

O-58 (27)**KARYOTYPE ANALYSIS IN DIPLOID AND POLYPLOID SPECIES OF IRANIAN WILD ASPARAGUS**

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Asparagus is a genus in the family Asparagaceae, with a basic chromosome number of $x = 10$ ($2n=2x=20$), and different ploidy levels have been recognized in Asparagus plants. In this respect, the karyotype analysis in some ploidy levels of Asparagus still remains. The experiment reported here, karyotype study was performed in diploid and polyploidy Asparagus in Iran. Seeds of six wild Asparagus accessions belong to four *Asparagus* species include *A. officinalis* L., *A. persicus* Baker., *A. verticillatus* L., and *A. breslerianus* Schult. & Schult. F. was collected from natural zones of Iran. The chromosomes were prepared and arranged in decreasing lengths and paired according to arm ratio. According to results, karyotypic formula consist exclusively of metacentric (m) and submetacentric (sm) chromosomes. The karyotype formula were $8m+12sm$ for *Asparagus officinalis* (2x), $30m+10sm$ for *A. officinalis* (4x), $56m+24sm$ for *A. officinalis* (8x), $12m+8sm$ for *A. persicus* (2x), $14m+6sm$ for *A. verticillatus* (2x), $56m+24sm$ for *A. breslerianus* (8x). Smallest (2.625 μm) and longest (4.199 μm) chromosome length were obtained in *A. breslerianus* and *A. persicus*, respectively. The results demonstrated karyotypic and chromosomal diversity among diploid and ploidy wild Asparagus, which useful in the study of *Asparagus* genus evolution.

Keywords: Asparagus, chromosome, metacentric, submetacentric, karyotype.