

## ASSAM BIOTECH CONCLAVE 2017



*Inaugural speech by Shri Sarbananda Sonowal,  
Chief Minister, Assam*



*Inaugural speech by Shri Keshab Mahanta,  
Minister, Science and Technology Dept., GoA*

GBP organized its 2<sup>nd</sup> Biotech Conclave in association with industry partner Federation of Industries & Commerce of North Eastern Region (FINER) at the Lily Hotel, Guwahati, on 5-6<sup>th</sup> January 2017.

### Inaugural session

The event was inaugurated by lighting of lamps by the Chief Guest, Shri Sarbananda Sonowal, Chief Minister, Assam along with the Guests of Honour: Shri Keshab Mahanta, Minister, Science and Technology Dept., GoA; Shri V.K. Pipersenia, IAS, Chief Secretary, GoA; Shri Ram Muivah, IAS, Secretary, NEC; Prof. Gautam Biswas, Director, IIT Guwahati; Dr. Mohd. Aslam, Adviser, DBT, Gol and Mr. Sushil Goenka, MD, Emami Ltd.

In his opening remarks, Shri Vinod Seshan, IAS, CEO, GBP gave a brief overview on GBP and its facilities. He also highlighted the objective of the conclave to bring together various biotech entrepreneurs, researchers, academicians, industry professionals, investment bankers, angel investors, government representatives, policy makers and others in the biotechnology field to explore the possibilities of biotechnology in North East India. He also outlined the growing role of GBP in promoting and assisting budding entrepreneurs of the region in the biotech sector.



*Unveiling of the model of GBP*

Shri Keshab Mahanta, Minister, Science and Technology Dept., GoA stressed on the importance of industry-academia interactions, and invited entrepreneurs, start-ups and students to utilize the facilities at GBP. In his inaugural speech, Shri Sarbananda Sonowal, Chief Minister, Assam emphasized on the importance of biotechnology in developing Assam as an organic hub by exploring the biodiversity of the region, which will thereby contribute to the economic growth of the state.

The session also featured the unveiling of the draft Biotechnology Policy of Assam and the model of GBP along with the release of the 2<sup>nd</sup> issue of North East Bioline and the Master Plan of GBP by Shri Sarbananda Sonowal, Chief Minister, Assam and Shri Keshab Mahanta, Minister, Science and Technology Dept., GoA. To accelerate the R&D activities in biotechnology and related fields and for faster penetration in industry, Memorandum of Understanding (MoU) were signed between Guwahati Biotech Park and:

- Federation of Industries & Commerce of North Eastern Region (FINER)
- Indian Institute of Entrepreneurship (IIE)
- National Institute of Pharmaceutical Education and Research (NIPER)
- North Eastern Development Finance Corporation Ltd. (NEDFi)
- National Research Development Corporation (NRDC)

**Technical Session: Talent search contest on 'Innovative research ideas leading to entrepreneurial venture in Biotechnology and allied areas'**

Research proposals from all over India were invited on innovative research ideas with the objective to accelerate R&D activity and ignite young minds to cultivate entrepreneurial ideas in biotechnology and allied areas. 15 shortlisted proposals were presented at the conclave, spread over two sessions and chaired by Dr. Pawan Sharma, Senior Consultant, NER-BPMC, DBT, GoI, and Dr. P.G. Rao, VC, USTM. The contest was judged by the following panel: Prof. B.C. Basistha, Addtl. Director (Biotechnology Division), Department of Science & Technology and Climate Change, Sikkim; Prof. M.C.





Kalita, Department of Biotechnology, Gauhati University; Prof. L. Sanjukumar, Department of Biotechnology, Manipur University; Prof. A.K. Das, Dean, Department of Botany, Rajiv Gandhi University, Arunachal Pradesh; Prof. D. Syiem, Department of Chemistry, NEHU, Meghalaya; Prof. C.R. Deb, Department of Botany, Nagaland University, Nagaland; Prof. Ajay Kunumakkara, BSBE, IIT Guwahati and Prof. K. Pakshirajan, BSBE, IIT Guwahati.

