Withanolide-based steroids from the cultured soft coral *Sinularia brassica*

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Abstract

Twelve new withanolides, *sinubrasolide* A–L (1–12), were isolated from a cultured soft coral *Sinularia brassica*. The structures of 1–12 were established by detailed spectroscopic analysis, including extensive examination of 1D NMR spectroscopic data and 2D NMR (\(^1^H–\(^1^H\) COSY, HMQC, HMBC and NOESY) correlations. These compounds were found to be the withanolide-type steroids which were rarely discovered in marine environment. The structure of 1 was further confirmed by a single-crystal X-ray diffraction analysis. Furthermore, the cytotoxicity of compounds 1, 3, and 9 against a limited panel of cancer lines was also determined.