



Herald Sun

City ascends medical peak

MELBOURNE hospitals, medical researchers and scientists have amazed the world with surgical techniques and technological advances. As reported in today's *Herald Sun*, these medical miracles now include inserting stem cells deep into a patient's brain in an experimental treatment for Parkinson's disease.

Sufferers experience tremors, shaking and slowness of speech from a disease that has no cure. Medication can alleviate symptoms, but the world-first treatment undertaken by neuroscientists at the Royal Melbourne Hospital may eventually prove to be a breakthrough.

The pioneering operation took months in planning and involved transplanting millions of stem cells into a Melbourne man's brain. Health reporter Lucie van den Berg describes how neurologist Andrew Evans and neurosurgeon Girish Nair used a replica of their patient's brain to chart twin paths to reach 14 target sites.

Just injecting foreign cells into the brain tissue posed a risk, writes van den Berg. The stem cells produced by the International Stem Cell Corporation, a Californian biotech company, can transform into any cell in the body, but it is hoped they will replace the neurotransmitter dopamine, which is at reduced levels in Parkinson's sufferers.

The surgery took eight hours, using a machine to guide the neurosurgeons into the brain. "The site is very close to the brain stem and if you poke around in the wrong

places then it could end in paralysis or death," surgeon Nair told van den Berg.

Melbourne is the most advanced medical research centre in Australia. What is done here is watched by medical specialists and researchers around the world.

The neurological team behind the stem cell treatment is "pushing the frontiers", says Nair.

The operation at the Royal Melbourne has been to determine if the treatment is safe. What it may eventually lead to is the cure hoped for by the 10 million people globally who suffer from the disease.

Melbourne's research institutes lead their fields in medicine, science, technology and engineering.

There are 263 biotechnology companies in Victoria, 13 major medical research institutes and 10 internationally recognised teaching hospitals.

The Murdoch Childrens Research Institute conducts lifesaving research for babies and children. The Monash Institute of Medical Research is concerned with human reproduction and development. The Bionics Institute, the Burnet Institute, the Baker IDI Heart and Diabetes Institute, the CSIRO, the National Ageing Research Institute, the Peter MacCallum Cancer Centre, the Walter and Eliza Hall Institute, universities and hospitals all contribute to this world reputation.

This latest stem-cell treatment may lead to another breakthrough in medical research. Medical miracles and Melbourne have become synonymous.