



Cellanyx Reports Novel Method to Culture Primary Prostate Biopsy Cells

*Company applying breakthrough approach for culturing prostate cancer cells, published in **Urology**, to develop prostate cancer risk stratification test based on novel phenotypic biomarkers in live tumor cells*

Beverly, MA, May 30, 2017 – Cellanyx reported a novel method for culturing primary prostate cancer cells directly from human prostate tissue harvested at the time of surgery. This novel and breakthrough approach, published on line May 25, 2017 in the journal *Urology*, will advance the understanding of prostate cancer cell behavior and enable the use of novel phenotypic biomarkers by more closely replicating the cellular microenvironment in the tissue compared to other currently available technologies. Cellanyx is utilizing this breakthrough primary prostate cancer cell culture technology to develop a superior risk stratification test for prostate cancer, based on live cell phenotypic biomarkers.

“Prostate cancer is the most common cancer in men but it is a very heterogeneous disease,” said David Albala, MD, Chief of Urology at Crouse Hospital (Syracuse, NY) and former Professor and Co-Director of Endo-Urology at Duke University School of Medicine and an author on the paper. “The disease presents a major challenge in discriminating indolent from aggressive prostate tumors. The ability to culture primary prostate cancer cells and assess live cell tumor behavior provides a foundation for developing more quantitative tools based on behavior of a patient’s tumor cells to help determine which patients are at risk of aggressive disease.” Dr. Albala is a scientific advisor to Cellanyx.

“This work represents a fundamental breakthrough in prostate cancer research,” said Grannum Sant, MD, FRCS, FACS, Professor and Former Chair of Urology, Tufts University School of Medicine, an author on the paper and Chairman, Cellanyx Scientific Advisory Board. “Researchers have long known that cancer cells behave differently than normal cells. This new approach unlocks the potential of live, single-cell phenotypic biomarkers to improve prostate cancer risk stratification and prognostication.”

“Culturing primary prostate cells has to date been a significant challenge,” said Ashok, Chander, PhD, CEO of Cellanyx and an author on the paper. “Existing methods for culturing prostate cells rely on immortalized cell lines grown in serum which over time undergo mutations that may render them un-representative of prostate tissue in vivo.”

The new method builds on a growing body of research indicating that interactions among cells and the extracellular matrix in which they reside play important roles in normal cell function and cancer. “The Cellanyx test, in which cells are grown in an extracellular matrix formulation, produces viable cells, available for rapid dynamic analysis in a more physiologically relevant environment,” said Dr. Chander.

In the study, the researchers obtained tissue samples from ten clinical sites in the US from 260 patients undergoing radical prostatectomy. Samples contained both cancer and non-cancer cells. Of the 260 prostate tissue samples 251 were successfully cultured. The cells were cultured on glass plates with either a proprietary extracellular matrix formulation or control proteins and the cells were assessed for seven days across a number of criteria for cell culturing, including adhesion, growth, cell spreading and metabolic activity. The cells grown on the extracellular matrix formulation performed significantly better than those grown on the control and other standard extracellular matrix proteins. The researchers also used a marker of tumor cells to demonstrate that the cultured cells included cancer as well as non-cancer cells.

The paper is entitled, “Rapid and short-term extra-cellular matrix-mediated *in vitro* culturing of tumor and non-tumor human primary prostate cells from fresh radical prostatectomy tissue.” [Pubmed Link](#)

In addition to Drs. Albala, Chander and Sant, authors on the paper included: Michael S. Manak, Cellanyx, Jonathan S. Varsanik, Cellanyx, Brad J. Hogan, Cellanyx, Vladimir Mouraviev, Central Florida Cancer Institute, Stephen M. Zappala, Tufts University School of Medicine and Andover Urology.

About Cellanyx Diagnostics

Cellanyx Diagnostics is developing a proprietary living cell phenotypic cancer diagnostic platform to aid clinical decision making. The company’s unique ‘biopsy-on-a-chip’ methodology provides quantitative, actionable assessment of individual cancer cells in biopsy samples using multiple molecular and cellular phenotypic markers of tumor aggressiveness and metastatic potential. Cellanyx has demonstrated clinical proof-of-concept with its lead product in development, a diagnostic to improve risk stratification in men with prostate cancer. Learn more at www.cellanyx.com.

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