Biotransformation of (−)-α-Pinene by Botrytis cinerea

Afgan Farooq a,b, Satoshi Tahara b, M. Iqbal Choudhary a, A tta-ur-R ahman a, Zafar Ahmed a, K. Hüsnü Can Başer c, and Fatih Demirci c,*

a International Centre for Chemical Sciences, H. E. J. Research Institute of Chemistry, University of Karachi, 75270-Karachi, Pakistan
b Division of Applied Biosciences, Graduate School of Agriculture, Hokkaido University, 060-8589 Sapporo, Japan
c Medicinal and Aromatic Plant and Drug Research Centre (TRAM), Anadolu University, 26470-Eskishehir, Turkey. Fax: +90 22 23 35 01 27. E-mail: fdemirci@anadolu.edu.tr

* Author for correspondence and reprint requests


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(−)-α-Pinene (1), a major constituent of many aromatic plants was biotransformed by the plant pathogenic fungus Botrytis cinerea to afford three new metabolites, characterized as 3β-hydroxy-(−)-β-pinene (10%) (3), 9-hydroxy-(−)-α-pinene (12%) (4), 4β-hydroxy-(−)-α-pinene-6-one (16%) (5) by physical and spectroscopic methods. A known metabolite verbene none (2) was also obtained.