Scientific Program –

11th International Conference of Environmental Mutagens- 11th ICEM

Sunday November 3rd, 2013

2:00- 5:45 h pm Registration and Pre-registered

3:00- 5:30 h pm

EEMS COUNCIL MEETING- ARAUCARIA

4:30- 5:30 h pm

AAEMS COUNCIL MEETING- IGUAÇU III

6:00- 6:45 h pm Opening Ceremony- BALROOM

Announcement of the next ICEM at South Korea

6:45- 7:45 h pm – Opening Plenary Lecture- BALROOM

Chair: Carlos Renato Machado, SBMCTA President, Brazil

The keyrole of DNA damage in cancer, aging and longevity
Speaker: Jan H. Hoeijmakers, Erasmus Medical Center, Rotterdam, The Netherlands

7:45 h pm – Welcome reception drink and Dance Show

Monday November 4th, 2013

PARALLEL LECTURES

8:00 - 8:45 h am

CATARATAS I - Chair: Hiroshi Kasai, JEMS President, Japan-
The xeroderma pigmentosum population in the UK: unexpected phenotypes and relationships to molecular defects.
Speaker: Alan Lehmann, University of Sussex, UK

CATARATAS II - Chair: Guenter Speit, EEMS President, European-
Direct effects of radiation and chemicals on human tissue maintained in Super-SCID mice
Speaker: Taisei Nomura, National Institute of Biomedical Innovation & Osaka University, Osaka, Japan
8:45- 9:30 h am
CATARATAS I - Chair: Mats Ljungman, EMGS President, North America

The Pros and Cons of DNA Repair
Speaker: Leona Samson, MIT, USA

CATARATAS II - Chair: Patricia Ostrosky, ALAMCTA Councilor, Latin America

What causes human cancer? Approaches from chemistry of DNA damage
Speaker: Hiroshi Kasai, University of Occupational & Environmental Health, Japan

9:30- 10:00 h am- COFFEE BREAK

10:00-12:00 h am- PARALLEL SYMPOSIA

CATARATAS I - DNA damage, aging and disease
Chair: Bevin Engelward, MIT, USA

Katharina Schlacher, Sloan-Kettering Institute, NY, USA
The replication protectome suppresses genomic instability
Ben Van Houten, University of Pittsburgh, PA, USA
Watching DNA repair one molecule at a time: UV-DDB stoichiometry, dynamics and implications in xeroderma pigmentosum
Laura Niedernhofer, SCRIPPS Florida, USA
The mechanism by which DNA damage promotes aging
Short Talk: Sylvie Sauvaigo, CEA-Grenoble INAC/LCIB, France
DNA repair enzyme signature using a multiplexed repair assay: characterization of a cohort of 110 healthy individuals.
Short Talk: Elizabeth Snow, University of Tasmania, Tasmania, Australia.
SIRT1 Inhibition Promotes Apoptotic Sensitivity in p53-Mutated Keratinocytes

CATARATAS II - Combining international toxicogenomics data bases for developing novel gene profiles in vitro for predicting genotoxicity and carcinogenicity in vivo – contributions from the US, Europe and Japan
Chair: Jos Kleijnans, Maastricht University, The Netherlands

Jun Kanno, National Institute of Health Sciences, Tokyo, Japan
Progress in Japanese Percellome Project and incorporation of TGP data
Tim Gant, Health Protection Agency, Oxford, UK
Predicting novel toxicology from connectivity mapping of gene-expression profiles
Ralf Herwig, Max Planck Institute for Molecular Genetics, Berlin
Modelling ‘omics-based on liver carcinogenesis
Ofelia Olivero, NCI, NIH, Bethesda, USA
Common pathways of gene expression in infants and cells exposed to anti-HIV antiretrovirals: Biomarkers of exposure and risk?
Short Talk- Anna Francina Jackson, Health Canada, Ottawa, Canada
Using a toxicogenomics approach to obtain the molecular mode of action for furan hepatocarcinogenicity using sub-chronically exposed B6CF1 mice

IGUAÇU I - Cyto genetics in humans: from mechanisms to cancer risk and clinical prognostic applications
Chair: Kari Hemminki, German Cancer Research Center, Heidelberg, Germany
Hannu Norppa, Finnish Institute of Occupational Health, Helsinki, Finland
Application of modern cytogenetic tools in mechanistic studies
Pavel Vodicka, Institute of Experimental Medicine, Prague, Czech Republic
Cytogenetics and cancer risk
Kari Hemminki, German Cancer Research Center, Heidelberg, Germany
Clinical and molecular implications of cytogenetic findings
Mariles Maria F de Souza, University of Londrina, PR, Brazil
Methylation and polymorphism associated with prostate cancer risk, aggressiveness and protection

IGUAÇU II - Mutagens in the aquatic environment – sources, exposure, and consequences
Chairs: Alain Devaux, LEHNA, Lyon, France
Gisela Umbuzeiro, UNICAMP, Brazil
Alain Devaux, LEHNA, Lyon, France
Genotoxicity pressure on germ cells in aquatic organisms: consequences on fitness
Tracy Collier, National Marine Fisheries Service/NOAA, Seattle, Washington, USA
Exposure and Sub-lethal Effects of PAHs in Puget Sound – Relevance for Determination of Sediment Quality Criteria
Sylvie Bony, LEHNA, Lyon France
Hazard assessment of coal tar-based sealcoat runoff water
Tamara Grummt, Umweltbundesamt, Bad Elster, Germany
Risk Assessment of Emerging Mutagenic Contaminants in the Water Cycle – Recent Advances and Future Needs
Francine I Vacchi, Faculdade de Ciências Farmacêuticas, USP, SP, Brazil.
Genotoxicity assessment of effluent and surface waters under the influence of textile activities - the Piracicaba river case

IGUAÇU III - Bacterial models for mutagenesis studies: from basic mechanisms to infectious diseases
Chair: Rodrigo da Silva Galhardo, ICB – USP – São Paulo, SP, Brazil
Susan M. Rosenberg, Baylor College of Medicine, Houston, USA
Double strand breaks and stress-induced mutations in the E. coli chromosome
Ivan Matic, Université Paris Descartes, Faculté de Médecine Paris
Modulation of the replication fidelity by subinhibitory concentrations of bactericidal antibiotics
Andrea Smania, Universidad Nacional de Córdoba, Argentina

Mutating for survival: Approaching to mutagenesis mechanisms and Pseudomonas aeruginosa adaptability from an evolutive perspective
Digby Warner, University of Cape Town, South Africa

Translesion synthesis in Mycobacterium tuberculosis and its impact on antibiotic resistance
Short Talk- Carina O Lopes, Institute of Biomedical Sciences, USP, SP, Brazil.
Functional analysis of genes belonging to the SOS regulon in Caulobacter crescentus

12:00- 2:00 pm LUNCH BREAK

12:10 – 1:50 pm LUNCH DEBATE - IGUAÇU I

Do all positive Ames test results predict the same level of carcinogenic or mutagenic risk?
Chairs: Raffaella Corvi, ECVAM, Italy
David Kirkland, Kirkland Consulting, UK

12:40 – 1:50 pm

CATARATAS I - TECHNICAL CONFERENCE

Ion Torrent: the revolutionary technology for DNA sequencing
Speaker: Ricardo Dalla Costa, M.Sc.
Sponsor: Life Technologies

