

Wild bitter gourd fruit extracts attenuate monocyte adhesiveness to pulmonary epithelial cells and the related mechanisms

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Wild bitter gourd (WBG, *Momordica charantia* L.) is consumed as a vegetable and has been used as a traditional herbal medicine in Asia. The previous reports showed that the noticeable pharmacological properties of WBG fruit extract (WBGE) have antidiabetic, anti-inflammatory, anti-tumor and anti-oxidative actions. However, the anti-inflammatory effects of WBGE on human lung epithelial cells and the underlying mechanisms have not been elucidated. The present study investigated the molecular basis of the effects of WBGE on intercellular cell adhesion molecule -1 (ICAM-1) expression in alveolar epithelial A549 cells and wild-type (WT) mice with or without TNF- α treatment. WBGE significantly decreased the TNF- α -induced ICAM-1 expression in A549 cells through the inhibition of NF- κ B/I κ B phosphorylation and also decreased leukocyte adhesion. Moreover, WBGE reduced the ICAM-1 expression in lung tissues of WT mice with or without TNF- α treatment; these results suggest that WBGE reduced ICAM-1 expression both *in vitro* and *in vivo*. Based on these findings, WBGE should be considered a novel therapeutic agent for targeting epithelial activation in pulmonary inflammation.

Biography

Yuh-Lien Chen has completed her PhD research at Institute of Anatomy and Cell Biology, College of Medicine, National Taiwan University. Her academic interests focus on the pathogenesis and therapy of cardiovascular diseases and inflammation. She is currently a Professor at Institute of Anatomy and Cell Biology, College of Medicine, National Taiwan University. She has published more than 90 papers in reputed journals.

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