

सी एस आईआर-उत्तर पूर्व विज्ञान तथा प्रौद्योगिकी संस्थान, जोरहाट CSIR-NORTH EAST INSTITUTE OF SCIENCE & TECHNOLOGY, JORHAT VOL. XXXVIII NO. 1 NOVEMBER 2014 - MARCH 2015

DR HARSH VARDHAN, HON'BLE UNION MINISTER, SCIENCE & TECHNOLOGY AND EARTH SCIENCES VISITED CSIR-NEIST



Dr Harsh Vardhan, Hon'ble Union Minister, Science & Technology and Earth Sciences, addressing CSIR-NEIST staff members at Dr J N Baruah Auditorium.

Dr Harsh Vardhan, Hon'ble Union Minister, Science & Technology, Earth Sciences and Vice President, CSIR visited CSIR-NEIST on 15 November, 2014. Addressing scientists and young researchers on his maiden visit to the Institute, Dr Harsh Vardhan, Hon'ble Union remarked that "Scientists should help North-East's local communities to cope with climate change". He emphasized on 'Make in India' vision of the Prime Minister, Shri Narendra Modi which he said needs regional synergies. He further added, "A terrific explosion of scientific energy is waiting to be tapped. The Narendra Modi government will channelize this into giving Indian industry a competitive edge in the global economy". He stressed on the need for nationwide network of laboratories under the Council for Scientific and Industrial Research (CSIR) to give solutions to enable local communities everywhere to improve their standards of living. He appreciated the efforts of CSIR-NEIST to combat the emergence of new agricultural pests and spread of new weeds in agriculture. Dr Harsh Vardhan said, "I am here to convey to you the Prime Minister's message that we want a strong and developed India, but not at the cost of the Environment. The North-East is India's greatest resource of biodiversity, genetic resources, ground water and countless other treasures. CSIR-NEIST should develop programmes for their safeguarding."



Interactive meeting held with Dr Harsh Vardhan. The meeting was attended by Dr D Ramaiah, Director, CSIR-NEIST and Dr Sudeep Kumar, Director-Central Office, CSIR, including all HODs and Area Coordinators of the Institute.

He recounted that as Union Health Minister, he had laid particular stress on medicinal and aromatic plants for their vast medical use. He mentioned that CSIR-NEIST's research output would be crucial to creating a viable economy for local communities. Dr Harsh Vardhan who was accompanied by Dr Sudeep Kumar, Director-Central Office, CSIR arrived in the morning and visited various divisions of the Institute along with Dr D Ramaiah, Director, CSIR-NEIST. He was shown a brief presentation on the activities of Institute by the Director, CSIR-NEIST and later spent some time in Biotechnology, Materials Science and Chemical Sciences laboratories. He also visited the Drug Processing Unit, experimental farm and GSI station. Dr Harsh Vardhan showed keen interest in the drugs (ointments) to fight arthritis and fungal infection.

He stressed on the need to expedite development of the chemical lead compound for production of anti-lung cancer drugs- a project of CSIR-NEIST which is in its advanced stage. He also announced a project to accurately and systematically document the impact of climate change on the natural ecosystems and biodiversity of the Himalayas and the North -East region. He further said, "I am in contact with renowned biologists all over the world who have pointed out to me the vital need for building up a database on the rapidly changing scene in these two regions. "I'd urge the scientists to carry out a pilot study within a short time which will help local communities develop alternative systems", opined Dr Harsh vardhan. Dr Harsh Vardhan said a social movement to bridge Science and Society is the need of the hour and pointed out, that, "The people of North - Eastern India are far more educated and aware than other regions and there is tremendous indigenous knowledge with people of this region". Scientists must listen to local communities and not patronise them. There is much to learn from the North-East for the benefit of the rest of India, he opined.



BHARAT RATNA PROF CNR RAO DELIVERS 54TH CSIR-NEIST FOUNDATION DAY LECTURE





Left: Bharat Ratna Prof CNR Rao, FRS, National Research Professor, JNCASR, Bengaluru, delivering the 54th CSIR-NEIST Foundation Day Lecture on 18.03.2015. Other dignitaries on the dais are (from left), Dr R C Boruah, Outstanding Scientist, Dr D Ramaiah, Director, CSIR-NEIST and Mrs Indumathi Rao. Right: Prof Rao, Guest of Honour, inaugurating the SS Bhatnagar Building for Advanced Analytical Facility at CSIR-NEIST.

