



CSIR News

NEWSLETTER OF THE COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH

Volume 63 No. 23 & 24

website: <http://www.csir.res.in>

December 2013

In This Issue

265 In The News

- DG-CSIR Inaugurates CSIR-800 Coordination Centre
- CSIR at Synergy 2013 – Empowering Bengal's Enterprise
- Dr. Rajesh Gokhale Awarded Infosys Prize 2013

273 71st CSIR Foundation Day Celebrations

- CBRI
- CDRI
- CFTRI
- CGCRI
- CIMAP
- CSIO
- IIIM
- IMMT
- IMTECH
- NAL
- NBRI
- NGRI
- NEIST

287 Honours & Awards

288 Announcements

In The News

DG-CSIR Inaugurates CSIR-800 Coordination Centre

THE Council of Scientific and Industrial Research (CSIR) has launched the CSIR-800 programme with the aspiration of improving the lives of 800 million fellow Indians through S&T interventions. The CSIR-800 Coordination Centre was inaugurated at the CSIR-NAL campus by DG-CSIR, Prof. Samir K. Brahmachari in Bangalore on 2 September 2013.

Speaking at the inauguration, Prof. Brahmachari said that the CSIR-800 programme is the Council of Scientific and Industrial Research's contribution to India meeting the Millennium Development Goals. CSIR-800 will deploy needed technologies in 29 village clusters (encompassing some 500+ villages) across India with the objective of improving the quality of life of the communities there.

The Karnataka TECHVIL

Prof. Brahmachari spoke of the consultations National Aerospace Laboratories had with

state officials in selecting a cluster of three villages (Palkanamardi, Kyadigere and Alkot) in District Raichur. This will be the Karnataka TECHVIL where technology interventions will be focused. He said that CSIR-800 seeks to make each TECHVIL a "live-in technology incubator" by enrolling local entrepreneurs to identify opportunities and solutions.

Initial field assessments of the three village clusters indicate their poor connectivity, high percentage of households below the poverty line, and lower than normal literacy rates. The district has an average annual rainfall of only 50 cm, canal connections yet to be established, and bore-wells already showing arsenic contamination. Communities rightly identify water as the main factor responsible for their poor quality of life. Consequently CSIR-800 is putting together a sustainable implementation plan for water in consultation with relevant state agencies.



Prof. Samir K. Brahmachari, DG-CSIR inaugurating the CSIR-800 Coordination Centre

Watershed and Agriculture in Raichur

CSIR-NGRI scientists will examine state watershed management plans, and bring tested techniques to assess and measurably raise aquifer levels. As the ground table improves, arsenic levels in bore-wells will be diluted, and planned cropping in the watershed will further improve soil moisture.

Value-added crops with improved earnings are planned for the watershed areas with guidance from CSIR-CIMAP scientists who have already visited the area. CSIR-CIMAP have estimated the soil quality and interviewed farmers for feedback on adopting alternate commercially valuable crops with improved water economics.

Training and monitoring will be the programme backbone. Economic models are being worked out so that farmers can choose to mix and match crops of their choice and the level of value-addition they wish to select.

Potable Water in Raichur

Presently, tankers bring drinking water to the villages with RO plants planned as more permanent solutions. However, effluent from RO plants is now recognized as worsening the situation.

CSIR has well-tested zero-polluting solutions with technologies for particulates, high dissolved solids, iron, arsenic and

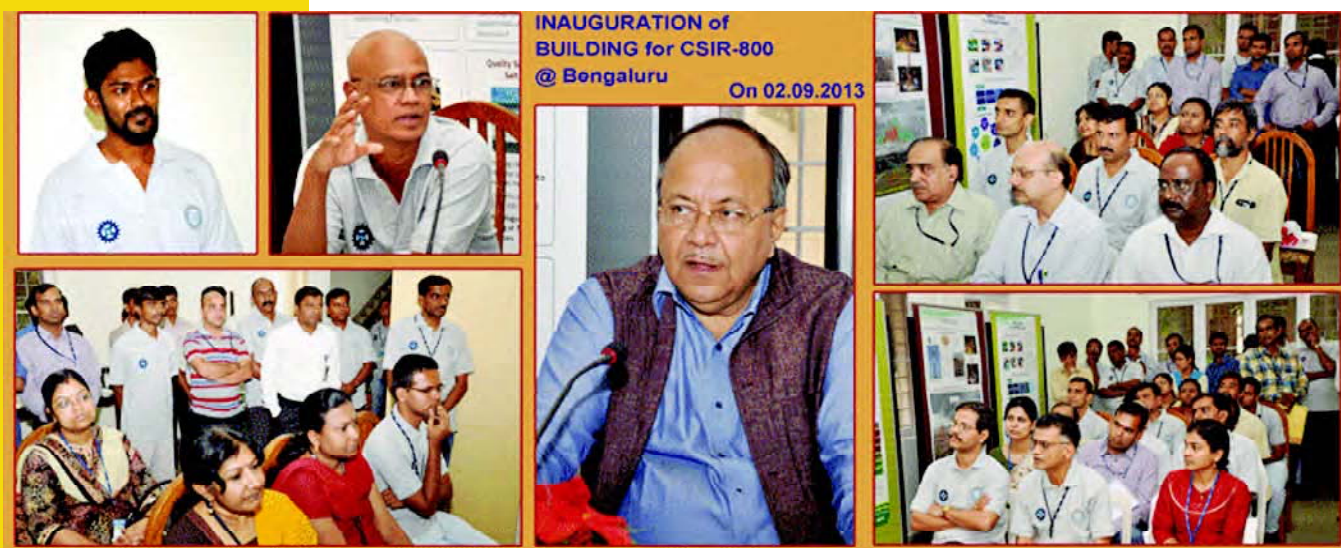
fluoride from several CSIR labs – CGCRI, CSMCRI, NEERI and IMMT – that for decades have been operating in many parts of the country producing tens of millions of liters of potable water. These technologies will be offered in the Raichur TECHVIL.

Other Technologies

Opportunities such as the rise in bamboo imports will be continuously monitored and offered as solutions after viable business models are built for their local growth and value-addition. Other CSIR technology solutions such as food processing, e-Health, artisans skilling, waste management, rural roads and housing, smokeless stoves, and solar-wind systems will be brought to Raichur when business opportunities become viable.

While CSIR-800 works in the technology arena, it recognizes societal needs as equally important. The programme is therefore collaborating with corporate houses for implementation plans in greening, IT, sanitation, hygiene, and health; and with NGOs in raising awareness in the same areas.

Prof. Brahmachari concluded that CSIR-800 envisions inclusive growth and improved quality of life for India's 800 million citizens through science and technology interventions that are socially and economically relevant. CSIR firmly believes that with adoption of appropriate technologies, a new generic model of generating entrepreneurs and creating business opportunities will be created in the country.



CSIR at Synergy 2013 – Empowering Bengal’s Enterprise



MSMEs or the Micro, Small and Medium enterprises, like elsewhere in the world, are the backbone of the economy in India. According to the 4th Census of MSME Sector, these enterprises employ about 59.7 million persons spread over 26.1 million enterprises. It is estimated that in terms of value, MSME sector accounts for about 45% of the manufacturing output and around 40% of the total export of the country. Globally too, the MSMEs have been described as engines of economic growth that promote equitable growth and enhance inclusiveness.

Keeping in mind the economic and social relevance of the MSMEs, the Department of Micro and Small Scale Enterprises and Textiles, Government of West Bengal organized *Synergy MSME 2013* at Milan Mela, Kolkata. It was a six-day event held during 16-21 September 2013 focusing on multi-dimensional and customized solutions to the MSME business needs. This included guidance on regulatory compliances and financial aid.



