

International Conference on Agri-Environmental Chemistry and Toxicology

September 20-22, 2011, Budapest, Hungary

Tuesday, September 20, 2011

Welcoming Address

- 8:00–9:00 *Registration*
9:00–9:15 **Tamás Németh** (Secretary General of the Hungarian Academy of Sciences [HAS])
Welcome remarks, general comments on behalf of the HAS

Morning Session

Session 1. Overview of Current Agri-Environmental Issues

Chair: **Tamas Komives** (Plant Protection Institute, Hungarian Academy of Sciences, Budapest, Hungary)

- 09:15–9:45 **Peter Schröder** (German Research Center for Environmental Health, Germany)
Agriculture: best practices to reduce environmental impact
09:45–10:00 **Márton Jolánkai** (St. István University, Gödöllő, Hungary)
Climatic aspects of agri-environmental pollution
10:00–10:15 **Lukas Y. Wick** (Helmholtz Centre for Environmental Research UFZ, Germany)
Surfing the ‘fungal web’: fungal mycelia as effective dispersal networks of bacteria and
chemicals for biodegradation of soil contaminants
10:15–10:30 **Tibor Bíró** (Károly Róbert College, Gyöngyös, Hungary)
Application of remote sensing in the red sludge environmental disaster in Hungary
10:30–10:45 *Coffee break, poster viewing*

Session 2. Pesticides and Fertilizers

Chair: **Márton Jolánkai** (St. Stephen University, Gödöllő, Hungary)

- 10:45–11:15 **John E. Casida** (University of California at Berkeley, USA)
The greening of pesticide-environment interactions
11:15–11:30 **Alexandra ter Halle** (Université Blaise Pascal, France)
Photodegradation of pesticides on crops: a dissipation path often overlooked
11:30–11:45 **Gábor Gullner** (Plant Protection Institute, Hungarian Academy of Sciences, Budapest,
Hungary)
Sulfur supply of susceptible and resistant tobacco plants influences their defense reactions
against Tobacco mosaic virus inoculation
11:45–12:00 **Monilal Chatterjee** (Bidhan Chandra Agriculture University, India)
Spinetogram: A new microbial insecticide for effective management of chili and cabbage pests
12:00–12:15 **Swapan K. Mandal** (Department of Agril. Entomology, Bidhan Chandra Krishi
Viswavidyalaya, India) Bioefficacy of cyazypyr 10% OD, a new anthranilic diamide insecticide,
against the insect pests of tomato and its impact on natural enemies and crop health
12:15–14:00 *Lunch, poster viewing*

Afternoon session

Session 3. Phytoremediation

Chair: **Alexandra ter Halle** (Université Blaise Pascal, France)

- 14:00–14:30 **Qing X. Li** (University of Hawaii at Manoa, USA)
Biomass production of five biofuel crops and phytotoxicity to seed germination and early growth
of nine plants grown in polycyclic aromatic hydrocarbons heavily contaminated soil
14:30–15:00 **Jean-Paul Schwitzguébel** (Ecole Polytechnique Federale de Lausanne, Switzerland)
Accumulation of pollutants and plant wellness: bottleneck or key to successful
phytoremediation?

- 15:00–15:15 **Naser A. Anjum** (University of Aveiro, Portugal)
Assessment of strategies adopted by *Phragmites australis* for its dominance in mercury-contaminated Ria de Aveiro coastal lagoon, Portugal
- 15:15–15:30 **László Simon** (College of Nyíregyháza, Hungary)
Passive phytoextraction of toxic elements from sewage sludge compost by *Salix viminalis* energy plants
- 15:30–16:30 *Poster viewing*

Wednesday, September 21, 2011

Morning session

Session 4. Genetically Modified Crops

Chair: **Zoltán Király** (Plant Protection Institute, Hungarian Academy of Sciences, Budapest, Hungary)

- 09:00–09:30 **John Huppatz** (Commonwealth Scientific and Industrial Research Organization, Canberra, Australia)
Genetically modified crops - science, politics and perception
- 09:30–10:00 **Balázs Barna** (Plant Protection Institute, Hungarian Academy of Sciences, Budapest, Hungary)
Abiotic and biotic stress tolerant plants with elevated antioxidant capacity
- 10:00–10:15 **Gábor Bakonyi** (St. István University, Gödöllő, Hungary)
Preference of *Folsomia candida* (Collembola) fed on *Bt* and non-*Bt* food sources of various genetical events
- 10:15–10:30 **András Takács-Sánta** (Eötvös Loránd University of Sciences, Budapest, Hungary)
Does the world need genetically modified plants?
- 10:30–10:45 **András Székács** (Plant Protection Institute, Hungarian Academy of Sciences, Budapest, Hungary)
Reception of genetically modified plants in the European Union – the scientific background of the Hungarian moratorium on *MON 810*
- 10:45–11:00 *Coffee break, poster viewing*

