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## A Reticuloendothelial System Activating Glycan from the Rhizomes of *Curcuma longa*\*

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From the hot water extract of the rhizomes of *Curcuma longa*, a glycan, named ukonan A, has been isolated by fractionation on DEAE-Sephadex A-25 followed by chromatography on Con A-Sepharose and Sephacryl S-300 columns. The glycan showed remarkable reticuloendothelial system potentiating activity in the carbon clearance test.

The glycan was composed of a polysaccharide (92.7%) and a peptide moiety (7.3%). The polysaccharide was composed of L-arabinose, D-xylose, D-galactose, D-glucose, L-rhamnose and D-galacturonic acid in the molar ratio of 12: 4: 12: 1: 4: 10. Gel chromatography gave a value of  $1.1 \times 10^5$  for its molecular mass. It gave a single band on PAGE, and a single peak on gel chromatography.

Chemical and spectroscopic studies established that the minimal unit of the polysaccharide is composed of twelve terminal  $\alpha$ -L-arabinofuranose, four  $\alpha$ -1,5-linked L-arabinofuranose, eight  $\alpha$ -1,3-linked L-arabinopyranose, one  $\beta$ -1,4-linked D-xylopyranose, seven  $\beta$ -3,4-branched D-xylose, nine terminal  $\beta$ -D-galactose, three  $\beta$ -1,3-linked D-galactose, three  $\beta$ -1,6-linked D-galactose, nine  $\beta$ -3,6-branched D-galactose, one terminal  $\alpha$ -D-glucose, one  $\alpha$ -1,4-linked D-glucose, two  $\alpha$ -1,2-linked L-rhamnose, six  $\alpha$ -2,4-branched L-rhamnose and twenty  $\alpha$ -1,4-linked D-galacturonic acid residues.

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