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**A Novel Neutral Polysaccharide Having Activity on  
the Reticuloendothelial System from the  
Root of *Glycyrrhiza uralensis*\***

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A novel neutral polysaccharide; named glycyrrhizan UC, was isolated from the root of *Glycyrrhiza uralensis* by hot water extraction followed by treatment with cetyltrimethylammonium bromide, gel chromatography with Sephacryl S-300, and affinity chromatography on Con A-Sepharose. The polysaccharide was obtained from the fraction retained in Con A. It produced a single band on PAGE, and a single peak on gel chromatography. A value of  $6.9 \times 10^4$  was yielded for the molecular mass.

Glycyrrhizan UC is composed of L-arabinose : D-galactose : D-glucose : L-rhamnose in the molar ratio of 10:30:27:1. Its effect on the reticuloendothelial system was demonstrated by a carbon clearance test. The phagocytic index was significantly increased, and the value was superior than those of glycyrrhizans UA and UB.

Chemical and spectroscopic studies indicated that the minimal unit of glycyrrhizan UC is composed of seven terminal  $\alpha$ -L-arabinofuranose, seven  $\alpha$ -1,5-linked L-arabinofuranose, two terminal  $\alpha$ -L-arabinopyranose, four  $\alpha$ -1,3-linked L-arabinopyranose, four terminal  $\beta$ -D-galactopyranose, ten  $\beta$ -1,3-linked D-galactopyranose, eighteen  $\beta$ -1,4-linked D-galactopyranose, ten  $\beta$ -1,6-linked D-galactopyranose, twelve  $\beta$ -3,6-branched D-galactopyranose, five  $\beta$ -4,6-branched D-galactopyranose, one  $\beta$ -2,4-branched D-galactopyranose, twelve terminal  $\alpha$ -D-glucopyranose, eight  $\alpha$ -1,3-linked D-glucopyranose, twenty-six  $\alpha$ -1,4-linked D-glucopyranose, one  $\alpha$ -3,6-branched D-glucopyranose, seven  $\alpha$ -4,6-branched D-glucopyranose, one terminal  $\alpha$ -L-rhamnopyranose and one  $\alpha$ -1,2-linked L-rhamnopyranose residues.

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