





सी एस आई आर-उत्तर पूर्व विज्ञान तथा प्रौद्योगिकी संस्थान, जोरहाट CSIR-NORTH EAST INSTITUTE OF SCIENCE & TECHNOLOGY, JORHAT

VOL. XXXIX NO. 1 DECEMBER 2016 - MARCH, 2017

Connecting Science & Technology for a Brighter Tomorrow

CSIR-NEIST TRANSFERS THREE TECHNOLOGIES FOR COMMERCIALIZATION



Dr D Ramaiah, Director, CSIR-NEIST handing over the Anti-Arthritis technology package to Mr Sanjay Kumar, Chief Manager, Multani Pharma Ltd., New Delhi, in presence of CSIR-NEIST team members.



Dr D Ramaiah, Director, CSIR-NEIST handing over the Anti-Arthritis technology package to to Mr Rajnish Jha, General Manager, M/s Altis Life Sciences, Himachal Pradesh in presence of CSIR-NEIST team members.



Dr D Ramaiah, Director, CSIR-NEIST handing over the wood care technology package to Mr Dileswar Pradhan, CEO, M/s DSP Agrofoods & Chemical Industries, Bhubaneswar, in presence of the technology team members.

CSIR-NEIST transferred three technologies consecutively for commercialization to three industry clients during December, 2017. On 8 December, 2016, CSIR-NEIST transferred its technology, 'Herbal Anti-Arthritis Formulation' to two major pharmaceutical companies viz., Multani Pharmaceuticals Ltd., New Delhi and Altis Life Sciences, Himachal Pradesh. A team of officials from both the companies visited CSIR-NEIST during 8-9 December, 2016 for undertaking demonstration and the know-how package. In a short interactive meeting held during the visit, Dr D Ramaiah, Director, CSIR-NEIST lauded the efforts of the scientists including the retired torch-bearers and expressed his satisfaction in seeing the efforts of the institute proliferating to society. He hoped that the companies will not only make the product have pan-India presence but also find place in the international market. Mr Kumar, Chief Manager, Saniay Pharmaceuticals Ltd, expressed his gratitude to CSIR-NEIST for entrusting them with the product and promised to make it a household name in India and abroad. Mr Rajnish Jha, General Manager, M/s Altis Life Sciences, too expressed gratitude on behalf of his companies and also pointed out that transfer to several companies on non-exclusive basis promotes healthy competition and benefits the customer as quality is maintained and prices have to be competitive. Dr D Ramaiah handed over the technology packages to both the companies in presence of the technology team led by Dr Mantu Bhuyan, Sr Scientist and others.

CSIR-NEIST also transferred its technologies on 'Herbal Mosquito repellent candle' and 'Herbal wood care formulation' to M/s DSP Agrofoods & Chemical Industries, Bhubaneswar on 15 December, 2016. Mr Dileswar Pradhan, CEO of the company visited CSIR-NEIST during 15-16 December, 2016 for taking demonstration of the technologies and know-how packages.

DIRECTOR, CSIR-NEIST EXTENDS NEW YEAR'S DAY GREETINGS TO THE STAFF





Left: Dr D Ramaiah (center), Director, CSIR-NEIST delivering his New Year's Day speech. Mrs A Sengupta, Head-RPBD Division and Mr Ajay Kumar, Hindi Officer, are seen delivering the same in Assamese and Hindi respectively. Right: A section of staff members attending the address.

Dr D Ramaiah, Director, CSIR-NEIST addressed the staff members on 2 January, 2017 and extended New Year's greetings to all. He said that New Year is the best time to look ahead and think where we want to make headway. Delivering his New Year's Day speech, he recalled the Institute's performance made in 2016 and mentioned that it has been eventful and rewarding in many aspects. 'A good number of technologies were translated during the year and we have shown excellence in academics, external cash flow and in societal fronts', he said.

He recapitulated the various activities and events held during the year which have been significant to the overall performance of the Institute. He expressed his appreciation and congratulations to all for achieving the milestones and objectives of 12th Five Year Plan Projects which are due to be over by March, 2017. With four ambitious Fast Track Translation Projects sanctioned by CSIR recently and several Mission Mode Projects which have been proposed, he encouraged all to give their best in achieving the deliverables. Declaring the year 2017 as the year of Objective Oriented Research For Mankind, he appealed to all to strive hard to achieve higher objectives and develop technologies for the masses, both in high-end category and also for the rural areas. The Institute's Diary-2017 and Calendar-2017 were released by the Director later, on the occasion.

CSIR-NEIST ORGANIZED WORKSHOP-CUM-TRAINING ON BIOLOGICAL DATA ANALYSIS USING R-PACKAGE



Dr D Ramaiah, Director, CSIR-NEIST addressing the participants in the inaugural session.

Below: A section of staff members attending the address.

