

ABSTRACT

Charles University

Department of Biological and Medical Sciences

Candidate: Konstantinos Bountalis

Supervisor: prof. PharmDr. Petr Nachtigal, Ph.D.

Title of diploma thesis: Soluble endoglin effects on endothelial dysfunction markers in mice

Endothelial dysfunction is associated with modification of endothelial cells amount failing to maintain vascular homeostasis and result in variable pathological inflammatory states as well as in progression of vascular damage. Particularly its state is characterized by high expression of cell adhesion molecules, reduction of vasodilation and accumulation of cholesterol molecules.

The purpose of this study is to detect soluble endoglin effects on the expression of VCAM-1 and ICAM-1 in aorta in mice. The experiment was accomplished utilizing specific immunohistochemical methods for the detection of expression of selected adhesion molecules. High fat diet administration resulted in development of mild hypercholesterolemia in mice in both groups. High levels of soluble endoglin however did not significantly affect the expression of VCAM-1 and ICAM-1 in aortic endothelium when compared to mice with low levels of soluble endoglin.

The results of this study did not show pro-inflammatory effects of soluble endoglin in aorta in mice.