CZECH ACADEMY OF AGRICULTURAL SCIENCES

Open Access CAAS Agricultural Journals

Veterinární mec

Safety assessment of sanguiritrin, alkaloid fraction of Macleaya cordata, in rats

J. Psotova, R. Vecera, A. Zdarilova, E. Anzenbacherova, P. Kosina, A. Svobodova, J. Hrbac, D. Jirovsky, M. Stiborova, V. Lichnovsky, J. Vicar, V. Simanek, J. Ulrichova

https://doi.org/10.17221/5534-VETMED

Citation: Psotova J., Vecera R., Zdarilova A., Anzenbacherova E., Kosina P., Svobodova A., Hrbac J., Jirovsky D., Stiborova M., Lichnovsky V., Vicar J., Simanek V., Ulrichova J. (2006): Safety assessment of sanguiritrin, alkaloid fraction of Macleaya cordata, in rats. Veterinarni Medicina, 51: 145-155.

download PDF

The subchronic safety of sanguiritrin, a mixture of sanguinarine (SA) and chelerythrine (CHE) quaternary benzo[c]phenanthridine alkaloids (QBA), obtained from Macleaya cordata was assessed. Rats were fed a diet containing 120 ppm sanguiritrin (100 ppm QBA) for 109 days. The feed consumption and the animal weight were monitored. The content of QBA in selected tissues and plasma was determined using HPLC. It was evidenced that 2% of QBA were absorbed through the GIT while 98% were excreted in the feces. In plasma, bilirubin, urea, creatinine, glomerular filtration, AST, ALT, GMT, ALP and total antioxidant capacity were determined. In liver, GSH level, lipoperoxidation products, SOD and GPx activities and total amount of cytochrome P450 were evaluated. Damage to nuclear DNA was assessed; a ^{32}P-postlabeling assay proved that no DNA-adducts were detected in nuclear and mitochrondrial DNA in liver. No adverse effects were observed on rat organism. QBA had no influence on the gut mucosal epithelium, liver tissue and any biochemical parameters tested. Oxidative stress was not manifested during the experiment.

Keywords:

benzo[c]phenanthridine alkaloids; oral administration; biochemical markers; oxidative stress; DNA damage; cytochrome P450

download PDF

Impact factor (WoS)

2016: 0.434
5-Year Impact Factor: 0.7

SJR (SCOPUS)

2017: 0.280 – Q2 (Veterina (miscellaneous))

Abstracted/Indexed in

Agrindex of AGRIS/FAO d
Animal Breeding Abstrac
CAB Abstracts
CNKI
CrossRef
Current Contents®/Agric
Biology and Environmen
Sciences
Czech Agricultural and Fo
Bibliography
DOAJ (Directory of Open
Journals)
EBSCO – Academic Searc
Ultimate
FSTA (formerly: Food Scie
Technology Abstracts)
Google Scholar
J-GATE
Science Citation Index Ex
SCOPUS
TOXLINE PLUS
Web of Knowledge℠
Web of Science®

Open Access Policy

This journal provides imn open access to its conten principle that making res freely available to the pub supports a greater global exchange of knowledge.

Contact

Mgr. Zuzana Karlíková
Executive Editor
phone: + 420 227 010 352
e-mail: vetmed@cazv.cz

Address

Veterinární Medicína
Czech Academy of Agricu Sciences

Slezská 7, 120 00 Praha 2, Republic