



Unusual chemical composition of a Mexican Propolis collected in Yucatan

Submitted by Séverine Boisard on Mon, 01/16/2017 - 09:59

Titre Unusual chemical composition of a Mexican Propolis collected in Yucatan

Type de publication Communication

Type Communication par affiche dans un congrès

Année 2013

Langue Anglais

Date du colloque 29/09-04/10 2013

Titre du colloque Apimondia XXXIII International Apicultural Congress

Auteur Boisard, Séverine [1], Tho Huynh, Thi Huong [2], Landreau, Anne [3], Kempf, Marie [4], Escalante-Erosa, Fabiola [5], Peña-Rodriguez, Luis Manuel [6], Hernandez-Chavez, Luis Ignacio [7], Richomme, Pascal [8]

Pays Ukraine

Ville Kiev

Résumé en anglais

Introduction: Propolis, or bee glue, is a natural resinous hive product collected by honeybees from buds and exudates of various trees and plants. Mixed with beeswax and salivary enzymes, it is employed to fill cracks and embalm dead invaders in the hive. Several studies about mexican propolis have revealed chemical profiles where cinnamic and phenylpropanoic acid derivatives as well as flavonoids dominated, whereas these extracts exhibited cytotoxic and/or antifungal activities. Research methods: An ethanolic extract of a batch of mexican propolis, collected in the state of Quintana Roo, Mexico, was first analysed by High Performance Liquid Chromatography coupled with Diode Array Detector (HPLC/DAD) but no major components could be detected. Its antioxidant activity was evaluated by 1,1-diphenyl-2-picrylhydrazyl (DPPH) assay as well, and its antibacterial (against 21 Gram-positive and Gram-negative strains including *Staphylococcus aureus*) and antifungal (against *Candida albicans* and *Aspergillus fumigatus*) properties were evaluated through microdilution assays. Then, this extract was fractionated by Flash chromatography. Three of the fractions, containing the major constituents, were analysed by Gas Chromatography coupled with Mass Spectrometry (GC/MS). Results and discussion: This Mexican propolis did not show any antioxidant neither antibacterial nor antifungal activity. The main constituents of this Mexican propolis were identified as triterpenes (amyrenone, amyrin and amyrin-3-acetate) and sterols (fucosterol and sistosterol). This unusual composition associated with a Mexican propolis would thus explain the lack of biological activities. Further investigations will be conducted in order to link this chemical composition with the propolis plant sources.

URL de la notice <http://okina.univ-angers.fr/publications/ua15415> [9]

Lien vers le document en ligne <http://apimondia2013.org.ua/en/> [10]

Liens

- [1] <http://okina.univ-angers.fr/severine.boisard/publications>
- [2] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=17326>
- [3] <http://okina.univ-angers.fr/anne.landreau/publications>
- [4] <http://okina.univ-angers.fr/marie.kempf/publications>
- [5] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=25157>
- [6] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=17328>
- [7] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=17329>
- [8] <http://okina.univ-angers.fr/p.richomme/publications>
- [9] <http://okina.univ-angers.fr/publications/ua15415>
- [10] <http://apimondia2013.org.ua/en/>

Publié sur *Okina* (<http://okina.univ-angers.fr>)