PRESS RELEASE

Xcell Biosciences to Introduce Next Generation System for Cell-based Assays at the 2016 Molecular Medicine Tri-Conference

New Avatar™ system replicates the in vivo environment of samples to deliver reproducible, biologically relevant results

San Francisco – March 2, 2016 – Xcell Biosciences, Inc., announced today that the company will unveil its Avatar system, a revolutionary new platform for culturing and propagating tumor samples, circulating tumor cells (CTCs) from liquid biopsies, stem cells and primary samples, at the Molecular Medicine Tri-Conference taking place March 6-11 in San Francisco.

The Avatar system enables a new generation of cell-based assays by allowing for complete control of key physiological conditions found in the microenvironments of cells, including settings for pressure, oxygen, temperature and CO2 levels. In addition to enabling culture of difficult samples such as tumor biopsies and primary samples, the system overcomes limitations of traditional cell culture to generate results that exhibit the phenotypic, genomic and proteomic characteristics of the native sample.

Disparities between cell profiles measured *in vivo* and *ex vivo* have called into question many findings based on cultured cells. Mimicking the physiological conditions of a sample's native environment is critical to obtaining accurate and actionable experimental results in important fields such as cancer research, biomarker discovery, lead candidate selection and optimization, stem cell research and regenerative medicine, and immunotherapy drug development.

Charles Ryan, MD, Associate Professor of Medicine and Urology at the UCSF Helen Diller Family Comprehensive Cancer Center and Clinical Program Leader for Genitourinary Medical Oncology has been collaborating with Xcell for the past two years on a number of research projects. "Currently we are doing a pilot study on the feasibility of doing this testing for Prostate cancer," said Dr. Ryan. "We are comparing results from the Avatar platform to results from biopsies, so we can understand how similar or different they are. Our goal is to use the Avatar platform to help us find patterns that are predictive of failure or the success of treatments and to integrate that information into ways to help predict the efficacy of drugs."

Brian Feth, CEO of Xcell Biosciences commented: "Traditional cell culture does not accurately represent the native microenvironment of cells, which has led to decades of *ex vivo* analysis of cells that do not behave as they would in nature. We are excited to introduce the Avatar system so scientists can now study cultured cells with greater certainty that the data they generate offers a real representation of how those cells function and behave *in vivo*."

Mr. Feth will present the company's new platform at the Plenary Session Panel "Emerging Technologies and Industry Perspectives" on Wednesday, March 9th at 8:00 a.m. and will participate in the "Swimming with the Sharks" venture financing competition later that day. Company scientists will also present a poster titled "Characterization of the effects of hypoxia

and hydrostatic pressure on the culture of cancer cell lines and primary tissue." Attendees can meet with company representatives at booth #429.

For more information, visit www.xcellbio.com.

About Xcell Biosciences, Inc.
Xcell Biosciences, Inc., is developing revolutionary products and workflows for life science and translational research that reproduce physiologically relevant conditions to enable more meaningful, biologically relevant experiments. The company's tools empower scientists to obtain accurate and actionable results in important fields such as cancer research, biomarker discovery, lead candidate selection and optimization, stem cell research and regenerative medicine, and immunotherapy drug development. Xcell's first product, the Avatar™ system, opens the door for a new generation of cell-based assays by allowing for complete control of key physiological conditions found in cellular microenvironments. In addition to enabling culture of difficult samples such as tumor biopsies and primary samples, the system overcomes limitations of traditional cell culture to generate results that exhibit the phenotypic, genomic and proteomic characteristics of the native sample.

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