Taxonomy of Penicillium citrinum and related species

Penicillium citrinum and related species have been examined using a combination of partial beta-tubulin, calmodulin and ITS sequence data, extrolite patterns and phenotypic characters. It is concluded that seven species belong to the series Citrina. Penicillium sizovae and Penicillium steckii are related to P. citrinum, P. gorlenkoanum is revived, Penicillium hetheringtonii sp. nov. and Penicillium tropicoides sp. nov. are described here as new species, and the combination Penicillium tropicum is proposed. Penicillium hetheringtonii is closely related to P. citrinum and differs in having slightly broader stipes, metulae in verticils of four or more and the production of an uncharacterized metabolite, tentatively named PR1-x. Penicillium tropicoides resembles P. tropicum, but differs in the slow maturation of the cleistothecia, slower growth at 30A degrees C and the production of isochromantoxins. The type strain of P. hetheringtonii is CBS 122392(T) (=IBT 29057(T)) and the type strain of P. tropicoides is CBS 122410(T) (=IBT 29043(T)).

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