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A comparative study of crude extracts from some medicinal plants against malaria pathogens with chloroquine drug

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alaria is one of the most important infectious diseases worldwide where in Africa the disease is mostly endemic. The Lohoices for the treatment are highly limited, and prolonged with minimum dose goes for 10-14days. Over forty different medicinal plant species from East Africa regions are commonly used by the local traditional healers for the treatment of malaria. Among them, the stem barks and soft roots from Azadirachta indica, Cissampelos mucronata, Zanthoxylum chalybeum, Entandrophragma congolense, Picralima nitida, Toddalia esiratica, Tamarindus indica, Maytenus senegalensis, and Dodonaea angustifolia are commonly used traditionally for antimalaria. A total of nine aqueous crude plants extracts from the said traditional medicine were evaluated for their in vivo antimalarial activity using Plasmodium berghei infected swiss mice and for their acute toxicity using brine shrimp lethality test and the locally available chloroquine was used as an anti-malaria drug. The plants extract had a LC50> 750µg/ml thus non-toxic. The aqueous extract significantly reduced parasitemia by an average of 35.4% at a dose of 200 mg/kg incomparable to chloroquine after 48 hours as a monotherapy showing the significant difference from that of chloroquine(P≤0.07). This suggests synergism of phytoconstituents and efficacy of crude extracts against specific drug chloroquine in suppressing the parasitemia thus ascertaining the ethnopharmacological claims.

Biography

Ochieng O Anthony studied pure and applied chemistry, a PhD scholar, the senior chemistry lecturer at Faculty of Science, Sumait University in Tanzania. He is also a co-author of determination of acidic pharmaceutical components in an analgesic drug. His research focuses on natural products and evaluating their medicinal values, pharmaceutics, cosmetology, education chemistry, macrocyclic compounds and their applications in drug design and using statistical thermodynamics in evaluating acidic constants. He is a member of Kenya Chemical Society, American Chemical Society, Royal Society of Chemistry & GNDU Chemical Society. He has 7 years working in pharmaceutical and cosmetic industrial sectors, 3 publications in reputable journals and 15 years lecturing chemistry in higher institutions of learning.

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