A blood group A specific lectin from the seeds of Crotalaria striata

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Abstract: A lectin, monospecific for human blood group A red blood cells was extracted from seeds of Crotalaria striata and purified by molecular sieving on Sephadex G-100 and ion-exchange on DEAE-cellulose. A molecular mass of 30 kDa was determined by SDS-polyacrylamide gel electrophoresis under non-reducing and reducing conditions. Molecular sieving on a Superose 12 column indicated a molecular mass of 110 kDa, suggesting the tetrameric nature of the native protein. Amino-acid composition showed the presence of aminated carbohydrate residues on the lectin. N-terminal amino-acid sequencing showed a striking similarity with the N-terminal sequence of the lectin from Crotalaria juncea, which is blood-group non-specific. The potency order of agglutination inhibition with galactose containing monosaccharides was N-acetyl-D-galactosamine > D-galactose > D-galactosamine as found for blood-group-A specific lectins from other species.

Author Keywords: (C. striata); amino acid sequence; blood group A; Lectin; N-acetyl-D-galactosamine
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