

# CSIR in Media



*75 Years of*  
**CSIR Touching Lives**

**A Daily News Bulletin**  
**27<sup>th</sup> February 2017**





## Scientists exhorted to focus on science for the benefit of people

CSIR-CECRI

26<sup>th</sup> February 2017

Asserting that Indian scientific laboratories had state-of-the-art facilities and were not inferior to any laboratory in the world, Union Minister of Science and Technology and Earth Sciences Harsh Vardhan has called upon scientists to be more focussed on ‘science for the benefit of the people.’

Talking to reporters after inaugurating additive manufacturing 3D printer unit and unveiling the handheld soil testing kit for farmers, developed at the CSIR-Central Electrochemical Research Institute (CECRI) here on Saturday, he said Prime Minister Narendra Modi has made it clear that science should be for the benefit of the people and scientists should work towards achieving the objective.

In the last two years, the ministry was trying to change the overall perception and outlook of the scientists in CSIR and other departments and has been asking them to be more people-centric, he said. “Before deciding what they wanted to do, the scientists should assess the problems of the people and try to solve them through science. This is the vision of the Prime Minister,” he said.

Commending CSIR laboratories for the wonderful performance all these years, Mr. Vardhan, citing a recent international study, said India has emerged second after China in the world in terms of scientific research and exhorted the scientists to ensure that their findings and innovations were translated into action and converted into benefits for the people.



He said the cost-effective handheld soil testing kits for the farmers would go a long way in revolutionising the agriculture sector and improve the lifestyle of the farming community. The kit, which would be made available to the farmers for a few hundred rupees, would help them obtain the results of soil tests in a few minutes with the help of an app compared to the existing waiting time of 15 days, he said. “This will help the farmers in a big way,” he said.

Lots of good things were happening at CSIR-CECRI and most of the things done here actually impacted the day-to-day lives of the common man and that was the beauty of it, he said.

He said India had scientific collaborations with more than 80 countries in the world and powerful collaborations with 44 countries such as the US, Canada, Germany, France, Japan, South Korea and Israel on very important research subjects.

In Nano technology, India has emerged number three in the world and in space, ISRO has recently created a world record by sending more than 100 satellites in one go, he said. Some of the countries which had negative impression on India’s space programme had sent more than 90 of their satellites using Indian launch vehicles and this was the very positive development, Mr. Vardhan said.

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## Call to use technology in food sector in a big way

CSIR-CFTRI

25<sup>th</sup> February 2017



### CFTRI Director advocates helpline to preserve, reuse food

With the use of modern technology, food going waste may be collected, preserved and certified for consumption, according to Ram Rajasekaran, Director, Central Food Technological Research Institute (CFTRI), Mysuru.

Inaugurating the four-day 'Foodtech' expo, organised by MADITSSIA at Tamukkam Ground here on Friday, Prof. Rajasekaran said institutions

such as MADITSSIA could examine the modalities of having an exclusive helpline, through which people could pass information on excess food available with them.

Instead of being wasted, the food items could be sent to a centre, where they could be preserved and reused. Marriage halls, hotels, restaurants and industrial canteens could be informed of such a helpline, he suggested.



The food items thus collected could be preserved and packed in such a way that their nutritional value remained intact for the next two or three days, and they could be offered to people in need. CFTRI scientists would provide technological support to achieve this task, he added.

He appealed to the people in food trade to understand the need of the consumers and the current trend.

Technology played a crucial role in food industry right from production to packaging. Food producers had to focus on nutrition security and nutrition safety.

Daniel Chellappa, Senior Scientist, Bhaba Atomic Research Centre, released the exhibitor directory and stressed the importance of technology in food sector. Expo chairman G. Kandaswamy said products had been displayed in over 125 stalls and an exclusive food court was open on all four days.

