

CURRENT RESEARCH AND DEVELOPMENT IN BIOTECHNOLOGY ENGINEERING AT IIUM

VOLUME II

Editors:

Ibrahim Ali Noorbatcha
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Raha Ahmad Raus



IIUM PRESS

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

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(VOLUME II)

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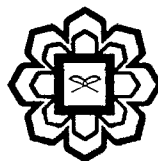
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IIUM Press

Published by:
IIUM Press
International Islamic University Malaysia

First Edition, 2011
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Perpustakaan Negara Malaysia

Cataloguing-in-Publication Data

Ibrahim Ali Noorbacha, Hamzah Mohd. Salleh, Mohamed Elwathig Saeed Mirghani & Raha Ahmad Raus: Current Research and Development in Biotechnology engineering at IIUM
Volume II

ISBN: 978-967-418-151-2

Member of Majlis Penerbitan Ilmiah Malaysia – MAPIM
(Malaysian Scholarly Publishing Council)

Printed by :
IIUM PRINTING SDN. BHD.
No. 1, Jalan Industri Batu Caves 1/3
Taman Perindustrian Batu Caves
Batu Caves Centre Point
68100 Batu Caves
Selangor Darul Ehsan

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EXTRACTION AND EVALUATION OF ANTICANDIDAL ACTIVITY FROM SELECTED MALAYSIAN PLANTS

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ABSTRACT

Six local plants, *Ixora chinensis*, *Cassia alata*, *Alpinia galanga*, *Clerodendrum paniculatum* (red and white), and *Mussaenda philippica* (red) were evaluated for their anticandidal activity. Methanol, hexane, ethyl acetate and distilled water were used as solvent to extract the plant samples and disc diffusion method was used to determine the antifungal activity against *Candida albicans*, *Candida glabrata*, *Candida parapsilosis* and *Candida tropicalis*. Anticandidal assay showed that *A. galanga* is positive for the assay while all other plants showed negative result. Ethyl acetate extract of *A. galanga* had the largest inhibition zone against candidal growth. This study suggested that *A. galanga* is highly potential in anticandidal activity which can be further analyzed for the development of new antibiotic against fungal infection.

Keywords: Anticandidal activity, *Alpinia galanga*, Disc diffusion assay, Ethyl acetate

INTRODUCTION

In recent years, the incidence of fungal infections has been rising all over the world. The risk of opportunistic fungal infections has greatly increased in patients who are severely immunocompromised due to cancer chemotherapy, organ or bone marrow transplantation and human immunodeficiency virus infection (Zhang et al., 2006). Candidiasis is the most frequent fungal infection which is caused by *Candida* species. There are several types of candidiasis, ranging from superficial infections of the skin, nails and mucous membranes to candidaemia and deep-seated systemic infections (Hoepelman et al., 1996). The most common *Candida* species that cause fungal infections are *Candida albicans*, *Candida glabrata*, *Candida tropicalis*, and *Candida parapsilosis*.

Plants are the main medicinal source to treat infectious diseases due to economic conditions and availability. The earliest report on medicinal plant research in Malaysia was on