruber and Sarmiento, 1997](#); [Karl et al., 1997](#)). UCYN-A (*Candidatus* Atelocyanobacterium thalassa) is considered to be the most abundant unicellular diazotroph in the global ocean ([Moisander et al., 2010](#); [Luo et al., 2012](#); [Martinez-Perez et al., 2016](#); [Turk-Kubo et al., 2018](#); [Zehr and Capone, 2020](#)). It has been shown that UCYN-A exchanges fixed nitrogen for fixed carbon from its haptophyte host ([Thompson et al., 2012](#); [Zehr, 2015](#); [Martinez-Perez et al., 2016](#)). The combination of an obligate symbiosis with haptophyte algae ([Thompson et al., 2012](#); [Krupke et al., 2014, 2015](#); [Zehr, 2015](#); [Cabello et al., 2016](#); [Cornejo-Castillo et al., 2016](#); [Martinez-Perez et al., 2016](#); [Zehr et al., 2016](#); [Munoz-Marin et al., 2019](#); [Zehr and Capone, 2020](#); [Farnelid et al., 2021](#)) and cosmopolitan distribution ([Moisander et al., 2010](#); [Farnelid et al., 2016](#); [Harding et al., 2018](#); [Shiozaki et al., 2018](#); [Cabello et al., 2020](#); [Tang et al., 2020](#)) makes UCYN-A unusual in the world's ocean.

### Classification

*Bacteria* » *Cyanobacteriota* » *Cyanophyceae* » *Chroococcales* » *Aphanothecaceae* » *Candidatus*  
*Atelocyanobacterium*

### Registry URL

<https://seqco.de/i:771>