













Chinese Journal of Natural Medicines

2019

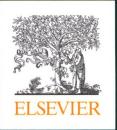
Volume 17 Number 7 July 2019

(Monthly, Founded in 2003)

Original name: 中國天然采物

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CHINESE JOURNAL OF NATURAL MEDICINES

Volume 17, Number 7, July 2019

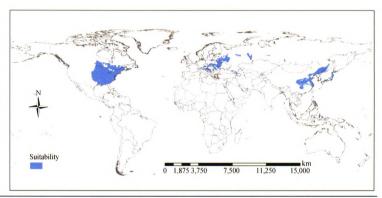
Contents

·Research articles·

Prediction of the globally ecological suitability of *Panax quinquefolius* by the geographic information system for global medicinal plants (GMPGIS)

SHEN Liang, LI Xi-Wen, MENG Xiang-Xiao, WU Jie, TANG Huan, HUANG Lin-Fang, XIAO Shui-Ming, XU Jiang*, CHEN Shi-Lin*

In this study, the areas with potential ecological suitability for *Panax quinquefolius* were predicted using the geographic information system for global medicinal plants (GMPGIS) based on 476 occurrence points and 19 bioclimatic variables. The results indicate that the new ecologically suitable areas for *P. quinquefolius* are East Asia and the mid-eastern Europe. These findings can be used as a useful guide for *P. quinquefolius* introduction and cultivation in ecologically suitable areas.



An *in vitro* study on interaction of anisodine and monocrotaline with organic cation transporters of the SLC22 and SLC47 families

490-497

CHEN Jia-Yin, Jürgen Brockmöller, Mladen V. Tzvetkov, WANG Li-Jun, CHEN Xi-Jing

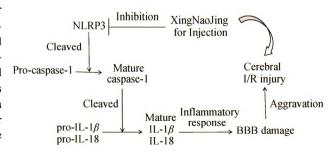
This study systematically investigated the interaction of two alkaloids, anisodine and monocrotaline, with organic cation transporter OCT1, 2, 3, MATE1 and MATE2-K by using *in vitro* stably transfected HEK293 cells. Both anisodine and monocrotaline were inhibitors of organic cation transporter OCT1, 2, 3, MATE1 and MATE2-K. The OCT2 may be important for renal elimination of anisodine and OCT1 was responsible for monocrotaline uptake into liver.

XingNaoJing injections protect against cerebral ischemia/reperfusion injury and alleviate blood-brain barrier disruption in rats, through an underlying mechanism of NLRP3 inflammasomes suppression

498-505

QU Xiao-Yu, ZHANG Yue-Ming, TAO Li-Na, GAO Huan, ZHAI Jing-Hui, SUN Jing-Meng, SONG Yan-Qing*, ZHANG Si-Xi*

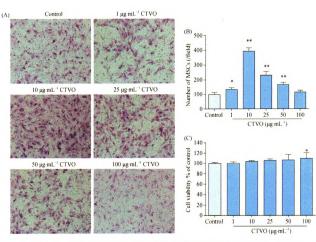
Xingnaojing injections are used clinically in China for treatment of stroke. The results showed that XNJ could significantly increase the survival percent, decrease the infarct area and ameliorate neurological deficits and brain damage after I/R injury. Leaking amount of Evans Blue was reduced by XNJ, and the expression of tight junction protein, occludin and ZO-1 was also up-regulated by XNJ, which showed a role of protection on BBB disruption. The expression of NLRP3 was inhibited after exposure of XNJ, which was associated with inhibition of the inflammatory response.



Catharmus tinctorius volatile oil promote the migration of mesenchymal stem cells via ROCK2/ 506-516 Myosin light chain signaling

LIU Ya-Mei, LI Wang-Yang, XU Liang-Liang, YU Li-Juan, LUO Yi-Wen, LI Xi-Can, ZHANG Xun-Chao, XIONG Yun-Pu, CHEN Hong-Tai, ZHU Jun-Lang, CHEN Chen, XIE Yu-Lu, CHEN Dong-Feng*, WANG Bin*

This study indicates that *Catharmus tinctorius* volatile oil promotes MSC migration through enhancing ROCK2 mRNA and protein expressions. MSC migration induced by CTVO was blunted by ROCK2 inhibitor, which also decreased myosin light chain (MLC) phosphorylation. Meanwhile, the siRNA for ROCK2 inhibited the effect of CTVO on MSC migration ability and attenuated MLC phosphorylation, suggesting that CTVO may promote BMSC migration *via* the ROCK2/MLC signaling. *C. tinctorius* volatile oil-targeted therapy could be a beneficial strategy to improve the therapeutic potential of cell transplantation for bone diseases in regenerative medicine.



A hepatoprotection study of Radix Bupleuri on acetaminophen-induced liver injury based on CYP450 inhibition

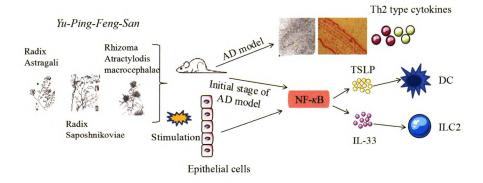
WANG Yu-Xin, DU Yi, LIU Xia-Fei, YANG Fang-Xiu, WU Xiao, TAN Li, LU Yi-Hong, ZHANG Jing-Wei, ZHOU Fang, WANG Guang-Ji*

We investigated the potential hepatoprotective effect of Radix Bupleuri (RB) by inducing acute liver injury (ALI) in an animal model using acetaminophen (APAP) after pretreatment with RB aqueous extract for three consecutive days. The results clearly demonstrates that RB exhibited significant protective action against APAP-induced acute live injury *via* pretreatment, and which is partly through inhibiting the increase of activity and protein expression of cytochrome P450 enzymes.

