

Inhibition of xanthine oxidase by some Iranian plant remedies used for gout

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Abstract

Gout is a metabolic disease with a distinct increase in the uric concentration in body fluids. Xanthine oxidase is an enzyme that converts hypoxanthine and xanthine to uric acid and has an important role in pathogenesis of some diseases. Flavonoids are a big group of natural compounds and have a distinct inhibitory activity against xanthine oxidase. In vitro assay of xanthine oxidase inhibitory activity was determined by measurement of decreased uric acid absorbance by UV spectroscopy at 290 nm. Aqueous extracts of *Mentha pulegium*, *Hypericum perforatum* and *Matricaria chamomilla* had dominant inhibitory activity on xanthine oxidase. *Cynara scolymus* and *Phasaeolus vulgaris* also showed some xanthine oxidase inhibitory activity. *Hedera hlix*, *Trachyspermum copticum*, *Zea mays*, *Cinnamomum zeylanicum*, *Fraxinus excelsior*, *Cichorium intybus*, *Capparis spinosa* and *Trigonella foenum-graceum* had no significant effect on xanthine oxidase activity. As *Matricaria chamomilla* also has anti-inflammatory effects, it can be useful for treatment of gout in which inflammation is an important problem.

Reaxys Database Information

Author keywords

Gout; *Matricaria chamomilla*; Xanthine oxidase

Indexed Keywords

EMTREE drug terms: *Capparis spinosa* extract; *Cichorium intybus* extract; *cinnamomum zeylanicum* extract; *Cynara scolymus* extract; *Fraxinus excelsior* extract; *hedelix*; *Hypericum perforatum* extract; maize extract; *Matricaria chamomilla* extract; *Mentha pulegium* extract; plant extract; *Trachyspermum copticum* extract; *Trigonella foenum graecum* extract; unclassified drug; uric acid; xanthine oxidase

EMTREE medical terms: antiinflammatory activity; artichoke; article; *capparis spinosa*; chicory; *Cinnamomum zeylanicum*; drug inhibition; fenugreek; gout; *Hypericum perforatum*; in vitro study; inflammation; ivy; maize; *Matricaria*; *Mentha pulegium*; *Trachyspermum copticum*; ultraviolet spectroscopy; uric acid blood level

Chemicals and CAS Registry Numbers: uric acid, 79-93-2; xanthine oxidase, 9002-17-9

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