



College of Liberal Arts and Sciences
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Natural Product Inspired Novel Antimalarials

ABSTRACT: Over the past several decades, natural products have been the most successful source of potential drugs to combat many infectious diseases. Notably, they have provided some of the best antimalarials known to date, such as quinine and artemisinin, isolated from *Cinchona* species and *Artemisia annua*, respectively. Many of these natural products provided inspiration and template toward the design and development of various antimalarials currently in clinical use or under development. Recently, our efforts focused on the biosynthesis and synthesis of various novel antimalarial natural products. A rigorous structural optimization process has expanded our chemical library, and more importantly, produced lead candidates with significantly improved efficacy and safety profiles.

BIOGRAPHY: Dr. Papireddy (Reddy) Kancharla is currently a Research Assistant Professor in the department of chemistry at Portland State University. Reddy has been working closely with Dr. Kevin Reynolds and Dr. Jane Kelly at Portland State University for the last 10 years and they jointly developed several novel antimalarials. Reddy was born and grew up in India. He received a Ph.D. in Chemistry in 2010 from the Acharya Nagarjuna University, India. Then he moved to Portland State University to pursue his postdoctoral training with Prof. Kevin Reynolds. Reddy's postdoctoral work mainly focused on the elucidation of biosynthetic pathways of various intricate natural products in *Streptomyces* and evaluation of their therapeutic implications. His current research interests are in medicinal chemistry, drug discovery, and natural products, specifically for novel antiplasmodial chemotypes.