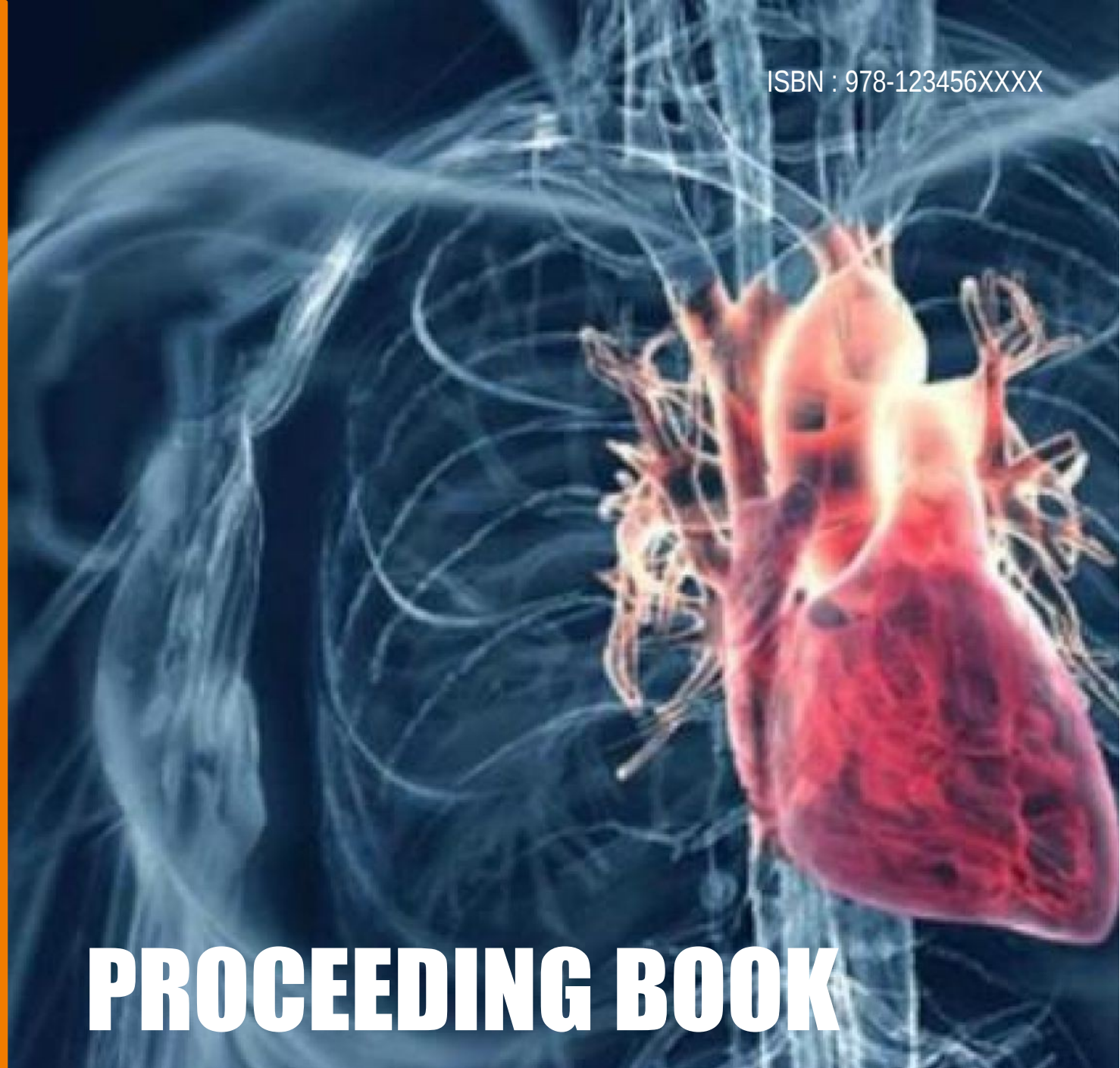


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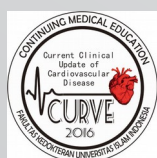
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Pengembangan Metode Kultur Sel Endotel Manusia (*Human Umbilical Vein Endothelial Cells*) Untuk Penelitian antiaging kardiovaskuler

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Abstract

Background: The morbidity and mortality of cardiovascular disease in Indonesia is high. Endothelial cells play a key role in the pathogenesis of cardiovascular disease. Endothelial role as regulator in hemostasis and coagulation, vasomotor regulation, angiogenesis and permeability. Until now, the development of culture methods of human umbilical vein endothelial cells (HUVEC) are based on foreign protocols that are often not in accordance with the laboratory conditions in Indonesia. Need to develop a model of HUVEC cell cultures for testing the mechanism of pathogenesis of cardiovascular disease in cultured endothelial cells. Culture of human endothelial cells from umbilical vein would be presented as a model of anti-aging research cardiovascular endothelial cells in vitro.

Method: The study was conducted with the design of experiments in vitro on HUVEC cells. Vein endothelial cells isolated from the placenta. Activity in the research is to pilot plant umbilical vein endothelial cells (HUVEC) and standardize the incubation time and the concentration of collagenase as a determinant factor of growth and cell morphology. Incubation time and the concentration of collagenase is able to foster the culture of HUVEC best set as a standard method in HUVEC culture protocol.

Results: The study has gained HUVEC culture method in accordance with the conditions Gadjah Mada University LPPT laboratory. Growth and development of collagenase HUVEC optimal incubation takes 1 hour. Collagenase concentration which produces optimal HUVEC culture is 12 micrograms / ml.

Conclusion: The study has been able to determine the incubation time and the concentration of collagenase that produces optimal HUVEC culture

Keywords: HUVEC; incubation time; concentration of collagenase