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[The Hindu](#)



## Cancer Genetics India Partners with CSIR-Centre for Cellular and Molecular Biology to Organize the 2nd Annual Next Generation Sequencing Conference in India

CSIR-CCMB

22<sup>nd</sup> February 2017

India, Feb. 23, 2017 (GLOBE NEWSWIRE) -- Cancer Genetics, Inc. (Nasdaq:CGIX) (“CGI” or “The Company”), a leader in precision diagnostics for oncology, announced today that Cancer Genetics India (CG India) and CSIR-Centre for Cellular and Molecular Biology (CSIR-CCMB) have jointly organized the 2nd Annual NGS Conference taking place from 22<sup>nd</sup> to 24<sup>th</sup> of February 2017 in Hyderabad, India. The conference will bring together eminent scientists from several government research institutions that conduct cutting edge biological research using NGS technology and bioinformatics. The objective of the conference is to provide recent updates and discuss the impact of diverse yet relevant applications of NGS and bioinformatics on key research areas such as agri-genomics, onco-genomics, microbiology, and human genetics.

The opening day of the conference coincided with the 89th birthday of Dr. P. M. Bhargava, the founder of CSIR-CCMB. On this occasion, CSIR-CCMB had organized a “Founder’s Day Celebration,” which was a great opportunity to interact with one of India’s most celebrated scientists. “We are delighted to partner with CG India to welcome all speakers and participants to hear from Dr. T Ramasamy, the distinguished speaker on this occasion,” said Dr. Rakesh Mishra, Director, CSIR-CCMB. “We are looking forward to a great conference that will promote cross-disciplinary research collaborations across India.”

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## A juicy solution to preserve food drinks

CSIR-CFTRI

24<sup>th</sup> February 2017

Use of assorted preservatives in processed food for durability has always been a cause for concern specifically among the health conscious people. But, is it possible to avoid such ingredients and ensure longevity of the processed food products?

Resource Centre, who was instrumental in designing the system, the effect of microwave power on the quality of juices were studied during the storage period of 18 months to optimise the rate of throughput, and retention of nutritional factors.

The Hyderabad Resource Centre of Central Food Technological Research Institute (CFTRI) has precisely done this by developing a unique equipment with the capacity to mass-produce preservative-free fruit and vegetable juices.

The system located at the Hyderabad centre is now ready for commercial use. “We are hiring out the equipment. Entrepreneurs in this line of business can avail the facility at a reasonable price,” RG Math said and added that CFTRI was also ready to transfer the technology to entrepreneurs who are interested in manufacture of the equipment.

Experiments have established the fact that juices’ blends churned out from this machine - known as the ultra high frequency heating system - have a much longer shelf life than those products with preservatives. According to RG Math, Senior Principal Scientist at the Hyderabad

“We have the technology to scale up the capacity of the system customised it in accordance with the customers’ requirements,” he informed The Hans India.



Producing preservative -free highly durable juices is only one of the many stand-apart features compared to its conventional counterparts.

The ultra high frequency heating system can produce 30 litres of juice per hour and 1,000 bottles per day.

The advantages do not end here. The microwave equipment can convert fruit or vegetable into juice within 5 minutes compared to 45 minutes consumed by the conventional food processing systems.

One of the most crucial advantages of processing juices on this system is that the nutrition value retained.

“We have optimised the rate of throughput and retention of nutritional factors, which is considered as major improvement in the efficiency of the microwave treatment and the economics of microwave process having high potential for processing of vegetable and non-acidic fruits,” says RG Math.

Elaborating on the cost-benefit factors, RG Math explained that energy consumption for 1 litre of blend juice was 99 paise compared to around Rs 5 on conventional systems.

“The energy saved during MW heating is approximately 337% and the processing is reduced by three times that that of the conventional system thus contributing to increase in the production of processed juice,” he said and informed that MW system is based on green technology with co<sub>2</sub> emission for 1 litre blend being only 113.6g compared to 560g by conventional systems.

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**[Hans India](#)**



## **RICH to bridge gap between innovation and implementation**

CSIR-IICT

25<sup>th</sup> February 2017

There are more than 50 small and world-class research institutes in Hyderabad and the number of intellectual minds is countless. For all these years, most of these scientists have limited their discoveries and knowledge-base to the labs, said IT minister KT Rama Rao on Friday, adding that things were going to change.

