

# Antioxidant Activity and Angiotensin I-Converting Enzyme Inhibition by Enzymatic Hydrolysates from Bee Bread

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Enzymatic hydrolysates were prepared from bee bread using three proteases. The antioxidant properties of these hydrolysates were measured using four different methods. These had remarkable antioxidant activity similar or superior to that of 1 mM  $\alpha$ -tocopherol. They also had high scavenging activities against active oxygen species as the superoxide anion radical and hydroxyl radicals. Moreover, they showed angiotensin I-converting enzyme inhibitory activities and the activities were similar to those from various fermented foods such as fish sauce, sake, vinegar, cheese, miso, and natto. The present studies reveal that enzymatic hydrolysates from bee bread are of benefit not only for the materials of health food diets, but also for in patients undergoing various diseases such as cancer, cardiovascular diseases, diabetes, and hypertension.

*Key words:* Bee Bread, Enzymatic Hydrolysates