**Kanematsu/Novo-Nordisk Research Award: Dr Freda Passam**

Project title: “Regulation of platelet integrin function by thiol isomerases in thrombosis and haemostasis”

As a haematologist I am struck by the frequency of blood clots causing diseases such as heart attack, stroke and venous thrombosis. New anticlotting medicines are being developed day by day however they are still limited by a high incidence of recurrent clotting and the side effect of bleeding. I believe the opportunity to further the knowledge base in the complex area of thrombosis will lead to the discovery of more effective and safer anticlotting agents with the potential to help an unquantifiable number of people. This is the primary ideal of the RCPA Foundation in awarding the Kanematsu Novo Nordisk grant. This ideal also represents the prime motivation for my involvement in thrombosis research. For the last 8 years I have been studying the disulfide bond patterns in clotting proteins and how these are regulated by a group of enzymes named thiol isomerases. With the RCPA Kanematsu Novo Nordisk Award I will study the effect of thiol isomerases on the disulfide bond patterns of the platelet’s main receptor: the fibrinogen receptor. I will also examine if inhibition of thiol isomerases is an effective way of preventing platelets to bind fibrinogen and clot. Understanding the mechanism of platelet activation by thiol isomerases will facilitate the design of novel antithrombotics targeting these enzymes.