ISSX 9TH INTERNATIONAL MEETING
ISTANBUL 2010

September 4-8, İstanbul Convention and Exhibition Centre

What is ISSX ?

The International Society for the Study of Xenobiotics (ISSX) is the premier international scientific organization for researchers interested in the study of xenobiotics (drugs, agricultural and industrial chemicals, environmental contaminants and other exogenous substances). The society serves to promote scientific development and to foster communications among researchers. ISSX hosts an International Meeting in every three years.

This meeting aims

to bring together many internationally renowned scientists and young scientists from academia and industry, working on drug/xenobiotic research in diverse fields including basic and clinical pharmacology and therapeutics, toxicology, oncology, endocrinology, physiology, biochemistry, medicinal chemistry, drug discovery and development, molecular and structural biology and genetics, and other related areas .

All accepted abstracts will be published in a special supplemental issue of *Drug Metabolism Reviews*.

Forum

Istanbul ISSX Meeting Includes

- **Short courses**
- **Plenary lectures**
- **Symposia**
- **Poster presentations**
- **Short oral presentations selected from abstracts**
- **Job placement service (employment opportunities)**
- **Presentations of society awards**
- **Industry-supported symposia**
- **Competition for best poster presentations by predoctoral and postdoctoral researchers**
- **Student networking**
- **Commercial exhibitions**
- **Society banquet**
- **Social programme**

Meeting Organizing Chair

Prof. Dr. Emel Arinç
Turkish Academy of Sciences
Middle East Technical University
Ankara, Turkey

Meeting Organizing Committee

Arinç, Emel (Turkey)
Beaune, Phillipe H. (France)
Hodgson, Ernest (USA)
Ingelman-Sundberg, Magnus (Sweden)
Johnson, Eric F. (USA)
Kaminsky, Laurence S. (USA)
Kroemer, Heyo K. (Germany)
Meyer, Urs A. (Switzerland)
Prough, Russell A. (USA)
Serabjit-Singh, Cosette J. (USA)
Şen, Alaattin (Turkey)
Testai, Emanuela (Italy)

International Scientific Advisory Board

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Uetrecht, Jack (Canada)
Vereczkey, Lazlo (Hungary)
Vermeulen Nico P.E. (Netherlands)
Yost, Gerald S. (USA)

Scientific Sessions

Prediction and Mechanisms of Adverse Drug Reactions
Chair: Jack Uetrecht (Canada)

Structure and Function of Drug Metabolizing Enzymes & Transporters
Chair: Eric Johnson (USA)

Gene Regulation of Drug Metabolizing Enzymes by Nuclear Receptors
Chair: Patrick Maurel (France)

Clinical Pharmacology of Drug Transport: From Bench to Bedside
Chair: Heyo Kroemer (Germany)

Novel Extrahepatic Cytochromes P450 with Endogenous and Exogenous Functions
Chair/Co-chair: Garold S. Yost (USA)/Jorge Capdevila (USA)

Pharmacogenomics of Cancer Treatment - Emerging Era of Translational Medicine
Chair/Co-chair: Emel Arinç (Turkey)/Matthias Schwab (Germany)

Nutrition and Cancer Prevention
Chair/Co-chair: Young-Joon Surh (South Korea)/Ömer Küçük (USA)

Pharmacoepigenetic and MicroRNA-dependent Control of Drug Metabolism and Action
Chair/Co-chair: Magnus Ingelman-Sundberg (Sweden)/Tsuyoshi Yokoi (Japan)

Oxidative Stress, DNA Damage, Repair and Biological Consequences
Chair: Miral Dizdaroglu (USA)

Biotechnology: Bioengineering of New Enzymes
Chair: Elizabeth Gilliam (Australia)

Toxicogenomics and Xenobiotic/Drug Safety: Present Status & Perspectives
Chair/Co-chair Nico P.E. Vermeulen (Netherlands)/Laura Suter-Dick (Switzerland)

Contemporary Issues in Drug Research and Therapeutics
Chair/Co-chair Anthony Y. H. Lu (USA)/Alexander I. Archakov (Russia)

Environmental Toxicology and Health
Chair/Co-chair: Ernest Hodgson (USA)/Emanuela Testai (Italy)

The abstract submission date is May 14, 2010

Registration fee for member students and post-doctoral fellows: only 175 $

Further info: www.issx.org

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Vermeulen Nico P.E. (Netherlands)
Yost, Gerald S. (USA)

