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## Use of homo lipid for delivery of anti-malarial drugs

Ogbonna John Dike N, Nwobi Chinekwu S and Attama Anthony A  
University of Nigeria, Nigeria

Solid lipid microparticles (SLMs) which are recent drug delivery system employed in the delivery of drugs in addition of having advantages of lipid formulations are biocompatible, less toxic, long term stability etc. In this study, lipid was extracted from the goat fat using wet rendering method. The lipid matrix was prepared by fusion method and the drug loaded (chloroquine phosphate, halofantrine and artemether/lumefantrine) SLMs formulated by hot homogenization. The *in vivo* activity of the SLMs on *Plasmodium berghei* infected mice was done using Peter's four day suppressive protocol and the histological studies performed after the mice were sacrificed. The SLMs were stable. The SLMs containing artemether/lumefantrine had 87.01% parasite clearance while the commercial formulation of artemether/lumefantrine had 80.0% parasite clearance; SLMs containing chloroquine phosphate had 87.10% parasite clearance while the commercial formulation of chloroquine phosphate had 84.12% parasite clearance; SLMs containing halofantrine had 72.96% parasite clearance while the commercial formulation of halofantrine had 85.71% parasite clearance. The group G which received no treatment had 14.89% parasite clearance. The SLMs formulations had good *in vivo* activity compared to the commercial formulation and were not harmful to the vital organs of the mice therefore SLMs can be an alternative means of formulating these antimalarials.

[john.ogbonna@unn.edu.ng](mailto:john.ogbonna@unn.edu.ng)

## Biological activities of species in the genus *Tulbaghia*: A review

S Takaidza, M Pillay and F Mtunzi  
Vaal University of Technology, South Africa

Since time immemorial, plants have been used by several communities to treat a large number of diseases. Numerous studies on the pharmacology of medicinal plants have been done. Medicinal plants constitute a potential source for the production of new medicines and may complement conventional antimicrobials and probably decrease health costs. Phytochemical compounds in plants are known to be biologically active aiding, for example, as antioxidants and antimicrobials. The overwhelming challenge of drug resistance has resulted in an increasing trend towards using medicinal plants to treat various diseases, especially in developing countries. Species of the genus *Tulbaghia* has been widely used in traditional medicine to treat various ailments such as rheumatism, fits, fever, earache, tuberculosis etc. It is believed that the species possess several therapeutic properties. This paper evaluates some of the biological activities of the genus *Tulbaghia*. It is evident from current literature that *T. violacea* is the most promising species. The other species of *Tulbaghia* still require further studies to ascertain their medicinal potential.

### Biography

S Takaidza is currently pursuing her PhD in Biotechnology and works as a Research Technician at Vaal University of Technology where she has completed MTech in Biotechnology in 2012. She has graduated in 2005 with a BSc degree in Microbiology from University of Limpopo, South Africa. Her first degree was BSc in Science with Education at Bindura University of Science and Technology, Zimbabwe.

[samkelisot@vut.ac.za](mailto:samkelisot@vut.ac.za)

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