IGUAÇU I - SBMCTA COUNCIL MEETING

IGUAÇU II - IAEMS COUNCIL MEETING

IGUAÇU III - TECHNICAL CONFERENCE

Rapid and Reliable Gene Construction with gBlocks(tm)
Speaker: Stephen Gunstream,
Sponsor: Síntese Biotecnologia

2:00 - 4:00 h pm- PARALLEL SYMPOSIA

CATARATAS I - The replication of damaged DNA: a one-way trip to oncogenesis?
New Aspects on the Regulation of The Specialized DNA polymerase eta in human cells
Zvi Livneh, Weizmann Institute of Science, Israel

Regulation of Mammalian Translesion DNA Synthesis by Nuclear Architecture
Jean Sebastien Hoffmann, Cancer Research Center of Toulouse, France

The role of specialized polymerases in genomic replication
Vanessa Gottifredi, Fundación Instituto Leloir, Argentina

Collaboration and Coordination between tolerance and checkpoint pathways
María Belén Federico, Fundación Instituto Leloir, Argentina

The contribution of FANCD2 to the cellular response to UV irradiation

CATARATAS II - Searching for biomarkers of exposure to low doses and dose rates
Chair: Mats Harms-Ringdahl, Stockholm University, Sweden

Biomarkers of radiation exposure
Janet Hall, Institute Curie, Paris, France

DNA damage response pathways as biomarkers of exposure to radiation
Penny A. Jeggo, University of Sussex, UK

Use of proteomics in search for biomarkers of radiation exposure
Soile Tapio, Institute of Radiation Biology, Neuherberg, Germany

Biomarkers of individual sensitivity
Sepideh Arbab Bidgoli, Islamic Azad University, Tehran, Iran

Role of biomarkers in regulation and standardization of nanomaterials: effectiveness and challenges

IGUAÇU I - The Mutagenic Hazards of Diesel Engine Exhausts - Impacts of Fuel Formulation and Pollution Control Technology
Chairs: Paul White, Health Canada, Ottawa, Canada

Mutagenic and Carcinogenic Activity of Diesel Exhaust – Overview of IARC Monograph 105 (Diesel and Gasoline Engine Exhaust)
Paul White, Health Canada, Ottawa

Oxidative Stress and Genetic Damage in Mammalian Cells Exposed to Biodiesel Particulates from Representative Euro2 and Euro4 Engines
David M. DeMarini, University of North Carolina at Chapel Hill, USA

Bioassay-directed Fractionation of Diesel Exhaust Particulate
Jürgen Krahl, Coburg University of Applied Sciences and Arts, Coburg, Germany

Non-Regulated Emissions and Genetic Toxicity in the Exhaust of Diesel Engines Powered by Bio-Derived Fuels and Their Blends
Short Talk - Alexandra Long, University of Ottawa, Ottawa, Canada
The Effect of Fuel Formulation and Catalytic Exhaust Treatment on the Mutagenic Activity of Particulates from a Heavy-duty Diesel Engine

IGUAÇU II - Impact of coffee on DNA-damage and cancer risks
Chairs: Siegfried Knasmüller, Medical University of Vienna, Austria
       Margareta Törnqvist, Stockholm University, Sweden

Siegfried Knasmüller, Medical University of Vienna, Austria
Prevention of hepatic cancer and DNA-damage in the liver by coffee and its constituents
       Doris Marko, University of Vienna, Austria
Induction of Nrf2 by coffee in vitro and in vivo
       Margareta Törnqvist, Stockholm University, Sweden
Acrylamide in coffee and other foods: Doses in humans and health risks.
       Miroslav Mišík, Medical University of Vienna, Austria
Prevention and induction of oxidative DNA damage by coffee and its constituents.

IGUAÇU III - Stem cells: the response to DNA damage and possible therapeutic applications
Chair: Eugenia Dogliotti, Istituto Superiore di Sanità, Italy

Jurgen Thomale, University of Duisburg-Essen Medical School, Essen, Germany.
Stemness and the cellular response to DNA-reactive anticancer drugs
       Malcolm Alison, Barts and The London School of Medicine and Dentistry, Queen Mary University of London, London, UK
Mechanisms of radio- and chemoresistance in cancer stem cells
       Paola Fortini, Istituto Superiore di Sanità, Rome, Italy
Changes in DNA repair and DNA damage signaling from adult stem cells to post-mitotic cells in skeletal muscle
       Short Talk- Shahragim Tajbakhsh, Institut Pasteur, Paris, France
Sorting chromosomes asymmetrically: escaping DNA damage or regulating cell fate?

4:00 - 4:30 h pm- COFFEE BREAK

4:30- 6:30h pm- PARALLEL SYMPOSIA AND FORUM

CATARATAS I - Oxidized DNA damage processing
Chair: Nadja C. de Souza-Pinto, University of São Paulo, Brazil

David Wilson, III, NIA, NIH, USA
BER in neurodegenerative diseases
       Tinna Stevsnsner, Aarhus University, Denmark
Different roles of CSB protein in BER in nucleus and mitochondria
       Peter Mckinnon, St. Jude's Hospital, USA
DNA repair in neurogenesis and neurodegeneration
Jean Cadet, CEA, Grenoble, France

One-electron oxidation of cellular DNA: intra- and inter-strand cross-links
Short Talk - Bernd Epe, Institute of Molecular Biology, Mainz, Germany
Activation of human lymphocytes by phytohemagglutinin strongly accelerates the repair of oxidized DNA bases via NF-YA-mediated upregulation of OGG1

CATARATAS II - Genomic and post-genomic mechanisms of cigarette smoke.
Chair: Alberto Izzotti, University of Genoa, Italy

Stephen S. Hecht, University of Minnesota, Minneapolis, USA
Mechanisms of genotoxicity and carcinogenicity of cigarette smoke
David Phillips, King's College, London, UK
Tobacco smoke-related DNA adducts
Alberto Izzotti, University of Genoa, Italy
Post-genomic alterations induced by cigarette smoke
Markku Pasanen, University of Eastern Finland, Kuopio, Finland
Gene expression, transcriptomics and proteomics in the placentas from cigarette-smoking mothers
Soterios Kyrtopoulos, Athens, Greece
Epigenome-wide profiling reveals multiple biomarkers of exposure to current and past smoking and pathways of biological effects.

IGUAÇU I - Ecogenotoxicology Forum: Present state and future challenges
Chairs: Vera Maria Ferrão Vargas, Research Program FEPAM, Brazil
David M. DeMarini, University of North Carolina at Chapel Hill, USA

Vera Maria Ferrão Vargas, Research Program FEPAM, RS, Brazil
Use of strategies integrating genotoxicity in diagnosis of contaminating sites: soil, air, river water and sediments
Claudia Bolognesi, National Cancer Research Institute, Genova, Italy
Micronucleus cytome assay: an approach to evaluate cytotoxic and genotoxic environmental pollution
Staffan Lundstedt, Umeå University, Umeå, Sweden
Toxic hazards of polar polycyclic aromatic compounds in environmental samples
Short Talk: Cesar K Grisolia, University of Brasilia, Brasilia, Brazil.
Challenges in aquatic nanogenotoxicology
Short Talk: Helio V Bernardes, Brazil Lutheran University, RS, Brazil
Biomonitoring of Aquatic Pollution in Coal Exploration and Combustion Area Through Genotoxicity and Mutagenicity Tests on Zebrafish
Short Talk: Gisela L Poletta, University of Buenos Aires, Argentina
DNA Damage in Wild Populations of Caiman Latirostris Environmentally Exposed to Pesticides: Evidence Of Oxidative Stress
Short Talk: Helena C Reinardy, Bermuda Institute of Ocean Sciences, St. George’s, Bermuda
DNA repair in sea urchins: role in genotoxicity resistance and carcinogenesis
Directed Discussion, Coordinator: David DeMarini, US Environmental Protection Agency, Research Triangle Park, NC, USA

