



New clinical trial to fight kids' brain tumours

An Australian-first clinical trial, which aims to protect children's bone marrow while they are having chemotherapy to treat malignant brain tumours, is just days from launching at The Children's Hospital at Westmead.

After 14 years of research, The Children's Hospital at Westmead will use gene therapy in childhood cancer to allow for the protection of bone marrow while using higher doses of chemotherapy.

The trial is the result of a tireless commitment from the Children's Cancer Research Unit at the Kids Research Institute, the research arm of The Children's Hospital at Westmead.

It would also not have been possible without generous financial support, including more than \$3.3 million from the Kids' Cancer Project (formerly the Oncology Children's Foundation).

Senior Staff Specialist at The Children's Hospital at Westmead's Oncology Unit, Dr Geoff McCowage, said: "This innovative treatment opens the door for better treatment for children fighting some of the most serious and life threatening tumours.

"We are optimistic, but cautious. This is the first step along a difficult road.

"This is a phase one trial, where we aim to establish the safety and the feasibility of the gene therapy and its potential long-term benefits for other paediatric conditions involving bone marrow.

"Although we proceed with caution, it's very exciting to have reached this stage and we are hopeful for what lies ahead."

Brain tumours in children have been historically very difficult to treat because the chemotherapy drugs used have toxic side effects and can destroy healthy bone marrow cells. This leaves the child susceptible to infections.

Higher doses could be more effective in treating lethal tumours, however, up until now the toxicities have limited the drug doses that can be used.

The aim of the gene therapy is to increase the level of Methyl-Guanine Methyl Transferase (MGMT) in bone marrow, so higher doses of chemotherapy can be given to the child.

This will be done by inserting a specific gene into the patient's cells.

MGMT is a natural occurring substance which protects cells from chemotherapy drugs such as temozolomide.

Kids' Cancer Project CEO, Peter Neilson, said: "This is another example of how the Kids' Cancer Project is focused on achievements and results to beat this insidious disease.

"Our funding is aimed at childhood cancers with the lowest survival rates. Almost half the children with these types of cancer lose their battle.

"We hope our contribution will help dramatically shrink this frightening figure."

Children taking part in the trial will have a very poor prognosis and would have exhausted all other conventional treatment options.

The trial is expected to start next month.

ENDS

For more information, or to arrange an interview, please contact Kate Jacka, Public Relations at The Children's Hospital at Westmead, at kate.jacka@health.nsw.gov.au or on (02) 9845 3586.

NOTES TO PRODUCERS/EDITORS

The fruition of the Cancer Gene Therapy Trail is the result of unwavering efforts from a number of dedicated professionals. Below is a brief look at just a few of them.

Dr Geoff McCowage – Senior Staff Specialist, Oncology Unit

Dr McCowage initiated the program. Combined with the strong science behind the proposed strategy, Dr McCowage was inspired by the possibility of improving outcomes for children with highly malignant, and difficult to treat brain tumours.

"This innovative treatment opens the door for better treatment for children fighting some of the most serious and life threatening tumours."

Professor Ian Alexander – Head of the Gene Therapy Research Unit

Professor Alexander is an expert in gene delivery to the haematopoietic stem cell compartment, having initiated the first gene therapy trial in Australia in 2002. This trial concerned the immunodeficiency disease X-linked SCID.

Along with Dr Belinda Kramer (below), Prof Alexander is responsible for the design and development of the Cancer Gene Therapy Trial vector, and the trial protocol.

“The amazing staff and state-of-the-art facilities at The Children’s Hospital at Westmead, and generous financial support, have combined to make this possible.

“This is just the start of a long process but it’s an exciting time too. We should be very proud.”

Dr Belinda Kramer – Senior Hospital Scientist

Since transferring from the Bone Marrow Transplant laboratory to the Children’s Cancer Research Unit in 1998, Dr Kramer has dedicated her time exclusively to making the Cancer Gene Therapy Trial a reality.

Dr Kramer worked on earlier versions of the trial vector until work with current vector began in 2005.

“It’s an absolute thrill to be at this stage of the trial.”

Peter Neilson – CEO, Kids’ Cancer Project

The Kids’ Cancer Project (KCP) is an Australian charity that funds research programs dedicated to finding cures for childhood cancer. The KCP has been a major supporter of the Cancer Gene Therapy Trial, donating more than \$3.3 million to ensure integral research could continue.

“This (funding) is another example of how the Kids Cancer Project is focused on achievements and results to beat this insidious disease.”

The Children’s Hospital at Westmead is the highly respected, largest paediatric centre in NSW, providing excellent care for children from NSW, Australia and across the Pacific Rim. It forms part of the Sydney Children’s Hospitals Network (Randwick and Westmead).

Established in 1880, The Children’s Hospital at Westmead is a public Hospital and registered charity with 3,000 staff working in 150 departments. 70,000 sick children and their families are cared for each year in a family-focused, healing environment.

Funded by the NSW Government, The Children’s Hospital at Westmead provides significant extra services aided by the generosity of individual and corporate donors. For more information visit www.chw.edu.au