DD-CSIR inaugurating the
Technology Pavilion at Synergy -2013

Synergy 2013 was geared not only to provide support to existing MSMEs but also to attract potential entrepreneurs. Technology was recognized as a major theme as it was felt that access to appropriate technology and its adoption can greatly benefit MSME. Emphasis was thus given to development

Participating CSIR Laboratories

1. CSIR-Central Glass and Ceramic Research Institute, Kolkata
2. CSIR-Central Leather Research Institute, Chennai
3. CSIR-Central Mechanical Engineering Research Institute, Durgapur
4. CSIR-Central Institute of Medicinal and Aromatic Plants, Lucknow
5. CSIR-Central Electronic Engineering Research Institute, Pilani
6. CSIR-Central Road Research Institute, New Delhi
7. CSIR-Central Salt and Marine Chemicals Research Institute, Bhavnagar
8. CSIR-Central Institute of Mining and Fuel Research, Dhanbad
9. CSIR-Institute of Minerals and Materials Technology, Bhubaneswar
10. CSIR-Indian Institute of Chemical Technology, Hyderabad
11. CSIR-Institute of Himalayan Bio-resource Technology, Palampur
12. CSIR-Indian Institute of Chemical Biology, Kolkata
13. CSIR-National Botanical Research Institute, Lucknow
14. CSIR-National Metallurgical Laboratory, Jamshedpur
15. CSIR-National Environmental Engineering Research Institute, Nagpur
16. CSIR-North East Institute of Science and Technology, Jorhat.

of necessary institutional mechanisms to promote networking between technology providers and technology seekers. Thus, Synergy 2013 approached the issues facing the entrepreneurs in MSME sector in a holistic manner.

The Council of Scientific and Industrial

Research (CSIR) was a key partner in the event which is believed to be the first such state-sponsored event of its kind in the country. From across India, CSIR laboratories showcased products and technologies for MSMEs to adopt and prosper.

CSIR Technologies on Display

Theme 1. Wealth from Waste

- Solid waste to tiles (CSIR-CGCRI)
- Plastic waste to bitumen (CSIR-CRRI)

Theme 2. Technologies for Water

- Brackish water desalination technology (CSIR-CSMCRI and CSIR-CGCRI)
- Technology for iron removal (CSIR-CGCRI)
- NEERI-Zar (CSIR-NEERI)
- TERAFIL Water Filter (CSIR-IMMT)
- Membrane modules for water purification (CSIR-IICT)

Theme 3. Agri-Business and Food Processing

- Pesticides from red spider mite (CSIR-NEIST)
- Technology for extraction of rice bran oil (CSIR-IICT)
- Agro technologies for tea (CSIR-IHBT and CSIR-IICB)
- Bio-pesticides and bio-fertilizers (CSIR-NBRI)
- Herbal Soft Drinks (CSIR-NBRI)
- Herbal products for multiple applications (CSIR-CIMAP)
- Herbi chew (CSIR-CIMAP)
- Floriculture and dehydration of flowers (CSIR-NBRI)

Theme 4. Materials, Machines, Devices

- X-ray imaging based mango sorting system (CSIR-CEERI)
- Technologies for glass coatings (CSIR-CGCRI)
- Desktop micro-factory (CSIR-CMERI)
- Multi-axes micro-milling machine (CSIR-CMERI)
- Brassware lacquer and brass melting furnace (CSIR-NML)

Theme 5. Clean Environment

- Soft coke oven for rural application (CSIR-CIMFR)
- Technology for better recovery of fallen animal carcasses (CSIR-CLRI)
- Zero effluent leather processing (CSIR-CLRI)
- Low cost sanitary ware (CSIR-CGCRI)
- Phytoid wastewater purification technology (CSIR-NEERI)
- Multi-fuel biomass cook-stove (CSIR-IMMT)
- *Angarmitra* eco-friendly *chullah* (CSIR-CIMFR)

CSIR Technologies on Display



The CSIR Innovation Complex @ Kolkata, slated to come up at Baruipur, West Bengal and which at present operates out of the premises of CSIR-IICB also extended its services to the budding as well as the established entrepreneurs. This stall excited the curiosity of many visitors who came with specific queries.

Department of Scientific and Industrial Research (DSIR), New Delhi also had a stall in the Technology Pavilion where it

showcased its specific schemes e.g. PRISM (**P**romoting Innovation in **I**ndividuals, **S**tart-ups and **M**SMEs) that are targeted towards MSMEs.

Other institutions/organizations that also showcased their products/processes in the Technology Pavilion included: IIT-Kharagpur, Jadavpur University, Bengal Engineering and Science University, Shibpur, MSME Tool Room, MSME Testing Centre, West Bengal Renewable Energy

Development Agency (WBREDA), National Test House, Bureau of Energy Efficiency and Khadi & Village Industries Board.

The Technology Pavilion was inaugurated by DG-CSIR, Prof. Samir K. Brahmachari, in the presence of Shri Rajiva Sinha, Principal Secretary, Micro & Small Enterprises and Textiles, Govt. of West Bengal and other dignitaries.

The Technology Pavilion welcomed more than 17,000 visitors; most of them either existing entrepreneurs or potential ones.

At the inauguration ceremony of *Synergy 2013*, Chief Minister of Bengal, Ms Mamata Banerjee made a spirited case for the MSMEs. She said that the MSMEs have enormous potential for generating employment and that it was the objective of the Conclave to support the entrepreneurs by making all facilities available under a single umbrella. She also launched the *Biswa Bangla* brand and the website www.myenterprise.wb.gov.in.

Dr. Amit Mitra, Minister-in-Charge Finance & Excise, West Bengal Government briefly outlined the financial achievements of West Bengal and also the impetus being given to implementation of schemes to encourage the MSME sector.

During the Inaugural session, CSIR exchanged the MoU for providing support of modern and innovative technology to the MSME sector: Setting up Technology Facilitation Centre at Kolkata. The MoU was exchanged between Prof. Samir K. Brahmachari and Shri Rajiva Sinha. The Centre is slated to come up in the premises

of the CSIR-Central Glass and Ceramic Research Institute.

In all, thirty-one MoUs were signed as direct purchase agreements by business houses with artisans of the rural craft hubs at *Synergy 2013*.

At the Technical Session on the first day Prof. Samir K. Brahmachari shared the dais with Shri Madhav Lal, Secretary MSME, GoI and Shri Ashok Aikat, co-founder of the Sonodyne Group and President of Bharat Chamber of Commerce.

Shri Madhav Lal spoke on “Challenges and Opportunities in the MSME Sector: ecosystem reforms and strengthening.” He elaborated on the importance of MSMEs citing impressive statistics to back up the claims. He said that after agriculture, MSMEs are the largest employers. Although geographically distributed, these have always been the nurseries of entrepreneurs and innovators. In today’s globalized world, the concept of manufacturing has undergone a major change. It is not necessary for the automobile industry, for example, to produce the entire automobile under one roof. Detroit, once the thriving automobile capital of the world is a ghost town now because the production process changed totally. Globalization has posed certain challenges to the MSMEs but then it has also presented opportunities. He said, “We recognize that partnerships are important.”

Shri A. Aikat drew upon his own experiences as an entrepreneur and spoke about an interesting concept, namely, Personal Social Responsibility. He also called for the personalized mentoring of the young who have fire in their bellies and vision in their hearts.

Prof. Samir K. Brahmachari in his presentation on “Challenges and Opportunities for the MSME sector: in adoption of appropriate technology,” enthralled the audience with a fine balance of telling statistics and personal understanding of the issues faced by the entrepreneurs, especially those who were planning their first start-up enterprise. He said that his privileged position as Secretary to GOI, DSIR allowed him access to policies on tax incentives etc., run projects such as STEP; i.e., have a role that was more



The Technology Pavilion at Synergy -2013

regulatory in nature. On the other hand, his role as DG CSIR not only allowed him to implement the policies framed in New Delhi but also to command the laboratories to fight at the frontier areas of need. He said that about five years back realizing the need to use S&T interventions to address the problems of those living at the bottom of the economic pyramid, CSIR launched its CSIR-800 programme.