**IGUAÇU II - Novel integrated approaches for toxicological hazard identification and risk assessment**

*Chairs: Carole Yauk, Health Canada, Canada  
Mirjam Luijten, RIVM*

- Nikolai Chepelev, Health Canada, Canada
  
  Integration of toxicogenomics data into human health risk assessment

- Russell Thomas, The Hamner Institutes for Health Sciences, NC, USA
  
  Incorporating new technologies into toxicity testing and risk assessment

- Bette Meek, McLaughlin Centre for Population Health Risk Assessment, University of Ottawa, Canada
  
  Developments in Mode of Action/Adverse Outcome Pathway Analysis for Toxicity Testing and Risk Assessment

- B. Bhaskar Gollapudi, Cardno ENTRIX, Midland, MI, USA
  
  Epigenetics: Are we ready to consider epigenetic effects in human health risk assessment?

- Mirjam Schaap, National Institute for Public Health and the Environment, USA
  
  Detection of features of non-genotoxic carcinogens in embryonic stem cells and primary hepatocytes using transcriptomics.

**IGUAÇU III - DNA damage and Repair**

*Chair: Filippo Rosselli, Gustave Roussy Institute, Villejuif, France*

- Thomas Rosenquist, Stony Brook University, NY, USA
  
  Unraveling the mystery of a global environmental disease

- Jean-Hugues Guervilly, Cancer Research Center of Marseille, Marseille, France
  
  SLX4: playing with ubiquitin and SUMO

- Filippo Rosselli, Gustave Roussy Institute, Villejuif, France
  
  ERCC1 and MUS81 process late replication intermediates at fragile sites and promote sister chromatid separation during mitosis

- Jean-Baptiste Charbonnier, University of Paris-Sud, Gif sur Ivette, France
  
  Structural Studies of the Multiprotein Complexes of the Human Non-Homologous End Joining Pathway

- Ivelina V Vasileva, Institute of Molecular Biology, Bulgarian Academy of Sciences, Sofia, Bulgaria
  
  Role of mammalian INO80 complex in replication stress resistance

- Wynand P Roos, Medical Center of the University Mainz, Germany
  
  Malignant melanoma cells are resistance to DNA interstrand cross-linking chemotherapeutics due to p53 dependent DDB2/XPC-mediated DNA repair

6:30- 8:30 h pm- POSTER PRESENTATION
Tuesday November 5th, 2013

PARALLEL LECTURES

8:00-8:45 h am

CATARATAS I - Chair: David Wilson, EMGS Councilor, USA
DNA repair, diseases and aging
Speaker: Vilhelm A. Bohr, NIA, NIH, USA

CATARATAS II - Chair: Myung-Haing Cho, KEMS President-Elect, Korea
Cigarette smoke-induced transgenerational alterations in genome stability in cord blood of human F1 offspring
Speaker: Diana Anderson, University of Bradford, West Yorkshire, UK

8:45-9:30 h am

CATARATAS I - Chair: Carlos F. M. Menck, Brazilian EMS Councilor, Brazil
Gene therapy of xeroderma pigmentosum skin cells
Speaker: Alain Sarasin, Institut Gustave Roussy, Villejuif, France

CATARATAS II - Chair: Leon Mullenders, EEMS Vice-President, European
Frits Sobels Award Lecture- EEMS
Speaker: David Phillips
King's College London, London, United Kingdom
DNA adducts: detection, characterisation, biological consequences

9:30-10:00 h am - COFFEE BREAK

10:00-12:00 h am - PARALLEL SYMPOSIA

CATARATAS I - Sun radiation: interaction with the environment and humans
Chair: Evelyne Sage, Institut Curie, CNRS, Paris, France

Evelyne Sage, Institut Curie, CNRS, Paris, France
DNA damage induced by UVA radiation: role in sunlight mutagenesis and carcinogenesis
Patrick Rochette, Laval University, Québec, Canada
Genotoxicity of sunlight in human cornea
Peter Karran, Clare Hall Laboratories, London, UK,
Sun-sensitivity, DNA repair inactivation and skin cancer risk in immunosuppressed patients.
Rex Tyrrell, University of Bath, Bath UK
UVA as an oxidative stress: the disruption of iron and heme homeostasis versus restoration and repair
Short Talk- André Passaglia Schuch, Federal University of Santa Maria, RS, Brazil
DNA damage induced by sunlight: environmental and photoprotection measurements

CATARATAS II - Harnessing new technologies to identify human germ cell mutagens
Chairs: Carole Yauk, Health Canada & Dept. of Genetics, University of Leice, Canada
Yuri Dubrova, University of Leicester, Leicester, UK
Jeff Kidd, University of Michigan Medical School, MI, USA
Adapting Illumina Sequencing to Detect Rare Mutations
Yuri Dubrova, University of Leicester, Leicester, UK
Analysis of copy number variants in the offspring of irradiated male mice
Thomas Wilson, University of Michigan, MI, USA
The effects of hydroxyurea treatment of germ cell mutation rates
Lucas Argueso, Colorado State University, CO, USA
A new yeast bioassay to uncover the environmental mediators of germ cell copy number variants
Short Talk - Marc Beal, Health Canada, Canada
New technologies in the analysis of rodent sperm mutations

IGUAÇU I - Survival and death pathways triggered by chemotherapeutics
Chair: Bernd Kaina, Department of Toxicology, University Medical Center, Mainz, Germany
Bernd Kaina, University of Mainz, Germany
Survival and death strategies for cancer cells exposed to alkylating anticancer drugs
Thomas Hofmann, DKFZ, Heidelberg, Germany
DNA damage-triggered cell death signaling: role of p53 and HIPK2
Robert Sobol, University of Pittsburgh, PA, USA
Modulation of BER by anticancer drugs

Short Talk - Luciana R Gomes, University of São Paulo, SP, Brazil
Three-dimensional cell growth confers enhanced sensitivity to doxorubicin by impaired autophagy induction
Short Talk: Diana L Bordin, Federal University of Rio Grande do Sul, Brazil
Autophagy induction in colorectal cancer contributes to the tolerance of oxaliplatin under low glucose condition
Short Talk - Jianwei Zhou, Institute of Toxicology, School of Public Health, Nanjing Medical University, Nanjing, People’s Republic of China
Degradation of XRCC1 by TXNL1 contributes to cisplatin resistance in human gastric cancer cells.

IGUAÇU II - The Mutagenic Activity and Carcinogenic Hazards of Complex PAH Mixtures
Chair: Paul White, Health Canada, Ottawa, Canada
Lynn Flowers, US Environmental Protection Agency, Washington, DC, USA
The Relative Potency Factor Approach for Cancer Risk Assessment of PAHs in Complex Mixtures
Paul White, Health Canada, Ottawa, Canada

Mutagenic Potency Ratio - A Bioassay-based Approach for Cancer Risk Assessment of PAHs in Complex Mixtures
Kristian Dreij, Karolinska Institute, Stockholm, Sweden.