CSIR-NEIST celebrated its 54th Foundation Day on 18 March, 2015 with a day-long programme. Befitting the occasion, a special programme was held at Dr J N Baruah Auditorium. Bharat Ratna Prof CNR Rao, FRS, National Research Professor, Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru graced the event as Chief Guest and delivered the Foundation Day Lecture while Mrs Indumathi Rao was present as Guest of Honour. Delivering his lecture, on 'Science in India' Prof Rao posed the question, When India will be Great? Based on his personal research experience he mentioned that without being strong in Science, a country cannot prosper. India needs many better research Institutes with modern equipment facilities and more number of recruitment of bright scientists in the system, Prof Rao said. He emphasized on doing quality science despite of all odds or obstacles. One has to come out from selfishness to do good science as generosity is one important facet of a good scientist, he said. Mrs Indumathi Rao in her address emphasized on improving the education systems and motivating students to bring out the best potential from them.

The poorest student must feel himself as the brightest chap and through this process if only a few students get transformed we will

be approaching towards great India, she commented. Dr D Ramaiah, Director, CSIR-NEIST delivered the welcome address and introduced the Chief Guest to the audience. The programme was largely attended by eminent scientists, guests, members of press and media and members of CSIR-NEIST fraternity, both old and new. On the occasion, the Institute's 'Highlights 2014-2015' was released by the Chief Guest. Also, members of the staff who superannuated during the year 2014 - 2015 were felicitated and Certificates of Appreciation were awarded to staff members who showed exemplary performance during 2014 - 2015. The programme concluded with vote of thanks delivered by Dr RC Boruah, Outstanding Scientist, CSIR-NEIST. As a part of the celebration, the day was also observed as 'Open Day' during 9.00 am to 12.00 pm. About 500 students from various schools of Jorhat along with teachers visited the institute. It is worthy to mention here that Bharat Ratna Prof CNR Rao and Mrs Indumathi Rao visited CSIR-NEIST during 17-19 March, 2015 during which Prof Rao inaugurated the S S Bhatnagar building for Advanced Analytical Facility at CSIR-NEIST on 18 March, 2015 in the morning hours besides visiting various divisions of the Institute and interaction with the scientists.

CSIR-NEIST MOTIVATES SCHOOL STUDENTS TO TAKE UP SCIENCE AS A CAREER



Dr D Ramaiah, Director, CSIR-NEIST addressing the students in the inaugural session on 5 January, 2015. Dr R C Boruah, Outstanding Scientist and Dr B G Unni, Chief Scientist (from right in the dais) graced the occasion as Guest of Honour and Special Invitee respectively.

CSIR-NEIST organised a week-long science motivational programme for talented school students during 5-10 January, 2015. Twenty eight students of class XI from various schools of Assam and Manipur along with 4 teachers attended the programme. The week- long programme included 6 hands-on type project work on 6 different topics under the supervision of CSIR-NEIST scientists, popular science lectures delivered by CSIR-NEIST scientists & experts from other institutes/universities, visit to Assam Agricultural University, Tocklai Experimental Station and exposure trip to historical places. Besides, the Institute also organised 2 one-day motivational programme on 22 & 23 January, 2015 at its premise. Seventy students of class X and XI along with seven teachers from various schools of Jorhat town and suburbs attended the programme held during the period. The programmes included four popular science talks delivered by CSIR-NEIST scientists and experts from other institutes/universities and visit to various divisions of the Institute.



CSIR-NEIST ORGANISED A PUBLIC LECTURE FOR SCHOOL AND COLLEGE STUDENTS



Bharat Ratna Prof CNR Rao, FRS, National Research Professor, JNCASR, Bengaluru, delivering the public lecture for school & college students on 19.03.2015.

