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Genetic Systems of Two Species of *Artemisia* Harbouring NW Himalayas

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Abstract—*Regardless of advancement in the modern medicinal system, a large percentage of world population still relies on the indigenous or traditional system of medicine. WHO has reported that about 80% of the world's population is dependent upon non conventional medicines, especially herbal sources in their primary healthcare (Chan, 2003). Genus Artemisia represented by about 500 species; scattered worldwide is one such example. It has blessed the world with drugs such as artemisinin, santonin, hispidulin etc. besides being cytotoxic, antihepatotoxic, antibacterial, antifungal and antioxidant.*

Indian subcontinent harbours 45 species of Artemisia (Karthikeyan et al., 2009). Of these, 20 have been described by Kaul and Bakshi (1984) from North West Himalayas with particular reference to Kashmir. Though extensive cytological and biochemical data is available for this genus, it stands neglected for its reproductive details which are crucial for cultivation as well as conservation.

Present study has its focus on genetic system of 2 species of Artemisia namely A. vestita Wall. and Artemisia glauca Pall. ex Willd. growing on the lower reaches of Pir Panjal mountain ranges, Kishtwar Himalayas and Kashmir Himalayas, forming populations mainly along roadsides. A. vestita Wall., a traditional Tibetan medicine, has wide clinical application for inflammatory diseases. Hispidulin, an active component from this species suppresses the angiogenesis and growth of human pancreatic cancer (He et al.,2010). A. glauca on the other hand has its usage as a spice, flavouring for salads and in manufacture of tarragon vinegar. Both the species investigated propagate through perennial root stock. They have varied sex expressions which is gynomonoecy in A. vestita and functional monoecy in A. glauca. While A. vestita is stable cytologically, 4 populations of A. glauca investigated presently depict the occurrence of distinct chromosome races. Presentation will elaborate on the details of these observations.

Keywords*: Artemisia, perennial root stock, functional monoecy, cytology.*