



3D3C Organs-on-a-Chip Training Course

Date: April 18 & 19, 2019

Location: 3D Cell Culture Core (3D3C) Facility, BRK2087, Birck Nanotechnology Center, Purdue University

Course Fee: \$350 per person

Who should attend:

Anybody who wants to learn about the basic knowledge and techniques of organs-on-a-chip

Activities: Lecture, Discussions, Class-room Exercises, Demonstrations, Hands-on Training

Day One	AM	<p>Lecture (2h): Organs-on-a-chip</p> <p>Demonstration and Hands-On Practical – Part I (1.5h)</p> <ul style="list-style-type: none"> • Set up and run of microfluidic system for cell culture; observation of cells on different materials used for the fabrication of 3D cell culture platforms
	PM	<p>Exercise: i. Calculation of fluid speeds in microfluidic platforms (1h)</p> <p>ii. Design of a glandular system with the OChip toolbox (1h)</p> <p>iii. Origami for organs-on-a-chip (OOrigami) (0.5 h)</p> <p>Q & A (0.5h)</p>
Day Two	AM	<p>Q & A (0.5h)</p> <p>Exercise: i. Importance of culture geometry – flat, curved, angled surface (1 h)</p> <p>ii. Building a stroma with the OChip toolbox (1h)</p> <p>Visit: Micro-machining and 3D printer (1h)</p>
	PM	<p>Demonstration and Hands-On Practical – Part II (1.5h)</p> <ul style="list-style-type: none"> • Impact of chemicals on cells cultured in a gradient-on-a-chip microfluidic system <p>Exercise: i. Building a liver with the OChip toolbox (1h)</p> <p>ii. Origami for organs-on-a-chip (OOrigami) (0.5 h)</p> <p>Q & A and Conclusion (1h)</p>

Prerequisites: Purdue REM biosafety training and blood borne pathogen training; sufficient knowledge in basic cell culture techniques or 3D3C Cell Culture Basics training workshop

Class Size: Six participants (supervised by two trainers)

Contact for question and registration: Dr. Tim Kwok, Facility Manager, 3D Cell Culture Core (3D3C) Facility (kwokt@purdue.edu, 765-494-6697)

Registration deadline: March 29 2019