

## Testing indigenous plants as cancer killers

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Flinders researcher Dr Bradley Simpson

Native Australian plants are being screened for potential cancer-killing properties by Flinders University researcher Dr Bradley Simpson.

Working with three Indigenous communities in the Adelaide Hills,



Flinders Ranges and Cape York in Far North Queensland, Dr Simpson is testing eight different flora species to look for possible medically useful compounds to treat cancer. He is currently experimenting on several cancer types including acute leukaemia and skin, lung, breast and colon cancers.

Now in its eighth month, Dr Simpson said the study has detected early changes in the appearance and shape of <u>cancer cells</u> when combined with semi-crude plant extracts, meaning "the <u>plants</u> are essentially killing the cancer cells".

"We've seen some promising effects on changes to the morphology of the cancer cells but we still need to test the plants on healthy, normally functioning cells to see if they have selective killing properties," Dr Simpson, based in the Flinders Centre for Innovation in Cancer, said.

"At the moment we're unsure if the plants specifically target cancer cells or if they just have an overall toxic effect," he said.

"The ultimate goal is to discover plant-derived products that kill the cancer cells without harming the <u>healthy cells</u> – chemotherapy kills both good and bad cells, causing adverse side-effects, so the ideal scenario is to find a compound that leaves the healthy cells alone."

Dr Simpson said he expected to know whether the plants have a selective or broader killing effect by mid-2014, paving the way for the next phase of the research which will involve chemical analysis to better understand the active ingredients in the plants.

He said the plants have long been used by Indigenous communities to treat various health ailments, yet it was the first time they had been explored in anti-cancer applications.



"Nature is a treasure trove of potential better treatments, and both myself and the Indigenous communities I'm working with think these particular plants have real promise.

"I wouldn't say we can cure cancer with one chemical treatment alone, it takes a broader approach, but if we find some promising results from these plant studies it means we might be able to use them to complement existing treatments."

## Provided by Flinders University

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