

# South Asia Biosafety Program

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## BANGLADESH

### 1<sup>st</sup> National Workshop on CRISPR-CAS9 Genome Editing Technology

Ms. Farida Yasmin, Department of Biochemistry and Molecular Biology, University of Dhaka, Dhaka

As a cutting-edge genome editing technology, CRISPR-Cas9 is such a popular topic these days, we could term it "CRISPR-craze". CRISPR-Cas9, a system adapted from bacterial immune system, has fueled the genome editing revolution thanks to efficient, rapid and easy-to-use technology. To enrich the learning experience for this technology, the Global Network of Bangladeshi Biotechnologists (GNOBB) in association with Faculty of Biological Sciences, University of Dhaka, organized a workshop on "CRISPR-Cas9 Genome Editing Technology" where hands-on training and interaction with resource persons made the workshop successful.

The program was held on 28 March 2017 at the Centre for Advanced Research in Sciences (CARS). The program began with a welcome address from GNOBB President, Professor Dr. Zeba Islam Seraj. She is hopeful about the benefits of such a workshop for scientists who are working on crop improvement. The inaugural session included insightful speeches from Chief Guest, Professor Dr. AAMS Arefin Siddique, special guest, Dr. Kazi M Komoruddin, Dr. Abidur Rahman, and Dr. Asadulghani. The technical session, and knowledge assessment on CRISPR technologies were presented by Dr. Abidur Rahman, Associate Professor, Department of Plant Bio Sciences, Faculty of Agriculture, Iwate University, Japan, and his JSPS postdoctoral fellow, Dr. Mohammad Aslam. The importance of

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## INDIA

### New Indian Council of Agricultural Research SOPs Posted to the ICAR Biosafety Portal

Activities involving genetically engineered (GE) plants are regulated in India as per the Rules for Manufacture, Use/Import/Export and Storage of Hazardous Micro-Organisms/GE Organisms or Cells, 1989 notified under the Environment (Protection) Act, 1986 and associated guidance. As part of the Indian Council of Agricultural Research (ICAR) compliance management program for working with GE plants, a set of documents has been prepared by ICAR Institutional Biosafety Officers to provide practical guidance for ICAR's scientists, facility managers and other personnel involved in research activities with GE plants in contained facilities (e.g., labs, growth chambers), greenhouses and screen houses. These ICAR-approved documents are the first in a series that will eventually cover biosafety compliance-related best practices throughout the research – development – deployment pipeline.

- Standard Operating Procedures for Working with GE Plants in Containment Facilities
- Guidance for Conducting Research with Regulated GE Plants in Contained Greenhouses and Screen Houses
- Record of Containment
- Record of Greenhouse and Screen House Operations
- Record of Facility Inspection

Visit the ICAR Biosafety Portal at <http://biosafety.icar.gov.in> to view these compliance documents and more.

## Highlights from the Workshop on Biosafety Regulatory System and Network Development

Dr. M. Khalequzzaman Akhond Chowdhury, National Project Coordinator (NPC) INBF Project, Department of Environment (DOE), Dhaka

The 2<sup>nd</sup> Regional Training Workshop was held under the UNEP/GEF-funded Implementation of National Biosafety Framework (INBF) project of the Department of Environment (DOE) on May 18, 2017 in Chittagong. There were approximately 70 participants including faculty members of the Department of Genetic Engineering and Biotechnology, Department of Biochemistry & Molecular Biology, Department of Microbiology of Chittagong University; BARI Regional Research Station, Hathazari; scientists from the Department of Agricultural Extension of Chittagong region; faculty members from different departments of Chittagong Veterinary and Animal Sciences University; Bangladesh Forest Research Institutes (BFRI); Bangladesh Rice Research Institute (Comilla); Bangladesh Fisheries Research Institute, Cox's Bazar; Bangladesh Fisheries Research Institute (BFRI), Mymensingh; University of Science & Technology Chittagong, Upazilla Agriculture officers and officials from the DOE Chittagong region. Throughout this day-long training workshop, awareness was raised among regional stakeholders on the recent developments in biosafety-related issues and activities being carried out by the DOE under the INBF project.