Session 5. Ragweed Pollen Allergy

Chair: **Zsuzsa Basky** (PPI, Hungary)

- 11:00–11:30 **Michel Thibaudon** (RNSA, France)
Different ways to measure health impact due to exposure to ragweed pollens
- 11:30–12:00 **Kristóf Nékám** (National Institute of Rheumatology and Physiotherapy, Hungary)
Allergenic response to airborne ragweed pollens
- 12:00–12:15 **Tamas Komives** (Plant Protection Institute, Hungarian Academy of Sciences, Budapest, Hungary)
Precision management of ragweed
- 12:15–12:30 **Zsuzsa Basky** (PPI, Hungary)
Non-herbicidal control of ragweed
- 12:30–14:00 *Lunch, poster viewing*

Afternoon session

Session 6. Industrial chemicals, persistent organic pollutants

Chair: **Qing X. Li** (University of Hawaii at Manoa, USA)

- 14:00–14:30 **More Nandkishor** (B B A Central University, Lucknow, India) Determination of heavy metals in a stretch of river Gomati (UP, INDIA) using aquatic plants as a model system
- 14:30–15:00 **Rahmiana Zein** (Andalas University, Indonesia) The use of snake fruit (*Salacca edulis*) shell as sorption material of cadmium, chromium, zinc and copper ions present in wastewater
- 15:00–15:30 **Emese Bertáné Szabó** (Institute of Food Processing, Quality Assurance and Microbiology, Debrecen, Hungary)
Recent results to the evaluation of the long term effects of metal pollution in Tisza river
- 15:30–15:45 **Sándor Némethy** (Károly Róbert College, Gyöngyös, Hungary)
Sources, assessment, remediation and prevention of persistent organic pollutants. The Ecocycle-model as a solution. Swedish case studies, environmental monitoring and legislation

Session 7. Summary session

Chair: **John E. Casida** (University of California at Berkeley, USA)

15:45–16:30 Summary discussions on current agri-environmental issues

Thursday, September 22, 2011

Visiting a Polluted Site under Remediation

Andras Bittsanszky (Plant Protection Institute, Hungarian Academy of Sciences, Budapest, Hungary)

08:30 Departure by bus

12:00–14:00 *Lunch*

20:00 (approx.) Return to Budapest

Poster Sessions

Session 1. Overview of Current Agri-Environmental Issues

- 1. Response of glutathione conjugation system to soil borne *Rhizoctonia* infection of okra**
A. Bittsanszky, G. Oros (Plant Protection Institute, Hung. Academy of Sciences, Budapest, Hungary)
V. Ravishankar Rai (Department of Studies in Microbiology, University of Mysore, India)
- 2. Diversity of arbuscular mycorrhizal fungi (AMF) in a Hungarian vineyard (*Vitis vinifera* L.)**
G. Csima, K. Posta (Szent István University, Plant Protection Institute, Gödöllő, Hungary)
- 3. Use of natural zeolite as support of pendimethalin-degrading bacteria in bioremediation assay**
P. Pinilla, M.J Martínez-Iñigo, M.C. Lobo (IMIDRA, Alcalá de Henares (Madrid), Spain)
- 4. Some effects of etofenprox and lead on the chicken embryo**
O. Pálfi, L. Várnagy, K. Balogh, M. Erdélyi, M. Mézes (Szent István University, Gödöllő, Hungary)
- 5. Reducing environmental risk by breeding mlo resistant spring barley (*Hordeum vulgare* L.) lines**
A. Bakó (Fleischmann Rudolf Research Institute, Kompolt, Hungary)
M. Hajós-Novák (Szent István University, Gödöllő, Hungary)
K. Manninger (Institute for Plant Protection, Budapest, Hungary)
- 6. Comparison of the legal regulations of chemicals and pesticides in the European Union**
Gy. Németh, A. Székács (Plant Protection Institute, Hungary)
- 7. Screening kernels of maize (*Zea mays* L.) inbred lines and hybrids for mycotoxin content after natural and artificial infection**
B. Nagypál (Breeding Station of KWS)

Session 2. Pesticides and Fertilizers

- 8. Agricultural application of bio-ash – toxicological aspects**
Á.D. Anton (Budapest University of Technology and Economics, Hungary)
M. Rékási, N. Uzinger, A. Anton (Research Institute for Soil Science and Agricultural Chemistry, Budapest, Hungary)
- 9. In silico design of pesticide molecules**
B. Bordás, I. Béla, T. Kőmíves (Plant Protection Institute, Hung. Academy of Sciences, Budapest,

Hungary)