The research ideas covered a broad range of topics ranging from biomass assimilation, soil microbiology, genetic engineering, ethno-botany, renewable energy, bio-profiling, food processing, and development of commercial biotechnological devices, diagnostic kits and medical devices. The winners were offered cash prize with the option to avail ready-to-use laboratory space at GBP.

***Winners of 'Talent Search contest on Innovative Research Ideas leading to Entrepreneurial venture in Biotechnology and allied areas'***

<b><i>Prize</i></b>	<b><i>Winners</i></b>	<b><i>Title of Proposal</i></b>
1	Bibhas Kumar Bhunia, BSBE, IIT Guwahati	Affordable Bio-artificial Disc for Lower Back Pain Management
2	Debojit Borah, Center for Studies in Biotechnology, Dibrugarh University	Cost effective household procedure for the production and packing of dry fish with good odour and improved flavour and longer shelf life
3	Chandravati, Dept. of Polymer & Process Engineering, IIT Roorkee	Production of Nanocellulose and its Application as Bio-ink for 3D Bio-printing
4	Rukungoyi Phesao, Assam Down Town University	MADS (Motor Assisted Dynamic Splint) Device for Hemiplegic patient to regain functional activities in the course of rehabilitation
5	Abhishek Das, Tripura University	Development of Low Cost hand-held colposcope (AD-scope) for detection of Cervical cancer

## Special Interactive Sessions

The Conclave provided a platform for brainstorming on prospective biotechnological ventures of the region, industrial interventions and entrepreneurial endeavours.

### Session I: INDUSTRY-ACADEMIA-BUSINESS

*Theme: Biotechnology and Business - Catalyst for growth*

*Chair* – Dr. P. G. Rao, VC, USTM; Former Director, NEIST, Jorhat

*Co-Chair* -Shri P. Padmanabhan, MD, NRL

*Panelists :*

Dr. H. Purushotham, CMD, NRDC

Mr. Rama Iyer, Senior VP, Head-Strategic Alliances & Innovation, T-Hub

Dr. Sanjay Kumar Chetia, Principal Scientist, Regional Agricultural Research Station, Assam Agricultural University, Titabor

Dr. S.P. Singh, VC, Royal Global University

Dr. Mandar Kulkarni, Chief Technology Officer, Cancer Genetics Inc.

Dr. Ranjit Ranbhor, GM, Sun Pharma

Mr. Chinmoy Sharma, MD, North East Green Tech Pvt. Ltd.

Mr. Sushil Goenka, MD, Emami Ltd.

Industry-academic interface is the building block for spreading fundamental knowledge and technological developments in biotechnology in order to develop viable products and technologies to increase market ventures. After an elaborate discussion, the panel recommended the following points:

- Create an environment for innovation in industry-academia to boost research and market capital
- Ascertain the ideas pertaining to what has to be done prior to going into industry
- Create more revenues for collaboration for close industry-academia interactions
- Development of new technologies to meet future challenges
- Avail benefit from the different grants and schemes of government
- Avail expertise and technological assistance from government bodies

### Session II: TEA RESEARCH & BIOTECHNOLOGY

*Theme: Sustainable Quality Tea Production through Biotechnological Approach*

*Chair*- Shri Bidyananda BarKakati, VC, Tea Board Of India

*Panelists:*

Dr. P. Mohan Kumar, Advisor, National Tea Research Foundation, Tea Board

Dr. D. Haraprasad, IFS, MD, Assam Tea Corporation Ltd.

