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FUNGI

MONILIALES

RELATIONSHIPS IN *PENICILLIUM AURANTIO-VIRENS*

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According to Raper and Thom[1] the *Penicillium cyclopium* Westling series contains four distinct but very closely related species: *P. cyclopium* Westling, *P. puberulum* Bainier, *P. martensii* Biourge, and *P. aurantio-virens* Biourge. A biochemical relationship within the series had been established by the isolation of the metabolites, puberulic and puberulonic acids,[2,3] from all four species. In addition, the first three species were reported[4,5] to produce penicillic acid. We now report the production of the latter metabolite by the fourth species and this establishes the unique relationship between members of the series.

EXPERIMENTAL

Three different strains of *P. aurantio-virens* Biourge (NNRL-2138, NRRL-2010 and NRRL-2137) were available. Employing an NH_4OH color test as a semi-quantitative determination, all three strains seemed to produce penicillic acid but strain NNRL-2137 seemed to afford the greatest amount when cultured on a standard Raulin-Thom medium.

Penicillic acid (150 mg/l) was isolated, 15–20 days after inoculation, by the procedure of Birkinshaw *et al.*[4] with minor modifications. Recrystallization from hot H_2O (deC) yielded penicillic acid hydrate, m.p. 64–64·5°; the anhydrous acid (*ex* light petroleum) had m.p. and m.m.p. 83–84°. The phenylpyrazoline phenylhydrazone had m.p. and m.m.p. 176° and the dibromide had m.p. 154–155°.

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