

Cytological Studies of Different Species of Subfamily Papaveroideae from Rajasthan

Kuljit Kaur* and R.C. Gupta

Department of Botany, Punjabi University, Patiala 147002

Papaveraceae commonly known as Poppy family includes 40 genera and 770 species at world level. In India, the family is represented by 5 genera and 26 species. The members of family have great medicinal value. Earlier there is no cytological work has been done on members of family from Rajasthan area. Presently meiotic studies have been made on 4 species of family which includes intraspecific polyploidy cytotypes in one of the species (*Argemone mexicana* $2n=28, 56$). The tetraploid cytotype has abnormal meiosis having some quadrivalents during metaphase-I. On the other hand diploid cytotype has normal meiotic course. *Argemone ochroleuca* ($2n=28$) has normal meiotic course. The two species of Papaver (*P.dubium* and *P.rhoeas*) are diploid with $2n=14$. The meiotic behaviour in both the species is highly irregular with the presence of laggards, bridges, cytomixis, leading to abnormal microsporogenesis and consequently resulting in low pollen fertility.