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MS stem cell repository a world first

The Menzies Institute for Medical Research is to create a stem cell repository for multiple sclerosis (MS) research with the aim of identifying the cause of the disease.

MS Stem, a world first, will allow Menzies researchers to carry out detailed genetic and cellular studies and determine what role cells in the nervous system play in initiating MS.

Neuroscientist Dr Kaylene Young will speak about this exciting new development at the MS Symposium in Hobart today, organised by MS Limited to recognise World MS Day.

"We know that the immune system attacks the nervous system in people with MS, but what we are focusing on is understanding why this is the case."

While it is relatively easy to study the immune cells of people with MS, as immune cells can be found in blood, it is not so easy to study or understand what happens to the brain cells. However, it is now possible to generate stem cell lines from a small skin biopsy or even blood cells.

"By reprogramming mature skin or blood cells, we can obtain immature stem cells. The stem cells can then be directed to mature into nerve cells and oligodendrocytes, the brain cell types affected in MS," Dr Young said.

A group of five Menzies researchers have received seed funding to begin generating stem cell lines from people with MS. If additional funding can be obtained, their goal is to generate stem cell lines from 100 people with MS - 40 people with primary progressive disease and 60 people with relapsing-remitting disease.

Since 1998 Menzies has been at the forefront of some of the most important advancements in MS research. Menzies researchers and their collaborators have made significant contributions to understanding the genetic, environmental and lifestyle risk factors for both the development and progression of MS.

Media contact: Angela Wilson, MS Flagship Communications Coordinator, Menzies Institute for Medical Research, 0487 325 217 or angela.wilson@utas.edu.au

Information released by: Communications and Media Office University of Tasmania +61 3 6226 2124 Media.Office@utas.edu.au Twitter.com/utas_newsroom

menzies.utas.edu.au