

Wednesday, January 28th, 2015

LSC 3 - Life Sciences Centre

2350 Health Sciences Mall

12-1pm



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“Tissue factor, hemostasis and vascular inflammation”

Tissue factor (TF) is the primary activator the coagulation cascade. Our research area focuses on the role of TF in thrombosis and hemostasis as well as interaction between the coagulation system and inflammation. Specifically, we are interesting in protease activated receptors (PARs) and their role in mediating interactions between coagulation and inflammation. Using mouse model of sickle cell disease (SCD) we have demonstrated that vascular inflammation in SCD is caused by microthrombotic events trigger by TF expressed on leukocytes whereas non-coagulant form of TF expressed by endothelial cells mediates FXa-PAR2 signalling and contributes independently to inflammation by increasing circulating levels of IL-6. Our unpublished study indicates that TF also plays important role in the pathophysiology of stroke. We found that astrocyte TF is essential for brain hemostasis and attenuates hemorrhagic transformation; however, it also contributes to microvascular thrombosis and neuronal damage during the reperfusion of the ischemic brain.