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Design, synthesis and evaluation of novel Chalcones as antimalarial agents

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Among various antimalarial agents, chloroquine and its derivatives remains the backbone of medical care against malaria. Due to resistant strains of malarial parasite against chloroquine, the urgency to explore a new and cost-effective medicament to cure malaria increases. Chalcones are stable, low molecular weight compounds and easy to prepare in a cost-effective manner, thus attracts attention of different scientists for the synthesis of antimalarial chalcones to find out a novel and efficacious drug. *In-silico* strategies have been of incredible importance in target identification and in prediction of novel drugs by means of bioinformatics tools to analyze possible active sites, drug likeness, molecular docking and ADME/T. The utilization of complementary experimental and informatics methods increases the rate of success in many stages of the drug discovery, by assessing the interactions between the ligands and the binding site of the protein according to their binding affinity and elucidation of their functions to the discovery and development of compounds with desired properties. Structures of more protein targets get to be accessible through crystallography, NMR and bioinformatics methods. Also to win the battle against life-threatening diseases like Malaria, a global push is essential. Intervention of computers at some conceivable steps is imperative to cut down the expense and time needed in the drug discovery process. Our group has been dealing with *in silico* drug design, synthesis and biological activities of chalcones. Here we discuss the *in silico* and synthetic approach towards development of antimalarial chalcones.

Biography

Nidhi Mishra has expertise in drug design and synthesis of biologically active compounds. She has experience in computational chemistry and computational biology.

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