

South Asia Biosafety Program

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BANGLADESH

Highlights from the 8th International Plant Tissue Culture and Biotech Conference

Dr. M. Imdadul Hoque, Dean, Faculty of Biological Sciences, University of Dhaka and Country Coordinator, South Asia Biosafety Program, Dhaka



On December 3-5, 2016, the Bangladesh Association for Plant Tissue Culture & Biotechnology (BAPTC&B) in collaboration with the University of Dhaka and the National Science Museum organized the 8th International Plant Tissue Culture and Biotechnology Conference held at the Dhaka University Campus. The theme of the conference was "Biotechnology for Innovative Agriculture and Food Security". Many participants from Bangladesh, India, Nepal, Bhutan, and the United Kingdom attended this three-day event.

The inaugural ceremony began with the welcome address offered by Prof. Dr. Sheikh Shamimul Alam, Secretary, Organizing Committee and General Secretary, BAPTC&B. He introduced the foreign delegates to the participants and invited guests. The inaugural ceremony was chaired by Prof. Dr. M. Mozammel Haque, Chairman, Organizing Committee and President, BAPTC&B.

Mr. Yeafesh Osman, Hon'ble Minister, Ministry of Science and Technology, Govt. of the People's Republic of Bangladesh, inaugurated the conference as the Chief Guest. During his address, Mr. Osman highlighted the importance of agricultural biotechnology for ensuring food security in the coming days. He shared that the population of Bangladesh is increasing every day and cultivable land is decreasing at an alarming rate. He urged the bioscientists to develop stress tolerant crops, so that these

crops can be grown in the salinity and drought prone areas of Bangladesh as well as providing an option to expand the cultivable lands. Mr. Osman assured participants that his ministry will extend support to the projects related to agricultural biotechnology.

Prof. Dr. AAMS Arefin Siddique, Hon'ble Vice-Chancellor, University of Dhaka and Chief Patron of this conference along with Professor Dr. Kamal Uddin Ahamed, Hon'ble Vice Chancellor, Sher-e-Bangla Agricultural University and Professor Dr. K.M. Nasiruddin, Hon'ble Vice Chancellor, Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj, graced the inaugural ceremony as the Special Guests. Dr. Siddique mentioned that with the development of high yielding varieties of different crops Bangladesh has become relatively self-sufficient in food grain production. However, the productivity of these crops are almost at their peak and there are little or no possibilities to increase the yield further using conventional breeding techniques. It is under this background that Dr. Siddique commented that we need to use biotechnology to feed our ever-increasing population. Dr. Ahamed and Dr. Nasiruddin also highlighted the importance of modern biotechnology, which has already contributed significantly to the development of insect and pest resistant corn, cotton, soybean, brinjal and canola.

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After the inaugural ceremony, a plenary lecture on crop improvement under stress for food security through innovative microbial biotechnology approach was presented by Prof. Dr. Narendra Tuteja, Former Group Leader, Plant Molecular Biology, International Center for Genetic Engineering and Biotechnology (ICGEB) and Director, AIMT, Amity University, Noida, India. In his presentation, Dr. Tuteja gave an account of his work on the development of stress tolerance, especially highlighting salinity and drought tolerant crop varieties. He also stressed the need for the development of stress tolerant crop plants because of climate change.

Following the plenary lecture session, there were six scientific sessions with presentations covering all aspects of plant biotechnology including in vitro plant regeneration and micropropagation, marker assisted breeding, genomics, proteomics and bioinformatics, and environmental biotechnology. A full session was held on the application of modern

biotechnology and biosafety regulatory issues and sponsored by the UNEP/GEF funded Implementation of National Biosafety Framework (INBF) Project of the Department of Environment.

Among the presentations, Dr. M. Khalequzzaman Akhond Chowdhury, National Project Coordinator, INBF Project, presented on the status of biosafety regulatory regimes of Bangladesh while Prof. Dr. M. Imdadul Hoque, Country Coordinator, South Asia Biosafety Program (SABP), presented on the need for biosafety regulations in transgenic crops. Prof. Hoque also highlighted the activities of SABP in Bangladesh.

Draft recommendations based on the issues raised during different scientific sessions were presented during the concluding ceremony. There was an open discussion on the presented recommendations, which were adopted with the remarks of the participants. The conference ended with the remarks by Dr. Hoque and a vote of thanks offered by Dr. Alam.



