

## CSIR-North East Institute of Science & Technology, Jorhat

*Connecting Science & Technology for a Brighter Tomorrow*

### Dr G Narahari Sastry assumed charge as Director, CSIR-NEIST

Dr G Narahari Sastry, Chief Scientist & Head of Centre for Molecular Modeling in CSIR's sister laboratory, CSIR-Indian Institute of Chemical Technology (CSIR-IICT), Hyderabad has taken over the charge as the Director of CSIR-North



Dr G Narahari Sastry, Director, CSIR-NEIST

East Institute of Science & Technology (CSIR-NEIST), Jorhat on 19 February 2019 from Dr Samit Chattopadhyay, who was holding additional charge of the post of Director, CSIR-NEIST besides CSIR-IICB, Kolkata. Dr Sastry has obtained his early education in Khammam, Telangana, and obtained his B.Sc. & M.Sc. from Osmania University (campus), Andhra Pradesh and Ph.D from University of Hyderabad. After a couple of post-doctoral stints, he started his independent research career in 1997 at Pondicherry University before moving to CSIR-IICT in 2002. He is a professor of AcSIR in Chemistry and Lifesciences disciplines. Dr Sastry has long research experience in theoretical and computational chemistry, computational biology, computer aided molecular design and Chemoinformatics. Dr Sastry has made fundamental contributions in the area of non-covalent interactions and developed several important concepts in this area. His group is interested to apply the data science approaches, and also developing an indigenous software, Molecular Property Diagnostic Suite. Several of his computational predictions have seen experimental realization. Besides publishing independently, the group also has active collaboration with several experimentalists and strongly believe that 'theory-experiment interplay is indispensable' for the progress of science. Dr Sastry is a J. C. Bose National Fellow (2015). He was awarded with Shanti Swarup Bhatnagar Prize in Chemical Sciences in 2011, considered as one of the highest prize for Science and Engineering in India. Dr Sastry also received National Bioscience award (DBT)

in 2009, one of the highest for Lifesciences in India, Swarnajayanti Fellowship 2005 (DST), B.M. Birla Award for 2001, B.C. Deb Memorial Award (2009), CRSI Medal 2011, and AvH Fellowship. He has delivered more than 300 invited lectures which include talks in national and international conferences. He was a visiting professor at IMS, Japan; LMU, Munich, Germany; Jackson State University, USA, and Kyushu University, Japan. He was elected as a Fellow of National Academy of Sciences (FNASc), Fellow of the Indian Academy of Sciences (FASc), Fellow of Association of Biotechnology and Pharmacy, Telangana State Academy of Sciences (Founder Fellow) and Andhra Pradesh Academy of Sciences (FAPAS). He is a regular reviewer to some prestigious journals and also in the editorial board of some journals. It may be worthwhile to mention that Dr Sastry has joined the Institute as the Eleventh Director of the Institute after Dr Samit Chattopadhyay.

### Dr G Narahari Sastry calls on CSIR-NEIST community to deliver solutions for improving quality of lives



Dr G Narahari Sastry, Director, CSIR-NEIST addressing the staff members on 20 February 2019. Seated on the dais: Mr J L Khongsai (left), Administrative Officer and Dr R L Goswamee, Sr Principal Scientist & Head, Materials Science & Technology Division.

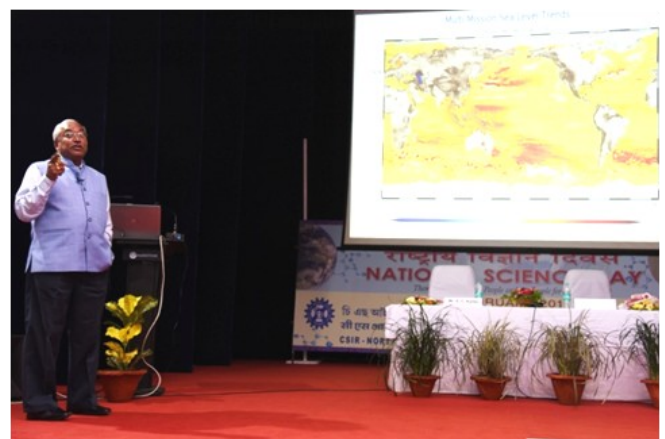
A day after assuming the charge of Director, CSIR-NEIST, Dr G Narahari Sastry addressed the staff members on 20 February 2019 at Dr J N Baruah auditorium. Dr Sastry called on CSIR-NEIST frater-

