

Bioprospecting- Search for Natural Bioactive Molecules

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From National Conference on Natural Products as therapeutics, Medical Microbiology, Nanobiology and System biology: Current Scenario & Emerging Trends, 'NATCON-2014'.

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18-19 September 2014.

American J of Bio-pharm Biochem and Life Sci 2014 September, Vol. 4 (Suppl 1): PL01

PLENARY LECTURE

The Indian subcontinent is rich in biodiversity and home to a variety of plants and animal species. More than 15,000 species of plants have been recorded from India. Plants have been the source of food and medicine for mankind even before the dawn of civilization. Ayurveda, the Indian system of medicine is the first written document of the use of plants for curing various ailments. It is believed that a very small fraction of the plant species have been used as source of bioactive molecules for their use as pharmaceuticals, pesticides and cosmetics. More than 70% of the currently prescribed drugs are derived from natural molecules. Recently, there is a surge of interest in the search for promising bioactive molecules the food and medicinal plants. We have been investigating plants as potential sources of novel therapeutic molecules. We have discovered several bioactive molecules from fungi and plants. Sporotricolone is a novel bioactive molecule isolated from a fungus from our laboratory which could be a candidate for either a drug for Alzheimer's disease or a novel biopesticide (US patent 2006). We have also isolated several bioactive compounds from the edible roots of *Decalepis hamiltonii* which show free-radical scavenging properties and constitute novel nutraceutical molecules with promising health promoting potential. It is for the first time that an edible root form India has been shown to contain an array of bioactive compounds that could be exploited for better health.