

Immunostimulatory Activity of *Syneilesis palmata* Leaves through Macrophage Activation and Macrophage Autophagy

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Syneilesis palmata (SP) has been used as a traditional medicinal plant and vegetable. SP was reported to exert pharmacological activities such as anti-inflammation, anti-cancer, and anti-HIV. However, there are no studies on the immunostimulatory activity of SP. Thus, in this study, we report that *S. palmata* leaves (SPL) induce the activation of macrophages. An increase in both secretions of immunostimulatory mediators and phagocytotic activity was observed in SPL-treated RAW264.7 cells. However, this was reversed by inhibition of TLR2/4. In addition, the p38 inhibition reduced the SPL-mediated secretion of immunostimulatory mediators, and the SPL-mediated p38 activation was blocked by the TLR2/4 inhibition. SPL augmented both p62/SQSTM1 and LC3-II. TLR2/4 inhibition blocked the SPL-mediated increase of p62/SQSTM1 and LC3-II. These findings indicate that SPL may activate macrophages through TLR2/4-dependent p38 activation and activate autophagy through TLR2/4 stimulation.

[This work was supported by R&D Program for Forest Science Technology (Project No. 2021377C10-2123-BD02) provided by Korea Forest Service (Korea Forestry Promotion Institute).]

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