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**GROUNDBREAKING PAPER PUBLISHES LONG TERM RESULTS OF A SUCCESSFUL PHASE I CLINICAL TRIAL
USING AUTOLOGOUS NEURAL STEM CELLS TO TREAT PARKINSON'S DISEASE**

LOS ANGELES, California (February 16, 2009) –Scientists announced today the publication of a landmark peer-reviewed paper in the February issue of the [Bentham Open Stem Cell Journal](#) which outlines the long term results of the world's first clinical trial using autologous neural stem cells for the treatment of Parkinson's disease.

According to lead author, Michel F. Levesque, MD, FRCS(C), FACS, "We have documented the first successful adult neural stem cell transplantation to reverse the effects of Parkinson's disease and demonstrated the long term safety and therapeutic effects of this approach". Dr Levesque is a principal investigator for NeuroGeneration, a biotechnology company, and is affiliated with the UCLA School of Medicine and the Brain Research Institute.

The researcher reports that the publication of the article, "[Therapeutic Microinjection of Autologous Adult Human Neural Stem Cells and Differentiated Neurons for Parkinson's Disease: Five-Year Post-Operative Outcome](#)" in the Bentham Open Stem Cell Journal heralds an important moment in regenerative and personalized medicine. "Our paper describes how we were able to isolate patient-derived neural stem cells, multiply them *in vitro* and ultimately differentiate them to produce mature neurons before they are reintroduced into the brain's basal ganglia. This is performed without the patient requiring immunosuppressants. Of particular note are the striking results this study yielded—for the five years following the procedure the patient's motor scales improved by over 80% for at least 36 months. A word of caution must be added however, since this is a single case study, a larger clinical trial is needed to replicate these findings", says Levesque.

"We have been pioneering the use of neural stem cells for neurodegenerative disorders since 1998 and were the first research team to successfully use differentiated adult neural stem cells for the cellular restoration and

treatment of Parkinson's disease. Our original methodology is based on the replication of several steps in human neurogenesis to regenerate millions of mature neurons characterized before transplantation. These steps are essential to establish safety, efficacy and to understand mechanisms of brain repair. The autologous approach mitigates the long term risks associated with allogenic transplants, including infection, inflammatory response, immune rejection, and poor biologic efficacy. In addition, we believe it was the combination of dopaminergic and GABA-ergic neurons that produced the long-lasting motor improvement. This suggests that in humans, Parkinson's disease is more than a chronic dopaminergic dysfunction and involves the GABA-ergic system with its glial environment. The relevance of this discovery cannot be understated because it questions the classical dopaminergic model of Parkinson's disease", says Levesque.

Scientists at NeuroGeneration are planning a larger prospective clinical trial for Parkinson's disease. "It's our hope that this trial will result in the launch of a cost-effective and lasting therapies for the millions of patients suffering from debilitating neurodegenerative disorders," concludes Levesque.

ABOUT NEUROGENERATION:

NeuroGeneration, a biotechnology company, is engaged in the development of biological products for the repair of neurological disorders. The company has completed a Phase I clinical trial for Parkinson's disease using adult derived neural stem cells. It intends to start a Phase II study for the treatment of Parkinson's disease as soon as it received final approval from the FDA. It is also planning Phase I studies for multiple systems atrophy, atypical parkinsonism, stroke, spinal cord and brain injuries, and Alzheimer's disease. The company was founded in 1998 and is headquartered in Los Angeles, California.

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