

FUTURE MEDICINAL CHEMISTRY, VOL. 13, NO. 11 | SHORT COMMUNICATION

New evidence for tamoxifen as an antischistosomal agent: *in vitro*, *in vivo* and target fishing studies

Tais C Silva[‡], Ana C Mengarda[‡], Bianca C Silva, Thais S Relvas-Lima, Vinicius C Rodrigues, Maria C Salvadori, Fernanda S Teixeira, Andrey FS Lopes, Daniela GG Rando & Josué de Moraes[✉]

Published Online: 26 Apr 2021 | <https://doi.org/10.4155/fmc-2020-0311>

📄 About

🔧 Tools

🔗 Share

📄 View Article

Background: Praziquantel is the only drug available to treat schistosomiasis, and there is an urgent demand for new anthelmintic agents. Methodology & results: We conducted in-depth *in vitro* and *in vivo* studies and report a target fishing investigation. *In vitro*, tamoxifen was active against adult and immature worms at low concentrations (<5 μM). Tamoxifen at a single dose (400 mg/kg) or once daily for five consecutive days (100 mg/kg/day) in mice harboring either adult (patent infection) or juvenile (prepatent infection) significantly reduced worm burden (30–70%) and egg production (70–90%). Target fishing studies revealed propionyl-CoA carboxylase as a potential target for tamoxifen in *Schistosoma mansoni* and glucose uptake by *S. mansoni* was also significantly reduced. Conclusion: Our results provide news evidence of antiparasitic effect of tamoxifen and reveal propionyl-CoA carboxylase as a potential target.

Keywords: antischistosomal compound • drug repositioning • *Schistosoma* • schistosomiasis • tamoxifen • target fishing

[Contact Us](#) | [About](#) | [Newsletter](#)



Future Science Ltd, Unitec House, 2 Albert Place, London, N3 1QB, UK
+44 (0)20 8371 6090

[Terms and conditions](#) | [Privacy policy](#) | [Accessibility](#)

© 2021 Future Science Group