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Effects of *Phaleria macrocarpa* (Scheff.) Boerl Extract on Malondialdehyde level in Preeclampsia-induced HUVEC culture

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Preeclampsia is a major cause of both maternal and perinatal mortality and morbidity. The pathopysiology of preeclampsia remain unclear but early placental dysfunction followed by oxidative stress, increased lipid peroxidation, and reduced antioxidants play an important role. Malondialdehyde (MDA) is the final product of lipid peroxidation, commonly used as the oxidative stress marker. Prevention and treatment of oxidative stress in preeclampsia using antioxidant including melatonin, beta-caroten, vitamin C or E has been developed but none is yet recommended. Thus the efforts are continuing to find an effective antioxidant in preeeclampsia. *Phaleria macrocarpa*, a medicinal plant has long been used traditionally and known has high antioxidant capacity by in vitro and in vivo studies. HUVEC culture is an in vitro model widely used to study the preeclampsia pathogenesis. This study aims to determine the effects of *Phaleria macrocarpa* extract on MDA level in preeclampsia-induced HUVEC culture. Our results showed the *Phaleria macrocarpa*'s extract reduce MDA level siginifcantly at concentration of 0.977µg/mL in preeclampsia-induced HUVEC culture and at 15.625µg/mL reduce MDA level to control normal level. Thus, *Phaleria macrocarpa*'s extract might be used as agent to overcome oxidative stress in preeclampsia.

Biography

Simanjuntak L is a senior lecturer at Faculty of Medicine, Nommensen HKBP University, Medan, Indonesia in Department of Obstetrics and Gynecology. He has completed Master degree in Obstetrics and Gynecology at 2003 in Universitas Sumatera Utara. Now he is pursuing his PhD program at University Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia.

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