Letters to the Editor

Further Research on the Classification of Mucoid Strains of *Pseudomonas aeruginosa*

In their paper "Influence of Culture Conditions on Expression of the Mucoid Mode of Growth of *Pseudomonas aeruginosa*," Chan et al. (3) state that colony morphology on a single agar medium is an insufficient criterion for the designation of a given isolate as being mucoid or nonmucoid. The chemically defined medium used by Chan et al. (3) is similar to that previously used by Fyfe and Govan (5) to classify mucoid strains of *P. aeruginosa*. It was modified by the addition of Mg^{2+} and gluconate. The effect of gluconate-supplemented culture medium on the production of "slime" by *P. aeruginosa* has been previously described by Haynes (7). Recently, the use of multiple plating media to identify mucoid strains of *P. aeruginosa* was extended and amplified by Pugashetti et al. (8). In the latter investigation, expression of the mucoid colonial phenotype on six different media (including the Vogel-Bonner minimal medium [9] used by Chan et al.) was used to classify 15 independently isolated mucoid strains of *P. aeruginosa* into at least six groups. Although Chan et al. (3) present data which in large part confirm and duplicate the results of the above authors, reference is not made to the appropriate publications.

In discussing the enhancement of mucoid growth caused by inclusion of Mg^{2+} in their culture medium, Chan et al. do not refer to the pertinent report of Boyce and Miller (1) on the effects of Ca^{2+}, Mg^{2+}, and Fe^{2+} on growth and stability of mucoid strains. In addition, the enhanced stability of mucoid strains in shaken cultures, referenced by Chan et al. as a personal communication, has been explained in detail by Govan et al. (6) and Boyce and Miller (2). Chan et al. (3) used light and electron microscopy to demonstrate very convincingly the fibrous nature of the exopolysaccharide produced by mucoid strains of *P. aeruginosa*. However, the authors failed to cite the very similar results of Dunne et al. (4), who also used electron microscopy to show that the cells of mucoid strains of *P. aeruginosa* are surrounded by dense, fibrous material which is absent from cells of nonmucoid variants.

In summary, it would seem that Chan et al. (3) were unaware of recent publications directly related to the subject of their paper. Chan et al. state that their present findings add to the complexity presented by the phenomenal variety of phenotypes of *P. aeruginosa* that are isolated from individual cystic fibrosis patients. It can be argued that failure to cite pertinent findings by other workers in the field does nothing to improve the situation.

LITERATURE CITED

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