

Title	The core structure and immunological activities of glycyrrhizan UA, the main polysaccharide from the root of glycyrrhiza uralensis
Sub Title	
Author	清水, 訓子(Shimizu, Noriko) 友田, 正司(Tomoda, Masashi) 高田, 勝利(Takada, Katsutoshi) 権田, 良子(Gonda, Ryoko)
Publisher	共立薬科大学
Publication year	1992
Jtitle	共立薬科大学研究年報 (The annual report of the Kyoritsu College of Pharmacy). No.37 (1992. ) ,p.53- 53
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=AN00062898-00000037-0053">https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000037-0053</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.

**The Core Structure and Immunological Activities of Glycyrrhizan  
UA, the Main Polysaccharide from the  
Root of *Glycyrrhiza uralensis*\***

Noriko SHIMIZU, Masashi TOMODA, Katsutoshi TAKADA and Ryōko GONDA

清水訓子, 友田正司, 高田勝利, 権田良子

The controlled Smith degradation and limited hydrolysis of glycyrrhizan UA, the main phagocytosis-activating polysaccharide isolated from the root of *Glycyrrhiza uralensis* FISCHER, was performed. The reticuloendothelial system-potentiating, anti-complementary and alkaline phosphatase-inducing activities of glycyrrhizan UA and its degradation products were investigated. Methylation analyses of primary, secondary and tertiary Smith degradation products and of the limited hydrolysis product indicated that the core structural features of glycyrrhizan UA include a backbone chain composed of  $\beta$ -1,3-linked D-galactose. All of the galactose units in the backbone carry side chains composed of mainly  $\alpha$ -1,5-linked L-arabino- $\beta$ -1,6- or 1,3-linked D-galactose residues at position 6. Removal of the arabinosyl side chains caused a pronounced decrease in immunological activity.

The polyol form product obtained by periodate oxidation followed by reduction enhanced the anti-complementary activity. This is the first example of such an effect on the activity by a polyol-type degradation product.

---

\* 本報告は *Chem. Pharm. Bull.*, **40**, 2125—2128 (1992) に発表.