

Draft Program (May 21 2014)
43rd Annual Meeting of the EEMS hosted by UKEMS

Day 1: Sunday 6th July, 2014

REGISTRATION

13:00 – 17:00 Foyer, George Fox Centre, Lancaster University

EEMS Continuing Education Program

- 13:30 – 17:00**
1. “Comet Assay” (Sponsored by HLS)
George Fox Centre, Room LT3
(Tea break 15.15 – 15.45 Foyer)
 2. “DNA damage responses”
George Fox Centre, Room LT4
(Tea break 15.15 – 15.45 Foyer)

17:30 **OPENING OF CONFERENCE**
George Fox Centre, Lecture Theatre 1

Welcome by Presidents of EEMS and UKEMS

17:40 – 18:30 **Fritz Sobels Award Lecture**
Introduced by Leon Mullenders

19:00 – late **Welcome reception and buffet** (Foyer George Fox)

Program may be subject to change as speakers and presentation titles are confirmed in the coming weeks

The development of the scientific program has been supported with organizational input from the UKEMS Molecular Epidemiology Group (MEG), Industrial Genotoxicity Group (IGG) and EEMS Industry Special Interest Group, The Genome Stability Network (GSN, an affiliate of UKEMS) and sponsorship & organizational support from ILSI-HESI, Unilever, ECETOC, Lancaster University, HLS and ECVAM.

The organizers are also seeking support from Industry.

Program for 43rd Annual Meeting of the EEMS hosted by UKEMS

Day 2: Monday 7th July 2014 - Morning

REGISTRATION

08:30 – 12:30 Foyer, George Fox Centre, Lancaster University

PLENARY LECTURE (Lecture Theatre 1)

09:00 – 9:05 Welcome from **Francis L Martin** (Local Organiser, Lancaster University)

09:05 – 9:55 **Dr Ketan J Patel** (PNAC, MRC, Cambridge)
The genetic basis of how mammals protect against genotoxic metabolites

Symposium 1: Next generation sequencing (NGS) and its impact on understanding mutagenesis

Chair: L Mullenders (Netherlands)
George Fox Centre, Lecture Theatre 1 (LT1)

10:00 – 10:30 Dr. Marcel Tijsterman (LUMC, Netherlands)
Polymerase theta-mediated end joining (TMEJ) of replication-associated DNA breaks

10:30 – 11:00 Dr. Ludmil B Alexandrov (Wellcome Trust Sanger Inst., Cambridge, UK)
Signatures of mutational processes in human cancer

11:00 – 11:20 *Coffee, George Fox Centre Foyer*

11:20 – 11:50 Dr. Nicola Crosetto (Goethe University, Germany)
Mapping 'Breakomes' by Next Generation Sequencing: Methods and Perspectives

11:50 – 12:20 Dr. Alain Nicolas (Paris, France)
Mutational landscape of yeast mutator strains

12:20 – 12:50 Dr. Anton Gartner (Dundee, UK)
Genetic Toxicology by whole genome sequencing of *C. elegans*

Symposium 2: The Exposome (Organised by UKEMS MEG)

Chairs: Volker M. Arlt (UK); Soterios Kyrtopoulos (Greece)
George Fox Centre, Room LT3

10:00 – 10:30 Dr. Zdenko Herceg (IARC, France)
Characterizing the epigenome and exposome in evaluating environmental exposures and cancer risk

10:30 – 11:00 Dr. Serena Nik-Zainal (Wellcome Trust Sanger Institute, UK)

Signatures of mutagenesis in mammalian cells

11:00 – 11:20 *Coffee, George Fox Centre Foyer*

11:20 – 11:50 Dr. Toby Athersuch (Imperial College London, UK)
The role of metabolomics in characterising the human exposome

11:50 – 12:20 Dr. Theo de Kok (Maastricht University, The Netherlands)
Internal exposome: 'omics' approaches for developing novel biomarkers of exposure

12:20 – 12:50 *Selected abstracts*
2 Short Presentations (15 min)

Workshop 1: Regulatory genetic toxicology: new challenges and case studies (Organised by UKEMS IGG & EEMS Industrial Gp)

Chairs: Ann Doherty (UK); Elisabeth Lorge (France)
George Fox Centre, Room LT4

10:00 – 10:30 Dr. Steven Dertinger (Litron Laboratories, USA)
Interpreting in vitro micronucleus positive results: Simple biomarker matrix discriminates clastogens, aneugens, and irrelevant positive agents