Prof. Brahmachari praised the small entrepreneurs, saying that they were the most talented workforce but that they had not been properly utilized. He elaborated on the issues that were especially relevant to the MSMEs; particularly the obstacles that faced the individual entrepreneur running proprietary units. Many carried out businesses from home or garages. However, since it was mandatory for even such businesses to comply with regulations, the regulatory bodies come into the picture the moment an MSME is registered. There are different rates for utilizing electricity for domestic and for business purposes but an MSME may become non-viable the moment higher rates are applied for the electricity consumed. He called for concessions and incentives to be given to such entrepreneurs so that they could not only produce products but also generate employment. Such measures would, no doubt, provide a fillip for the MSMEs.

In this context, he mentioned the CSIR Innovation Complex @ Kolkata, which has been envisioned as an institute that would boost translational research and development so as to cater to the needs of the MSMEs of the eastern region of India, which relies upon age-old technology for processing and manufacturing, to make them competitive globally and thus, increase national prosperity. CSIR Innovation Complex @ Kolkata aims to expand innovation capacity by leveraging S&T driven entrepreneurial projects.

He said that CSIR had many products and processes that had the potential to be adopted by the entrepreneurs. He then shared some stunning success stories, some of which have resulted in enormous gains for the nation thanks to import substitution. In a few cases CSIR scientists have achieved success in fields where there are only limited players. CRGO or electrical steel is a critical

item used to manufacture transformers, and CSIR scientists have the technology to make CRGO.

DG-CSIR mentioned that there were quite a few CSIR institutes in this region and that Kolkata could be thought of as a Gateway to the North East where the CSIR-NEIST was located. He made it a point to mention, with pride, a few key technologies of the laboratories of CSIR that could be utilized by the MSME sector. Particular mention was made of the paving blocks created using the waste emanating from steel plants and optical fiber amplifier of CSIR-CGCRI as well as its process that has resulted in reduced use of Ukraine clay (from 20% to about 1%) which greatly benefitted small and medium scale tiles manufacturing enterprises in Gujarat; waste to wealth products of CSIR-NIIST especially the fibers made out of pineapple, banana and jute; and novel process for bio jet fuel developed by CSIR-IIP.

DG-CSIR said that CSIR is partnering with the National Innovation Council to provide S&T interventions needed for enhancing the technological base of MSMEs. He specifically discussed (i) Mango Cluster, Krishnagiri (CSIR-NIIST and CSIR-CFTRI); (ii) Brass Cluster, Moradabad (CSIR-NML and CSIR-CECRI), and (iii) Bamboo Cluster, Agartala (CSIR-CIMAP).

He stated that, as a part of this focused effort, CSIR has developed a protocol for enhancing the storage life of Krishnagiri mangoes from 7 days to 35 days. For the Brass Cluster, Moradabad, a lacquer has been developed to give more shine to the Moradabad brass products as compared to their across-the-border counterparts. Also, the low cost Jhama coal will be used to substitute the expensive imported coal. For the Agartala Bamboo Cluster, cheaper alternative to *Jiget* binding material used in *Agarbatties* has been developed.

Considering that there are about 3.5 lakh workers in the brass cluster; 2.5 lakh workers in the mango cluster and around two lakh workers in the bamboo cluster, these pilot mode projects have touched many lives indeed. The good news got better when DG-CSIR said that additional 60 MSME clusters have been identified for S&T interventions.



DG-CSIR mentioned about the CSIR Innovation Complex @ Kolkata, which has been envisioned as an institute that would boost translational research and development so as to cater to the needs of the MSMEs of the eastern region of India, which relies upon age-old technology for processing and manufacturing, to make them competitive globally and thus, increase national prosperity.

In continuance of CSIR's ongoing efforts an initiative had been taken to synergize its leadership in leather technology with the availability of natural fibres in the North-Eastern part of India. CSIR-CLRI and CSIR-NEIST have transformed ethnic products of the Northeast by coming out with innovative fusion designs to catch the market.

Dr. Rajesh Gokhale Awarded Infosys Prize 2013

Dr. Rajesh S. Gokhale, Director, CSIR–Institute of Genomics and Integrative Biology (IGIB), New Delhi has been awarded the prestigious Infosys Prize 2013 in Life Sciences for his work in the field of lipid metabolism in *M. tuberculosis*. He discovered fatty acyl AMP ligases in *M. tuberculi*, their role in the generation of the lipid components of its cell wall and of their existence in other organisms, where they play a role in complex organic biosynthesis.



Dr. Gokhale is a Ph.D. from the Indian Institute of Science (IISc), Bangalore, in the area of protein folding and stability. He then carried out postdoctoral work at Stanford University in polyketide synthases and secondary metabolite biosynthesis. Before becoming Director of CSIR-IGIB, he served as faculty at the National Institute of Immunology (NII). Dr. Gokhale is the Co-founder of Vyome Biosciences, a biopharmaceutical company developing drugs for dermatology care utilizing genomics knowledge.

He is the recipient of several awards including Swarnajayanti Fellowships, the Shanti Swarup Bhatnagar Prize and the National Bioscience Award for Career Development.

These include Leather, Pharma, Clay, Rubber, Dyes and intermediates to name a few.

DG-CSIR highlighted the CSIR efforts that have led to the empowerment of people in the Kashmir Valley through creation of an aromatics industry which is appropriate for a state rich in biodiversity and aromatic & medicinal plant production. He also proudly announced that in June this year a Branch laboratory of CSIR-IIIM (at Srinagar) had been rededicated to the nation.

He also presented the data on the enormous economic impact of the improved varieties of plants such as Mint, Khus, Lavender, Rose and *Artemisia annua* in states as far flung as Jammu and Kashmir, Uttar Pradesh, Bihar, Rajasthan, and Madhya Pradesh.

India is one of the leading producers of pepper in the world. DG-CSIR urged the MSME entrepreneurs interested in agro-products to consider adopting the technology of making white pepper which was available with CSIR-NIIST. He explained that though black and white peppers both come from the fruit of the pepper plant, these are processed differently. White pepper, which is obtained by removing the outer skin of

the ripe/dried black peppercorns commands a much higher price than black pepper.

DG-CSIR also briefly touched upon TECHVILs: the CSIR-800 programme of empowering communities with appropriate S&T interventions. He said that in continuance of CSIR's ongoing efforts an initiative had been taken to synergize its leadership in leather technology with the availability of natural fibres in the North-Eastern part of India. CSIR-CLRI and CSIR-NEIST have transformed ethnic products of the Northeast by coming out with innovative fusion designs to catch the market.

Prof. Brahmachari said that the economic impact assessment of CSIR technologies on MSME sector has shown its great dynamism and wonderful performance. He concluded by saying that as he was being driven to the venue of *Synergy 2013*, he was delighted to see, for the first time ever, huge hoardings in Bengali that effectively conveyed the message that Knowledge/Scientific research could be used to innovate and create Wealth.

Report by Dr Sukanya Datta, Principal Scientist, Director's Cell, CSIR-CGRI

Central Building Research Institute (CBRI), Roorkee



The 71st CSIR Foundation Day 2013 was celebrated at CSIR-Central Building Research Institute (CBRI), Roorkee on 26 September 2013.

On the occasion, Dr. S.J. Chopra, Chancellor, University of Petroleum & Energy Studies, Dehradun was the chief guest and Prof. S.K. Bhattacharyya, Director, CSIR-CBRI presided over the function. Many dignitaries, superannuated staff members of CBRI, students from local schools and colleges, faculty members, press and media were present on this occasion.

Mr. R.K. Garg, chief scientist and chairman of the committee welcomed all the dignitaries and highlighted the achievements of CSIR under the able leadership of Prof. S.K. Brahmachari, DG-CSIR and Prof. S.K. Bhattacharyya, Director of the institute.

Prof. S.K. Bhattacharyya addressed the gathering and touched upon the glorious journey of CSIR over the past seventy one years which started with the establishment of five laboratories, which has now risen to thirty seven labs with different specializations. He said that CSIR has given the maximum number of patents to the country and what is practiced today at CSIR is science for engineering and engineering for science. He also said that CSIR-AcSIR



Address by Chief Guest Dr. S.J. Chopra,
Chancellor, University of Petroleum &
Energy Studies, Dehradun

will help in the development of the country through knowledge generation and exploring new and innovative ideas through the youth of the country. He touched upon the focus areas of R&D in the institute and network projects under the twelfth five year plan and hoped that CSIR-CBRI may be able to serve the society in a more effective manner as Team CSIR.

