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An Acidic Polysaccharide Having Activity on the Reticuloendothelial System from the Bark of *Eucommia ulmoides**

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An acidic polysaccharide, named eucomman A, was isolated from the dried bark of *Eucommia ulmoides* by hot water extraction followed by treatment with cetyltrimethylammonium bromide. The precipitate obtained was purified by ion-exchange chromatography with DEAE-Sephadex A-25. The polysaccharide gave a single band on PAGE, and gave a single peak on gel chromatography. It showed significant reticuloendothelial system-potentiating activity in a carbon clearance test.

It is composed of L-arabinose: D-galactose: D-glucose: L-rhamnose: D-galacturonic acid in the molar ratio of 8:6:4:5:8 in addition to small amounts of peptide moiety. Gel chromatography gave a value of 6.0×10^4 for its molecular mass.

Methylation analysis, ^{13}C -NMR and periodate oxidation studies elucidated that the minimal unit of eucomman A is composed of three terminal α -L-arabinofuranose, eleven α -1,5-linked L-arabinofuranose, two α -1,3-linked L-arabinopyranose, three terminal β -D-galactopyranose, two β -1,3-linked D-galactopyranose, three β -1,4-linked D-galactopyranose, one β -1,6-linked D-galactopyranose, two β -2,4-branched D-galactopyranose, one β -3,6-branched D-galactopyranose, two terminal α -D-glucopyranose, six α -1,4-linked D-glucopyranose, one terminal α -L-rhamnopyranose, five α -1,2-linked L-rhamnopyranose, four α -2,4-branched L-rhamnopyranose, fourteen α -1,4-linked D-galactopyranosyluronic acid and two α -2,4-branched D-galactopyranosyluronic acid residues.

* 本報告は *Chem. Pharm. Bull.*, 38, 1966—1969 (1990) に発表.