Chinese medicine *Yu-Ping-Feng-San* attenuates allergic inflammation by regulating epithelial 525-534 derived pro-allergic cytokines

WANG Xiao-Tong, LIU Hai-Liang, YU Xi, WANG Can, GUI Li-Li, WANG Xiao-Yu, HUA Yong-Qing, ZHENG Jie, HONG Min*

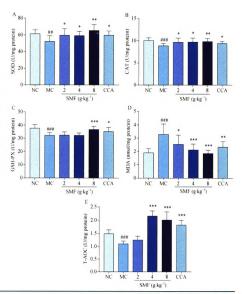
This study aimed to investigate the mechanisms of Yu-Ping-Feng-San (YPFS) on attenuating allergic inflammation in the initial stage of atopic dermatitis (AD). The results showed that YPFS was a potential natural product for attenuating the initial stage of allergic inflammation through regulating NF-κB-TSLP/IL-33 pathway, which may provide a novel effective target for the prevention and treatment of allergic diseases.



Hematopoietic effect of small molecular fraction of *Polygoni multiflori* Radix Praeparata in 535-544 cyclophosphamide-induced anemia mice

ZHU Li-Li, FAN Luo-Di, HU Ming-Hua, MA Fang-Li, QI Jin*

The aim of this study is to investigate the protective effects of a small molecular fraction (SMF) of *Polygoni multiflori* Radix Praeparata (PMRP) in a cyclophosphamide (CTX) induced anemia mouse model. The results show that SMF can significantly accelerate the recovery of peripheral hemogram, increase the activity of antioxidant enzymes and GM-CSF in serum and spleen. SMF also increases the number of spleens cells, improves bone marrow pathology. These show that, the SMF of PMRP promoted the recovery of hematopoietic function in a CTX-induced anemia mouse, which can support SMF to be used as an adjunct to chemotherapy to counteract its side effects.

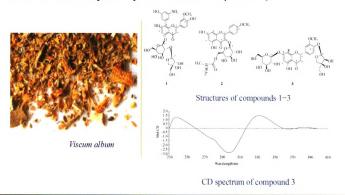


Three new bioactive flavonoid glycosides from Viscum album

545-550

DAI Jia-Kun, CAO Duo^{*}, LI Cui-Hua, GAO Jing, LI Meng-Qing, FAN Na, WEI Ya-Hui^{*}, SUN Zheng-Liang^{*}, HOU Meng-Yang

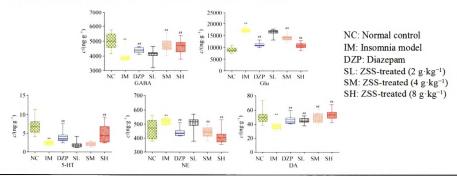
Two new flavonoid glycosides, named viscumneoside XII (1), and viscumneoside XIII (2); a new dihydrogen flavonoid glycoside product named viscumneoside XIV (3), were isolated from the aerial part of *Viscum album*, along with seven known compounds. In addition, cytotoxicity assay showed that 1, 2 and 3 possessed significant inhibitory activities against C6, A549 and MDA-MB-231 (the inhibition rate arrived about 50%, 70% and 74% respectively with $IC_{50} \le 60.00 \, \mu mol \cdot L^{-1}$).



Determination of five neurotransmitters in the rat brain for the study of the hypnotic effects of Ziziphi Spinosae Semen aqueous extract on insomnia rat model by UPLC-MS/MS

YAN Yan, ZHANG Min, DU Hui-Zhi, SHEN Chen-Xi, LI Ai-Ping, PEI Xiang-Ping, DU Chen-Hui*, QIN Xue-Mei*

The data obtained in this study demonstrate that Ziziphi Spinosae Semen (ZSS) aqueous extract (4 and 8 $g \cdot kg^{-1} \cdot d^{-1}$ for seven days) could ameliorate the symptoms of insomnia by significantly changing the levels of the neurotransmitter parameters and modulating the levels of monoamines and amino acid neurotransmitters in the brain.



[Reference of CJNM] CN32-1845/R*2003*m*A4*80*en*P*\frac{1}{2}50.00*1500*9*2019-07

2017 JCR IF: 1.773



Establishment: May 2003

Sponsored by

China Pharmaceutical University



Chinese Pharmaceutical Association



Published by Science Press

ISSN: 2095-6975













Chinese Scientific Core Journal

CSCD Indexed in Chinese Science Citation Da



Full-text on ScienceDirect

Chinese Journal of Natural Medicines

Aims and Scopes

The Chinese Journal of Natural Medicines (CJNM) is devoted to communications among pharmaceutical and medicinal plant scientists who are interested in the advancement of the botanical, chemical, and biological sciences in support of the use of natural medicines in health care, in particular, traditional Chinese medicines (TCM). CJNM aims to cover a broad spectrum of original research papers and review articles on natural medicines or their products from all over the world, including those from TCM.

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ISSN 2095-6975



PISSN: 2095-6975 EISSN: 1875-5364 Original PISSN: 1672-3651 Publication Frequency: 12 issues per year/Monthly

Editing: Editorial Board of Chinese Journal of Natural Medicines

Address: 24, Tongjia Xiang, Nanjing, China

Postcode: 210009

Tel: 86-25-83271565, 83271568

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http://www.sciencedirect.com/science/journal/18755364