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In vitro* efficacy of three approved drugs and their synergistic interaction against *Leishmania infantum

Rasha Fadly Mady, Iman Fathy Abou El Naga and Nermine Mogahed Fawzy Hussien
Alexandria University, Egypt

Leishmaniasis is one of the most neglected tropical diseases. The available drugs have many side effects and drug resistance. In the current work the leishmanicidal effect of three approved drugs acting on three different enzymes namely Auranofin, Aluvia and Sorafenib had been analyzed. Their synergistic, additive or antagonistic effects against *L. infantum* promastigotes were investigated. The ultrastructural changes of the parasite treated by the aforementioned drugs were studied. This study demonstrated evidences that Auranofin, Aluvia and Sorafenib had significant antileishmanial effect against the promastigotes of *L. infantum* and Auranofin showed the highest effect. The combined administration of the drugs in two way combinations led to additive interactions. Furthermore, the combination of the three drugs had shown synergistic action. The electron microscopic study revealed that the three drugs exerted their leishmanicidal action by inducing apoptosis while Alluvia lead also to autophagy.

Biography

Rasha Fadly Mady has her expertise in Medical Parasitology. She is an Assistant Professor at Alexandria Faculty of Medicine. She also had good experience in propagation of toxoplasma and leishmanial in laboratory. She had Post-Doctoral Research in Wellcome Trust Laboratory, Natural History Museum, London.

rasha.madi@alexmed.edu.eg

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