Dr. S.J. Chopra, Chancellor, University of Petroleum & Energy Studies, Dehradun talked about the 'Leadership and Intellectual Integrity' in decision making. He shared his R&D experiences and stressed the need of honorable behavior and intellectual integrity for the efficient working of an organisation.

On this occasion, the *CBRI Annual Report 2011-12* was released by the chief guest Dr. S.J. Chopra and Prof. S.K. Bhattacharyya. The superannuated staff members of CSIR-CBRI received Samman Patras, shawls and wrist watches. The staff members, who have completed twenty five years' service in CSIR were presented wrist watches. CSIR prize for securing more than ninety percent marks in three science subjects at intermediate level by the children of staff members was given away by the chief guest.

A number of science projects were prepared and working models were



Prof. S.K. Bhattacharyya, Director,
CSIR-CBRI

Prof. S.K. Bhattacharyya addressed the gathering and touched upon the glorious journey of CSIR over the past seventy one years which started with the establishment of five laboratories, which has now risen to thirty seven.

exhibited by local school/college students under the CSIR Programme on 'Faculty Training and Motivation of Science Students' and were highly appreciated. Prizes were given to the winning entries. Prizes were also given to the winners of the essay competition (for children of CBRI staff members), conducted on this occasion. There were other activities too including visit of school students providing a platform for scientist-student interaction and generating interest among the youth for science and technology.



Demonstration of the working models by the students



Release of *CBRI Annual Report*

The Foundation Day Lecture was delivered in the afternoon on the topic "Energy: Yesterday, Today and ??????" by Dr. S.J. Chopra, Chancellor, University of Petroleum & Energy Studies, Dehradun. He presented the global energy scenario and the

trends of energy consumption, leading to the present critical situation. He also suggested changes that could be done by individuals in daily routine activities to save energy.

To celebrate the CSIR Foundation Day in a befitting manner a cultural programme was organised in the evening which was enjoyed and appreciated by one and all. The prizes were distributed to the participants by Mrs. Kajal Bhattacharya, patron of CSIR-CBRI ladies club.

Central Drug Research Institute (CDRI), Lucknow



Prof. Y.K. Gupta addressing the audience

CSIR-Central Drug Research Institute (CDRI) celebrated the 71st CSIR Foundation Day on 26 September 2013. Prof. Y.K. Gupta, All India Institute of Medical Sciences, New Delhi was the chief guest of the function. Addressing the audience, he appreciated the scientific contributions made by CSIR-CDRI. In his presidential address he discussed about the obstacles and their solutions in clinical trials.

On this occasion, felicitation with CSIR-CDRI Award-2013 for

Excellence in Drug Research was the main event. CSIR-CDRI Awards for Excellence in Drug Research had been instituted in the year 2004 to honour Indian researchers below 45 years of age who have contributed significantly to the broad areas of drug research. The Award is being given in two categories viz. Biological Sciences and Chemical Sciences. Each award carries a cash prize of Rs. 20,000 and a citation.

The prestigious CSIR-CDRI Award for Excellence in Drug Research for the year 2013 in Biological Sciences was awarded to Dr. B. Gopal, IISc, Bengaluru for his work on "Studies on sigma factor/anti-sigma complexes reveal a molecular rationale for *M. tuberculosis* persistence" whereas in Chemical Sciences the award was conferred on Dr. Srinivasa Reddy, CSIR-NCL, Pune for his work on "Efforts to identify new

chemical entities (NCEs) for treating metabolic disorders and infections”. Both the awardees presented their research achievements.

The chief guest Prof. Y.K. Gupta released the *CSIR-CDRI Newsletter* (Vol. 5 No.1 April to September, 2013) and felicitated employees of CSIR-CDRI who retired during September 2012-August 2013, followed with felicitation of employees who have

completed 25 years of their services at CSIR-CDRI. Cash prizes were also awarded to the children of CSIR-CDRI employees who secured more than 90% marks in Science subjects in intermediate board exams.

About 200 Postgraduate and Graduate students from Lucknow and Allahabad Universities also visited the Institute and interacted with the scientists.



Release of *CSIR-CDRI Newsletter*



Dr. T.K. Chakraborty felicitating Prof. Y.K. Gupta



Dr. B. Gopal receiving the CDRI Award-2013 (Biological Sciences) for Excellence in Drug Discovery



Dr. Srinivasa Reddy receiving the CDRI Award-2013 (Chemical Sciences) for Excellence in Drug Discovery

Central Food Technological Research Institute (CFTRI), Mysore

A quiet septuagenarial birthday celebration in the morning, belied the deluge that was in store for the next two days. The visitors were anticipated to trickle in slowly. Unexpectedly, it was a flood....wave after wave.... they came in buses, they came in autos, they came by cars, they came in singles, they came by the dozens, they came with friends, they came with families; they came from everywhere – Davangere to Mandya to Nanjangud to our own backyards; the tiny tots jostled with the grandmothers and entrepreneurs hustled with backpacking students. The indefatigable red Tee shirt young brigade overwhelmed with exhaustion, shepherding lines and replenishing water cans.

The crowds were in for a treat—be it roasted nuts and rotis or square puris and the fresh bottled juices—the “person of the moment” were the ones operating the demonstration units. It was a sight to watch people in lines gaping at the deft skills of the operators with awe. It was touching to see a partially blind student asking questions and diabetics showing keen interest in the various anti diabetic initiatives. At the same time it was hilarious to hear about an old lady showing interest only in our colleague’s Mysore silk saree!

It has been a while since we saw the LKG and UKG students picnicking and frolicking on the grounds and lawns of Cheluvamba’s Mansion. The evening ended leaving a warm after glow of a sweet tiredness.

—Dr. Avinash Sattur

The blog writing by Dr. Avinash Sattur summarizes the CSIR Foundation Day celebrations held at CSIR-CFTRI this year. The CSIR Foundation Day at the CSIR-Central Food Technological Research Institute, Mysore, was celebrated with the organization of the Doing Science With Purpose exhibition and the Open Days of CSIR-CFTRI. Mrs. C. Shikha, Deputy Commissioner, Mysore District, inaugurated the celebrations by lighting the lamp in a simple function. Prof. Ram Rajasekharan presided.

Speaking to the gathering, Mrs. Shikha recalled how the small dot of indelible ink,

and the energy food used in the nutrition programmes, reminded her of the contributions of CSIR and CFTRI. She also distributed the CSIR Cash Awards for Meritorious Students, mementoes to retirees of the year and for those who have completed 25 years of Council service.

Then began the Open days of CFTRI. In two days, more than 19000 (nineteen thousand) people visited the Institute and watched several CFTRI-designed machines in operation. Besides, posters that explained various research programmes underway in the Institute were on display. The public also had an opportunity to taste some novel products of CFTRI. School children, physically challenged persons on wheel chairs, college students from as far as Kerala, entrepreneurs, senior citizens and women thronged the Institute to get a glimpse of research activities. Elaborate arrangements were made to guide the visitors around the two-kilometer route charted for the visit.

Various facilities of the Institute were kept open for the public to visit and also the Doing Science with Purpose exhibition that showcased the seven decades of CSIR. Besides, 12 licensees of CSIR-CFTRI were provided space to display their products in the exhibition. On display were novel products like Spirulina, coconut milk powder, free flowing baking soda, Mini Dhal Mill, Automatic Chapathi Machine, chemical free jaggery, palm jaggery, coffee concentrate, fruit juice concentrate and osmodehydrated fruits.

“I must be thankful for giving the opportunity, to see the various departments engaging in the team work of making food related things, more simpler ways of processing in a hygienic way,” wrote Mr. Mahadevan, a senior citizen and a chemical consultant who visited the Institute. Similar sentiments, and literally colourful comments, were expressed by the visitors.

The huge number of visitors prompted the Institute scientists to conduct surveys on nutrition awareness and food allergy. Thousands responded to the survey. About 150 entrepreneurs used the occasion to seek technologies from the Institute.



