

Title	Studies on the polysaccharides having immunological activities from the root of glycyrrhiza uralensis and the stolon of G. glabra var. glandulifera
Sub Title	
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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.51- 51
JaLC DOI	
Abstract	
Notes	抄録
Genre	Technical Report
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000037-0051

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**Studies on the Polysaccharides Having Immunological
Activities from the Root of *Glycyrrhiza uralensis*
and the Stolon of *G. glabra* var. *glandulifera****

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The effect of glycyrrhizans UA, UB, UC and GA isolated from the licorice roots and stolons on the reticuloendothelial system (RES) was demonstrated by a modification of the *in vivo* carbon clearance test using ICR-SPF male mice. In addition, both the anti-complementary activity and the mitogenic activity on the alkaline phosphatase-inducing activity have been investigated. Structural features of these immunologically active polysaccharides were elucidated by chemical and spectral procedures.

The main parts of both glycyrrhizan UA and glycyrrhizan GA are occupied by the components of α -arabino- β -3,6-galactan type units, though the former has GalA and the latter possesses GalA and GlcA as the component hexuronic acids. Glycyrrhizan UB is basically a similar type of polysaccharide to the former, though α -2,4-branched rhamnoga-lacturonan units occupy the major part of it. In analogy with glycyrrhizan UA, glycyrrhizan UC possesses many α -arabino- β -3,6-galactan type units, and besides these factors, this substance is characteristically rich in β -1,4-galactan, α -1,3- and α -4,6-glucan type units.

Glycyrrhizans UA, UB, UC and GA showed remarkable RES-potentiating activity. The values of the phagocytic index of the latter two polysaccharides were higher than the former two. Glycyrrhizans GA and UC also showed remarkable anti-complementary and alkaline phosphatase-inducing activities.

* 本報告は *J. Pharmacobio-Dyn.*, 15, s—7 (1992) に発表.