A two-day workshop-cum-training on "Biological data analysis Using R—Package" was organized by CSIR-NEIST during 5-6 January, 2017 supported by DBT, Govt. of India. The main objective of the workshop was to generate an in-depth knowledge about the applications of R-language for analysis of biological data analysis. The programme started with a short inaugural session presided over by Dr D Ramaiah, Director, CSIR-NEIST on 5 January, 2017. Dr Santanu Dutta, Associate Professor in Mathematics, Tezpur University and Dr Rajal Debnath, Scientist, CMER&TI, Jorhat attended as resource persons. Dr Dutta discussed about R language, setting up R platform and its multifarious applications including biological data analysis while Dr Debnath elaborated the use of various bioinformatics tools like QIIME, MUTHOR, UPARSE etc. in gene sequencing data analysis and discussed the implementation of R-package. A hands-on training on QIIME and R-package was held further wherein the participants were trained with demo session by microbial gene sequenced datasets.

The programme ended with a valedictory session held on 6 January, 2017. Dr D Ramaiah, Director CSIR-NEIST presided over the session wherein Mr Srinivas Lanka, Mentor to Industrialists, Corporate Boards and various Govt. Ministries and currently on his official visit to CSIR-NEIST also joined the programme. Mr Lanka in his brief address mentioned the importance of biological data analysis in recent R & D which was also reiterated by Dr T C Bora, former Head, Biotechnology Division. The programme was coordinated by Dr Ratul Saikia, Sr Scientist & in-charge, BIF-Centre, CSIR-NEIST. Altogether 35 nos. of participants from different institutes/organizations like IIT-Guwhati, NIT-Silchar, Tezpur University, Mizoram University, Guwahati University, Assam Agricultural University, Dibrugarh University, TRA-Tocklai, CMER&TI-Jorhat, RFRI-Jorhat and various colleges joined in the workshop.

CSIR-NEIST CONDUCTED FIRST ENTRANCE TEST FOR INDIA INTERNATIONAL EARTH SCIENCE OLYMPIAD (IESO) 2017 IN JORHAT

An Entrance Test of the Geological Society of India INTERNATIONAL EARTH SCIENCE OLYMPIAD (IESO) 2017, which is scheduled to be held in France for the year 2017, was successfully conducted by CSIR-NEIST for the first time in Jorhat on 22 January, 2017. Held at KV-NEIST, altogether 62 students from different schools of in & around Jorhat participated. Dr R K Mrinalinee Devi, Women Scientist, Geoscience & Technology Division (GSTD), conducted the

examination as Centre In-charge of the Jorhat Centre. The Geological Society of India is the body responsible for selecting the Indian team for the International Earth Science Olympiad. So far, the program in the country involves four stages: (i) National level Entrance Test, (ii) Training Camp culminating in the Indian National Earth Science Olympiad, (iii) Pre-departure training camp and (iv) International Earth Science Olympiad. The Earth Science Olympiad (ESO) is conducted by the ESO Cell at the Geological Society of India constituted by the President, Geological Society of India. The IESO is supported by the Ministry of Earth Science (MoES), Government of India as one of its outreach programme for promoting the study of Earth Science.

BHARAT RATNA PROFESSOR C N R RAO VISITED CSIR-NEIST

Bharat Ratna Professor C N R Rao, National Research Professor, Linus Pauling Research Professor & Honorary President, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore visited CSIR-NEIST on 21 December, 2016. He delivered a special lecture on 'Photochemical and thermochemical splitting of water' at Dr J N Baruah auditorium which was attended by CSIR-NEIST staff members. During his visit, he laid the Foundation Stone for new Bank and Post Office complexes in the campus and as well as for the new gate and boundary wall. He also inaugurated the Rural Technology Demonstration Centre in presence of Director, CSIR-NEIST, Dr D Ramaiah and staff members.



CSIR-NEIST staff interacting with Bharat Ratna Prof C N R Rao (left) during the lecture session. Right: A section of staff members attending the address.

Foundation Stone laying and Inauguration ceremonies of New Gate and Boundary Wall by Prof C N R Rao





Glimpses of the Foundation Stone laying and Inauguration ceremonies by Bharat Ratna Prof C N R Rao, in presence of Director, CSIR-NEIST, Dr D Ramaiah and CSIR-NEIST staff.

MR SRINIVAS LANKA, MENTOR-INDUSTRIALISTS, CORPORATE BOARDS AND GOVT. INITIATIVES VISITED CSIR-NEIST

Mr Srinivas Lanka, a thought leader in the field of Pharmaceuticals in India and mentor to various Industrialists, Corporate Boards and Government of India Initiatives visited CSIR-NEIST during 4-6 January, 2017. A close interaction between Mr Lanka and the scientists was held during the period wherein research and development issues particularly in the field of Pharmaceuticals were discussed. Mr Lanka provided valuable insights related to strategies for new drug development and its marketing.

Detailed discussions on effective marketing strategies vis-a-vis the active technologies of CSIR-NEIST were also held during the interactive sessions. Mr Lanka also delivered a Special Lecture entitled, "Linkage of Govt. and Industry to achieve health Indian Pharma" on 5 January, 2017 at Dr J N Baruah auditorium.



