

Living Cell Technologies Limited Company Announcement

Promising Preclinical Results with NTCELL in Parkinson's

- Two animal models for the neurodegenerative condition Parkinson's disease show significant improvement in motor activity when implanted with NTCELL
- The affected brain areas show dramatic restoration of brain cell numbers

10 November 2010 – Sydney, Australia, Auckland, New Zealand– Living Cell Technologies Limited (ASX: LCT; OTCOX: LVCLY), is a global company pioneering the development of cell implants to treat diabetes and neurological diseases that are not effectively managed with conventional therapies. Today's report highlights outstanding functional and structural benefits from implants of NTCELL, LCT's cell implant product for neurodegenerative conditions. These encouraging results are from two internationally accepted preclinical models of Parkinson's disease.

In a rodent model, abnormal movements were quantitatively assessed after implantation of NTCELL, which is comprised of neonatal porcine choroid plexus epithelial cell clusters encapsulated in IMMUPEL[™] (LCT's alginate based microencapsulation system). The implants were placed in the affected part of the brain, the nigro-striatum, under stereotactic guidance. Compared with similarly implanted empty capsules disease-related movement abnormality was reduced by 56% for the four week duration of the treatment. Terminal examination showed marked repopulation of the affected area of the brain with dopamine containing cells. The depletion of these cells is responsible for the symptoms of Parkinson's disease. The control group showed no significant functional or structural improvement. The remarkable improvements in the test group provide strong preclinical data demonstrating the efficacy of NTCELL as a potential therapeutic to treat Parkinson's disease.

Similar improvements are also reported from an ongoing study with a comparable nonhuman primate model. This latter experiment is a long-term study, with final functional and histological results expected in the second quarter of next year. The results of these studies will provide critical validation for potential human trials.

Professor Bob Elliott, LCT's Medical Director said: "This treatment strategy is quite different from previous attempts by others at cell therapy which have been centred on implanting brain dopamine-producing cells. NTCELL offers those who suffer from neurodegenerative conditions a new hope and an alternative to the ongoing deterioration that is expected despite the best of conventional therapies."

"The implantation of the choroid plexus cells contained in NTCELL results in either a relocation or regeneration of the patient's own dopamine-producing cells. This occurs under the influence of hormone-like secretions coming from the implants. Such brain repair has

been reported in publications by LCT in modelling of a number of other neurodegenerative diseases characterized by brain cell loss, several which are referenced below. The positive results from our preclinical Parkinson's disease studies augur well for the development of an effective new treatment for this common and distressing disease."

References:

- Skinner SJ, Geaney MS, Lin H et al.: Encapsulated living choroid plexus cells: potential long-term treatments for central nervous system disease and trauma. J Neural Eng 6(6), 65001 (2009)
- Borlongan CV, Thanos CG, Skinner SJ, Geaney M, Emerich DF: Transplants of encapsulated rat choroid plexus cells exert neuroprotection in a rodent model of Huntington's disease. Cell Transplant 16(10), 987-92 (2008)
- Emerich DF, Thanos CG, Goddard M et al.: Extensive neuroprotection by choroid plexus transplants in excitotoxin lesioned monkeys. Neurobiol Dis. 23(2), 471-801 (2006)

(Encapsulated choroid plexus reverses Huntington's Disease lesion and behaviour in non-human primate model.)

Skinner SJ, Geaney MS, Rush R *et al.*: Choroid plexus transplants in the treatment of brain diseases. Xenotransplantation 13(4), 284-8 (2006).

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About Living Cell Technologies - <u>www.lctglobal.com</u>

Living Cell Technologies (LCT) is developing cell-based products to treat life threatening human diseases. The Company owns a biocertified pig herd that it uses as a source of cells for treating diabetes and neurological disorders. The Company's lead product, DIABECELL[®], consists of microencapsulated porcine islets which are implanted into a patient's abdomen using a simple laparoscopic procedure. DIABECELL is designed to help normalise the lives of people with unstable Type 1 diabetes, especially those suffering from life-threatening episodes of unaware hypoglycaemia (low blood sugar), a dangerous and potentially fatal diabetes complication. The Company entered clinical trials for its diabetes product in 2007 and very encouraging results have been reported to date. There have been no reports of product related adverse events.

Applying the same platform technologies as DIABECELL, LCT has developed NTCELL, a choroid plexus cell product which is currently in preclinical development to treat neurodegenerative diseases such as Parkinson's disease, Huntington's disease, stroke, and hearing loss.

The Company's breakthrough proprietary micro-encapsulation technology, IMMUPEL[™] is the most advanced in the world and enables implantation of cell-based therapeutics without immunosuppression. LCT also offers medical-grade porcine-derived products for the repair and replacement of damaged tissues, as well as for research and other purposes.

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