EDITORIAL

Research Needs on Ethno-medicine

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Since time unknown, medicinal plants have been used traditionally in curing various ailments and diseases of human beings as well as animals. This knowledge of ethno-medicine has been transmitted from generation to generation. But modern medicine is gradually replacing this knowledge which needs to be recovered.

People living in the rural areas still have to depend on the ethno-medicine owing to the lack of modern medical facilities available in these areas. But the efficacy of ethno-medicine has rarely been confirmed and validated scientifically. Sufficient research inputs have been given on the inventory of the medicinal plants in remote rural areas, though the rural ethno-medical practitioners, in many cases, are reluctant to divulge the knowledge unless they are convinced and pleased.

Though the information is published in research journal, the further research on pharmacognosy, histochemistry and ethnopharmacology is rarely undertaken. Moreover, researches are undertaken in isolation. There is a great necessity to push inter-disciplinary research on these valuable treasures of nature and knowledge in utilizing them. Kacip Fatimah (*Labisia pumila* Blume), one of the most famous and widely used herbs especially in Southeast Asia, possesses bioactive compounds, antioxidants, secondary metabolites and health promoting properties. We want to cite here few examples of research undertaken in Forest Science School, UANL, Mexico.

a. In an earlier study in Biology Faculty, one student selected through interview one species of medicinal plants used for diabetes for her thesis in Cadereta Nuvevoleon. After thorough research on pharmacognosy and histochemistry she selected two species (*Tecoma stans* and *Bauhinia divaricatea*) which were found to be effective in reducing blood sugar in induced diabetic rat.

a. It has been well documented in the literature that the supply of micronutrients are found to be effective in reducing the blood sugar and obesity of the diabetic patients. We evaluated macro- and micro-nutrients of 18 medicinal plants used traditionally to alleviate diabetes in North-eastern Mexico. On the basis of the results we recommended that *Melia azadirachta*, *Opuntia ficus-indica*, *Phoradendron villosum*, *Moringa oleIfer*, *Marrubium vulgare*, *Celtis laevigata*, *Carya illinoiensis, Agave macroculmis*, *Arbutus xalapensiss*, *Cinnamomum verum*, *Croton suaveolens*, *Hedeoma palmeri*, *Phalaris canarionsis*, *Salvia sps.*, Tragia ramos *Tillandsia villosus*, and *Eruca sativa* could be considered to be used effectively for the control of diabetes. Further research is needed to analyse biochemical ingredients of these species.

b. We analysed macro-and micro-nutrient contents of 44 medicinal plant species used for various diseases. It is assessed that some species contain high amount of nutrients (macro- and micro-nutrients) of high nutraceutical values, thereby confirming their efficacy to combat various diseases and provide an opportunity to scientists working on medicinal plants to select the species with high nutrient content. Among the three species selected for high micro-nutrients were Cu (33 mg g^{-1} dw), Fe (1450 to 3973 mg g^{-1} dw) and Zn (167 to 216 mg g^{-1} dw). Therefore, all these species could serve as good sources of both high nutritional and nutraceutical values apart from their respective use in alleviating particular disease. We mention here few species with very high micro-nutrients:

Cu (mg g^{-1} dw): *Celtis laevigata* (33.88), *Phalaris canariensis* (33.78), *Tillandsia usenoides* L. (33.70).

Fe (mg g^{-1} dw): *Gnahalium canescens* (39777.55), *Tragia ramosa* (1450.25), *Tillandsia usenoides* (936.75).

Zn (mg g^{-1} dw): *Salix lasiolepis* (216.31), *Ocimum basilicum* (118.77), *Rosamrinus officinalis* (86.07).

In the context of the above discussion, we urge the necessity of an inter-disciplinary research on medicinal plants. There is also a great necessity of the recovery of ethnic knowledge associated with the use of medicinal plants. In Mexico, many indigenous tribes living in remote villages practice medicinal plants which are not yet recovered.