Microgramma vaccinifolia: PURIFICATION AND PARTIAL CHARACTERIZATION OF RHIZOME LECTIN

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Lectins are carbohydrate binding proteins or glycoproteins from non immune origin; reversible and specific sugar recognition promote cellular agglutination. The aim of this work was the purification and partial characterization of *Microgramma vaccinifolia* rhizome lectin (MvRL). Proteins from dry rhizome (5 g) were extracted with 0.15 M NaCl and fractionated with 60% or 80% ammonium sulphate saturation. Extract, 0-60% (RF0-60%) and 0-80% (RF0-80%) fractions were evaluated by hemagglutinating activity (HA), protein concentration and polyacrylamide gel (10%) electrophoresis (PAGE) on native or denaturing conditions. HA of RF0-60% was also evaluated after treatment with EDTA. RF0-60% was chromatographed on Sephacryl *S*-300 column. Extracted proteins (78 mg) were salt precipitated and a higher purification factor was detected with RF0-60%, mainly active with human type A erythrocytes. HA was partially inhibited by glycoproteins and carbohydrates; activity was Ca^{+2} dependent, resistant to heating and detected in acidic pH values. PAGE revealed that RF0-60% contained one acidic protein. Gel filtration chromatography resolved RF0-60% as an unique protein peak with molecular mass 100 kDa. Ion addition promoted recovery of abolished MvRL activity. PAGE and gel filtration chromatography revealed that MvRL has high molecular mass.

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