

Leukaemia researcher loses her locks

Mater Medical Research Institute (MMRI) scientist, Dr Hannah Cullup, proved that her commitment to finding cures for leukaemia goes way beyond the laboratory, when she shaved her head for *World's Greatest Shave* 2009.

Dr Cullup's MMRI colleagues along with supporters from local Bees Nees Realty, Mater Pathology and the Leukaemia Foundation, gathered to watch her go under the buzzer and raise close to \$4000. The MMRI shave event raised an impressive total of \$7000.

According to Dr Cullup, her decision to shave came from her close experience with cancer.

"When I was little my mum had breast cancer and she lost some of her hair. Since I have been working in leukaemia research I have often seen adults and children who have lost their hair as part of their battle to survive. They are the brave ones – I'm just shaving my head to let them know they are not alone, and to say thank you for the pennies that make the dollars which allow me to do research that will hopefully benefit patients in the future," she said.

Dr Cullup's research

Dr Cullup's research project is entitled, Antibody-mediated Dendritic Cell Depletion to Attenuate GVHD and promote GVL, and is funded by a grant-in-aid from the Leukaemia Foundation.

At the end of January this year, Dr Cullup also became the first researcher in Australia to receive the Jose Carreras International Leukaemia Foundation Fellowship award. She was able to meet Jose Carreras when he visited Brisbane in February this year.

The research project is aiming to develop a new therapy for the prevention of graft versus host disease.

Leukaemia is a disease of the blood and bone marrow and continues to be a life threatening condition affecting both children and adults. Not all patients with leukaemia will be cured by chemotherapy.

Stem cell transplantation improves their chances of survival, and requires intensive chemotherapy and radiotherapy to eradicate the underlying disease, followed by an infusion of healthy stem cells to provide an anti-leukaemic effect (graft versus leukaemia [GVL]) and normal blood cells.



When a leukaemia patient has to undergo a bone marrow transplant they may unfortunately suffer from the immunological reaction of the donor cells against the patient called graft versus host disease.

GVHD can produce serious damage to the internal organs and lining of the mouth and gut and is associated with an increased risk of death after transplantation. Recovery can also be circumvented by leukaemic relapse.

Dr Cullup's research will determine if an antibody to kill a particular type of white blood cell, called a dendritic cell, will prevent graft versus host disease, and promote the beneficial graft versus leukaemia effect – the reason why a patient is given a transplant.

"We are also investigating therapeutic cell based strategies designed to prevent GVHD and relapse to allow engraftment of a healthy donor blood system. Together, these studies will improve the therapeutic options and long-term survival of patients receiving stem cell transplantation as treatment for leukaemia," Dr Cullup said.