

PAEMS
2008
Cape Town, South Africa



6th PAN AFRICAN ENVIRONMENTAL MUTAGEN SOCIETY CONFERENCE

Environmental Mutagens and Carcinogens:
Assessing, Managing and Reducing Risk

Cape Town International Convention Centre (CTICC)
Cape Town, South Africa
2 - 5 November 2008

PROGRAMME

Sunday, 2 November 2008

08:00 - 09:00 Registration Satellite Course 1 (SC1): Scientific Writing
Muffins and Coffee: CTICC, Roof Terrace

09:00 - 17:00 Satellite Course 1 (SC1): Scientific Writing
Venue: CTICC Roof Terrace
Tea/Coffee Breaks and Lunch: CTICC Roof Terrace

PROGRAMME - SATELLITE COURSE 1 (SC1)

Scientific Writing

Instructor: Prof John Leslie

Kansas State University, Kansas, USA

08:30 - 09:00 Registration CTICC Roof Terrace
Muffins and Coffee

09:00 - 09:15 Prof Walter Marasas
Welcome and Opening

09:15 - 10:30 Prof John Leslie
Organization, Planning and Presentations

10:30 - 11:00 Coffee / Tea Break

11:00 - 13:00 Content and Preparation of a Scientific Paper

13:00 - 14:00 Lunch

14:00 - 15:30 Editors, Reviewers and Manuscript submission

- 15:30 - 16:00 Coffee / Tea Break
- 16:00 - 16:45 Practising the Preaching - Revise an Abstract
- 16:45 - 17:00 Summary, Evaluation and Closing Remarks
- 15:30 - 18:00 Conference Registration (CTICC, Jasminum Conservatorium)
Loading Presentations (CTICC, Auditorium 2)
Put Posters up (Strelitzia Conservatorium)
- 18:00 - 20:00 Welcome Reception (Venue: CTICC, Jasminum Conservatorium)

Monday, 3 November 2008

- 07:30 - 08:00 Conference Registration (Muffins and Coffee), Loading Presentations,
Put Posters up (CTICC, Strelitzia Restaurant Area, Auditorium 2 and
Jasminum Conservatorium)

SESSION 1 *Chairpersons: Dr Hester Vismer and Prof Chris Wild*

- 08:00 - 08:30 Dr Hester Vismer
Chairperson PAEMS 2008
Opening and Welcome
- 08:30 - 09:00 O1 - Prof Chris Wild (Plenary Address)
*Molecular Epidemiology Unit, Faculty of Medicine and Health,
University of Leeds, Leeds, United Kingdom*
Mycotoxins and disease: the importance to health in Africa.
- 09:00 - 09:30 O2 - Dr Carl Albrecht (Invited Lecture)
Cancer Association of South Africa, Cape Town, South Africa
How important are man-made molecules as a cause of cancer?
- 09:30 - 09:50 O3 - Dr Wolfgang Muster, A Brigo
*F. Hoffmann-La Roche Ltd., Non-Clinical Drug Safety, Basel,
Switzerland*
Computational toxicology in drug development and early hazard
identification.

09:50 - 10:20 O4 - Prof Iqbal Parker, D-P Li (Plenary Address)
International Centre for Genetic Engineering and Biotechnology, ICGEB (Cape Town), University of Cape Town, Observatory, Cape Town, South Africa
Gene-Environment Interactions in Oesophageal Cancer in South Africa.

10:20 - 11:00 Break, Exhibitor and Poster Attended Session 1 (P1 - P7)

SESSION 2 Chairpersons: *Dr Jeanine Marnewick and Prof Volker Mersch-Sundermann*

11:00 - 11:30 O5 - Prof Theeshan Bahorun (Plenary Address)
Department of Biosciences, Faculty of Science, University of Mauritius, Réduit, Republic of Mauritius
Cancer chemoprevention: alternative strategies.

