

Bankhead-Coley Cancer Research Program

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Physics

University of South Florida

2010 Program

Technology Transfer/Commercialization Partnership

(1-year project)

Project Title: Use of Synthetic Biomatrix to Enhance Autologous Peripheral Stem Cell Transplantation

Project Summary: A side-effect of chemotherapy and/or radiotherapy is impairment of the patient's bone marrow and immune system. The main long-term objective of this project is to reduce the morbidity of cancer patients who have undergone these approaches to treatment. The project sets out to achieve the objective by improving the transplantation of self-donated adult stem cells, a procedure used in the treatment of thousands of patients per year in the USA alone. The potential impact of the research is all the greater because the treatment of other conditions may benefit from the same research. The main aim of the project is for researchers based at University of South Florida and BioLaminex, Inc., a small biotechnology company headquartered in Tampa, to determine whether the Company's coating technology for cell culture vessels will enhance adult stem cell expansion and transformation into a certain cell type – outside the body. A key feature of the coating technology, called synthetic biomatrix, is the avoidance or minimization of non-human source materials, which is important for product regulation and market acceptance. If the work is successful, it will enhance the ability of current transplantation methods to restore a patient's bone marrow and immune system to pre-treatment levels.