Program & Abstracts

IBC

The 3rd Indonesian Biotechnology Conference 2004

An International Conference and Exhibition

INNA Grand Bali Beach Hotel, Sanur, Bali
December 1-3rd, 2004

"Recent Advances in Biotechnology for Human Health and Food Sustainability"

Hosted by :

Konsorsium Bioteknologi Indonesia

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PM3

ISOLATION AND PARTIALLY PURIFICATION OF PROTEIN DISULFIDA ISOMERASE FROM *Saccharomyces cerevisiae* [pUKC470]

Mariana Wahyudi[1], Muliawati Sindumarta[2], Dessy Natalia[2]
[1] *Fakultas Farmasi Universitas Surabaya,* [2] *Departemen Biokimia MIPA Kimia Institut Teknologi Bandung*

ABSTRACT

Protein disulphide isomerase (PDI) is a multi-enzyme involved in catalyzing redox and isomerization reactions of disulphide bonds in secretory proteins. This investigation is focused on the isolation and partially purification of PDI from *Saccharomyces cerevisiae* [pUKC470] in order to elucidate mechanism of action of PDI by characterizing kinetics of the enzyme. The specific activity of PDI isolated from transformant increased by 17 fold compared to the wild type *Saccharomyces cerevisiae* W303. The purification of PDI from transformant using ammonium sulphate fractionation followed by ion exchange chromatography on DEAE-Sephacel revealed that the specific activity of PDI increased to 255.28 unit per mg, a degree of purity 137 fold compared to the cells free extract, and yield of 41 %.

Keywords: DEAE-: dietilaminoetil-; PDI: Protein disulphide isomerase; Saccharomyces cerevisiae [pUKC470]

PM4

CURCUMIN INHIBIT REDUCTION OF THE ADIPOCYTE LEPTIN-RECEPTOR INDUCED BY ATHEROGENIC DIET

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Laboratory of Physiology Medical Faculty Brawijaya University.

ABSTRACT

Curcumin is one of the phytopharmaca that can inhibit lipid peroxidation by reserving antioxidant (super oxide dismutase, katalase, and glutathione peroxidase) activity. Vascular injury caused by atherogenic diet, through oxidative stress mechanism, tends to reduce the leptin receptor in peripheral tissues. The aim of this research was to investigate the ability of curcumin to inhibit leptin receptor reduction by evaluating the adipocyte leptin receptor density in the adventitia aorta of rat treated with atherogenic diet with and without curcumin administration.

Combine nutrition between atherogenic diet and curcumin (atherogenic diet without curcumin; atherogenic diet + 50 mg / kg BW / day curcumin; ath-

2. *Medical, Pharmaceutical and Nutraceutical Biotechnology (PM)*

PM1	**Hanizar E, Sumitro S.B and Hinting A**: Detection Of Azf (Azoospermic Factor) Gene Deletion In Infertile Men
PM2	**Sumika Shimoji, Mika Himeji, Shin-Ichi Yazaki, Takashi Ohtsuki, Sadaharu Ui, R. D. Esti Widjayanti, Koesnandar and Akio Mimura :** Evaluation Of Ant- UVB Components Of Tropical Medicinal Plants By Using Human Fetal Lung Diploid Cell Line TIG-1
PM3	**Mariana Wahyudi, Muliawati Sindumarta and Dessy Natalia**: Isolation And Partially Prification Of Protein Disulfida Isomerase From Saccharomyces Cerevisiae [Pukc470]
PM4	**M. Rasjad Indra, Wibi Ariawan and Tinny E. Hernowati** : Curcumin Menghambat Penurunan Reseptor Leptin Adiposit Akibat Diet Aterogenik
PM5	**Diana Nurani, Noer Laily, Sri Istini and Ida Susanti** : Comparison Of Plantago Ovata Fiber And Bacteria Fiber For Lowering Blood Cholesterol In Rats
PM6	Wahyuni D.: Purification Of A High-Molecular-Weight Insecticidal Protein Complex Produced By The Entomopathogenic Bacterium Photorhabdus Luminescens Isolated From Indonesia
PM7	**Aulanni 'Am and Basuki :** Characterization Of Protein Kinase-(Pkc-α) Isolated From *Benign Prostatic Hyperplasia* (BPH) Patients
PM8	**Nur Permatasari, Ma'rifin Husin, Mulyohadi Ali, Sutiman B Sumitro and Moch Aris Widodo :** The Effects Of H_2O_2 And Basal Ca^{2+} Cytosolic Concentration On The Level Of Mitochondrial Respiration In Vascular Endothelial Cells Cultured Exposed To High Glucose Concentration
PM9	**Yanti, E Ovianto, Mt Suhartono, T Idiyanti, D Sajuthi and LH Suparto** : Antithrombotic Potency Of Local Earthworm Powder (*Lumbricus Rubellus*) In Long-Tail Monkey (*Macaca Fascisularis*)
PM10	**Hulman Siagian, Usman S. F. Tambunan, Sabbath Marchend and Titan Reagan Sjofjan** : Bioinformatics Study Of HPV Genomes As First Step To Develop Kit For Cervical Cancer Detection
PM11	**Rifatul Widjhati, Agus Supriyono, Subintoro and Elrade Rofaani :** Bioactive Compounds Isolated From Indonesian Marine Sponges As Potential Sources For Pharmaceuticals.
PM12	**Sri Purwanti, Ika Nurlaila, Lilis Purwowati, Mashinta Mailani, Sri Widyarti, Sutiman B. Sumitro and Aris Soewondo :** The Study Of Quercetin Diet To Apoptotic Protein Parp 85 KD In Rat Lung-Injected Nitrosodiethylamine (Ndea)