WATER EXTRACTION FROM CINNAMOMUM KANEHIRAI LEAVES INHIBITS INFLAMMATORY MEDIATORS IN LPS-STIMULATED RAW264.7 MACROPHAGES

YI-TING LEE, HSIN-YU CHANG, WAN-ZHU ZHAN, Wu Jane Yii
E-mail: jywu@mail.dyu.edu.tw

ABSTRACT

Cinnamomum kanehirai (Lauraceae) is a unique and native tree of Taiwan, and C. kanehirai is the major host for medicinal fungus Antrodia cinnamomea. In traditional Chinese medicine, it is claimed to be beneficial to clear the lungs, dispel apathy, hepato-protective and calm nervous depression. To investigate how the water extraction of C. kanehirai leaves (CKL) regulates production of Interleukin-1 beta, Interleukin-6, Interleukin-10, nitric oxide (NO), and pro-inflammatory factors (NF-κB, iNOS, and COX-2) in this study. The present study demonstrated that CKL extracts could suppress the production of NO in LPS-stimulated RAW264.7 macrophages. CKL extracts also inhibited the production of tumor necrosis factor-alpha, interleukin-1 beta, interleukin-6, and interleukin-10. On the other hand, the western blotting results showed that CKL extracts treatment for 24 hr significantly reduced iNOS, COX-2 and NF-κB, respectively. All these results suggested the inhibitory effects of CKL extracts on the production of inflammatory mediators through the inhibition of the NF-κB pathway. Our results indicated that CKL extracts inhibited inflammatory events and iNOS expression in LPS-stimulated RAW264.7 cells through the inactivation of the NF-κB pathway. This study gives scientific evidence validating the use of CKL extracts in anti-inflammatory in traditional Chinese medicine.

Keywords: RAW264.7 MACROPHAGES

REFERENCES