Mr. Md. Raisul Alam Mondal, Director General, Department of Environment inaugurated the training workshop as the Chief Guest. Mr. Md. Azadur Rahman Mollick, Director, Chittagong (Metropolitan) and Mr. Md. Mokbul Hossain, Director (Chittagong Laboratory), DOE were present as the Special Guests. Mr. Md. Masud Karim, Director, Chittagong Division of DOE presided over the inaugural ceremony. Mr. Mohammed Solaiman Haider, Director (Planning), DOE, and Project Director, INBF Project gave a welcoming address at the beginning of the inaugural ceremony. In his address, Mr. Haider briefed on the UNEP/GEF-funded INBF project as well as the purpose of the regional training workshop.

The Chief Guest, the Honorable Director General, Department of Environment, welcomed and thanked the participants, noting satisfaction with the number of participants from universities (public & private), research institutes and scientists working in the agriculture extension departments who participated on short notice. He described the work activities being carried out at his department on the UNEP/GEF-funded INBF Project. They have already drafted different regulatory documents as well as taken steps to update the existing Rules and Guidelines, namely the Biosafety Guidelines of Bangladesh, and the Bangladesh Biosafety

Rules 2012. He requested the participants assist DOE by providing their inputs on the drafted biosafety regulatory documents, and requested them to fill in the forms to be uploaded in the biosafety network database. Mr. Md. Azadur Rahman Mollick, and Mr. Md. Mokbul Hossain thanked the Director General, DOE, and Mr. Mohammed Solaiman Haider for considering Chittagong as the venue of this important workshop. They also welcomed all participants who joined from different public and private organizations. They expressed their wishes a successful workshop. The inaugural ceremony concluded with remarks by the Chair.

The technical session of the workshop included the presentation of four papers. The first paper on "Biosafety: National and International Perspective" was presented by Mr. Mohammed Solaiman Haider. Mr. Haider addressed issues related to the emergence of biosafety applicable to research and developmental activities of modern biotechnology. He also gave a brief overview on the emergence of the Cartagena Protocol under the Convention of Biological Diversity (CBD) and Bangladesh's experience in becoming a party to this protocol. He also described the chronology of the Biosafety Regulatory Regimes of Bangladesh.

In his presentation, Dr. M. Khalequzzaman Akhond Chowdhury, National Project Coordinator (NPC), INBF Project described various salient features on biosafety systems as per Biosafety Rules of Bangladesh 2012 and Biosafety Guidelines. Dr. Chowdhury highlighted the developmental history as well as an overview on the scope and applications of these regulatory documents. He noted under the UNEP/GEF INBF project, initiative has been taken to update these documents.

Professor Dr. M. Imdadul Hoque, Bangladesh Country Coordinator, South Asia Biosafety Program, presented a paper on "Biosafety Concerns in Contained, Confined and Open Fields Trials of Genetically Engineered Crops". Dr. Hoque described the importance, obligations, and purpose of contained, confined, and open field trials as well as the management practices which need to be followed during the trials.

The last paper was presented by Mr. Mohammed Solaiman Haider on "Risk Assessment, Management and Communications". Mr. Haider described issues related to assessment, management and communication of potential risks posed during research and field trials of genetically engineered crops. There were lively discussions at the end of each presentation.



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biosafety regulation in terms of GMO in Bangladesh, and CRISPR-Cas9, was addressed by Dr. Asadulghani, and Dr. Abidur Rahman.

In total, 32 participants from different research institutes and universities of Bangladesh attended this hands-on learning experience. Certificate of participation were distributed by the President of GNOBB. The day-long program concluded successfully with the veneration of

the resource persons and remarks by the General Secretary of GNOBB, Professor Dr. Muhammad Manjurul Karim. Media partners of this program were Channel 24 and The Daily Star. Initiatives such as this provide exposure for budding researchers to cutting-edge experimental techniques. GNOBB will continue to support such initiatives in the future.



