

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 proteome 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 Kleinjans, 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 - Cytogenetics 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

Short talk- Marilesia 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

Short Talk- 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

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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?*

Chair: Vanesa Gottifredi, Fundación Instituto Leloir , Argentina

Patricia L. Kannouche, CNRS, Villejuif, France
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
Vanesa 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

Janet Hall, Institute Curie, Paris, France
Biomarkers of radiation exposure
Penny A. Jeggo, University of Sussex, UK
DNA damage response pathways as biomarkers of exposure to radiation
Soile Tapio, Institute of Radiation Biology, Neuherberg, Germany
Use of proteomics in search for biomarkers of radiation exposure
Mats Harms-Ringdahl, Stockholm University, Sweden
Biomarkers of individual sensitivity
Sepideh Arbabi 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
David M. DeMarini, University of North Carolina at Chapel Hill, USA

Paul White, Health Canada, Ottawa
Mutagenic and Carcinogenic Activity of Diesel Exhaust – Overview of IARC Monograph 105 (Diesel and Gasoline Engine Exhaust)
Steffen Loft, University of Copenhagen, Copenhagen, Denmark
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 Stevnsner, 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

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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 Latiostris 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

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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 Guerville, 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 Yvette, France
Structural Studies of the Multiprotein Complexes of the Human Non-Homologous End Joining Pathway.
Short Talk- Ivelina V Vasileva, Institute of Molecular Biology, Bulgarian Academy of Sciences, Sofia, Bulgaria
Role of mammalian INO80 complex in replication stress resistance
Short Talk- 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

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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 Mutation

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

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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/aprimidinic 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 epidermTM 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 HCT 116 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

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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

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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

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: Adayapalam T. 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 γ H2AX 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

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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
*Omics 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 oncologic treatments released in
hospital waste water and surface water.*

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6:30- 8:30 h 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

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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.

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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

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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 trypanosomas

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

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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 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

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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

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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

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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
Diesel Emissions and Lung Cancer Development

Tetsushi Watanabe, Kyoto Pharm. Univ., Japan

Trans-boundary air pollution with genotoxic compounds in East Asia

Yukari Totsuka, National Cancer Research Institute, Japan

Mechanisms of genotoxicity in the lung by nanomaterials

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

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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 Autónoma de México, México

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 Crystallography, 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- Takayoshi 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

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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, Vrije Universiteit Brussel, 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

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 States, 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 h pm- POSTER PRESENTATION

Friday November 8th, 2013

8:00- 10:00 h 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

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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 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 Haghdoost, The Wennergren Institute, Stockholm University, Sweden

Intracellular nucleotide pool is a significant target for free radical induced mutations

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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.

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

PLENARY LECTURE

10:30- 11:15 h 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 h 12:00 h am

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

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12:00 -13:30 h am

BALLROOM - CLOSING CEREMONY - AWARDS