

[Chem. Pharm. Bull., 36, 3032 (1988)]

Polysaccharides in Fungi. XXII. A Water-Soluble Polysaccharide from the Alkaline Extract of the Insect-Body Portion of Chán huā (Fungus: *Cordyceps cicadae*).

TADASHI KIHU, MASAHIKO ITO, KATSUYUKI NAGAI, CHIHIRO HARA, SHIGEO UKAI*

A water-soluble polysaccharide (CI-5N), $[\alpha]_{\text{D}}^{+30}$ in water, was isolated from the alkaline extract of the insect-body portion of Chán huā. CI-5N was composed of D-mannose, D-galactose, and D-glucose in the molar ratio of 1.0 : 0.67 : 0.23, and its molecular weight was *ca.* 390000. From the structural analysis, it was concluded that the polysaccharide has a highly branched structure, and is composed of (1→6)-linked and (1→2)-linked α -D-mannopyranosyl residues, and (1→2)-linked α -D-glucopyranosyl residues. The branches contain short chains having (1→2)-linked β -D-galactofuranosyl residues and single β - and/or α -D-galactofuranosyl residues.

[Biochemistry, 27, 5824 (1988)]

Thermodynamic Parameters and Shape of the Mycobacterial Polymethyl-polysaccharide-Fatty Acid Complex.

TADASHI KIHU,* CLINTON E. BALLOU

Properties of the mycobacterial polymethylpolysaccharide-lipid complex have been investigated by fluorometric techniques. From the dissociation constant for the O-methylglucose polysaccharide-parinaric acid complex at 293K, a Gibbs free energy (ΔG°) of -33.65 KJ/mol was obtained. The Kd decreased with increasing temperature, giving an enthalpy (ΔH°) of 15.4 KJ/mol, and a molar entropy (ΔS°) of 167.4 JK⁻¹ was obtained. From fluorescence depolarization measurements, the methylglucose polysaccharide-Parinaric acid complex appears to display isotropic rotation. The polysaccharide and fatty acid chain-length dependence of the interaction shows a discontinuity for helical polysaccharide segments shorter than 12 sugars and for fatty acids shorter than palmitate.

[Shoyakugaku Zasshi, 42, 28 (1988)]

Microscopic Identification of Folium Apocini Veneti (Luobumaye) in Chinese Commercial Products.

TOSHIHIRO TANAKA,* EIJI SAKAI, NORIKO TSUTSUMI, MIZUO MIZUNO, AKIYO SAKUSHIMA and SANSEI NISHIBE

In China, "Luobumaye" is used for hypertension, nervous breakdown, dropsical swelling caused by nephritis and so on. According to the Chinese pharmacopoea (1985), this drug consists of dried leaves of *Apocynum venetum* L. (Apocynaceae). This study was carried out in order to establish a microscopic technique for identifying the leaves of this plant. It was found that this plant was certainly contained in one kind of species. But no fragment of the leaves could be detected in the cigarette, other kind of species and tablets bearing the name of Luobuma.