10:30 – 11:00 Dr. Jim Harvey (GSK, UK)
The ICH M7 guideline: industrial feedback & case studies

11:00 – 11:20 *Coffee, George Fox Centre Foyer*

11:20 – 11:50 Dr. Peter Kasper (BfARM, Germany)
Genetic toxicology testing of therapeutic biologicals: Current discussions on best practices

11:50 – 12:10 Dr. Melanie Guerard (Roche, Switzerland)
Genotoxicity testing of peptides: folate deprivation as a marker of exaggerated pharmacology

12:10 – 12:30 Dr. Marc Audebert (INRA / France)
A high throughput genotoxicity screen using γ H2AX

12:30 – 12:50 *Selected abstract*
1 Short Presentation (20 min)

13:00 – 14:00
Lunch (George Fox Centre)

13:15 Lunchtime lecture (Supported by ECVAM) LT4

Chair Raffaella Corvi (ECVAM, Italy)

Prof. David Kirkland (Kirkland Consulting, UK)

Mammalian cell results with Ames-positive chemicals – correlations with presence or absence of in vivo genotoxic or carcinogenic activity

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Day 2: Monday 7th July 2014 – Afternoon

Symposium 3: Cellular stress, chromatin remodelling and epigenetics (Organised and sponsored by the GSN)

Chair: Simon Reed (UK)

George Fox Centre, Lecture Theatre 1

14:00– 14:30 Dr. Ivan Ahel (Oxford, UK)
Structure and catalytic mechanism of adp-ribosyl glycohydrolases

14:30 – 15:00 Dr. Haico van Attikum (LUMC, Netherlands)
Dissection of DNA damage responses using genetic interaction maps

15:00 – 15:30 Prof. Simon Reed (Cardiff University, UK)
Nucleotide Excision Repair Factors Directly Regulate dNTP Synthesis in Response to UV Damage in Yeast

15:30 – 16:00 *Coffee, George Fox Centre Foyer*

16:00 – 16:30 Dr. Svetlana Khoronenkova (Oxford University, UK)
Coordination of DNA damage signalling and repair

16:30 – 17:00 *Selected abstracts*
2 Short Presentations (15 min)

Symposium 4: Therapeutic Cancer Prevention

Chairs: Karen Brown (UK); Clarissa Gerhäuser (Germany)

George Fox Centre, Room LT3

14:00– 14:30 Prof. Karen Brown (Leicester University, UK)
Less is more for cancer chemoprevention: evidence of a non-linear dose response for the protective effects of resveratrol

14:30 – 15:00 Prof. Ann Williams (Bristol University, UK)
Cyclooxygenase inhibitors for the prevention of cancer

15:00 – 15:30 Dr. Clarissa Gerhäuser (DKFZ, Germany)
Epigenetics and cancer chemoprevention

15:30 – 16:00 *Coffee, George Fox Centre Foyer*

16:00 – 16:35 Dr Farhat Khanim (University of Birmingham, UK)
Drug repurposing: From Cancer treatment to prevention

16:35 – 17:10 Professor Gareth Evans (Manchester University, UK)
Current state of the use of SERMS for women unaffected with breast cancer: Uptake of tamoxifen in young women

17:10 – 17:30 Ankur Karmokar, University of Leicester, UK
Assessing molecular mechanisms of curcumin and its *in vivo* efficacy in targeting colorectal cancer stem-like cells

Workshop 2: Nanogenotoxicity (Sponsored by ECETOC)

Chairs: Roel Schins (Germany); Ben van Ravenzwaay (Germany)

George Fox Centre, Room LT4

14:00– 14:10 Dr. Alan Poole (ECETOC, Belgium)
Consideration of Relevant Investigations Providing a Picture of Genotoxic Potential of Nanomaterials

14:10– 14:40 Dr. Shareen Doak (Swansea University, UK)
Caveats to investigating the genotoxicity of nanomaterials

14:40 – 15:10 Dr. Laetitia Gonzalez (VUB, Belgium)
Novel insights in nano-genotoxicology: from 2009 till now

15:10 – 15:40 Dr. Martin Clift (University of Fribourg, Switzerland)
The role of oxidative stress in nanomaterial related genotoxicity *in vitro*

15:40 – 16:00 *Coffee, George Fox Centre Foyer*

16:00 – 16:30 Dr. Roel Schins (University of Dusseldorf, Germany)
Genotoxicity of nano and non-nano materials: Lessons from different dimensions

16:30 – 17:00 Dr. Lan Ma-Hock (BASF, Germany)
A life-time inhalation carcinogenicity study with two nano materials

