Cardiovascular and cerebrovascular diseases are the global leading cause (>30%) of death. The plasminogen activation (PA) system plays a dual role: removal of thrombotic occlusions and promotion of haemorrhagic reactions. We investigate the molecular interactions between components of the PA system and the mechanism of activation and inhibition via structure and function studies. We apply these knowledge to the development of better and more efficient strategies, such as the use of specific monoclonal antibodies, to modulate the activity of the system. Successful outcomes would be of great benefit to the outcome of clinical conditions such as tissue injuries, clotting disorders, bleeding, inflammatory disease, in bacterial or viral infections and in cancer metastasis.

Research Projects

1. Structural characterization of monoclonal antibodies which mediated down regulation of cancer progression
2. Finding new strategies for the treatment of traumatic injuries

Small Molecule Inhibitors to Plasmin Derived from Tranexamic Acid (TXA)

Structure of anti-metastasis and anti-inflammatory plasmin inhibitors

Selected significant publications:


