[Antileishmanial and cytotoxic activity of secondary metabolites from](https://www.tandfonline.com/doi/abs/10.1080/14786419.2021.1871906) *[Taberneamontana ventricosa](https://www.tandfonline.com/doi/abs/10.1080/14786419.2021.1871906)* [and two](https://www.tandfonline.com/doi/abs/10.1080/14786419.2021.1871906) *[aloe](https://www.tandfonline.com/doi/abs/10.1080/14786419.2021.1871906)* [species](https://www.tandfonline.com/doi/abs/10.1080/14786419.2021.1871906)

Authors

Moses Andima, Albert Ndakala, Solomon Derese, Sarkar Biswajyoti, Aabid Hussain, Li Jun Yang, Otieno Elsie Akoth, Paolo Coghi, Chiranjib Pal, Matthias Heydenreich, Vincent Kam-Wai Wong, Abiy Yenesew

Publication date

2021/1/5

Journal

Natural Product Research

Pages

1-5

Publisher

Taylor & Francis

Description

In this study, the antileishmanial and cytotoxic activities of secondary metabolites isolated from *Tabernaemontana ventricosa* Hochst. ex A. DC., *Aloe tororoana* Reynolds, and *Aloe schweinfurthii* var. *labworana* Reynolds were investigated. Overall, nineteen known compounds were isolated from the three plant species. The compounds were characterized based on their spectroscopic data. Voacristine and aloenin were the most active compounds against promastigotes of antimony-sensitive *Leishmania donovani* (IC50 11 ± 5.2 μM and 26 ± 6.5 µM, respectively) with low toxicity against RAW264.7, murine monocyte/macrophage-like cells. The in silico docking evaluation and *in vitro* NO generation assay also substantially support the antileishmanial effects of these compounds. In a cytotoxicity assay against cancer and normal cell lines, ursolic acid highly inhibited proliferation of lung cancer cells, A549 …