Dr. A.K. Barooah, Director, Tea Research Association

Dr. B.K. Borthakur, Former Scientist, Tocklai Tea Research Institute

Dr. Raj Baruah, Former Chariman, Assam Tea Planters' Association

Dr. Tanoy Bandyopadhyay, Biotechnologist, Tea Research Association



The panelists discussed the importance of biotechnological intervention in tea research and its industrial application. Importance of value addition in tea and sustainability in the global market were elaborately considered. The recommendations of the panel were:

- Industry-oriented research should be focussed
- Manufacture of specialty tea to be encouraged
- Geographical acclamation for Assam tea
- Whole Genome Sequencing of tea
- Production of genetically designed tea cultivar of superior quality, climate tolerance and pest resilience

### **Session III: SERICULTURE BIOTECHNOLOGY**

*Theme: Present status and future prospect of Muga Silk industry in Assam*

*Chairperson: Shri P.K. Das, Scientist-E (Retd.), Central Silk Board, Guwahati*

*Rapporteur : Dr. R. Kumar, Scientist-C, Central Silk Board, Guwahati*

*Moderator- Dr. Mamta B. Devi, Executive Officer, Silk Mark*

*Panelist:*

Shri M.N. Saikia, Director of Sericulture, GoA

Shri B. Choudhury, Scientist-D & Head, Muga Silkworm Seed Organization, Central Silk Board, Guwahati

Dr. Kartik Neog, Scientist-D, Central Muga Eri Research & Training Institute

Dr. Vijayan Kunjupillai, Scientist-D, Central Silk Board

Dr. R. Kumar, Scientist-C, Central Muga Eri Research & Training Institute

Shri A.K. Pal, Scientist-C, RSTRS, Central Silk Board

Dr. Nihar Ranjan Kalita, Secretary, Sualkuchi Tat Silpa Unnayan Samiti

The panel discussed the overview of muga industry in Assam, restoration of purity of Sualkuchi silk through biotech intervention, strategy for optimization of muga silkworm seed production, prospects of biotechnology in non-mulberry silkworm, application of molecular biological tools for improvement of silk productivity, strategy for conservation of wild silk moth and overview of muga post cocoon technology. The recommendations were:

- Stakeholders should interact intensively to systemize the industry for all-round development and cost-effective venture
- Adequate emphasis should be given for preservation of sericigenous flora and fauna existing in the region
- Intensive R&D support should be provided using biotechnological tools for improving productivity, evolving high-yielding varieties of silkworm, identification of non-traditional suitable pockets for multiplying seed crops, expansion through large scale plantations in forest areas and wasteland.
- Create a system to make easy access of muga yarn at lower price, ensure certification of muga silk products and develop clusters of muga cocoon producers, reelers and weavers
- Adoption of improved methodology in yarn production and introduction of diversification in muga weaving

- Procurement of various machineries for improving post cocoon activities through planned programs from Central Silk Board
- Identify and encourage local bodies, inventors and manufacturers of machineries suitable for post cocoon activities

#### **Session IV: ENTREPRENEURSHIP DEVELOPMENT, INNOVATION AND INCUBATION**

*Theme: Entrepreneurship Development with special context to Biotechnology in North East India*

*Chair - Dr. Alak Kr. Buragohain, VC, Dibrugarh University*

*Co-Chair - Mr. Sanjeeb Kakoty, Associate Professor, IIM, Shillong*

*Panelist:*

Mr. Rama Iyer, Senior Vice President, Head-Strategic Alliances & Innovation, T-HUB

Dr. Raghavendra Hunasgi, CEO, Marketing and Branding Leader

Mr. R. S. Joshi, IPP, FINER

Mr. Sandeep Khaitan, Director, Holistic Advisory Services Pvt. Ltd

Dr. USN Murthy, Director, NIPER

Ms. Rajilakshmi Borthakur, CEO, Terra Blue XT

Entrepreneurship is the new buzzword among the young generation. The panel explored answers for questions relating to making successful entrepreneurs, and its do's and don'ts. The recommendations of the panel were:

- Innovative technology-driven research to address the demands of the market
- Convergence of various disciplines for superior research output
- Increased linkage between research, industry and commerce
- Increase awareness on funding options for entrepreneurial ventures