Interactive session between Mr Srinivas Lanka and CSIR-NEIST's scientists led by Dr D Ramaiah, Director, CSIR-NEIST at MS Iyengar hall.

CSIR-NEIST INKS MOU WITH ALL MIZORAM FARMERS' UNION

With an aim to promote cultivation of Medicinal & Aromatic Plants under 'CSIR Aroma and Phytopharmaceutical Mission', CSIR-NEIST signed MoU with All Mizoram Farmers' Union (AMFU), Aizawl on 13 February, 2017. Under the MoU, 500 hectares of land is aimed to be brought under the cultivation in various parts of Mizoram. A team from AMFU, Aizawl led by Mr Z Lalremruata, General Secretary, AMFU visited CSIR-NEIST on 13.02.2017 for signing and discussion



Dr D Ramaiah, Director, CSIR-NEIST handing over the signed MoU to Mr Z Lalremruata, General Secretary, AMFU after in presence of other members from CSIR-NEIST and AMFU.

AWARDS/FELLOW(S)





Dr H B Singh



Dr D Ramaiah, Director, CSIR-NEIST has been elected Fellow of the Prestigious "National Academy of Sciences (NASI)", India, for his important contributions in synthesizing NIR absorbing squarines, porphyrins, chlorins and aza-BODIPY dyes for studying these as sensitizers and photodynamic therapeutical (PDT) applications.

Dr H B Singh, Principal Scientist & Scientist-in-Charge, Branch lab, Imphal has been awarded the Distinguished Scientist Award 2016 by Venus International Foundation for his contribution in the field of Biodiversity. The award consisting of certificate, bronze medal and memento was presented by Justice S K Krishnan, Hon'ble Judge of Madras High Court to Dr Singh on 3 December, 2016 at Le Royal Meridien Hotel, Chennai.

Dr Ram Awatar Maurya, Scientist, has been awarded the NASI Young Scientist Platinum Jubilee Award 2016 by the National Academy of Sciences (NASI), Allahabad, India. The award was presented in the valedictory function of the 86th Annual Session and Symposium on, "Science, Technology and Entrepreneurship for Human Welfare in the Himalayan Region" held at Uttarakhand Technical University, Uttarakhand on 4 December, 2016.

LAURELS

Ms G Darabdhara

CSIR-NEIST RESEARCH SCHOLAR PARTICIPATED IN THE 9TH HOPE MEETING WITH NOBEL LAUREATES

Ms Gitashree Darabdhara, DST-INSPIRE SRF participated in the 9th HOPE Meeting with Nobel Laureates held at Tokyo International Forum, Japan from 26th February-2nd March, 2017 organized by Japan Society for the Promotion of Science (JSPS). She is amongst nine other Indian participants and the only member from CSIR selected to take part in the meeting.

CSIR-NEIST TEAM WINS RUNNERS-UP TROPHY IN SSBMT

Ms Pushpa Kumari Das, Technician and Ms Himadri Das, Research Scholar from Cellulose Pulp and Paper Group have won the Runners-up trophy in Women Carom Doubles in SSBMT (Indoor) Finals 2017 held at CSIR-CIMAP Lucknow during 3-5 March, 2017



Ms Pushpa Kumari Das and Ms Himadri Das receiving the Runners-up Trophy from Dr Madhu Dikshit, Director, CSIR-CDRI, Lucknow.

EXHIBITION

CSIR-NEIST PARTICIPATED IN THE 'NATIONAL VENDOR DEVELOPMENT PROGRAMME 2017'

CSIR-NEIST participated in the National Level Vendor Development programme Exhibition 2017 during 21-22 February, 2017 at Jorhat Bisturam Baruah Hall premises, organized by MSME-Development Institute, Guwahati, Ministry of MSME, Govt. of India in association with NESSIA Jorhat. The objective of the programme was to provide opportunity to MSME's to showcase their capabilities in various wings of Govt. organisations that outsource from micro and small enterprisers. CSIR-NEIST showcased its developed small scale technologies to enterprisers participated in the programme successfully.

CSIR-NEIST PARTICIPATED IN THE 'ASSAM SCIENCE FESTIVAL 2017' HELD AT KALAKSHETRA GUWAHATI

CSIR-NEIST participated in the Assam Science Festival Exhibition 2017 during 27-28 February, 2017 at Kalakshetra, Guwahati. In order to strengthen science, technology and innovative activities in the state, The Assam Science, Festival, 2017, was organized by Assam Science Technology and Environment Council, Government of Assam, where most of the Scientific organization with nos. of innovators participated.



From Right -Dr D Ramaiah, Director, CSIR-NEIST Jorhat, Sri Faizur Rahman, Founder President of NESSIA, and Sri Prabin Baruah, PTO, CSIR-NEIST Jorhat in front of CSIR-NEIST Exhibition Stall



Mr. Keshab Mahanta, Hon'ble S&T and Water Resources Minister, Govt. of Assam visited the Stall.

