allied academies

8th International Conference on

TRADITIONAL MEDICINE AND ACUPUNCTURE

July 23-24, 2018 | Rome, Italy

Myungsoo Joo et al., Arch Gen Intern Med 2018, Volume 2 | DOI: 10.4066/2591-7951-C1-003

ANTI-INFLAMMATORY ACTIVITY OF THE DECOCTION OF *FORSYTHIA SUSPENSA* (THUNB.) VAHL IS RELATED TO THE INDUCTION OF A20

Myungsoo Joo and **Kyun Ha Kim**
Pusan National University, Republic of Korea

The water extract of *Forsythiae fructus* (WFF) is a herbal remedy that has been used to treat various inflammatory diseases in Traditional Chinese Medicine. Although WFF has shown to suppress inflammatory reaction, the underlying mechanisms for this activity remain less understood. Here, we examined whether the anti-inflammatory activity of WFF is associated with A20 or *TNFAIP3*, a ubiquitin-regulator protein that inhibits inflammatory signaling cascades triggered by endotoxin or cytokines. The water extract of *Forsythia suspensa* (Thunb.) Vahl was prepared and fingerprinted by HPLC. WFF treatment of RAW 264.7 cells increased the nuclear Nrf2, an anti-inflammatory transcription factor, and induced the expression of Nrf2-dependent genes such as HO-1, *NQO1*, and *GCLC*, suggesting that WFF activates Nrf2. On the other hand, WFF suppressed NF- B activity induced by LPS or TNF- , suggesting that WFF inhibits the signaling cascades started from the receptors for LPS and TNF- . WFF induced the expression A20, which was coincided with the suppression of NF-κB. By contrast, when A20 expression was silenced by siRNA, WFF failed to suppress NF-κB. Therefore, our results suggest that while activating Nrf2, WFF suppresses NF-κB by inducing the expression of A20, which collectively attributes to the anti-inflammatory function of WFF.

BIOGRAPHY

Myungsoo Joo has completed his PhD from the University of Texas at Austin, USA. He is a Professor of Pusan National University, Republic of Korea, publishing about 70 publications in relation to lung inflammation.

mjoo@pusan.ac.kr

Note: