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Scientification of Jamu
(Evidence-based Jamu Development):
A Breakthrough Program from Plant
to Medicine for Health Care

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on Indonesia Medicinal Plant

“Exploration, Conservation, Development,
and Utilization of Indonesian Medicinal Plant”

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PURWOKERTO

PROCEEDINGS OF INTERNATIONAL CONFERENCE ON MEDICINAL PLANTS

Scientification of Jamu (Evidence-based Jamu Development): A Breakthrough Program from
Plant to Medicine for Health Care

In occasion of

**The 43th National Meeting of National Working Group on Indonesia
Medicinal Plant
11-13 October 2012
Purwokerto, Indonesia**

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Scientification of Jamu (Evidence-based Jamu Development): A Breakthrough Program from
Plant to Medicine for Health Care

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Potency of Methanol Extract of *Artocarpus champeden* Stem Bark to Inhibits The Growth of *Plasmodium falciparum*

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Abstract

Methanol extract obtained from a three-steps successively extraction of the Cempedak (*Artocarpus champeden*) stem bark was examined for its antimalarial activity. The extraction was done firstly with n-hexane, secondly with dichloromethane, and then with methanol. The methanol extract then subjected to examination with the chloroquine-sensitive and chloroquine-resistant strains of *Plasmodium falciparum* according to an in-vitro testing procedure developed by Trager and Jensen. The examination was conducted with non-synchronized cultures of *P. falciparum* of the 3D7 strain (the chloroquine-sensitive) and the G-2300 strain (the chloroquine-resistant) with the concentrations of extract in the microwells were 100, 10, 1.0, 0.1 and 0.01 µg/mL for 48 hours incubation. Chloroquinediphosphates was used for positive control with the concentrations of 10, 1.0, 0.1, 0.01 and 0.001 µg/mL, and DMSO for negative control. The IC₅₀ values found for the methanol extract were 4.230 µg/mL on the 3D7, and 16.580 µg/mL on the G-2300 strain. At the same test condition, the chloroquinediphosphates has the IC₅₀ of 0.003 µg/mL on the 3D7 strain. From the results of the examination, it can conclude that methanol extract *A. champeden* is categorized as strong or very active antimalarial against the chloroquine-sensitive *P. falciparum* strain, and moderate or active against the chloroquine-resistant strain.

Keywords: *Artocarpus champeden*, antimalarial activity, in-vitro, *Plasmodium falciparum*, chloroquine-sensitive and chloroquine-resistant.