VOL. XXXIX NO. 1. DECEMBER 2016 - MARCH, 2017

CSIR-NEIST BRANCH LAB., ITANAGAR PARTICIPATES IN STATEHOOD DAY EXHIBITION

CSIR-NEIST Branch lab., participated in the Statehood Day exhibition organized at Indira Gandhi Park, Itanagar by the state government of Arunachal Pradesh on the occasion of Statehood Day celebration on 20 February, 2017. In the exhibition stall, various activities of the Branch lab., were

showcased, particularly activities towards socio-economic development in the state through small rural technologies disseminated to rural masses. Various posters and exhibit materials were displayed during the exhibition.

CSIR-NEIST PARTICIPATED IN ODISHA MSME TRADE FAIR 2017

CSIR-NEIST participated in the Odisha MSME Trade Fair 2017 held at IDCO ground, Bhubaneswar during 5-10 March, 2017. Various technologies and products developed by the Institute were showcased and displayed in the exhibition through sample materials and posters. A large number of visitors including entrepreneurs, scientists, Members of Parliament, farmers, students and general public visited the exhibition stall. Mr

Madhurjya Saikia and Mr Sanjoy Kumar Chanda, Technical Officers participated in the exhibition and actively interacted with the visitors. It is worth mentioning that besides the publicity in various local print media, a documentary on CSIR laboratories was telecasted by Doordarshan Odia on 25.03.2017 and 26.03.2017 wherein Mr Madhurjya Saikia spoke about CSIR-NEIST participation .

LECTURE PROGRAMMES UNDER IIME-NE CHAPTER HELD

CSIR-NEIST organized two Lecture Programmes at its premise under Indian Institute of Mineral Engineers—North East Chapter (IIME-NE chapter) on 9 February, 2017 and 22 February, 2017. Dr B N Sahoo, Dy. General Manager, Oil India Limited, Duliajan delivered the Lecture entitled, "Climate change— a threat to Mother Earth" on 09.02.2017 while Dr Pratik Swarup Dash,

Head, Tata Steel, Coal Group, Jamshedpur delivered the Lecture on 22.02.2017 on the topic, "Current research activities and future prospects in Tata Steel". The programmes were coordinated under the Presidentship of Dr P Sengupta, Head–MSTD Division and Dr B K Saikia, Sr Scientist & Joint Secretary, IIME-NE Chapter.

CSIR-NEIST CELEBRATED NATIONAL SCIENCE DAY 2017



Dr P G Rao, Vice Chancellor, USTM & Chief Guest of the function delivering the National Science Day Lecture on the topic, 'Science to Society'.

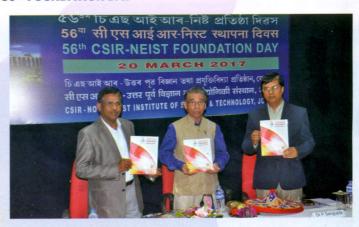


Dr R Ravi, Air Commodore, Air Force Hospital, Jorhat delivering his lecture on the topic, 'Aerospace Medicine and Flying: an Overview'as Guest of Honour

CSIR-NEIST CELEBRATED 56TH FOUNDATION DAY



Padma Bhushan Dr T Ramasami, former Secretary, DST, Govt. of India and former DG-CSIR, delivering the 56th CSIR-NEIST Foundation Day Lecture on the topic, 'Triple Helix of Excellence, Relevance and Sustenance'.



Release of NEIST 'Highlights 2016-17' by the Chief Guest, Dr T Ramasami, during the function in presence of Dr D Ramaiah (left), Director, CSIR-NEIST and Dr P Sengupta (right), Chief Scientist.

VOL. XXXIX NO. 1. DECEMBER 2016 - MARCH, 2017

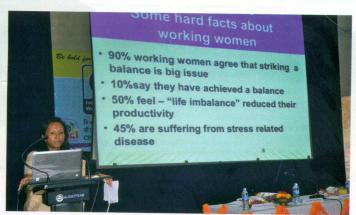


Dr T Ramasami interacting with the beneficiaries at Weaving Cluster Beneficiaries Meet held at New Sonowal Gaon, Mariani later on the day.



Dr T Ramasami unveiling the plaque of Foundation Stone Laying of "Centre for Advanced Civil Engineering Research" at CSIR-NEIST in presence of Director, CSIR-NEIST, Dr D Ramaiah and staff members.

CSIR-NEIST CELEBRATED INTERNATIONAL WOMEN'S DAY 2017



Mrs Bandana Dutta Tamuli, District Development Commissioner, Jorhat delivering her speech as Chief Gues on the topic, 'Women- Today and tomorrow'..



Dr Usha Rani Pegu, Professor, Jorhat Medical College Hospital & Guest of Honour delivering her talk entitled, 'Women and Health Issues'.

