

# Anti-Inflammatory Activity of Licochalcone A Isolated from *Glycyrrhiza inflata*

Yongming Cui, Mingzhang Ao, Wei Li, Jing Hu, and Longjiang Yu\*

College of Life Science and Technology, Institute of Resource Biology and Biotechnology, Huazhong University of Science & Technology, Wuhan 430074, China. Fax: +862787792265. E-mail: cym981248@163.com or yulj@hust.edu.cn

\* Author for correspondence and reprint requests

Z. Naturforsch. **63c**, 361–365 (2008); received October 2/November 22, 2007

Licochalcone A was isolated from the roots of *Glycyrrhiza inflata* and evaluated for its anti-inflammatory activity in xylene-induced mice ear edema and carrageenan-induced paw edema tests. At the same time, the inhibition of prostaglandin biosynthesis by licochalcone A was also studied in lipopolysaccharide (LPS)-induced mouse macrophage cells. At 5 mg/ear, licochalcone A showed remarkable effects against acute inflammation induced by xylene, and at the doses of 2.5, 5, 10 mg/kg (p.o.), licochalcone A reduced significantly paw edema induced by carrageenan compared to the control at the fourth hour. Both COX-2 activity and expression were significantly inhibited by licochalcone A at all the test doses. Therefore, licochalcone A could be a useful compound for the development of new anti-inflammatory agents.

*Key words:* Licochalcone A, *Glycyrrhiza inflata*, Anti-Inflammatory Activity