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Bogazici-BME/Lifesci & TETAM & Inovita & ISEK Ortak Semineri

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Human Organ-on-a-Chip

Hüseyin Avcı

Assistant Professor, Eskisehir Osmangazi University

28 Kasım, 2017 (Salı); 13.00 – 14.00

*Biyomedikal Mühendisliği Enstitüsü, TETAM 3. Kat,
Boğaziçi Üniversitesi Kandilli Kampüsü, İstanbul*

About the Seminar:

Microfluidic Biosensors for Future of Drug Development and Study of Disease: Organ-on-a-chip systems are miniaturized microfluidic 3D human tissue and organ models designed to recapitulate the important biological and physiological parameters of their in vivo counterparts. They have recently emerged as a viable platform for personalized medicine and drug screening. These in vitro models, featuring biomimetic compositions, architectures, and functions, are expected to replace the conventional planar, static cell cultures and bridge the gap between the currently used preclinical animal models and the human body. It is strongly believed that these versatile and robust platforms that are capable of automated and continual detection of soluble biomarkers will find widespread use for long-term monitoring of human organoids during drug toxicity studies or efficacy assessments of in vitro platforms.

About the Speaker

Dr. Avci received his master's and PhD degree in 2010 and 2013, respectively, from Fiber and Polymer Science at NC State University. Throughout his graduate career at NC State University, he has studied on a special interest in the field of antimicrobial materials and then developed a cost effective, 'green' and eco-friendly bath media to produce of ultra-high performance filaments for the biomedical applications. Following his graduation from NC State, he worked as a Post-Doctorate Research Associate on different projects that span unique amorphous and crystalline structure and performance of different thermoplastic polymers and nano-hybrid filtration for improving air quality in passenger aircrafts for The Boeing Company at Istanbul Technical University. Later he has joined the department of Metallurgical and Materials Engineering at Eskisehir Osmangazi University as an Assistant Professor since September 2014. During that time, he also worked on textile techniques to develop tissue scaffolds. He has a strong background in textile production techniques. He

expanded his background into other applications including biosensor-integrated organ-on-a-chip platform for automated and continual analyte monitoring as a research scientist at Harvard Medical School, Harvard-MIT Division of Health Sciences and Technology and Brigham and Women's Hospital. During that time, his experimental study has been proven successfully and the results as a part of the articles have been published in high-impact journals.

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Yaşam Bilimleri ve Teknolojileri İstanbul İşbirliği Platformu Projesi (İnovita),
'İstanbul Kalkınma Ajansı Bilgi Odaklı Ekonomik Kalkınma Mali Destek Programı' kapsamında
İstanbul Kalkınma Ajansı (İSTKA) tarafından desteklenerek kurulmuştur.

Boğaziçi Üniversitesi (LifeSci) Yaşam Bilimleri ve Teknolojileri Uygulama ve Araştırma Merkezi,
T.C. Kalkınma Bakanlığı desteği ile kurulmakta olan bir mükemmeliyet merkezidir.

İSEK (İstanbul Sağlık Endüstrisi Kümelenmesi), Teknopark İstanbul koordinasyonunda
İstanbul Bölgesinde sağlık alanında aktif üniversite araştırma merkezlerini, STK'ları
kamu kurumlarını ve İSO destekli olarak da tüm üretici ve ArGe şirketlerini
biraraya getirmeyi hedefleyen bir kümelenme birlikteliğidir.

Bu seminerlerin kapsamı ile ilgili tüm sorumluluk, yalnızca konuşmacılara ve katılımcılara ait olup,
İSTKA, Kalkınma Bakanlığı ya da Bilim, Sanayi ve Teknoloji Bakanlığı'nın görüşlerini yansıtmamaktadır.
