



# HerbClip™

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**FILE: ■Propolis**  
**■Hepatoprotection**  
**■Helicobacter pylori**

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**RE: Propolis Demonstrates Liver Protectant Activity**

Banskota AH, Tezuka Y, Adnyana IK, Ishii E, Midorikawa K, Matshushige K, Kadota S.  
Hepatoprotective and anti-*Helicobacter pylori* activities of constituents from Brazilian propolis.  
*Phytomedicine*. 2001; 8:16-23.

Propolis is a resinous hive product collected by honey bees from various plant sources. It has a long history of being used in traditional medicine dating back to at least 300 BCE. It is reported to possess a broad spectrum of biological activities including anticancer, antioxidant, anti-inflammatory, antibacterial, and antifungal. Propolis is a relatively popular ingredient in various consumer health products for both internal and external applications sold in health food stores.

The current study tested the hepatoprotective (liver protective) activity of Brazilian propolis and 27 constituent compound extracts on D-galactosamine (D-GalN)/tumor necrosis factor- $\alpha$  (TNF- $\alpha$ )-induced cell death in primary cultured mouse hepatocytes. Anti-*Helicobacter pylori* activity was tested against three different strains. Free radical scavenging activity of the extracts was also measured.

Almost all compounds isolated from the MeOH extract of Brazilian propolis exhibited concentration dependent hepatoprotective activity. The four flavonoid extracts that were tested possessed the strongest inhibitory effect. However, several other phenolic compounds exhibited inhibitory effects as well.

Anti-*Helicobacter pylori* activity of isolated compounds were tested against three different strains. Mild anti-*Helicobacter pylori* activity of nearly half of the isolated compounds were observed.

Total balance between reactive oxygen species and antioxidants possibly effect the signaling mechanisms of various responses to TNF- $\alpha$ . Most of the phenolic compounds in the propolis extracts possessed antioxidative activity and flavonoids are well known radical scavengers. The antioxidant activity of the phenolic compounds found in the propolis sample may play an important role in its hepatoprotective action, although other mechanisms such as attenuation of the inhibition of protein

synthesis induced by D-GalN, and enzyme inhibition may be implicated in their actions against cell death.

This study adds to the growing body of research evidence supporting the antimicrobial and other healing properties of this interesting and time-honored natural remedy.

*-Densie Webb, Ph.D.*

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