Short Courses

1: Current Application of Pharmacokinetic-Pharmacodynamic Modeling During Drug Discovery & Development
Organizer: Bill J. Smith, *Development Strategies Group, Pharmacokinetics, Dynamics&Metabolism, Pfizer, La Jolla, USA*

2: Stem Cell Issues: Basic Science and Practical Approaches
Organizer : Emin Kansu, *Dept. of Oncology, School of Medicine, Hacettepe University, Ankara, Turkey*

3: Oxidative DNA Damage: Mechanisms and Measurement
Organizer : Miral Dizdaroglu, *National Institute of Standards and Technology, Chem. Sci. and Tech. Lab, Gaithersburg, MD, USA*

4: Hands-On Workshop on Predicting Oral Drug Bioavailability and Its Interindividual Variability: Interplay between Formulation, Drug Permeability and Metabolism
Organizer: Amin Rostami, *School of Pharmacy and Pharmaceutical Sciences, University of Manchester, UK*

Keynote Lectures

Drug Transporters: Roles in New Drug Discovery and Development
Yuichi Sugiyama, *Pharmaceutical Sciences, Univ. of Tokyo, Japan*

Transporter Mediated Toxicity: The role of Mitochodrial and Plasma Membrane Transporters
Jashvant Unadkat, *Dept. of Pharmaceutics, Univ. of Washington, Seattle, WA, USA*

The abstract submission date May 14, 2010

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PLENARY SESSIONS AND SYMPOSIA

Prediction and Mechanisms of Adverse Drug Reactions
Organizer : Jack Uetrecht (Canada)

Use of Animal Models for the Study of ADRs
Jack Uetrecht, *Canada Research Chair in Adverse Drug Reactions, Faculty of Pharmacy, Univ. of Toronto, Canada*

Understanding Idiosyncratic Hepatotoxicity: From Man to Mouse to Computer
Paul B. Watkins, *University of North Carolina Institute for Drug Safety Sciences, Chapell Hill, NC, USA*

Genetic Risk Factors for ADRs
Munir Pirmohamed, *Pharmacogenetics, Centre for Drug Safety Science, Dept. of Pharmacology, Univ. of Liverpool, UK*

ADR Prediction: an Evolving Industry Perspective
Bruce D. Car, *Vice President, Discovery Toxicology, Bristol-Myers Squibb, Princeton, NJ, USA*

Toxicogenomics and Xenobiotic/Drug Safety: Present Status & Perspectives
Organizers : Nico P.E. Vermeulen (Netherlands)/ Laura Suter-Dick (Switzerland)

Strategic Applications of Toxicogenomics in Early Drug Discovery
James L. Stevens, *Senior Research Fellow, Lilly Research Laboratories, IN, USA.*

Toxicogenomics: a Predictive Tool in Toxicology and Drug Deveopment
Laura Suter-Dick, *Investigative Toxicology, Non Clinical Safety, F. Hoffmann-La Roche, Basel, Switzerland.*

Epigenomics - Impact for Drug Safety Sciences
Jonathan G. Moggs, *Novartis Inst. for BioMedical Research, Translational Sciences, Preclinical Safety, Switzerland*

Biomarkers for Adverse Drug Reactions: Proteomics and Metabolomics Strategies
Kevin B. Park, *Dept. of Pharmacology & Therapeutics, University of Liverpool, UK*

Pharmacogenomics of Cancer Treatment-Emerging Era of Translational Medicine
Organizers : Emel Arinç (Turkey)/Matthias Schwab (Germany)

Role of Pharmacogenomics in the Treatment of Breast Cancer
David Flockhart, *Division of Clinical Pharmacology, Indiana Univ. School of Medicine, Indiana, USA*

Pharmacogenetics of Thiopurins in the Treatment of Acute Childhood Leukemia
Matthias A. Schwab, *Dept. of Clinical Pharmacology, Dr Margarete Fischer-Bosch Inst, Stuttgart, Germany*

Mechanisms of Resistance and Clinical Results of Second Generation Tyrosine Kinase Inhibitors in CML Patients Resistant/Intolerant to Imatinib
Tim H. Brümmendorf, *Dept. Hematology and Oncology, Univ. Hospital Aachen, Aachen, Germany*

Pharmacogenomics of Colorectal Cancer Including Prognostic and Predictive Biomarkers
Sabine Tejpar, *Digestive Oncology, Center for Human Genetics, Univ. Hospital Gasthuisberg, Leuven, Belgium*

