

# 1 **Phytochemicals inhibit atopic dermatitis by modulating pro-** 2 **inflammatory cytokines**

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4 2023/03/08

## 5 **Outline**

- 6 1. Introduction
- 7 2. Tea saponin extracted from seed pomace of *Camellia oleifera* Abel ameliorates  
8 DNCB-induced atopic dermatitis-like symptoms in BALB/c mice
- 9 3. Sophoricoside from *Styphnolobium japonicum* improves experimental atopic  
10 dermatitis in mice
- 11 4. *Alpinia officinarum* water extract inhibits the atopic dermatitis-like responses in  
12 NC/Nga mice by regulation of inflammatory chemokine production
- 13 5. Conclusion

## 14 **Abstract**

15  
16 Atopic dermatitis is an allergic dermatosis that occurs in young children between the  
17 ages of one and two years, in people with congenital genetic defects, and in people with  
18 immune system disorders. The cause of Atopic dermatitis is the entry of allergens into the  
19 body through the defective skin barrier, which leads to the differentiation of excessive Th2  
20 helper T cells (Th2), and the release of cytokines (IL-4, IL-13, etc.) from Th2 that trigger  
21 acute and chronic allergic reactions. dermatitis. Phytochemicals refer to natural chemicals  
22 found in plants, usually those that may affect human health, but can also refer to essential  
23 nutrients. Phytochemicals can be broadly classified as glycans, lipids, terpenoids, phenols,  
24 and alkaloids, which are mainly known for their metabolic, anticancer, antibacterial,  
25 neuropathy inhibition, oral health maintenance, and wound healing effects. In some studies,  
26 the anti-inflammatory effect of phytochemicals can affect the balance between TH1 and TH2  
27 of the body's acquired immunity, which can be restored by suppressing Th2 or increasing the  
28 differentiation of Th1 through ingestion and patching, thus achieving the effect of slowing  
29 down atopic dermatitis. Among the phytochemicals selected in this study, Tea saponin  
30 belongs to the glycoside group, while Sophoricoside and Galangin belong to the phenolic  
31 group of phytochemicals. Sophoricoside has been detected to inhibit the differentiation of  
32 CD4+ T cells into other helper T cells, which can become a preventive agent of inflammation.

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