

South Asia Biosafety Program

NEWSLETTER for private circulation only – not for sale



Contained Field Trials of
PDH45 at BRRI's Transgenic
Green House

PAGE 2

Open Access to Four Food
and Feed Safety Protein
Monographs

PAGE 2

Spotlight on the Institutional
Biosafety Officer Dr. Alok Das

PAGE 3

Calendar of Biosafety Events

PAGE 4

Save the Date September 11-13, 2017

5th Annual South Asia Biosafety Conference
Taj West End, Bangalore



About the Conference

The South Asia Biosafety Program, the ILSI Research Foundation and Biotech Consortium India Limited are pleased to invite you to 5th Annual South Asia Biosafety Conference on September 11-13, 2017. Held at the Taj West End, Bangalore, this conference provides a forum to hear from leading scientists representing regulatory agencies, public sector research institutions, and the private sector in South Asia and internationally.

Social Media

Follow along to @ILSIRF on Twitter for updates. **#SABC2017**

Who Should Attend

The conference is open to all scientists, academics, researchers and officials from industry, research institutions, universities, government departments and ministries.

Registration Details

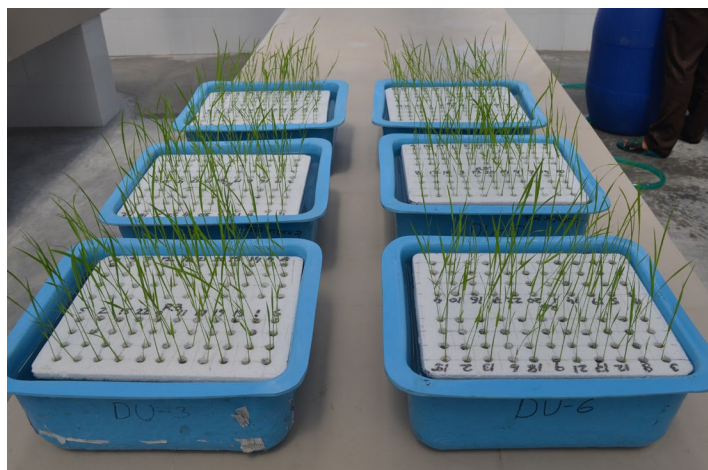
Please save the date for September! Registration information to follow.

Final Reminder for ISBGMO Abstracts

The 14th International Symposium on the Biosafety of Genetically Modified Organisms (ISBGMO14) will take place on June 4-8, 2017 in Guadalajara, Mexico. ISBGMO14 offers a unique opportunity to share information and experiences as well as engage in open and meaningful dialogue on biosafety research, risk analysis, policy and regulatory matters. Get involved with this year's symposium by presenting a poster or an oral presentation. The deadline for abstract submissions is March 6, 2017. Visit <http://isbr.info/ISBGMO14/Abstracts> to learn more.

Contained Trials of PDH45 at Bangladesh Rice Research Institute's Transgenic Green House

Dr. Zeba I. Seraj, Department of Biochemistry and Molecular Biology, University of Dhaka, Dhaka



Pea DNA Helicase (PDH45) was shown to confer salt tolerance in a local rice variety with a seed set observed at a salt stress of 12 dSm^{-1} in a collaborative effort between Dhaka University, Bangladesh and ICGEB, New Delhi¹. The transgene or single event was then crossed into the genetic background of four farmer popular varieties, specifically BR28, 29, 36 and 47 and advanced several generations. The transgenic BR28 and 47 lines were subjected to detailed expression and physiological analysis under salt stress in a contained net-house at Dhaka University. Some of the BR28 and BR47 transgenic rice lines showed vigorous growth, higher chlorophyll content, lower electrolyte leakage and lower SES score compared to their corresponding wild types after being subjected to salt stress. At the reproductive stage under continuous salinity stress, those lines also showed significantly better spikelet fertility and yield per plant than their corresponding wild types. The downstream interactomes of the PDH45 transgene in the rice genotypes showed that there was a significant increase in expression of six salt stress related genes at 150 mM NaCl stress.



Our selected transgenic lines were sent to the Bangladesh Rice Research Institute (BRRI) following the Biosafety Permissions and Procedures for further vigorous testing of their performance in contained green-house facilities under the supervision of Dr. Enamul Haque. Screening tests were conducted by Dr. M. Sazzadur Rahman and Dr. Shanaz Sultana. The performance of BR28, 29 and 36 and 2 BR47 transgenic lines was better under salinity stress at the seedling stage. The performance parameters included better SES scores, 90-100% survival and lower Na/K ratios compared to their corresponding wild types.

Looking ahead, these five lines will be going through another round of seedling salinity stress tests. They will also be undergoing a reproductive-stage salinity screening at 10 dSm^{-1} and will be assessed for their yield potential under stress.

¹Amin et al. 2102- Molecular Breeding 30: 345-354. DOI 10.1007/s11032-011-9625-3



OPEN ACCESS TO FOUR FOOD AND FEED SAFETY PROTEIN MONOGRAPHS

Monographs reviewing the food safety information for Cry1Ab, Cry1Ac, EPSPS and PAT proteins, commonly used in genetically engineered plants are now available. These summary documents provide an information resource for regulators and scientists who may not have ready access to the data in existing regulatory dossiers.

