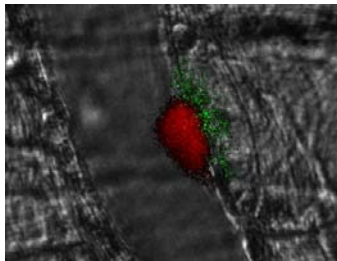


第4回生命科学セミナー ・ 第154回細胞生物学セミナー

演 者 : Dr. Jonathan Gibbins (School of Biological Sciences, University of Reading, UK)

日 時 : 2011年7月29日(金)16:00~17:00

場 所 : 京都産業大学総合生命科学部15号館1階 15102セミナー室



Thrombosis formation (red) and Collagen exposure (green) at a site of vascular injury

演題: Collagen and the regulation of platelet function: a precarious balance between bleeding and thrombosis.

Platelets perform an important function, triggering the blood to clot following injury, but may also be activated and trigger thrombosis in diseased arteries. In recent years substantial progress has been made in understanding how platelets recognise and respond to tissue injury or diseased vessels, yet ignore the un-damaged vasculature. This has begun to feed into the design of new strategies for the prevention of thrombosis, through the suppression of platelet reactivity - anti-platelet therapy. The balance between activatory and inhibitory signalling in the platelet determines the outcome of a precarious balance between haemostasis and thrombosis.

In this talk the role of collagen, as a principal activatory platelet agonist will be introduced, along with the multi-receptor mechanisms that enable platelet responses to collagens exposed at sites of vascular injury that culminate in haemostasis. This will include a surprising new role for the chaperone protein HSP47 on the surface of these cells. Platelet activatory cell signalling is tempered by opposing inhibitory signalling, and we have recently made advances in understanding how inhibitory receptors reduce platelet reactivity. At the heart of activatory and inhibitory platelet regulation lies immunoreceptor signalling mechanisms that will be explored.