CSIR-NEIST, Jorhat organised a Public Lecture for school and college students on 19 March, 2015 at District Library, Jorhat. Bharat Ratna Prof CNR Rao, FRS, National Research Professor, Jawaharlal Nehru Centre for Advanced Scientific Research, Bengaluru delivered the lecture before a galaxy of scientists, eminent personalities from Jorhat District Administration, members from Assam Science Society- Jorhat branch and students from various schools and colleges of Jorhat and nearby districts.

Delivering his lecture on "Celebration of Science: Glorious Past and Challenging Future" Prof Rao spoke about Science and stories of great discoveries in Science. Prof Rao in his very elaborative lecture highlighted the discoveries which celebrated its glorious centenary year in 2011 and 2012. The discovery of atomic structure by Rutherford, Super Conductivity by K Onnes, X-Ray Crystallography by W L Bragg and X-Rays by Roentgen are some he emphasized in his lecture. Prof Rao also mentioned the Solvay Conference of 1911 and 1927 which he called as the Golden Age of Science. The fundamental contribution by Lavoisier in Chemistry earned him the title of 'Father of Chemistry',



A section of audience and students at the function

he informed. Other great discoveries of Dalton, Michael Faraday, D Mendeleyev, Seaborg, F Wohler, G N Lewis and Linus Pauling are some he further detailed in his lecture. Encouraging the students, he urged them to always have an inquisitive mind for doing Science. 'Pick an area where no research has been done much but fundamental research done' opined Prof Rao in his message to the budding students. Mrs Indumathi Rao who attended the programme as Guest of Honour presented a Multimedia Demonstration on "Nano World" which showed basic aspects of Nano Science and Nano Technology and its wide applications.

Earlier, Dr D Ramaiah, Director, CSIR-NEIST delivered the welcome address and briefly introduced the Chief Guest, Bharat Ratna Prof CNR Rao to the audience. The programme concluded with vote of thanks by Dr R C Boruah, Outstanding Scientist, CSIR-NEIST. About 1000 students of standard IX to college level (B.Sc) from different schools and colleges of Jorhat and nearby districts attended the lecture.

AWARD/RECOGNITION

DR DIPAK KR DUTTA, CHIEF SCIENTIST CONFERRED THE CRSI BRONZE MEDAL



Dr D K Dutta, Chief Scientist

Dr Dipak Kr Dutta, Chief Scientist has been awarded the prestigious CRSI Bronze Medal and a certificate by the Chemical Research Society of India (CRSI) in recognition of his contribution to research in Chemistry. The medal was presented in the 17th Annual CRSI National Symposium in Chemistry held during 5-8 February, 2015 at CSIR-NCL, Pune. Dr Dutta also delivered an invited talk on, "Potential metal-complexes and metal-nanoparticles for efficient catalytic applications" in the symposium.

CSIR-NEIST RESEARCH ARTICLES RECEIVES WIDE READERSHIP

- A research article entitled, "Biosynthesis of Ag nanoparticles using pedicellamide and its photocatalytic activity: An eco-friendly approach" authored by Tamuly C, Hazarika M, Bordoloi M J, Bhattacharyya P K, Kar R published in Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 2014 (May), 132, p: 687-691, has been downloaded or viewed 372 times since its publication (measured through January, 2015) as reported by Elsevier.
- A research article entitled, "Natural polyhydroxyalkanoate-gold nanocomposite based biosensor for detection of antimal drug artemisinin" authored by Phukon P, Radhapyari K, Konwar B K, Khan R published in Materials Science and Engineering: C, 2014 (January), 37, p: 314-320, has been downloaded or viewed 394 times since its publication (measured through December, 2014) as reported by Elsevier.



SOCIETAL ACTIVITIES

CSIR 800 PROGRAMME



Women participants undergoing training on Mushroom cultivation at CSIR-NEIST.

- * Under the newly implemented project of CSIR 800 programme entitled, 'An integrative approach for development of low cost technologies for socio-economic upliftment of two backward areas of Jorhat district, Assam', CSIR-NEIST organized training programme on various occasions (detailed as under) for dissemination of rural based technologies like Mushroom cultivation and Production of Liquid Deodorant & Cleaner for the benefit of unemployed people. The programmes were coordinated by Dr S P Saikia, Scientist & Coordinator of the project.
- Training programme on Mushroom cultivation and Production of Liquid Deodorant & Cleaner was organised on 23 December, 2014 at Malowkhat, 44 no. Madhya Charusorai gaon (Jorhat) in which 89 unemployed women from Malowkhat and surrounding places received the training.
- Training programme on cultivation of Mushroom at CSIR-NEIST on 13 March, 2015. Eighteen unemployed women from Malowkhat under 44 No. Madhya Charusorai Goan Panchayat, Jorhat received the training.



