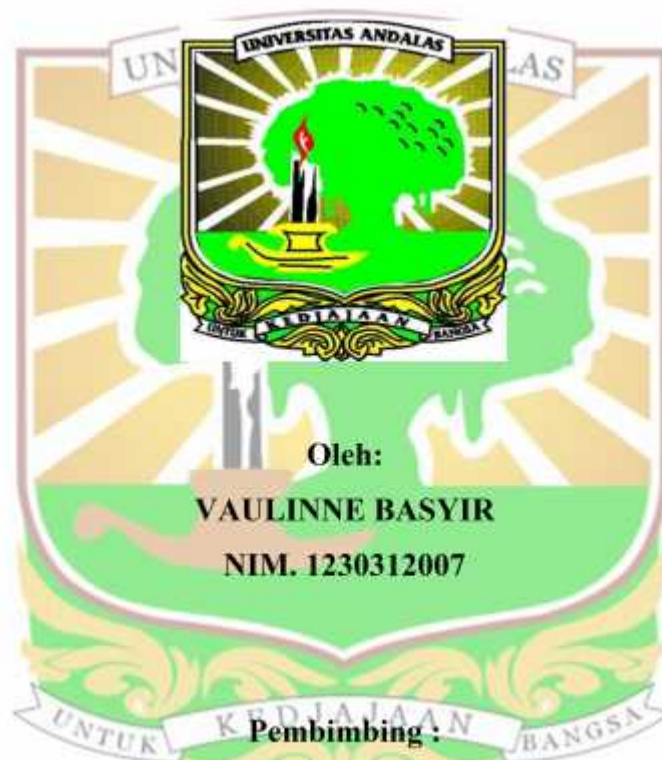


DISERTASI

PENGARUH LIKOPEN TERHADAP KADAR *SOLUBLE FMS-LIKE TYROSINE KINASE 1, PLACENTAL GROWTH FACTOR* DAN MALONDIALDEHID PADA PREEKLAMSI

PENELITIAN EKSPERIMENTAL PADA SEL TROFOBLAS YANG DIINDUKSI SERUM MATERNAL DENGAN PREEKLAMSI



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ABSTRACT

POTENTIAL LYCOPENE IN IMPROVEMENTS DAMAGE OF ENDOTHELIAL CELLS IN VITRO (LEVEL CHANGES sFLT-1, PIGF AND MDA) CELL TROPHOBLAST OF PREECLAMPSIA

Vaulinne Basyir

Preeclampsia is a major cause of morbidity and maternal and perinatal mortality. Incidence of preeclampsia is still high and management is not optimal; because of the etiology and pathophysiology of preeclampsia is still unknown. This research aimed to determine the differences of sFlt-1, PIGF and MDA in vitro on trophoblast cell respectively induced by normal and pre-eclampsia serum; to determine effect of lycopene to the levels of sFlt-1, PIGF and MDA.

This research was carried out experimentally in the laboratory at Molecular Genetics and Cell Culture Laboratory, Faculty of Medicine Universitas Padjadjaran. Serum samples obtained from Hasan Sadikin Hospital, Bandung in accordance with inclusion and exclusion criteria. First determined LC_{50} values of lycopene against trophoblast cell and then used as the basis value concentration. Further, examinations of sFlt-1 and PIGF with ELISA method, and MDA examination with TBARS method on trophoblast cell normal conditions and pre-eclampsia with data analysis using analysis of variance (ANOVA) and Duncan test to determine differences between variables.

The results showed that the LC_{50} value was 250 ug/ml and serial concentrations used ranging from 1,953 until 125 ug/ml. Obtained sFlt-1 levels decreased significantly ($p < 0,05$) from 39,5445 to 31,1342 pg/ml and MDA in 18,8923 to 8,5773 μ M, and PIGF levels increased significantly from 2,81 to 5,842 pg/ml the trophoblast cell preeclampsia induced by serum concentration after administration lycopene of 15,625-31,25 ug/ml whose value approaches the state of the trophoblast cell induced serum of normal pregnancy. Lycopene influence on levels of sFlt-1, PIGF and MDA on cell trophoblast of preeclampsia.

The conclusions of this study are lycopene can changes the levels of sFlt-1, PIGF and MDA. Its influenced by lycopene concentration and the type of serum

Key words: Angiogenesis, Antioxidants, Lycopene, MDA, Trophoblast