

Azando E.V.B., Hounzangbé–Adoté M.S., Olounladé P.A., Brunet S., Fabre N., Valentin A., Hoste H. 2011. Involvement of tannins and flavonoids in the *in vitro* effects of *Newbouldia laevis* and *Zanthoxylum zanthoxyloides* extracts on the exsheathment of third-stage infective larvae of gastrointestinal nematodes. *Veterinary Parasitology*, 180 (3): 292-297.

ABSTRACT: The present study aimed at examining the possible role of tannins and flavonoids on the *in vitro* anthelmintic properties of the extracts of two plants from the southern area of Western Africa, i.e. *Newbouldia laevis* and *Zanthoxylum zanthoxyloides*. Extracts of the two plants were prepared by use of acetone/water (70/30) and their anthelmintic activity was measured by use of the larval exsheathment inhibition assay (LEIA) applied on the abomasal species, *Haemonchus contortus* and the intestinal species *Trichostrongylus colubriformis*. Three concentrations of extracts were evaluated to examine the possible dose effect. In addition, the possible involvement of tannins and flavonoids was examined by comparing the levels of inhibition of larval exsheathment obtained with the same extracts, after or not addition of PVPP which forms complexes with these compounds. The results indicate significant effects with both plants and both nematode species. In the range of concentrations examined, the results were dose-dependent for *N. laevis* extracts but not for *Z. zanthoxyloides* because the three doses applied provoked a similar highly significant inhibition whatever the tested dose. The use of PVPP indicated for both plant and nematode species, that tannins and flavonoids are involved partly in the effect but that some other biochemical compounds were also involved in both plants.