

TAXONOMIC NOTE

A taxonomic note on the authorship and date of valid publication of *Rhodococcus sputi*

B. J. Tindall¹ and J. P. Euzéby²

Author for correspondence: B. J. Tindall. Tel: +49 531 2616 224. Fax: +49 531 2616 418.
e-mail: bti@gbf.de

¹ DSMZ – Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH, Mascheroder Weg 1b, D-38124 Braunschweig, Germany

² Ecole Nationale Vétérinaire, 23, chemin des Capelles, 31076 Toulouse cedex 3, France

Authorship of the name *Rhodococcus sputi* is variously attributed to Tsukamura 1978 or Tsukamura and Yano 1985. DNA–DNA binding data indicate that this species and *Rhodococcus obuensis* Tsukamura 1983 and *Rhodococcus chubuensis* Tsukamura 1983 are subjective (heterotypic) synonyms. Although these organisms have been placed in the genus *Gordonia* as *Gordonia sputi*, the correct name of the taxon created by unification of these three species is directly affected by the date of valid publication of these species as members of the genus *Rhodococcus*. Thus, the name *R. sputi* only has priority if the authorship is attributed to Tsukamura 1978. The question of authorship and priority is clarified in the present work.

Keywords: Bacteriological Code, *Rhodococcus sputi*, authorship, valid publication

The Approved Lists of Bacterial Names (Skerman *et al.*, 1980) did not include the name *Rhodococcus sputi* Tsukamura 1978, which was published by Tsukamura (1978), nor was it included in the corrected version (Skerman *et al.*, 1989). In view of the fact that the name was not included in the Approved Lists, Tsukamura & Yano (1985) revived the name *Rhodococcus sputi*, together with the name *Rhodococcus aurantiacus*. Various taxonomic changes have now meant that *R. sputi* is now included in the genus *Gordonia* (see Stackebrandt *et al.*, 1988, 1989). In addition, it has been shown that the species *R. sputi* (*Gordonia sputi*) has a sufficiently high DNA–DNA binding value to be considered to be in the same taxon as *Rhodococcus obuensis* Tsukamura 1983 (see Tsukamura, 1982, 1983; Zakrzewska-Czerwińska *et al.*, 1988). Riegel *et al.* (1994) have also provided evidence that *Rhodococcus chubuensis* Tsukamura 1983 (Tsukamura, 1982, 1983) is also a member of the species *G. sputi*. However, a number of problems arise in connection with the name *R. sputi*, the basonym of *G. sputi*, which have a direct bearing on the priority of the three different synonyms, *R. chubuensis*, *R. obuensis* and *R. sputi*. The name *R. sputi* appears twice in various publications, either as *R. sputi* Tsukamura 1978 or as *R. sputi* (*ex* Tsukamura) Tsukamura and Yano 1985.

The Bacteriological Code (1975 Revision) (Lapage *et al.*, 1976) states that ‘names validly published under this Code between 1 January 1978 and 1 January 1980 will be added to the Approved Lists of Bacterial Names’ (Rule 24a, Note 1) and the Bacteriological

Code (1990 Revision) (Lapage *et al.*, 1992) states that ‘these Approved Lists of Bacterial Names were approved by the ICSB and published in the IJSB on 1 January 1980. Names validly published between 1 January 1978 and 1 January 1980 were included in the Approved Lists of Bacterial Names’ (Rule 24a, Note 1). Thus, the name *R. sputi* Tsukamura 1978 may be considered to have been placed in the Approved Lists of Bacterial Names (Skerman *et al.*, 1980), although the name was not included in the corrected version published in 1989 (Skerman *et al.*, 1989). It is interesting to note that, in the lists of nomenclatural changes in the period 1 January 1980 to 1 January 1985 published in Moore *et al.* (1985), the name *R. sputi* Tsukamura 1978 is cited correctly. However, in view of the fact that the name *R. sputi* Tsukamura 1978 was not included in the Approved Lists of Bacterial Names (Skerman *et al.*, 1980), Tsukamura & Yano (1985) revived the name *R. sputi* (*ex* Tsukamura 1978) Tsukamura and Yano 1985. It should be noted that the name *R. sputi* (*ex* Tsukamura 1978) Tsukamura and Yano 1985 appears in two subsequent publications by Moore & Moore (1989, 1992), but that the name *R. sputi* Tsukamura 1978 is absent from these lists.

To clarify the situation, it should be noted that the name *R. sputi* Tsukamura 1978 is to be treated as being included in the Approved Lists of Bacterial Names and that the name has priority over *R. sputi* (*ex* Tsukamura 1978) Tsukamura and Yano 1985. However, it should also be noted that the name *R. sputi* (*ex* Tsukamura 1978) Tsukamura and Yano 1985 is illegitimate ac-

ording to Rules 51a and 51b of the Bacteriological Code (1990 Revision) (Lapage *et al.*, 1992). The name is contrary to Rule 33c, since the name *R. sputi* Tsukamura 1978 is treated as being in the Approved Lists of Bacterial Names and therefore cannot be revived, and is illegitimate, as defined by Rule 51a. Similarly, the name *R. sputi* (*ex* Tsukamura 1978) Tsukamura and Yano 1985 is also contrary to Rule 51b, since the authors should have used the name *R. sputi* Tsukamura 1978. It is hoped that clarification of the status of the names *R. sputi* Tsukamura 1978 and *R. sputi* (*ex* Tsukamura 1978) Tsukamura and Yano 1985 will lead to the appropriate corrections in the Approved Lists of Bacterial Names and in those databases that have taken on the mammoth task of keeping track of nomenclatural changes governed by the Bacteriological Code.

