

## **India need to develop strong legal system against bio-piracy: Prof. K V Krishnamurthy**

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A concrete legal mechanism should be in place to protect and sharing of India's biodiversity knowledge of indigenous communities, or else it will become the property of somebody else as per the provisions of existing Intellectual Property Rights (IPR), according to professor K V Krishnamurthy, president, Foundation for the Revitalization of Local Health Traditions, Bangalore.

The usurping of indigenous knowledge or traditional knowledge, including medical knowledge, without any benefit to the owner-society is called bio-piracy or gene robbing. There are more than 250 recorded cases of bio-piracy relating to traditional knowledge systems. As far as Indian cases are concerned, the cases related to Neem, Basmati and Turmeric are the popular ones. The existing legal systems and International Conventions such as Convention on Biological Diversity (CBD) cannot protect traditional knowledge and traditional medicinal systems, Krishnamurthy asserted.

He was delivering a memorial lecture on professor A Gnanam, at the Madurai Kamaraj University, Madurai. Prof Gnanam was the famous botanist and former vice chancellor of Madras University, Pondicherry University and Bharathidasan University, Trichy.

According to Krishnamurthy, India's Traditional Knowledge system is codified and holistic in approach, while western knowledge is non-codified and reductionist. The Traditional Knowledge System of a country is also called Indigenous Knowledge System (IKS). This is in close contact with the nature and has passed on through generations. The overwhelming influence of western knowledge has suppressed the Indian Knowledge system and in some places totally eliminated. So there should be appropriate mechanisms for the protection of the indigenous knowledge, and legal and scientific methods have to be applied to identify the bio-diversity elements.

The Ethno-directed Approach (based on traditional experience and wisdom) of modern research in India's biodiversity (also called bio-prospecting) is the best way of identifying novel biodiversity elements, modifying the traditional resources and to conserve the crop plants, professor Krishnamurthy said. About three-fourths of all the useful plants of the world have been discovered only through the application of ethno directed-approach. India is one of the major centers of origin, domestication and diversification of useful plants.

While interacting with Pharmabiz, professor Krishnamurthy said, attempts to make a wider use of IKS through ethno-directed approach of bio-prospecting have begun to revolutionize the health sector besides food and agriculture. However, active bio-prospecting efforts have unfortunately led to large scale bio-piracy. IKS is being

increasingly stolen and the indigenous communities who are the owners of this knowledge, have become the sufferers, because, there is no benefit sharing.

He reminded that the western knowledge system (WKS) was supported by state and public bodies. But the Indian traditional knowledge system received very little attention or policy or program support. There is very little constructive interaction between followers of IKS and WKS.

The present century is the era of biological sciences. Although bio-diversity is done to identify potential bio-diversity elements to meet all human requirements, bio-prospecting for medicinal plants or chemical, nutraceuticals, food and crops has been taken up world wide on a priority basis. It is very difficult to accurately estimate the commercial value of bio-prospecting in pharmacy and medicine. Many multinational companies have already started to intensively bio-prospect for medicinal plants recognized and tested by the Indian Knowledge System.

In India, the Eastern Ghats have 402 out of 2000 species of domesticated medicinal plants, although there are many more wild medicinal plants used by different tribal communities. The Indian System of medicine such as Ayurveda, Siddha, Unani, Folk and Tribal medicine have all along exploited these medicinal resources. The formulations used successfully by these systems to prevent and cure many ailments in humans and domesticated animals are now getting gradually subjected to phyto-chemical analyses to understand the chemical bases of their activity through reverse pharmacognosy. So a definite law should be implemented to safeguard the biodiversity knowledge of indigenous communities without being robbed or stolen, he said.