Persistent Activation of DNA Damage Signalling by PAH Mixtures
Staffan Lundstedt, Umeå University, Umeå, Sweden

Identification of polar polycyclic aromatic compounds in complex, PAH-contaminated environmental matrices
Steven O’Connell, Oregon State University, Corvallis, OR, USA

Novel Technologies for OPAH and PAH Identification in Personal and Environmental Complex Mixtures

IGUAÇU III - New Approaches in Nanogenotoxicology
Chair: Hannu Norppa, Finnish Institute of Occupational Health, Helsinki, Finland

Hannu Norppa, Institute of Occupational Health, Helsinki, Finland
Search for genotoxic and carcinogenic nanomaterials
Gareth Jenkins, Swansea University, Wales, UK
In vitro prediction of carcinogenesis coupling genotoxicity to cell behaviour and cell morphology.
Short Talk: Frederique AA Van Acker, TNO Triskelion, Zeist, The Netherlands.
(Geno)toxicity assessment of ceriumoxide nanoparticles: a comparison study using a human 3D airway model, A549 and Beas-2B cells
Short Talk: Helene Moche, Institut Pasteur de Lille, Lille, France
WC-Co as a nanoparticulate reference positive control in in vitro genotoxicity assays
Short Talk: Marcin Kruszewski, Institute of Nuclear Chemistry and Technology, Warszawa, Poland
Long-term survival of human cells treated with nanoparticles corresponds to the formation of oxidative DNA damage.

12:00- 2:00 pm LUNCH BREAK

12:40 – 1:50 pm

CATARATAS I - EEMS GENERAL ASSEMBLY

IGUAÇU I - Cooperation in Environmental Sciences
Health and Environmental Sciences Institute (HESI)’s organization and activities
Richard Paules, NIEHS; and colleagues.

IGUAÇU III - SBMCTA GENERAL ASSEMBLY
2:00-4:00 h pm- PARALLEL SYMPOSIA

CATARATAS I - DNA repair from one molecule to entire genome and cell death
Chair: Lisiane B. Meira, University of Surrey, UK

Bennett Van Houten, University of Pittsburgh, PA, USA
Watching DNA repair one molecule at a time: reconstituting nucleotide excision using quantum-dot labeled proteins.
Lisiane B. Meira, University of Surrey, UK
Base excision repair drives neuronal cell death
Margherita Bignami, Istituto Superiore di Sanità, Rome, Italy
Repair synthesis driven by OGG1 and MUTYH DNA-glycosylases combined with oxidized nNTPs favours trinucleotide repeat instability
Short Talk- Agnieszka M. Maciejewska; Institute of Biochemistry and Biophysics, Polish Academy of Sciences, Warsaw, Poland
Acrolein adducts to adenine and cytosine- mutagenic potency and repair by AlkB dioxygenase
Short Talk- Fabio L Forti, Institute of Chemistry, University of Sao Paulo, SP, Brazil
DUSP3 silencing affects the DNA repair of human cells stressed with UV light through nucleolar proteins

CATARATAS II - EEMS young scientist session
Chair: Guenter Speit, Ulm University, Ulm, Germany

Ilio Vitale, Istituto Superiore di Sanità, Rome, Italy (AWARD WINNER)
The impact of unscheduled changes in ploidy in cancer
Mikhail Kutuzov, Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia
Interaction of PARP2 with apurinic/apyrimidinic DNA in comparison to PARP1
Katherine Chapman, Swansea University, Swansea, UK
Improving human relevance of in vitro genotoxicity tests by reducing oversensitivity of current assays: exploring chronic dosing in cell lines and 3D epiderm™ tissue culture models
Ann-Liza Piberger, Institute for Applied Bioscience, Food Chemistry and Toxicology, Karlsruhe, Germany
The broccoli-born isothiocyanate sulforaphane impairs DNA repair processes in HCT116 cells
Joanna Gorniak, Newcastle University, Newcastle upon Tyne, UK
Epigenetic regulation of base excision repair
Helena Libalova, Institute of Experimental Medicine AS CR, Praha, Czech Republic
Global gene expression changes induced by organic extracts of air pollutants in human lung cells

IGUAÇU I - Oxidized damage associated to non-cancer diseases
Chair: Elza T. Sakamoto-Hojo, São Paulo University, Ribeirão Preto, SP, Brazil

Akihiko Nunomura, University of Yamanashi, Japan.

**Oxidative Damage to RNA in Aging and Neurodegenerative Disorders**
Ana Lúcia dos Anjos Ferreira, UNESP-Botucatu, SP, Brazil

The role of oxidative damage in the pathogenesis of metabolic and cardiovascular diseases

Elza Sakamoto-Hojo, USP-Ribeirão Preto, SP, Brazil

**Signaling pathways associated with oxidative stress in lymphocytes of patients with diabetes mellitus**

Short Talk- Daniela T Soltys, Institute of Chemistry, USP, SP, Brazil.

**Changes in DNA base excision repair activities in brains from Alzheimer’s disease patients**

Short Talk- Olga I Lavrik; Institute of Chemical Biology and Fundamental Medicine, Novosibirsk, Russia

**Tyrosyl-DNA phosphodiesterase 1 as a new player of base excision repair**

---

**IGUAÇU II - Environmental mutagenesis and noncancer diseases**
Chair: David M. DeMarini, University of North Carolina at Chapel Hill, USA

Roger Godschalk, University of Maastricht, The Netherlands

The role of DNA damage in atherosclerosis: a never ending story?

Lucia Migliore, University of Pisa, Pisa Italy;

**Mutations, environmental factors and epigenetic mechanisms in neurodegenerative diseases**

Francesco Marchetti, Health Canada, Ottawa, Canada

Protecting the next generation: identifying and assessing heritable mutagenic hazards

Short Talk- Lucymara F Agnez-Lima, Federal University of Rio Grande do Norte, RN, Brazil

**APE1 protein inhibitors modulate the inflammatory response in cellular models**

Short Talk- Michael Norman Routledge, University of Leeds, UK

**DNA methylation and gene expression changes associated with aflatoxin exposure in utero in infants from the Gambia**

---

**IGUAÇU III - Replication infidelity and mutagenesis**
Chair: Roger Woodgate, NICHD/NIH, USA

Robert Fuchs, CNRS, Marseille, France

**The critical choice between Translesion Synthesis and Damage Avoidance**

Roger Woodgate, NICHD/NIH, USA

**Mechanisms of ribonucleotide repair in E.coli**

Patricia Opresko, University of Pittsburgh, PA, USA

**Roles for Translesion DNA Synthesis in Telomere Preservation**

Katherine Donigan, NICHD/NIH, USA

**Standing Guard: Steric Gate Residues of Eukaryotic Y-family DNA Polymerases**

Katherine Donigan, NICHD/NIH, USA

Short Talk- Annabel Quinet, Université Paris Sud, Institut de Cancérologie Gustave Roussy, Villejuif, France
Tolerance of damage induced by low-dose ultraviolet irradiation in the human genome.

