

New drug targets skin cancer

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A new class of drug targeting skin cancer's genetic material has been successfully tested in humans for the first time, opening the way to new treatments for a range of conditions from skin cancers to eye diseases.

The research involves the drug Dz13, a targeted molecular therapy, which was developed at the University of [New South Wales](#) (UNSW) and has now been found to be safe in a clinical trial of patients with the common [skin cancer](#), basal-cell carcinoma.

"This is the first report of a drug of this type to be used in humans," says UNSW Medicine's Professor Levon Khachigian, who has been developing the DNAzyme technology for 10 years.

"It's a [smart drug](#), which targets a bad protein that controls tumour growth and spread," says Professor Khachigian, the Director of the UNSW Centre for [Vascular Research](#). The collaborative trial was conducted by researchers from UNSW, the University of Sydney and Royal Prince Alfred Hospital.

The findings have been published today in the prestigious journal *The Lancet*.

"Even though we were only testing for safety, there were unexpected positive effects," says Professor Khachigian. "The drug knocked down levels of this bad protein and the tumours shrunk in the majority of patients."

The researchers hope subsequent trials will prove that larger doses of the drug over a longer time period will be more effective.

"Targeted molecular therapy like this might also offer novel, effective, and less invasive [therapeutic options](#) for basal-cell carcinoma," says Professor Gary Halliday, from the University of Sydney, who is one of the co-authors of the study.

If the next stages of the clinical trials in basal-cell carcinoma are successful, the researchers hope that within three years, the drug could be used as a treatment for these cancers, reducing scarring and the costs and inconvenience associated with surgery.

Basal-cell [carcinoma](#) is the most common cancer among fair-skinned people worldwide with Australia having the highest incidence.

"This may be a 'one-size fits all' therapy, because it targets a master regulator gene called c-Jun which appears to be involved in a range of diseases," says Professor Khachigian, who predicts that melanoma and eye diseases including macular degeneration and diabetic retinopathy are the likely future targets for research.

A phase one trial in skin melanoma is expected to begin in a month.

Provided by University of New South Wales

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