Glimpses of the CSIR Foundation Day Celebrations at CSIR-CFTRI

CSIR-Central Glass & Ceramic Research Institute (CGCRI), Kolkata



On 26th September 2013, CSIR-CGCRI celebrated the 71st CSIR Foundation day with pride and joy. A formal lecture entitled “Non-power Applications of Nuclear Energy” was delivered by Chief Guest Shri Sekhar Basu, Director, Bhabha Atomic Research Centre (BARC), Mumbai. Former Director, CSIR-CGCRI, Dr. H.S. Maiti was the Guest of Honour. He also addressed the audience.

Mr Kamal Dasgupta, Acting Director, CSIR-CGCRI in his brief address provided a succinct summary of CSIR-CGCRI's achievements in the past one year. He shared with the audience the good news that CSIR CGCRI was doing well and that its ECF had jumped to Rs 17.44 crores. He said that it was a good idea to use the money generated to carry out innovative R&D and create a knowledgebase that could be used to generate wealth for the nation. He said that CSIR-CGCRI has many such projects for different societal sectors.

Mr Kamal Dasgupta then listed a few major technologies transferred in recent times to the market. He made special mention of the technologies of borosilicate glass beaded nodules for encapsulation of nuclear wastes and ceramic-glass linings which were transferred to the market, and also referred to the demonstration of 20-stack fuel cells of 500 W capacity. He added that on the infrastructure and services front too, the institute had made great strides with the revamping of power substation that has tripled power distribution capacity of the Institute. On the sports front, CSIR-CGCRI had nailed the Hussain Zaheer competition.

Former Director, Dr. H.S. Maiti, who spoke next, said he was happy to see the success of CSIR-CGCRI. He said that technology development takes decades. It takes sustained effort, courage and perseverance, he added. He cited the growth of bio-ceramics technology as an example which had come to fruition after about 15 years. The breakthrough in fiber optics research which is being demonstrated in Delhi, owes its origin to the 10th Five Year



Mr Kamal Dasgupta, Acting Director, CSIR-CGCRI delivering his address

Plan. “Focussed, directed effort is needed; not short-term but long-term perspectives and not individual, but group dynamics, is the key to success,” he said. He stressed the need for generating a brand image in research.

Dr. Dinesh K. Srivastava, Director, Variable Energy Cyclotron Centre (VECC) introduced Shri Sekhar Basu, Director, Bhabha Atomic Research Centre.

Shri Sekhar Basu in his talk said that BARC provides R&D support to the Indian Nuclear Power programme and was also active in the use of nuclear energy in non-strategic sectors. The focus of his talk was Agriculture, Food preservation, Healthcare, Water, Environmental issues, Industrial appliances (radio-graphy, radiotracer and nucleonic gauge), Electricity, and Fluid fuel substitutes. He said that BARC has released 40 crop varieties to the country for commercial cultivation. These improved varieties enjoyed great popularity with the farmers and exhibited many desirable traits such as higher yield, large seed size, and resistance to biotic and



Shri Sekhar Basu, Director BARC gave the Inaugural address at the 71st Foundation Day celebrations at CGCRI

abiotic stresses. He said that these “Trombay crops” could be thought of as being “designer crops” because these could be engineered to have the desired qualities. Protocols for large-scale production of commercially important varieties of banana, pineapple and sugarcane have been created and transferred to the fields.

He said that radiation protection of food was another area of great importance. It is also a good way for hygienization of spices.

Shri Basu also explained in detail about the healthcare techniques that use radiation. He proudly spoke about the Bhabatron – India’s indigenous telecobalt machine. Shri Basu touched upon issues of Arsenic, Iron, Fluoride and microbial contaminant removal from water at very low cost. He informed that the world’s largest desalination plant was coupled to a nuclear power plant that is operational at Kalpakkam, India. He mentioned that at the Kolkata Port, sediment transport investigations used Scandium 46 radiotracers. As a result of this study it was possible to select proper dumping sites for the dredged sediments. He spoke about the

environment-friendly biogas plant set up in Tihar jail which converted kitchen waste to methane in about 200 aesthetically-pleasing biogas plants.

Finally, he highlighted the contribution of CSIR-CGCRI in the area of specialty glasses. His talk delivered a message: “Bring technology development to a logical end; develop a product and there must be a method to deliver the technology through entrepreneurship.”

Twenty seven personnel who had superannuated from CSIR-CGCRI this year and 12 staff members who had completed twenty-five years of service to CSIR were also felicitated. Wards of the staff were also awarded for excellence in academics, sports and various cultural competitions organized in connection with the Foundation Day.

The Institute was thrown open to the public in the afternoon. Students from various schools in the city were taken round various labs in the Institute. A cultural programme was organized in the evening in which the staff of the Institute performed.

CSIR-Central Institute of Medicinal and Aromatic Plants (CIMAP), Lucknow

CSIR-Central Institute of Medicinal & Aromatic Plants (CIMAP) celebrated the 71st CSIR Foundation Day by organizing various programmes in its campus. In the main

function, Chief Guest Prof. D.K. Gupta, Vice Chancellor, King George’s Medical College, Lucknow delivered the Foundation Day Lecture and Dr Nitya Anand, Former Director, CSIR-CDRI was the guest of honour.

Prof. Gupta in his address

underlined the need for utilizing the available resources, facilities and manpower in different institutes and to have collaboration with each other to maximize the outcome of the research. He said that the herbal products developed by CSIR-CIMAP should reach the masses at affordable cost. Dr Nitya Anand in his remarks presented the historical perspectives of setting up of CSIR and different laboratories specially the CSIR labs at Lucknow such as CDRI, NBRI, IITR and CIMAP. He praised the efforts of CIMAP in reaching the different strata of the society by various means and congratulated the scientists for development of health care products based on medicinal plants.

Dr. C.S. Nautiyal, Director, CSIR-CIMAP welcoming the guests announced that a new product *Herbal Mouthwash* had been developed by CSIR-CIMAP in collaboration



Prof. D.K. Gupta delivering the CSIR Foundation Day Lecture

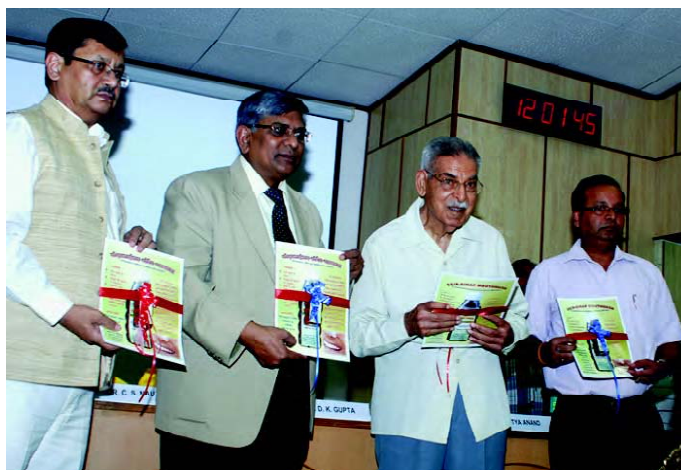
with KGMU which would be released in the Foundation Day function.

The CSIR-CIMAP *Herbal Mouthwash* was standardized and scientifically validated and clinically tested in collaboration with the Department of Pedodontics, Faculty of Dental Sciences, King George's Medical University (KGMU), Lucknow. The Herbal Mouthwash acts against the harmful *Streptococcus mutans* bacteria responsible for tooth decay and cavities. It is effective against gingivitis and gives long lasting refreshing feeling in the mouth. The plant extract used in the formulation of *Herbal Mouthwash* is a natural cleanser. The team involved in the development of the product comprises DN Mani, DU Bawankule, Karuna Shanker, Rakesh Pandey, Alok Kalra, Dharmendra Saikia, Rajesh Verma, Puja Khare, Dewashya Pratap Singh, Sudeep Tandon from CSIR-CIMAP and Prof. Ramesh Pandey and Esha Jain from KGMU, Lucknow.

