
BIOACTIVITY PROPERTIES OF FINGERROOT [*Boesenbergia rotunda*(L.) Mansf. A] EXTRACT AND PANDURATIN A, A COMPOUND ISOLATED FROM THE RHIZOME OF FINGERROOT AND ITS APPLICATIONS

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Abstract

B. rotunda is known as 'temukunci' in Malaysia and Indonesia or 'krachai' in Thailand. It is a medicinal and culinary herb in Southeast Asia and widely use in Javanese cuisine. *B. rotunda* belongs to a ginger (Zingiberaceae) family. Among genera, *B. rotunda* is facing problems in taxonomy classification due to its heterogeneous external morphology. Previously, it was categorised in *Kaempferia* genus. It is known as fingerroot because the plant consist a small globular shaped central rhizome with fleshy long and thick tubers sprout all in the same direction like fingers. The colour and the tubers depend on the variety of *B. rotunda* whether yellow, red or black varieties. The fresh rhizomes have a characteristics aroma and a slightly pungent taste but it promotes appetite. Therefore, it frequently used as condiment in curry or soups. Other than culinary purpose, *B. rotunda* also can be used as traditional medicine to treat muscle pain, gastrointestinal disorders, stomach ache, peptic ulcer, gout and oral diseases. The consumption of *B. rotunda* leaves can lessen food poisoning and allergies. In Indonesia, the rhizome is typically used in 'jamu' preparation for women after childbirth as well as a beauty aid for teenagers. The rhizome also is used as a traditional medicine to treat inflammation in women uterus and in vaginal infection. Moreover, *B. rotunda* rhizome is utilized as an anti-inflammatory and anti-cancer herb in Indonesia. It has been determined that the compound which has responsible to various biological activities is a panduratin A. Panduratin A, anature chalcone compound isolated from the rhizome of "temu kunci" or fingerroot. Panduratin Aor *B. rotunda* extract also has great potentialtobe developedinto various productssuch ascosmetics, supplements, functional food and natural sanitizer.

Keywords : bioactivity properties, cosmetics, functional food, natural sanitizer, panduratin A, supplements.