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**Arabinogalactan Core Structure and Immunological Activities  
of Ukonan C, an Acidic Polysaccharide from  
the Rhizome of *Curcuma longa*\***

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Controlled Smith degradation of ukonan C, a phagocytosis-activating polysaccharide isolated from the rhizome of *Curcuma longa* L., was performed. The reticuloendothelial system-potentiating, anti-complementary and alkaline phosphatase-inducing activities of ukonan C and its degradation products were investigated. Methylation analyses of the primary and secondary Smith degradation products and of a de-arabinosylated product indicated that structural features of the arabinogalactan core of ukonan C include a backbone chain composed of  $\beta$ -1,3-linked D-galactose and  $\beta$ -1,4-linked D-xylose. All of the galactose units in the backbone carry side chains composed of  $\beta$ -1,6-linked D-galactosyl residues with or without terminal  $\alpha$ -L-arabinose units at position 3.

Ukonan C showed remarkable effects on both reticuloendothelial system-potentiating and alkaline phosphatase-inducing activities. Periodate oxidation caused a decrease in or disappearance of the immunological activities, but the controlled Smith degradation product having the arabinogalactan core structure of polysaccharide showed a pronounced effect on anti-complementary activity.

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