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# Recap of Day One

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**James Kim, Ph.D.**  
**HESI**

Genetic Toxicology:  
Opportunities to Integrate  
New Approaches

**April 25, 2012**

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ILSI Health and  
Environmental Sciences  
Institute

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# Session 1: Alternative experimental models to improve genetic toxicity testing

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- **Introduction** – *Dr. Marilyn Aardema (BioReliance, USA)*
- **Overview of the use of 3-dimensional tissue constructs for genotoxicity testing**
  - *Dr. Stefan Pfuhler (Procter & Gamble, USA)*
- **Development of in vitro toxicity testing using hepatocytes differentiated from human stem cells**
  - *Dr. Seiichi Ishida (NIHS, Japan)*
- **Humanized models in toxicology and their applications to hazard characterization and risk assessment**
  - *Dr. Darrell Boverhof (Dow Chemical, USA)*
- **Session 1 Discussion**—SWOT analyses



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# Session 2: Biomarkers of epigenetic changes and their applicability to genetic toxicology

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- **Introduction**

- *Dr. Bhaskar Gollapudi (The Dow Chemical Co., USA)*

- **A new paradigm for epigenetic control of cell phenotype: Dynamic reprogramming of tRNA modifications and ribosomes controls selective translation of stress response proteins**

- *Dr. Peter Dedon (Massachusetts Institute of Technology, USA)*

- **Epigenomics and impact for drug safety sciences**

- *Dr. Jennifer Marlowe (Novartis, USA)*

- **Epigenetic traits as biomarkers of carcinogenesis**

- *Dr. Igor Pogribny (U.S. Food and Drug Administration, NCTR)*

- **MIR-34 prevents in vivo lung tumor initiation and progression in the therapeutically resistant *KRAS;TRP53* mouse model**

- *Dr. Andrea Kasinski (Yale University)*

