



OncoCyte Announces Availability of Abstracts With New Clinical Data From Studies of PanC-Dx™ Cancer Diagnostic in Bladder and Breast Cancer

Mar 20, 2015

Data to be Presented at American Association for Cancer Research 2015 Annual Meeting

ALAMEDA, Calif.–(BUSINESS WIRE)–Mar. 20, 2015– BioTime, Inc. (NYSE MKT:BTX) and its subsidiary OncoCyte Corporation today announced the online availability of abstracts providing human clinical data highlighting the potential of *PanC-Dx™*, OncoCyte's class of non-invasive cancer diagnostics based on OncoCyte's proprietary set of cancer markers. These markers were discovered by company scientists through an analysis of broad gene expression patterns in numerous cancer types. These markers, including COL10A1, are the subject of multiple pending patent claims filed in numerous countries worldwide and are owned by OncoCyte. Data included in the abstracts will be presented in two poster presentations at the [American Association for Cancer Research \(AACR\) Annual Meeting](#) being held April 18-22, 2015.

"The presentations on *PanC-Dx™* at the AACR 2015 annual meeting will report on the first human clinical data from a key OncoCyte product development program," said Joseph Wagner, PhD, OncoCyte's Chief Executive Officer. "We, along with our clinical investigators, are pleased with the high sensitivity and specificity of *PanC-Dx* in diagnosing bladder cancer. The levels of accuracy that we report may give this new diagnostic the potential for widespread adoption as an improved method of detecting bladder cancer or its recurrence. We appreciate the effort of our clinical investigators and distinguished collaborators at Johns Hopkins University School of Medicine, leaders in bladder cancer research."

The first abstract describes the clinical data and assay development progress of OncoCyte's bladder cancer diagnostic test. Data obtained from a clinical study recently completed in collaboration with investigators in the Department of Pathology at Johns Hopkins University School of Medicine, was to assess the performance of OncoCyte's proprietary diagnostic technology in detecting the most common type of bladder cancer, urothelial carcinoma (UC). Study investigators collected 90 urine samples from patients undergoing urine cytology for the diagnosis of either primary or recurrent bladder cancer. An analysis was performed and a panel of markers that discriminates UC from non-cancerous conditions was identified. Evaluation of the performance of this gene panel indicated high levels of sensitivity and specificity (Receiver Operating Characteristic area under the curve of greater than 0.9). Additional evaluation of this gene panel in the context of a larger multi-site study is ongoing and results from this expanded clinical study will be included in the presentation.

The second presentation will provide a summary of the clinical data and assay development progress of OncoCyte's breast cancer diagnostic test. Specifically, the abstract describes the potential utility of

COL10A1 as a blood-based biomarker for multiple cancers, including breast cancer. This study involving over 600 patients is being conducted at Scottsdale Medical Imaging Laboratories.

Overall markets for bladder cancer diagnostics are large and growing. Based on National Cancer Institute statistics, it was estimated that in 2015 over 74,000 new cases of bladder cancer would occur in the United States and a total of over 500,000 men and women alive would have a history of bladder cancer and be subject to recurrence surveillance testing using cystoscopy or urine cytology. Bladder cancer has the highest recurrence rate of any major type of cancer; recurrence surveillance testing is strongly recommended and widely performed.

In 2010, over 30 million screening mammograms were performed in the US alone. The American Cancer Society and the National Comprehensive Cancer Network both recommend screening mammography every year starting at age 40, which has been associated with relative reduction in breast cancer mortality of 15% to 20%. However, the NCI estimates that approximately 20% of all breast cancers are not detected by mammography during annual screening which indicates there is an unmet need for a breast-cancer screening test with superior specificity and sensitivity when compared to standard screening mammography.

