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The amoebicidal potential of *Arachis hypogaea* L. pericarp on cysts of *Acanthamoeba astronyxis* T7 genotype

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Acanthamoeba is an opportunistic pathogen causing keratitis and fatal encephalitis. Early diagnosis, followed by aggressive treatment using a combination of drugs is a prerequisite for successful treatment. Many natural compounds have demonstrated lethal effects, yet the search for novel natural amoebicidal agents is still of current interest. The study investigated the *in vitro* amoebicidal effect of *A. hypogaea* L. (peanuts) pericarp (as waste product); resveratrol, total methanol extract and its fractions (n-hexane, dichloromethane, ethyl acetate and ethanol) on cysts of *A. astronyxis* T7 genotype from patients suffering keratitis. *Acanthamoebae* were isolated, cultivated on 1.5% non-nutrient agar and incubated with different concentrations of the plant extractives. The total methanol extract showed the highest mean of non-viable (cysts 99%), followed by the ethanol, ethyl acetate, dichloromethane, n-hexane extractives and finally resveratrol regarding accumulative effect on second day. The study highlighted a guide for the best concentration of each extractive to be used and the duration and effect it will give along accumulation. All the used samples proved *in vitro* amoebicidal activity and could be considered new promising natural agents with special regards to the synergetic effect of different constituents in total methanol extract which added to its potency.

Biography

Mona H Hetta has started her career in Natural Product Department of National Research Centre, Egypt. She was awarded a scholarship by DAAD in 1996. She has completed her Doctorate in Pharmacognosy in 2001 from Helwan University, Egypt. She held a number of managerial positions since 2008 which includes The Head of Pharmacognosy Department (2008-2014), Coordinator of Clinical Pharmacy Program (2008-2011) and Dean of Faculty of Pharmacy (2014). She was given Scientific Excellence Award from Beni-Suef University in 2011. She has joined Faculty of post-graduate studies and advanced materials, Beni-Suef University, Egypt as Vice Dean of the Faculty in 2012. She was then promoted to Professor in 2013. She has 53 scientific published papers. Currently, she is the Dean of Faculty of Pharmacy, Fayoum University.

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