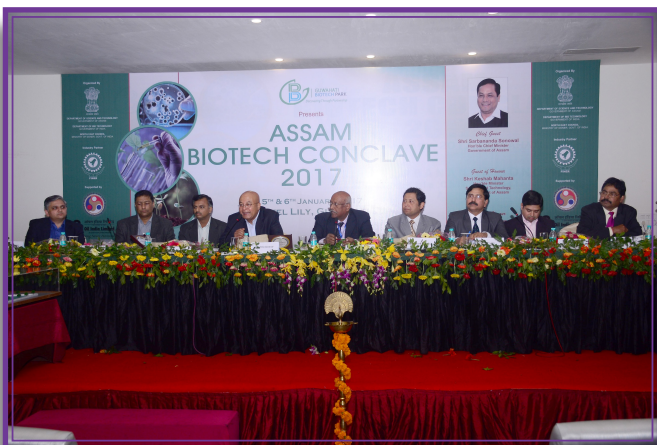
#### **Felicitations to the contributors of draft Biotechnology Policy of Assam**

Five core persons actively involved in the preparation of the draft Biotechnology Policy of Assam were felicitated by Shri Keshab Mahanta, Honorable Minister, Science and Technology Dept., GoA during the Conclave:

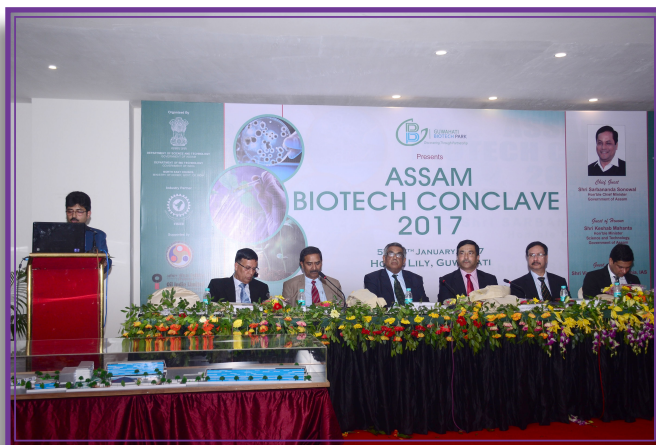
- Prof. Pratap Jyoti Handique, Department of Biotechnology, Gauhati University
- Dr. B.G. Unni (Former Scientist, NEIST, Jorhat), Director-Research, Assam down Town University, Guwahati
- Prof. B.K. Sarmah, Director, DBT-AAU Centre, Assam Agricultural University, Jorhat
- Prof. Probodh Borah, Dept. of Animal Biotech, Veterinary College, Khanapara, Guwahati
- Dr. S.K. Sinha, Fellow & Biotechnology Area Convenor, TERI-NE, Guwahati

#### **Young Innovative Entrepreneur Award**

Ms. Rajilakshmi Borthakur, CEO, Terra Blue XT was conferred the Young Innovative Entrepreneur Award 2016 for her healthcare start-up dedicated to using cutting-edge technology to make the lives of people with chronic disorders better.



*Panelists at the Industry-Academia-Business session*



*Panelists at the Tea Research & Biotechnology session*



*Panelists at the Sericulture Biotechnology session*



*Panelists at the Entrepreneurship development, Innovation and Incubation session*



*Ms. Rajilakshmi Borthakur, CEO, Terra Blue XT receiving the Young Innovative Entrepreneur Award 2016 from Shri Keshab Mahanta, Minister, Science and Technology Dept., GoA*



## PROJECTS/INTERNSHIPS at GBP

### Theme: Microbiological Techniques and Imaging

A group of ten (10) interns, Pallavi Mohanty, Pranjit Roy, T. Deepa, [M.Sc 2<sup>nd</sup> year (Biotechnology) Annamalai University, Tamil Nadu], Anchal Das, [B.Sc 1<sup>st</sup> year (Biotechnology) St. Anthony's College, Shillong]; Samyukta, [B.Tech 2<sup>nd</sup> year (Biotech) SRM University, Tamil Nadu]; Kuladeep Thakuria, Neelam Pr. Das, Manash Pr. Baruah, Jyotirmay Rajbongshi, [M.Sc 2<sup>nd</sup> year (Botany) USTM, Meghalaya] and Pallabita Saha [B.Sc 2<sup>nd</sup> year (Biotech) Cotton College State University, Assam] completed their internship on 'Microbiological Techniques and Imaging' under the supervision of Dr. Bula Choudhury, Senior Scientist, GBP. As part of their internship program, T. Deepa, Pallavi Mohanty and Pranjit Roy were also taken on an industrial visit to West Assam Milk Producer's Co-operative Union Ltd., Guwahati

