NOTES


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Deoxyribonucleic acid hybridization studies done on 24 Providencia friedericiana strains showed that they were highly related (74 to 86% at 75°C) to the type strain of Providencia rustigianii. In addition, their biochemical reactions were the same. Therefore, the names P. rustigianii and P. friedericiana are subjective synonyms. Because P. rustigianii was described and validated first, it is the senior synonym and has priority over the junior synonym, P. friedericiana.

In 1983, two laboratories independently described new, biochemically similar species under the names Providencia rustigianii (2) and Providencia friedericiana (5). P. rustigianii was described in June 1983 and gained standing in nomenclature in July 1983 when it appeared in Validation List 11 (3). P. friedericiana was described in October 1983 and thus gained standing in nomenclature at this time (5). Strains of these two species were exchanged by the two laboratories to determine whether they belonged in the same species. Deoxyribonucleic acid hybridization studies were done by labeling deoxyribonucleic acid from the type strain (ATCC 33673) of P. rustigianii with 32P04 and testing it by the hydroxyapatite method (2) against deoxyribonucleic acid from 24 P. friedericiana strains, including the type strain of that species (DSM2620). The data obtained showed that the two species were highly related. The 24 strains of P. friedericiana were 77 to 89% related to the type strain of P. rustigianii at 60°C and 74 to 86% related at 75°C. Related deoxyribonucleic acid sequences contained only 0.0 to 0.5% divergence. In the previous study, P. rustigianii strains were 81% or more related to strain ATCC 33673T in reactions at 60°C (2). Biochemical tests done by both laboratories also showed the two species to be the same. Any differences noted were due to the media and methods used. An updated biochemical description of P. rustigianii was given by Farmer et al. (1).

We conclude that strains of P. rustigianii are very closely related to those of P. friedericiana and that these two organisms should be classified in the same species. P. rustigianii has priority over P. friedericiana because the former was validated (3) before P. friedericiana was described (5). Since these two organisms have different type strains, P. friedericiana is a (junior) subjective synonym of P. rustigianii (4).

LITERATURE CITED

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