The Research and Innovation Circle of Hyderabad (RICH), KTR's brainchild aims to create a synergy of research institutions, academic institutions and industries, was inaugurated at –

Indian Institute of Chemical Technology Council of Scientific & Industrial Research (IICT: CSIR).

“The objective of RICH is to initiate, innovate and implement where great minds from diverse backgrounds will work together while creating a social impact. While the Telangana government will initially provide funding, stakeholders from various industries will be brought in soon,” said Ajit Rangnekar, former dean of Indian School of Business (ISB), now director general of RICH. A team called ‘RICH associates’ led by Rangnekar will move to Parishram Bhavan, in Bashergbagh and begin with cataloging the research work done across institutions in the city.



“We will then look at ways in which these institutions can work together, including corporates with an agenda to solve societal problems. While institutions like the Centre for Cellular and Molecular Biology(CCMB), IICT, LV Prasad Eye Institute (LVPEI), International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and Defence Research and Development Organisation(DRDO), the founding members of RICH will provide the knowledge and the minds, institutions like NALSAR University of Law will look at Intellectual Property Rights (IPR) and ISB will help with the entrepreneurial development,” explained Rangnekar.

Talking about the operational aspects of RICH, which will begin fully in the next 100 days, BV Papa Rao, advisor to TS government for policy and institutional development said: “There will be one non-profit company and a for-profit one to ensure that scientists also get monetary benefits. We also have the support of the Defence ministry which will be open for ideas, commercialisation and civilian use, with those that can be dealt with openly.” KT Rama Rao also expressed delight over the new project.

Union minister for science and tech optimistic

“We have human intellect but there is a lack of enterprises and RICH is aimed to change that. Funding is the biggest challenge and to meet that we are looking at convergence of industries,” he said. Stating that he has been encouraging state governments to take up such collaborative initiatives, Union Minister of State for Science and Technology, YS Chowdary said that he was happy that the Telangana government had launched RICH.



“Now, venture capitalists and lenders will have a major role to play. Once the matrix is fixed, it will be easy to lay the path and I am sure RICH is going to have a nation-wide impact. RICH will help address issues of rural India,” he said.

Representatives of research institutes said that RICH will help them create an industry for innovation and research for scientists.

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**[New Indian Express](#)**



## Indigenous smart wheelchair soon

CSIR-CMERI

27<sup>th</sup> February 2017

Scientists at CSIR-CMERI in Durgapur have developed the country's first intelligent and powered wheelchair that features fully electronic soft-touch control and infrared-based obstruction warning. Earlier, such wheelchairs were imported.

Priced at about Rs 35,000, the wheelchair will be launched at CSIR-CMERI's diamond jubilee programme at the institute auditorium. It can detect obstacles at least 1m away, which will help physical challenged and elderly people who rarely have access to domestic help. It can also scale sloping pavements while maintaining stability and high manoeuvrability. Its modular construction and collapsible foot rest, light components and interchangeable seating enhance its endurance limit

(8-10 hours for a normal intermittent run) without compromising safety.

CSIR-CMERI director Harish Hirani said: "The wheelchair has differential steering, fully electronic soft-touch control and infrared-based obstruction warning features. It has six wheels to enhance mobility, stability and capability to turn 360 degrees in any narrow corridor. It offers high manoeuvrability to navigate smoothly on inclines. This cost-effective product has immense societal value for physically challenged and elderly people."

Regarding portability, Hirani said: "It has a foldable foot rest. Research is on to make it completely foldable. It offers manoeuvrability on slopes upto 8-9 degrees in indoor environments."



Federation of West Bengal Trade Association chairman Mahesh Kumar Singhania, a wheelchair user, said: "Quality wheelchairs are not available in Kolkata. At Rs 35,000, the price is still very high. The poor will be deprived of the intelligent wheelchair. If the government subsidises it, all sections can afford it. Those who use wheelchairs face certain problems: these cannot often be carried into a train or taken into a lift. I have four to five wheelchairs at the repair centre. Maintenance is also a problem. Wheelchair manufacturers must provide after-sales service."