- 10. Risk of agricultural use of anaerobic digestate and compost materials**
M. Gulyás, G. Füleky (Szent István University, Department of Soil Science and Agricultural Chemistry, Gödöllő, Hungary)
A. Tomocsik, V. Orosz, M. Makádi (University of Debrecen Centre for Agricultural and Applied Economic Sciences Research Institutes and Study Farm Research Institute of Nyíregyháza, Hungary)
- 11. Effects of root exudates originated from mycorrhizal plants on pathogenic *Fusarium* sp**
I. Hernádi, K. Posta (Plant Protection Institute, Szent István University, 2100, Gödöllő, Hungary)
- 12. Bio-insecticidal toxin crystals of *Bacillus thuringiensis* type strains: microscopic observations and protein patterns**
J. Kutasi (BioFil Ltd., Budapest, Hungary)
I. Puspán, R. Kovács, É. Kárpáti (Eötvös Loránd University of Sciences, Budapest, Hungary)
J. Makk, (Saniplant Ltd., Budapest, Hungary)
- 13. Screening of pesticide residues in three potentially suitable amendments for agricultural soils**
R.A. Pérez, C. Sánchez-Brunete, B. Albero, E. Miguel, J.L.Tadeo, (Departamento de Medio Ambiente, INIA, Madrid, Spain)
J. Alonso, M.C. Lobo (IMIDRA, Alcalá de Henares (Madrid), Spain)
- 14. Assessment of the effects of herbicide application on target and non-target organisms**
J. Žaltauskaitė, V. Brazaitytė (Vytautas Magnus University, Kaunas, Lithuania)

Session 3. Phytoremediation

- 15. Chemical background of the amendment materials used in the remediation process of a heavy metal polluted area**
K. Antal, L. Blaskó, J. Budai (University of Debrecen, Karcag Research Institute, Karcag, Hungary)
- 16. Overproduction of GSH (glutathione) by 35S-gshI poplar (*Populus x canescens*)**
A. Bittsánszky, G. Gullner, T. Kómvés (Plant Protection Institute, Hung. Academy of Sciences, Budapest, Hungary)
G. Gyulai, G. Heltai, (Szent István University, Gödöllő, Hungary)
- 17. Lead content of the vegetables and of agricultural soils located in the vicinity of tailing deposits from Baia Mare area**
G. Oprea, C. Mihali (North University of Baia Mare, Baia Mare, Romania)
A. Michnea (Environmental Protection Agency Maramureş, Baia Mare, Romania)
M. Şenilă, C. Roman (INCDO-INOE 2000-Research Institute for Analytical Instrumentation, Cluj-Napoca, Romania)
A. Pop (University of Agricultural Sciences and Veterinary Medicine Cluj Napoca, Romania)
I. Gogoşa (Banat University of Agricultural Sciences and Veterinary Medicine Timisoara, Romania)

Session 4. Genetically Modified Crops

- 18. Inter-laboratory comparison of Cry1Ab toxin quantification in *MON 810* maize by enzyme-immunoassay**
E. Takács, A. Székács, B. Darvas (Plant Protection Institute, Hungary)
G. Weiss (Ecostrat GmbH, Germany)
D. Quist (Genok Centre for Biosafety, Norway)
A. Hilbeck (Institute of Integrative, Switzerland)

Session 5. Ragweed Pollen Allergy

- 19. Relationship of soil contamination and microorganisms of ragweed (*Ambrosia artemisiifolia* L.) pollen**
M. Dobróné Tóth (College of Nyíregyháza, Institute of Environmental, Nyíregyháza, Hungary)
R. Rohr (Claude Bernard University, Lyon, France)

Session 6. Industrial Chemicals, Persistent Organic Pollutants

- 20. Ameliorative effect of *Moringa oleifera*, activated charcoal and charcoal on lead toxicity in Wistar rats**
F.E. Ekwain (University of Buea, Cameroon)
T.M. Ahmed (Laboratory of Forensic Toxicology, Egypt)
M.D. Matey (Kwame Ninsin University, Ghana)
I.S. Idoko (Amado Bello University, Nigeria)
A.T. Peter (University of Ibadan, Nigeria)
N Ozele (National Veterinary Research Institute, Vom Nigeria)
- 21. Exposure to acetamide-generating compounds is a risk factor of acute hepatic inflammation**
M.Y. Liu, D.Z. Hsu (National Cheng Kung University Medical College, Tainan, Taiwan)
S.P. Chien (Institute of Living Sciences, Tainan University of Technology, Tainan, Taiwan)
- 22. Germination and early development of *Brassica napus* L. and *Brachypodium distachyon* (L.) Beauv. growth with Zn, Cr(VI), As(V) or Cd**
B. Montalbán, A. Pérez-Sanz, A.E. Pradas del Real, P. Gonzalo, A. Plaza, M.C. Lobo (IMIDRA, Alcalá de Henares [Madrid], Spain)