4:00 - 4:30 h pm- COFFEE BREAK

4:30 - 6:30 h pm- PARALLEL SYMPOSIA AND FORA

CATARATAS I - Understanding the mutational processes shaping cancer genomes
Chair: Leon Mullenders and Marcel Tijsterman, University Medical Center, Leiden, The Netherlands

Thomas Kunkel, NIEHS, Research Triangle Park, NC, USA.
Determinants of leading and lagging strand DNA replication fidelity
Marcel Tijsterman, University Medical Center, Leiden, The Netherlands
Repair of Replication fork collapses
Gloria M. Calaf, Instituto de Alta Investigación, Universidad de Tarapacá, Arica, Chile
Genomic instability induced by environmental compounds and estrogen
James R. Lupski, Baylor College of Medicine, Houston, TX, USA
Structural variation in the human genome: Genomic disorders and cancer chromothripsis.
Short Talk- Ludmil B Alexandrov, University of Cambridge, Cambridge, UK
Signatures of mutational processes in human cancer

CATARATAS II - Biomarkers of Radiation Induced DNA Damage and their use in Biological Dosimetry.
Chair: AdayapalamT. Natarajan, University of Tuscia, Viterbo, Italy

Adayapalam T. Natarajan, University of Tuscia, Viterbo, Italy
Biomarkers of Radiation Damage in Human
Michael Fenech, CSIRO, Adelaide, Australia
Micronuclei in Radiation Biodosimetry: Improvements, mechanisms and confounding factors.
Gabriel Pantelias, NCSR, Demokritos Athens, Greece
Premature Chromosome Condensation in Biodosimetry, improvements and confounding factors
Harry Sherthan, Inst. Radiobiology, Munich, Germany
Gamma H2AX- DNA damage foci as biomarker of radiation exposure
Short Talk- Marc Audebert, Toxalim, Research Centre in Food Toxicology, Toulouse, France
Validation of a high-throughput genotoxic screening using yH2AX In Cell Western assay on human cells.

IGUAÇU I - DNA Repair and mutagenesis
Chairs: Bruce Demple, State University of New York, NY, USA
Luis Blanco, Universidad Autonoma, Madrid, Spain

PrimPol, an archaic enzyme involved in replication fork re-start and translesion synthesis in human cells

Bruce Demple, State University of New York, NY, USA

The Intersection of Genome Stability and Base Excision DNA Repair

Kyungjae Myung, NIDDK/NIH, USA

Translating genomic instability to clinical applications

Priscilla Cooper, Lawrence Berkeley National Laboratory, Berkeley, CA, USA

Cellular Senescence, Cell Death, and Genomic Instability Associated with Defects in Multiple DNA Repair Processes from Loss of XPG

Short Talk - Ann-Karin Olsen, Norwegian Institute of Public Health, Oslo, Norway

Neil dependent repair of oxidative DNA base lesions; implications for mutagenesis and cancer development

IGUAÇU II - Comet Technology Takes Off - (FORUM)

Co-Chairs: Andrew Collins, University of Oslo, Norway, and Bevin P. Engelward, MIT, USA

Andrew Collins, Department of Nutrition, University of Oslo, Norway

Applications of comet technology for measurement of DNA repair

Bevin P. Engelward, Department of Biological Engineering, MIT, USA

Development of a high throughput comet platform & its applications

Robert Sobol, University of Pittsburgh, USA

Basic research applications of comet technology & emerging opportunities

Short Talk - Stefan Pfuhler, Procter & Gamble Co, Mason, USA

3D Skin Comet assay validation using full thickness tissues: Update on the ongoing validation.

IGUAÇU III - Applications of proteomics & metabolomics in (eco)toxicological and biomedical research

Chairs: Jos Kleinjans, Maastricht University, The Netherlands

Bennard van Ravenzwaay, BASF, Germany

Organized by the European Centre for Ecotoxicology and Toxicology of Chemicals (ECETOC) and the European Environmental Mutagen Society (EEMS), sponsored by Long-range Research Initiative of the European Chemical Council (CEFIC-LRI)

Henk Vrijhof- ECETOC, Belgium

Introduction

Coral A. Lamartiniere, University of Alabama, Birmingham, USA

The role of proteomics in cancer research

Andre Schrattenholz, Proteosys Mainz, Germany

The use of proteomics for the identification of compounds inducing reproduction toxicity

Bennard van Ravenzwaay, BASF, Ludwigshafen, Germany

The sensitivity of metabolomics; a comparison of metabolomics and regulatory NOEL and LOEL values in 28-day rat studies
Elizabeth Donley, Stemina Biomarker Discovery, Madison Wisconsin, USA

Establishment and assessment of a new embryonic stem cell based biomarker assay for developmental toxicity screening
Saskia M van der Vies, University Medical Center, Amsterdam, The Netherlands

Omnics sciences in (regulatory) toxicology: conclusions from ECETOC’s 3rd omics workshop
Jos Kleinjans, Maastricht University, The Netherlands

Concluding remarks

ARAUCARIA - Recent updates in regulatory genotoxicity testing - FORUM
Chair: Elisabeth Lorge, Servier Group, France

Masamitsu Honma, NIHS, Japan
Risk assessment and management of genotoxic impurities in pharmaceuticals.
Elisabeth Lorge, Servier Group, France
The highlights of the new OECD genotoxicity guidelines.

Short Talk- Annie Pfohl-Leszkowicz, Institute Polytechnique, Toulouse, France
In vitro bioassays for risk assessment of oncoligic treatments released in hospital waste water and surface water.

6:30- 8:30 pm- POSTER PRESENTATION

Wednesday November 6th, 2013

PARALLEL LECTURES

8:00- 8:45 h am

CATARATAS I - Chair: Chul Choi, Chair of General Secretary of KEMS, Korea
DNA glycosylases search for and destroy oxidized DNA bases.
Speaker: Susan Wallace, University of Vermont, USA

CATARATAS II - Chair: Sepideh Arbabi Bidgoli, IREMS President, Iran
All roads lead to Rome: different mechanisms to bypass DNA lesions in translesion synthesis
Speaker: Wei Yang, NIDDK/NIH, USA

IGUAÇU I - Chair: Elza Sakamoto-Hojo, SBMCTA Treasurer
Biomarkers discovery and statistical design
Speaker: Ziding Feng, Fred Hutchinson Cancer Research Center, USA

8:45- 9:30 h am
**CATARATAS I** - Chair: Álvaro Augusto C. Leitão, Brazilian EMS Councillor, Brazil

*A novel function of short noncoding RNAs in the repair of damaged DNA*

*Speaker:* Fabrizio D'Adda di Fagagna, Institute of Molecular Oncology Foundation, Milan, Italy.

**CATARATAS II** - Chair: Catherine B. Klein, EMGS Past-President, North America

*Specialized DNA replication as a source of cancer prognostic markers and Achilles heels*

*Speaker:* Christophe Cazaux, Université Paul Sabatier (Toulouse III), France.

9:30-10:00 h am - **COFFEE BREAK**

10:00-12:00 h am - **PARALLEL SYMPOSIA**

**CATARATAS I** - *MicroRNAs in environmental mutagenesis*

*Chair:* Alberto Izzotti, University of Genoa, Genoa, Italy

- Franck Slack, Yale University, USA
- *MicroRNA discovery and next frontiers*
  - Joris Pothof, Erasmus University Medical Center, Rotterdam, The Netherlands
- *MicroRNA in environmental mutagenesis*
  - Luciana dos Reis Vasques, University of São Paulo, SP, Brazil
- *The silent relationship of microRNAs and Epigenetics*
  - Alberto Izzotti, University of Genoa, Genoa, Italy
- *MicroRNA in cancer prevention*
  - Short Talk- Nigel J Gooderham, Surgery and Cancer, Imperial College, London, UK
- *Mutagenesis by an antisense oligonucleotide and its degradation product*

**CATARATAS II** - *Mechanisms underlying thresholds for genotoxic carcinogens*

*Chairs:* Takehiko Nohmi, National Institute of Health Sciences, Tokyo, Japan
  - George Johnson, Swansea University, Swansea, UK

- Takehiko Nohmi, National Institute of Health Sciences, Tokyo, Japan
- *Introduction and roles of self-defense mechanisms in thresholds for genotoxic chemicals*
  - George Johnson, Swansea University, Swansea, UK
- *Roles of DNA repair in thresholds for mutagenic alkylating agents*
  - Teruhisa Tsuzuki, Kyushu University, Fukuoka, Japan
- *Roles of DNA repair in thresholds for oxidative mutagens*
Yasunobu Aoki, National Institute for Environmental Studies, Tsukuba, Japan
In vivo mutagenesis resulting from oxidative stress with suppressed in mice with suppressed phase II drug-metabolizing enzyme expression
B. Bhaskar Gollapudi, Cardino ENTRIX, Midland, MI, USA
Dose response and point of departure assessment in genetic toxicology

**IGUAÇU I - DNA metabolism in neglected tropical diseases**
Chair: Carlos Renato Machado, Universidade Federal de Minas Gerais, MG, Brazil.

