

## LIFESTYLE

# Cancer treatment breakthrough looms: Australian scientists say they are on the cusp of revolutionary discoveries

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MERCURY

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A medical breakthrough could see the end of the need for child cancer sufferers to undergo chemotherapy treatment. *Source: News Limited*

**CANCER sufferers could one day avoid debilitating chemotherapy as a result of breakthrough Australian research into how to stop cancer cells dividing.**

The discovery could also lead to new treatments for children who suffer from a rare syndrome that causes their organs to age prematurely.

The research could even unlock the secret of how to stop the human body ageing.

“We are on the cusp of something transformative,” Sydney’s Children’s Medical Research Institute genome integrity group leader Tony Cesare said.

Institute director Roger Reddel said one of the ways cancer cells kept dividing was by keeping the ends of their chromosomes, called telomeres.

The institute will become a world leader in the field next year when it opens a \$2 million Telomere Research Centre equipped with new technology able to examine thousands of cells at a time.

International researchers looking at telomeres will meet in Sydney this week to share insights into how best to treat patients with rapid organ ageing and cancer.

Professor Reddel said part of the research would aim to help children who suffered from shortened telomere syndrome, which caused their organs to age rapidly. They need a treatment to stimulate the lengthening of their telomeres.

Cancer patients need the opposite – a treatment to stop their telomeres staying long.

“The hope is to have a treatment with fewer side-effects than current chemotherapy,” Prof Reddel said.

The risk was that such cancer treatment would shorten normal cells and cause them to age prematurely, he said.

“Conceivably, the normal cells may well be able to tolerate treatment for long enough for the cancer to be dealt with.”

Normally, telomeres get shorter and cells stop dividing as a person ages – but this does not happen in cancer cells.