



cftri

A Constituent Laboratory of Council of
Scientific & Industrial Research
New Delhi

NEWSLETTER July - September 2007

Contents

- CSIR Foundation Day
- Nation's 60th Independence Day
- CFTRI Awards
- M.Sc. and ISMT Awards Day
- Minister of State for Commerce Visits CFTRI
- New Processes Released
- US Patents Granted
- National Nutrition Week
- Visit of Canadian High Commissioner to CFTRI
- Ph.D. Degree Awarded
- Forthcoming Events

CSIR Foundation Day - 2007

CFTRI celebrated the CSIR Foundation Day on 26 September, 2007 in the institute. Prof. B.A. Viveka Rai, Vice Chancellor, Karnataka State Open University, Mysore, graced the function as the Chief Guest and addressed the staff and invitees. Speaking on the occasion, Prof. Rai lauded the efforts of CFTRI in providing scientific and technological knowledgebase of the traditional Indian foods with a focus on nutritional attributes benefiting the human population.

Dr. V. Prakash, Director, CFTRI, in his presidential remarks, appreciated efforts by the staff in positioning the Institute on a global pedestal, but also cautioned that complacency might undo what has been achieved over the years. He urged the staff to deliver their best to keep the Institute's flagship always high.



Dignitaries of the CSIR Foundation Day on the dais: Prof. Viveka Rai, Vice Chancellor, KSOU, Mysore (third from left), and Dr. V. Prakash, Director, CFTRI, are seen

Prof. Viveka Rai distributed the prizes to the children of the staff of CFTRI who had won in different competitions, held as part of the Foundation Day celebration and Hindi Fortnight competitions.

CFTRI Annual Awards for the outstanding achievements by the staff in the scientific, technical and non-technical categories were distributed on the occasion. Also children of the CFTRI staff received cash awards and certificates for meritorious performance in their academic studies.

Dr. V. Prakash presented mementoes and shawls to the staff who had completed 25 years of service and the retirees during the previous year.

Earlier Dr. M.C. Varadaraj, Head, HRD, welcomed the Chief Guest and dignitaries and Dr. K.N. Gurudutt, Head, FS&AQCL, proposed the vote of thanks.



A view of the audience from CSIR Foundation Day function in the institute

Nation's 60th Independence Day Celebrated

60th Independence Day of the Nation was celebrated at CFTRI on 15 August, 2007. Dr. V. Prakash, Director, CFTRI, unfurled the tricolor flag and received the salute from Scouts & Guides along with NCC cadets of CFTRI School. Dr. Prakash, called upon scientists to set higher benchmarks to excel in the area of Food Science and Technology. "Nation looks to us as the leader and we need to prove it ourselves", he said. Dr. (Mrs.) Jamuna Prakash distributed sweets to the children. Cultural programmes and sports activities for the staff were also arranged by Food Research Institute Gymkhana (FRIG) on that day.



CFTRI School children in the Independence Day March Past

Hindi Fortnight - 2007

The Hindi Fortnight was celebrated this year in the month of September as in the previous years. Number of competitions were conducted during 27.8.2007 to 17.9.2007 in which the staff, research students, project assistants and CFTRI School children participated overwhelmingly.

The valedictory function of Hindi Fortnight was arranged along with CSIR Foundation Day. The prizes for the

winners in the competitions were distributed by the Chief Guest, Prof. B.A. Viveka Rai, Vice Chancellor, KSOU, Mysore. Dr. V. Prakash, Director, CFTRI, Mysore presided over the function.

Dr. D. Rama Reddy, Senior Hindi Officer, presented the report of progressive use of Hindi in the institute during the previous year.

