## S. Takeuchi LAB.

## [Biohybrid System]

Department of Mechanical and Biofunctional Systems

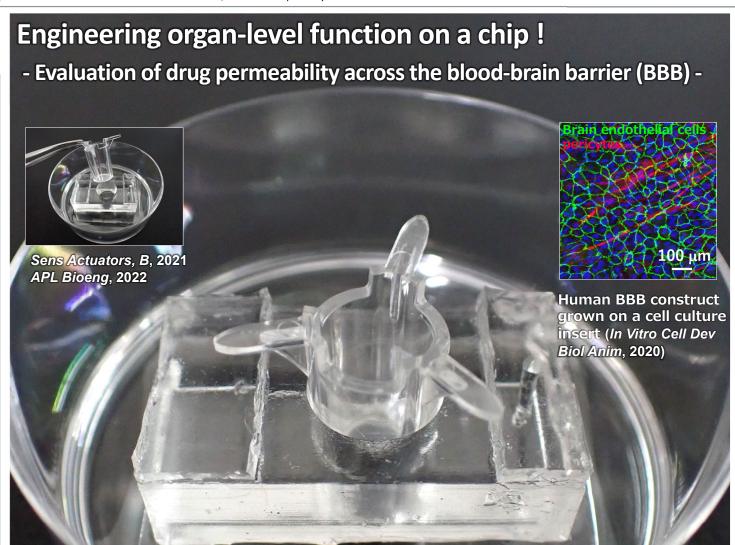


MEMS/Biotechnology/Tissue Engineering

Graduate School of Information Science and Technology, Mechano-Informatics

Graduate School of Arts and Sciences, Multidisciplinary Sciences

http://www.hybrid.t.u-tokyo.ac.jp/



"Organ-on-a-chip is an interdisciplinary technology that enables us to replicate the tissue microarchitecture and functions of living organs on a microfluidic chip. Currently, our group developed a simple and easy-to-handle microfluidic device incorporating a three-dimensional cellular construct of human BBB to estimate the drug transfer to the brain. As compared to the conventional 2D culture method, our device can achieve such complex *in vivo*-like tissue microenvironment involving fluid shear stress. BBB chip is expected to be a promising drug discovery tool with more physiological accuracy.