

Chromosome Variation and Evolution in Narbon Vetch, *Vicia narbonensis* L.

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ABSTRACT

Vicia narbonensis, commonly known as Narbon vetch, cultivated for forage purposes is considered to share common ancestry with widely cultivated Faba bean, *Vicia faba*. Thirty four accessions of *V. narbonensis* and its five subspecies originating from different countries and habitats were investigated to ascertain the nature and extent of structural changes in the chromosome morphology. In all the accessions, the somatic cells possessed 14 submedian chromosomes. The chromosome complements characteristically resolved into four distinct types of karyotypes (A, B, C, D). In all accessions but one, the 14 chromosomes fall in seven homomorphic pairs. In the karyotype A, B and C, the chromosome pairs III, IV and VII were exactly similar. The two pairs between karyotype A and B, and that of B and C were clearly distinguishable by centromeric location and (or) chromosome length in I and V pairs, and II and VI pairs, respectively. Between karyotypes A and C, I, II, V and VI pairs could be distinguished. Karyotypes A, B and C were not specific to any particular subspecies of the species. Karyotype D displays differences in the chromosome length and the arm ratios.

Key words: *Vicia narbonensis*, karyotypes A, B, C, D, chromosome repatterning

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