17:00 – 17:10 Dr. Bennard van Ravenzwaay (BASF, Germany + ECETOC, Belgium)
Summary & Conclusions

Poster Session 1

Foyer, George Fox Centre

17:30 – 19:30 Poster Session
First hour odd numbered posters manned, second hour even numbered posters manned

Beer/Wine and non-alcoholic refreshments will be served

Please find time to visit our trade stands

19:30 Dinner: At Barker House (Included in delegate pass)

Program for 43rd Annual Meeting of the EEMS hosted by UKEMS

Day 3: Tuesday 8th July 2014 - Morning

Symposium 5: Replication and transcription control after DNA damage

Chair: L Mullenders (Netherlands)

George Fox Centre, Lecture Theatre 1

09:00 – 09:30 Dr. Niels de Wind (LUMC, Netherlands)
Genome instability following mitotic transmission of unreplicated DNA lesions

09:30 – 10:00 Dr. Emmanuelle Despras (Paris, France)
Regulation of canonical and non canonical functions of specialized DNA polymerase eta in response to DNA damage

10:00 – 10:30 Dr. Peter McHugh (Oxford, UK)
The role of exonucleases in replication-coupled DNA interstrand crosslink repair

10:30 – 11:00 *Coffee, George Fox Centre Foyer*

11:00 – 11:30 Prof. Jordi Surrallès (Universitat Autònoma de Barcelona, Spain)
Discovery of novel Fanconi anemia genes: fundamental research and clinical implications

11:30 – 12:00 Dr. Evi Soutoglou (IGBMC, France)
NEED4 and Cul3 dependent RNA pol II degradation in the presence of DSBs

Symposium 6: Systems biology (Sponsored by Unilever)

Chairs: Francis L Martin (UK); Yeyejide Adeleye (UK)

George Fox Centre, Room LT3

09:00 – 09:30 Dr. Maurice Whelan (ECJRC, Ispra, Italy)
Using Adverse Outcome Pathways to support mechanistic based safety assessment

09:30 – 10:00 Dr. Rebecca Clewell (The Hamner, RTP, USA)
Applying the TT21C principles to safety assessments of new chemicals including DNA damaging agents

10:00 – 10:30 Prof. Bob van de Water (Leiden University, The Netherlands)
Towards a High Throughput Microscopy Pathway in Toxicity Reporter Platform for Chemical Safety Assessment

10:30 – 11:00 *Coffee, George Fox Centre Foyer*

11:00 – 11:30 Dr. Yeyejide Adeleye (Unilever, UK)
Implementing Toxicity Testing in the 21st Century (TT21C) using Quercetin as a Case Study for Consumer Safety Risk Assessment

11:30 – 12:00 *Selected abstracts*
2 Short Presentations (15 x 2 min)

Workshop 3: Ecogenotoxicity

Chairs: Awadhesh Jha (UK); J Kevin Chipman (UK)

George Fox Centre, Room LT4

09:00 – 09:30 Prof. Awadhesh Jha (Univ. Plymouth UK)

Applications of biomarkers in aquatic organisms: linking human and environmental health

09:30 – 10:00 Dr. Claudia Bolognesi (National Inst. Cancer, Genoa, Italy)

Mussel micronucleus cytome assay, an approach to evaluate cytotoxic and genotoxic environmental pollution: examples of field application

10:00 – 10:30 Prof. Rebecca J Van Beneden (University of Maine, USA)

Impact of environmental exposures on metabolic pathways and behavior in fish

10:30 – 11:00 Coffee, George Fox Centre Foyer

11:00 – 11:30 Prof. J Kevin Chipman (Univ. Birmingham, UK)

Reflection of exposure of aquatic organisms to environmental pollutants via the transcriptome and epigenome

11:30 – 12:00 *Selected abstracts*

2 Short Presentations (15 min)

12:00 – 13:30

Lunch (George Fox Centre)

12:05 – 12:45 UKEMS AGM

George Fox Centre, Room LT3

12:50 – 13:30 EEMS AGM

George Fox Centre, Room LT4

Program for 43rd Annual Meeting of the EEMS hosted by UKEMS

Day 3: Tuesday 8th July 2014 - Afternoon

Poster Session 2

Foyer, George Fox Centre

13:30 – 15:30 Poster Session

First hour odd numbered posters manned, second hour even numbered posters manned

Please find time to visit our trade stands

15:30 – 16:30 EEMS Young Scientist Award Lecture (LT1)

Introduction: President of EEMS

16:30 – 18:00 EEMS Young Scientist Session (LT1)

