Herbal remedies: Natural but not unhazardous - Study cases of Aristolochia intoxication

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Aristolochic acid (AA) produced by some plants from the Aristolochia genus, Asarum and Bragantia species, is a common term to define the mixture of structurally related nitrophenanthrene carboxylic acid derivatives. AA-I and AA-II are the major components of such mixtures and are structurally similar except for the presence of an α-methoxy group on AA-I. Various Aristolochia species are used in traditional medicines for the treatment of diverse disorders like snakebites, fever, gout, infection, diarrhea, arthritis, rheumatism. Due to severe adverse effects, including urothelial cancers and renal deficiency, encountered in self-medicating patients, Aristolochia-based remedies are nowadays forbidden in Europe and in the United States. On the contrary, those plants are still commonly used as herbal remedies in Iran, India, Bangladesh and many other parts of the world. Rat models of acute and chronic AAI and/or AAII-induced toxicity have been developed and described in the literature. Due to the renal organotropism of AA toxicities, our laboratory was interested in studying the urinary metabonomic profiles of rats exposed to those toxicants. This new “omic” concept allowed to identify which part of the kidney is mostly affected, the toxic mode of action and to discover potential urine biomarkers of the pathology.

Biography
Duquesne Marilyn has completed her master thesis at the University of Mons (UMONS) on a subject related to the Balkan Endemic Nephropathy, and obtained a PhD grant on which she is currently working. The result acquired during the master thesis has been published. This funding is co-funded by Joelle Nortier, Head of the department of dialysis and kidney transplantation at Erasme Hospital in Belgium, and Jean-Marie Colet, Head of the Human Biology & Toxicology laboratory at UMONS. This collaboration, already initiated during my master thesis, now includes the Nephrology Department of Zagreb University Hospital headed by Bojan Jelakovic.

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