www.waavp2011-argentina.com.ar

23

2011 WAAVP BUENOS AIRES ARGENTINA

TOWARDS GOOD MANAGEMENT PRACTICES IN PARASITE CONTROL

August 21-25, 2011

Panamericano Buenos Aire Hotel & Resort

aapavet

Asociación Argentina de Parasitología Veterinaria

SOCIEDAD DE MEDICINA VETERINARIA
REPUBLICA ARGENTINA

In vitro efficacy of plant extracts and synthesized substances on *Rhipicephalus (Boophilus) microplus* (Acari: Ixodidae)

L. D. de Barros[1], A. C. de Souza Chagas[2], F. Cotinguiba[3], M. Furlan[3], R. Giglioti[1], M. C. de Sena Oliveira[2], H. Ribeiro Bizzo[4]
[1]Faculdade de Ciências Agrárias e Veterinárias/UNESP, Jaboticabal, SP; [2]Centro de Pesquisa Pecuária Sudeste/EMBRAPA, São Carlos, SP; [3]Instituto de Química/UNESP, Araraquara, SP; [4]Centro de Tecnologia Agroindustrial de Alimentos/EMBRAPA, Rio de Janeiro, RJ.

Herbal drugs have been widely evaluated as an alternative method of parasite control, aiming to slow development of resistance and obtain low-cost biodegradable parasiticides. The aim of this study was to evaluate the *in vitro* efficacy on *Rhipicephalus (Boophilus) microplus* of *Carapa guianensis*, *Cymbopogon martinii, Cymbopogon schoenanthus* and *Piper tuberculatum* extracts and similar synthesized substances. In the immersion test, engorged females were collected from cattle and evaluated in five dilutions ranging from 10% to 0.030625%. In the larval test, around 100 larvae were placed on filter paper impregnated with the dilutions, ranging from 10% to 0.02%. The treatments and controls in both tests were done in three replicates. Phytochemical analysis of oils was performed by gas chromatography. The main compounds were oleic acid (46.8%) for *C. guianensis* and geraniol for *C. martinii* (81.4%) and *C. schoenanthus* (62.5%). The isolated and synthesized substances showed no significant effect on larvae and engorged females. *C. martinii* at a concentration of 5% and *P. tuberculatum* at 10%, showed the best efficacy on the engorged females, causing 75.60% and 91.97% mortality, respectively. The fact that geraniol is present in greater quantities in *C. martinii* explains its higher activity in relation to *C. shoenanthus*. There is still a need to validate the *in vivo* use of safe and effective phytoparasiticidal substances. Efforts should be focused on developing formulations that enhance the efficacy of these extracts *in vivo* and lengthen the residual period.