



Grant announced for breast cancer drug resistance research project

The Cancer and Bowel Research Charitable Trust today announced funding for joint research by Palmerston North Hospital and Massey University into drug resistance which prevents effective chemotherapy treatment of breast cancer.

Massey University senior biochemistry lecturer Dr Kathryn Stowell and Palmerston North Hospital medical oncologist Dr Richard Isaacs aim to refine previous work to identify the genes which cause drug resistance, a common barrier to chemotherapy treatment of breast cancer.

The pair have worked together since 1997 and have identified a group of genes in breast cancer cells which are either turned on or off in response to chemotherapy. The research aims to find what roles the genes have in determining sensitivity to anti-cancer drugs.

One in every 12 New Zealand women develop breast cancer and the rate is increasing, independently of known age-related effects. Chemotherapy can reduce reoccurrence after surgery by 35 per cent and produce responses in 50 per cent of patients with metastatic breast cancer.

However, drug resistance is responsible for failure of chemotherapy in 50 per cent of patients. Dr Stowell says research is reducing the problem:

“When I started working in this area the figure was 60 per cent of patients developing drug resistance, so in the last 10 years it has come a long way.”

“The more we know about why cancers become resistant to certain drugs, the easier it will be to design new drugs and more effective chemotherapy regimens.

“With the funding from the Cancer and Bowel Research Charitable Trust, we are in a better position to make a difference than we have ever been before,” Dr Stowell said.

According to Dr Isaacs, cancer research is “on the crest of a wave of more targeted therapy”.

“Until quite recently, chemotherapy consisted of administering poisons which damage the genes of fast-growing cells including cancers, but which non-cancerous cells can repair.”

“Now we’re looking to target only cancers with more specific drugs.

“By having the hospital and the university work together, we can test hypotheses using the hospital’s tumour bank built up over the last 20 years, with the knowledge of how treatment has proceeded for each patient.

“The research will be able to be applied in the treatment of other cancers.”

Trust executive chairman Troy Manhire, speaking from the Trust’s Australasian head office in Adelaide, said the \$42,000 funding for the project had been made possible by New Zealanders’ donations to the Trust over the past year.

The Cancer and Bowel Research Charitable Trust is a non-profit organisation which raises funds to support cancer research and prevention, in particular targeting colorectal (bowel) cancer.

The trust was established in New Zealand in 2003, and uses funds raised within New Zealand exclusively for New Zealand projects.

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