Dr P K Baruah, Medical Officer & Head, Clinical Centre, CSIR-NEIST examining a beneficiary from the targeted malnourished population at the Health camp held while Dr S P Saikia, Coordinator of the programme looks on.

- Training programme on cultivation of Mushroom at CSIR-NEIST on 30 March, 2015. Twenty unemployed men and women from Nam Chungi, Chungi, Jorhat received the training.
- * A Health Camp was organized under the project "S&T interventions to combat malnutrition in women and children" at the CSIR-800 Techvil in Sonitpur, Assam in collaboration with the Institute of Integrated Resource Management (IIRM), Tezpur on 19 March, 2015 where anthropometric measurements and systemic examination of respiratory, gastrointestinal, nervous, cardiovascular and locomotors system was undertaken. One kilogram of KomalChawl (Soft Rice) popularly known for its bran intact and rich dietary fiber, essential fatty acids and other significant quantities of starch, protein, vitamins, and dietary minerals was distributed to each 100 beneficiaries comprising the targeted malnourished population. The programme was coordinated by Dr S P Saikia, Nodal Scientist of the project.

CSIR-NEIST BRANCH LABORATORY ORGANISED TRAINING PROGRAMME ON MUSHROOM CULTIVATION

CSIR-NEIST branch lab, Itanagar, Arunachal Pradesh organised training and awareness programme on Mushroom and Vermicompost cultivation on various occasions (detailed below) for the benefit of unemployed rural people of Arunachal Pradesh. The training programme covered theoretical and practical demonstration on the cultivation method, appraisal on various health benefits of Mushroom and scope for income generation through these cultivation practices. Dr Chandan Tamuly, Scientist-in-charge, Branch lab and Dr Budhen C Baruah, Sr Technical Officer coordinated the programmes.

- A training programme was organised in collaboration with Yogging Karma Self Help Group, Nirjuli at D-Sector, Nirjuli on 27 January, 2015. Twenty packets of Mushroom spawn were distributed to the trainees for trial basis cultivation. About 20 women representatives from the SHG actively participated in the programme.
- A training programme was held in collaboration with Gungma Dene Self Help Group, Itanagar on 3 February, 2015 at Lorr village,



Dr Chandan Tamuly, Scientist-in-charge (seated on left) and Dr Budhen C Baruah ,STO, (seated second from right) with the participants of the training programme at Lorr village, Itanagar.

Itanagar. About 20 women representatives from the SHG participated in the training.

• A training programme on Mushroom and Vermicompost cultivation was organised at Karmajuli village, Nirjuli on 2 March, 2015. Ten packets of Mushroom spawns were distributed to the trainees for trial cultivation. Thirty women trainees from Karmajuli village received the training.



OTHER EVENTS HELD

VIGILANCE AWARENESS WEEK OBSERVED AT CSIR-NEIST DURING 27 OCT - 3 NOV, 2014



Mr Pankaj Sharma, Wing Commander, Air Force, Jorhat delivering lecture as Chief Guest in the valedictory function of Vigilance Awareness Week held on 3 November, 2014.

PARTICIPATION IN EXHIBITION



CSIR-NEIST participated in the exhibition held on the occasion of Farmer's Day on 4 November, 2014 organized by Regional Agricultural Research Station at Titabar.

DIRECTOR, CSIR-NEIST ADDRESSED THE STAFF MEMBERS ON NEW YEAR'S DAY





Left: Dr D Ramaiah (center), Director, CSIR-NEIST addressing the staff members on 1 January, 2015. Sri Ajay Kumar (right), In-charge-Hindi cell and Dr R L Bezbaruah (left), Head- I&BD Division are seen translating the speech in Hindi and Assamese respectively.

Right: CSIR-NEIST staff members attending the address.

