



08 JUN, 2019

New light on cancer

Herald Sun, Melbourne

HUDSON
 INSTITUTE OF MEDICAL RESEARCH

Page 1 of 1

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Trial hope for 'Star Trek' treatment

LIGHT used as medical therapy once only existed in sci-fi series such as *Star Trek*, but the treatment is rapidly becoming a reality.

After 500 controlled medical studies, clinical trials that use light to kill skin cancers are set to begin in Australia this year.

A robot has also been developed by Melbourne's Swinburne University that uses light to treat soft tissue injuries.

Researchers in Australia are at the forefront in the field, which could be a new way of treating everything from migraines and bad backs to ovarian cancer.

Dr Andrew Stephens, from the Hudson Institute of Medical Research in Melbourne, has trialled a new photodynamic drug being developed by the Invion company — IVX-PO2, a modified form of chlorophyll from plants — to kill ovarian cancer cells in Petrie dishes.

"We've done lots of testing in the lab and it has been very effective at killing tumour cells," Dr Stephens said.

"It's not a case of will it or

SUE DUNLEVY

won't it work, it's a case of how effective it will be."

The chemical is quickly cleared from the body, but it is taken up by cancer cells circulating in the blood.

When the patient is exposed to light beams of a certain wavelength, the photosensitiser becomes toxic to the cancer cells.

Unlike previous such treatments, this one does not require patients to be locked in a darkened room for weeks or months after treatment.

The chemical has been turned into a gel, which later this year will be tested on 30 patients with basal cell carcinoma skin cancers, Invion CEO Dr Greg Collier said.

The gel will be applied to the cancer and then a laser light of a certain wavelength will be shone on the spot to destroy the cancer cells.

The chemical is also being turned into an intravenous formulation to see if it can treat ovarian, lung and prostate cancers.

The researchers want to test if the treatment can kickstart

the body's immune system and not only kill the cancer but prevent it returning.

"We already know it can kill ovarian cancer tumours. Now we want to know what the immune consequences are, can it lead to a protective response," Dr Stephens said.

At Swinburne University, Dr Mats Isaksson has developed a robot that uses light to treat soft tissue injuries and chronic pain.

The robot combines a thermal camera that identifies where there is inflammation in the body and a laser that directs light onto the spot for six minutes at a time for up to 30 minutes to relieve inflammation and control pain.

Adelaide GP Dr Mark Rogers is involved in the company behind the robot and he now uses light therapy to treat migraines, sprained ankles, fibromyalgia and other inflammatory and soft tissue problems.

He claims treating a sprained ankle with light for 20 minutes twice a week can reduce the pain and inflammation within five days.

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