SOCIETAL ACTIVITIES

CSIR-NEIST BRANCH LAB, ITANAGAR ORGANIZED TRAINING ON MUSHROOM CULTIVATION AND VERMICOMPOST PRODUCTION

CSIR-NEIST Branch Itanagar in association with a NGO, 'ASWASH-The ray of hope' organized an awareness and training programme on cultivation of mushroom and vermicompost production at Azad, North Lakhimpur, Assam on 17 December, 2016. About 10 participants showed keen interest to start mushroom cultivation and vermicompost production at Azad. The programme was coordinated by Dr J C Borah, Scientist-in-charge, Branch Lab.

CSIR-NEIST Branch Lab., Itanagar in association with Bongalmara Self Help Group, Laluk (Assam) imparted training on Mushroom cultivation to the members of the SHG at No.1 Bongalmara, Laluk, Assam on 17 January, 2017. Dr Chandan Tamuly, Scientist and Dr B C Baruah, Sr Technical Officer interacted with the trainees and disseminated information about the nutritional and commercial aspects of the cultivation practice. A practical demonstration on preparation of mushroom bag was conducted and to help the trainees in the initial cultivation, CSIR-NEIST's team distributed 30 packets of mushroom spawn to the participants. Altogether 12 members received the training.

Another training-cum-awareness programme on Mushroom cultivation was held at branch lab on 18 January, 2017. Altogether 12 ST women from G sector Naharlagun, Polocolony Naharlagun and A sector Itanagar participated in the programme. Dr Budhen Ch Baruah, Sr Technical Officer coordinated the programme and distributed 24 packets of Mushroom spawn to the participants for the initial cultivation process.

A training programme on 'Vermi-compost production' was organized on 10 February, 2017. About 56 nos. of farmers/villagers/beneficiaries from different parts of Arunachal Pradesh and North Lakhimpur, Assam attended the day-long programme. Dr Jagat C Borah, Sc-in-charge, Branch lab., Itanagar coordinated the programme. The training programme covered theoretical session and practical demonstration of vermi-compost production.

VOL. XXXIX NO. 1. DECEMBER 2016 - MARCH, 2017



Trainees undergoing demonstration at Vermi-compost demonstration unit, Branch lab premise on 10.02.2017.



Trainees of Mushroom cultivation with CSIR-NEIST branch lab team members at Laluk (Assam) on 17.01.2017.

CSIR-NEIST BRANCH LAB., ITANAGAR ORGANIZED TRAINING PROGRAMMES ON SMALL RURAL TECHNOLOGIES UNDER CSIR 800 PROJECT

A one-day training on small rural technologies like, 'Low dust chalk pencil', 'Liquid & solid deodorant', 'Banana fibre extraction' and 'Wood care' was held at CSIR-NEIST branch lab on 21 February, 2017. The programme was aimed at dissemination of small low cost technologies among rural masses. These technologies are economical, affordable, environment friendly and requires low investment which can be easily adopted for income generation and earning livelihood.

About 60 nos. of farmers/villagers/beneficiaries from different parts of Arunachal Pradesh and North Lakhimpur Assam received the training. Dr Jagat C Borah, Sc-in-charge, Branch lab., Itanagar coordinated the programme and the resource persons were, Dr Tridip Goswami, Principal Scientist and Dr Dipul Kalita, Scientist. Hands-on demonstration on the technologies was provided to the trainees

CSIR-NEIST BRANCH LAB., ITANAGAR ORGANIZED TRAINING PROGRAMME ON AROMATIC PLANTS CULTIVATIONS AND DISTILLATION **UNDER CSIR 800 PROGRAMME**

With an aim to promote aromatic plant cultivation and its distillation for socio-economic development, CSIR-NEIST Branch Lab., Itanagar organized a one-day training programme on 'Aromatic Plants cultivation and distillation' on 7 March, 2017

at its premise. About 40 nos. of farmers/villagers from different parts of Arunachal Pradesh and North Lakhimpur (Assam) participated in the training. The programme was coordinated by Dr Jagat C Borah, Sc-in-charge, Branch Lab.

CSIR-NEIST ORGANIZED TRAINING PROGRAMME ON MUSHROOM CULTIVATION AND AROMATIC PLANT CULTIVATION UNDER CSIR 800 PROJECT



Trainees of Mushroom cultivation along with CSIR-NEIST team

CSIR-NEIST organized training programmes on Mushroom cultivation at its premise on 8 February, 2017 and 17 February, 2017. The main aim of the training was to encourage the farmers/women entrepreneurs/unemployed youth to venture into commercial cultivation for livelihood and income generation. About 50 unemployed men/women from Kohora, Golaghat took the training. The programmes included detailed demonstration and hands-on training on the cultivation method.

CSIR-NEIST also organized training on Aromatic Plants cultivation at its premise on 9 February, 2017 wherein 24 unemployed men from Kohora, Golaghat district were trained in commercial cultivation of Aromatic plants like Citronella and Lemongrass. Dr S P Saikia, Sr Scientist coordinated the programmes. The programmes were held CSIR under 800 project entitled, 'Enhancement of rural employment /entrepreneurship through MSME technologies and industrial trades training'.

