



2nd INTERNATIONAL CANCER AND ION CHANNELS CONGRESS

September 22 – 24, 2019 Wyndham Grand Ozdilek Izmir / Turkey

“Ion Channels, Cancer Metabolism, and Translation To Therapy”

Pre-congress Course: LAB-ON-A-CHIP (Held in conjunction with IONCC2019)

COURSE CHAIRS:

Prof. Dr. Yasemin BASBINAR (Dokuz Eylül University)

Assist. Prof. Dr. Hüseyin ÜVET (Yıldız Technical University)

Gizem ÇALIBAŞI KOÇAL, PhD (Dokuz Eylül University, MIT Koch Institute)

SCIENTIFIC SECRETARY: Feriha TOKSOZ, PhD

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SPEAKERS*

Assoc.Prof.Dr.Ahu ARSLAN YILDIZ (Izmir Institute of Technology)

Assoc Prof. Dr. Sinan Güven (Dokuz Eylul University, İzmir Biomedicine and Genome Center)

Gizem ÇALIBAŞI KOÇAL, PhD (Dokuz Eylül University, MIT Koch Institute)

Anıl Demirçalı (Yıldız Teknik Üniversitesi)

Yalın KILIÇ, PhD (SolarBiotec Inc.)

Prof.Dr.Selçuk KILINÇ (Koek Biotech) (Ege University)

Prof.Dr.Devrim PESEN OKVUR (Initio Inc.) (Izmir Institute of Technology)

Assist.Prof.Dr.Hüseyin ÜVET (Yıldız Technical University)

Prof.Dr. Özlem YEŞİL ÇELİKTAŞ (Ege University)

**Names are written in alphabetical order.*



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PROGRAMME

- Moderator:** Prof. Dr. Yasemin BASBINAR
- 09:00 – 09:45** An Introduction to LOC Devices
Assist. Prof. Dr. Hüseyin ÜVET (Yildiz Technical University)
- 09:45- 10:30** Microscale in vitro cancer models for tumor biology
Gizem ÇALIBAŞI KOÇAL, PhD (Dokuz Eylul University, MIT Koch Institute)
- 10:30 - 11:00** **Coffee break**
- Moderator:** Asst. Prof. Dr. Hüseyin ÜVET
- 11:00 - 11:45** Disease modeling in microfluidic organ-on-chips for preclinical studies
Prof. Dr. Özlem YEŞİL ÇELİKTAŞ, PhD (Ege University)
- 11:45 - 12:30** Lab-on-a-chip devices for molecular diagnosis
Assoc. Prof. Dr. Ahu ARSLAN YILDIZ (Izmir Institute of Technology)
- 12:30 – 13:30** **Lunch**
- Moderator:** Prof. Dr. Özlem YEŞİL ÇELİKTAŞ
- 13:30 - 14:15** Digital Holography in Cancer Research
Anıl Demirçalı (Yıldız Teknik Üniversitesi)
- Moderator:** Anıl Demirçalı
- 14:15 – 15:00** Translation to clinic: BioMEMS Applications in Microfluidics
Yalın KILIÇ, PhD (SolarBiotec Inc.)
- 15:00 – 15:30** **Coffee break**
- 15:30- 16:15** Translation to clinic: Microfluidic sperm sorting tips
Prof. Dr. Selçuk KILINÇ (Koek Biotech) (Ege University)
- 16:15- 17:00** Translation to clinic: Lab-on-a-chip for revealing cancer and advancing drug discovery
Prof. Dr. Devrim PESEN OKVUR (Initio Inc.) (Izmir Institute of Technology)
- 17:00- 17:45** Microfluidic systems for stem cell and organoid culture
Assoc. Prof. Dr. Sinan GÜVEN (Dokuz Eylul University, IBG Center)



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COURSE DATE: 22 September 2019 (Sunday)

APPLICATION DEADLINE: 20 September 2019

DESCRIPTION

Microtechnology offers small sample volume, easy manipulation of chemical and biological substances, high sensitivity, fast processing time and low-cost manufacturing capabilities which is not possible by using traditional laboratory-based systems. This is called lab-on-a-chip technology. Lab-on-a-chip devices are extensively explored and even validated for use in the detection, diagnosis, prognosis, drug screening and treatment of diseases with the improved understanding in life sciences as well as the achieved developments in microfluidics. LOC devices are promising platforms for applications in cancer research. This course will focus to the concepts and applications of lab-on-chip based approaches have been used in biological and medical sciences for a variety of applications.

TOPICS

- Introduction and overview of LOC and BioMEMS
- Materials, design and fabrication
- Disease models
- Cancer models for tumor biology
- Molecular diagnosis
- Digital Holography
- Drug discovery
- Translation to clinic- Application and products
- Challenges in product development
- Commercialization issues

TARGET AUDIENCE:

Graduate students studying in biological and medical sciences, and researchers conducting multidisciplinary research in these fields, R&D personnel working in government and private companies can attend the meeting.

SUPPORTERS

This course was supported by the TUBITAK 1003 Primary Subject R&D Funding Program (performed by 116E866 project numbered which is sub-project of 15062016 project numbered of large scale Project)