The status of the species Actinobaculum massiliense (Greub and Raoult 2006). Request for an Opinion

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A recent study on members of the genus Actinobaculum revealed that cultures of the species Actinobaculum massiliense CCUG 47753T (=DSM 19118T) currently being distributed do not conform to the properties of the type strain of A. massiliense CIP 107404T given by Greub & Raoult [Greub, G. & Raoult, D. (2002). J Clin Microbiol 40, 3938–3941]. The original strain, CIP 107404T is no longer available from the Biological Resource Center of Institut Pasteur, Paris. Based on data currently available, the organism currently deposited as CCUG 47753T and DSM 19118T is a member of the species Actinobaculum schaalii. Clearly, the organism deposited as CCUG 47753T and DSM 19118T as the type strain of the species Actinobaculum massiliense does not have the properties given by Greub & Raoult. Based on the absence of an authentic type strain, the Judicial Commission is requested to examine the status of the name Actinobaculum massiliense Greub and Raoult 2006 and to issue an Opinion.

Actinobaculum massiliense Greub and Raoult 2002 was included on Validation List no. 111 (Greub & Raoult, 2006) with the type strain designated CIP 107404T (=CCUG 47753T). The strain was distributed from the CCUG to the DSMZ and deposited as DSM 19118T. The Greub & Raoult (2002) strain was isolated from the urine of an elderly woman with recurrent cystitis. However, this strain is no longer listed in the CIP online catalogue and later correspondence with the depositor, Dr G. Greub, on 24 April 2013 to obtain an authentic culture was unsuccessful.

In the effective publication by Greub & Raoult (2002) proposing the name Actinobaculum massiliense, the authors reported that the 16S rRNA gene sequence of the type strain deposited as AF487679 showed 92 to 93% sequence similarity to the type strain of Actinobaculum schaalii. Irrespective of the 16S rRNA gene sequence divergence, there is no explicit citation of phenotypic differences between A. massiliense CIP 107404T and A. schaalii CCUG 27420T by those authors. Closer examination of the article by Greub & Raoult (2002) revealed that the phenotypic properties of A. massiliense CIP 107404T and A. schaalii CCUG 27420T listed in Table 1 (page 3939) are identical and with the exception of acid production from glycogen, the biochemical properties cited under ‘description of ‘A. massiliense’ sp. nov.’ are similar to those of A. schaalii described by Lawson et al. (1997).

However, in a previous study (Yassin et al. 2014) it has been shown that the 16S rRNA gene sequence of CCUG 47753T and DSM 19118T is not identical to the sequence AF487679 (93.5% sequence similarity). It has also been shown that: (1) the 16S rRNA gene sequences of CCUG 47753T and DSM 19118T displayed 98.7% similarity with the sequence Y12329 of the type strain A. schaalii CCUG 27420T; (2) the 16S RNA signature nucleotides of CCUG 47753T and DSM 19118T were similar to those of A. schaalii but not to those found in the sequence AF487679 of A. massiliense (similar to those of Actinobaculum suis); (3) DNA–DNA hybridization between A. massiliense CCUG 47753T and A. schaalii CCUG 27420T gives a value of 68.8% (mean of 70.4 and 67.3%), that is slightly less than 70%; (4) there are no phenotypic differences between the CCUG 47753T and DSM 19118T strains of A. massiliense and the type strain of A. schaalii. On the basis of these data, Yassin et al. (2014) have concluded that the strain deposited in the CCUG culture collection as CCUG 47753T (=DSM 19118T) belongs to the species A. schaalii.

Consequently, the organism currently deposited as CCUG 47753T and DSM 19118T should be recognized as a member of the species A. schaalii (Lawson et al. 1997).

In the absence of the availability of strain CIP 107404T, together with the fact that the properties of strains CCUG 47753T and DSM 19118T do not coincide with the properties of A. massiliense Greub and Raoult 2006 given by Greub & Raoult (2002), it would appear that an
authentic derivative of the type strain may not have been deposited in two different culture collections in two different countries. Consequently, on the basis of Rule 18 g and Rules 27 and 30 of the Bacteriological Code (Lapage et al., 1992), as modified by De Vos & Trüper (2000) and Labeda (2000), this matter is being referred to the Judicial Commission with the request that they examine the facts and issue an Opinion on the status of the name *Actinobaculum massiliense* Greub and Raoult 2006 or provide a solution to the current situation.

**REFERENCES**


