

Title	Arabinogalactan core structure and immunological activities of ukonan C, an acidic polysaccharide from the rhizome of curcuma longa
Sub Title	
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Publisher	共立薬科大学
Publication year	1993
Jtitle	共立薬科大学研究年報 (The annual report of the Kyoritsu College of Pharmacy). No.38 (1993.) ,p.45- 45
JaLC DOI	
Abstract	
Notes	抄録
Genre	Technical Report
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000038-0045

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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 β -1,3-linked D-galactose and β -1,4-linked D-xylose. All of the galactose units in the backbone carry side chains composed of β -1,6-linked D-galactosyl residues with or without terminal α -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.

* 本報告は *Biol. Pharm. Bull.*, **16** (3), 235—238 (1993) に発表.