# Networking Opportunities

## 5<sup>th</sup> Annual South Asia Biosafety Conference

### September 2017

### Bangalore, India



#### About the Conference

The South Asia Biosafety Conference (SABC) is the preeminent regional gathering of scientists, regulators and other stakeholders who are interested in biotechnology applications for sustainable development, environmental risk assessment, and biosafety regulation in South Asia. SABC provides an excellent opportunity to network and collaborate with peers in South Asia. This year's conference will be held at the Taj West End in Bangalore, India from September 11-13, 2017.

Under the auspices of the South Asia Biosafety Program, SABC is co-organized by the ILSI Research Foundation and Biotechnology Consortium India Ltd, with cooperation from the Ministry of Environment, Forest and Climate Change (Government of India), the National Academy of Agricultural Sciences, India, the International Society for Biosafety Research, the Department of Environment, Bangladesh, and other regional partners.

#### Program Highlights

This year's program is featuring sessions on Soil and Plant Microbiomes; New Applications of Biotechnology: Focus on Forestry and Biofuels; Designing Confined Field Trials to Maximize Data Transportability; Best Practices for Public Sector

Genetically Engineered Product Development Programs; Synthetic Biology; the Intersection of the Cartagena Protocol and the Indian Biosafety Regulatory System. This year will also include a lighting round for students and young scientists as well as three optional half day workshops.

#### Reasons to Attend SABC

- Network with 120+ attendees from multi-sectoral fields
- Gain new insight on the latest science from highly respected scientific experts
- Exchange ideas and gain new perspectives
- Renew and strengthen current partnerships
- Engage in peer-to-peer learning
- Present your research during the poster session or through an oral presentation
- Stay informed about biotechnology in South Asia

#### Registration Information

Registration is now open and includes access to all plenary sessions, conference materials, opening and closing ceremonies, Welcome Reception, and half day workshops. Please see pages 5-6 or visit <http://sabc.biotech.co.in/>



EVENT	ORGANIZED BY	DATE	WEBSITE
<b>INDIA</b>			
International Conference on "Recent Trends in Agriculture, Biotechnology and Food Processing"	College of Agriculture, Hassan, Karnataka	July 5-7, 2017 Hassan, Karnataka	<a href="http://www.uasbangalore.edu.in/index.php/college-of-agriculture-hassan">www.uasbangalore.edu.in/index.php/college-of-agriculture-hassan</a>
2 <sup>nd</sup> Annual AGRIBIOTECH India Summit 2017	Inventicon Business Intelligence Pvt. Ltd.	July 13-14, 2017 New Delhi	<a href="http://www.agribiotechindia.com/Sponsorship-Prospectus.aspx">www.agribiotechindia.com/Sponsorship-Prospectus.aspx</a>
3 <sup>rd</sup> International Conference on Plant Genetics and Genomics "AgriGenomics India 2017"	SELECTBIO	July 20-21, 2017 Chandigarh	<a href="http://www.selectbiosciences.com/conferences/index.aspx?conf=AGI17">www.selectbiosciences.com/conferences/index.aspx?conf=AGI17</a>
International Symposium on Horticulture: Priorities & Emerging Trends	Indian Council of Agricultural Research (ICAR), New Delhi, Indian Institute of Horticultural Research, Bengaluru, India Society for Promotion of Horticulture, IIHR, Bengaluru, India International Society for Horticultural Science (ISHS), Belgium	September 5-8, 2017 Bangalore	<a href="http://www.iihr.res.in/content/international-symposium-horticulture-priorities-emerging-trends">www.iihr.res.in/content/international-symposium-horticulture-priorities-emerging-trends</a>
5 <sup>th</sup> Annual South Asia Biosafety Conference	SABP, ILSI Research Foundation, Biotech Consortium India Limited (BCIL)	September 11-13, 2017 Bangalore	<a href="http://sabc.biotech.co.in/">http://sabc.biotech.co.in/</a>
International Symposium on Sugarcane Research Co 205: 100 Years and Beyond	ICAR-Sugarcane Breeding Institute, Tamil Nadu Agricultural University, The South Indian Sugar Mills Association and Society for Sugarcane Research and Development Coimbatore	September 17-20, 2017 Coimbatore	<a href="http://sugarcane.icar.gov.in/images/sbi/article/Sucrosym_firs.pdf">http://sugarcane.icar.gov.in/images/sbi/article/Sucrosym_firs.pdf</a>
<b>INTERNATIONAL</b>			
BIO International Convention	Biotechnology Innovation Organization	June 19-22, 2017 San Diego, CA, USA	<a href="http://www.convention.bio.org">www.convention.bio.org</a>
The 3 <sup>rd</sup> International Conference on Agricultural and Biological Sciences (ABS 2017)	ABS 2017	June 26-29, 2017, Qingdao, Shandong China	<a href="http://www.absconf.org/index.html">http://www.absconf.org/index.html</a>
Plant Transformation & Biotechnology IV	Vienna International Science Conferences & Events Association (VISCEA)	June 29-30, 2017 Vienna, Austria	<a href="http://viscea.org/index.php/plant-trans-biotech">http://viscea.org/index.php/plant-trans-biotech</a>



