

## **CAF/03/09 - Investigation of JAK2 targets in myeloproliferative neoplasms**

Immature cells termed haemopoietic stem cells which reside within the bone marrow are responsible for producing the different types of mature blood cells which circulate in our bodies. Myeloproliferative neoplasms (MPN) are blood cell disorders which originate from a genetic defect in a haemopoietic stem cell. This results in alterations within the cells, especially of proteins and genes which control the way the stem cells develop. An abnormal and overactive version of a protein called causes some types of MPN. New drugs have been developed to block the activity of JAK2, but these haven't proved to be as successful in controlling these conditions as anticipated. This project aims to identify direct JAK2 targets and additional proteins which still bind and interact with the abnormal JAK2, to maintain disease despite the use of JAK2 inhibitors to disrupt its activity. This may lead to new targeted therapies for treatment of MPNs.