### Theme: Biomolecule Profiling

A group of nine (9) interns, Riya Ghosh [B.Sc 2<sup>nd</sup> Sem. (Biotechnology) St. Anthony's College, Shillong], Jayeeta Brahma, Rupjyoti Bharali [Research Scholar, Dept. of Botany, NEHU, Shillong], Himakhi Debnath [M.Sc 2<sup>nd</sup> Sem. (Biotechnology) Gauhati University], Keshab Kemprai [M.Sc 4<sup>th</sup> Sem. (Biochemistry & Biotechnology) Annamalai University, Tamil Nadu], Pranjal Kalita [BSc 4<sup>th</sup> Sem., (Biochemistry) St. Anthony's College, Shillong], Ankita Upadhyaya [BSc 4<sup>th</sup> Sem., (Biotechnology) St. Edmunds College, Shillong], Abhijit Choudhury and Lawonu Pr. Mudoi [M.F.Sc 2<sup>nd</sup> Sem., (Aquatic Environment Management, College of Fisheries) AAU, Raha, Nagaon] completed their internship on 'Biomolecule Profiling' of lower plants and fish species of the region under the supervision of Dr. Madan Gopal Barthakur, Senior Scientist, GBP. The interns, as part of their internship work, were



provided exposure on many laboratory techniques like extraction of molecules from natural species, chromatography, and high-end analytical instruments like GCMS etc. They were also given exposure to other instruments like HPLC, Confocal Microscope etc. present in GBP and were further taken on an Industrial Exposure Visit to Emami Ltd, EPIP, Amingaon.

### Theme: Application of Sophisticated Analytical Instruments (HPLC, LC-MS & GC-MS)

Dibyaranjan Mohapatra, M.Sc 2<sup>nd</sup> year (Biochemistry) Annamalai University, Tamil Nadu completed a one month internship on 'Qualitative and Quantitative Drug Analysis by HPLC and LC-MS' under the supervision of Dr. Saurav Dey, Technical Officer, GBP.



### NEW ENTREPRENEURS at GBP

National Institute of Pharmaceutical Education and Research (NIPER), Guwahati signed a Memorandum of Agreement (MOA) for laboratory space (2016 sq. ft.) at GBP on 10<sup>th</sup> January 2017 for the project "Development of phytopharmaceuticals from the Medicinal plants of north eastern part of India for the pharmacological management of cancers and other inflammatory diseases".

## VISITS

### Visits at GBP



Dr. B. Majumdar, Principal Scientist, R&D, Central Research Institute for Jute and Allied Fibres (CRIJAF), Kolkata, Dr. S. Sarkar, Chief Administrative Officer, CRIJAF, Kolkata and Dr. S. Singh, In-charge, REMI, CRIJAF, Barpeta, Assam visited the laboratory space of Guwahati Biotech Park on 10<sup>th</sup> January 2017.

### Visits by GBP team



Dr. Bula Choudhury, Senior Scientist, GBP and Dr. Ashma Begum, Research Associate, GBP visited the Indian Jute Industries Research Associate (IJIRA), EPIP, Guwahati to understand the functionalities of the organization on 19<sup>th</sup> January 2017.

## REPUBLIC DAY CELEBRATION

The 68<sup>th</sup> Republic Day of India was celebrated on 26<sup>th</sup> January 2017 in the institute campus.

Chief Advisor: **Shri Vinod Seshan, IAS**, Chief Executive Officer, GBP  
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