STATUS OF THE GENERIC NAMES MICROPOLYSPORA
LECHEVALIER ET AL. 1961 AND MICROPOLISPO
SCHCHEPKINA 1940 (ACTINOMYCETALES)

Request for an Opinion from the Judicial Commission
(ICNB) conserving the generic name
Micropolyspora Lechevalier

Hubert A. Lechevalier

Institute of Microbiology, Rutgers, The State University,
New Brunswick, New Jersey

INTRODUCTION

In 1961, Lechevalier et al. described the genus of Actinomy
cetales, Micropolyspora (type species: M. brevicatena),
which was characterized by the production of short chains
of conidia on both the substrate and on the aerial mycelia.
The spores of micropolysporae were reported by these au-
thors to be formed basipetally and by Kosmochev (1964),
acropetally; the point of agreement being that elongation of
some sort takes place during sporogenesis. Micropolys-
porae were further characterized by having a type IV cell
wall (Lechevalier et al. 1966).

Through Bejuki (1965), the author noted that Siu (1951)
included two species of Micropolispora in a list of bacteria
known to decompose cellulose. Siu was referring to a Rus-
sian paper by T. V. Shchepkina (1940). An examination of
Shchepkina's paper indicated that she had isolated from cot-
ton bolls three sporangia-forming actinomycetes and named
them Micropolispora cellulosisolvens, M. disjungens and
M. spiralis. As Couch did, nine years later (1949) when he
reported on the isolation of sporangia-forming Actinomyce
tales, the Russian investigator recognized a morphological
similarity between her Micropolispora spp. and members
of the genus Micromonospora.

The author drew Shchepkina's paper to the attention of
Dr. V. A. Tsyganov of Leningrad and Dr. L. V. Kalakoutskii
of Moscow and asked for information about Mme. Shchepkina
and the fate of her cultures. At the moment, all that has
been learned is that she died in 1941 during the blockade of
Leningrad (1941-1943) and that her cultures are probably

lost. Drs. Tsyganov and Kalakoutskii were also of the opinion that Shchepkina did isolate sporangia-forming actinomycetes but that her descriptions were not good enough to permit generic assignment.

The author obtained cotton bolls from the south of the U.S.A. and Mrs. M. P. Lechevalier tried without success to isolate from them sporangia-forming actinomycetes.

The discovery of Shchepkina's work has historical significance for those interested in Actinoplanaceae but it also creates a nomenclatural problem since according to Rule 24 of the International Code of Nomenclature of Bacteria (1966) "mere orthographic variants of the same name are treated as homonyms. . . ." and "A name of a taxon is illegitimate: . . . If it is a later homonym of the name of a taxon of bacteria. . .

The author believes however that the generic name Microspolyspora (Lechevalier et al.) should be conserved against the name Micropolispora (Shchepkina) for the following reasons.

ARGUMENT

In Chapter 2 of the International Code of Nomenclature of Bacteria (1966), Principle 1 states that one of the essential points of nomenclature is "to avoid or to reject the use of names which may cause error or ambiguity or throw science into confusion. Next in importance is the avoidance of all useless creation of names."

The generic name Micropolispora, Shchepkina, should be considered a nomen dubium since none of the three species named by Shchepkina could be recognized on the basis of her description in the light of present day knowledge. All that can be said of her paper of 1940 is that in all probability she saw and isolated sporangia-forming actinomycetes. From reading her paper, one cannot get a clear picture of the properties of her organisms and assign them to one of the eight sporangia-forming genera keyed by Thiemann et al. (1967) nor consider them as belonging to a new genus (or genera) unknown to us. As we have seen, this confusion cannot be cleared up by examining her cultures, since they cannot be found.

The work of Shchepkina, in spite of its novelty, had been completely forgotten. Not a single publication pointed out that she had preempted Couch in discovering sporangia-forming actinomycetes, until our rediscovery of her work (Lechevalier et al. 1966a; Kalakoutskii et al. 1967). No men-

tion of Micropolispora was found in the two books of Imshenietskii on microbiology of cellulose. In both the Russian edition of 1953 and the German one of 1959, Shchepkina's paper of 1940 is listed in the bibliography. However, Micropolispora and the paper are not mentioned in the text. As a matter of fact, Imshenietskii warned the readers that not all papers cited in the bibliography were mentioned in the text.

It seems thus well established that even in Russia Micropolispora was a forgotten name until we noticed it in 1965. In contrast, the word Micropolyspora serves a useful purpose and has been used by various authors as reviewed by Lechevalier and Lechevalier (1967) (Cross et al. 1968).

If Micropolyspora (Lechevalier et al.) is conserved against Micropolispora (Shchepkina) the creation of a new name for the replacement of Micropolyspora (Lechevalier et al.) will be avoided.

REQUEST

The author requests that the Judicial Commission of the International Committee on Nomenclature of Bacteria rule that the generic name Micropolyspora (Lechevalier, Solorovsky and McDermont 1961) be conserved against the name Micropolispora (Shchepkina 1940).

LITERATURE CITED

- Bejuki, W.M. 1965. Form and utilization of bacteriological information in a select document collection. *Bact. Rev.* 29:546-553.
- Couch, J.N. 1949. A new group of organisms related to Actinomycetes. *J. Elisha Mitchell Sci. Soc.* 65:315-318.
- Cross, T., A.M. Maciver and J. Lacey. 1968. The thermophilic actinomycetes of mouldy hay: Micropolyspora faeni nov. sp. *J. Gen. Microbiol.* 50:351-359.
- Imshenietskii, A.A. 1953. *Microbiology of Cellulose*. (In Russian) Academy of Sciences U.S.S.R. Moscow. 1959. (In German) Akademie-Verlag. Berlin.
- International Code of Nomenclature of Bacteria. 1966. *Intl. J. Syst. Bact.* 16:459-490.
- Kalakoutskii, L.V., I.P. Kirillova and N.A. Krasil'nikov. 1967. A new genus of the Actinomycetales—Intrasporangium gen. nov. *J. Gen. Microbiol.* 48:79-85.
- Kosmachev, A.E. 1964. A new thermophilic actinomycete Micropolyspora thermovirida n. sp. *Microbiology U.S.S.R.* 33:235-237

- Lechevalier, H.A. and M.P. Lechevalier. 1967. Biology of Actinomycetes. *Ann. Rev. Microbiol.* 21:71-100.
- _____, _____ and B. Becker. 1966. Comparison of the chemical composition of cell-walls of nocardiae with that of other aerobic actinomycetes. *Intl. J. Syst. Bact.* 16: 151-160.
- _____, _____ and P.E. Holbert. 1966a. Electron microscopic observation of the sporangial structure of strains of Actinoplanaceae. *J. Bact.* 92:1228-1235.
- _____, M. Solotorovsky and C.I. McDurmont. 1961. A new genus of the actinomycetales: Micropolyspora gen. nov. *J. Gen. Microbiol.* 26:11-18.
- Shchepkina, T.V. 1940. Description of endoparasites of cotton fibers. *Bull. Acad. Sci. U.S.S.R. Classe Sci. Biol.* 5:643-661 (in Russian).
- Siu, R.G.H. 1951. Microbial decomposition of cellulose, with special reference to cotton textiles. Reinhold. New York.
- Thiemann, J.E., H. Pagani and G. Beretta. 1967. A new genus of the Actinoplanaceae: Dactylosporangium, gen. nov. *Arch. Mikrobiol.* 58:42-52.