On this occasion, 14 CSIR-CIMAP employees who had completed 25 years of their service and 15 employees who retired in the previous year were felicitated with mementoes and *Samman Patra*. Dr. D.D. Patra,

Chief Scientist and chairman of the organizing committee conducted the programme and Dr. Mohd. Zaim proposed the vote of thanks.

Prizes were also distributed to the children of CSIR-CIMAP employees who had participated in the essay competition. CSIR-CIMAP remained open for general public including students who visited labs and experimental farm and interacted with the scientists.



Release of Herbal Mouthwash. Standing from right are: Dr. C.S. Nautiyal, Prof. D.K. Gupta, Dr. Nitya Anand and Dr. D.N. Mani

CSIR-Central Scientific Instruments Organisation (CSIO), Chandigarh

The CSIR-Central Scientific Instruments Organisation (CSIO) celebrated the CSIR Foundation Day by organising a Foundation Day Lecture by Dr. Manoj K. Arora, Director, PEC University of Technology, Chandigarh on 26 September 2013.

In his address, Dr. Arora highlighted the need for GIS and Remote Sensing based techniques for landslide monitoring and mapping. He emphasized the importance and significance of this technology in developing early warning systems for natural disasters like landslides so that the loss to life and property could be mitigated and the environment could also be protected.

Earlier, Dr. Girish Sahni, Director, CSIR-CSIO while welcoming the chief guest



Address by Dr. Girish Sahni, Director, CSIR-CSIO at the CSIR Foundation Day at CSIR-CSIO, Chandigarh. Dr. Manoj K. Arora, Director, PEC University of Technology, Chandigarh and Chief Guest on the occasion looks on

highlighted the aims and goals of CSIR and its contribution in the field of science and technology. He also talked about various incentives and awards schemes of CSIR for young scientists and school children. Dr. Sahni also presented an overview of the on-going projects and future plans of the Laboratory.

All staff members of CSIO who completed 25 years of regular service in CSIR and also who retired during the preceding year were honoured with mementoes, shawls and *Samman Patra*.

The laboratories of CSIO were also kept open for the general public on 26 September from 1000 hrs to 1300 hrs. More than 1500 visitors, including students from various schools, engineering colleges, university and general public went around various laboratories of the organisation. This

provided them a unique opportunity to see the live demonstration of instruments developed at CSIO and a chance to interact with the scientists.

The programme concluded with prize distribution to the wards of staff who had excelled in various sports and other events. A quiz competition had also been organized for the CSIO staff on 25 September 2013. It was a broad spectrum quiz in which all the scientists, technical and administrative staff participated with enthusiasm.

Besides this, various competitions were organised for the wards of CSIO staff as a part of the CSIR Foundation Day celebrations. In the poetry competition the children exhibited their creativity by composing poems in Hindi in praise of CSIR and on various subjects of science and technology.

CSIR-Indian Institute of Integrative Medicine (IIIM), Jammu

CSIR-Indian Institute of Integrative Medicine (IIIM) celebrated the 71st Foundation Day of CSIR on 26 September 2013. On this occasion a distinguished biologist Prof. (Mrs.) Manju Sharma, NASI-Distinguished Woman Scientist Chair, Formerly Secretary to the Govt. of India, Department of Biotechnology was the Chief Guest and Dr. Rajiv I. Modi, Chairman & Managing Director, Cadila Pharmaceuticals Ltd. was guest of honour.

This year, it was decided to dedicate this event to the memory of Founder Chairman of Cadila Pharmaceuticals, Shri Indravadan A. Modi. Shri Modi had a long productive association with IIIM, Jammu which led to discovery and development of Risorine, an anti-tubercular drug in the year 2009. After its launch, the drug has

been administered to more than 50,000 TB patients.

Dr. Ram Vishwakarma, Director, CSIR-IIIM, Jammu welcomed the guests. While commenting on the achievements of CSIR, he said that CSIR is one of the largest public funded R&D organisations of the country, is the highest patent holder from India and publishes about 4500 research papers annually and has linkages to academia, R&D organisations and industry. Dr. Vishwakarma in his address also highlighted the achievements of IIIM, Jammu.

Prof. Manju Sharma delivered the CSIR Foundation Day and Shri Indravadan A. Modi Memorial Lecture on “Excitement and Application of Biotechnology for Sustainable Development”. She said that, with the increase in absolute number of people that are to be fed, the carrying capacity of agricultural lands would soon be surpassed, if we stick to conventional agricultural practices. She mentioned several approaches where biotechnology could provide an answer to this grave problem of food security. Nutritional enhancement



Distinguished dignitaries on the dais

through crop biotechnology could help to counter the problem of malnutrition. She also elaborated on the crucial role biotechnology has played in healthcare and its contributions in livelihood generation.

Dr. Manju Sharma also formally launched a Jammu & Kashmir Chapter of the National Academy of Sciences of India which is functioning under the chairmanship of Dr. Ram Vishwakarma, Director, CSIR-IIIM for creating adequate impact of NASI and inculcate scientific thinking and scientific temper especially in the youth of J&K state. Before launch, a short presentation on the J&K Chapter of NASI was made.

In his presidential remarks, Dr. Rajiv Modi, Chairman and Managing Director, Cadila Pharmaceuticals Ltd., said that the path breaking work being undertaken by the teams at CSIR-IIIM is a true celebration of Indian science and Indian scientists. He also shared the valuable learnings of integrity, commitment and focused approach from his legendary father, Shri Indravadan Modi with the young scientists present there.

At the function, awards were given to research students who published best scientific research papers from the Institute, contributed in the area of discovery biology, contributed highest number of NCEs/pure natural products to the Institutional compound library (Col. Sir R.N. Chopra

Repository) reference compounds and winners of the quiz competition. Mementoes were also given to scientists who superannuated during the last year and who completed 25 years of service in CSIR from this institute.

In addition, Special Achievement Awards were given to three young entrepreneurs who have demonstrated significant achievements through their individual initiative in the cultivation, utilization and value addition of medicinal and aromatic plants in the state of Jammu & Kashmir. The achievement awards for the year 2013 were presented to Mr. Zubir Ahmad (Ladakh), Ms. Nusrat Jahan Ara (Kashmir) and Mr Subash Chander (Kishtawar).



A view of the function

CSIR-Institute of Minerals and Materials Technology (IMMT), Bhubaneswar

The 71st CSIR Foundation Day was celebrated with great pride and festive spirit on 26 September 2013 at CSIR-IMMT, Bhubaneswar. Apart from award of mementoes to employees who retired recently and also to those who completed 25 years of service to the Council, winners of various competitions held among school children and staff members were also given away prizes.

Dr. Harish Hande, Managing Director, SELCO-India was the Guest of Honour. Dr. Hande delivered a very inspiring talk on



Dignitaries on the dais at CSIR-IMMT

CSIR has already striven to live up to the government's expectations, and its achievements in various spheres are being recognized at the National and International level.

**Dr Grish Sahni
Director, CSIR, IMTECH**

solar technology and about his pragmatic efforts to put solar technology in the hands of the poor, through his social enterprise SELCO, India.

The Chief Guest Prof. S. Ranganathan, Department of Materials Engineering, IISc Bangalore, delivered a very informative and interesting CSIR Foundation Day lecture on "The Glitter of Gold".

Prof. B.K. Mishra, Director, CSIR-IMMT

presided over the function and mentioned the important achievements made by IMMT over the last year. He congratulated the scientists, notably those who have won various national accolades, for their significant contributions. To mark the festive spirit, a cultural programme of music and dance was staged in the evening giving a platform to an ensemble of local artists and students of the institute.

CSIR-Institute of Microbial Technology (IMTECH), Chandigarh

CSIR-Institute of Microbial Technology (IMTECH), Chandigarh, celebrated CSIR's Foundation Day by organizing several events. A foundation day lecture was delivered by Prof. Arun K. Grover, Vice-Chancellor Panjab University, Chandigarh. Professor Grover spoke on the topic "Organization of Research in India by Shanti Swarup Bhatnagar and Homi Bhabha: A Perspective".

