

Serum Amyloid A in Cardiovascular Disease

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

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

Project Code: ANZAC1

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Project Description:

Atherosclerosis and its cardiovascular complications is one of the major causes of morbidity and mortality in both developed and developing countries. The recent characterization of the acute phase protein, serum amyloid A (SAA), as an important inducer of endothelial dysfunction has opened a new area of research that focuses on SAA as a therapeutic target for strategies to combat atherogenesis. SAA levels have also been correlated with the severity of human coronary artery atherosclerosis and many cardiovascular risk factors including diabetes and insulin resistance, obesity, and rheumatoid arthritis.

We, in the Vascular Biology Group located at the ANZAC Research Institute, work closely with Cardiologists from the Concord Hospital. We have designed exciting projects that will investigate the role of SAA in atherogenesis and atherothrombosis. These experiments will enlighten us on factors that may play a pivotal role in cardiovascular disease. We believe SAA to be a promising target for therapy in conditions associated with chronic elevated levels, such as coronary artery disease and diabetes to slow the progression of endothelial dysfunction and atherosclerosis.

You will be working closely with Dr Susan Hua – an experienced postdoctoral researcher with a Doctorate in Pharmacy. You will have the opportunity to significantly contribute to this new and exciting area of research. You will learn cutting-edge techniques such as culturing of mammalian cells, RNA isolation techniques, q-PCR and rt-PCR, protein expression and purification, western blotting, Ca²⁺ signalling and imaging techniques, and have the opportunity to participate in the development of novel treatment strategies. This may have important implications for the management of patients with cardiovascular diseases.

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