



Biotechnology for medicinal plants in E. Africa

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Abstract

Plant resources with medicinal value have steadily gained importance in many developing countries. Factors that favor increased preference of herbal medicine include escalating prices of synthetic and chemically processed drugs, absence of formal medical services especially in rural areas, drug resistance and lack of drugs for some ailments. With increasing exploitation, the sustainability of the ecosystems of forests, grasslands and other natural reservoirs of most of the plants with medicinal value are being threatened. Threats include possible extinction of species, over-harvesting of leaves, bark, roots, sap, seeds and other products. Loss of ecosystems will adversely affect biodiversity and bio-equilibrium. To address the increasing demand for medicinal plant resources, strategies need to be developed on alternative ways of obtaining the required plant products without recourse to the natural pools. Several possibilities that are being investigated at FaCT Biosciences Ltd to address this need include production of microplants through tissue culture that would be screened to identify species whose biochemical profiles are similar at the young and old growth stages. Other investigations are looking at the potential of technologically manipulating the nutrition and other growth factors that would enhance production of medicinal factors in microplants.