Details for the two poster presentations are as follows:

Presentation Title:

[Identification of gene-expression biomarkers in urine pathology specimens for the detection of bladder cancer](#)

Abstract #: 551

Location: Poster Section 23

Poster Board Number: Board 21

Date & Time: Sunday, April 19, 2015 at 1:00 PM – 5:00 PM EDT

Presentation Title: [Identification of type X collagen as a pan-cancer serum biomarker](#)

Abstract #: 1578

Location: Poster Section 22

Poster Board Number: Board 18

Date & Time: Monday, April 20, 2015, 8:00 AM – 12:00 PM EDT

About OncoCyte Corporation

OncoCyte, a majority-owned subsidiary of BioTime, Inc., is developing novel products for the diagnosis and treatment of cancer in order to improve the quality and length of life of cancer patients. Based on large unmet need, market size, and data generated thus far from patient sample screening, OncoCyte is initially focusing its efforts on developing *PanC-Dx*[™] diagnostic products for use in detecting breast, bladder, and lung cancers. *PanC-Dx*[™] is a class of non-invasive cancer diagnostics based on a proprietary set of cancer markers characterized, in part, by broad gene expression patterns in numerous cancer types. The *PanC-Dx*[™] biomarkers were discovered as a result of ongoing research within OncoCyte and BioTime on the gene expression patterns associated with embryonic development. This research has demonstrated that many of the same genes associated with normal growth during embryonic development are abnormally reactivated by cancer cells. These genes regulate such diverse processes as cell proliferation, cell migration and blood vessel formation. Many of these genes have not been previously associated with cancer. Moreover, expression of a large subset of these genes is conserved across numerous cancer types (e.g. cancers of the breast, colon, ovaries, etc.), suggesting these genes may control fundamental processes during cancer growth and progression. In addition to their potential value in developing diagnostic biomarkers, an understanding of the pattern of expression of these genes

may also enable the development of powerful new cancer therapeutics that target rapidly proliferating cancer cells.

About BioTime

BioTime, Inc., a pioneer in regenerative medicine, is a clinical-stage biotechnology company. BioTime and its subsidiaries are leveraging their industry-leading experience in pluripotent stem cell technology and a broad intellectual property portfolio to facilitate the development and use of cell-based therapies and gene marker-based molecular diagnostics for major diseases and degenerative conditions for which there presently are no cures. The lead clinical programs of BioTime and its subsidiaries include: *OpRegen*[®], currently in a Phase I/IIa trial for the treatment of the dry form of age-related macular degeneration; *AST-OPC1*, currently in a Phase I/IIa trial for spinal cord injuries; *Renovia*[™], currently in a pivotal trial in Europe as an injectable matrix for the engraftment of transplanted cells to treat HIV-related lipodystrophy; and *PanC-Dx*[™] cancer diagnostics, which are completing initial clinical studies for bladder, breast, and lung cancer. *AST-VAC2*, a cancer vaccine, is in the pre-clinical trial stage.

BioTime's subsidiaries include: publicly-traded Asterias Biotherapeutics, Inc. (NYSE MKT: AST), developing pluripotent stem cell-based therapies in neurology and oncology, including *AST-OPC1* and *AST-VAC2*; Cell Cure Neurosciences Ltd., developing stem cell-based therapies for retinal and neurological disorders, including *OpRegen*[®]; OncoCyte Corporation, developing *PanC-Dx*[™] cancer diagnostics; LifeMap Sciences, Inc., developing and marketing an integrated on-line database resource for biomedical and stem cell research; LifeMap Solutions, Inc., a subsidiary of LifeMap Sciences, developing mobile health (mHealth) products; ES Cell International Pte Ltd, which has developed cGMP compliant human embryonic stem cell lines that are being marketed by BioTime for research purposes under the ESI BIO branding program; OrthoCyte Corporation, developing therapies to treat orthopedic disorders, diseases and injuries; and ReCyte Therapeutics, Inc., developing therapies to treat a variety of cardiovascular and related ischemic disorders.

BioTime common stock is traded on the NYSE MKT under the symbol BTX. For more information, please visit www.biotimeinc.com or connect with the company on [Twitter](#), [LinkedIn](#), [Facebook](#), [YouTube](#), and [Google+](#).

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.

To receive ongoing OncoCyte corporate communications, please click on the following link to join our email alert list: <http://investors.oncocyte.com/information-request/email-alerts>

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