

**Dr M Carter – Royal Hallamshire Hospital, Sheffield**

**Grant awarded £4,000 (1 Year)**

***Investigation of hyperhomocysteinemia as a cause of the increased risk of thrombosis in inflammatory bowel disease***

Thrombosis is the sudden blockage of a blood vessel with a blood clot. Such events are associated with serious illness and mortality, especially when the vessel supplies blood to an important organ or, if the clot moves (embolises) to block such a vessel. Patients with ulcerative colitis (UC) and Crohn's Disease (CD) are at increased risk of thrombosis when compared to healthy individuals without inflammatory bowel disease (IBD). Such events occur in younger individuals, are more often recurrent and frequently affect unusual vessels compared to individuals without IBD. A number of abnormalities in the blood have been discovered which can increase any individual's risk of thrombosis, but none of these are selectively increased in patients with IBD. Recently the high level in the blood of a substance called homocysteine has been found to be associated with thrombosis. The level of this substance is dependant on vitamin intake and on hereditary factors coded in the genes. Patients with IBD are often deficient in vitamins for reasons related to their underlying illness. High homocysteine levels may therefore explain their increased risk of thrombosis. We plan to investigate this potential link further by measuring levels of homocysteine and vitamins in the blood of patients with IBD, and by comparing levels between those who have and have not had thromboses. We will also study ahereditary factor that predisposes individuals to high homocysteine levels in these same patients. Positive results would not only identify novel ways of recognising IBD patients who have a high risk of thrombosis, but would also suggest that simple vitamin supplementation may reduce this risk.