CSIR-NEIST CELEBRATED NATIONAL SCIENCE DAY ON 25 FEBRUARY, 2015



Left: Prof Harsh K Gupta, Member, Atomic Regulatory Board; President, Geological Society of India; President, International Union of Geodesy & Geophysics and Chairman, Research Council, CSIR-NEIST delivering the National Science Day lecture on, 'Living with Earthquakes in the North-East India'. Right: Dignitaries on the dais (from left), Dr R C Boruah, Outstanding Scientist, CSIR-NEIST; Prof Harsh K Gupta, Chief Guest of the programme; Dr D Ramaiah, Director, CSIR-NEIST and Prof Kankan Bhattacharyya, Department of Physical Chemistry, Indian Association for the Cultivation of Science, Kolkata present as Guest of Honour. (Dr Bhattacharyya delivered a popular talk on Raman effect and brief history of Prof. Raman.)



CSIR-NEIST CELEBRATED 66TH REPUBLIC DAY ON 26 JANUARY, 2015



Dr D Ramaiah, Director, CSIR-NEIST inspecting the Guard of Honour.

Dr Ramaiah addressing the staff members on the occasion.

CSIR-NEIST CELEBRATED INTERNATIONAL WOMEN'S DAY ON 10 MARCH, 2015



Right inset: Dr Neelima Saikia, Former Principal Scientist, CSIR-NEIST delivering Women's Day Lecture as Chief Guest. Right: Other dignitaries seated on the dais are (from right), Dr Minakshi Pathak, Ex-Dean, Dept. of Home Science, AAU-Jorhat present as Guest of Honour and Dr D Ramaiah, Director, CSIR-NEIST.

CSIR-NEIST TRANSFERRED KNOWHOW ON LIQUID DEODORANT & CLEANER



CSIR-NEIST signed knowhow transfer agreement with Mr Arindam Ghosh, an entrepreneur from Agartala, Tripura on 17 February, 2015 for transfer of technology/knowhow on Liquid Deodorant & Cleaner. Photo shows Dr D Ramaiah (extreme right), Director, CSIR-NEIST handing over the knowhow package to the entrepreneur, Mr Arindam Ghosh (extreme left).

COLLOQUIUM

Dr V Ramamurthy, Professor & Chair Organic Chemistry, Dept. of Chemistry, University of Miami delivered talks on "Science & Scientist" and "Photochemistry in a Capsule" on 26 & 27 March, 2015 at CSIR-NEIST.

STUDENTS' VISIT UNDER RMSA PROGRAMME



Mr. Probin Baruah, PTO, briefing the CSIR-NEIST activities to the student visitors. 17 School of the District of class XI batch visited CSIR-NEIST Under the programme.

VISIT ABROAD



Dr S P Saikia

Dr S P Saikia, Scientist, visited CNR-Institute of Agricultural Biology & Biotechnology (CNR-IBBA), Milan, Italy during 07-17 November, 2014 for scientific research stay under the joint project, 'Comparative studies on the Physiology and Biochemical aspects of adaptation and productivity in Camelina sativa L. in different biogeographic regions' under CSIR/CNR S&T Working Programme for the year 2012-2014.

PAPERS PUBLISHED PATENTS GRANTED/FILED

- In International Peer Reviewed Journals In National Peer Reviewed Journals : 3 In Proc. of Seminars/
 - Granted abroad : 2
 - Filed abroad : 6 Granted in India: 2
 - Filed in India : 4

FAREWELL

: 4

The following members of the staff have retired from Council's service on superannuation from CSIR-NEIST during November, 2014 to March, 2015.

- 1. Dr B G Unni, Chief Scientist 2. Dr T C Bora, Chief Scientist

Conferences

- 3. Dr B P Baruah, Principal Scientist 4. Dr D K Dutta, Principal Scientist
- 5. Mr Nilim Kumar Neog, PTO, 6. Shri A C Kakoty, STO(3)
- 7. Shri P K Goswami, Asstt. G 8. Shri N C Bora, PS
- 9. Shri B C Bora, Sr Tech.
- 10. Mr N N Borah, Sr Tech.
- 11. Shri R Pachani, Gp C, Non-tech.

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