Int J Pharm Bio Sci 2015 Jan; 6(1): (P) 283 - 289

Research Article **Natural chemistry**

International Journal of Pharma and Bio Sciences **ISSN 0975-6299**

ESSENTIAL OIL OF RED GALANGAL (*ALPINIA GALANGA* (L) WILLD) RHIZOMES AS SLIMMING AROMATHERAPY

RIZKI DAMAYANTI[1], IRMANIDA BATUBARA[1,2] AND IRMA HERAWATI SUPARTO*[1,2,3]

[1]Department of Chemistry, Faculty of Mathematics and Natural Sciences, Bogor Agricultural University, IPB Campus, Darmaga, Bogor, 16680, Indonesia
[2] Biopharmaca Research Center-Bogor Agricultural University, Bogor, 16128, Indonesia
[3]Primate Research Center-Bogor Agricultural University, Bogor, 16151, Indonesia

ABSTRACT

Red galangal (*Alpinia galanga* (L) Willd**)** is an aromatic plant which has potential as aromatherapy. The aim of this research was to evaluate and identify the red galangal essential oil as slimming aromatherapy through *in vivo* observation in adult male *Sprague Dawley* rats. The oil was separated by distillation and fractionated by silica gel column chromatography resulting five fractions. Crude essential oil, fractions 1 and 2 were further analyzed by gas chromatography-mass spectrometry and performed *in vivo* assay. The major compounds in the crude oil were β-bisabolene (11.78%) and trans-caryophyllene (9.10%); in fraction 1 was bicyclo-2-heptene (12.08%); and pentadecane (11.09%) in fraction 2. After five weeks of inhalation with 0.1% concentration, body weight showed significant difference ($P<0.05$) and animals inhaling the crude oil had the lowest body weight compared to fraction 1 but not different compared to control and fraction 2 treated animals. In conclusion, red galangal's essential oil compound β-bisabolene and trans-caryophyllene were suggested as the responsible compounds that has slimming aromatherapy effect.

KEY WORDS: **aromatherapy, slimming, red galangal, essential oil**

*Corresponding author

IRMA HERAWATI SUPARTO
Department of Chemistry, Faculty of Mathematics and Natural Sciences, Bogor Agricultural University, IPB Campus, Darmaga, Bogor, 16680, Indonesia
Biopharmaca Research Center-Bogor Agricultural University, Bogor, 16128, Indonesia
Primate Research Center-Bogor Agricultural University, Bogor, 16151, Indonesia