Visit www.ilsirf.org/resources/publications

Spotlight on the Institutional Biosafety Officer Dr. Alok Das



Browse resources available through the IBO Program

Visit the ICAR Biosafety Portal, an online resource to strengthen compliance with the regulatory framework and also to effectively facilitate research and development of agricultural biotechnology activities in ICAR through the regulatory process for the benefit of farmers and society, at <http://biosafety.icar.gov.in/>



Currently, over 30 Indian Council of Agricultural Research (ICAR) institutes have active research programs using genetically engineered (GE) plants, covering over 80 species. Because ICAR is committed to compliance with biosafety regulations concerned with GE organisms, it has partnered with the South Asia Biosafety Program to initiate a series of biosafety capacity building activities across the institutions for research programs engaged in the development of GE plants.

The first major activity has been a pilot program in ten ICAR institutions actively working to develop new GE plants. Two individuals were selected from each of the ICAR institutions to become Institutional Biosafety Officers (IBOs). After their initial training, the IBOs will be working together to create all the materials necessary for a functioning institutional biosafety program, including standard operating procedures, staff training materials, and processes for facility biosafety audits. In this month's SABP newsletter, we will be featuring Institutional Biosafety Officer Dr. Alok Das. Read about his perspective on being involved in the IBO program.

INSTITUTIONAL BIOSAFETY OFFICER: Dr. Alok Das

JOB TITLE: Scientist (Agricultural Biotechnology)

ORGANIZATION: Indian Institute of Pulses Research (IIPR), Kanpur

BIOGRAPHY: Dr. Alok Das has been awarded graduate and post-graduate degrees from Assam Agricultural University, Jorhat, and a Ph.D. in Molecular Biology and Biotechnology from the National Research Centre on Plant Biotechnology, Indian Agricultural Research Institute, New Delhi. His current research interests include gene technology and translational genomics for pulses (grain legumes) improvement, particularly in improving resistance against insect pests, such as gram pod borer and bruchids, and climate resilience traits including enhanced drought tolerance in chickpea and pigeonpea. He also oversees the biosafety compliance of the Institute and currently serves as the Member Secretary of the Institutional Biosafety Committee (IBSC).

THE VALUE OF THE IBO PROGRAM: "The series of workshops under ICAR's New Programme on Biosafety Awareness and Compliance Readiness at the Pilot Scale, known as the IBO Program, has been extremely valuable to us. Workshops have been highly interactive. Working together with other IBOs, asking questions, and exchanging insights about stewardship, guidelines and standard operating procedures for confined field trials have been true learning experiences. Invited talks from eminent scientists and mentoring by biosafety experts led us to understand various real-world facets of biosafety. Learning and knowledge gained through the workshops helped us to relook at several aspects of biosafety compliance, improve and strengthen them and adopt strategies to maintain compliance. e-Learning courses and the preparation of guidelines and procedures for working with genetically engineered plants are the real hallmarks of the program. Thanks to BCIL and the ILSI Research Foundation for the endeavor!"

EVENT	ORGANIZED BY	DATE	WEBSITE
INDIA			
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
Workshop on Technology and Innovation Management - Key to Effective Commercialization	Biotech Consortium India Limited and Department of Biotechnology	February 21, 2017 New Delhi	www.bcil.nic.in
XIII Agricultural Science Congress, 2017	National Academy of Agricultural Sciences (NAAS), India	February 21-24, 2017 Bangalore	www.agricongress2017.com
Doubling Farmers' Income by 2022: The Role of Weed Science Biennial Conference	Indian Society of Weed Science and ICAR-Directorate of Weed Research	March 1-3, 2017 Udaipur	http://bc.isws.org.in/
National Conference on Perspective of Challenges and Options in Maize Production and Utilization	Dr. Rajendra Prasad Central Agricultural University	March 3-4, 2017 Pusa, Samastipur, Bihar	www.pusavarsity.org.in
Workshop on "Phase-II Capacity Building Project on Biosafety: Outcomes and Way Forward"	Ministry of Environment, Forest and Climate Change and BCIL	March 15, 2017 New Delhi	www.bcil.nic.in
INTERNATIONAL			
14 th International Symposium on the Biosafety of Genetically Modified Organisms (ISBGMO14)	International Society for Biosafety Research (ISBR)	June 4-8, 2017 Guadalajara, Mexico	http://isbr.info/ISBGMO14
BIO International Convention	Biotechnology Innovation Organization	June 19-22, 2017 San Diego, CA, USA	www.convention.bio.org
Risk Analysis for the Release of GMOs into the Environment	International Centre for Genetic Engineering and Biotechnology (ICGEB) Biosafety Group	May 22-26, 2017 Trieste, Italy	www.icgeb.org/meetings-2017.html
5 th Annual South Asia Biosafety Conference	SABP, ILSI Research Foundation, Biotech Consortium India Limited (BCIL)	September 11-13, 2017 Bangalore, India	Registration information coming soon



SOUTH ASIA
BIOSAFETY PROGRAM

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.



CONTACT SABP

BANGLADESH

Prof. Dr. M. Imdadul Hoque
Department of Botany
University of Dhaka
Dhaka - 1000
Bangladesh
Email: mimdadul07@yahoo.com

INDIA

Dr. Vibha Ahuja
Chief General Manager
Biotech Consortium India Limited
Anuvrat Bhawan, 5th Floor
210, Deendayal Upadhyaya Marg
New Delhi 110 002 India
Email: vibhaahuja.bcil@nic.in

UNITED STATES

Mrs. Libby Williams
Communications Manager
ILSI Research Foundation
1156 Fifteenth Street N.W., Suite 200
Washington, D.C. 20005-1743 USA
Email: libwilliams@ilsr.org
Twitter: @CERA_ILSI and @ILSIRF

To receive an electronic copy of this newsletter send your name, institutional information and e-mail address to: vibhaahuja.bcil@nic.in