In vivo anti-hyperuricemic effects of Tradescantia albiflora Kunth extracts in potassium oxonate-induced hyperuricemic rats

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Tradescantia albiflora Kunth (Commelinaceae) is used in traditional Chinese medicine prescriptions to treat gout and hyperuricemia. To the best of our knowledge there has been no prior report on the antioxidant activities or xanthine oxidase inhibitory actions of extracts from T. albiflora. We evaluated the xanthine oxidase (XOD) inhibition activity of extracts from T. albiflora in vitro and examined its effects in vivo in a rat model of hyperuricemia. Experimental hyperuricemia was induced in rats by intraperitoneal injections of the uricase inhibitor potassium oxonate (PO, 250 mg/kg bw). Rats were divided into five groups for treatment (n=8 per group): (1) PO; (2) PO + TA-HE; (3) PO + TA-EA; (4) PO + TA-BuOH; (5) PO + TA-Water. Besides the controls (group 1), the remaining 4 groups were i.p. injected with PO (250 mg/kg) one hour before orally administering the T. albiflora extract. All the four subfractions (hexane, ethyl acetate, n-butanol and distilled water) extracts derived from T. albiflora were observed significantly reduced plasma uric acid (P UA) relative to the PO group. The EA soluble fractions (TA-EA) exhibited the best xanthine oxidase (XO) activity. These findings show that the in vivo hypouricemic effect in hyperuricemic animals was consistent with in vitro XO inhibitory activity from T. albiflora extracts.

References: