

Structural Characterization of Lectin from *Erythrina speciosa* Seed (LES)

Perilo, C.S¹., Barbosa, J.C¹., Santana, M.A²., de Andrade, M.H³., Nagem, R.A.P¹

¹ Departamento de Bioquímica e Imunologia, ICB, UFMG, Belo Horizonte, Brazil; ² Faculdade de Ciências Biológicas e da Saúde (FCBS), UFVJM, Diamantina, Brazil; ³ UFOP, Ouro Preto, Brazil.

Lectins, multivalent cell-agglutinating proteins by virtue of their exquisite sugar specificities, are useful tools in widespread applications. Plant lectins exhibit sequence and 3-D structure homology suggesting conservation throughout evolution and important physiological roles. Seeds of legumes have long been known to represent a rich source of lectins. In this context, the present investigation has been devoted to characterize the structure of lectin from seeds of *Erythrina speciosa* (LES) by X-ray crystallography, CD and DLS techniques. DLS results show that LES presents monodispersity in 10mM Hepes buffer pH 7.4, containing 5 mM MnCl₂ and 5mM CaCl₂. The shape of CD spectrum in far-UV region indicates that LES is a β -pleated-sheet-rich protein that is confirmed by the x-ray crystallographic structure of the protein. Crystals of LES grew in the presence of NaI, what allowed structure determination by both MR and SAD techniques. Data were collected at Brazilian Synchrotron Light Laboratory (LNLS) and crystal diffracted up to 2.0 Å. Structure refinement is being conducted at ICB, UFMG.

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