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Author	高田, 勝利(Takada, Katsutoshi) 友田, 正司(Tomoda, Masashi) 清水, 訓子(Shimizu, Noriko)
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**Core Structure of Glycyrrhizan GA, the Main Polysaccharide from  
the Stolon of *Glycyrrhiza glabra* var. *glandulifera* ;  
Anti-Complementary and Alkaline Phosphatase-  
Inducing Activities of the Polysaccharide  
and Its Degradation Products\***

Katsutoshi TAKADA, Masashi TOMODA and Noriko SHIMIZU

高田勝利, 友田正司, 清水訓子

The controlled Smith degradation and limited hydrolysis of glycyrrhizan GA, a representative polysaccharide with remarkable phagocytosis-enhancing activity isolated from the stolon of *Glycyrrhiza glabra* var. *glandulifera* REG. et HERD. were carried out. Methylation analyses of the primary and the secondary Smith degradation products and of the limited hydrolysis product indicated that the core structural features of glycyrrhizan GA include a backbone chain composed of  $\beta$ -1,3-linked D-galactose residues. Three-fifths of the galactose units in the backbone carry side chains composed of  $\beta$ -1,3- and  $\beta$ -1,6-linked D-galactosyl residues at position 6. Anti-complementary and alkaline phosphatase-inducing activities of the polysaccharide, periodate oxidation-reduction and the controlled Smith degradation products were investigated, and the controlled Smith degradation product showed significant activity.

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