The VC said that the necessity of organising scientific and industrial research in colonial India was articulated soon after the end of the First World War in the 1920s. However, it is the commencement of the Second World War in 1939 that compelled the then government of India to invite Prof. Shanti Swarup Bhatnagar, the founder Director of University Chemical Laboratories at University of Punjab at Lahore, to move

in as the Director of the newly created Board of Scientific Industrial Research (BSIR) at Calcutta.

Dr. Girish Sahni, director of IMTECH, welcomed the guests. He mentioned that CSIR has already striven to live up to the government's expectations, and its achievements in various spheres are being recognized at the National and International level.

Throughout the day, several students and researchers from other Institutions visited the labs of the Institute to know about the research being carried out at this premier national lab.

On this occasion the Institute also rewarded its employees who had retired and also those who had completed 25 years of service in CSIR.

CSIR-National Aerospace Laboratories (NAL), Bangalore

CSIR Foundation Day was celebrated in NAL on 26th September 2013 at the S.R. Valluri Auditorium, NAL, Bangalore. Mr. A.S. Ganeshan, Outstanding Scientist & Programme Director Satellite Navigation Programme, ISRO Satellite Centre-Bangalore delivered the CSIR Foundation Lecture and Dr. L. Venkatkrishnan, Head, EAD delivered the Sixteenth NAL Business Lecture.

The programme opened with a brief welcome address by Dr. J.S. Mathur, Head KTMD.

Mr. A.S. Ganeshan spoke on India's Space Navigation Programme. Mr Ganeshan shared his experiences and insights on Project GAGAN (GPS Aided Geo Augmented Navigation) and IRNSS (Indian Regional Navigation Satellite System). It was

a compelling narrative that covered wide ground highlighting the utility of Project GAGAN and IRNSS. He said the navigation satellites broadcast signals which are used by a receiver to determine precisely its position, velocity and time. Satellite navigation systems support an unlimited number of users. The availability of navigation satellite system makes it easier to compute one's position anywhere on the globe with a GPS system. GAGAN, he said, will evolve into an indigenous navigation service to provide enhanced and more precise navigation. To provide this service, IRNSS will be in place by 2015.

GAGAN uses a system of ground stations to provide necessary augmentation to the GPS standard positioning service (SPS) navigation signal. A network of precisely surveyed ground reference stations is strategically positioned across the country to collect GPS satellite data. Using this information, the master control centre generates messages to correct any signal errors. These correction messages are then uplinked and broadcast through communication satellites (Geostationary) to receivers onboard aircraft using the same frequency as GPS.

GAGAN is designed to provide the additional accuracy, availability, and integrity necessary to enable users to rely on GPS for all phases of flight. GAGAN will also provide the capability for increased accuracy in position reporting, allowing for more uniform and high-quality Air Traffic Management (ATM). Mr. Ganeshan's presentation concluded with a truly remarkable video clip about GAGAN. He concluded his talk stating GAGAN will provide benefits beyond aviation to all modes of transportation, including maritime, highways, and railroads.

Dr. L. Venkatkrishnan spoke on "Dhvani: To Hear is to See". His talk was a wonderful introduction to the development of an indigenous system for Detection and Hit Visualization using Acoustic N-wave Identification (DHVANI) for locating bullet hits on targets for the Indian Army. He said this involved the deployment of an array of acoustic sensors under the general flight path

of such projectiles, acquiring and analyzing the signal in real-time and instantaneous display of results in a graphical form at the shooter's end. He concluded his talk stating the system is cost effective and reduces training time.

Mr. Shyam Chetty in his presidential remarks spoke about CSIR's numerous accomplishments in various fields and briefly described NAL's highlights during the year. The Chief Guest released the Annual Report. The function ended with distribution of the various Foundation Day awards by the chief guest and a well-articulated vote of thanks by Mr. A. Somanarayan. Ms Jyothi anchored the programme.



Glimpses of the CSIR Foundation Day Celebrations at CSIR-NAL

CSIR-National Botanical Research Institute (NBRI), Lucknow

The CSIR-National Botanical Research Institute (NBRI), Lucknow, observed “Open Day” on 26 September 2013 to commemorate the Foundation Day of CSIR. On this



Dignitaries on the dais

occasion, various Laboratories, Botanic Garden, Herbarium, Exposition, Library and Banthra Research Station of the Institute remained open to public from 11.00 am to 4.00 pm. A large number of students and researchers also visited the facilities.

Prof. Deepak Pental, Director, CGMCP, University of Delhi, was the Chief Guest of the function and Dr. Harsharan Das, IAS, Principal Secretary, Science and Technology (U.P.) was the Guest of Honour.

Prof. Pental in his lecture entitled, “Interface of genetics and genomics for plant breeding: Some examples from oilseed mustard”, spoke on the challenges faced by the scientist in the country and abroad for feeding the ever growing human population. He further said that while the breakthroughs in S&T in health, transport and communication are obvious to all, major developments in food production and breeding have remained obscure.

He said that his group has developed hybrids of mustard *Brassica juncea* DMH-1 and DMH-11 with an aim to increase its yield and protection from biotic and abiotic stresses.

Hybrid DMH-1 which has been developed by crossing Indian mustard lines with lines of East European gene pool had been tested by ICAR in multi-location trials and has been found to be superior to the best varieties by 15-20% in yield and has been released for cultivation. More recently, a new CMS based hybrid has been developed which is bold seeded and has better oil content than DMH-1 while maintaining its overall productivity, he added.

He noted that Hybrid DMH-11, based on a transgenic system of pollination control has been found to be the most versatile system for hybrid seed production. Field trials in DMH-11 have been completed and are currently undergoing biosafety analysis, he added. However, he said that given the controversies created around transgenic plants, it cannot be predicted when the technology will reach farmer’s field. Given the strong demand of edible oils, where India is currently importing around Rs. 60,000 crore worth of edible oils to meet its consumption demands, non-release of this technology is hurting the overall interests of the farming communities and the country, he said.

He noted that transgenic approaches may also be useful in mustard to develop germplasm for disease resistance for *Alternaria* and stem rot for which germplasms are not available. He remarked that in spite of recent breakthroughs in NGS technologies for markers and availability of major breakthroughs in transgenic technologies, plant breeding remains difficult due to complex genetics of important agronomic traits and long generation time of crop plants. Plant breeding through modern interdisciplinary approaches is the need of the hour, he added. He remarked that lack of support and clarity in S&T policy are the major hurdles in successful testing of transgenic crops.

Earlier, Dr. C.S. Nautiyal, Director, CSIR-NBRI, welcomed the distinguished guests and other dignitaries present on this auspicious occasion. Dr. Harsharan Das, IAS,

Principal Secretary, Science and Technology (U.P.), spoke on the importance of instilling scientific temper and awareness among general public and school children and the role of scientific community *viz.* research institutions and S&T planners to join hands together to achieve the goal.

Prof. Deepak Pental distributed certificates and mementoes to 21 employees who have

completed 25 years of CSIR service and 21 employees who retired during the last year. Dr. Harsharan Das distributed prizes and certificates to those children of staff who participated and won in the Science Essay competition organized on this occasion. Dr. Kamla Kulshreshtha, Principal Scientist, compered the function and Dr. S.K. Raj, Chief Scientist, proposed the vote of thanks.



CSIR-National Geophysical Research Institute (NGRI), Hyderabad

CSIR Foundation Day was celebrated on 26th September 2013. Prof. J. Srinivasan, FNA, FASc. Chairman, Divecha Centre for Climate Change, Honorary Professor, Centre for Atmospheric and Oceanic Sciences, Indian Institute of Science, Bangalore was the chief guest and delivered a lecture on Himalayas, Tibet and the Indian monsoon. The speaker spoke on the importance of Himalayas in controlling the Indian summer Monsoon. With the help of 'climate models', he explained various scenarios of Indian Monsoon precipitation over the Indian region.

Prior to the talk, Dr. S.S. Rai, Acting Director, CSIR-NGRI welcomed the gathering while Dr. Parthasarathy, chief scientist, introduced the chief guest.

