



## Our world-first hearts that repair themselves

By Clair Weaver

August 05, 2007 12:00am

Article from:

**Sunday Telegraph**

AUSTRALIA'S top heart specialists believe they have found a treatment to stop heart disease in its tracks, potentially saving millions of lives worldwide.

Experts from the Victor Chang Cardiac Research Institute and Sydney's St Vincent's Hospital will today unveil the groundbreaking discovery, which involves using adult stem cells from patients to repair their own hearts.

The world-first treatment has been shown to generate new blood vessels and repair dead tissue in the heart.

The changes appear to be permanent.

Heart disease, the world's biggest killer, claims 17 million lives a year.

In Australia, there are 3.5 million sufferers and 50,000 die annually - 35 per cent of all deaths.

The new treatment involves injecting patients with a hormone to release beneficial stem cells from bone marrow into the bloodstream.

Then patients are put on a treadmill to encourage the cells to travel to the heart, where they create new blood vessels to restore circulation and boost heart function.

Evidence has also shown the hormone, Granulocyte Colony Stimulating Factor (GCSF), can also rescue and protect struggling heart muscles from dying.

It has passed safety tests and began the second phase of human trials last week.

Professor David Ma, head of blood and stem-cell research at St Vincent's, said the treatment was amazing because when the study began a few years ago, the whole hypothesis was different.

"It's given us a new direction to attack the situation.

"Because of the study results ... we have changed our emphasis."

Prof Ma said the findings were significant as heart disease was already a massive problem in developed nations such as the US and Britain, but was also rapidly growing in developing countries such as India and China.

Professor Bob Graham, head of the Victor Chang Cardiac Research Institute, told *The Sunday Telegraph* early findings were very promising.

Speaking from the US, where he was meeting international specialists last week, Prof Graham said: "At the moment we are restricting it to the most severe patients, but if it works ... hopefully we can broaden it.

"The nice thing about this trial is that the drug is already on the market - although it hasn't been used for this application."


GCSF is commonly used to help cancer patients to recover after chemotherapy and also after bone marrow transplants.

Dr Sharon Chih, cardiology research fellow at St Vincent's Hospital, is co-ordinating the trial of 40 patients with severe angina.

After three weeks they will be checked with MRI scans to assess the treatment's effectiveness.

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