

Antiparasitic activity of *Alstonia boonei* De Wild. (Apocynaceae) against *Toxoplasma gondii* along with its cellular and acute toxicity

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ABSTRACT:

Toxoplasmosis (*Toxoplasma*) and malaria (*Plasmodium*) are two disease caused by parasites of the phylum Apicomplex. The treatment of toxoplasmosis is similar to that of malaria. Traditionally, *Alstonia boonei* De Willd. (Apocynaceae) is a plant widely used in the treatment of malaria. This study was conducted to assess the antiparasite activity of the 70% hydroethanolic extract of *A. boonei* on *Toxoplasma gondii* and to study its cellular and acute toxicity. The *in vitro* parasitic and cytotoxic assays were performed on HFF cells while the acute *in vivo* toxicity was performed on (Swiss) mice. The ethanolic extract stopped the proliferation of *T. gondii* with an IC₅₀ of 0.13 mg/mL. This extract is neither toxic to HFF cells nor to mice at doses lower than 15000 mg/kg/Vo bw. No signs of behavioural toxicity were observed at this same dose. This confirms the traditional use and its safety in the treatment of *phylum* apicomplex parasites.

Keywords:

Alstonia boonei, Toxoplasmosis, *Toxoplasma gondii*, HFF cells, toxicity.