



# **Q Therapeutics and Johns Hopkins Researchers Collaborate on Study of Human Neural Glial Cells in Treatment of ALS**

## **Researchers utilize Q-Cells® for neurodegenerative diseases**

Salt Lake City, UT, October 21, 2008 – Q Therapeutics, Inc., announced today that studies are underway with Nicholas Maragakis, MD, and his research team at Johns Hopkins University to build on recent results showing that glial progenitor cells (GRPs) have a therapeutic benefit in a model of amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig's Disease. Results of the initial Johns Hopkins studies appear this week in *Nature Neuroscience*.

Q's collaboration with Dr. Maragakis' research team extends the work of both groups and will focus on the ability of Q's human GRPs, known as Q-Cells®, to protect motor neurons from degeneration in the SOD-1 rat model of ALS. This collaboration will support the development of a therapeutic product for treatment of ALS. In parallel to the studies by the Hopkins group utilizing Q-Cells® in ALS animal models, Q Therapeutics will continue to manufacture the cellular product (with the University of Utah Cell Therapy Facility) and to perform pre-clinical safety studies required by the FDA. Positive results of the studies with Q-Cells® would be supportive of a future Investigational New Drug (IND) submission to the FDA for conducting clinical trials in ALS patients. Q recently met with FDA regarding its manufacturing and cellular characterization protocols as well as the design of preclinical safety studies utilizing Q-Cells® for another neurodegenerative indication. ALS strikes 5,000 new patients every year in the US. There is no cure for ALS and patients usually die within 3-5 years after diagnosis.

Dr. Maragakis' study published in *Nature Neuroscience* demonstrated that transplantation of rat GRP cells into SOD-1 rats conferred therapeutic benefits as measured electrically in the nerve connecting the spinal cord and diaphragm which controls breathing function. The cellular treatments also resulted in benefits as assessed by muscle strength and a sparing of motor neuron cells in the cervical spinal cord. Importantly, treatment with the glial progenitor cells extended the lifespan of the rats. "We are excited to use Q's human cells in these models of ALS," said Dr. Maragakis. "This novel approach of using a purified population of human glial progenitor cells to protect motor neurons from death holds the possibility of extending the lifespan of ALS patients as well as reducing loss of motor function."

Q Therapeutics President and CEO, Deborah Eppstein, Ph.D., welcomed the opportunity to study the efficacy of Q-Cells® in this model of neurodegeneration. "We believe that Q-Cells should have applicability to several different types of central nervous system diseases. We are looking forward to studying the efficacy of our product in the neurodegenerative setting of this ALS model in addition to our on-going studies in other models that involve demyelination. We are

looking forward to working with Dr. Maragakis and other members of the Robert Packard Center for ALS Research at Johns Hopkins on this groundbreaking project.”

This work is being supported by a grant from the Maryland Stem Cell Research Fund (MSCRF) and Q Therapeutics, Inc. Nicholas Maragakis, MD, an Associate Professor of Neurology at Johns Hopkins is principal investigator and James Campanelli, Ph.D., Senior Director of Research and Development at Q, is co-investigator on the grant.

About Q Therapeutics, Inc.

Q Therapeutics, Inc. is an emerging biopharmaceutical company, venture-backed and privately held, developing products to treat debilitating diseases of the central nervous system. The Company has exclusive rights to 16 patents arising out of work done by Mahendra Rao, MD, Ph.D., at the University of Utah and NIH, as well as rights to pending patents from Steven Goldman, MD, Ph.D. and Cornell Medical Foundation. The company’s first product, Q-Cells®, is a cell-based therapeutic intended to restore or preserve normal function of neurons by providing essential support functions that occur in healthy central nervous system tissues. Q-Cells® may be applicable to a wide range of demyelinating diseases, including multiple sclerosis, transverse myelitis, cerebral palsy, and white matter stroke; as well as other neurodegenerative diseases such as ALS (Lou Gehrig’s Disease), traumatic spinal cord injury, Parkinson’s and Alzheimer’s Disease. Initial clinical targets are transverse myelitis, a rapidly paralyzing, inflammatory demyelinating spinal cord injury related to MS; and ALS, with preclinical studies ongoing to support first IND filing in 2009. Q’s pipeline includes other cell products for treating diseases including Alzheimer’s Disease and peripheral neuropathies, as well as use of its proprietary cells for new drug discovery. For more information, visit [www.qthera.com](http://www.qthera.com).

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