Title	Characterization of two acidic polysaccharides having immunological activities from the root of panax ginseng
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.44- 44
JaLC DOI	
Abstract	
Notes	抄録
Genre	Technical Report
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000038-0044

Characterization of Two Acidic Polysaccharides Having Immunological Activities from the Root of *Panax ginseng**

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Two acidic polysaccharides, named ginsenan PA and ginsenan PB, were isolated from the root of *Panax ginseng* C. A. MEYER. They were homogeneous on electrophoresis and gel chromatography, and their molecular masses were estimated to be 1.6×10^5 and 5.5×10^4, respectively. They are composed of L-arabinose : D-galactose : L-rhamnose : D-galacturonic acid : D-glucuronic acid in the molar ratios of 11 : 22 : 1 : 6 : 1 (ginsenan PA) and 3 : 7 : 2 : 8 : 1 (ginsenan PB), in addition to small amounts of *O*-acetyl groups. Almost all (ginsenan PA) and part (ginsenan PB) of the hexuronic acid residues exist as methyl esters. Reduction of carboxyl groups, methylation analysis, nuclear magnetic resonance and periodate oxidation studies indicated that their structural features include mainly both α-arabino-β-3,6-galactan type and rhamnogalacturonan type structural units. Both polysaccharides showed remarkable reticuloendothelial system-potentiating activity in a carbon clearance test, pronounced anti-complementary activity and alkaline phosphatase-inducing activity in a dose dependent manner.

* 本報告は *Biol. Pharm. Bull.*, **16** (1), 22—25 (1993) に発表.