Novel Extrahepatic P450s with Endogenous and Exogenous Functions
Organizers : Garold S. Yost (USA)/Jorge Capdevila (USA)

Lung P450 Expression, Bioactivation, and Mechanism-Based Inactivation by Glucocorticoids and Mutagens
Gary S. Yost, *Dept. of Pharmacology and Toxicology, Univ. of Utah, Salt Lake City, UT, USA*

Function and Regulation of CYP2S1
Oliver Hankinson, *Dept. of Pathology and Laboratory Medicine, Los Angeles, CA, USA*

The Arachidonic Acid Epoxygenases: Functional Roles and Relevance to the Pathophysiology of Hypertension and Tumor Angiogenesis
Jorge Capdevila, *Dept. of Medicine, Vanderbilt University Medical School, Nashville, TN, USA*

Essential Role of Cytochrome P450s in Vitamin D Signaling
Inge Schuster, *Institute of Pharmaceutical Chemistry, University of Vienna, Vienna, Austria*

Contemporary Issues in Drug Research and Therapeutics
Organizers : Anthony Y. H. Lu (USA)/Alexander I. Archakov (Moscow/Russia)

Safety and Efficacy of Amphiphilic Cyclodextrins for Drug Delivery
A. Atilla Hincal, *IDE Drug Information Consultancy and Education Ltd Co., Ankara, Turkey*

Application of Nanotechnology in Cancer Therapy and Imaging
Dong M. Shin, *Hematology and Medical Oncology, Winship Cancer Inst., Emory Univ., Atlanta, GA, USA*

Nanobiotechnology in Clinical Proteomics
Alexander I. Archakov, *Russian Academy of Sciences, Moskow, Russia*

Pharmacologically Regulated Stem Cell Therapy
C. Anthony Blau, *Inst. for Stem Cell and Regenerative Medicine, Univ. of Washington, Seattle, WA, USA*

Oxidative Stress, DNA Damage, Repair and Biological Consequences
Organizer : Miral Dizdaroglu (USA)

Oxidative DNA Damage, DNA Repair Enzyme NEILI, Polymorphisms and Cancer
Miral Dizdaroglu, *National Inst. of Standards and Technology, Chem. Sci. and Technology Lab, MD, USA*

Oxidative Stress and Antioxidants, Beneficial or Pathological
Bary Halliwell, *Department of Biochemistry, National University of Singapore, Singapore*

Role of Transcription Coupled DNA Repair in Human Disease
Philip Hanawalt, *Department of Biology, Stanford University, Stanford, CA, USA*

DNA Repair of Oxidative Damage: From Mechanisms to Cancer Risk
Eugenia Dogliotti, *Istituto Superiore di Sanita Rome-Italy*

Environmental Toxicology and Health
Organizers : Ernest Hodgson (USA)/Emanuela Testai (Italy)

Metabolic Interactions of Agrochemicals and Human Health
Ernest Hodgson, *Dept. of Environmental and Molecular Toxicology, NCSU, Raleigh, NC, USA*

Human Health Risk Assessment Associated with Cyanotoxin Exposure
Emanuela Testai, *Istituto Superiore di Sanita , Environmental and Primary Prevention Dept., Rome, Italy*

Heavy Metals in the Environment and Human Health
Claudia Miero, *Chemistry Dept., University of Aveiro, Aveiro, Portugal*

Dialkylanilines are Ubiquitous and Potently Toxic and Mutagenic via Multiple Metabolic Pathways
Steven R. Tannenbaum, *Dept. of Biological Engineering and Chemistry, MIT, Cambridge, MA, USA*

Gene Regulation of Drug Metabolizing Enzymes by Nuclear Receptors
Organizer : Patrick Maurel (France)

AhR and Gene Regulation
Yoshiaki Fujii-Kuriyama, *University of Tsukuba, TARA, Tsukuba, Ibaraki, Japan*

Nuclear Receptors and Gene Regulation
David D. Moore, *Baylor College of Medicine, Dept. of Molecular and Cellular Biology, Houston, TX, USA*

CAR and Gene Regulation
Masahiko Negishi, *NIEHS/NIH, Pharmacogenetics Section, Research Triangle Park, NC, USA*

PXR and CAR and the Regulation of Gene Involved in the Metabolism of Anticancer Drugs
Jean-Marc Pascussi, *University of Montpellier 1, INSERM, Montpellier, France*

