A comparison of methods for the typing of fish-pathogenic Vibrio spp.

The validity and distinctiveness of Vibrio anguillarum (= Listonella anguillara), V. (= Photobacterium) damsela, V. ordalii and V. salmonicida was confirmed. However, strains received as V. cholerae and V. splendidus were heterogeneous. Ribotyping, phenotypic (BIOLOG-GN fingerprints and API 20E profiles), chemotaxonomic (lipopolysaccharide [LPS] and outer membrane proteins [OMP]), serogrouping and plasmid profiling data were not always congruent. V. anguillarum isolates were recovered in a single ribotype cluster, but many serogroups. There was little variation in OMP profiles, but not so for LPS profiles and plasmid composition. Heterogeneity was recorded in the phenotypic characters, particularly with the API 20E rapid identification system. V. damsela displayed heterogeneity by ribotyping, but homogeneity by BIOLOG-GN fingerprints and API 20E profiles. Four serogroups were defined, but only one LPS profile was recognised. V. ordalii was homogeneous by ribotyping, serogrouping and plasmid profiling, was accommodated in two LPS groups, but was more heterogeneous by BIOLOG-GN and API 20E. Despite its more exacting cultural requirements, V. salmonicida autoagglutinated and could not be serogrouped, but was accommodated in a single LPS group showing a profile associated with rough strains, and contained plasmids of 4.7 and 42 kb. Heterogeneity was recorded with the API 20E rapid identification system.

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