

PROSOMES OF HIGHER PLANTS SHARE BIOCHEMICAL PROPERTIES

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Prosomes, small cytoplasmic ribonucleoprotein (SCRNP) complexes of high stability were recently described for the first time in a plant (Kremp et al., *Exp. Cell Res.* 166, p 553, 1986). These RNPs of about 19S were isolated by gradient centrifugation and FPLC from *Nicotiana rustica*, *Solanum tuberosum* and *Phaseolus radiatus*. Prosomes of all 3 species exhibited similar characteristics: Examination by electron microscopy revealed distinct small raspberry-shaped particles (diameter 15 nm) with a central depression. The total molecular weight is about 650 kDa. 2D-PAGE showed about 15 slightly acidic proteins (24-32 kDa). Incubation with biotinylated lectins provided evidence that some of these proteins are glycosylated. Small RNAs (70-150 and about 600 nt) were identified by urea-PAGE. Polyclonal antibodies against the prosome of *Solanum* showed cross reaction with prosomal proteins of other species. These data suggest that prosomes are ubiquitous in higher plants and that their properties are highly conserved during evolution.