Harvard’s Wyss Institute and Sony DADC Announce Collaboration on Organs-on-Chips

The Associated Press

BOSTON--(BUSINESS WIRE)--Mar 18, 2013--Today the Wyss Institute for Biologically Inspired Engineering at Harvard University and Sony DADC announced a collaboration that will harness Sony DADC’s global manufacturing expertise to further advance the Institute’s Organs-on-Chips technologies.

Human Organs-on-Chips are composed of a clear, flexible polymer about the size of a computer memory stick, and contain hollow microfluidic channels lined by living human cells – allowing researchers to recapitulate the physiological and mechanical functions of the organs, and to observe what happens in real time. The goal is to provide more predictive and useful measures of the efficacy and safety of new drugs in humans – and at a fraction of the time and costs associated with traditional animal testing.

“We are excited to apply Sony DADC’s deep manufacturing expertise to confront one of the major challenges in the life sciences by helping to accelerate the translation of the Wyss Institute’s Organ-on-Chips from the benchtop to the marketplace,” said Christoph Mauracher, Senior Vice President of the BioSciences division of Sony DADC. “The Organs-on-Chips have the potential to revolutionize testing of drugs, chemicals, toxins and cosmetics.” This collaboration builds on the momentum the Wyss Institute team has gained recently on its Organs-on-Chips research program. With support from Defense Advanced Research Projects Agency (DARPA)*, National Institutes of Health (NIH), Food and Drug Administration (FDA), and pharmaceutical partners, more than ten Organs-on-Chips are currently under development at the Wyss Institute, including a lung, heart, liver, kidney, bone marrow, and gut-on-a-chip; there is also a major effort to integrate these organ chips into “human body on-chips” that mimic whole body physiology.

In February, Wyss Founding Director Don Ingber, M.D., Ph.D., who leads the Organs-on-Chips research program, received the prestigious 3Rs Prize from the UK’s National Centre for the Replacement, Refinement and Reduction of Animals in Research for the lung-on-a-chip. This month, the Society of Toxicology awarded him the Leading Edge in Basic Science Award for his “seminal scientific contributions and advances to understanding fundamental mechanisms of toxicity.” “Our work with Sony DADC is a wonderful example of the Wyss Institute model in action,” said Ingber. “We collaborate with industry to help de-risk the technologies we develop, both technically and commercially, and therefore expedite their translation into real world applications.” *Part of this research was sponsored by the U.S. Army Research Office (ARO) and DARPA; the views and conclusions contained in this document are those of the authors and should not be interpreted as representing the official policies, either expressed or implied, of ARO, DARPA or the U.S. Government.

About Wyss Institute for Biologically Inspired Engineering
The Wyss Institute for Biologically Inspired Engineering at Harvard University uses Nature’s design principles to develop bioinspired materials and devices that will transform medicine and create a more sustainable world. Working as an alliance among Harvard’s Schools of Medicine, Engineering, and Arts & Sciences, and in partnership with Beth Israel Deaconess Medical Center, Brigham and Women’s Hospital, Boston Children’s Hospital, Dana Farber Cancer Institute, Massachusetts General Hospital, the University of Massachusetts Medical School, Spaulding Rehabilitation Hospital, Boston University and Tufts University, the Institute crosses disciplinary and institutional barriers to engage in high-risk research that leads to transformative technological breakthroughs. By emulating Nature’s principles, Wyss researchers are developing innovative new engineering solutions for healthcare, energy, architecture, robotics, and manufacturing. These technologies are translated into commercial products and therapies through collaborations with clinical investigators, corporate alliances, and new start-ups. The Wyss Institute recently won the prestigious World Technology Network award for innovation in biotechnology. For more information please visit http://wyss.harvard.edu.

About Sony DADC
Sony DADC is a leading disc and digital service provider for the entertainment, education and information industries, offering world-class digital and physical supply chain solutions and software services. Building on the company’s experience in high-precision manufacturing, its mass production capability and supply chain expertise, Sony DADC’s BioSciences division partners with Life Sciences, Medical Technologies and Diagnostics companies enabling the industrial manufacturing of smart consumables. Sony DADC’s global set-up comprises production sites, distribution hubs, digital & service facilities in 19 countries worldwide, including Japan, the US and Europe. For more information please visit www.sonydadc.com.

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