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ACTINOMYCES VISCOSUS, COMB. NOV.,
A CATALASE POSITIVE, FACULTATIVE
MEMBER OF THE GENUS ACTINOMYCES

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ABSTRACT. Actinomyces viscosus (Howell et al.)
comb. nov. Georg, Pine and Gerencser 1968,
is proposed as the name of the organism pre-
viously described as Odontomyces viscosus
Howell, Jordan, Georg and Pine 1965. It is
proposed that Actinomyces discofoliatus (Grü-
ter 1932) be placed on the list of nomina re-
jicienda as a nomen dubium.

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Actinomyces viscosus, first isolated from gingival plaques of hamsters with periodontal disease by Howell in 1963, was described on the bases of the morphological and general cultural characteristics of 169 isolates from 30 to 48 animals cultured. In Howell's report and in subsequent further descriptions of its physiological and biochemical characteristics by Howell and Jordan (1963) as well as in reports of its ability to induce similar experimental infections in hamsters by Jordan and Keyes (1964a, b) the organism was referred to as the "hamster organism." These workers believed that the organism belonged in the family Actinomycetaceae, but did not believe that any of the existing genera in that family were suitable.

The genus Nocardia was considered inappropriate to accommodate the "hamster organism" on the basis of morphological, physiological, and cell wall differences. Rothia dentocariosa, Georg and Brown (1967) (then known as

Nocardia dentocariosus), which this organism resembled morphologically, was considered inappropriate also because of physiological and cell wall differences. This left only one genus, Actinomyces, to consider. On the basis of (1) cellular morphology, (2) facultative metabolism, (3) fermentation of glucose to form lactic, formic, acetic, and succinic acids, (4) requirement for CO₂, and (5) cell wall constituents, the hamster organism was considered closely related to the genus Actinomyces, particularly A. naeslundii, which is a facultative organism. However, the "hamster organism" was not included in the genus Actinomyces, because, according to the description of this genus in the 7th Edition of Bergey's Manual of Determinative Bacteriology, all species of this genus are catalase negative, whereas the "hamster organism" is catalase positive.

Consequently, a new genus, Odontomyces, was erected. This organism was described as Odontomyces viscosus, gen. nov., spec. nov. Howell, Jordan, Georg and Pine 1965. The species name "viscosus" was selected because of the viscous character of the colonial growth.

Since a redefinition of the genus Actinomyces to include catalase positive organisms is currently being recommended by the "Subgroup on Taxonomy of Microaerophilic Actinomyces" of the "Subcommittee on Taxonomy of Actinomycetes," it is now recommended that Odontomyces viscosus be removed to the genus Actinomyces as A. viscosus.

Actinomyces discofoliatus (Grüter), isolated from human actinomycosis, was described by Grüter in 1932 and by Negroni in 1938. Both of these descriptions are inadequate for identifying an isolate as A. discofoliatus, particularly in the light of current criteria for identifying Actinomyces. Only one of the strains on which either of these descriptions was based is available. This strain, isolated by Negroni, is in the American Type Culture collection as A. discofoliatus ATCC 19246. When this strain was studied, it was found to have the characteristics of A. viscosus and to differ in several respects from the original description of A. discofoliatus. There is some doubt that this culture is actually the same as the original isolate (Negroni, personal communication). If A. discofoliatus and A. viscosus are identical, then the name discofoliatus would appear to have priority. However, the actual identity of the organism originally designated A. discofoliatus is in doubt since none of Grüter's cultures are extant and the published descriptions are inadequate.

On the other hand, A. viscosus has been adequately described and authentic cultures are available. Therefore, it is suggested that the specific epithet discofoliatus be placed on the list of nomina rejicienda as a nomen dubium and that the strain now classified as A. discofoliatus ATCC 19246 be reclassified as A. viscosus.

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