



Canadian Cord Blood Registry

(A Subsidiary of Cell Therapy Technologies Inc.)

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Cell Therapy Technologies Announces Successful Use of Cord Blood Stem Cells to Prevent Oxygen Induced Lung Damage in a Neonatal Rat Model:

Edmonton, Alberta May 25th, 2006: Cell Therapy Technologies (CTT) in conjunction with scientists at the University of Alberta announces the successful development of a therapy to prevent oxygen induced lung damage in a neonatal rat model. This important discovery was presented at the recent meeting of the Society for Pediatric Research in San Francisco, USA on May 1st, 2006. Each year approximately 10% of all births are premature. Premature infants are at increased risk for oxygen induced lung toxicity with subsequent development of Broncho Pulmonary Dysplasia (BPD), a life long crippling lung disease. At the present time, there is no effective therapy for this serious complication of prematurity. Using cultured human umbilical cord blood stem cells, Scientists led by Drs. Bernard Thebaud and John Akabutu have developed a unique method of enabling cord blood stem cells to be introduced into the lung of a neonatal rat model of BPD. The cord blood stem cells integrated into the lung alveoli and expressed surfactant protein C indicative of their conversion to alveolar type II pneumocytes. The damage to lung alveoli in this model was prevented by the cord blood stem cells. This is the first demonstration in the world of the ability of cultured cord blood stem cells to prevent oxygen toxicity in the lung in a neonatal rat model. Translation of this innovation to an early clinical trial in neonates is warranted because of the critical nature of oxygen induced lung damage in premature infants. Prevention of this toxicity will eliminate the debilitating residual lung damage of these children and result in a good quality of life with significant savings to the healthcare system.

The ability to harness the power of a patient's own stem cells to regenerate or prevent damage to the lung following oxygen exposure is a potentially powerful therapy for BPD, a disease that has no current treatment. The method of the introduction of these cells into the lung parenchyma permits the cord blood stem cells to home to the area in need of protection and regeneration. This therapy has application in other lung diseases, including diseases of adults where there is damage to the alveolar cells as well. These diseases include emphysema, lung fibrosis, cystic fibrosis, adult respiratory distress syndrome, diseases that currently have no satisfactory treatment.

Cord blood stem cells harvested at the birth of an infant represent a unique opportunity for the application of non embryonal derived stem cells to the treatment of life threatening lung disorders. The current innovation supports the notion that these stem cells can transdifferentiate into lung alveolar type II pneumocytes, integrate into lung tissue and repair or prevent lung tissue damage. Stem cells from cord blood have the ability to transdifferentiate into fat cells, bone, nerve tissue, liver and pancreatic cells. These cells hold the promise as biopharmaceuticals for the treatment of life threatening disorders including diseases of the lung, blood vessels, heart, diabetes and nervous system, where cell repair or regeneration of the damaged organ would be curative.

About Cell Therapy Technologies: Cell Therapy Technologies (CTT) is a privately held biotechnology company, based in Edmonton, Alberta. Through its subsidiary the Canadian Cord Blood Registry (CCBR), a unique technology platform to cryopreserve and store cord blood stem cells collected at birth for autologous or family usage has been developed. This proprietary processing technology platform consistently obtains yields of up to 100% of cord blood stem cells from whole cord blood for cryopreservation. This is unique in the cord blood industry where yields of 85% represent the norm. The cryopreserved cord blood stem cells are stored in liquid nitrogen at -196°C and are held indefinitely for future use in regenerative medicine and cell therapy. CTT is engaged in active research, with emphasis on the lung, in transdifferentiation of cord blood stem cells for therapeutic use. For further information please contact us at 1-888-818-2673 or at info@ccbr.ca

A provisional patent # 60/745,848 has been filed with the United States Patent and Trademark Office on the 27 April, 2006.