11:30 - 12:00 O6 - Prof Volker Mersch-Sundermann (Invited Lecture)
University Medical Center Freiburg, Freiburg, Germany
Modulation of cell cycle regulation and apoptosis caused by sulfur containing food ingredients: molecular mechanisms of chemoprevention caused by isothiocyanates and allyl sulfides.

12:00 - 12:20 O7 - Dr Lyndy McGaw, EE Elgorashi, VP Bagla, TA Mokoka, JN Eloff
Phytomedicine Programme, Department of Paraclinical Sciences, Faculty of Veterinary Science, University of Pretoria, Onderstepoort, South Africa
Genotoxicity, cytotoxicity and biological activity investigation of South African plants used in ethnoveterinary medicine.

12:20 - 12:40 O8 - Dr Jeanine Marnewick¹, WCA Gelderblom²
¹Oxidative Stress Research Unit, Faculty of Health and Wellness Sciences, Cape Peninsula University of Technology, Cape Town, South Africa. ²PROMECA Unit, Medical Research Council, Tygerberg, South Africa
Rooibos and honeybush – unique South African herbal beverages with chemopreventive activities.

12:40 - 13:30 Lunch, Exhibitor and Poster Attended Session 2 (P8 - P14)

13:30 - 14:00 PAEMS 2008 Group Photograph (Strelitzia Restaurant)

SESSION 3 *Chairperson: Dr David DeMarini*

- 14:00 - 14:30 O9 - Dr David DeMarini (Plenary Address)
Environmental Carcinogenesis Division, US EPA, North Carolina, USA
Mutagenicity and mutation spectra of disinfection by-products of drinking water.
- 14:30 - 14:50 O10 - Dr Virginie Faucet-Marquis¹, L Delgado¹, M DeMeo², A Dauta³,
C Albasi¹, A Pfohl-Leszkowicz¹
¹Laboratoire de Genie Chimique, Department of BioSyM, Toulouse, France. ²Faculté de Pharmacie, Marseille, France. ³Université Paul Sabatier, Toulouse, France
Validation of ecotoxicity tests to evaluate the genotoxicity of hospital water waste.
- 14:50 - 15:10 O11 - Dr Benedicta Oben¹, PM Oben¹, J-F Akoachere², CM Anu³, P Tebid⁴, E Tabi¹
¹Fisheries and Hydrobiology Unit, Department Plant and Animal Sciences, University of Buea, Cameroon. ²Department Biochemistry and Microbiology, University of Buea, Cameroon. ³Chair of Freshwater Conservation, Brandenburg Technical University, Cottbus, Germany. ⁴Department Medical Microbiology, Faculty of Health Sciences, University of Buea, Cameroon
Tumour-promoting hepatotoxins in the African aquatic environment.
- 15:10 - 15:40 O12 - Annatjie Moolman (Plenary Address)
Water Research Commission, Gezina, Pretoria, South Africa
Water and health-related research.

15:40 - 16:10 Break, Exhibitor and Poster Attended Session 3 (P15 - P20)

SESSION 4 *Chairperson: Prof Wentzel Gelderblom*

- 16:10 - 16:40 O13 - Prof Roland Ndip (Invited Lecture)
Department of Biochemistry and Microbiology, University of Fort Hare, Alice, South Africa
Potent *in vitro* antimicrobial activity of two Cameroonian medicinal plants on clinical isolates of *Helicobacter pylori*.
- 16:40 - 17:00 O14 - Dr Natalia Vorobyeva¹, AN Osipov¹, EYu Lizunova¹, OV Boeva¹, VK Bozhenko²
¹NN Semenov Institute of Chemical Physics, Russian Academy of Sciences, Moscow, Russia. ²Russian Research Center for Roentgenradiology, Moscow, Russia
DNA double-strand breaks and their repair in blood lymphocytes of prostate cancer patients.

