Evalution of Phenolic Compounds in Brazilian Propolis from Different Geographic Regions

Maria Cristina Marcucci[a,§,*], Federico Ferreres[a], Angela Ramalho Custódio[b], Marcia M. C. Ferreira[c], Vassya Stefanova Bankova[d], Cristina García-Viguera[a], Walter Antonio Bretz[e]

[a] Laboratório de Fitoquímica, Centro de Edafología y Biología Aplicada del Segura, Apartado de Correos, 4195 – 30080, Murcia, Spain
[b] Faculdade de Ciências Farmacêuticas – Universidade São Francisco, Av. São Francisco. de Assis, 218, Bragança Paulista, SP, 12900–000, Brazil
[c] Departamento de Fisico-Química, Instituto de Química – UNICAMP, Campinas, SP, 13083-970, Brazil
[d] Institute of Organic Chemistry, Center of Phytochemistry, Bulgarian Academy of Sciences, Sofia 1113, Bulgaria
[e] University of Pittsburgh, School of Dental Medicine, Pittsburgh, PA, 15090, USA

* Author for correspondence and reprint requests

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Chemometrics has been shown quite efficient to uncover relationships between chemical composition of a sample and its geographical origin. Forty propolis samples originated from the the South and South East of Brazil were analyzed by HPLC and 18 compounds of interest were studied which included: caffeic, *p*-coumaric and ferulic acids, and some of their derivatives, pinobanksin, a derivative of kaempferol and five phenolic compounds (assigned as 3-prenyl-4-hydroxycinnamic acid (PHCA); 2,2-dimethyl-6-carboxyethnyl-2H-1-benzopyran (DCBE); 3,5-diprenyl-4-hydroxycinnamic acid (DHCA); compound E (still unknown) and 6-propenoic-2,2-dimethyl-8-prenyl-2H-1-benzopyran acid (DPB). Principal Component Analysis (PCA) indicated three different groups of propolis samples, having the same typical chromatogram, evaluated by HPLC. Samples from the South East group were rich in derivatives of kaempferol. Samples from the South group I had a high content of DPB compound, but a low concentration of kaempferol derivatives and of DCBEN compound. Samples from the South group II were characterized by a high concentration of DCBEN, DHCA, *p*-coumaric and DPB compounds. Therefore, the identification of new compounds in Brazilian propolis can give useful information about the plant sources of a given geographic region.