**Journal of Helminthology**

***SUPPLEMENTARY MATERIAL***

***In vitro* anthelmintic activity of** Siparunaguianensis **extract and essential oil against** Strongyloidesvenezuelensis

*Highlights:*

* This study examined the anthelmintic properties of extracts and fractions from *Siparuna guianensis* against *Strongyloides venezuelensis* eggs and larvae, using the Egg Hatching Test (EHT) and Larval Motility Test (LMT)*.*
* All *S. guianensis* samples suppressed eggs hatching as effectively as the positive control, albendazole.
* The inhibitory effect of higher concentrations of *S. guianensis* fractionson *S. venezuelensis* larval motility significantly differed from the negative controls, water and DMSO.
* Phytochemical analysis of the ethanol extract and fractions revealed the presence of phenolic compounds, tannins and flavonoids*.*

**Supplementary**

**Table S1.** Inhibition of S. venezuelensis egg hatching after 48 h of treatment with *S. guianensis* fractions.

|  |  |
| --- | --- |
| Fraction | Inhibition of eggs hatching ( %) |
| Ethyl acetate (mg/ml) |  |
| 0.8 | 91.5 ± 2.0 a c |
| 0.4 | 86.0 ± 3.6 a |
| 0.2 | 78.3 ± 5.5 b |
| 0.1 | 74.7 ± 5.5 b |
| 0.05 | 71.2 ± 7.6 b |
| Aqueous (mg/ml) |  |
| 0.8 | 91.0 ± 2.3 a c |
| 0.4 | 88.8 ± 1.5 a |
| 0.2 | 73.5 ± 0.1 b |
| 0.1 | 70.9 ± 3.6 b |
| 0.05 | 70.8 ± 6.1 b |
|  |  |
| Water | 62.4 ± 2.2 |
| DMSO (1%) | 72.6 ± 2.4 |
| Albendazole (0.025 mg/ml) | 94.3 ± 1.4 |

Letters indicate significant difference (p< 0.05) from the controls, a water,

b albendazole, and c DMSO (dimethyl sulfoxide), for the Fisher’s exact test.

**Table S2.** Inhibition of *S. venezuelensis* larval motility after 24 h of treatment with *S. guianensis* fractions.

|  |  |
| --- | --- |
| Fraction | Inhibition of larval motility (%) |
| Ethyl acetate (mg/ml) |  |
| 0.8 | 82.2 ± 1.1 a b c |
| 0.4 | 44.3 ± 5.1 a b c |
| 0.2 | 36.0 ± 14.7 a b c |
| 0.1 | 23.8 ± 5.3 a b c |
| 0.05 | 20.6 ± 4.5 a b c |
| Aqueous (mg/ml) |  |
| 0.8 | 99.4 ± 0.5 a c |
| 0.4 | 35.1 ± 5.6 a b c |
| 0.2 | 29.1 ± 10.4 a b c |
| 0.1 | 25.4 ± 1.1 a b c |
| 0.05 | 13.6 ± 0.3 a b |
|  |  |
| Water | 7.0 ± 2.1 |
| DMSO (1%) | 7.3 ± 2.0 |
| Ivermectin (0.316 mg/ml) | 100.0 ± 0.0 |

Letters indicate significant difference (p< 0.05) from the controls, a water,

b ivermectin, and c DMSO (dimethyl sulfoxide), for the Fisher’s exact test.

**Table S3.** Qualitative analysis of phytochemicals present in the extract and fractions of *S. guianensis* leaves

|  |  |  |  |
| --- | --- | --- | --- |
| Compound class | Ethanol  extract | Ethyl acetate  fraction | Aqueous  fraction |
| Flavanolsa | + | - | + |
| Flavones, flavonols, and xanthonesa | + | + | + |
| Phenolic compounds | + | + | + |
| Tannins | + | + | + |
| Saponins | - | - | - |

a Flavonoids were detected at pH 11.

+, present ; -, not present.

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**Fig. S1.** Thin layer chromatography profiles of *Siparuna guianensis* leaf extract and fractions eluted with hexane:ethyl acetate 7:3. (A) Visible light; (B) UV light, 360nm. Samples: 1, ethanol extract; 2, ethyl acetate fraction; 3, aqueous fraction.