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PLANT CRUDE EXTRACTS INHIBIT OVIPOSITION OF BOVINE TICK
RHIPICEPHALUS (BOOPHILUS) MICROPLUS

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Parasitism by the bovine tick *Rhipicephalus (Boophilus) microplus* is one of the main barriers for the development of livestock. The indiscriminate use of carrapaticides promoted tick resistance and consequently doses applied by farmers have increased, contributing for contamination of meat, milk and environment¹. Nevertheless, secondary metabolism of plants is known to produce many molecules with a sophisticated chemical architecture and a great variety of functional groups. These molecules have been used as the starting point in some strategic research areas for development of new drugs^{2,3}. Therefore, the goal of this study was to prospect plants for future control of bovine tick. Plant tissues were collected at Embrapa Southeast Livestock area, cleaned up, dried at 45°C, milled and extracted with some organic solvents. The bioassay applied to evaluate the reduction of the engorged female oviposition was the Adult Immersion Test (AIT)⁴. Crude extracts were dissolved in water:acetone:Tween 80 50:50:1.9 v/v/v (Control 1) at concentration of $\approx 100\text{mg.mL}^{-1}$ and tested in triplicate. Reduction of oviposition (%) was calculated comparing the egg weight averages of each extract with those produced by females from the 100% deionized water group (Control 2). Values of Control 1 were not subtracted from the values of each extract. Altogether, 22 extracts were evaluated and 12 reduced the tick's oviposition above 80%. Group 1: AM 73 - 100% (seeds, *Michelia champaca*), AM 76 - 96% (seeds, *Persea americana*), AM 83 - 91% (fruits, *Schinus molle*), AM 155 - 88% (leaves, *Schinus terebinthifolius*) and Control 1- 15.5%. Group 2: AM 52 - 98% (fruits, *Guazuma ulmifolia*), AM 61 - 88% (seeds, *Hymenaea courbaril*), AM 67 - 97% and AM 70 - 95% (inflorescence and peduncles of *Mangifera indica*, respectively), AM 80 - 84% (stem bark, *Poincianella pluviosa*), AM 91 - 100% (seeds, *Syzygium jambos*), AM 97 - 98% (fruits, *Tamarindus indica*), AM 116 - 89% (leaves, *Myracrodruon urundeuva*) and Control - 18.8%. The development of new acaricides based on plant molecules can promote conservation of the biodiversity, fomenting the establishment of more rational and eco friendly alternatives to control livestock's diseases.

Refs.

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