

Media Release

JBS Publication Demonstrates Utility of InSphero 3D Co-culture Microtissues as Phenotypic RNAi Screening Tool

Schlieren, Switzerland, February 27, 2014 – Report in the Journal of Biomolecular Screening establishes fluorescent 3D tumor co-culture model, enables screening of gene function in a system more reflective of *in vivo* tumor growth.

Research in the Journal of Biomolecular Screening co-authored by InSphero AG and the Institute of Molecular Health Sciences (Zurich) characterizes a high-throughput compatible 3D tumor model system based on InSphero's GravityPLUS™ hanging drop technology. The authors use the co-culture model and RNA interference (RNAi) to reveal differential phenotypic responses to targeted gene disruption that are dependent upon the 2D or 3D manner in which the cells are grown.

Currently, identification of drug targets and primary target validation are typically performed using 2D cell culture systems. These conditions do not reflect the interactive 3D tumor microenvironment *in vivo*. The study directly compares 2D and 3D microtissue co-cultures composed of human DLD I colon cancer cells and murine fibroblasts, each genetically modified to allow simple quantification of tumor and fibroblast cell number by fluorescence imaging. Upon siRNA-mediated depletion of Kif11/Eg5, a critical mitotic protein, cancer cell proliferation in 3D microtissues was inhibited, whereas those in 2D monolayers were more resistant to gene depletion and continued to proliferate.

Dr. Jens M. Kelm, Chief Scientific Officer at InSphero AG and corresponding author on the manuscript, states the 3D co-culture model attempts to more accurately reflect the heterotypic interactions seen *in vivo*, while also being amenable to high-throughput approaches to early target identification and validation. "Our findings reiterate the importance of the cellular context in which gene function analysis studies are performed. Co-cultures grown in 3D may display a dramatically different result in phenotypic screens than in traditional 2D monolayers."

InSphero provides a broad portfolio of assay-ready 3D InSight™ Tumor Microtissues from widely used cell lines, including various co-cultures with human or mouse stromal cells, and Fluorescent Microtissues expressing reporters to distinguish tumor and stromal cell populations.

To find out more about InSphero visit www.insphero.com.

InSphero contact

Dr. Randy Strube, Director of Global Marketing, phone +1 800-779-7558 ext. 102,
randy.strube@insphero.com , www.insphero.com

Dr. Jens Kelm, CSO and Co-Founder, phone +41 44 5150490, jens.kelm@insphero.com ,
www.insphero.com

About InSphero

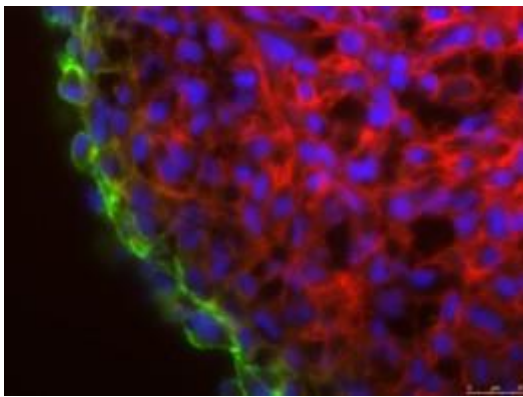
InSphero is a leading supplier of organotypic, biological *in vitro* 3D microtissues for highly predictive drug testing. The company, headquartered in Zurich, Switzerland, with subsidiaries in the USA and in Germany, currently counts all of the top ten global pharmaceutical and

cosmetics companies as customers. InSphero 3D InSight™ Microtissues enable more biologically relevant in vitro applications in efficacy and toxicology. The spin-off company of the Swiss Federal Institute of Technology (ETH) Zurich and the University Zurich has been recognized for its scientific and commercial achievements with a number of national and international awards and is also certified to the ISO 9001:2008 standard for its Quality Management System.

Follow us on   and www.insphero.com

Images to media release

For a high resolution image visit our [media gallery](#).



InSphero provides a broad portfolio of assay-ready 3D InSight™ Tumor Microtissues from widely used cell lines, including various co-cultures with human or mouse stromal cells.