Richard McCulloch, University of Glasgow, Glasgow, UK
*Repair and replication in Trypanosoma brucei: genome maintenance functions adapted for immune evasion*
Luiz Ricardo Orsini Tosi, University of São Paulo, Ribeirão Preto, Brazil
*A peculiar 9-1-1 complex in the DNA damage response of the protozoan parasite Leishmania*
Gonzalo Cabrera, Universidad de Chile, Santiago, Chile
*DNA damage and the Base Excision Repair pathway as a survival strategy in Trypanosoma cruzi*
Maria Carolina Quartim Barbosa Elias-Sabbaga, Instituto Butantan, São Paulo, Brazil
*Dynamic regulation of DNA replication in trypanosomomas*
Short Talk - Ceres Luciana Alves, Federal University of Minas Gerais, MG, Brazil
*Studying possible roles of TcMSH2 and TcRAD51 genes in events of genetic exchange in Trypanosoma cruzi*

**IGUAÇU II - Environmental pollution and Health Impact**
Chair: Radim J. Sram, Institute of Experimental Medicine AS CR. Czech Republic

Jia Cao, College of Preventive Medicine, Third Military Medical University, Chongqing, China
*The effects and mechanisms of environmental pollutants in Chongqing, China, on male reproductive health*
Pavel Rossner, Institute of Experimental Medicine AS CR. Czech Republic
*Analysis of biomarkers in a Czech population exposed to heavy air pollution*
Qiang Liu, Institute of Radiation Medicine, Chinese Academy of Medical Sciences, China
*Spermatozoa damage of adult men exposed to the processing of electronic waste*
Metka Filipič, National Institute of Biology, Ljubljana, Slovenia
*The occurrence of the residues of cytostatic drugs in the environment: Is there a problem?*

**IGUAÇU III - Antimutagenesis and Anticarcinogenesis: Nutrigenomic Perspectives**
Chair: Young-Joon Surh, Seoul National University, South Korea
Young-Joon Surh, Seoul National University, South Korea
*Phytopharmaceuticals and nutraceuticals with antimutagenic and anticarcinogenic activities*

Clarissa Gerhäuser, German Cancer Research Center, Germany
*Epigenetic approaches to cancer prevention*

Karl-Heinz Wagner, University of Vienna, Austria
*DNA damage and genomic stability in diabetic subjects and the impact of a dietary intervention*

Short Talk - Young Rok Seo, Dongguk University, Seoul, South Korea
*A novel molecular mechanism of selenomethionine-mediated chemoprevention in vitro and in vivo systems*

Short Talk - Cecilia Frostne, Stockholm University, SE-106 91 Stockholm, Sweden
*Differences in genotoxic exposure between vegetarian and non-vegetarian diets studied by haemoglobin adducts from acrylamide and by micronucleous frequencies*

12:00-6:30 h pm FREE AFTERNOON

6:30-7:30 h pm-

**CATARATAS I - ALAMCTA GENERAL ASSEMBLY**

**IGUAÇU I - IAEMS Business Meeting**

8:00 h pm- GALA DINNER- BALROOM

---

**Thursday November 7th, 2013**

**PARALLEL LECTURES**

8:00-8:45 h am

**CATARATAS I** - Chair: Graciela Spivak, EMGS Councilor, USA
*Generating and Repairing Leading and Lagging Strand Replication Errors*
Speaker: Tom Kunkel, NIEHS/NIH, NC, USA

**CATARATAS II** - Chair: Takehiko Nohmi, IAEMS President-Elect, Japan
*The micronucleus assay in human biomonitoring- what does it really tell us?*
Speaker: Guenter Speit, Ulm University, Ulm, Germany

**IGUAÇU I** - Chair: Ofelia Ana Olivero, EMGS President-Elect, North America

---
DNA damage complexes as responses informing on environmental stress and as controls of biological outcomes to environmental toxins  
Speaker: John A Tainer, Lawrence Berkeley National Lab, La Jolla, CA, USA

8:45- 9:30 h am

Chair: Israel Felzenszwalb, SBMCTA Councilor, Brazil  
CATARATAS I - Single-cell approaches in mutation research  
Speaker: Jan Vijg, Albert Einstein College of Medicine, New York, USA

CATARATAS II - Chair: David Kirkland, EEMS Past-President, European From Toxicology to Clinic: A Systems Medicine Approach  
Speaker: Stefano Bonassi, IRCCS San Raffaele Pisana, Rome, Italy

IGUAÇU I - Chair: Enrique Zamorano Ponce, ALAMCTA President, Latin America  
Air pollution and pregnancy outcome - interpretation of biomarkers for the risk assessment  
Speaker: Radim J. Sram, Institute of Experimental Medicine, Czech Republic

9:30- 10:00 h am- COFFEE BREAK

10:00-12:00 h am- PARALLEL SYMPOSIA

CATARATAS I - Genomic approaches for biomarker development and safety assessment  
Chair: Richard S. Paules, NIEHS, NC, USA  
Sponsor: ILSI Health and Environmental Sciences Institute (HESI), Washington DC, USA  
Richard S. Paules, NIEHS, NC, USA  
Omic Approaches for Development of Biomarkers for Clinical Safety Assessment  
Jiri Aubrecht, Pfizer Global Research and Development, Groton, Connecticut, USA  
A genomic signature for decision making in genotoxicity testing  
Jos CS Kleinjans, University of Maastricht, The Netherland  
Carcinogenomics: Genomic contributions to cancer assessment  
Russell “Rusty” S. Thomas, The Hamner Institutes for Health Sciences, NC, USA  
Incorporating New Technologies into Toxicity Testing and Risk Assessment  
Short Talk- Romualdo Benigni, Istituto Superiore di Sanita, Rome, Italy  
A toxicological ontology for the OECD (Q)SAR toolbox

CATARATAS II - Effect of Environmental Mutagens · Carcinogens on Respiratory Disease and Lung Cancer Development
Chairs: David M. DeMarini, University of North Carolina at Chapel Hill, USA
        K. Wakabayashi, University of Shizuoka, Japan

        David M. DeMarini, University of North Carolina at Chapel Hill, USA
        Tetsushi Watanabe, Kyoto Pharm. Univ., Japan
        Yukari Totsuka, National Cancer Research Institute, Japan

        **Diesel Emissions and Lung Cancer Development**
        Tetsushi Watanabe, Kyoto Pharm. Univ., Japan
        **Mechanisms of genotoxicity in the lung by nanomaterials**
        Tetsushi Watanabe, Kyoto Pharm. Univ., Japan

        Short Talk- Nilmara de Oliveira Alves, Federal University of Rio Grande do Norte, RN, Brazil.

