A119 Toxic plants available on the market in the district of Bamako, Mali; traditional knowledge compared with modern pharmacology and toxicology

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In Mali the main part of the population use both conventional medicine and traditional medicine to solve their health problems . People have empirical knowledge on plant medicine that mainly is held by traditional practitioners. Scientific studies on plants have been carried on some plants and they have confirmed their local uses. But few data are available on the toxicity of Malian medicinal plants. In the present work we record the toxic plants used as medicine in the Bamako district with the aim to evaluate the knowledge of traditional healers and herbalist on the toxicity of plants used. We want especially to identify the plants they consider as toxic and to compare this knowledge with pharmacology and toxicology data found in the scientific literature. It is also important to record how they prevent these intoxications and to prepare a database on the toxicity of Malian medicinal plants that are in use as medicines.

The survey was carried out in Mali on the market places in the Bamako district. The persons included in the survey (106) are healers and herbalists which consented to participate An individual interview was done The questions asked where on 1) the plants they considered one should be aware of because of the risk on human health, 2) the diseases they treat with the plants, 3) how they prepare the medicine, 4) which are the toxicity signs, 5) how the plants became harmful, and 6) how to prevent these risks.

A survey of literature was conducted to verify or sustained the claimed toxicological data.

20 plants are arranged according to their quotation on the questionnaire. The information included the botanical name, literature survey on pharmacology and toxicology of the plant, healers knowledge on plant toxicity and its prevention.

Swartzia madagascariensis Desv., *Cassia siberiana* DC, *Trichilia roka* Chiov., *Securidaca longepedunculata* Fresen, *Cassia alata* L., are the plants the most supposed to be toxic by traditional practitioners in Bamako district. These plants have been used as arrow poisons, fish poisons, or ordeal poison somewhere. Toxic substances were found in some plants. The plants are used orally and in bath for treatment of variety of ailments such as malaria, stomach pains, constipation, jaundice, gastric ulcers. The toxicity signs are diarrhoea vomiting and are prevented by associated other plants.

A120 Antiproliferative effects of aromatic and aliphatic lichen compounds on human malignant cells *in vitro* and correlation to 5-lipoxygenase inhibitory activity

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Reports of elevated levels of lipoxygenase metabolites in several types of human cancer, including pancreas, breast, colon and prostate (1), have further encouraged studies of lipoxygenase inhibitors as potential cancer chemotherapeutic or cancer chemopreventive agents. In testing lichen compounds of various chemical classes (e.g. depsides, tri-depsides, depsidones, aliphatic lactones, dibenzofurans) for antiproliferative activity against cultured human malignant cell lines by measuring uptake of [^{3}H]-thymidine, correlation has in some cases been found between antiproliferative activity and previously exhibited *in vitro* 5-lipoxygenase inhibitory effects. This has been most notable for the aliphatic lactone protolichesterinic acid and the depsidone lobaric acid (2). In an attempt to clarify the mechanism of activity of compounds exhibiting dual activity, our panel of cell lines has been extended to include 3 lines from pancreas cancer (Capan-1, Capan-2, PANC-1), as well as breast (T47-D), colon (WIDR), prostate (PC-3), small cell lung (NCI-N417), ovary (OVCAR-3), stomach (AGS), leukemia (HL-60, K-562) and T-cell leukemia (JURKAT) lines in addition to normal human fibroblasts, lymphocytes and luminal breast cells. Apart from this extension in the number of cell lines, a marketed 5-lipoxygenase inhibitor has been added to our collection of test substances. In so doing, it is hoped that a better understanding will be obtained as to the variation in sensitivity according to tissue of origin and whether and to what extent the two types of activity are associated with each other in the different chemical classes of compounds.

References: 1. Steele, V.E. et al. (2000) Expert Opin. Inv. Drug 9(9): 2121-2138. **2.** Ögmundsdóttir, H.M. et al. (1998) J. Pharm. Pharmacol. 50(1): 107-115.