〔J. Nat. Prod., **50**, 1189 (1987)〕

A New Dihydrostilbene in *Dendrobium chrysathum*.

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Many phenanthrene stilbenoids have been isolated from plants of the Orchidaceae. These compounds are considered to play important roles in such plants as phytoalexins. Our present work describes the occurrence and structural elucidation of a new stilbenoid from *Dendrobium chrysanthum* WALL. ex LINDL. The new compound was isolated from an EtOH extract after Si gel chromatography. By the ^{1}H NMR spectrum; two singlets 〔2.80 (4H), 6.36 (2H) ppm〕 and an ABX system 〔6.60 (d, J=1.8 Hz), 6.67 (dd, J=7.9, 1.8 Hz) and 6.82 (d, J=7.9 Hz)〕 besides three methoxy two hydroxy group, ms (*m/z* 167 and 137) and the nOe experiments, the structure was determined to be 4, 4'-dihydroxy-3, 3', 5-trimethoxybibenzyl.

〔Chem. Pharm. Bull., **35**, 4286 (1987)〕

Polysaccharides in Fungi. XX. Structure and Antitumor Activity of a Branched (1→3)-β-D-Glucan from Alkaline Extract of Yū ěr.

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A water-insoluble glucan (N-5P), 〔α〕$_D^{23}$ +2.3° (0.5M NaOH), was isolated from the alkaline extract of the fruit bodies of Yū ěr (Chinese name) (*Auricularia* species). The molecular weight of N-5P was estimated to be 560,000. From the results of methylation analysis, periodate oxidation, Smith degradation, partial aectolysis, enzymic hydrolysis, chromium trioxide oxidation, and ^{13}C-NMR, it was concluded that N-5P has a main chain composed of β-(1→3)-linked D-glucopyranosyl residues, with single, β-(1→6)-linked D-glucopyranosyl groups attached as side chains, which account for a quater of the total sugar residues. N-5P showed potent antitumor activity against the solid form of sarcoma 180 in mice, and exhibited significant carbon clearance-enhancing activity in mice.

〔Bull. Chem. Soc. Jpn., **60**, 4267 (1987)〕

A High-Resolution Solid-State ^{13}C NMR Study of the Secondary Structure of Branched (1→3)-β-D-Glucans from Fungi : Evidence of Two Kinds of Conformers, Curdlan-Type Single-Helix and Laminaran-Type Triple Helix Forms, as Manifested from the Conformation-Dependent ^{13}C Chemical Shifts.

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The high-resolution ^{13}C-NMR spectra of a variety of fungal branched (1→3)-β-D-glucans were recorded in a DMSO solution and a lyophilized solid in order to gain an insight into the primary and secondary structures in relation to their gel-forming property. The differential behavior of gelformation between the linear and branched (1→3)-β-D-glucans was explained in terms of the molecular conformations in the solid and gel states.