        **Particulate matter from biomass burning in the Amazon region induces apoptosis and necrosis in A549 human lung cells**

        **IGUAÇU I - Mitochondrial DNA maintenance**
        Chair: Nadja Souza Pinto, University of Sao Paulo, SP, Brazil

        Jason Bielas, Fred Hutchinson Cancer Institute, USA
        **MtDNA mutagenesis in cancer**
        Laurie Kaguni, Michigan State University, USA
        **The mitochondrial replisome**
        Miguel Garcia-Diaz, Stony Brook University, USA
        **Mitochondrial transcription termination**
        Craig Cameron, Penn State, USA

        **Control of Transcription and RNA polymerase activity in mitochondria**

        **IGUAÇU II - Cockayne and UV-sensitive syndromes: insights on processing of oxidative DNA damage**
        Chair: Graciela Spivak, Stanford University, USA

        Graciela Spivak, Stanford University, USA
        **Deficient transcription-coupled repair of 8-oxoG in CS and UVSS cells**
        Emilio Rojas del Castillo, Universidad Nacional Autonoma de Mexico, Mexico

        **Processing of DNA damage in neurons**
        Wim Vermeulen, Erasmus MC, The Netherlands
        **New players in transcription-coupled DNA repair: UVSSA and USP7**
        Eugenia Dogliotti, Istituto Superiore di Sanità, Italy

        **The role of CSA and CSB in the response to oxidative stress: DNA repair defect or bioenergetic dysfunction?**
        Short Talk- Barbara Pascucci, Institute of Crystallografy, Consiglio Nazionale delle Ricerche, Roma, Italy
        **Does CSA play a role in mitochondrial quality control?**

        **IGUAÇU III - Chemoprevention versus genotoxic risk factors from food**
        Chair: Nagini Sidhavaram, Annamalai University, India

        Nagini Sidhavaram, Annamalai University, India
        **Molecular targets of chemoprevention by dietary ellagic acid in an animal model of oral oncogenesis.**
Fabrizio Palitti, University of Viterbo, Viterbo, Italy
Chromosomal Biomarkers to assessing health benefits of functional foods.
Margareta Törnqvist, Stockholm University, Stockholm, Sweden.
Protein adducts as a tool to detect background exposure to genotoxic risk factors from food and other sources

Short Talk - Ankur Karmoka, University of Leicester, UK
The cancer chemopreventive agent curcumin targets stem-like cells in primary human colorectal cancer and premalignant adenomas

Short Talk - Mihi Yang, Sookmyung Women’s University, Seoul, Republic of Korea
A Pilot Study to Evaluate Antioxidative and Epigenetic Effects of Blueberry (Vaccinium spp.)

12:00- 2:00 pm LUNCH BREAK
12:40 – 1:50 pm
CATARATAS I - IAEMS GENERAL ASSEMBLY

2:00-4:00 h pm- PARALLEL SYMPOSIA

CATARATAS I - Whole genome sequencing in genetic toxicology: from single cells to tumors
Chair: Jan Vijg, Albert Einstein College of Medicine, New York, USA

Peter Stambrook, University of Cincinnati, Ohio, USA
Whole genome sequencing of tumors and its prognostic and diagnostic value
Giel Hendriks, Leiden University Medical Center, Leiden, the Netherlands.
The ToxTracker assay: Unveiling the carcinogenic properties of chemicals.
Yousin Suh, Albert Einstein College of Medicine, New York, USA
Mutation Avoidance in Exceptional Human Longevity: A Single Cell Approach
Manoor Prakash Hande – National University of Singapore, Singapore
Predictive genomics: a post-genomic integrated approach to analyzing biological signatures of radiation exposure
Short Talk- Takayohsi Suzuki, National Institute of Health Sciences, Tokyo, Japan
Use of the next generation sequencers for the evaluation of genomic integrity of cellular therapy products

CATARATAS II - Mechanisms of micronucleus formation by environmental and genetic factors
Chairs: Michael Fenech, CSIRO, Adelaide BC, Australia

Michael Fenech, CSIRO, Australia
Overview on mechanisms of micronucleus formation by environmental and genetic factors
Qinghua Shi, University of Science and Technology of China, Hefei, China

Novel micronucleus formation mechanism discovery using live cell imaging
Micheline Kirsch-Volders, VrijeUniversiteitBrussel, Brussels, Belgium

New insights on mechanisms of micronucleus formation as a result of chromosome malsegregation
Julia Catalan, Finnish Institute of Occupational Health, Helsinki, Finland

Nuclear buds in human lymphocytes at different stages of the cell cycle
Short Talk- Aline Bernardes, Federal University of Goias, Chemistry Institute, Goiânia, GO, Brazil,
Evaluation of in vivo mutagenic and antimutagenic activities of chalcone (E)-3-(4-nitrophenyl)-1-phenylprop-2-en-1-one (cg1) in the mouse bone marrow micronucleus test.
Short Talk- Françoise Soussaline, IMSTAR SA Paris, France
Validation of a new scoring method of micronucleated L5178Y cells by high throughput automated image analysis

IGUAÇU I - New perspectives on DNA repair-deficient diseases
Chair: A. Sarasin, Gustave Roussy Institute, Villejuif, France

Miria Ricchetti, Pasteur Institute, Paris, France
Mitochondrial alterations in the Cockayne syndrome
Luciana Nogueira Andrade, Instituto do Cancer, SP, Brazil
Evidence for premature aging due to oxidative stress in CSB deficient iPS cells
Karina Miranda Santiago, Hospital AC Camargo, SP, Brazil
XP patients in Brazil
François Cartault, CHR Félix Guyon, La Réunion, France
Black-skinned xeroderma pigmentosum C patients: A common ancestor to patients from Comorian Islands in the Indian Ocean and Brazil?
Short Talk- Veridiana Munford, University of São Paulo
Characterization of primary fibroblast cells and Identification the genetic mutation responsible for the phenotype of patients with Xeroderma Pigmentosum from Goias, Brazil

IGUAÇU II - Eco-genotoxicology
Chair: Awadhesh N. Jha, Plymouth University, Plymouth, UK

Awadhesh N Jha, Plymouth University, Plymouth, UK
Use of biomarkers in aquatic organisms: implications for human & environmental health
Claudia Bolognesi, Inst. For Research on Cancer, Genoa, Italy
A pilot biomonitoring study to evaluate the environmental impact of Haven oil spill (Liguria, Italy): ten-year survey using genotoxicity biomarkers
Rebecca J. Van Beneden, University of Maine, USA
Arsenic toxicity in the aquatic environment: proteomics approach using different fish models
Kar Chowdhuri, Institute of Toxicology Research, Lucknow, India

Stress & stress associated markers for ecotoxicological assessment using fruitfly model

4:00- 4:30 h pm- COFFEE BREAK

4:30- 6:30 h pm- PARALLEL SYMPOSIA/ FORA

CATARATAS I - Molecular targets in cancer and therapeutic applications
Chair: Curtis Harris, NIH/NCI, Maryland, USA

Interweaving the threads of p53, inflammation and microRNAs networks in the tapestry of cancer
Grigory Dianov, University of Oxford, UK

Base excision repair targets for cancer therapy
Annette K. Larsen, Université de Paris 6, Paris, France.

