



## Water Extract of Propolis Might be Safer to Use During Pregnancy than Ethanol Extract

Al Mukhlas FIKRI<sup>1\*</sup>, Ahmad SULAEMAN<sup>1</sup>, Sri Anna MARLIYATI<sup>1</sup>, Mokhamad FAHRUDIN<sup>2</sup>

<sup>1</sup>Department of Community Nutrition, Faculty of Human Ecology, Bogor Agricultural University, Bogor 16680, Indonesia.

<sup>2</sup>Faculty of Veterinary Medicine, Bogor Agricultural University, Bogor 16680, Indonesia

Received/Geliş Tarihi: 08/10/2018, Accepted/ Kabul Tarihi: 19/10/2018

\*Corresponding author /Yazışılan yazar

### Abstract

Propolis is a natural product that has many health benefits. This study was the first investigation examining the effect of propolis administration on pregnancy. Pregnant mice were used as experimental animals (n = 25) divided in five groups. They were control group (Tween 80 1%), low (380 mg/ kg b.w) and high (1400 mg/ kg b.w) dose of ethanol extract of propolis (EEP), low (380 mg/ kg b.w) and high (1400 mg/kg b.w) dose of water extract of propolis (WEP). Propolis was administered from 0 to 18 days of gestational age. The results showed that high dose of EEP significantly reduced weight and crown-rump of fetuses and increased the amount of resorption (p<0.05). However, low dose of EEP, low and high dose of WEP did not affect weight and crown-rump length of fetuses compare to control group. Low dose of EEP, low and high dose of WEP significantly reduced number of resorption compare to high dose of EEP. There was no difference in liver and kidney weight, serum ureum, creatinine, alanine aminotransferase (ALT), aspartate aminotransferase (AST) and maternal weight gain. No significant difference also was found in placental weight, litter size, number of dead fetuses, embryo mortality before and after implantation. The results of this study indicate that WEP might be safer to use during pregnancy than EEP.

**Acknowledgement:** Thanks to Ministry of Research, Technology and Higher Education, Republic of Indonesia for research grant through scheme Master and Doctoral Program of Excellent Graduate

### References:

1. Fikri AM, Sulaeman A, Marliyati SA, Fahrudin M. Antiemetic Activity of *Trigona* spp. Propolis from Three Provinces of Indonesia with Two Methods of Extraction. Pharmacog J. 2018;10(1):120-2.