

# Novel drug targets in malaria parasite with potential to yield antimalarial drugs with long useful therapeutic lives.

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## **Abstract**

The status of chemotherapy as the main strategy in malaria control is rapidly being eroded by development of drug resistant Plasmodia, causing malaria to be dubbed a "re-emerging disease". To counter this misfortune, there is an urgent need to develop novel antimalarial drugs capable of delaying resistance, or circumventing it altogether. Mode of action of antimalarial drugs, inter alia, has a bearing on their useful therapeutic lives (UTLs), with single target drugs having short UTLs compared with drugs which possess pleiotropic action. Quinolines and artemisinin are the two classes of drugs with pleiotropic action and subsequently long UTLs. All other antimalarials are single-target drugs, and have been rendered ineffective within 1 to 5 years of their introduction for clinical use. This strongly underlines the need for development of new antimalarial therapies possessing long UTLs. The present review explores novel drug targets within the malaria parasite that may be exploited in the search for novel drugs that possess long and UTLs.

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