



Effect of Total Flavonoids from *Chrysanthemum indicum* on Ultrastructure and Secretory Function of Synoviocytes in Adjuvant Arthritis Rats

Xiao-Yu CHEN ^{1,2}, Jun LI ¹, Wen-Ming CHENG ¹, Hui JIANG ¹, Lei ZHANG ¹, & Rong HU ¹

¹ School of Pharmacy, ² Department of Histology and Embryology,
Anhui Medical University, Hefei, Anhui Province, China 230032

SUMMARY. *Chrysanthemum* is a traditional Chinese medicine used in China to treated inflammatory disease. The total flavonoids of *Chrysanthemum indicum* (TFC) were extracted from the dried bud of *C. indicum*. Our previous study had demonstrated TFC was a new class of effective anti- inflammation, analgesia and immunoregulation agents. In this study, we established an adjuvant arthritis (AA) model by injection of Freund's Complete Adjuvant (FCA) to investigate the effect of TFC on chronic autoimmune disease. Secondary paw swelling of AA rats was measured with volume meter and polyarthritis index was scored. IL-1 β and TNF- α production in synoviocytes were determined by radioimmunoassay. RT-PCR observed mRNA expressions of IL-1 β and TNF- α in the synovial membrane. The morphological alteration of synoviocytes organell was followed by transmission electron microscopy.

KEY WORDS: *Chrysanthemum indicum*, Inflammation, Immunoregulation, Synoviocytes, Experimental Arthritis.

* Author to whom correspondence should be addressed. *E-mail:* cxyayd@yahoo.com.cn or lijun@ahmu.edu.cn