

INTERNATIONAL BIOTECHNOLOGY SEMINAR & 5th KBI Congress 2010

MALANG • 27 - 30 JULY 2010

Biotechnology :
*Breakthrough for the Future of
Industrial Challenges in Developing Countries*

ABSTRACTS



proceeding

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Wednesday, July 28 th 2010
Room B. (Hotel UMM Inn)

HEALTH			
1st Session Moderator: Prof. Dr. Ir. Zaituni Udin, M.Sc.			
NO	TIME	NAME OF PRESENTER	PAPER TITLE
1	15.30 - 15.45	Agnes O. Lizandi	Vascgrow Enhance Endothelial Progenitor Cells Proliferation and Differentiation
2	15.45 - 16.00	Hening Widowati	The Influence of Cadmium to The Amount of Vitamin in Aquatic Vegetables
3	16.00 - 16.15	Anggia Prasetyoputri	Towards New Influenza Antivirals from Natural Products: The Development of a Bioassay Based on Heterologous Expression Of M2 Ion-Channel Protein
4	16.15 - 16.30	Zesfin B.P.	Status of Reproduction of Post Mortem Kacang Goat In Slaughter House In Padang
2nd Session Moderator: Prof. Dr. Ir. Hj. Zesfin BP, M.S.			
5	16.30 - 16.45	Zaituni Udin	Effect of Storage Temperature of Epididymis on Semen Quality of Swamp Buffalo
6	16.45 - 17.00	Camy F. Surjadi	Cryopreserved Umbilical Cord Blood Mononuclear Cell as a Potential Source for Clinical Application
7	17.00 - 17.15	Dwi Wahyuni	Chemical Composition and Larvicidal Activities of Essential Oil of <i>Piper betle</i> from The Indonesian Plants Against <i>Aedes aegypti</i> L.

Larvicidal activity of extracted piper betle from the Indonesian plants against *Aedes aegypti* L

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Abstract

Aedes aegypti L. is the major vector of dengue fever. Dengue fever is endemic over large areas of tropics and subtropics. Outbreaks of dengue have repeatedly occurred in Indonesian over the last 10 years. This study was undertaken to assess the larvicidal potential of the extracted *Piper betle* from the Indonesian Plants against *Aedes aegypti* L. The larvicidal activity of extracted *Piper* from the Indonesian Plants was tested using third-instar larvae of *Aedes aegypti*.

Methods: *Plant material* - the *Piper betle* from the Indonesian Plants were extracted by ethanol. Larvae of *A. aegypti* were collected from a mosquito colony maintained strain Jember-Indonesian. For the assay, of the extracted was placed in a 50 ml beaker that contained 50 larvae (third instar). Mortality was recorded after 24 h of exposure during which no nutritional supplement was added. Each test comprised of three replicates with five concentrations (100, 75, 50, 25, 10 ppm). Data were evaluated through regression analysis. From the regression line, the LC₅₀ values were read representing the lethal concentration for 50% larval mortality of *A. aegypti*. The results from the *A. aegypti* larvicidal assay using of extracted *Piper betle* from the Indonesian Plants were those of the 24 hour exposed, LC₅₀ = 11,04 ppm. For the 48 hour exposed, LC₅₀ = 9,045 ppm. *Piper betle* from the Indonesian Plants against *Aedes aegypti* L present potential alternatives of new bioinsecticide

Keywords: *Aedes aegypti*, *Piper betle* from the Indonesian Plants

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