Tuesday, 4 November 2008

08:00 - 08:30 Conference Registration (Muffins and Coffee), Loading Presentations

SESSION 5 *Chairpersons: Prof Michael Kew*
Prof Annie Pfohl-Leszkowicz

08:30 - 09:00 O15 - Prof Michael Kew (Plenary Address)
*Department of Medicine, University of Cape Town, Observatory,
Cape Town, South Africa*
Interaction between aflatoxin B₁ and other risk factors in
hepatocarcinogenesis.

09:00 - 09:20 O16 - Dr Gordon Shephard
PROMECA Unit, Medical Research Council, Cape Town, South Africa
Mycotoxin problems in the food chain: a comparison of developing
and developed worlds.

09:20 - 09:40 O17 - Prof Annie Pfohl-Leszkowicz¹, M Tozlovanu¹, M Baker², V Faucet-
Marquis¹, W Gabryelski², P Mantle³, RA Manderville²
*¹Laboratoire de Génie Chimique, Department BioSyM, Auzeville-
Tolosane, France. ²Department of Chemistry, University of Guelph,
Guelph, Ontario, Canada. ³Imperial College, London, United
Kingdom*
Overview on molecular mechanism involved in ochratoxin A
nephrotoxicity and carcinogenicity.

09:40 - 10:00 O18 - Dr Samir Abbès¹, J Ben Salah-Abbès¹, Z Ouanes²,
MA Abdel-Wahhab³, H Bacha², R Oueslati¹
*¹Laboratory of Environmental Immunology, Microbiology and
Cancerology, Faculty of Sciences Bizerte, Tunisia. ²Laboratory of
Research on Biologically Compatible Compounds, Faculty of
Dentistry, Monastir, Tunisia. ³Food Toxicology and Contaminants
Department, National Research Centre, Dokki, Cairo, Egypt*
Genotoxicity and clastogenicity of zearalenone mycotoxin:
preventive role of aluminosilicate clay.

10:00 - 10:30 Break, Exhibitor and Poster Attended Session 4 (P21 - 26)

SESSION 6

Chairperson: Prof Lothar Bohm and Prof Yogi Naik

- 10:30 - 11:00 O19 - Prof Yogi Naik (Invited lecture)
Department of Environmental Science and Health, National University of Science and Technology, Bulawayo, Zimbabwe
The impact of genotoxic pesticides on the environment.
- 11:00 - 11:30 O20 - Prof Lothar Bohm (Invited Lecture)
Faculty of Health Sciences, University of Stellenbosch, Tygerberg, South Africa
Neem toxins in agriculture and medicine.
- 11:30 - 11:50 O21 - Dr Asita Asita, R Makhalemele
Department of Biology, National University of Lesotho, Maseru, Lesotho
Assessment of pesticides for cytotoxic and genotoxic effects in the onion root tip assay.
- 11:50 - 12:30 Presentation by Applied Biosystems, South Africa
Low level quantification, identification, and characterization of carcinogenic substances in daily food and environmental samples using LC/MS/MS with library searching capabilities.
- 12:30 - 13:30 Lunch, Exhibitors and Poster Attended Session 5 (P27 - P32)
- 13:30 - 15:30 PAEMS General Meeting (Auditorium 2)
- 15:30 - 16:00 Break, Exhibitor and Poster Attended Session 6 (P33 - P38)
- 18:00 for 18:30 - 22:30 Conference Dinner and Show (Dress: Smart casual)
Venue: BMW Pavilion, V&A Waterfront, Cape Town
[Buses will leave from the CTICC at 17:30](#)

Wednesday, 5 November 2008

08:00 - 08:30 Muffins and Coffee, Loading Presentations

SESSION 7 Chairpersons: *Prof Mary Gulumian and Prof Andreyan Osipov*

08:30 - 09:00 O22 - Prof Mary Gulumian (Plenary Address)
Toxicology and Biochemistry Section, NIOH, Johannesburg, South Africa

Toxicity and genotoxicity of particles in the environment and in occupational settings.