POST TRAINING INTERVENTION FOR INITIAL FINANCIAL ASSISTANCE AND BUSINESS LINK-UP ORGANIZED AT CSIR-NEIST BRANCH LAB., ITANAGAR



A view of the meeting in progress.

CSIR-NEIST Branch Lab., Itanagar organized a brainstorming meet on 'Post training intervention for initial financial assistance and business link-up' at its premise on 28 March, 2017. The main objective of the programme was to set up a business link-up and initial financial assistance to start or implementing technologies by potential entrepreneurs beneficiaries. It is to be mentioned that under the CSIR 800 programme, CSIR-NEIST has been promoting disseminating few simple technologies suitable for the micro-scale sector of the industry which are simple, easy to operate with low skill and minimum land, labour and capital, and are meant for the unskilled or semi-skilled entrepreneurs. Four awareness cum training programmes on "Mushroom spawn production and cultivation technology,

Vermi-composting, Banana fibre extraction and products thereof, Solid deodorant freshener, Liquid deodorant cleaner, wood care, Mosquito repellent incense sticks and candle, cultivation of Aromatic plants and distillation technology were held during February-March, 2017. About 60 nos. of farmers, villagers, beneficiaries from different parts of Arunachal Pradesh and North Lakhimpur Assam attended the day-long programme besides important personalities from various organizations. Notable among them were Mr Bamang Mangha, Chairman, State Council of Science & Technology, Itanagar; Talo Potom, ADM cum CEO, Itanagar capital Complex; Mr G Angu, Dy Director, Directorate of Industries, Govt. of Arunachal Pradesh; Mr S K Das, Chief Manager, Canara Bank, Itanagar Branch; Dr Debajit Mahanta, Scientist, State Council of Sc & Technology, A.P and Mr B P Saikia, Extension Officer, DIC, Itanagar, Assam. Dr P Sengupta, Chief Scientist & Coordinator, Branch Lab in his opening remarks gave a brief overview of CSIR-NEIST, Dr Jagat C Borah, Sc-in-charge, Branch Lab in his welcome address briefed about the activities of the lab. Dr Budhen C Baruah, Sr Technical Officer; Dr Sidhartha Saikia, Sr Scientist; Mr Dipankar Neog, Sr Scientist and Dr Jatin Kalita, Scientist discussed in detail the potential technologies and its proposed business link-up for the beneficiaries in their presentations. A detailed discussion was held with the dignitaries and the beneficiaries on various issues like business support services, financial assistance, technical assistance, etc. for way forward.

CSIR-NEIST ORGANIZED TRAINING PROGRAM ON MEDICINAL & AROMATIC PLANTS CULTIVATION

CSIR-NEIST in association with its sister laboratory, CSIR-IIIM, Jammu and Sher-e-Kashmir University of Agricultural Sciences and Technology (SKUAST), Jammu organized training programmes at Krishi Vigyan Kendra, Jammu and Krishi Vigyan Kendra, Kathua on 10 & 11 January, 2017 respectively under the project "J&K AROMA AROGYA GRAM-JAAG (RSP-4001)".

Dr S P Saikia, PI of the project coordinated the programmes aimed to promote commercial cultivation of medicinal & aromatic plants for socio-economic upliftment of rural masses of J&K. Altogether 151 farmers from Jammu and Kathua attended the programmes.

PAPERS PUBLISHED

In International Peer Reviewed Journals

- 1. Assanvo E F, Kalita M, Saikia M, Baruah S D: Aqueous extraction of Ricinodendron heudelotii oil and directminiemulsion polymerization of the oil-in-water fraction, *Industrial Crops and Products*, 2016, 81 (Jan), p: 30-37.
- 2. Devi M, Bhakuni S S, Phukan M K, Duarah R: Tectonic forcing of drainages and geomorphic features developed across Himalayan mountain frontal part of western limb of Siang Antiform, Arunachal Himalaya, *Environmental Earth Sciences*, 2016, 75(5), p: 4-24.
- 3. Das T, Baruah B P, Saikia B K: Thermal behaviour of low-rank Indian coal fines agglomerated with an organic binder, *Journal of Thermal Analysis and Calorimetry*, 2016, 126(2), p: 435-446.
- 4. Talukdar M, Das Dhrubajyoti, Bora C, Bora T C, Deka Boruah H P, Singh A K: Complete genome sequencing and comparative analyses of broad-spectrum antimicrobial-producing Micromonospora sp. HK10, *Gene*, 2016, 594(1), p: 97-107.
- 5. Dutta D, Hazarika R, Dutta P D, Goswami T, Sengupta P, Dutta D K: Synthesis of Ag-Ag2S Janus nanoparticles supported on an environmentally benign cellulose template and their catalytic applications, *RSC Advances*, 2016, 6, p: 85173-85181.

