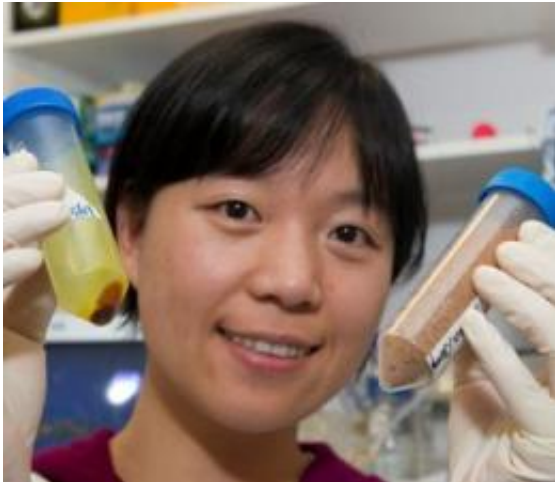


Tropical fruit's role as skin cancer weapon

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An exciting breakthrough on the potential anti-skin cancer properties of the tropical fruit mangosteen has earned its researcher, Flinders University PhD candidate Jing Jing Wang (pictured), a seat in the finals of a prestigious medical prize.

The [Medical Biotechnology](#) student is through to the state finals of the 17th annual Ross Wishart Memorial Award of the Australian Society for Medical Research, with the winning presentation to be announced at an Adelaide Convention Centre function on June 6.

Ms. Wang's latest achievement follows a string of triumphs since she began her PhD in 2008, including the Chinese Government Award for

Outstanding Self-Financed Students Abroad in March, and in 2011 she won the state round of the AusBiotech-GlaxoSmithKline Student Excellence Awards, an annual scheme which aims to reward promising student research.

Born in Inner Mongolia, Ms. Wang came to Flinders in 2008 on a research scholarship to undertake her PhD into the properties and mechanisms of potential anti-cancer compounds extracted from the rind of mangosteen, under the supervision of Professor Wei Zhang and Dr. Barbara Sanderson.

With a sweet and juicy texture, the tropical fruit has been used for centuries in South East Asia to treat skin infections and wounds, while its therapeutic compounds are widely investigated as potential treatments for breast, lung and colon cancer.

Yet its role in [skin cancer](#) – which affects two in three Australians by the time they are 70 – has been largely undocumented until now.

Ms Wang said her studies have shown the rind of mangosteen can kill cancerous [cells](#) in melanoma and squamous cell carcinoma, the most common types of skin cancer, and prevent them from growing.

Tested on human skin cancer cells, she said the compounds from the fruit induced “apoptosis”, meaning the cells programmed their own death, while it also stopped the cells from dividing.

“Most cancers are resistant to cell death induced by conventional chemotherapy but in this case mangosteen can kill skin cancer cells through apoptosis and halting their growth,” Ms. Wang said.

“Cancer cells are out of control, they divide without dying but we’ve found this compound can halt that division and most importantly it has

the potential to inhibit its spread throughout the body,” she said.

“The early stages of skin cancer can be cured very easily with surgery but it becomes deadly once it metastasises, yet we’ve found mangosteen compounds can inhibit the migration and invasion of melanoma and squamous cell carcinoma cells in a laboratory setting.”

Now waiting for final sign off on her PhD, Ms. Wang has applied for seeding grants from Flinders and the National Health and [Medical Research](#) Council to further her research, which would include animal tests and, eventually, studies into the development of a topical cream.

“Once melanoma becomes deadly, mangosteen compounds could be commercialised into a chemotherapy treatment which could potentially save lives but this would require a lot more research, animal tests and clinical trials which can take decades.”

Provided by Flinders University

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