Photosynthesis of dimeric cinnamaldehyde, eugenol, and safrole as antimicrobial agents

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Abstract

It has been reported that trans-cinnamaldehyde, eugenol and safrole inhibited bacteria and fungi growth in vivo mode. In order to improve their biological activity, dimeric cinnamaldehyde, eugenol and safrole have been photosynthesized. The photosynthesis compounds were 4,6-diphenyl-1,2-dioxane-3,5-dicarboxaldehyde, 4,4-(cyclobutone-1,3-diyl bis(methylene))bis(2-methoxyphenal), and 3,6-bis(benzo[d][1,3]dioxol-5-ylmethyl)-1,2-dioxane. These new dimeric compounds strongly inhibited Candida albicans growth more than the monomers. (C) 2011 King Saud University. Production and hosting by Elsevier B.V.

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