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### **Study Identifies New Source of Stem Cells**

**Montreal, August 13, 2001.** A new study from the **Montreal Neurological Institute (MNI) of McGill University** has identified a non-controversial source of stem cells that can produce a number of different cell types, including the type of neural cells needed to potentially help patients recover from a spinal cord injury or Parkinson's disease.

These findings are published today on-line in the highly cited scientific journal ***Nature Cell Biology*** in an article entitled "**Isolation of Multipotent Adult Stem Cells from the Dermis of Mammalian Skin**" by J.G. Toma, M. Akhavan, K.J.L. Fernandes, F. Barnabé-Heider, A. Sadikot, D.R. Kaplan, and F.D. Miller. The paper can be viewed on line at [http://www.nature.com/ncb/future\\_issues/](http://www.nature.com/ncb/future_issues/).

**Dr. Freda Miller** and colleagues at the Centre for Neuronal Survival and the Brain Tumour Research Centre at the **Montreal Neurological Institute, McGill University**, have isolated stem cells from the dermis of adult rodents that will proliferate and differentiate in culture to produce very different cell types- neurons, glia, smooth muscle cells, and fat cells. These novel stem cells, SKPs, were isolated from the skin of juvenile and adult rodents- an accessible non-embryonic source. Human studies have indicated that similar cells are present in adult human skin. "We believe our discovery is important as we have identified an exciting new stem cell from a non-controversial source that holds considerable promise for scientific and therapeutic research," says Dr. Freda Miller.

The work conducted at the MNI has led Dr. Miller and her colleagues to offer a **new account of stem cells present in the adult**. "SKPs represent a novel multipotent stem cell less biased than other adult stem cells- they have the ability to differentiate into diverse cell types of different embryonic lineage and can be cultured for one year without losing this ability," explains Dr. Miller. "This is extremely significant as rather than being programmed to generate only skin cells, SKPs can be directed to become neurons or neuronal support cells or even muscle cells- depending on what is needed. Importantly, SKPs also represent a potentially autologous (i.e. originating from within the same individual) stem cell source that can generate neural cell types damaged in

spinal cord injury or Parkinson's disease. This means that complications seen in donor transplantations are avoided as the patient's own cells are being transplanted." The MNI researchers expect that the new findings will contribute to our understanding of the impressive versatility of stem cells and offer a potential solution to individuals with Parkinson's disease and other neural disorders.

Funding for this research was made possible by the generous support of Aegera Therapeutics Inc. and the Canadian Institutes of Health Research (CIHR). Dr. Miller is a Senior Investigator of the CIHR and a member of The Stem Cell Network, a new component of the Canadian Networks of Centres of Excellence.

The Montreal Neurological Institute is a McGill University research and teaching institute, dedicated to the study of the nervous system and neurological diseases. It is one of the world's largest institutes of its kind; MNI researchers are world leaders in biotechnology, brain imaging, cognitive neuroscience and the study and treatment of epilepsy, multiple sclerosis and neuromuscular disorders.

Aegera Therapeutics Inc. is a privately held biotechnology company headquartered in Montreal, Canada, with a wholly owned subsidiary based in Ottawa, Aegera Oncology Inc. The Company's primary focus is developing small molecules that modulate signal transduction pathways to treat central and peripheral nerve diseases, and to restore normal cell death mechanisms in cancer by inducing apoptosis (programmed cell death).

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