HyStem@-C Demonstrated Effective when Formulated with Human Heart Cells and Transplanted in an Animal Model of Heart Disease

The Associated Press

ALAMEDA, Calif.--(BUSINESS WIRE)--May 14, 2012-- BioTime, Inc. (NYSE MKT: BTX) announced today the publication of a scientific paper demonstrating the effectiveness of HyStem(R)-C in the transplantation of heart muscle-derived cells in an animal model of heart disease. The paper, "Functional performance of human cardiosphere-derived cells delivered in an in situ polymerizable hyaluronan-gelatin hydrogel," is published online (ahead of print) in the peer-reviewed journal Biomaterials. The report demonstrates that the survival of human heart-derived cells is markedly improved when the cells are formulated in HyStem(R)-C, a product being developed by BioTime under the trade name ReneviaTM as a cell delivery device.

In today's publication, human heart-derived cells were transplanted into the hearts of mice around the time of injury in an animal heart attack model. When transplanted without matrix, the heart cells fared poorly, as is commonly observed in the absence of such support.

However, when the cells were transplanted with HyStem(R)-C there was a significant increase in the number of surviving transplanted cells.

Another significant finding reported in the study is that transplantation of the cells with HyStem(R)-C into the injured heart muscle resulted in an increase in left ventricular ejection fraction (LVEF), a measure of the ability of the cells to restore strength to the damaged heart wall.

The lead author on the paper is Ke Cheng of the Cedars-Sinai Heart Institute in Los Angeles, California. Other authors from Cedars-Sinai are Deliang Shen, Baiming Sun, Giselle Galang, and Eduardo Marbán.

Authors from Capricor, Inc. of Los Angeles, California are Agnieszka Blusztajn, Rachel R. Smith, and Linda Marbán. Additional authors are Tao-Sheng Li from the Department of Stem Cell Biology at Nagasaki University Graduate School of Biomedical Science in Nagasaki, Japan; Glenn D. Prestwich from the Department of Medicinal Chemistry and Center for Therapeutic Biomaterials at the University of Utah in Salt Lake City; and BioTime author Thomas I. Zarembinski.

"Heart disease remains the number one cause of mortality in the United States," said William Tew, Ph.D., BioTime's Chief Commercial Officer.

"We are gratified to see the utility of our HyStem(R) technology in the field of cardiology as it has been previously reported in neurology and orthopedics. We see

the development of these unique matrices as a strategic means of capturing near-term commercial opportunities while building a foundation for a large pipeline of transplantable human cells derived from pluripotent stem cells such as human embryonic stem and induced pluripotent stem cells." BioTime's goal is to obtain approval to market Renevia(TM) in European Union countries by the end of 2013 for use in the transplantation of adipose tissue for reconstructive and dermatological surgery. A discussion of this use of ReneviaTM in a presentation by Dr. Tew, which also describes BioTime's other plans for its HyStem(R) line of products, is available online at www.biotimeinc.com.

Background BioTime is a leader in developing, manufacturing, and marketing proprietary biocompatible hydrogels that mimic the human extracellular matrix (ECM). The human ECM is a web of molecules surrounding cells that is essential to the formation, function, and growth of discrete tissues and organs in the body. BioTime's HyStem(R) hydrogels support the growth and directed differentiation of stem cells by mimicking the ECM, and are designed as injectable, resorbable matrices for tissue engineering, regenerative medicine, and for research applications involving the laboratory culture of human cells. Uses of BioTime's HyStem(R) technology has been reported on in over 90 scholarly publications and is presently being used at several leading medical institutions investigating potential cell-based therapies for osteoarthritis, myocardial infarction, stroke, brain tumors, and wound healing. HyStem(R) offers a convenient delivery matrix and its in situ polymerization creates a biocompatible, resorbable scaffold for cell proliferation and tissue regeneration.