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CSIR-CMERI

27<sup>th</sup> February 2017

# Indigenous smart wheelchair soon

Mohammad Asif

**Durgapur:** Scientists at CSIR-CMERI in Durgapur have developed the country's first intelligent and powered wheelchair that features fully electronic soft-touch control and infrared-based obstruction warning. Earlier, such wheelchairs were imported.

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CSIR-CMERI

27<sup>th</sup> February 2017

# CSIR-CMERI PLANS TO SET UP NATIONAL MANUFACTURING HUB

DIRECTOR SAYS THE INSTITUTE WILL PROVIDE SOLAR ENERGY & OFFICE SPACE TO 25 START-UP INCUBATORS

DEBAJYOTI CHAKRABORTY

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Durgapur, 26 February

Council of Scientific & Industrial Research ~ Central Mechanical Engineering Research Institute (CSIR-CMERI) has planned to set up a National Manufacturing Hub, provide solar energy and space to 25 start-up incubators from its 50 kilowatt (peak) solar park and manage zero domestic solid waste in its own colony, said director of CSIR-CMERI Dr Harish Hirani at Durgapur today.

Talking to The States-

man, Dr Hirani said the solar park is the third generation solar item produced by the country's premier research institute. "First we set up solar tree. Now we have set up a solar park with solar artefact design. There are three types of solar trees ~ large trees or banasapati (5kw), umbrella or atapattam (1kw) and prismatic (1KW). In India there are 300 sunny days out of 365 days in a year. And every day from 9 a.m. to 3 p.m., solar energy can be trapped," Dr Hirani added.

The solar park set up on 9600 square feet area is capa-

bale of generating 50 KW of power in peak hours. The present cost is Rs 1.25 crore but with mass scale production, the cost can be brought down by another 20 per cent, the scientists said.

"The uniqueness about the solar park lies in its solar artefact design. Roof mountain solar panels have been installed and the ground has 100 per cent clearance. Even the new townships can use the power in their colony besides walking and jogging in the free space of the park. Malls and hotels can also be built in front. But the biggest

prospective users can be the millions and billions of farmers of our country. In the remotest corner, he can install it and start farming in his own field, supply power to homes and use pumps. Unlike the previous solar panels, the latest avatar has total free ground," he added.

Scientist of CSIR-CMERI Solar Park Project Dr Sudip Samanta said the solar park is connected with the battery bank at the control room and through an inverter; the AC current is converted into DC power, which is connected to elec-

tric load for domestic use. "There are 25 unutilised quarters of CMERI in its campus at Durgapur and during the day, power will be provided to these colonies. As many as 25 start-up companies will set up offices here. The surplus power will be utilised for street lighting in the CMERI Durgapur campus," he added.

Four start-up companies have already shown interest to set up offices here with CMERI technology ~ robotics wheelchair, saliva testing and fluoride detection, digger teeth and solid waste disposal. On 17 January

this year CSIR has approved the CSIR-CMERI Incubation Centre at Durgapur. At present there are six banasapati and two each of umbrella and prismatic in the park. Few more will be set up to hike its capacity from 34KW at present to 50 KW, CMERI officials said.

Dr Hirani said with the latest technology of solar umbrella, there will be huge potential if these panels can be set up besides the National and state highways. National highways can generate upto 35GW green energy in peak hours, he added.

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CSIR-CMERI

27<sup>th</sup> February 2017

## ‘CSIR labs should become self-sustainable’

STATESMAN NEWS SERVICE

Durgapur, 26 February

In order to sustain in challenging atmosphere for the next 75 years, the Central Scientific and Industrial Research (CSIR) laboratories should become self-sustainable instead of depending on the government budgets and should focus on leadership in breakthrough technologies, said director general of CSIR Dr Girish Sahni at Durgapur today.

He was speaking on the occasion of the inauguration of the year-long diamond jubilee celebrations of CSIR - Central Mechanical Engineering Research Institute (CMERI) at Gandhi More in Durgapur today. Stressing the need to develop a coordination with various IITs, universities and other such

scientific research institutes in the country, he said that programme should be based on economic models. “A resolution has to be undertaken and path to future should be designed along with the economic benefit for the country by every scientist and other employees of the various CSIR laboratories in the country,” Dr Sahni added.