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-nity to deliver solutions which are aimed at improving the quality of lives in rural areas with long term sustainable development goals. He emphasized on nurturing persistence and determination while pursuing research in any field and encouraged all to maintain discipline, transparency and timeliness. For achieving transitional research, one must adopt and follow the attributes of 5 D's i.e Dedication, Diligence, Definitive, Discipline & Documentation, 5 T's which stands for Trust, Timeliness, Targeted Delivery, Tempo & Transparency and 5 C's i.e Confidence, Clarity, Commitment, Coordination & Communication, he said. Dr Sastry also stressed that one must actively participate in public engagements & interact more with society so that we realize not only individual dreams but also the dreams of millions of people. Quoting the famous quote of Robert Frost, *These woods are lovely, dark and deep, But I have promises to keep, And miles to go before I sleep, And miles to go before I sleep*, Dr Sastry extended best wishes and urged everyone to work together as a team and converge all our energies for the betterment of the society.

### CSIR-NEIST celebrated National Science Day

CSIR-NEIST celebrated National Science Day 2019 on 28 February with a day-long programme at its premise. Befitting the occasion, a special function was held at Dr J N Baruah Auditorium which was presided over by Er S C Kalita, Scientist-in-charge, CSIR-NEIST. Dr K J Ramesh, Director General, India Meteorological Department (IMD), New Delhi graced the function as Chief Guest and delivered the Science Day Lecture. The programme was largely attended by CSIR-NEIST staff, former employees and other invited guests. In his welcome address, Er Kalita highlighted the significance of Science Day in India and mentioned the importance & role of science in nation's progress while stressing on the theme for this year's Science Day celebration i.e Science for the People and the People for Science. Er Kalita also reiterated some vital contributions of CSIR-NEIST over the years with its multi-disciplinary programmes for



Dr K J Ramesh, Director General, India Meteorological Department (IMD), New Delhi delivering the Science Day Lecture on the topic, 'Climate Variability and Change: Challenges and Opportunities for India'.



Er S C Kalita, exchanging the agreement with Bana Tattwa Multi-Purpose Cooperative Society Ltd., Tripura for implementing CSIR Aroma Mission in the state of Tripura.

the socio-economic development of NE region. He further encouraged all to translate science from lab to field and add value to research while being beneficial to the society at the same time. Delivering the Science Day Lecture on the topic, 'Climate Variability and Change: Challenges and Opportunities for India', Dr Ramesh spoke in detail about adverse impacts of climate change and the various factors contributing to extreme impacts on seasons like heat waves and winter storms. Dr Ramesh informed that emissions from industries such as Green House gases have adverse effects on public



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Er S C Kalita, exchanging the agreement with Bana Tattwa Multi-Purpose Cooperative Society Ltd., Tripura Lotha Cultural Preservation Society, Nagaland in presence of the Chief Guest and CSIR Aroma Mission team.

health, agriculture and environment which need serious attention. He informed that a global framework is in place to work on climate change issues and further discussed the different programmes of United Nations Framework Convention on Climate Change (UNFCCC), Intergovernmental Panel on Climate Change (IPCC) and Montreal Protocol which deals with greenhouse gas emissions mitigation, protection of stratospheric ozone layer, etc. Dr Ramesh also spoke about the activities of IMD in global warming monitoring and concerns for least developed and developing nations like India. He said that the country at present needs 350 GW of power, out of which 20-25% are met by wind & solar energy. He elaborated the various options and opportunities for India to reduce carbon emission and all greenhouse gas emissions by 2050 wherein he mentioned about developing technologies to capture & remove carbon dioxide, meeting all energy needs by other sources and developing good management practices for agriculture, water, public health and environment. On the occasion, the Institute also exchanged agreement with two NGOs viz., Lotha Cultural Preservation Society, Nagaland and Bana Tattwa Multi-Purpose Cooperative Society Ltd., Tripura for implementing CSIR Aroma Mission in the states

of Nagaland and Tripura. Earlier, Dr Manoj Phukan, Scientist, CSIR-NEIST briefly introduced the Chief Guest to the gathering. The programme concluded with vote of thanks offered by Dr Debashis Mohanty, Scientist, Geosciences & Technology Division. Later, as a part of the celebration, the Institute observed 'Open Day' during which the Institute was kept open for the visit of students and general public for a stipulated time. Several school students from Jorhat visited CSIR-NEIST and interacted with the scientists.

### CSIR-NEIST transferred improved variety of Lemongrass (Jor Lab L-8) for commercial cultivation & processing



Dr G Narahari Sastry, Director, CSIR-NEIST handing over the agro-technology package of improved variety of Lemongrass (Jor Lab L-8) to Mr Naresh Tayade, Divisional Head-Perfumery, Pitambari Products Pvt.Ltd., Mumbai in presence of technology team members, business development team and others.

