

Treponema medium の生化学的および系統解析の調査

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Amended biochemical characteristics and phylogenetic position of *Treponema medium*.

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ABSTRACT : Umemoto et al. (1997, *Int J Syst Bacteriol* 47, pp. 67-72) proposed spirochete strain G7201, isolated from the periodontal pocket of an adult patient, as a new species, *Treponema medium*. They deposited this strain in the American Type Culture Collection (ATCC) as type strain ATCC 700293T. Recently, ATCC suggested that there is a discrepancy between the previous report and the results obtained by ATCC in biochemical tests on *T. medium* ATCC 700293T. In this study, we re-examined and verified the biochemical characteristics of *T. medium*. The fermentation pattern of carbohydrates of *T. medium* resembled that of *Treponema vincentii* and *Treponema denticola*, but *T. medium* was clearly differentiated from *T. vincentii* in the production of indole, and from *T. denticola* in the hydrolysis of esculin. Also, sodium dodecylsulfate-polyacrylamide gel electrophoresis (SDS-PAGE) protein profile analysis and phylogenetic comparison of 16S rDNA sequences revealed that *T. medium* is clearly differentiated from any established treponemal species, which supports the validity of the proposal of *Treponema medium* as a new species.

抄録 成人患者の歯周病ポケットから新種スピロヘータ *Treponema medium* を単離し、ATCC にこの種を登録した。*T. medium* の炭水化物発酵パターンは *Treponema vincentii* と *Treponema denticola* に類似したが、インドールの産生において *T. vincentii*、esculin の加水分解において *T. denticola* と明らかな違いがみられた。また SDS-PAGE によるタンパク発現解析、16S rDNA 配列による系統解析では、*T. medium* は明らかに既に確立された *Treponema* 種とは区別された。このことから *T. medium* は新種であることを指示する。

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