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Harvard, Sony collaborate for Organs-on-Chips

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Singapore: Wyss Institute for Biologically Inspired Engineering at Harvard University has collaborated with Sony DADC, disc and digital service provider, for utilizing its 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 Dr Christoph Mauracher, senior VP, BioSciences division, 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.