

Cancer Council awards millions in grants

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Oncology Update



Cancer Council NSW has announced 14 new research grants at a cocktail event in the heart of Sydney's new Barangaroo development.

Cancer Council NSW CEO Jim L'Estrange said that the annual awarding of research grants was one of the highlights of his year.

Four program grants, each of around \$2.2million, and ten project grants of around \$360,000 each were announced.

One recipient was Professor Roger Reddel, who has been working on telomeres for nearly 21 years. Together with Associate Professor Tracy Bryan, he discovered an alternative mechanism for telomere lengthening (ALT) used by about 15% of cancer cells.

By lengthening their telomeres, cancer cells are able to become immortal, explains Prof Reddel. Most tumours use telomerase to do this, but others use the ALT process he and Dr Bryan discovered.

“ALT is used by a lot of cancers that are currently quite hard to treat,” says Prof Reddel. “The types of tumours that use it include neuroblastomas, and some other childhood cancers, which are obviously of great interest to us at the Children’s Medical Research Institute.”

But adult tumours such as glioblastoma multiforme and grade II and III astrocytoma also use the pathway, he says, as well as osteosarcoma and many other sarcomas. His award is to develop therapies that attack the ALT pathway.

Glioblastoma was the subject of another award, to Dr Mustafa Khasraw, Clinical Lead at the University of Sydney’s NHMRC Clinical Trials Centre and also a medical oncologist at Royal North Shore Hospital.

He says glioblastoma is “one of the most miserable cancers” and that it “takes away the patient’s identity”.

It is notoriously difficult to treat, partly because it is difficult for therapies to cross the blood-brain barrier, but also because a patient’s tumour is often very heterogeneous, he explains.

His grant funds the second part of a phase 2 clinical trial looking at using a PARP inhibitor in conjunction with radiotherapy, and later with chemotherapy, in a group of very difficult-to-treat patients (MGMT unmethylated glioblastoma).

Another intransigent tumour is pancreatic cancer, and Dr Phoebe Phillip’s research on this is also awarded a grant.

“One reason why we think pancreatic cancer is so bad is because it is surrounded by a scar reaction that prevents drugs from reaching the tumour,” says Dr Phillips of the University of New South Wales.

“There’s a huge scar fibrosis reaction. It’s comprised of up to 90% scar and only 10% tumour.” She says the next most stromal cancer is breast cancer which is probably about 40% scar tissue.

The fibrosis reaction is produced by a protein made in stellate cells in the pancreas, which also support and feed the tumour, says Dr Phillips.

Dr Phillips (pictured receiving her award from Dr Mark Phillips of Cancer Council NSW) has found a way to interfere with the production of the protein, which is also responsible for the 'tumour helper' aspect of the cells.

She hopes to demonstrate, using a mouse model that she can break down the scar tissue, making the tumour more vulnerable to other treatments.