**SOUTH ASIA**  
BIOSAFETY PROGRAM

**The South Asia Biosafety Program (SABP)** is an international developmental program implemented in India and Bangladesh 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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To receive an electronic copy of this newsletter send your name, institutional information and e-mail address to: [vibhaahuja.bcil@nic.in](mailto:vibhaahuja.bcil@nic.in)

# Registration Form

## 5<sup>th</sup> Annual South Asia Biosafety Conference

September 11-13, 2017

Taj West End, Bangalore, India



*Registrations are limited to 120 for the conference. Registrants that cannot be accommodated will be added to a waitlist, and notified if space becomes available.*

Attach mailing label from brochure,  
or your business card.

Name Preferred on Badge \_\_\_\_\_

Complete the following if the information on the mailing label is incorrect or no label is provided.

Registrant is:

Gender            Male    Female  
Title            Mr.    Mrs.    Ms.    Dr.

First Name \_\_\_\_\_

Middle Initial \_\_\_\_\_

Last/Surname \_\_\_\_\_

Job Title \_\_\_\_\_

Employer/Company/Institution \_\_\_\_\_

Address \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

State/Province \_\_\_\_\_

Zip/Postal Code \_\_\_\_\_

Country \_\_\_\_\_

Telephone \_\_\_\_\_

Facsimile \_\_\_\_\_

E-mail \_\_\_\_\_

**Select one** optional workshop to attend on September 12:

Workshop I: Thinking Ahead: Designing Confined Field Trials to Maximize Data Transportability (limited to 30 attendees)

Workshop II: Best Practices for Public Sector GE Product Development Programs (limited to 25)

Workshop III: Intersection of the Cartagena Protocol and the Indian Biosafety Regulatory System (limited to 40)

### Registration\*

Category	Fee	
	INR	US\$
Industry	Rs. 6,500/-	\$100
Research Institution, Universities, Individual Experts	Rs. 3,500/-	\$50
Students	Rs. 2,700/-	\$40
BCIL Biotech Club Members	25% discount	
Additional delegates from same organization (except students)	25% discount	
Government Departments and Ministries	No fee up to two nominations and Rs. 2,000/- each for additional nomination. Registration must be submitted through email to vibhaahuja.bcil@nic.in and confirmed by organizers. No online registration.	

\*No free on-the-spot registrations.

In case you face difficulty in the online registration, please download the registration form and send it to us along with payment through bank transfer. The details for Bank Transfer are as follows:

**Beneficiary Name: Biotech Consortium India Limited**

**Account Number : 00032320008527**

**IFSC Code : HDFC0000003 (HDFC Bank Limited)**

### Cancellation/Refund Policy

Registration cancellations must be made in writing and received by BCIL no later than September 1, 2017. Cancellations received by this date are subject to a 20% processing fee. Registration and ticketed event cancellations received after September 1, 2017, are NOT subject to a refund.

