



DR CHEN CHEN JIANG

CALVARY MATER NEWCASTLE HOSPITAL
FUNDED BY CURE CANCER AUSTRALIA SUPPORTERS

crusader in the war against melanoma

Brilliant young scientist Dr Chen Chen Jiang is intrigued by the melanoma conundrum – why is the disease so resistant to common cancer treatments?

In earlier studies to try and determine the sensitivity of melanoma to killing induced by therapeutic drugs, 28-year-old Chen Chen studied the response of melanoma cells to stress conditions of an organelle, a structure within a cell, called endoplasmic reticulum (ER).

Her results showed that the resistance of melanoma to treatment is mainly due to how its cells adapt to stress. “Moreover, we found that this adaptation plays a role in resistance of melanoma to chemotherapeutic drugs.”

Indeed Chen Chen – a junior Hospital Scientist at the Oncology and Immunology Unit of Calvary Mater Newcastle Hospital – was the first to make this discovery, which has led to the development of new techniques in clinical use to treat various cancers.

Regulating the adaptation

Now as a logical extension to this work Chen Chen is testing the hypothesis that microRNAs – a recently discovered class of small molecules that regulate gene expression – play a role in regulating the adaptation of melanoma cells to ER stress.

If successful, she hopes her study will provide much-needed new insights and point to new, effective approaches against the disease.

“I think this is an exciting project and I’m being helped by great colleagues,” says Chen Chen, who hails originally from Anhui, near Shanghai, in China. “We have all the skills and equipment we need and we’ve enjoyed a lot of help from everyone in the lab.”

Chen Chen migrated to Australia in 2004, and stayed in Sydney for one year while studying for her Masters.

Under the supervision of melanoma expert Professor Peter Hersey, Chen Chen completed her PhD project in Newcastle in 2008 – in less than three years. Her work has already been widely published. She joined the American Association for Cancer Research in 2007 and has presented her work at a number of national and international conferences.

In 2010, Chen Chen received a Cure Cancer Australia grant to investigate the role of microRNAs in adaptation of melanoma cells to ER stress, as well as two smaller grants. “I’m thrilled by the Cure Cancer Australia award which will hopefully help me to make a huge leap forward in my research,” she says.

Chen Chen met her husband, Lei Tan, in Sydney. He currently works in IT. They have an infant son.