- 6.Rajkhowa S, Mahiuddin S, Ismail K: An Assessment of the Aggregation and Adsorption Behavior of the Sodium Dodecylsulfate-Cetyltrimethylammonium Bromide Mixed Surfactant System in Aqueous Medium, *Journal of Solution Chemistry*, 2016, p: 1-14.
- 7. Saikia P, Gautam A, Goswamee R L: Synthesis of nanohybrid alcogels of SiO2 and Ni-Cr/Mg-Cr-LDH: study of their rheological and dip coating properties, *RSC Advances*, 2016, 6(113), p: 112092-112102.
- 8. Passari A K, Misra V K, G V K, Saikia R, Singh B P: Distribution and identification of endophytic Streptomyces species from Schima walliwallichii as potential biocontrol agents against plant pathogen, *Polish Journal of Microbiology*, 2016, 65(3), p: 319-329.
- 9. Biswas R, Baruah S: Shear Wave Velocity Estimates through Combined Use of Passive Techniquesin a Tectonically Active Area, *Acta Geophysica*, 2016, 64(6), p: 2051-2076.
- 10. Saikia S, Chopra S, Baruah S, Singh U K: Shallow Sedimentary Structure of the Brahmaputra Valley Constraint from Receiver Functions Analysis, *Pure and Applied Geophysics*, 2016, 174(1), p: 229-247.

- Baruah S, Baruah S, Saikia S, Shrivastava M N, Sharma A, Reddy C D, Kayal J R: State of tectonic stress in Shillong Plateau of northeast India, Physics and Chemistry of the Earth, 2016, 95 p: 36-49.
- 12. Amin M A, Ahmed E M, Mostafa N Y, Alotibi M M, Darabdhara G, Das M R, Wysocka J, Ryl J, Rehim S S Abd El: Aluminum Titania Nanoparticle Composites as Nonprecious Catalysts for Efficient Electrochemical Generation of H2, ACS Applied Materials Interfaces, 2016, 8 p: 23655-23667.
- 13. Saikia P, Gautam A, Goswamee R L: Synthesis of nanohybrid alcogels of SiO2 and Ni-Cr/Mg-Cr-LDH: study of their rheological and dip coating properties, *RSC Advances*, *2016*, 6 p: 112092-112102.
- 14. Bhattacharjee N, Sujata B, Konwar N, Dewanjee S, Manna P: Mechanistic insight of diabetic nephropathy and its pharmacotherapeutic targets: An update, *European Journal of Pharmacology*, 2016, 791 p: 8-14.
- Darabdhara G, Sharma B, Das M R, Boukherroub R, Szunerits S:
 Cu-Ag birnetallic nanoparticles on reduced graphene oxidenanosheets as peroxidase mimic for glucose and ascorbic acid detection, Sensors and Actuators B: Chemical, 2017, 238, p: 842-851
- 16. Boruah P K, Sharma B, Hussain N, Das M R: Magnetically recoverable Fe3O4/graphene nanocomposite towards efficient removal of triazine pesticides from aqueous solution: Investigation of the adsorption phenomenon and specific ion effect, *Chemosphere*, 2017, 168, p: 1058-1067
- 17. Darabdhara G, Boruah P K, Hussain N, Borthakur P, Sharma B, Sengupta P, Das M R: Magnetic nanoparticles towards efficient adsorption of Gram positive and Gram negative bacteria: An investigation of adsorption parameters and interaction mechanism, *Colloids and Surfaces a Physicochemical and Engineering Aspects*, 2017, 516, p: 161-170
- 18. Roy S, Prasad A K, Handique G, Barua A, Roy S: First report on heat shock protein expression in red spider mites (Oligonychus coffeae) in response to pesticide exposure (Article), *Invertebrate Survival Journal*, 2016, 13, p: 350-354
- 19. Gogoi D, Devi R, Pahari P, Sarma B, Das S K: cis-Diastereoselective synthesis of chroman-fused tetralins as B-ring-modified analogues of brazilin (Article), *Beilstein Journal of Organic Chemistry*, 2016, 12, p: 2816-2822
- 20. Borthakur P, Darabdhara G, Das M R, Boukherroub R, Szunerits S: Solvothermal synthesis of CoS/reduced porous graphene oxide nanocomposite for selective colorimetric detection of Hg(II) ion in aqueous medium, Sensors and Actuators B: Chemical, 2017, 244, p: 684-692
- 21. Bhuyan D, Selvaraj K, Saikia L: Pd@SBA-15 nanocomposite catalyst: Synthesis and efficient solvent-free semihydrogenation of phenylacetylene under mild conditions, *Microporous and Mesoporous Materials*, 2017, 241, p: 266-273
- 22. Hazarika N, Sarmah B, Bordoloi M, Phukan P, Baishya G: Diastereoselective synthesis of tetrahydropyrans via Prins-Ritter and Prins-arylthiolation cyclization reactions, *Organic Biomolecular Chemistry*, 2017, 15, p: 2003-2012
- 23. Phukan A, Bhattacharjee R Paul, Dutta D Kumar: Stabilization of SnO2 nanoparticles into the nanopores of modified Montmorillonite and their antibacterial activity, *Advanced Powder Technology*, 2017, 28, p: 139-145
- 24. Sen A, Abdelmaksoud A S, Nazeer Ahammed Y, Alghamdi M, Banerjee T, Bhat M A, Chatterjee A, Choudhuri A K, Dast Dhir A, Dhyani P P, Gadi R, Ghosh S, Kumar K, Khan A H L, Khoder M, Maharaj Kumari K, Kuniyal J C, Kumar M, Lakhani A, Mahapatra P S, Naja M, Pal D, Pal S, Rafiq M, Romshoo S A, Rashid I, Saikia P, Shenoy D M, Sridhar V, Verma N, Vyas B M, Saxena M, Sharma A, Sharma SK, Mandal TK: Variations in particulate matter over Indo-Gangetic Plains and Indo-Himalayan Range during four field campaigns in winter monsoon and summer monsoon: Role of pollution pathways, *Atmospheric Environment*, 2017, 154, p: 200-224

