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Detail [Return to previous page](#)Save: **Protection of *Mucuna pruriens* seeds against *Echis carinatus* venom****Title: is exerted through a multiform glycoprotein whose oligosaccharide chains are functional in this role.****Author:** Guerranti,-R; Aguiyi,-J-C; Ogueli,-I-G; Onorati,-G; Neri,-S; Rosati,-F; Del-Buono,-F; Lampariello,-R; Pagani,-R; Marinello,-E**Citation:** Biochem-Biophys-Res-Commun. 2004 Oct 15; 323(2): 484-90

Abstract: In a previous paper we demonstrated that extracts of *Mucuna pruriens* seeds (MPE) protect mice against *Echis carinatus* venom (EV) by an immunological mechanism. In this paper we demonstrate that the MPE immunogen generating the antibody that cross-reacts with the venom proteins is a multiform glycoprotein (gpMuc) whose immunogenic properties mainly reside in its glycan-chains. The glycoprotein was purified from the protein extract of *M. pruriens* seeds using Concanavalin A affinity chromatography. Using 2-D gel electrophoresis it separated into seven isoforms having MWs in the range from 20.3 to 28.7 kDa and pIs from 4.8 to 6.5. N-terminal sequencing of these spots revealed close similarity since all of them contained the consensus sequence DDREPV-DT found in soybean Kunitz-type trypsin inhibitor. We suggest that gpMuc contains both N- and O-glycans. Mild alkaline treatment but not PNGase F led to loss of reactivity, indicating that O-glycans are probably involved in the antigenicity of gpMuc. Copyright 2004 Elsevier Inc.

Review
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