From Selected Abstracts (15min per presentation inc. questions)

Chair: Vice President EEMS

Followed by:

Coaches to Imperial Hotel, Blackpool @ 6:30pm

EEMS Conference Banquet

19:15 – late

Program for 43rd Annual Meeting of the EEMS hosted by UKEMS

Day 4: Wednesday 9th July 2014 - Morning

Symposium 7: The DNA damage response and human disease

Chair: **S Reed (UK)**

George Fox Centre, Room LT3

09:00 – 09:30 Prof. Keith Caldecott (University of Sussex, UK)
DNA Strand Breaks and Neurological Disease

09:30 – 10:00 Prof. Karen Crasta (NTU, Singapore)
DNA breaks and chromosome pulverisation from errors in mitosis

10:00 – 10:30 Dr. Laura Niederhofer (The Scripps Research Institute, USA)
Unexpected sequelae of endogenous DNA damage

10:30 – 11:00 Coffee Break

11:00 – 11:30 Maria Abad (Madrid, Spain)
Reprogramming in vivo: The power of manipulating cell plasticity

11:30 – 12:00 Dr. Rebecca McIntyre (Wellcome Trust Sanger Institute, Cambridge, UK)
High-throughput genetic screens to identify novel regulators of mammalian genome maintenance

Symposium 8: New insights into genetic & epigenetic mechanisms of de novo germline (epi)mutation

Chairs: **Martin Brinkworth (UK); Francesca Pacchierotti (Italy)**

George Fox Centre, Lecture Theatre 1

09:00 – 09:30 Dr. Mino Rassoulzadegan (Inserm, Nice, France)
RNA-mediated heredity of paramutation and acquired phenotype in the mouse

09:30 – 10:00 Dr. John McCarrey (University of Texas, USA)
Epigenetic Regulation of Genetic Integrity in Germ Cells and Stem Cells

10:00 – 10:30 Prof. Andrew Wilkie (University of Oxford, UK)
Selfish mutations in spermatogenesis and paternal age effects

10:30 – 11:00 Coffee Break

11:00 – 11:30 Dr. Martin Brinkworth (University of Bradford, UK)
***In vitro* screening of reproductive toxins using Staput-isolated male germ cells**

11:30 – 12:00 Dr. Francesca Pacchierotti (ENEA, Rome, Italy)
Germline transmission of enhanced susceptibility to radiation-induced brain tumors

Workshop 4: Consensus recommendations of the 2013 IWGT

Chairs: David Kirkland (UK); Hansjoerg Martus (Germany)
George Fox Centre, Room LT4

09:00 – 09:10 Dr. Hansjoerg Martus (Novartis, Switzerland)
Consensus recommendations from the 6th IWGT: Introduction

09:10 – 09:40 Dr. Bhaskar Gollapudi, (Exponent Inc, USA)
IWGT Workgroup Report on the In Vivo Pig-a Mutant Phenotype Assay

09:40 – 10:10 Dr. Brian Burlinson (HLS, UK)
6th IWGT Meeting: Report from the Comet Assay Working Group, “Critical Issues with the in vivo Comet Assay”

10:10 – 10:40 Prof. Yoshifumi Uno (Mitsubishi Tanabe, Japan)
A report of the liver micronucleus test working group in the 6th IWGT

10:40 – 11:00 Coffee, George Fox Centre Foyer

11:00 – 11:30 Dr. Paul White (Health Canada, Canada)
A toolbox to estimate point-of-departure metrics in genetic toxicology

11:30 – 12:00 Dr. George Douglas (Health Canada, Canada)
Approaches for Identifying Germ Cell Mutagens: Report of the 2013 IWGT Workshop on Germ Cell Assays

12:00 – 12:45
Lunch (George Fox Centre)

12:45 – 13:30
UKEMS Award Lecture (LT1)
Introduced by the President of UKEMS

Followed by
Afternoon Excursions

19:15 – late
EEMS BBQ
Venue TBC

Program for 43rd Annual Meeting of the EEMS hosted by UKEMS

Day 5: Thursday 10th July 2014 Morning

Symposium 9: Mitochondrial Mutagenesis

Chairs: Jon Lyon (UK); Eugenia Dogliotti (Italy)

George Fox Centre, Lecture Theatre 1

09:00 – 09:30 Prof. Patrick Chinnery (Wellcome Trust, Newcastle University, UK)

Mitochondrial DNA mutations in health and disease

09:30 – 10:00 Prof. Ian Holt (MRC NIMR, London, UK)