### Registration forms should be sent to:

Dr. Vibha Ahuja, Chief General Manager  
Biotech Consortium India Limited (BCIL)  
Anuvrat Bhawan, 5th Floor, 210, Deen Dayal Upadhyaya Marg  
New Delhi, India - 110 002  
Telephone Number +91-11-23219064-67 (Ext. 204; 205);  
23219059(D)  
Fax Number +91-11-23219063  
Email: vibhaahuja@biotech.co.in; vibhaahuja.bcil@nic.in

# Abstract Submission Form

## 5<sup>th</sup> Annual South Asia Biosafety Conference

September 11-13, 2017

Taj West End, Bangalore, India



Participants are encouraged to participate in this year's program in two ways:

1. **Submit an abstract for an oral presentation** in Plenary Session II: Crop Biotechnology and Biosafety in South Asia or Plenary Session V: New Applications of Biotechnology: Focus on Forestry and Biofuels. Submissions should describe research directly relevant to either of these topics, with preference to research that directly addresses biosafety risk assessment. Areas of particular interest include:
  - Innovations for resistance to plant pathogens and insect pests
  - Biotechnology as a tool for managing post-harvest losses
  - Genetically engineered trees for use in timber or biofuel production, and mechanisms to manage gene flow
  - Genetically engineered algae for biofuel production
  - Biotechnology and genetic conservation in natural forests

Abstracts submitted for oral presentations will be evaluated by the conference organizers for quality and applicability. Abstracts that are not selected for oral presentations may be considered for posters instead.

2. **Submit an abstract for a poster presentation** during the Poster Program. Presenting a poster is a noteworthy way to share expertise or accomplishment, and poster presenters will have a dedicated time to present and discuss their work with the diverse group of attendees. All posters must convey relevance to biosafety research, environmental risk assessment of genetically modified organisms (GMOs), or the regulation of GMOs— plants, animals, arthropods, or micro-organisms.

### Guidelines for Submission

The following are suggestions that will contribute to ensuring the readability and quality of abstracts submitted for oral or poster presentations:

- Check for proper spelling and grammar.
- Use a standard typeface such as Times Roman with a font size of 12.
- Begin sentences with words (not numbers).
- Standard abbreviations may be used without definition, but nonstandard abbreviations/acronyms should be placed in parentheses after the first use of the terminology. It is important to keep nonstandard abbreviations/acronyms to a minimum, to allow for readability and understanding.
- Do not include tables, figures, or graphs in the abstract.
- Limit the abstract to 300 words.
- Try to organize the abstract with the following headings where appropriate: purpose, methods, results, conclusions (e.g., for research projects) OR purpose, description, evaluation and outcomes (e.g., for capacity building projects).

Space is limited. Abstracts will be considered on a first come, first served basis.

### Deadlines

June 15, 2017 for oral presentations

August 1, 2017 for poster presentations

*Please complete the form below and email it to [lwilliams@ilsa.org](mailto:lwilliams@ilsa.org) and copied to [vibhaahuja.bcil@nic.in](mailto:vibhaahuja.bcil@nic.in). You will receive a return email acknowledging receipt of your abstract and subsequently a second email informing you if your abstract has been accepted into the program.*

### I. Lead Presenter

First Name \_\_\_\_\_

Last/Surname \_\_\_\_\_

Institution \_\_\_\_\_

Telephone \_\_\_\_\_

E-mail \_\_\_\_\_

### III. Co-Presenters (Include name, organization, e-mail)

\_\_\_\_\_

### III. Abstract Submission for

Oral Presentation Plenary Session II: Crop Biotechnology and Biosafety in South Asia

Oral Presentation Plenary Session V: New Applications of Biotechnology: Focus on Forestry and Biofuels

Poster Presentation

### IV. Abstract Title

\_\_\_\_\_

### V. Abstract (Maximum 300 words)

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\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

*(Note: Presenters must register for the 5<sup>th</sup> Annual South Asia Biosafety Conference. If an abstract is received from an author who is not registered, the abstract will NOT be included in the review process.)*