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# CCM111, the water extract of *Antrodia cinnamomea*, regulates immune-related activity through STAT3 and NF-κB pathways

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*Antrodia cinnamomea* (AC) exhibits many bioactivities, including anti-inflammatory, anti-cancer and hepatoprotection activities. Many researchers have studied the functions of the components or fractions of AC, but the functions of the original extractions of AC have not been studied. In addition, the detailed relationship between AC and immune-related signaling pathways is unclear. In this study, we screened the effects of CCM111, which is the extract of AC, on seven immune-related signaling pathways and further investigated whether CCM111 can influence inflammation. Interestingly, our results showed that CCM111 significantly inhibited the IL-6-stimulated STAT3 pathway and the LPS-stimulated NF-κB pathway in macrophages. CCM111 also decreased the phosphorylation of STAT3, Tyk2 and the nuclear translocation of p65. Moreover, CCM111 and F4 a fraction of CCM111, down-regulated Nitric Oxide (NO) production, the protein levels of iNOS and COX-2 and inflammatory cytokines in macrophage cells. Therefore, our study suggested that CCM111 has the potential to be developed as an effective anti-inflammatory agent.

## Biography

In-Yu Lin is currently pursuing his PhD from National Central University in Taiwan. His major research is traditional Chinese medicine, *Antrodia cinnamomea* (AC), which is a famous health food for liver protection and immune regulator.

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