

## **Popular use and pharmaceutical application of medicinal plants.**

Wagner Luiz Ramos Barbosa - Representative North  
Pharmacy college - Program of After-graduation in Pharmaceutical Sciences;  
Institute of Sciences of the Health; Federal university of Pará  
barbosa@ufpa.br

The National Politics of Medicinal Plants and Phytomedicines has as general objective "to guarantee to the Brazilian population the safe access and the rational use of medicinal plants and phytomedicines", "promoting the sustainable use of biodiversity, the development of a productive chain and the national industry", Pharmaceutical Sciences (PS) can strongly contribute for this general objective attending to the first specific objective of the same document: "to extend a therapeutical options to the patients, guarantying safe access to the medicinal plants, phytomedicines and services related to the phytotherapy, with effectiveness and quality, in the perspective to fulfil the attention to the health, considering the traditional knowledge on medicinal plants". To reach this objective we consider the of elements from PS such as: Pharmaceutical assistance, Development of Phytomedicines and Quality Control in combination with the traditional knowledge on medicinal plants. The association of these knowledge characterizes the Ethnopharmacy.

The application of the traditional, or popular, knowledge about the use of medicinal plant in the development of phytomedicines reveals itself as a very consequent and consistent strategy; therefore, it can generate occupation and income since the organized community contribute in the development process; in the production and insertion of these so developed product in the pharmaceutical market; this process still can be adequate from the ecological point of view, once the pant material used for the production of this phytomedicines can be obtained from vegetal specimens cultivated in deforested areas. When a project with this shape is generated and developed in the Pharmaceutical Sciences has an ethnopharmaceutical profile.

If the prospection of medicinal plants develops itself in an environment where contents of Anthropology, Health Sociology and, of course, Pharmaceutical Sciences interact we have then configured the Etnofarmácia. In the last decade, the consolidation of the Pharmaceutical Assistance has made possible a permanent upgrade of the concepts and the strategies of application of the ethnopharmaceutical method.

Currently, the ethnopharmaceutical survey is understood as a method for the prospection of medicinal plants in which the nosology of a human group can be drawn, the vegetal resources used to treat these illness can be identified, as well the remedies prepared to treat them and finally the relation between patients and remedies. The relation of illness serves as a base for the elaboration of the relation of plants. The

material obtained from them, the remedies, is analysed from two exclusive sub-areas of Pharmaceutical Sciences: the Pharmaceutical Technology and Pharmacognosy.

The Pharmaceutical Technology aims to systemize the preparation of the remedy, being able to transform it into a medicine using published data and experimental results, and also determine biopharmacotechnical parameters to elaborate the formulations. In this activity it is possible to develop new formulations and still discover new pharmaceutical adjuvant.

Finally, the Pharmacognosy characterizes the vegetable from botanical and chemical point of view leaving it prepared for, in combination with pharmaceutical technological and pharmacological data, to be used as active principles for the development of phytomedicines. To produce such botanical macroscopic and microscopic data the vegetable is analysed *in natura* and as a drug obtained from it, in which also pharmacochemical analyses are performed in order to find metabolites in the structure and organs of the vegetable. Refining these analyses, phytochemical assays, which consist in to use chemical reactions on extracts, are carried through. Also chromatographic analysis of these extracts are performed using thin layer and high performance liquid chromatography.

The industrial use of vegetable to produce phytomedicines and phytocosmetics must be preceded of extensive research that so far the described actions also the galenic development that is characterised as the actual elaboration of the pharmaceutical formulation. Once complete this phase, a production scaling must be designed, what must be very well planned because it is definitive for a successful process, because, in these conditions the developed formulation will be subjected to the strong technical conditions that recrudescence when the amounts are multiplied in the industrial scale. In this phase, the parameters defined and verified by the Pharmaceutical Technology play their role, and can vary in accordance to the pharmaceutical formulation being developed.

So, the industrial use of the vegetable is not more conditioned by pharmacognostic, pharmacological or even botanical properties. Here what determines is the constant supply of the plant material with identical quality to that one certified at the beginning of the process and the biopharmacotechnical properties determined in galenic stage, mainly, the physical and physico-chemical properties of the formulation.