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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  $6.0 \times 10^4$  for its molecular mass.

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

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