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Prospects in medicinal plants: Strategies for the future

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An unprecedented growth in the plant based pharmaceutical and cosmetic industry has been witnessed during the last decade. The sudden increase in the demand of the medicinal plants has caused a stark increase in the prices of such species. Most of these species are being harvested from the wild, creating ecological imbalances, threatening extinction of many species and depletion of genetic resources. Some of these species are endemic and great disparities in the prices are observed in different parts of the world owing to their poor transportation abilities. European Union and United States are among the top trading entities of the world, while some of the most species rich places in the world such as India contribute very little (0.5%) to the global market. Exploration, propagation and commercialization of the deliquescent natural wealth in such phyto-diversity rich areas, holds great potential both in commercial and scientific fields. We have identified some of the important medicinal plant species in India viz., *Rauvolfia serpentina*, *Rauvolfia tetraphylla*, *Ruta graveolens*, *Salix tetrasperma*, *Vitex negundo*, *Vitex trifolia* and *Withania somnifera* containing alkaloids with medicinal properties. Different strategies were orchestrated using biotechnological applications such as micropropagation, syn-seed production and hairy root culture for enhancing their potential for commercial use. These protocols can be used for propagation, transportation and developing bio-factories. Easy availability of these species will benefit the pharmaceutical companies on one hand while also desist destruction of the natural population maintain ecological balance.

Biography

Naseem Ahmad has earned his PhD degree in Botany (Plant Biotechnology) in 2008 from Aligarh Muslim University, India. Subsequently he has joined the Plant Biotechnology Laboratory, Botany Department; Aligarh Muslim University as Post-doctorate Fellow and since then, he has been carrying out his research work there. He has published more than 30 research papers in various national and international journals. He has also been conferred with two prestigious awards viz., Young Scientist of the Year 2010 by Council of Science Technology, UP and Jr. Scientist of The Year 2010, National Environmental Science Academy, New Delhi. He is also a member of several scientific societies and Editorial Board in various reputed journals.

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