

POSTER PRESENTATION

Open Access

In vitro anthelmintic activity of *Pothomorphe umbellata* (L.) Miq. (Piperaceae) against gastrointestinal parasites from sheep

Luis Eduardo Ferreira*, Pedro Castro, Franca Suzeli, Beleboni Rene

From 5th Congress of the Brazilian Biotechnology Society (SBBIOTEC)
Florianópolis, Brazil. 10-14 November 2013

Sheep farming in Brazil has been proved to be a promising economical activity by the offering of products with increased interest. Infections with gastrointestinal parasites from family of Trichostrongylidae, especially represented by *Haemonchus contortus*, are one the most limiting problem in sheep production, aggravated by the increasing resistance of nematodes to traditional anthelmintic drugs. Ethnopharmacological data have indicated the *Pothomorphe umbellata* as a promising alternative for the control of gastrointestinal nematodes. The aim of this work was to evaluate the *in vitro* anthelmintic effects of *P. umbellata* aqueous leaf extract against eggs, infective larvae and adult forms of parasitic nematodes from Trichostrongylidae family from sheep. At higher doses, *P. umbellata* extract showed 95.82%, and 32.18% of efficacy in egg hatch test (EHT) and larval motility test (LMT), respectively. In the adult worm motility test, worms were completely immobilized within the first 4-6 hours of nematode exposition to different dilutions of extract. Thus, these data showed that the evaluated extract presented significant anthelmintic activity, which are of high biotechnological interest and useful towards the growth of sheep farming in Brazil.

Published: 1 October 2014

References

1. Botura MB, Santos JDG, Silva GD, Lima HG, Oliveira JVA, Almedia MAO, Batatinha MJM, Branco A: In vitro ovicidal and larvicidal activity of *Agave sisalana* Perr. (sisal) on gastrointestinal nematodes of goats. *Veterinary Parasitology* 2013, 192(1-3):211-217.
2. Ferreira LE, Castro PM, Chagas AC, França SC, Beleboni RO: In vitro anthelmintic activity of aqueous leaf extract of *Annona muricata* L. (Annonaceae) against *Haemonchus contortus* from sheep. *Experimental Parasitology* 2013, 134(3):327-332.
3. Krychak-Furtado S, Silva AL, Miguel OG, Dias Jde F, Miguel MD, Costa SS, Negrelle RR: Effectiveness of Asteraceae extracts on Trichostrongylidae eggs development in sheep. *Rev Bras Parasitol Vet* 2011, 20(3):215-218.
4. Hounzangbe-Adote MS, Paolini V, Fouraste I, Moutairou K, Hoste H: In vitro effects of four tropical plants on three life-cycle stages of the parasitic nematode, *Haemonchus contortus*. *Research in Veterinary Science* 2005, 78(2):155-160.
5. Kozan E, Anul SA, Tatlı İİ: In vitro anthelmintic effect of *Vicia pannonica* var.*purpurascens* on trichostrongylosis in sheep. *Experimental Parasitology* 2013, 134(3):299-303.

doi:10.1186/1753-6561-8-S4-P155

Cite this article as: Ferreira et al.: In vitro anthelmintic activity of *Pothomorphe umbellata* (L.) Miq. (Piperaceae) against gastrointestinal parasites from sheep. *BMC Proceedings* 2014 8(Suppl 4):P155.

Submit your next manuscript to BioMed Central and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at
www.biomedcentral.com/submit



Unit of Biotechnology, Ribeirão Preto University (UNAERP), Ribeirão Preto, SP, Brazil