CSIR-NEIST transferred its agro-technology package on improved variety of Lemongrass (Jor Lab L-8) to M/s Pitambari Products Pvt.Ltd., Mumbai on 20 February 2019. Jor Lab L-8 has higher oil yield of 1% essential oil and herbage yield of 260q/ha (4 seasons/ environment) as compared to existing varieties which yields 0.4-0.8% essential oil. A team from the company led by Mr Naresh Tayade, Divisional Head-Perfumery was provided demonstration of the cultivation practice and its oil processing under the supervision of Dr Mohan Lal, Scientist & technology team leader.

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**Prof Alok Dhawan, Director, CSIR-IITR visited CSIR-NEIST**



Dr G Narahari Sastry, Director, CSIR-NEIST presenting a package of CSIR-NEIST herbal products to Prof Alok Dhawan during his visit.



Prof Alok Dhawan interacting with Dr Mohan Lal, Scientist at CSIR-NEIST Experimental farm area accompanied by Dr G Narahari Sastry, Director, CSIR-NEIST.

Prof Alok Dhawan, Director CSIR-IITR, Lucknow, visited CSIR-NEIST during 22-23 February 2019. Prof Dhawan had close interaction with the scientists while visiting various divisions of the Institute on 23 February accompanied by Dr G Narahari Sastry, Director, CSIR-NEIST. Prof Dhawan also briefly interacted with the research scholars at Dr J N Baruah auditorium.

**CSIR-NEIST participated in Emerging North East 2019 Exhibition**



Visitors interacting with CSIR-NEIST staff at the exhibition stall.

CSIR-NEIST participated in the exhibition held under the theme 'Emerging North East 2019' organised by Associated Chambers of Commerce and Industry of India (ASSOCHAM) at Maniram Dewan Trade Centre, Guwahati, Assam during 20-22 February 2019. CSIR-NEIST represented CSIR and showcased its R&D activities, societal programmes and other S&T activities which received keen interest from a large number of students, entrepreneurs and general public who visited the exhibition stall. Various potential products and technologies were displayed through posters and exhibit materials. Ms. Jiumoni Lahkar and Mr. Jugal Bori, technical staff participated in the exhibition and interacted with the



visitors. Along with CSIR, various state and central government departments and NGOs participated in the exhibition-cum-conference and displayed their products.

### CSIR-NEIST organized demonstration cum training programme for STINER-TFC Nagaland team



Nagaland STINER-TFC team during field demonstration cum training on cultivation and processing of aromatic plants at CSIR-NEIST experimental farm with CSIR-NEIST STINER team.

An intensive training on cultivation and processing of aromatic plants was imparted to Nagaland STINER-TFC team (Technology Facilitating Centre) from School of Agricultural Sciences and Rural Development (SASRD), Nagaland University during 26-28 February 2019. Four members from SASRD took up the training under supervision of CSIR-NEIST STINER team led by Dr Mantu Bhuyan, Principal Investigator of STINER project.

### Papers published

#### In International Peer Reviewed Journals

- Nongthombam G S, Boruah R C: Divergent synthesis of steroid analogs from steroidale formylenamides, conjugated enones and-formylvinyl halides, *Heterocycles*, 2019, 98 (1), p: 19-62.
- Raj J L, Rao G A: Issues on Design Shear Strength of RC Deep Beams, *Recent Ad-*

*vances in Structural Engineering-* Volume 1, 2019 p: 107-117

- Darabdhara G, Das M R: Dual responsive magnetic Au@Ni nanostructures loaded reduced graphene oxide sheets for colorimetric detection and photocatalytic degradation of toxic phenolic compounds, *Journal of Hazardous Materials*, 2019, 368 p: 365-377. **Highest Impact Factor Paper (IF-6.434)**
- Gogoi B, Bhau B S: DNA barcoding of the genus *Nepenthes* (Pitcher plant): a preliminary assessment towards its identification, *BMC Plant Biology*, 2018, 18 p: 153/1-153/7
- Borah G, Patel P: Ir(III)-Catalyzed [4 + 2] cyclization of azobenzene and diazotized Meldrum's acid for the synthesis of cinnolin-3 (2H)-one, *Organic Biomolecular Chemistry*, 2017, 17(9), p:2554-2563

### Farewell

The following member(s) of the staff have retired from Council's service on superannuation from CSIR-NEIST w.e.f 28 February 2019.

1. Mr Somiron Borthakur, Principal Technical Officer
2. Mr Prodip Borah, Section Officer (S&P)
3. Mr Bhogeswar Gogoi, Lab Assistant (2)