

Chromosome Study of the Medicinal Plants of Uttarakhand: Initial Steps in Biological Natural Resources Engineering

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Abstract—Traditional medicine systems are part of India's culture. Today the whole world has become progressively more interested in Indian ayurveda and other traditional health care systems. The demand for medicinal plants is increasing in both developing and developed countries as a result of recognition of the non-narcotic nature, lack of side effects and easy availability of many herbal drugs. Majority of population in the developing countries depend on traditional medicine for primary health care needs involving the use of medicinal plants. Uttarakhand state is the hub of medicinal plants species due to its rich biodiversity. The state has tremendous potential for medicinal plants cultivation which may be used for engineering of biological natural resources and will strengthen herbal-based industry in this region. Most often the medicinal plants are collected from the wild. This uncontrolled harvesting has resulted in the extinction of many plants and created huge issues related to the potency and quality of medicinal products derived from those plants. New approaches of biotechnology and conservation strategy can help preserve and utilize the indigenous knowledge of medicinal plants for humankind. The cytological studies are essential in order to prevent further destruction of available genetic variability existing in natural ecosystems and to utilize the available genetic diversity for increased plants productivity required for the fulfilment of the basic needs of the increasing human populations. Thus, we are attempting to study the chromosome number of some medicinal plants from Uttarakhand, starting with plants of Srinagar, Garhwal region. This study is expected to give an insight into the level and patterns of genetic diversity of the plants, and of their genetic potentialities which may be exploited in the future for breeding purposes for conservation of the endangered medicinal plants.