09:00 - 09:20 O23 - Dr Sohier Korraa¹, S Abdel Meguid², R Khalil³, A Hussein⁴, N Abdel Khalek⁴

¹*Department Health Radiation Research, National Center for Radiation Research and Technology.* ²*Department Zoology, Girl's College for Arts and Education, Ain Shams University.* ³*Department Microbiology, Faculty of Medicine, Ain Shams University.*

⁴*Department Radiological Safety, National Center for Nuclear Safety and Radiation Protection, Atomic Energy Authority, Cairo, Egypt*
Apoptosis and mononuclear cell surface markers expression among persons occupationally exposed to X-Rays in Cardiac Catheterization Units.

09:20 - 09:40 O24 - Prof Andreyan Osipov
NN Semenov Institute of Chemical Physics, Russian Academy of Sciences, Moscow, Russia

Molecular and cellular effects in mice chronically exposed to low dose-rate gamma-radiation.

09:40 - 10:00 O25 - Dr Badal Bhattacharya¹, N Biswas¹, S Pal², R Nandi²
¹*Department of Chemistry, Vinayaka Missions University, Tamilnadu, India.* ²*Institute of Ecotoxicology and Environmental Sciences, Kolkata, India*

Risk assessment from heavy metals accumulation in blood on human populations in urban industrial environment.

10:00 - 10:20 O26 - Sean Doel
WSP Environment and Energy (Pty) Ltd, Cape Town, South Africa
Formaldehyde Toxicology – Occupational versus Environmental HAP?

10:20 - 11:00 Break, Exhibitor and Poster Attended Session 7 (P39 - P44)

SESSION 8 *Chairpersons: Dr Gordon Shephard and Prof John Leslie*

11:00 - 11:30 O27 - Prof Wentzel Gelderblom (Plenary Address)
PROMECC Unit, Medical Research Council, Cape Town, South Africa
Perspectives on risk assessment paradigms of genotoxic and non-genotoxic carcinogenic mycotoxins.

11:30 - 11:50 O28 - Dr Hussaini A Makun¹, TA Gbodi¹, HO Akanya¹, EA Salako², GH Ogbadu³
¹Department of Biochemistry, Federal University of Technology, Minna, Nigeria. ²Department of Crop Production, Federal University of Technology, Minna, Nigeria. ³Sheda Science and Technology Complex, Federal Ministry of Science and Technology, Abuja, Nigeria
Studies of mycoflora and mycotoxins contaminating guinea corn and rice in Niger State, Nigeria.

11:50 - 12:00 O29 - Dr Hester Vismer, WFO Marasas
PROMECC Unit, Medical Research Council, Cape Town, South Africa
Mycotoxins: aspects concerning commercial, organic and genetically modified foods.

12:00 - 12:30 O30 - Prof John Leslie (Invited Lecture)
Department of Plant Pathology, Kansas State University, Manhattan, Kansas, USA
Genetic variation in mycotoxin-producing species of *Fusarium*.

12:30 - 13:30 Lunch, Exhibitors and Poster Attended Session 8 (P44 - P50)

SESSION 9 *Chairpersons: Prof Walter Marasas and Prof Wagida Anwar*

13:30 - 13:50 PAEMS Honorary Membership Award Ceremony

13:50 - 14:20 O31 - Prof Wagida Anwar (Plenary Address)
Department of Community, Environmental and Occupational Medicine, Faculty of Medicine, Ain Shams University, Cairo, Egypt
Environmental mutagens and possibilities for prevention.