Scientists and researchers should be able to know where to stop the research work and which one to continue. There is no benefit in publishing tonnes of useless research papers, he felt.

He said that unlike the IITs and other such institutes, there is huge expectation of the country from CSIR laboratories. It is true that both CSIR and CMERI has a glorious past. It is

due to CMERI that green revolution can take place in India after it came up with the Sonalika tractor and other farming devices for agricultural sector but time has come indeed for some introspection, he said.

Questions should be asked after 75 years why CSIR has been formed, he said. “Do not lose focus on issues like what will be your pay hike or other such things. Simply focus on your research work,” he advised to 120 scientists of CMERI Durgapur. Later, Dr Sahni inaugurated a low cost powered wheel chair, a domestic water defluoridation unit, a domestic arsenic water filter unit, a post harvesting ginger processing unit and a solar park. Professor Ajoy Roy, director of IEST (Shibpur) stressed

the need of integration of CSIR with its huge infrastructure.

With increase of population the challenges will become more in the years to come, the Padmashree Award winner said. From pre and post harvest technology to robotics and underwater and now solar technology, CMERI has come a long distance forward, he felt.

He said that the real pioneer of the Make in India programme has been Acharya Prafulla Chandra Roy when he set up his firm Bengal Chemical on 1902.

Dr Harish Hirani, director of CSIR- CMERI (Durgapur) said research work is at the final stages to install air purifiers at all the traffic signals in the country besides setting up solar battery charging parks.

**Published in:**

**Statesman**



CSIR-CMERI

27<sup>th</sup> February 2017

# राष्ट्रहित में गंठजोड़ का सही वक़्त: डा. गिरीश

- शोध के लिए संस्थान प्रतिबद्ध
- सीएमईआरआई में मनी हीरक जयंती
- 4 शोध राष्ट्र को समर्पित, 2 तकनीक का हस्तांतरण
- मेक इन इंडिया पर राष्ट्रीय संगोष्ठी प्रारंभ

दुर्गापुर। सीएमईआरआई-सीएमईआरआई के 60 वर्ष पूरा होने पर पूरे वर्ष चलने वाला हीरक जयंती समारोह प्रारंभ हुआ। मुख्य अतिथि वैज्ञानिक व औद्योगिक अनुसंधान परिषद के महानिदेशक एवं डीएसआरआई के सचिव डा. गिरीश साहनी, विशिष्ट अतिथि इंडियन इंस्टीट्यूट ऑफ इंजीनियरिंग साइंस एण्ड टेक्नोलॉजी, शिवपुर के उप प्राचार्य पद्मश्री प्रो. डा. अजय कुमार राय, सीएमईआरआई के निदेशक डा. हरीश हिरानी एवं समारोह आयोजन समिति के अध्यक्ष डा. शंकरनाथ सोम ने दीप प्रज्वलित कर समारोह का शुभारंभ किया। मुख्य अतिथि डा. साहनी ने प्रोफेसर हरीश हिरानी एवं उनकी टीम को बधाई देते हुए कहा कि अब वह समय आ गया है, जब निज हित की भावना त्याग कर गंठजोड़ कर राष्ट्र को सुदृढ़ व समृद्ध बनाने में अपना योगदान दें। उन्होंने कहा कि आने वाले 75

वर्ष में हमें 5 गुणा अधिक विकास के लिए प्रयत्नशील रहना होगा, जो चुनौतीपूर्ण कार्य है। डा. साहनी ने कहा कि शोध और विकास का नजरिया व्यवसायीकरण होना चाहिए। समिति संसाधनों में अधिक परिणाम के लिए व्यवसाय मॉडल को बदलना होगा। डा. राय ने भारत में विज्ञान और तकनीकी के उद्भव एवं विकास पर कहा कि प्रथम व द्वितीय विश्वयुद्ध में अग्रजों की हुकूमत ने मेक इन इंडिया का युग प्रारंभ किया था। देश की बढ़ती आबादी को स्वास्थ्यवर्द्धक और आर्थिक सम्पन्न बनाने की दिशा में ठोस पहल करनी चाहिए। 29 सितम्बर 1942 में सीएमईआरआई अस्तित्व में आया था। अतिथियों का स्वागत करते हुए डा. हिरानी ने कहा कि आज ही के दिन 1958 में दुर्गापुर में सीएमईआरआई की प्रयोगशाला स्थापित हुई थी। 60 वर्षों की उपलब्धियों, शोध और



