

Australia project maps melanoma gene

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A national study is set to map all the common gene mutations that cause deadly skin cancer in an attempt to find a cure. *Source:* Supplied

IN AN Australian first, a national study will map all the common gene mutations that cause deadly skin cancer in an attempt to find new ways to treat the disease.

The \$5.5 million Australian Melanoma Genome Project will initially screen 500 melanoma tumour samples held at the Melanoma Institute Australia in Sydney and the Queensland Institute of Medical Research.

Once the gene mutations have been identified, researchers will determine how common each mutation is and what role it plays in the growth and spread of melanoma.

Co-director of research at Melanoma Institute Australia, oncologist Professor Rick Kefford said Australia was uniquely positioned to undertake the research because the high incidence of skin cancer in the country meant researchers had access to significant numbers of records dating back to the 1960s.

The institute had the world's largest collection of tumour tissue stored in its biospecimen bank with around 3500 samples, he said.

Analysing 500 tumours would give a high probability of detecting all the mutations responsible for the disease, Prof Kefford said.

In 2002 researchers identified a gene mutation called BRAF, responsible for about half of all melanoma tumours, which can now be targeted with drugs known as BRAF inhibitors to prolong patients' lives.

Prof Kefford said the problem with the drugs was that tumours found ways to adjust to bypass the medications.

"This sort of technology will allow us to examine carefully what's going on in tumours that become resistant to BRAF inhibitors, and a whole series of other questions," he said.

"There's a whole set of diagnostic, prognostic and therapeutic outcomes from this down the track."

Prof Kefford, who is also the director of Westmead Institute for Cancer Research in Sydney, said the whole project would probably take three to five years.

Executive director of Melanoma Institute Australia, Professor John Thompson, said the project would move the world closer to prevent and cure skin cancer.

"We would be surprised if this work does not translate into a major extension of life for thousands of people worldwide with melanoma," he said.

The project has been largely funded by private donors with contributions from the NSW government and the Cancer Council NSW.