

Isolation and identification of New Peptaibol from *Apiocrea* SP. KGTRIF14T with Inhibitory Effects Against Tobacco Mosaic Virus Infection

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ABSTRACT : During the courses of screening works on the antiviral substances which show the inhibitory activity against tobacco mosaic virus(TMV) infection in tobacco plants (*Nicotiana tabacum* cv. Xanthi-nc), we found that a fungus(*Apiocrea* sp., named as KGTRIF14T), which was isolated from a decaying fruiting body of a basidiomycetes(*Gyroporus* sp.), produces potent inhibitors of TMV infection. The main inhibitory components were isolated from the rice-culture material of the fungus by solvent extraction and purified by silica gel chromatography, preparative TLC, and HPLC. Among the four purified antiviral components (1, 2, 3, and 4), compound 1, and 2 were identified as chrysospermin B, and D respectively. And the other two components 3, and 4 were identified as new members of the peptaibol class of linear lipophilic peptide antibiotics. peptaibol antibiotics have been known to have antibiotic activity against fungi and Gram positive bacteria. Their antibiotic activity is due to their ability to interact with phospholipid bilayers and form voltage-dependent transmembrane channels in planer lipid bilayers. We report here in the isolation, physico-chemical properties, structure determination, and biological activities including inhibitory activity against TMV infection of peptaibol 4.