दीप प्रज्वलित करते प्रो. डा. हरीश हिरानी।

छाया: अभय गिरि

विकास कार्यों पर ध्यानकेंद्रण करते हुए कहा कि हमें सामूहिक विकास के लिए सतत् प्रयत्नशील रहना होगा, ताकि सामाजिक-आर्थिक विकास सुनिश्चित की जा सके। मेक इन इंडिया, कौशल विकास जैसे कार्यक्रमों को सफल बनाने की दिशा में संस्थान द्वारा किये जा रहे नवोन्मेष शोध, अविष्कार और विकास कार्यों की ओर ध्यान

आकृष्ट करते हुए कहा कि पर्यावरण हितैषी, लागत प्रभावी, मूल्य सर्वाधिक, शोध व विकास के लिए संस्थान प्रतिबद्ध है। उन्होंने कहा कि आयान रि्यूवल प्लान, स्वचालित अंडर वाटर क्रीकल-500, सौर ट्री के बाद संस्थान के विज्ञानिकों ने अमेनिक चाटर फिल्टर, फ्लोराइड मुक्त पेयजल फिल्टर, लागत प्रभावी कोल चेंजर के विकास के साथ

कचड़ों के प्रसंस्करण व पृथकीकरण प्रक्रिया से शहर, अस्पताल, कृषि और ई-कचड़ों से मुक्त करने की महत्त्वकांक्षी योजना पर किये जा रहे कार्यों की जानकारी दी। मौके पर संस्थान द्वारा माइक्रोपैक्स एनर्जी लिमिटेड का अत्याधुनिक तकनीक से विकसित इन्वर्टर का पेटेंट हस्तांतरित किया गया, जबकि कोलकाता स्थित आईआईएमटी शिवपुर के

उत्तर-पूर्व राज्यों में अधिक मुनाफा हेतु अंदरक प्रसंस्करण इकाई को विकसित किया गया है, जिसे आज राष्ट्र को समर्पित किया गया। जगह-जगह स्थापित सौर स्टेशनों से सौर ऊर्जा उपलब्ध होगी। पारगों के किनारे लगे सोलर ट्री को हम नियंत्रण कक्ष के रूप में भी उपयोग कर

साथ मेकॉटोरिक्स विषय में एमटेक की शिक्षा प्रदान करने का समझौता का हस्तांतरण किया गया। संस्थान के दो नम्बर गेट पर स्थापित सौर पार्क का उद्घाटन भी किया गया। मौके पर सिम्फर, बीएन दास बंगलुरु द्वारा प्रदर्शनी लगायी गयी। उद्घाटन समारोह में सिम्फर के निदेशक डा. एके सिंह, डीएसपी के कार्यपालक निदेशक उत्पल कुमार पाठक, एसईआरसी चेन्नई के निदेशक संतोष कपुरिया, एनएएल बंगलुरु के निदेशक डा. जितेंद्र यादव, एनएएल जयशंकरपुर के निदेशक डा. इंदजीत चट्टराज, सिम्फर के विश्व वैज्ञानिक पी पॉल एच सहित काफी संख्या में वैज्ञानिक और कर्मचारी मौजूद थे। अंत में आयोजन समिति के अध्यक्ष डा. शंकरनाथ सोम ने धन्यवाद ज्ञापन किया। कार्यक्रम को सफल बनाने में डा. शिवनाथ माड्डी, प्रशासनिक अधिकारी जेम्स शरण, अनुभाग अधिकारी प्रभात भूषण, मुनमुन गुप्ता, कौशल कुमार, तकनीकी अधिकारी अजय राय, केन्द्रीय विद्यालय सीएमईआरआई के प्राचार्य होरालाल सहित संस्थान के विभागाध्यक्षों की सहकारीय भूमिका रही।

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