References

- Lapage, S. P., Sneath, P. H. A., Lessel, E. F., Skerman, V. B. D., Seeliger, H. P. R. & Clark, W. A. (editors) (1976). *International Code of Nomenclature of Bacteria (1975 Revision)*. Washington, DC: American Society for Microbiology.
- Lapage, S. P., Sneath, P. H. A., Lessel, E. F., Skerman, V. B. D., Seeliger, H. P. R. & Clark, W. A. (editors) (1992). *International Code of Nomenclature of Bacteria (1990 Revision)*. Washington, DC: American Society for Microbiology.
- Moore, W. E. C. & Moore, L. V. H. (1989). *Index of the Bacterial and Yeast Nomenclatural Changes Published in the International Journal of Systematic Bacteriology since the 1980 Approved Lists of Bacterial Names (1 January 1980 to 1 January 1989)*. Washington, DC: American Society for Microbiology.
- Moore, W. E. C. & Moore, L. V. H. (1992). *Index of the Bacterial and Yeast Nomenclatural Changes Published in the International Journal of Systematic Bacteriology since the 1980 Approved Lists of Bacterial Names (1 January 1980 to 1 January 1992)*. Washington, DC: American Society for Microbiology.
- Moore, W. E. C., Cato, E. P. & Moore, L. V. H. (1985). Index of the bacterial and yeast nomenclatural changes published in the International Journal of Systematic Bacteriology since the 1980 Approved Lists of Bacterial Names (1 January 1980 to 1 January 1985). *Int J Syst Bacteriol* **35**, 382–407.
- Riegel, P., Kamne-Fotso, M. V., De Briel, D., Prévost, G., Jehl, F., Piémont, Y. & Monteil, H. (1994). *Rhodococcus chubuensis* Tsukamura 1982 is a later subjective synonym of *Gordona sputi* (Tsukamura 1978) Stackebrandt 1989 comb. nov. *Int J Syst Bacteriol* **44**, 764–768.
- Skerman, V. B. D., McGowan, V. & Sneath, P. H. A. (editors) (1980). Approved lists of bacterial names. *Int J Syst Bacteriol* **30**, 225–420.
- Skerman, V. B. D., McGowan, V. & Sneath, P. H. A. (editors) (1989). *Approved Lists of Bacterial Names*, amended edition. Washington, DC: American Society for Microbiology.
- Stackebrandt, E., Smida, J. & Collins, M. D. (1988). Evidence of phylogenetic heterogeneity within the genus *Rhodococcus*: revival of the genus *Gordona* (Tsukamura). *J Gen Appl Microbiol* **34**, 341–348.
- Stackebrandt, E., Smida, J. & Collins, M. D. (1989). *Gordona* nom. rev. In *Validation of the Publication of New Names and New Combinations Previously Effectively Published Outside the IJSB*, List no. 30. *Int J Syst Bacteriol* **39**, 371.
- Tsukamura, M. (1978). Numerical classification of *Rhodococcus* (formerly *Gordona*) organisms recently isolated from sputa of patients: description of *Rhodococcus sputi* Tsukamura sp. nov. *Int J Syst Bacteriol* **28**, 169–181.
- Tsukamura, M. (1982). Numerical analysis of the taxonomy of nocardiae and rhodococci. Division of *Nocardia asteroides* sensu stricto into two species and descriptions of *Nocardia paratuberculosis* sp. nov. Tsukamura (formerly the Kyoto-I group of Tsukamura), *Nocardia nova* sp. nov. Tsukamura, *Rhodococcus aichiensis* sp. nov. Tsukamura, *Rhodococcus chubuensis* sp. nov. Tsukamura, and *Rhodococcus obuensis* sp. nov. Tsukamura. *Microbiol Immunol* **26**, 1101–1119.
- Tsukamura, M. (1983). *Rhodococcus chubuensis* sp. nov. and *Rhodococcus obuensis* sp. nov. In *Validation of the Publication of New Names and New Combinations Previously Effectively Published Outside the IJSB*, List no. 12. *Int J Syst Bacteriol* **33**, 896–897.
- Tsukamura, M. & Yano, I. (1985). *Rhodococcus sputi* sp. nov., nom. rev., and *Rhodococcus aurantiacus* sp. nov., nom. rev. *Int J Syst Bacteriol* **35**, 364–368.
- Zakrzewska-Czerwińska, J., Mordarski, M. & Goodfellow, M. (1988). DNA base composition and homology values in the classification of some *Rhodococcus* species. *J Gen Microbiol* **134**, 2807–2813.