

Media Release

Protea Biosciences and InSphero AG Enter into Collaboration and Co-marketing Agreement to Combine 3D Technologies

Schlieren, Switzerland and Morgantown, West Virginia, July 9, 2014 - Protea to apply direct 3D molecular imaging platform to InSphero's 3D InSight™ Microtissues.

Protea Biosciences Group, Inc. (OTCQB:PRGB) and InSphero AG jointly announced today that they have entered into a collaboration that will combine each company's respective 3D technology. InSphero AG is the leading supplier of [3D organotypic microtissues](#) for in vitro toxicology and efficacy studies, with models derived from liver, pancreas, tumor, and brain tissue that yield a high level of predictability during drug development compared to traditional 2-dimensional cell culture and other in vitro model systems. The collaboration will use Protea's proprietary LAESI® direct molecular imaging platform to analyze InSphero's proprietary 3D InSight™ microtissues, creating 3D molecular profiles for tissue characterization, drug metabolism and distribution, pharmacokinetic and toxicity applications. From this collaboration, Protea and InSphero expect to create new products and services that may be marketed to pharmaceutical and biotechnology researchers worldwide.

"The understanding of disease and the development of new pharmaceuticals continues to be an enormous challenge, one that requires new technologies", stated Protea's CEO Stephen Turner. He added, "We believe that InSphero's 3D microtissues deliver a new level of insight and predictability to the drug development process. We are honored to be working with InSphero's team of scientists and to have the opportunity to apply our LAESI direct molecular imaging technology to the analysis of their 3D microtissues."

InSphero CEO and co-founder Dr. Jan Lichtenberg believes the partnering of the two 3D technologies is a natural fit. "The LAESI technology increases the power of mass spectrometry, and is uniquely suited to meet the needs of researchers using our 3D microtissues. The ability to reconstruct the molecular profile of a tissue in three dimensions, including endogenous proteins, drugs, and compound metabolites, will facilitate a deeper characterization of 3D cell models, and open doors to novel applications that can further enhance their utility in drug discovery and development."

For more information about InSphero, visit www.insphero.com.

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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.

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About Protea Biosciences Group, Inc.

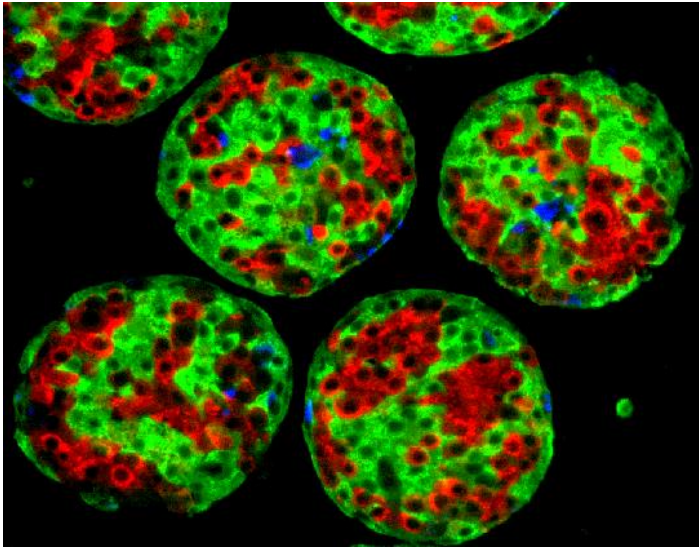
Protea Biosciences Group, Inc. (OTCQB:PRGB) is a commercial stage molecular information company, focused on meeting the needs of pharmaceutical, biotechnology, agriculture, chemical and other industries with innovative bioanalytical technologies. Protea's proprietary technology, LAESI® (Laser Ablation Electrospray Ionization), is used with mass spectrometry to identify large numbers of distinct molecules from a single analysis of tissues, cells, fluids, agricultural specimens and other sample types. Using proprietary software (ProteaPlot™), the location of each distinct molecule in a respective sample can be displayed, enabling direct molecular imaging. The LAESI DP-1000, an integrated system that combines LAESI and ProteaPlot, is marketed to a wide array of researchers for numerous applications. Protea maintains its own laboratory facility where it performs services using LAESI and complementary technologies for a wide array of customers to support preclinical pharmaceutical R&D, biomarker discovery and other applications. Protea also collaborates with researchers to apply its technologies and expertise to generate new discoveries and intellectual property.

Protea and LAESI are registered trademarks of Protea Biosciences Group, Inc.

Forward-Looking Statements

This press release may contain certain statements relating to future results. These statements are not historical facts, but instead represent only the company's belief regarding future events, many of which, by their nature, are inherently uncertain and outside of the company's control. It is possible that the company's actual results and financial condition may differ, possibly materially, from the anticipated results and financial condition indicated in these forward-looking statements. Further, information concerning the company and its business, including factors that potentially could materially affect the company's financial results, are contained in the company's filings with the Securities and Exchange Commission. All forward-looking statements included in this press release are made only as of the date of this press release, and we do not undertake any obligation to publicly update or correct any forward-looking statements to reflect events or circumstances that subsequently occur or of which we hereafter become aware.

Images to media release



Protea has announced a collaboration to characterize InSphero's 3D microtissues, such as 3D InSight™ Human Pancreatic Microislets, pictured here.

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