Resistance to genotoxic anticancer agents: beyond DNA repair.
Short Talk- Clarissa RR Rocha, Institute of Biomedical Sciences, USP, SP, Brazil.
Glutathione depletion sensitizes cisplatin and temozolomide resistant glioma cells
Short Talk- Mohamed AMM El Gendy, University of Alberta, Edmonton, Canada

Synthetic lethality is a promising targeted approach: the interaction between PTEN and PNKP

CATARATAS II - Reports from the 6th international workshop on genotoxicity testing (WGT)
Chairs: David Kirkland and Dr Hans-Jörg Martus, Co-chairs of the IWGT Steering Committee.

Guenter Speit, Ulm University, Ulm, Germany.

Critical issues with the In vivo Comet assay
Bhaskar Gollapudi, CardnoEntrix, Midland, MI USA

Scope, design and interpretation of the Pig-A assay
James T MacGregor, Toxicology Consulting Services, Arnold, MD 21012, USA

Quantitative approaches to genetic toxicology risk assessment
George R Douglas, Health Canada, Ottawa, ON, Canada

Approaches to identifying germ cell mutagens
Yoshifumi Uno, Mitsubishi Tanabe Pharma Co, Japan

Recommended methods for the liver micronucleus test

IGUAÇU I - Arsenic Induced Toxicity, Genetic Susceptibility and Carcinogenicity
Chair: Ashok K. Giri, Indian Institute of Chemical Biology, Kolkata, India

Ashok K. Giri, Indian Institute of Chemical Biology, Kolkata, India
Genetic, Genomic and Epigenetic Approaches to Identify Arsenic Susceptibility and Carcinogenicity
J. Christopher Statoes, University of Louisville, Kentucky, USA
Developmental Arsenic Exposure and Dysregulation of Liver Gene Expression
Habibul Ahsan, The University of Chicago, USA
Genetic Variants Associated with Arsenic Susceptibility

IGUAÇU II - Interplay Between DNA Damage, Chromatin and Transcription
Chairs: Mats Ljungman, University of Michigan & Heather O’Hagan, Johns Hopkins University, USA

Haico Van Attikum, Leiden University, The Netherlands
Dissection of DNA damage responses using genetic interaction maps
Heather O’Hagan, Johns Hopkins University, USA
Oxidative Damage-induced Epigenetic Changes
Mats Ljungman, University of Michigan, USA
DNA Damage and Transcriptional Response
Martin Arlt, University of Michigan, USA
CNVs, fragile sites, and transcription
Short Talk - Leonardo Lima, University of São Paulo, Brazil
Genome-wide Assessment of the Recovery of RNA Synthesis after UV-irradiation

IGUAÇU III - TECHNICAL CONFERENCE

Utilizing Tools in GeneSpring 12.6 to Help Find Biomarkers in Your Data
Sponsor: Agilent Technologies Brasil
Speaker: Yuri Moreira

6:30 - 8:30 pm - POSTER PRESENTATION

Friday November 8th, 2013

8:00 - 10:00 am - PARALLEL SYMPOSIA

CATARATAS I - Transcription, DNA damage and Repair
Chair: Leon Mullenders, University of Leiden, The Netherlands

Leon Mullenders, University of Leiden, the Netherlands
DNA damage, transcription and splicing (and translation) response
Tomoo Ogi, Nagasaki University, Japan  
*Novel factors in transcription coupled repair*

Fabrizio d’Adda di Fagagna, IFOM, Milan, Italy  
*The role of transcription in DSB repair*

Evi Soutoglou, Institut de Genetique Biologie Moleculaire, Illkirch, France  
*(EMBO Young Investigator Lecture)*

*Arrest of RNA polymerase II transcription in the presence of DNA breaks*  
Short Talk- Mateus P Mori, Institute of Chemistry, USP, SP, Brazil

*XPC protein absence compromise mtDNA encoded complex I, but not nuclear-encoded complex II*

---

**CATARATAS II - Biomarkers for individual risk assessment of chronic diseases**

Chair: Steve A. Belinsky, The Lovelace Respiratory Research Institute

Steve A. Belinsky, The Lovelace Respiratory Research Institute  
*Integrating Biomarkers Across Diverse Biospecimens for Lung Cancer Risk Assessment*

Tamar Paz-Elizur, Weizmann Institute of Science, Israel  
*Harnessing DNA repair for Lung Cancer Risk Assessment and Early Detection*

Short Talk- Giovana S Leandro, São Paulo University, Ribeirão Preto, SP, Brazil  
*Expression profiles of ubiquitin proteasome and DNA repair genes in lymphocytes of patients with Alzheimer’s disease*

Short Talk- Fabio Coppedè, University of Pisa, Pisa, Italy  
*Age, gender, clinical characteristics, and biomarkers of one-carbon metabolism correlate with gene promoter methylation in colorectal cancer and healthy mucosa*

---

**IGUAÇU I - The DNA damage response in chromatin**

Chairs: Gastón Soria, University of Cordoba, Argentina  
Wilner Martínez-López, Instituto Clemente Estable, Uruguay

Haico van Attikum, Leiden University Medical Center, The Netherlands  
*Chromatin remodeling during DNA Damage Response*

Sophie Polo, Epigenetics and Cell Fate Center, Paris VII, France  
*Chromatin dynamics during DNA Repair: Histones on the move*

Wilner Martínez-López, Instituto Clemente Estable, Uruguay  
*Influence of histone acetylation on CPDs removal in mammalian cells*

Gastón Soria, University of Cordoba, Argentina  
*Non histone chromatin proteins: more than barrier to DNA repair*

Short Talk- Siamak Haghdooost, The Wennergren Institute, Stockholm University, Sweden  
*Intracellular nucleotide pool is a significant target for free radical induced mutations*
IGUAÇU II - Pesticides regulation - Mutagenicity, Genotoxicity and Carcinogenicity aspects
Chairs: Gisela de Aragao Umbuzeiro, UNICAMP, Brazil and Errol Zeiger, Zeiger Consulting, Chapel Hill, NC, USA

- Errol Zeiger, Zeiger Consulting, USA
- Genetic toxicity testing for mutagenicity
  David DeMarini, University of North Carolina at Chapel Hill, USA
- Germ cell mutagenicity testing
  Rita Schoney, Office of Water, USEPA, USA
- The shape of the low dose curve for regulating mutagens and carcinogens
  Fabiane Resende Gomes, ANVISA, Brazil.
- New rules in Brazilian Pesticide regulations mutagenicity/genotoxicity aspects
  Discussion and recommendations, moderators Gisela Umbuzeiro, UNICAMP, Brazil and Rita Schoeny, USEPA, USA.

10:00-10:30 am - COFFEE BREAK

PLENARY LECTURE

10:30-11:15 am

BALLROOM - Chair: Carlos F. M. Menck, Brazilian EMS Councilor, Brazil
Role of transcription in genomic stability and human disease
Speaker: Philip Hanawalt, Stanford University, CA, USA

CLOSING PLENARY LECTURE

11:15 am - 12:00 pm

BALLROOM - Chair: Lucia Regina Ribeiro, Brazilian EMS Councilor, Brazil
Combining Scientific Knowledge on Environment-Gene Interaction to Optimize Human Health
Speaker: Michael Fenech, CSIRO, Preventative Health Flagship, Adelaide, Australia

12:00 -13:30 pm

BALLROOM - CLOSING CEREBONY - AWARDS