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## Anti-diabetic activities of vitexin and isovitexin from mung bean soup

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Diabetes is one of the worldwide non-communicable chronic diseases. Mung bean is one of plant legumes grown in Asia. It is rich with phytochemical compounds that are beneficial to the human health and also has the preventive effects against certain diseases. Vitexin and isovitexin are flavones found with high amount in mung bean. Both are known to have many biological activities including antioxidant, anti-proliferation, anti-inflammation and anti-diabetes. Mung bean soup is one of the popular healthy drinks. This study focuses on anti-diabetic effects of mung bean soup. Mung bean soup was standardized for concentrations of vitexin and isovitexin by high performance liquid chromatography before it was examined for its anti-diabetic effects. The result showed that mung bean soup could inhibit alpha-amylase with  $IC_{50}$  0.1437 and 0.2826 mg/ml and inhibit alpha-glucosidase with  $IC_{50}$  0.0239 and 0.0469 mg/ml (vitexin and isovitexin, respectively). Mung bean soup could also inhibit the formation of advanced glycation end products (AGEs) with  $IC_{50}$  0.0128 and 0.0252 mg/ml vitexin and isovitexin, respectively. Our study suggests that mung bean soup containing vitexin and isovitexin has anti-diabetic effects and these effects are due in part to inhibition of carbohydrate-metabolizing enzymes and AGEs formation.

### Biography

Sudathip Sae-tan is interested in the Field of Food and Health. Currently, she works at Department of Food Science and Technology, Faculty of Agro-Industry, Kasetsart University, Thailand. Her focus is on dietary food components to prevent non-communicable diseases. She has experiences in using chemical-based and cell-based assays including animal models to test the bioactivity. All these assays, allows her to find out the dietary components for disease prevention.

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