

NON-TECHNICAL ABSTRACT

Hematopoietic stem and progenitor cells express low levels of a key protein which repairs damage caused by chemotherapy agents. In this phase I trial, peripheral blood progenitor cells will be manipulated by a vector to increase the expression of this key protein, called O⁶-methylguanine DNA methyltransferase (MGMT). This trial will examine if such manipulated cells express increased levels of this protein, whether the cells are more resistant to chemotherapy in the laboratory and whether expression of the protein has any detrimental effects on the ability of these cells to form blood cells.