Register today for ISBGMO14 in Mexico

You are invited to the 14th International Symposium on the Biosafety of Genetically Modified Organisms (ISBGMO14) that will take place on June 4-8, 2017 in Guadalajara, Mexico. In the four days of the event, attendees will learn from the past, discuss the present and look ahead to future opportunities and challenges associated with GM technology. Register early for this symposium and save up to 20% by making use of the Early Bird Discount.

Parallel Sessions Announced

- Effects of Vertical Gene Flow Between GM Plants and Sexually Compatible Relatives – Dangerous Liaisons?
- Types of Evidence and Efforts Necessary to Inform the Safety Assessment of Unintended Effects in GM Plants
- Biosafety Research, Risk Assessment Experiences and Capacity Building in Latin America
- ERA vs. Ecological Research – The Relevance of a Good Problem Formulation to Ensure That Gathered Data are Useful for ERA
- GMOs in Integrated Pest Management (IPM)
- Gene Drive Systems and GM Insects for Pest Control
- Plant Genome Editing – Any Novel Features to Consider for ERA and Regulation?
- Biosafety and ERA of GM Algae
- Capacities for the Risk Assessment of GMOs: Challenges to Build Sustainable Systems



ISBGMO14 Keynotes: Prof. Tim Benton, Dr. Sheila Jasanoff and Dr. Fred Gould

Program with 50+ Speakers Confirmed

ISBR is honored to welcome such highly regarded speakers for ISBGMO14 representing academia, government and the private sector, including: Alan Gray, Alan Raybould, Amy Klocko, Andrew Roberts, Anthony Shelton, Carmen Vicien, Cindy Pearson, Clara Rubinstein, Clint Pilcher, Danilo Fernandez Rios, Denise Capalbo, Detlef Bartsch, Elizabeth Heitman, Esther J. Kok, Fabiano dos Santos Ferreira, George Leggewie, Graham Head, Jeffrey Wolt, Jim Gaffney, Josias Correa de Faria, Jörg Romeis, Karen Hokanson, Laura Privalle, Libby Williams, Linda Hall, Lorraine Maltby, Margaret McCormick, Maria Fedorova, Maria Mercedes Roca, Martin Lema, Max Scott, Michael Meissle, Michael Owen, Nicholas Storer, Norman Ellstrand, Paul Keese, Pedro Rocha, Phil Macdonald, Richard Sayre, Sarah Davis, Silverio García, Stephen Mayfield, Steven Bradbury, Thorben Sprink, Tim Harvey-Samual, Vibha Ahuja, Wayne A. Parrott, Wendy Craig and Xun Wang.

Visit <http://isbr.info/ISBGMO14> to register and learn more.

NEW BOOK ON GM, ORGANIC AND CONVENTIONAL CROPS AND FOODS

Title: *"The Coexistence of Genetically Modified, Organic and Conventional Foods"*

About the Book: Food, its ingredients and production has captured the public's attention in dramatic fashion over the past few years. Both conventional and social media overwhelming present both information and misinformation on these topics; resulting in a plethora of factual stories, outright lies and everything in between. One topic in particular has grabbed peoples' attention in a way that few other issues have done, GM verses organic.

In collaboration with my colleagues Nicholas Kalaitzandonakes (University of Missouri), Peter Phillips (University of Saskatchewan) and Justus Wesseler (Wageningen University, The Netherlands), I'm proud to announce the release of our newest academic publication, *The Coexistence of Genetically Modified, Organic and Conventional Foods*. Although many still debate over which is better, organic verses GM, our volume of chapters presents a wide variety of insights, evidence and prospects about coexistence.

Our book discusses present situations in countries like the United States, Brazil, Canada, Germany, South Korea and China. Other contributions discuss the role of government regulators and industry, offering suggestions and insights as to who should bear responsibility for coexistence. Discussion of the legal implications of coexistence and low level presence are included as are trade implications. The compendium of information and evidence illustrates that non-GM food products can be provided to consumers separate from GM-based products.

While coexistence amongst food production, GM, organic, and conventional exists, it's not uncommon for a traded food product to be rejected due to the means of production. The grain trading industry reports weekly occurrence of GM or conventional foods being rejected. The economic cost of this runs into the billions annually. As consumers these costs are passed onto us through higher food prices, due to the inability to ship food products internationally without coexistence issues causing problems.

This 32 chapter edited volume provides a global perspective on the leading market practices, regulatory requirements and legal parameters for coexistence between GM, conventional and organic crops and food products.