About BioTime, Inc BioTime, headquartered in Alameda, California, is a biotechnology company focused on regenerative medicine and blood plasma volume expanders. Its broad platform of stem cell technologies is developed through subsidiaries focused on specific fields of applications.

BioTime develops and markets research products in the field of stem cells and regenerative medicine, including a wide array of proprietary ACTCellerate(TM) cell lines, HyStem(R) hydrogels, culture media, and differentiation kits. BioTime is developing Renevia(TM) (formerly known as HyStem(R)-Rx), a biocompatible, implantable hyaluronan and collagen-based matrix for cell delivery in human clinical applications. As an injectable product, Renevia(TM) may address an immediate need in cosmetic and reconstructive surgeries and other procedures by improving the process of transplanting adipose derived cells, mesenchymal stem cells, or other adult stem cells. BioTime's wholly owned subsidiary ES Cell International Pte. Ltd. has produced clinical-grade human embryonic stem cell lines that were derived following principles of Good Manufacturing Practice and currently offers them for use in research. BioTime's therapeutic product development strategy is pursued through subsidiaries that focus on specific organ systems and related diseases for which there is a high unmet medical need. BioTime's majority owned subsidiary Cell Cure Neurosciences, Ltd. is developing therapeutic products derived from stem cells for the treatment of retinal and neural degenerative diseases. Cell Cure's minority shareholder Teva Pharmaceutical Industries has an option to clinically develop and commercialize Cell Cure's OpRegen(TM) retinal cell product for use in the treatment of age-related macular degeneration. BioTime's subsidiary OrthoCyte Corporation is

developing therapeutic applications of stem cells to treat orthopedic diseases and injuries. Another subsidiary, OncoCyte Corporation, focuses on the diagnostic and therapeutic applications of stem cell technology in cancer, including the diagnostic product PanC-DxTM currently being developed for the detection of cancer in blood samples, and therapeutic strategies using vascular progenitor cells engineered to destroy malignant tumors. ReCyte Therapeutics, Inc. is developing applications of BioTime's proprietary induced pluripotent stem cell technology to reverse the developmental aging of human cells to treat cardiovascular and blood cell diseases. BioTime's newest subsidiary, LifeMap Sciences, Inc., is developing an online database of the complex cell lineages arising from stem cells to guide basic research and to market BioTime's research products. In addition to its stem cell products, BioTime develops blood plasma volume expanders, blood replacement solutions for hypothermic (low temperature) surgery, and technology for use in surgery, emergency trauma treatment and other applications. BioTime's lead product, Hextend(R), is a blood plasma volume expander manufactured and distributed in the U.S. by Hospira, Inc. and in South Korea by CJ CheilJedang Corp. under exclusive licensing agreements. Additional information about BioTime, ReCyte Therapeutics, Cell Cure, OrthoCyte, OncoCyte, BioTime Asia, LifeMap Sciences, and ESI can be found on the web at www.biotimeinc.com.

Forward-Looking Statements Statements pertaining to future financial and/or operating results, future growth in research, technology, clinical development, and potential opportunities for BioTime and its subsidiaries, along with other statements about the future expectations, beliefs, goals, plans, or prospects expressed by management constitute forward-looking statements. Any statements that are not historical fact (including, but not limited to statements that contain words such as "will," "believes," "plans," "anticipates," "expects," "estimates") should also be considered to be forward-looking statements. Forward-looking statements involve risks and uncertainties, including, without limitation, risks inherent in the development and/or commercialization of potential products, uncertainty in the results of clinical trials or regulatory approvals, need and ability to obtain future capital, and maintenance of intellectual property rights. Actual results may differ materially from the results anticipated in these forward-looking statements and as such should be evaluated together with the many uncertainties that affect the business of BioTime and its subsidiaries, particularly those mentioned in the cautionary statements found in BioTime's Securities and Exchange Commission filings. BioTime disclaims any intent or obligation to update these forward-looking statements.

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