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Immunomodulatory effect of flavone from *Scutellaria baicalensis*Ming-Kuem Lin¹, Yi-Chen Liu², Chi-Chen Lin², Wen-Te Chang¹, Meng-Shiou Lee¹ and Yueh-Hsiung Kuo¹¹China Medical University, Taiwan²National Chung-Hsing University, Taiwan

Scutellaria baicalensis (Huáng-Qín) is a common herb in traditional Chinese medicine. Previous studies showed that extract from *S. baicalensis* has antimicrobial, anti-oxidative and anti-inflammatory activities. However, the active immune modulating compounds in *S. baicalensis* still remain unknown. In this study, four flavone compounds FL2, FL4, FL5 and FL7 were purified from *S. baicalensis* and used to examine their immune-modulatory effect using the LPS-induced dendritic cell-based model *in vitro* and 2,4-dinitrofluorobenzene-induced contact hypersensitivity response mouse model *in vivo*. We found that TNF- α , IL-6 and IL-12p70 secretion by dendritic cells were suppressed by FL2, FL4 and FL5. Expressions of surface marker CD80, CD86 and MHC II on dendritic cells were reduced by FL2 and FL5, which also showed non-cytotoxic activity. Furthermore, ear thickness and CD3+ cell number of the tested ears of the experimental mice were significantly decreased by applying 50 μ g of FL2. These results showed that flavones FL2 and FL5 from *S. baicalensis* have immunosuppressive effect on dendritic cells. *In vitro* dendritic cells maturation and *in vivo* delayed type hypersensitivity response were both inhibited by FL2, indicating that FL2 has a potent capability to treat hyper-inflammatory and dendritic cell-associated immune disorders.

Biography

Ming-Kuem Lin has completed his PhD from National Chung-Hsing University and Postdoctoral studies from University of California in Davis. He has published more than 25 papers in peer-reviewed journals.

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