Structure and Function of Drug Metabolizing Enzymes & Transporters
Organizer : Eric F. Johnson (USA)

Analysis of P450 Structure-Functions Relations in Drug Metabolism Using X-ray Crystallography
Eric F. Johnson, *Dept. of Molecular and Experimental Medicine, Scripps Research Institute, La Jolla, CA, USA*

P450 Structure and Function: Mechanisms of Drug Oxidations
F. Peter Guengerich, *Dept. of Biochemistry, Vanderbilt Univ. School of Medicine, Nashville, TN, USA*

Structural Studies of Cholesterol Metabolizing P450s
Irina Pikuleva, *Dept. of Ophthalmology, Case Western Reserve University, Cleveland, OH, USA*

Structure of P-Glycoprotein
Geoffrey Chang, *Dept. of Molecular Biology, Scripps Research Institute, La Jolla, CA, USA*

Clinical Pharmacology of Drug Transport: From Bench to Bedside
Organizer : Heyo Kroemer (Germany)

Therapeutic Implications of OATP1B1 Polymorphisms
Mikko Niemi, *Dept. of Clinical Pharmacology, Helsinki University, Finland*

Cardiovascular Drug Transport
Heyo K. Kroemer, *Institute of Pharmacology, Ernst Moritz Arndt University, Greifswald, Germany*

Regulation of Drug Transporters in Different Disease States and its Toxicological and Clinical Implications
Jose E. Manautou, *Univ. of Connecticut, School of Pharmacy, Pharmacology and Toxicology, CT, USA*

Quantification of Transporter/Enzyme Protein in Human Tissue by Mass Spectrometry: A New Path to Pharmacoproteomics
Tetsuya Terasaki, *Dept. of Biochemical Pharmacology and Therapeutics, Tohoku Univ., Tohoku, Japan*

Nutrition and Cancer Prevention
Organizers: Young-Joon Surh (South Korea)/ Ömer Küçük (USA)

Xenobiotic Metabolizing Enzymes as Targets for Nutritional Cancer Chemoprevention
Young-Joon Surh, *Lab of Molecular Carcinogenesis & Chemoprevention, Seoul National Univ., S. Korea*

Soy Isoflavones in Prostate Cancer Treatment
Ömer Küçük, *Dept. of Hematology-Oncology, Emory University, Winship Cancer Institute, Atlanta, USA*

Chemopreventive and Chemotherapeutic Effects of Curcumin: Molecular and Clinical Aspects
Marc Diederich, *Foundation for Research on Cancer & Blood Dis. Lab. of Mol. & Cell. Biology of Cancer, Luxembourg*

Tocopherols and Cancer Prevention
Chung S. Yang, *Laboratory for Cancer Research , College of Pharmacy, Rutgers Univ., NJ, USA.*

Pharmacoepigenetic and MicroRNA-Dependent Control of Drug Metabolism and Action
Organizers: Magnus Ingelman-Sundberg (Sweden)/Tsuyoshi Yokoi (Japan)

Pharmacoepigenetics of Drug Pharmacokinetics
Magnus Ingelman-Sundberg, *Dept. of Pharmacology, Pharmacogenetics, Karolinska Inst., Stockholm, Sweden*

MicroRNA Regulation of Drug Metabolizing Cytochromes P450
Miki Nakajima, *Faculty of Pharmaceutical Sciences, Kanazawa Univ., Japan*

Epigenetic Control of Ontogenicity of Cytochrome P450 Expression
Xiao-bo Zhong, *Dept. of Pharmacology & Toxicology, The Univ. of Kansas Medical Center, USA*

Oral Presentation 1: *TBA*
Oral Presentation 2: *TBA*

Biotechnology: Bioengineering of New Enzymes
Organizer : Elizabeth Gilliam (Australia)

Engineering of GSTs for Biocatalysis
Bengt Mannervik, *Dept. of Biochemistry and Organic Chemistry, Uppsala University, Uppsala, Sweden*

Engineering P450s by Rational Design
Luet-Lok Wong, *University of Oxford, Department of Chemistry, Oxford, UK*

Directed Evolution of Xenobiotic-Metabolising Enzymes
Elizabeth Gillam, *School of Biomedical Sciences, University of Queensland, Queensland, Australia*

Optimization of CYP102A1 for Biocatalysis
Vlada Urlacher, *Institute of Technical Biochemsitry, University of Stuttgart, Stuttgart, Germany*