



TARA

Life Science Center for Survival Dynamics
Tsukuba Advanced Research Alliance

TARA Seminar

16:00~17:00, Mon. Aug. 27th, 2018

Seminar room, Building A, TARA Center



Dr. Peter Loskill

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**Assistant Professor
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Merging high-content and higher-throughput screening: Microphysiological Organ-on-a- Chip systems integrating human retinal, cardiac and adipose tissue

Drug discovery and development to date has relied on animal models, which are useful, but fail to resemble human physiology. The discovery of human iPS cells has led to the emergence of a new paradigm of drug screening using patient- and disease-specific tissue-models. By combining hiPSC technology with microfluidic devices tailored to create microphysiological environments, organ-on-a-chip (OoC) can be generated, which combine human genetic background, *in vivo*-like structure, physiological functionality, and vasculature-like perfusion. Using microfabrication techniques, we have developed multiple OoCs that incorporate complex human 3D (retinal, cardiac, adipose, pancreatic) tissues, and keep them viable and functional over multiple weeks.

The seminar will be given in English.

Organizer; Prof. Hiromi Yanagisawa <hkyanagisawa @tara.tsukuba.ac.jp>

University of Tsukuba

