

## Structural aspects of a lectin from *Erythrina speciosa* seeds (LES) complexed with lactose

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Crystallographic studies have provided invaluable information concerning the structural aspects of lectin-carbohydrate recognition and specificity. The family of legume lectins is one of the most extensively studied groups of lectins.

This work intends to investigate the structural aspects of a lectin from the seeds of *Erythrina speciosa* (LES) by X-ray crystallography, CD and DLS techniques.

DLS results showed that LES presents monodispersity in 10 mmol.L<sup>-1</sup> Hepes buffer pH 7.4, containing 5 mmol.L<sup>-1</sup> MnCl<sub>2</sub> and 5 mmol.L<sup>-1</sup> CaCl<sub>2</sub>. The shape of CD spectrum in far-UV region indicated that LES is a  $\beta$ -pleated-sheet-rich protein that was confirmed by the X-ray crystallographic structure of the protein. The crystallographic structure of LES could be solved either by MR or SAD techniques.

The protein displays the traditional 'jelly-roll' fold, with largely antiparallel sheets as it occurs in most lectins from legumes. Diffraction data were collected at the Brazilian Synchrotron Light Laboratory (LNLS) and crystals diffracted up to 2.0 Å. Structure refinement is being conducted at ICB, UFMG.



Figure 1: Jelly roll topology of LES ("lectin fold").

### References:

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