14:20 - 14:40 O32 - Prof Wojciech Piekoszewski¹, E Florek², GH Br borowicz³, W Lechowicz⁴, MK Kornacka⁵, M Kulza²
¹Department of Analytical Chemistry, Jagiellonian University

Krakow, Poland. ²Laboratory of Environmental Research, Department of Toxicology University of Medical Sciences, Poznan, Poland. ³Perinatology and Gynaecology Clinic, University of Medical Sciences, Poznan, Poland. ⁴Institute of Forensic Research, Krakow, Poland. ⁴Neonatology Clinic, University of Medical Sciences, Warsaw, Poland

Exposure of pregnant women on tobacco specific carcinogens.

- 14:40 - 15:00 O33 - Prof Janusz Blasiak¹, T Poplawski¹, K Wozniak¹, E Pawlowska², J Szczepanska²
¹Department of Molecular Genetics, University of Lodz, Lodz, Poland. ²Department of Developmental Dentistry, Medical University of Lodz, Lodz, Poland
Genotoxicity of dental materials.
- 15:00 - 15:20 O34 - Dr Kareemah Gamiieldien¹, JD Van der Merwe², E Joubert³, WCA Gelderblom¹
¹PROMEC Unit, Medical Research Council, Tygerberg, South Africa. ²Department of Food Science, University of Stellenbosch, Stellenbosch, South Africa. ³ARC-Infruitec-Nietvoorbij, Stellenbosch, South Africa
Possible mechanisms involved in the anti-cancer properties of unfermented rooibos (*Aspalathus linearis*) and honeybush (*Cyclopia* spp) herbal teas.
- 15:20 - 15:40 O35 - Prof Okezie Aruomo
Department of Pharmaceutical and Biomedical Sciences, Touro College of Pharmacy, New York, USA
Pharmacoeconomics of cancer treatment and development of adjunct therapy.

15:40 - 16:00 Closing and Tea / Coffee

Thursday, 6 November 2008

- 08:30 - 09:00 Registration Satellite Course 2 (SC2): Current Trends in Genetic Toxicity Assessment
Muffins and Coffee: Strelitzia Conservatorium
- 09:00 - 17:00 Satellite Course 2 (SC2) - Current Trends in Genetic Toxicity Assessment
(See full programme on page 24)
Venue: CTICC, Auditorium 2
Tea/Coffee Breaks and Lunch: Strelitzia Conservatorium

PROGRAMME - SATELLITE COURSE 2 (SC2)
Current Trends in Genetic Toxicity Assessment

Coordinator: Dr Jeanine Marnewick

Oxidative Stress Research Centre, Cape Peninsula University of Technology, Cape Town, South Africa

Venue: Auditorium 2, CTICC

- 08:00 - 08:45 Registration CTICC, Strelitzia Restaurant Area
Muffins and Coffee
- 08:45 - 09:00 Dr Jeanine Marnewick
Oxidative Stress Research Centre, Cape Peninsula University of Technology, Cape Town, South Africa
Opening
- 09:00 - 10:00 Dr David DeMarini
US Environmental Protection Agency, North Carolina, USA
Mutagenesis (AMES, COMET, chromosome aberrations, micronuclei).
- 10:00 - 10:30 Coffee / Tea break
- 10:30 - 11:30 Dr David DeMarini
US Environmental Protection Agency, North Carolina, USA
Genetic biomarkers and molecular epidemiology.
- 11:30 - 12:30 Prof Wagida Anwar
Professor of Community, Environmental and Occupational Medicine, Faculty of Medicine, Ain Shams University, Ain Shams University, Cairo, Egypt
Classical and molecular cytogenetics of human chromosomes.
- 12:30 - 13:30 Lunch
- 13:30 - 14:30 Prof Volker Mersch-Sundermann
University Medical Center, University of Freiburg, Freiburg, Germany
Fine and ultrafine particles outdoors and indoors: knowledge and hypothesis of their contribution to mutagenicity and carcinogenicity.
- 14:30 - 15:30 Dr David DeMarini
US Environmental Protection Agency, North Carolina, USA
Chemical Carcinogenesis.
- 15:30 - 16:00 Additional questions
- 16:00 Closing and Coffee / Tea