Nucleotide sequence of the 5S rRNA from Listonella (Vibrio) ordalii ATCC 33509 and Listonella (Vibrio) tubiashii ATCC 19105

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The 5S ribosomal RNA nucleotide sequences of <u>Vibrio tubiashii</u> ATCC 19105 and <u>Vibrio ordalii</u> ATCC 33509 have been determined. The 5S rRNA was extracted, purified, and sequenced enzymatically (1), as previously described (2). The sequences are shown below:

V. ordalii ATCC 33509

5 ' UGCUUGGUGAUCAUAGCGUUGUGGACCCACCUGACUCCAUGCCGAACUCAGAAGUGAAAC ACAACAGCGCCGAUGGUAGUGUGGGGUUUCCCCAUGUGAGAGUAGGACAUCGCUAGGCAU 3 '

V. tubiashii ATCC 19105

5'UGCUUGGCGACCAUAGCGUUGUGGACCCACCUGAUUCCAUGCCGAACUCAGAAGUGAAAC GCAAUAGCGCCGAUGGUAGUGUGGGGCUUCCCCAUGUGAGAGUAGGACAUCGCCAGGCAU 3'

The most accurate secondary structure model for these sequences is that of Erdmann <u>et al</u>. (3). This model has been depicted for a closely related organism, <u>Listonella</u> (<u>Vibrio</u>) <u>aestuariana</u> ATCC 35048, in (4). Cluster analysis of the sequences shows that both organisms belong to the gamma-3 subdivision of the Rhodobacteria, and are members of the newly proposed genus <u>Listonella</u> (5). Based on comparative sequence analysis, <u>V. ordalii</u> is closely related to <u>L. pelagia</u>, <u>L. anguillara</u>, and <u>V. tubiashii</u> (95.5%, 94.8%, and 94.8% sequence similarity, respectively). <u>V. tubiashii</u> is also closely related to <u>L. pelagia</u>, as well as to <u>L. aestuariana</u> and <u>Photobacterium logei</u> (5) (99.3%, 97.0%, and 97.0% sequence similarity, respectively).

These results suggest that <u>Vibrio ordalii</u> ATCC 33509 and <u>Vibrio tubiashii</u> ATCC 19105 are misnamed. Further work is required to define the genus <u>Listonella</u> and determine its position within the family Vibrionaceae.

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