

PROGRAMME

Practical Course & Workshop: September 24th – 28th, 2007

**Venue: Fundação Ezequiel Dias
Rua Conde Pereira Carneiro, 80 - Gameleira
Belo Horizonte - MG (Cep: 30510-010), Brazil
Tel: 55 + 31 - 3371.9510 Fax: 55 + 31 - 3371.9511**

BIOSAFETY OF GM CROPS AND THE EVOLUTION OF REGULATORY FRAMEWORKS: ISSUES AND CHALLENGES

This meeting will focus in the following central activities:

1. A TRAINING WORKSHOP ON GM CROPS BIOSAFETY, with formal lectures on biosafety and several sessions of hands-on exercises as in actual regulatory review processes.
2. An analysis and discussion on the near term evolution and challenges in the biosafety of GM crops, namely the developments of GM crops involving:
 - a) complex phenotypes,
 - b) non-food applications
 - c) gene-restriction constructs

All these add-up to a relevant area of general interest in GM crop technologies because:

- are likely to have a significant impact on GM (and possibly also non-GM) crops regulatory frameworks, and
- will allow for a thorough discussion on the relationships between genetic engineering using genomics-guided design and traditional breeding.

DAY 1 - September 24th

BIOSAFETY OF GENETICALLY MODIFIED CROPS

Risk Analysis, Principles, Methodology and Harmonization

9:00- 10:00 hs- Registration and instructions

10:00- 11:00 hs- Opening session with Brazilian and international authorities

11:00- 11:30 hs- Coffee break

11:30- 12:30 hs- The ICGEB: promoting safe use of biotechnology- **Dr. Giuliano Degrassi, ICGEB, Italy**

12:30- 13:30 hs- General Aspects of risk analysis- **Dr. Gladys Huerga, CONABIA, Argentina**

13:30- 14:00 hs- Discussion

14:00- 15:00 hs- Lunch

15:00- 16:00 hs- Impact of agricultural biotechnology on biodiversity- **Dr. Klaus Ammann, TU Delft, Netherlands**

16:00- 16:45 hs- GMO risk assessment and regulation at the European level- **Dr. Joachim Schiemann, Federal Biological Research Centre for Agriculture and Forestry (BBA), Institute for Plant Virology, Microbiology and Biosafety, Germany**

16:45- 17:00 hs- Discussion

17:00- 17:30 hs- Coffee break

17:30- 18:15 hs- Regulatory Frameworks in LAC and the Biosafety Protocol- **Dr. Leila Oda, ANBio, Brazil**

18:15- 19:00 hs- Gene stacking – **Dr. Gladys Huerga, CONABIA, Argentina**

19: 00- 19:45 hs- Presentation of the Hands on Exercises-

General Coordination: Dr. Moisés Burachik and Dr. Leila Oda

Introduction to individual dossier (studies of real cases):

5 dossiers will be studied separately by teams composed of six- eight participants each, assisted by a coordinator having previous experience in the case.

- Group 1- Potato – **Coord. Dr. Elizabeth Hodson (Colombia)**
- Group 2- Cotton – **Coord. Dr. Eduardo Romano (Brazil) / Dr. Maria Fátima Grossi de Sá (Brazil)**
- Group 3- Banana – **Dr. Leila Oda (Brazil)**
- Group 4- Soybean – **Coord. Dr. Gladys Huerga (Argentina) / Moisés Burachik (Argentina)**
- Group 5- Blue carnation – **Coord. Dr. Rodrigo Artuduaga (Colombia)**

19:45- 20:00 hs- Discussion

20:00 hs- Departure of bus to the hotel

DAY 2. September 25th

BIOSAFETY OF GENETICALLY MODIFIED CROPS WITH COMPLEX PHENOTYPES

GM Crops with Complex Phenotypes: state of the art and regulatory challenges

9:00 - 9:45 hs- Basic cellular processes and complex phenotypes- **Dr. Elíbio Rech- Embrapa, Brazil**

9:45 - 10:30 hs- Genes/gene constructions expressing complex phenotypes- **Dr. Esteban Hopp, INTA, Argentina**

11:00 – 11:30 hs- Coffee break

11:30 – 12:15 hs- Resources for risk analysis (data bases, gene banks, bibliography, etc..)- **Dr. Giuliano Degrossi, ICGEB, Italy**

12:15 - 13:00 hs- Non-target arthropods risk assessment of insect-resistant GM crops- **Dr. Joerg Romeis, Agroscope Reckenholz-Tänikon Research Station ART, Switzerland**

