www.elsevier.com/locate/jep

Artepillin C, drupanin, aromadendrin-4'-*O*-methyl-ether and kaempferide from Brazilian green propolis promote gastroprotective action by diversified mode of action

Philipe Costa, Marilia O. Almeida, Marivane Lemos, Caroline Arruda, Rosana Casoti, Lincon Bordignon Somensi, Thaise Boeing, Marihá Mariott, Rita de Cássia Melo Vilhena de Andrade Fonseca da Silva, Bruna De Paoli Stein, Priscila de Souza, Ana Caroline dos Santos, Jairo K. Bastos, Luísa Mota da Silva, Sérgio Faloni de Andrade

PII: S0378-8741(18)32159-7
DOI: https://doi.org/10.1016/j.jep.2018.08.006
Reference: JEP11464

To appear in: *Journal of Ethnopharmacology*

Received date: 14 June 2018
Revised date: 29 July 2018
Accepted date: 9 August 2018

Cite this article as: Philipe Costa, Marilia O. Almeida, Marivane Lemos, Caroline Arruda, Rosana Casoti, Lincon Bordignon Somensi, Thaise Boeing, Marihá Mariott, Rita de Cássia Melo Vilhena de Andrade Fonseca da Silva, Bruna De Paoli Stein, Priscila de Souza, Ana Caroline dos Santos, Jairo K. Bastos, Luísa Mota da Silva and Sérgio Faloni de Andrade, Artepillin C, drupanin, aromadendrin-4'-*O*-methyl-ether and kaempferide from Brazilian green propolis promote gastroprotective action by diversified mode of action, *Journal of Ethnopharmacology,* https://doi.org/10.1016/j.jep.2018.08.006

Artepillin C, drupanin, aromadendrin-4'-*O*-methyl-ether and kaempferide from Brazilian green propolis promote gastroprotective action by diversified mode of action

Philipe Costa[1], Marilia O. Almeida[2], Marivane Lemos[2], Caroline Arruda[2], Rosana Casoti[2], Lincon Bordignon Somensi[1], Thaise Boeing[1], Marihá Mariott[1], Rita de Cássia Melo Vilhena de Andrade Fonseca da Silva[1], Bruna De Paoli Stein[1], Priscila de Souza[1], Ana Caroline dos Santos[1], Jairo K. Bastos[2], Luísa Mota da Silva[1], Sérgio Faloni de Andrade[1*]

[1]Programa de Pós Graduação em Ciências Farmacêuticas, Núcleo de Investigações Químico-Farmacêuticas (NIQFAR), Universidade do Vale do Itajai (UNIVALI) – Campus Itajaí, Santa Catarina, Brasil. Rua Uruguai, 458, Centro. CEP: 88302-901.

[2] School of Pharmaceutical Sciences of Ribeirão Preto of the University of São Paulo. Avenida do Café, s/n, 14040-903, Ribeirão Preto-SP, Brazil.

***Corresponding author:** Postal address: Programa de Pós-graduação em Ciências Farmacêuticas, Núcleo de Investigações Químico-Farmacêuticas (NIQFAR), Rua Uruguai, 458 - CEP 88.302-901, Itajaí, Santa Catarina, Brazil. faloni@univali.br

Abstract

Ethopharmacological relevance

The propolis is extensively used in folk medicine *in natura* or to prepare pharmaceutical formulations since ancient time to improve health or prevent diseases, among them gastrointestinal disorders. Aiming to contribute in the scientific validation about the popular use of Brazilian Green propolis (BGP) against gastritis and gastric ulcer, this work evaluated the antiulcer potential of isolated compounds from BGP, three prenylated *p*-coumaric acid derivatives and two flavonoids, respectively named: 3,5 diprenyl-4-hydroxycinnamic acid (artepillin C) (***1***), 3-prenyl-4-dihydroxycinnamoiloxy cinnamic acid (baccharin) (***2***), 3-prenyl-4-hydroxycinnamic acid (drupanin) (***3***), aromadendrin-4'-O-methyl-ether (***4***) and kaempferide (***5***).

Material and methods

The compounds were characterized by nuclear magnetic resonance and mass spectrometry. Their gastroprotective effects were evaluated against ethanol/HCl- and indomethacin-induced ulcer in mice. Further, histological, histochemical, oxidative and inflammatory parameters were analyzed at ulcerated tissue. Acid antisecretory activities also were also assessed.