

Inaugural Course on Molecular Toxicology

Organised by the EUROTOX - MOLECULAR TOXICOLOGY SPECIALTY SECTION

26-29 June 2019

Ege University, Izmir-TURKEY



EUROTOX-Molecular Toxicology Specialty Section (<http://www.eurotox.com/molecular-toxicology/>) organizes ***The Inaugural Course on Molecular Toxicology*** between 26 and 29 June 2019 at Ege University, Izmir-TURKEY.

The course has been recognised as an ERT Course on the core topic B4: Molecular and Cellular Toxicology (<http://www.eurotox.com/ert/>).

The course objectives, programme and the registration information can be seen in the following page.

The number of attendees will be limited to 40.

For the registration, please fill in the form (page 5) and return to ege.arzuk@ege.edu.tr with the bank receipt of the registration fee and any additional payments of your choice (*Group Dinner* and/or *Daily Tour to Ephesus*). Registration will be completed after the e-mail confirmation from the Organizing Committee.

Organizing Committee

The course is organized by the *EUROTOX-Molecular Toxicology Specialty Section*.

- Hilmi Orhan *chair*
- Angela Mally *secretary*
- Mathieu Vinken
- Atilla Akdemir
- Sinem Ilgın
- Ege Arzuk
- Sibel Özden
- Eren Özçağlı
- Hande Sipahi
- Suna Sabuncuoğlu
- Erdem Coşkun

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Course Objectives

Molecular toxicology is the discipline that particularly emerged in recent years as a result of the paradigm shift currently going on in the field of toxicology, which involves transitioning from classical toxicology, focusing on apical endpoints of toxicity in animal models, to more predictive in vitro toxicology, relying on information on toxic mechanisms. Driven by these recent developments, the *Molecular Toxicology Specialty Section* within EUROTOX aimed to establish a comprehensive modular education and training in this field. In this inaugural course, a series of state-of-the-art lectures related to 4 themes will be provided, namely; *General principles, Receptor-mediated toxic outcomes, Targets, cellular responses and interventions, and Approaches to toxicity prediction*. Each lecture within these themes will elaborate on both the basics and progress regarding specific topics pertinent to the molecular toxicology area. This 2.5 days' course will be assessed by a multiple-choice exam. This first course is intended to be followed by complementary other molecular toxicology courses in time, and it has been recognised as a *European Registered Toxicologist (ERT) Course* on the core topic B4: Molecular and cellular toxicology. This course is intended for (post)doctoral students and early-stage scientists from industry, academia or regulatory agencies who recently became active in the field of toxicology. Applicants should ideally have a background in toxicology, pharmaceutical sciences, biology, chemistry, (bio)medical sciences, veterinary sciences or equivalent.

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COURSE PROGRAMME

DAY 1. JUNE 26TH, Wednesday

| | | |
|--------------------|--|--------------------------|
| 08:30-09:00 | Opening and Introduction | <i>Hilmi Orhan</i> |
| 09:00-12:30 | GENERAL PRINCIPLES | |
| 09:00-09:45 | Structure-activity and dose-response relationships | <i>Hilmi Orhan</i> |
| 09:45-10:30 | Biotransformation reactions | <i>Miroslav Machala</i> |
| 10:30-11:00 | Coffee break | |
| 11:00-11:45 | Membrane lipid structure, cell surface receptors and cell-to-cell communication | <i>Miroslav Machala</i> |
| 11:45-12:45 | LUNCH | |
| 12:45-17:30 | RECEPTOR-MEDIATED TOXIC OUTCOMES | |
| 12:45-13:30 | Xenoreceptors: PARP and CAR | <i>Hartmut Jaeschke</i> |
| 13:30-14:15 | Xenoreceptors: PXR, KEAP and Nrf-2 | <i>Hartmut Jaeschke</i> |
| 14:15-15:00 | AhR receptors | <i>Jan Vondracek</i> |
| 15:00-15:30 | Coffee break | |
| 15:30-16:15 | THC receptors and novel mechanisms | <i>Felix Carvalho</i> |
| 16:15-17:30 | Hormone receptor-mediated toxic outcomes | <i>Hande Güreş Orhan</i> |

DAY 2. JUNE 27TH, Thursday

| | | |
|--------------------|--|------------------------|
| 09:00-17:45 | TARGETS, CELLULAR RESPONSES AND INTERVENTIONS | |
| 09:00-09:45 | Fingerprints of carcinogens in tumor genomes | <i>Mehmet Öztürk</i> |
| 09:45-10:30 | Physiological and pathological functions of microRNAs | <i>Brian Chorley</i> |
| 10:30-11:00 | Coffee break | |
| 11:00-11:45 | Modeling genetic susceptibility to disease | <i>Sinan Süzen</i> |
| 11:45-12:30 | Cellular responses to DNA damage | <i>Bensu Karahalil</i> |
| 12:30-13:30 | LUNCH | |
| 13:30-14:15 | Protein kinases | <i>tba</i> |
| 14:15-15:00 | Calcium homeostasis and proteases | <i>Metiner Tosun</i> |
| 15:00-15:45 | Protein modification and cellular responses | <i>Angela Mally</i> |
| 15:45-16:15 | Coffee break | |
| 16:15-17:00 | Organelle-mediated toxic pathways | <i>Hilmi Orhan</i> |
| 17:00-17:45 | Peptide and protein nanomaterials conjugates for biomedical interventions | <i>Candan Tamerler</i> |

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DAY 3. JUNE 28TH, Friday

09:00-12:30 APPROACHES TO TOXICITY PREDICTION

09:00-09:45 Adverse outcome pathways: focus on mitotoxicity *Mathieu Vinken*

09:45-10:30 Liver-based *in vitro* models: tools for molecular toxicology research *Mathieu Vinken*

10:30-11:15 Coffee break

11:15-11:45 Molecular modelling studies in toxicology *Atila Akdemir*

11:45-12:30 Break

12:30-14:00 LUNCH

14:00-16:00 Written exam (multiple choice)

20:00- Group Dinner

DAY 4. JUNE 29TH, Saturday

09:00-16:00 Daily tour to Ephesus

40 min lecture + 5 min Q&A

REGISTRATION & ACCOMMODATION

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| | Registration fee* |
|------------------------|-------------------|
| Academia or government | 150 EUR |
| Industry | 200 EUR |

*Registration fee includes attending all lectures, digital and printed course material, lunches and coffee breaks.

The number of attendees will be limited to 40 in order to provide the course efficiency. As the registrations will be accepted on *first come first serve* basis, quick action is important.

Additional expenses of choice

Group dinner (28 June 2019) 20 EUR

Daily tour to Ephesus (29 June 2019) 30 EUR

ACCOMMODATION

University Guesthouse, 10 min. walk to the venue.

Daily rate is 20 EUR/person in single room (inc. breakfast).

Booking can be done directly (+90 232 3112133) or via organization (ege.arzuk@ege.edu.tr)

Please fill in the below form and return to ege.arzuk@ege.edu.tr with the bank receipt of the registration fee plus any additional payments (Group Dinner and/or Daily Tour to Ephesus).

Account name: Ege Arzuk IBAN: TR090003200000000069277353 SWIFT: TEBUTRIS754

Name-surname

Registration type: Academia Industry

Arrival date:

Departure date:

Room preference: Single Double

Group dinner: Yes No

Daily tour to Ephesus: Yes No