

CD147 Expression in Coronary Artery Disease

Host School/Institute: Vascular Biology Group, ANZAC Research Institute

URL: <http://www.anzac.edu.au>

Project Code: ANZAC6

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Project Description:

Cardiovascular disease is one of the leading causes of death in the westernized world. Platelets play a pivotal role in the initiation and progression of plaque development in cardiovascular disease. In humans, platelet activation is evident in patients with coronary artery disease (CAD) when compared to healthy subjects. The presence of activated platelets and other factors such as matrix metalloproteinases (MMPs) may effect the stability of the plaque environment.

EMMPRIN (CD147) is an extracellular matrix metalloproteinase inducer that was first identified on tumor cells and was found to be capable of inducing matrix metalloproteinase (MMP) expression in adjacent fibroblasts. CD147 has since been observed on leukocytes and more recently on platelets.

At present, little is known about platelet CD147 expression in CAD. We are currently trying to understand the role of CD147 in CAD and to determine possible regulatory mechanisms. We will investigate CD147 expression in platelets and leukocytes and relate this to other parameters of platelet and leukocyte function. This project will involve techniques such as flow cytometry, ELISA and cell isolation.

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