The accumulation of mutant mitochondrial DNA in disease and ageing – Beyond oxidative stress

10:00 – 10:30 Dr. Eugenia Dogliotti (Istituto Superiore di Sanita, Rome, Italy)

The role of mitochondrial dysfunction in human syndromes defective in DNA repair

10:30 – 11:00 *Coffee, George Fox Centre Foyer*

11:00 – 11:30 Dr. Bill Rumsey (GSK, USA)

Mitochondrial DNA damage in smoking related pulmonary disease

11:30 – 11:45 Chloe Moss (MRC NIMR, London, UK)

Towards a Mitochondrial Fragilome

11:45 – 12:00 *selected abstract*

Short Presentation (15min)

Symposium 10: Are There Thresholds for Genotoxicity (Sponsored by ILSI Health and Environmental Sciences Institute)

Chairs: Jennifer Young Tanir (USA); George Johnson (UK)

George Fox Centre, LT3

09:00 – 09:30 Dr. Véronique Thybaud (Sanofi, France)

Impact Of Moving From Qualitative To Quantitative Approach On Genotoxicity Risk Assessment

09:30 – 10:00 Dr. Bhaskar Gollapudi (Exponent, USA)

Dose-response assessment in genetic toxicology: Thresholds or points of departure?

10:00 – 10:30 Dr. George Johnson (Swansea University, UK)

Roles of DNA repair in points of departure for genotoxicity

10:30 – 11:00 *Coffee, George Fox Centre Foyer*

11:00 – 11:30 Dr. Paul White (Health Canada, Canada)

Analyses of genotoxicity dose-responses: pros and cons of the different approaches and biological relevance

11:30 – 12:00 Dr. Shoji Fukushima (Japan Bioassay Research Centre, Japan)
Threshold of Genotoxic Carcinogens: Consideration from No-Effect Doses for Cancer-Related Markers in Chemical Carcinogenesis

Symposium 11: Environmental monitoring & sensor based technology (Sponsored by Lancaster University)

Chair: Francis L Martin (UK)

George Fox Centre, Room LT4

09:00 – 09:30 Prof. Pierre L Martin-Hirsch (Lancaster University, UK)
Translation into a clinical setting: the studies that would be needed

09:30 – 10:00 Prof. Francis L Martin (Lancaster University, UK)
Biospectroscopy as a novel approach to diagnose underlying disease: from biofluids to cytology

10:00 – 10:30 Prof. Walter Schubert (Otto-von-Guericke-University, Germany)
Systematic toponome decoding of disease mechanisms in human tissue

10:30 – 11:00 *Coffee, George Fox Centre Foyer*

11:00 – 11:30 Prof. Janina Kneipp (Humboldt Universitat zu Berlin, Germany)
Nanomaterials in complex biological systems: insights from surface enhanced Raman scattering (SERS)

11:30 – 12:00 Prof. Heqing Shen (Institute of Urban Environment, Xiamen, China)
Metabolomics study in a Population-Based Health Risk Assessment of Chemical-Related Male Infertility: Epidemiology Study of Arsenic

Conference Close

12:00 Profs. Leon Mullenders & Francis L Martin

12:15 – 13:00

Lunch (George Fox Centre)

Program may be subject to change as speakers and presentations are confirmed in the coming weeks

TBA: to be arranged; TBC: to be confirmed

EEMS Continuing Education Program

1. Comet Assay: Chair – Brian Burlinson (UK)

	Title	Time	Speaker
1	Introduction	13:30 13:45	- Brian Burlinson, HLS UK
2	How to perform a high quality in vivo comet assay that is acceptable to the regulators?	13:45 14:15	- Ulla Plappert-Helbig, Novartis, Switzerland
3	Interpretation of comet data - what does it all mean?	14:15 14:45	- Carol Beevers, Covance UK
4	Combination and Integration of the Comet assay in vivo: Experiences with repeated dosing of Methyl methanesulfonate, Temozolomide and Dibenzopyrene	14:45 15:15	- Melanie Guerard, Roche, Switzerland
	TEA	15:15 15:45	
5	Results of the EFPIA survey on the <i>in vivo</i> comet assay	15:45 16:15	- Bas-Jan Van Der Leede, Janssen Research & Development Belgium
6	Experience with (in vivo) comet assays in pharmaceutical testing: A regulator's view	16:15 16:45	- Roland Froetschl, BfArM Germany
7	Round-up	16:45 17:00	- BB and speakers

Program may be subject to change as speakers and presentations are confirmed in the coming weeks