13:00 – 13:45 hs- Environmental post-market monitoring of Bt-maize using butterflies and natural enemies as indicators- **Dr. Joerg Romeis, Agroscope Reckenholz-Tänikon Research Station ART, Switzerland**

13: 45 - 14:00 hs- Discussion of the morning sessions

14: 00 - 15:00 hs- Lunch

15:00 - 15:45 hs- Introduction to food safety assessments and the CODEX Alimentarius guidelines – **Dr. Harry Kuiper, RIKILT – Institute of Food Safety, Wageningen University & Research Centre, The Netherlands**

15:45- 16:30 hs- Food Safety assessment of new technologies including the possibility of using “omic” technologies- **Dr. Bruce Chassy, University of Illinois, USA**

16:30 - 17:00 hs- Discussion

17:00 - 17:30 hs – Coffee break

17:30 – 20:00 hs- Case studies- All five groups together with support of all coordinators

20:00 hs- Departure of bus to the hotel

DAY 3. September 26th

OVERVIEW OF THE NEW REGULATORY CHALLENGES

Frontiers in GM plant technologies

9:00 - 9:45 hs- Comparison between genomics-guided transgenes (GGT) with traditional breeding- **Dr. Ernesto Paterniani, Esalq – USP, Brazil**

9:45 - 10:30 hs- Biosafety of (GM) Crops with Complex Phenotypes – **Dr. Moisés Burachik, SAGPyA, Argentina**

10:30 – 11:00 hs- Discussion

11:00 - 11:30 hs- Coffee break

11:30 - 12:15 hs- Plant Molecular Pharming and other industrial applications: state of the art – **Dr. Esteban Hopp, Instituto de Biotecnología INTA, Las Cabañas y Los Reseros, Argentina**

12:15 - 13:00 hs- Gene flow and constructions to mitigate gene flow from transgenic crops - **Dr. Jonathan Gressel, Weizmann Institute of Science, Israel**

13:00 - 13:45 hs- The impact of agbiotech in the sustainable development of the Latin America and the Caribbean region- **Dr. Rodrigo Artunduaga, University Externado, Colombia**

13:45 - 14:00 hs- Discussion of the morning sessions

14:00 - 15:00 hs- Lunch

15:00 – 15:45 hs- *Weed control and stress tolerance* – **Dr. Chris Gliddon, University of Bangor, UK**

15 :45 - 17 :00 hs- Discussion

17:00- 17:30 hs- Coffee break

17:30 – 20:00 hs- Case studies- All five groups together with support of all coordinators Departure of bus to the hotel

DAY 4. September 27th

OVERVIEW OF THE NEW REGULATORY CHALLENGES

Frontiers in GM plant technologies and Bioethics perspectives

9:00 - 9:45 hs- Public perception, awareness and its consequences – **Dr. Lúcia de Souza, ANBio,**

9:45 - 10:30 hs- Regulation trends towards a sensible regulation of transgenic crops within a bioethics perspective– **Dr. Chris Gliddon, University of Bangor, UK**

10:30- 11:00 hs- Application of proteomic tools for assessing transgenic soybeans for biosafety studies- **Dra. Savithyri Natarajan, USDA, APHIS, USDA, USA**

11:00 – 11:30 hs- Coffee break

11:30 – 12:15 hs- Current status and environmental impacts of transgenic herbicide-resistant crops- **Dr. Antonio Cerdeira, Embrapa Meio Ambiente, Brazil**

Case studies- All five groups together with support of all coordinators

13:30 – 14:00 hs- Discussion

14:00 – 15:00 hs- Lunch

15:00 – 19:30 hs- Case studies- All five groups together with support of all coordinators

19:30 – 20:00 hs- Discussion

20:00 hs- Departure of bus to the hotel

DAY 5. September 28th

CASE STUDIES (cont.)

9:00 – 13:30 hs- Case studies- All five groups together with support of all coordinators

13:30 – 14:00 hs- Discussion

14:00 – 15:00 hs- Lunch

15:00- 16:30 hs- Recognizing and facing New Regulatory Challenges (Round table)- **Dr. Moises Burachik, Dr. Jonathan Gressel, Dr. Esteban Hopp**

16:30 – 17:00 hs- Discussion

17:00- 17:30 hs- Coffee break

17:30- 19:30 hs- Discussion: Future perspectives and suggestions- **Dr. Klaus Ammann, Dr. Leila Oda, Dr. Giuliano Degrassi, Dr. Juan Dellacha**

19:30 – 20:00 hs- Closing Ceremony and delivery of certificates

20:00 hs- Departure of bus to the hotel