- 25. Saneesh Babu P S, Manu P M, Dhanya T J, Tapas P, Meera R N, Surendran A, Aneesh K A, Vadakkancheril S J, Ramaiah D, Nair S A, Pillai M R: Bis(3,5-diiodo-2,4,6-trihydroxyphenyl)squaraine photodynamic therapy disrupts redox homeostasis and induce mitochondria-mediated apoptosis in human breast cancer cells (Article), Scientific Reports, 2017, 7, p: 42126
- 26. Harshvardhan K, Surib M, Goswami A, Goswami T: Biological approach for the production of vanillin from lignocellulosic biomass (Bambusa tulda), *Journal of Cleaner Production*, 2017, 149, p: 485-490
- Neog K, Dutta D, Das B, Gogoi P: Coumarin to Isocoumarin:
 One-Pot Synthesis of 3-Substituted Isocoumarins from
 4-Hydroxycoumarins and Benzyne Precursors, Organic Letters, 2017,
 p: 730-733
- 28. Thatte C S, Rathnam M V, Namdeo A, Rane K: Heterogeneous catalytic solvent-free synthesis of 3,3,5-trimethyl cyclohexyl anthranilic acid esters via trans-esterification, *Chemical Papers*, 2017, p: 1-10
- 29. Allou N B, Saikia P, Borah A, Goswamee R L: Hybrid Nanocomposites of Layered Double Hydroxides: an Update of their Biological Applications and Future Prospects, Colloid and Polymer Science, 2017, p: 1-23
- 30. Sharma A, Kumar A, Khan R: Electrochemical immunosensor based on poly (3,4-ethylenedioxythiophene) modified with gold nanoparticle to detect aflatoxin B1, *Materials Science and Engineering C, 2017*, 76, p: 802-809
- 31. Gogoi G, Hazarika S: Coupling of ionic liquid treatment and membrane filtration for recovery of lignin from lignocellulosic biomass, Separation and Purification Technology, 2017, 173, p. 113-120

In International Peer Reviewed Journals

Sharma R, Goswami A, Rudrapal M, Sharma D, Sharma H K, Chetia
 In vitro evaluation of the antimalarial activity of a designed novel quinuclidine derivative, *Current Science*, 2016, 111(12), p: 2028-2030

Farewell

The following members of the staff have retired from Council's service on superannuation from CSIR-NEIST during December, 2016 to March, 2017.

- Dr Rajani Kanta Boruah, Chief Scientist
- Mr Narayan Chandra Laskar, Principal Technical Officer
- 3. Mr Dipak Kumar Bordoloi, Principal Technical Officer
- 4. Dr Pranab K Baruah, Principal Technical Officer (MO)
- 5. Mr N C Patra, Private Secretary
- 6. Mr Arun Kumar Sarmah, Senior Technician (2)
- 7. Mr Tulsi Dutta, Sr Technician (2)
- 8. Mr Rajendra Nath Bora, Technician (2)
- Mr Kangjam K Singh, Assistant Gr II
- 10. Mr Dulal C Sarmah, Assistant Gr 1
- 11. Mr Tileswar Das, Lab Assistant
- 12. Ms K Susheela Das, Lab Assistant

Condolence held

The Director and members of the staff of CSIR-NEIST deeply condoled the sad demise of its ex-employee, Shri Akon Chandra Sharma (who breathed his last on 22.12.2016) at a condolence meeting held in front of the administrative building on 28.12.2016

CSIR-NORTH EAST INSTITUTE OF SCIENCE & TECHNOLOGY JORHAT-785006, ASSAM

Phone: 0376-2370012, Fax: 0376-2370011

Website: www.neist.res.in

Published by : Director, CSIR-NEIST

Produced by : Research Planning & Business Development Division Editor: A Sengupta, Editorial Staff : Illika Zhimo, Rishi Raj Phukan Design & Graphics : Paresh Saikia, Photo : Rakesh Bora

Printed at: Saraighat Offset Press, Guwahati