



Effect of Baicalin on Mast Cell-Dependent Anaphylactic Reaction

Yufei FENG, Zhongxu JING, Yanhong WANG & Yongji LI*

*College of Pharmacy, Heilongjiang University of Chinese Medicine,
24 Heping Road, Harbin 150040, P.R. China*

SUMMARY. Baicalin, a naturally occurring flavonoids compound, has multiple biological activities. However, roles of baicalin in the mast cell-mediated anaphylactic reaction have not been fully understood. In this study, the effect of baicalin on mast cell-dependent anaphylactic reaction and its mechanisms were investigated *in vivo* and *in vitro*. Baicalin inhibited skin vascular responses induced by compound 48/80 in rats, which also inhibited passive cutaneous anaphylaxis (PCA) reaction induced by ovalbumin (OVA). Moreover, Baicalin reduced histamine and trypsin release from peritoneal mast cells (PMC) activated by OVA in dose dependent. Pretreatment with Baicalin suppressed calcium uptake into PMC induced by antigen complex. The level of intracellular cyclic adenosine monophosphate (cAMP) in PMC was obviously elevated after baicalin treatment compared with control cells. The decreased calcium uptake and increased cAMP level might be involved in the inhibitory effect of baicalin on mast cell activation. These results suggest a possible therapeutic application of baicalin in allergic diseases.

KEY WORDS: Anaphylactic reaction, Baicalin, Mast cell-dependent.

*Author to whom correspondence should be addressed. *E-mail:* Liyongji2009@163.com