

Scientists unveil first MS stem cell model

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AUSTRALIAN researchers have developed the world's first stem cell model of multiple sclerosis, opening up new ways to study the disease and test treatments.

The deputy director of Monash University's immunology and stem cell laboratory, Claude Bernard, said he and his colleagues had used skin cells from MS sufferers to create induced pluripotent stem cells that have the capacity to become brain cells targeted by the disease.

This effectively creates a "disease in a dish" that can be replicated and studied by researchers who have previously had only blood cells, autopsy tissue and cerebrospinal fluid to work on. The cells also mean scientists can avoid using human embryos, overcoming ethical concerns.

Professor Bernard said this would create a limitless supply of the cells for researchers to study the mechanisms of the disease and to test new drugs.

"Much research to date has relied on animal models that, while similar to MS, have been very different to the human disease, which has led to ineffective and even detrimental MS treatments," he said. MS is the most common chronic neurological disease in the world and affects about 21,000 Australians.

Given there is no cure and treatments work for only about 30 per cent of sufferers, Professor Bernard said it was critical to continue the research. "There are so many people suffering from this difficult disease and it costs Australia about \$2 billion a year."

The findings were published in Stem Cell Research.

Read more: <http://www.smh.com.au/technology/sci-tech/scientists-unveil-first-ms-stem-cell-model-20111221-1p5I4.html#ixzz1hHMM98iN>