Products Serve As A Viable Source Of Lead Compounds For The Development Of New/novel Anti-malarials?

Guantai, Eric; Chibale, Kelly

Abstract:

Malaria continues to be an enormous global health challenge, with millions of new infections and deaths reported annually. This is partly due to the development of resistance by the malaria parasite to the majority of established anti-malarial drugs, a situation that continues to hamper attempts at controlling the disease. This has spurred intensive drug discovery endeavours geared towards identifying novel, highly active anti-malarial drugs, and the identification of quality leads from natural sources would greatly augment these efforts. The current reality is that other than compounds that have their foundation in historic natural products, there are no other compounds in drug discovery as part of lead optimization projects and preclinical development or further that have originated from a natural product start-point in recent years. This paper briefly presents both classical as well as some more modern, but underutilized, approaches that have been applied outside the field of malaria, and which could be considered in enhancing the potential of natural products to provide or inspire the development of anti-malarial lead compounds.