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In vitro evaluation of anti-helminthic activity of *Mentha piperita* extracts against *Strongyloides venezuelensis*

Maria Fernanda Chiari¹, César CoratRibeiro Prado², Silmara Marques Allegretti² and Fernanda de Freitas Anibal¹

¹Universidade Federal de São Carlos, Brasil

²Universidade Estadual de Campinas, Brasil

Disseminated strongyloidiasis is rare among the population of immunocompetent, but very important in immunocompromised individuals, particularly those co-infected with HIV. This form of the disease is due to autoinfection capacity of *Strongyloides stercoralis* and characterized by the presence of larvae in multiple organs. The search for new compounds that have antiparasitic activity and less side effects is of great interest for the treatment of immunocompromised individuals. The search for new drugs has an important ally in medicine for centuries, the use of medicinal plants. And in our group we have shown beneficial effects of *Mentha piperita* L. in the treatment of experimental schistosomiasis. Thus, we evaluated the Menthol and menthone compound in the viability of in vitro parthenogenetic females *Strongyloides venezuelensis*. After 12 days of infection of rats (Wistar -1500 larvae per animal), 15 cm of their small intestine were removed and the females were recovered. Two females per well containing 2 mL medium and compounds and Menthol and / or menthone (100 ug/ml, 50 ug/ml, 25 ug/ml and 12.5 ug/ml) in triplicate. We utilized Ivermectin (the same doses to compounds) to positive control and DMSO 99.9% to negative control. The tested compounds showed 100% efficiency for induction of *in vitro* female death, suggesting that these bio compounds have potential to be assessed for their effectiveness in reducing the parasitic load *in vivo* tests. And they can contribute to the search for new compounds in the control of parasitic diseases caused by nematodes.

Biography

Maria Fernanda Chiari graduated in biological sciences at Universidade Estadual do Norte do Paraná (2007) and became master in biotechnology at Universidade Federal de São Carlos in 2010. She is currently a fellow of CAPES doctoral program in biotechnology also from the Universidade Federal de São Carlos - UFSCar, working in the field of parasitology and immunology.

mfchiari@yahoo.com.br

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