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In Vivo antimalarial evaluation of novel 4-Aminoquinazoline derivatives

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Abstract

Malaria is a deadly parasitic infectious disease affecting billions of people around the world. A wide variety of quinazolines displayed potential antimalarial activities. Based on this, fifteen novel 4-aminoquinazoline derivatives were synthesized and tested for their *in vivo* antimalarial activities. The compounds were prepared using cyclization and condensation reactions. The structure of the synthesized compounds were verified using elemental microanalysis, IR, ^{1}H NMR and ^{13}C NMR spectral techniques. The *in vivo* antimalarial activities of the synthesized compounds were investigated using Swiss Albino mice infected with *Plasmodium berghi* ANKA strain.

All the synthesized compounds displayed significant antimalarial activities with percent suppression of 57.5-87.3 as compared to the control group ($P > 0.05$). Among the synthesized compounds **II, V, VIII** and **X** showed promising antimalarial activities with percent suppression of 87.3, 84.6, 01.2 and 79.8 respectively which indicate 4-aminoquinazolines are fruitful matrixes for the development of antimalarial agents. In addition, the acute toxicity test indicated that these compounds are free of any inherent acute toxicity symptoms.

Biography

Frezer Abiy has completed her BSc degree in Chemistry and MSc degree in Medicinal Chemistry from University of Gondar and Addis Ababa University School of Pharmacy respectively. She has served as a coordinator of research and community service at faculty level since 2012. In addition, she has submitted two two research articles for peer review journal.