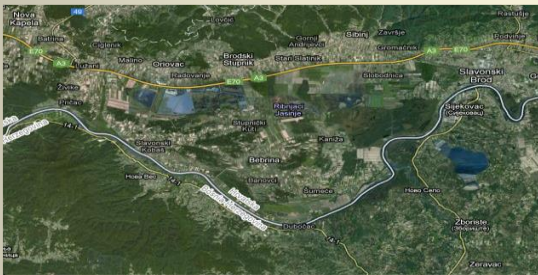


Endemic (Balkan) Nephropathy is a worldwide problem

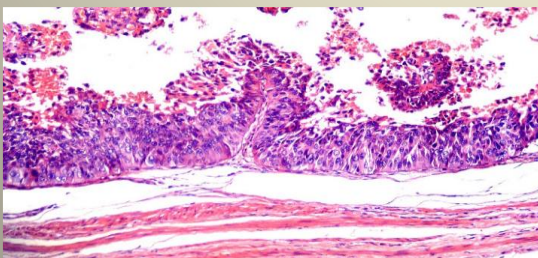
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Endemic (Balkan) nephropathy (EN) is a chronic tubulointerstitial nephropathy affecting farmers living in rural areas of Bosnia, Bulgaria, Croatia, Romania, and Serbia.

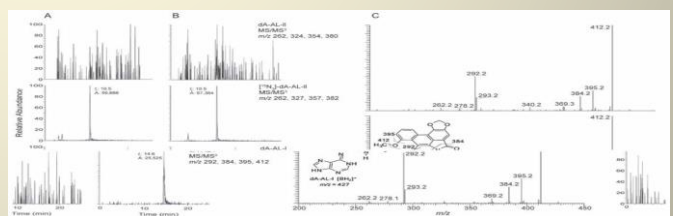


It has insidious onset and invariable progresses to end-stage-renal-disease. Peculiar characteristic is strong association with urothelial carcinoma of the upper urinary tract (UTUC).



The birthwort
(lat. *Aristolochia clematitis*)

Research projects conducted in Croatia confirmed our hypothesis that chronic dietary poisoning by aristolochic acid is responsible for EN and its associated urothelial cancer. Aristolochic acid was found as a compound in various herbal products which were used as a part of traditional medicine for thousands of years worldwide. Interestingly, aristolactam DNA adducts and the same pattern of p53 mutation was found in patients with UTUC treated with so-called “natural medicine” containing aristolochic acid in many countries including Taiwan, United States, United Kingdom, Spain, Belgium etc.



Mass spectroscopic characterization of DNA-aristolactam (AL) adducts in the renal cortex

Thus, EN should be considered as an environmental form of worldwide present aristolochic acid nephropathy.

Therefore, this is an important alert for nephrologists, urologist and public health authorities which are taking care of villagers from all world regions where plants of *Aristolochia* genus are growing.