



Federation of European Toxicologists & European Societies of Toxicology

The 2nd Course on Molecular Toxicology

22-24 May 2024

Ege University - İzmir, Türkiye

EUROTOX - Molecular Toxicology Specialty Section (<http://www.eurotox.com/molecular-toxicology/>) is organizing *The 2nd Course on Molecular Toxicology* in collaboration with Ege University Faculty of Pharmacy and the Turkish Society of Toxicology between May 22 and May 24, 2024.

Why should you attend this course?

Molecular toxicology is the discipline that particularly emerged in recent years due to the paradigm shift currently underway in the field of toxicology. This shift involves transitioning from classical toxicology, focusing on apical endpoints of toxicity in animal models, to more predictive in vitro toxicology, relying on information on toxicity 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 2nd course, a series of state-of-the-art lectures related to 4 themes will be provided, namely, General principles, Receptor-mediated toxic outcomes, Targets and cellular responses, 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 course is the 2nd of its kind and has been recognised as an ERT Course on the core topic [B4: Molecular and Cellular Toxicology](#).

Who should attend this course?

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.

How can I register?

To register, please complete the registration form (4th page) and email it to ecz.kemal.atmaca@gmail.com along 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 email confirmation from the Organizing Committee. **The number of attendees will be limited to 40.**

For more information

More information regarding the course objectives, programme and the registration form can be downloaded from <http://www.eurotox.com/2nd-course-on-molecular-toxicology/>

Prof. Dr. Angela Mally, Ph.D., E.R.T
Chair of the Molecular Toxicology Specialty Section

Prof. Dr. Hilmi Orhan, Ph.D., E.R.T.
Chair of the Local Organizing Committee



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The 2nd Course on Molecular Toxicology

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DAY 1. May 22nd, Wednesday

08:30-09:00	Opening and Introduction	Hilmi Orhan
09:00-12:30	RECEPTOR-MEDIATED TOXIC OUTCOMES	
09:00-09:45	Xenoreceptors: PARP, CAR, PXR, KEAP and Nrf-2	Hartmut Jaeschke
09:45-10:30	Modes of Cell Death	Hartmut Jaeschke
10:30-11:00	Coffee break	
11:00-11:45	AhR Receptors	Jan Vondracek
11:45-12:30	Hormone Receptor-Mediated Toxic Outcomes	Bayram Yilmaz
12:30-13:30	LUNCH	
13:30-17:30	APPROACHES TO TOXICITY PREDICTION	
13:30-14:45	Adverse Outcome Pathways	Mathieu Vinken
14:45-15:30	Liver-based <i>In Vitro</i> Models: Tools for Molecular Toxicology Research	Mathieu Vinken
15:30-16:00	Coffee break	
16:00-16:45	New Approach Methodologies (NAM)-based Testing	Thomas Hartung
16:45-17:30	Novel Computational Approaches to Predict Drug Metabolism and Toxicity	Atilla Akdemir
17:30-18:15	Zebrafish as an <i>In Vitro</i> Toxicity Testing Model	Gülçin Çakan Doğan

DAY 2. May 23rd, Thursday

09:00-11:45	GENERAL PRINCIPLES	
09:00-09:45	Structure-Activity and Dose-Response Relationships	Edward Calabrese
09:45-10:30	The Continuing Role of Biotransformation in Toxicology	Peter Guengerich
10:30-11:00	Coffee break	
11:00-11:45	Chemical and Biological Properties of Reactive Intermediates	Peter Guengerich
11:45-12:30	Membrane Lipid Structure and Cell Signalling.....	Suna Sabuncuoğlu
12:30-13:30	LUNCH	
13:30-17:00	TARGETS AND CELLULAR RESPONSES-1	
13:30-14:15	Carcinogenesis and Risk Assessment	Edward Calabrese
14:15-15:00	Physiological and Toxicological Functions of MicroRNAs	Timothy Gant
15:00-15:30	Coffee break	
15:30-16:15	Risk Factors Involved Interindividual Susceptibility and Genetic Polymorphism	Sinan Sützen
16:15-17:00	Cellular Responses to DNA Damage and Genotoxicity Testing	Marcus Cooke

DAY 3. May 24th, Friday

09:00-12:30	TARGETS AND CELLULAR RESPONSES-2	
09:00-09:45	Mitochondrial Dysfunction Induced by Chemicals	Hilmi Orhan
09:45-10:30	ER Stress and Consequences	Jan Vondracek
10:30-11:00	Coffee break	
11:00-11:45	Ion Channels and Ion Imbalances in Adverse Outcomes.....	Metiner Tosun
11:45-12:30	Protein Modification and Cellular Responses	Angela Mally
12:30-14:00	LUNCH	
14:00-16:30	Multiple choice exam	
20:00-	Group Dinner	

May 25th, Saturday

09:00-16:00	Excursion	
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