

Antimalarial alkaloids isolated from *Annona squamosa*

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Abstract

Aim of the investigation was to isolated antimalarial compounds from *Annona squamosa*, which is traditionally used in diseases including infections associated with malarial parasites. N-Nitrosoxylopine (**1**), Roemerolidine (**2**) and Duguevalline (**3**) were isolated from the extract of bark. All compounds showed moderate activity against chloroquine-sensitive strain (D10) and a chloroquine resistant strain (Dd2) of *Plasmodium falciparum* with IC₅₀ values ranging between 7.8 and 34.2 µM/mL. N-Nitrosoxylopine also showed cytotoxicity in MTT assay while no cytotoxicity was observed for other two compounds.

Keywords: *Plasmodium falciparum*, *Annona squamosa*, alkaloids, MTT

Introduction

Malaria is a major disease throughout the tropical and subtropical regions and continues to be one of the greatest causes of serious illness and death. According to the WHO Malaria Report 2008, there was an estimated 247 million malaria cases among 3.3 billion people at risk in 2006, causing nearly a million of deaths, mostly of children under 5 years. 109 countries were endemic for malaria in 2008, including 45 within the WHO African region. Malaria treatment relies on a handful of accepted, affordable and effective drugs, many of which are chemically similar. However, an increasing incidence of drug resistant strains of *Plasmodium* spp. highlights the need for novel antimalarial compounds. Plants represent an important source of novel Antimalarial compounds, as most famously evidenced