

Title	Characterization of two acidic polysaccharides having immunological activities from the root of panax ginseng
Sub Title	
Author	友田, 正司(Tomoda, Masashi) 武田, 健治(Takeda, Kenji) 清水, 訓子(Shimizu, Noriko) 権田, 良子(Gonda, Ryoko) 大原, 直子(Ohara, Naoko) 高田, 勝利(Takada, Katsutoshi) 平林, 啓子(Hirabayashi, Keiko)
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	<a href="https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000038-0044">https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000038-0044</a>

慶應義塾大学学術情報リポジトリ(KOARA)に掲載されているコンテンツの著作権は、それぞれの著作者、学会または出版社/発行者に帰属し、その権利は著作権法によって保護されています。引用にあたっては、著作権法を遵守してご利用ください。

The copyrights of content available on the Keio Associated Repository of Academic resources (KOARA) belong to the respective authors, academic societies, or publishers/issuers, and these rights are protected by the Japanese Copyright Act. When quoting the content, please follow the Japanese copyright act.

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

Masashi TOMODA, Kenji TAKEDA, Noriko SHIMIZU, Ryōko GONDA, Naoko ŌHARA,  
Katsutoshi TAKADA and Keiko HIRABAYASHI

友田正司, 武田健治, 清水訓子, 権田良子, 大原直子, 高田勝利, 平林啓子

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  $1.6 \times 10^5$  and  $5.5 \times 10^4$ , 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  $\alpha$ -arabino- $\beta$ -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.