To commemorate the CSIR Foundation Day, the institute was kept open to the public on 26th September 2013. This provided an opportunity for the public, mainly students, to get an idea of the activities being carried out by NGRI. About 3000 members visited the various labs and live demonstrations. Scientists and research scholars answered the queries of the students.

An exhibition was also organized. A committee of three members selected the Tsunami Group headed by Dr. Kirti Srivastava as the best display award and Magnetotellurics Group headed by Dr. B. P.K. Patro for best exposition.



At left, Prof. J. Srinivasan, Chief Guest of CSIR Foundation Day Lecture with Dr. S.S. Rai, Acting Director



CSIR-North East Institute of Science and Technology (NEIST), Jorhat

The CSIR-North East Institute of Science & Technology (NEIST), Jorhat celebrated the 71st CSIR Foundation Day on 24 September 2013 instead of 26 September with a well charted out programme.

The Foundation Day celebration function was held at the Dr. J.N. Baruah auditorium under the presidentship of Dr. R.C. Boruah, Acting Director, NEIST, Jorhat. Prof. Alak Kr Buragohain, Vice Chancellor, Dibrugarh University graced the function as the Chief Guest.

Welcoming the gathering, Dr. N.C. Barua, Chief Scientist & Coordinator of the prog-ramme, said that CSIR has contributed immensely in developing new

products, new technological advancements and has contributed significantly to basic research. He also said that CSIR-NEIST has been in the forefront of high quality product development.

Prof. Buragohain, in his Foundation Day lecture, talked about the *Innovative capability of*

Indians. To highlight the innovative potential of India, he cited many examples. He said that global R&D centres of many MNCs are mainly located in two cities of India namely Hyderabad and Bengaluru. He further said that two technologies behind Boeing Dreamliner have been developed by HAL, Bengaluru. He said call centers located at various places in India are an example of

innovation in technology management system. He said that innovative potential in India is perceived as a challenge globally now. He further said that failing to protect Traditional Knowledge is leading to their loss. He said in his opinion education should fulfill two major objectives. It must give ability to individuals to earn livelihood in a dignified manner and it should also distill the above average individuals with innovative potential. Concluding his lecture he said that the education system should identify, promote and forward the innovative potential.

The lecture was followed by the release of *Annual Report 2012-13* of the laboratory by the Chief Guest. Retired employees were felicitated with mementoes and CSIR *Sanman Patras* followed by presentation of token gifts to staff who recently completed 25 years of service in the council. Prizes and certificates were also distributed to the winners of various competitions held on the occasion like drawing and essay competition. Cash awards to selected bright SC/ST students from state board of North Eastern states of India were also announced. Prizes and certificates were distributed to prize winners of the Group Quiz competition held among the CSIR-NEIST staff members.

This was followed by release of a biannual magazine *IP Corner* by the Chief Guest. In a new initiative a Golden Jubilee Scholarship has been initiated by CSIR-NEIST and the two student winners from Manipur and Assam were presented with the scholarship.

After the award ceremony, Dr. Boruah addressed the gathering and said that he was proud that the institute had been awarded the prestigious CSIR Technology Award for the fourth time in a row now. He also said that the institute has the largest number of network projects till date in this 12th financial year plan.

The function concluded with vote of thanks by Ms Sangeeta Sharma, Junior Scientist. The function was attended by



Chief Guest Prof. Alak Kr Buragohain delivering the 71st CSIR Foundation Day lecture. Also seen seated on the dais (from left) Dr. R.C. Boruah, Acting Director, CSIR-NEIST and Dr. N.C. Barua, Chief Scientist

eminent scientists, invited dignitaries, students and teachers of nearby schools, colleges and universities, general public, members of NEIST fraternity, members of press and media.

Earlier in the day the institute observed “Open Day” between 9.30 am to 12.30 pm during which about 500 students along with their teachers paid a visit to different departments of the laboratory and interacted with the scientists and researchers.



Honours & Awards

ICMR Prize for Biomedical Research for CSIR-IICT Scientist

The ICMR Prize 2010 for Biomedical Research in Underdeveloped Areas has been conferred on Prof. U.S.N. Murty, Scientist-G, CSIR-Indian Institute of Chemical Technology (IICT), Hyderabad for his contribution in the area of *Integrated Control of Vectors and Vector Borne Diseases* in underdeveloped areas of India.

The specific focus of Dr. Murty's efforts in socially relevant programmes has made important contributions in the area of integrated control of vectors and vector borne diseases (VBD) like Malaria, Filariasis and Japanese encephalitis. His research group has successfully executed several research programmes in Mizoram, Sikkim, Arunachal Pradesh and Andhra Pradesh.

During the execution of these projects he has developed various disease modeling methods using datamining applications like forecasting (Heuristic engine), prediction of mosquitoes (JEBNET), classification of epidemiological data (VBCLASSIF), easy identification of mosquito species by expert system applications, and cluster analysis (SOM) for prioritization of disease endemic zones. Using these applications for control of vector borne diseases is the first of its kind in India.

Dr. Murty has developed biological databases on various VBDs which help in storing, retrieving and generating combinational reports for effective management of the VBDs. These technologies were effectively validated and implemented at field level for the benefit of



Dr. U.S.N. Murty receiving the ICMR prize for Biomedical research conducted in Under Developed areas of India for the year 2010 from Union Health Minister Shri Ghulam Nabi Azad

the society. In addition to these, his group has also been involved in spatial mapping/geographical visualization systems to identify the endemic locations of Filariasis and Malaria.

Dr. Murty has developed a strong interest in facilitating socio economic development of the underdeveloped regions of India. He has contributed largely to this region and successfully implemented challenging projects supported by the concerned state governments.

Dr. Murty is heading the Biology Division of CSIR-IICT, Hyderabad and has 18 patents/copyrights, published 126 research papers in national and international journals, contributed nine book chapters and edited a book on “Appropriate Technologies for North East Region”.

NOMINATIONS INVITED

2014 CSIR Young Scientist Awards

The Council of Scientific & Industrial Research (CSIR) invites nominations for the CSIR Young Scientist (YS) Awards for the year 2014. The awards are to be given for research contributions made primarily in India. The nominee should be a regular scientific staff of CSIR system holding a post of Junior/Trainee Scientist or above (Previously Scientist 'B' or above in Group IV) and should have joined the CSIR laboratory on or prior to 26th September 2013. The age of the nominee should not be **more than 35 years as on 26th September 2013**.

The YS Awards are given annually in the following disciplines: (1) Biological Sciences, (2) Chemical Sciences, (3) Earth, Atmosphere, Ocean and Planetary Sciences, (4) Engineering Sciences, and (5) Physical Sciences (including instrumentation). The YS Award comprises a citation, a cash award of Rs 50,000 (Rupees fifty thousand only), and a plaque.

Nominations addressed to **Scientist In-charge, SSB YSA Unit, Human Resource Development (HRD) Group, CSIR Complex, Library Avenue, Pusa, New Delhi 110 012** should be sent as per the prescribed proforma (original + one copy) latest by **31st January 2014**. A CD/DVD/USB flash drive is also required containing digital photograph (in JPEG format), duly filled proforma and significant publications (*in PDF format*) of the nominee.

The details of the YS Award and the prescribed proforma for nomination may be obtained from the above address or may also be downloaded from the website: www.csirhrdg.res.in

Printed and Published by

Deeksha Bist on behalf of CSIR-National Institute of Science Communication And Information Resources
Dr K.S. Krishnan Marg, New Delhi -110 012 and printed at NISCAIR Press
Dr K.S. Krishnan Marg, New Delhi -110 012

Editor: Hasan Jawaid Khan; **Editorial Assistance:** Neelima Handoo

Design: Neeru Sharma & Sarla Dutta; **Production:** Supriya Gupta

Phone: 25848702; Fax: 25847062; E-mail: csirnews@niscair.res.in; hjk@niscair.res.in

Website: <http://www.niscair.res.in>

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Annual Subscription: Rs 500; Single Copy: Rs 50.00

RN 4512/57