



Okra Polysaccharides Improves Spleen Weight and B-Lymphocytes Proliferation in Mice Infected by *Staphylococcus aureus*

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Abstract

Okra (*Abelmoschus esculentus*) is reported to have various biological functions such as antioxidant, anticancer and anti-inflammation. However, only few studies have been reported immunomodulatory activities of okra to prevent disease caused by bacteria infection. In this study, the immunomodulatory activities of polysaccharides from okra pods were investigated further through the spleen weight and B-lymphocytes proliferation in mice infected by *Staphylococcus aureus*. Okra polysaccharides were obtained by water extraction and ethanol precipitation. Okra polysaccharides with doses of 25, 50, 75, and 100 mg/kg BW were orally administrated to mice with or without *Staphylococcus aureus* infection. Spleen weight was evaluated in both treatment group and control group. B-lymphocytes proliferation was evaluated by MTT assay using LPS induction. Results showed that okra polysaccharide at the doses of 50, 75, and 100 mg/kg increased spleen weight ($p < 0.05$) significantly. While at the dose of 75 and 100 mg/kg, it increased the B-lymphocytes proliferation ($p < 0.05$) significantly. There is positive correlation between the spleen weight and B-lymphocytes proliferation by 73.3%. These result reveal that okra polysaccharide could improve the immune response and be utilized as a novel candidate of nutraceutical.

How to Cite

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