(Reproduced from the Sustainable Agriculture Innovations and Food Blog, originally published on November 29, 2016 by Dr. Stuart Smyth, Assistant Professor, Department of Agricultural and Resource Economics, University of Saskatchewan)

Link to the book: http://bit.ly/Coexistence_Smyth

THE AMERICAN JOURNAL OF TROPICAL MEDICINE AND HYGIENE PUBLISHES CONSENSUS POINTS FROM GLOBAL EXPERTS ON THE POTENTIAL RISKS OF USING GENE DRIVE MOSQUITOES TO CONTROL MALARIA

Title: *"Results from the Workshop "Problem Formulation for the Use of Gene Drive in Mosquitoes"*

Abstract: Reducing the incidence of malaria has been a public health priority for nearly a century. New technologies and associated vector control strategies play an important role in the prospect of sustained reductions. The development of the CRISPR/Cas9 gene editing system has generated new possibilities for the use of gene-drive constructs to reduce or alter vector populations to reduce malaria incidence. However, before these technologies can be developed and exploited, it will be necessary to understand and assess the likelihood of any potential harms to humans or the environment. To begin this process, the Foundation for the National Institutes of Health and the International Life Sciences Institute Research Foundation organized an expert workshop to consider the potential risks related to the use of gene drives in *Anopheles gambiae* for malaria control in Africa. The resulting discussion yielded a series of consensus points that are reported here.

DOI: 10.4269/ajtmh.16-0726

Link to the publication:
http://bit.ly/ILSIRF_Genedrives2016

Suggested citation: Roberts, A., Paes de Andrade, P., Okumu, F., Quemada, H., Savadogo, M., Singh, J.A., James, S. (2016). Results from the Workshop "Problem Formulation for the Use of Gene Drive in Mosquitoes". *American Journal of Tropical Medicine and Hygiene* 10.4269/ajtmh.16-0726



EVENT	ORGANIZED BY	DATE	WEBSITE
INDIA			
Seed Industry Programme	Cornell University and Sathguru	January 18-21, 2017 Hyderabad	www.sathguru.com/seed
National Symposium on Climate Smart Technologies for Enhancing Vegetable Oil Production	Indian Society of Oilseeds Research, ICAR-Indian Institute of Oilseeds Research, Hyderabad and National Academy of Agricultural Sciences (NAAS)	January 19-21, 2017 Hyderabad	http://bit.ly/2gEZR6o
International Symposium on Eco-Efficiency in Agriculture and Allied Research	Crop and Weed Science Society (CWSS) and Bidhan Chandra Krishi Viswavidyalaya (BCKV)	January 20-23, 2017 Nadia, West Bengal	www.cwssbckv.org and www.cropandweed.com
7 th Indian Seed Congress	National Seeds Association of India	February 12-14, 2017 Kolkata	http://nsai.co.in/isc2017
International Conference on Technological Advancement for Sustainable Agriculture and Rural Development (TASARD – India, 2017)	Society for Plant Research (VEGETOS), African-Asian Rural Development Organization (AARDO) and AIMT, Amity University, Noida	February 20-22, 2017 Noida	www.amity.edu/aimt/tasard
XIII Agricultural Science Congress, 2017	National Academy of Agricultural Sciences (NAAS), India	February 21-24, 2017 Bangalore	www.agricongress2017.com
INTERNATIONAL			
14 th International Symposium on the Biosafety of Genetically Modified Organisms (ISBGM014)	International Society for Biosafety Research (ISBR)	June 4-8, 2017 Guadalajara, Mexico	http://isbr.info/ISBGM014

Interested in contributing to the SABP Newsletter?

The SABP Newsletter, published monthly, is distributed to over 10,000 regulators, scientists, policy makers and other stakeholders interested in agricultural biotechnology in South Asia. Each edition includes editorials, information about biosafety regulation and policy developments in India, Bangladesh and Pakistan, SABP and other capacity building activities in the region, and related science or news stories. All contributions to the newsletter should have a clear connection to the mission of SABP, relate to South Asia and cannot be promotional. For more information or for your article to be considered, please email Libby Williams at lwilliams@ilsirf.org.



The South Asia Biosafety Program (SABP) is an international developmental program implemented in India, Bangladesh and Pakistan with support from the United States Agency for International Development. SABP aims to work with national governmental agencies and other public sector partners to facilitate the implementation of transparent, efficient and responsive regulatory frameworks for products of modern biotechnology that meet national goals as regards the safety of novel foods and feeds, and environmental protection.



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