



## International Workshops on Genotoxicity Testing (IWGT)

### Steering committee:

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From 31<sup>st</sup> October to 2<sup>nd</sup> November, 2013, the 6th International Workshop on Genotoxicity Testing will be held at the Bourbon Cataraz Hotel in Foz du Iguacu, Brazil. This workshop will, as usual, be organized as a satellite meeting to the International Conference on Environmental Mutagens (ICEM) held every four years. IWGT has been one of the most successful formats for gaining consensus on current issues in genetic toxicology, since world-leading experts on individual subjects are assembled, and recommendations on test systems or strategic themes are agreed and published on the basis of the best scientific knowledge in the different areas.

IWGT has held 5 previous workshops (Melbourne, 1993; Washington, 1999; Plymouth, 2002; San Francisco, 2005; Basel, 2009) and the consensus recommendations from these have been highly influential in shaping the revisions to OECD guidelines and the recommendations in the ICH S2 guidance. There are new challenges facing the genetic toxicology community including how to conduct and interpret new assays, how to measure effects in germ cells, how to reduce animal usage, and when thresholds for genotoxic effects exist.

At the 6th IWGT, the following topics will be addressed:

- A workgroup on the Comet assay will focus on technical issues such as:
  - Best way(s) to measure toxicity
  - The impact of toxicity (apoptosis, necrosis) on the interpretation of Comet assay results
  - Why some studies submitted to regulatory agencies have not been accepted
  - Integration of the Comet assay into repeat-dose toxicity studies
  
- A workgroup on the Pig-A assay will try to reach agreement on the following:
  - The scope of the assay
  - Study Design
  - Data evaluation and reporting
  - The status of validation.
  
- A workgroup will discuss quantitative aspects of genotoxicity testing, namely:
  - The need for quantitative assessment of genotoxic risk *vs.* hazard assessment
  - Acceptable Risk *versus* precautionary principle depending on human use and exposed populations
  - Methods to analyze exposure-response relationship of genotoxic responses and best descriptors
  - Consensus on thresholds/points of departure
  - Parameters and data necessary to define exposure-related risk
  - Interspecies extrapolation
  
- A workgroup will discuss approaches to identifying germ cell mutagens. They will discuss:
  - Why we need germ cell tests
  - Regulatory requirements for germ cell tests in different countries and international organizations
  - When to do germ cell tests and when NOT to do them
  - Which assays are currently being used - their advantages and disadvantages
  - What new assays are in the pipeline and what's missing
  - Whether germ cell effects can be extrapolated to inherited effects
  - The roles of pharmacokinetics and pharmacodynamics in relation to germ cell effects
  
- A workgroup will discuss the liver micronucleus test, and its objectives are:
  - To reach recommended protocol(s) for liver micronucleus tests with partial hepatectomy, in young rats, and in adult rats after repeated dosing of chemicals

- To clarify the strengths and limitations of each method
- To identify micronucleus tests in tissues other than liver, for example GI tract

➔ After 30 years of testing according to standardized approaches, it is timely to look ahead and try to anticipate the shape of genotoxicity testing in the future. A discussion on the following will be held in the full plenary session:

- What will be different in 10-15 years time?
- Will we still be using the same *in vitro* and *in vivo* tests?
- What kind of mechanistic data do we envisage being useful?
- Can data from screening studies (toxicogenomics, Green/BlueScreen etc) be helpful?
- What will be the impact of epigenetics?

As usual, expert scientists from academia, government and industry, from across the world, are being invited to participate, to provide focused discussion and to give conclusive recommendations. The success of IWGT has been largely due to getting powerful representation of all stakeholders around the table, and striving for data-driven consensus. Those of you interested in attending are welcome to join the audience. Details of how to register for the workshop will be available soon.



David Kirkland and Hans-Jörg Martus

IWGT Co-chairs.