

# KANSAS STATE UNIVERSITY

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### ***Abstract***

Malaria remains one of the top causes of human death annually. Growing resistance to antimalarial drugs pushes the global burden of malaria even further. Resistance to all antimalarial drugs has been reported, including to the most recently developed artemisinin derivatives. Further growth in artemisinin and multi-drug resistance threatens the global efforts to control malaria. To counter drug resistant malaria, new drugs are needed that have novel mechanisms of action. Because malaria predominantly occurs in lower-income countries, there have been relatively little research funding and private investment in developed countries. We describe the organization and efforts of Open Source Malaria, an open international consortium to address these challenges in antimalarial research and drug discovery,

We report several antimalarial series possessing several highly desirable attributes, including high potency and low toxicity in an *in vivo* mouse model of malaria. We describe the contributions of our group at Kansas State University in target discovery, chemo/bio-informatics, structural biology, and experimental biochemistry.