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## ANTI-INFLAMMATORY EFFECTS OF BAICALEIN ON RAW 264.7 MOUSE MACROPHAGES INDUCED WITH POLYINOSINIC-POLYCYTIDYLIC ACID

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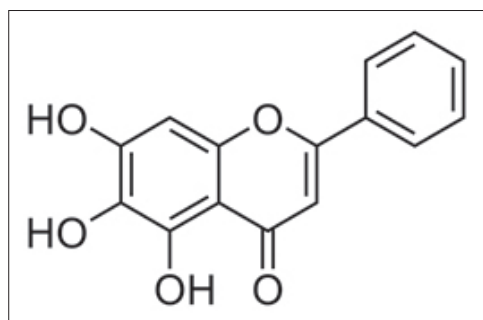


### Biography

Wansu Park has completed his PhD from Kyung Hee University and Postdoctoral studies from Kyung Hee University College of Korean Medicine. He is the Chief Professor of Pathology in College Of Korean Medicine, Gachon University. He has published more than 25 papers in reputed journals. He has served as the Chief Vice President of The Association of Korean Medicine in Republic of Korea from 2013 to 2017.

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Baicalein (5, 6, 7-trihydroxyflavone) is a flavone, originally isolated from the roots of *Scutellaria baicalensis* and *Scutellaria lateriflora*. It is also reported in *Oroxylum indicum* or Indian trumpet flower. It is the aglycone of baicalin. The roots of *Scutellaria baicalensis* have been used to treat pulmonary infection traditionally in Asia. The water extract of *Scutellaria radix* is known to have anti-inflammatory effects. However, the effect of baicalein on virus-induced macrophages has not been fully elucidated. In the present study, the anti-inflammatory effects of baicalein on double-stranded RNA (dsRNA)-induced macrophages were examined. Polyinosinic-polycytidylic acid (poly I: C), a synthetic analog of dsRNA, was used to induce RAW 264.7 cells in this study. Baicalein significantly inhibited the production of interleukin (IL)-1 $\alpha$ , IL-6, IL-10, interferon gamma-induced protein 10, granulocyte macrophage-colony stimulating factor, leukemia inhibitory factor (IL-6 class cytokine), lipopolysaccharide-induced CXC chemokine (LIX), monocyte chemoattractant protein-1, macrophage inflammatory protein-1 $\alpha$ , and vascular endothelial growth factor as well as calcium release and the mRNA expression of signal transducer and activator of transcription 1 (STAT1), STAT3, CHOP (GADD153), and FAS (CD95) in poly I:C-induced RAW 264.7 cells ( $P < 0.05$ ). Thus, the present results suggest that baicalein has anti-inflammatory properties, associated with its inhibition of cytokines, chemokines and growth factors in poly I: C-induced macrophages via the calcium-CHOP/STAT pathway.



Structural formula of flavonoid baicalein