CFTRI Awards 2007

● Best research paper published by staff

Basic Research:

- Dr. Lalitha R. Gowda
Protein Chemistry & Technology Department

Applied Research:

- Smt. M.L. Sudha
*Flour Milling, Baking & Confectionery
Technology Department*

● Best technology transferred to industry

- Dr. S.G. Prapulla and Team
*Fermentation Technology & Bioengineering
Department*

● Individual awards for scientific and technical contributions

Group IV:

- Mr. N. Bhaskar, *Meat, Fish & Poultry Technology
Department*
- Mr. B.B. Borse, *Plantation Products, Spices & Flavour
Technology Department*

Group III:

- Mrs. M.N. Rekha
Fruits & Vegetable Technology Department

● Individual awards for best technical support

Group II:

- Shri Bharath, *Food Engineering Department*
- Shri G. Narsing Rao, *CFTRI Resource Centre,
Hyderabad*

Group I:

- Shri N. Srinivasa Rao, *Finance & Accounts*

- Smt. R. Chaya Devi, *Human Resource Development
Department*

Group D (NT)

- Shri Cheluva, *CFTRI Departmental Canteen*

● Best contribution award for general administration, finance & accounts and stores & purchase staff

- Shri A.F. Fernandes, *General Administration*
- Shri G. Ravishankar, *Finance & Accounts*
- Mrs. Leela Vijayakumar, *Stores & Purchase*

● Best research publication award for Research Fellows and Project Trainees

- Dr. B.C. Narasimha Prasad
Plant Cell Biotechnology Department

● Best student award

- Mr. Hakim Asrar Ahmed, *M.Sc. (Food Technology)
Course*
- Mr. Iddi Hatibu Mvungi
*International School of Milling Technology
Certificate Course*

● Best award for contribution towards intellectual property

- Flour Milling, Baking & Confectionery Technology
Department

● Special award for outstanding contribution

- Food Safety & Analytical Quality Control Laboratory
Department
- Central Instruments Facility & Services Department

Kennesaw State University (USA) students visit CFTRI

The second batch of undergraduate students of biotechnology from Kennesaw State University, visited CFTRI during July 23-31, 2007 as part of the **Study Abroad Programme** of the University. Dr. Premila Achar, Associate Professor in Biotechnology, accompanied the team. Hands-on practicals and demonstration in the area of plant molecular biology, molecular detection methods for bacterial pathogens, biochemical and nutritional evidence through cell culture models, tissue culture techniques and recombinant DNA technology were

held as part of the programme together with many interactive sessions.



M.Sc. and ISMT Awards Day

The outgoing students of the prestigious M.Sc. (Food Technology) and Certificate course in Milling Technology courses at CFTRI were presented with Medals, Scholarships and Certificates. In a brief function held in the institute on July 13, 2007, Dr. V. Prakash, Director, CFTRI gave his presidential remarks.

Sixteen ISMT students and twenty four M.Sc. (Food Technology) students received the course completion certificates on this occasion.

Minister proposes Centre for Value Addition of Spices

Shri Jairam Ramesh, Hon'ble Union Minister of State for Commerce, Government of India, New Delhi, visited CFTRI, Mysore, on July 14, 2007. The Minister was received by Dr. V. Prakash, Director, CFTRI and staff of the Institute. Later, Dr. Prakash made a brief presentation of CFTRI activities with a focus on Industry - Institute interactions and the societal impact.

Speaking on the occasion, Minister lauded the efforts by CFTRI and emphasized the need to strengthen interactions among various Spices and Plantation Boards. He also expressed the need for a Centre for Value Addition of Spices at CFTRI, which would help farmers and growers in the plantation sector.

Nepal Academy of Science & Technology - CFTRI Interaction

A four member team from Nepal Academy of Science and Technology, Kathamandu consisting of Prof. Bishownath Prasad Agrawal, Dr. Saman Bahadur Rajbhandari, Dr. Mukunda Ranjit and Dr. Kayo Devi Yami were on a visit to CFTRI, Mysore during July 24-27, 2007. The team was in the Institute to understand the logistics for setting-up the infrastructural facilities for

GMO testing. An interactive discussion were also held with experts in the areas of LMOs detection, biosafety regulations and guidelines and food laws and standards with reference to quality and safety. Later, Dr. V. Prakash, Director, CFTRI gave an insight into CFTRI's spectrum of contributions in food science and technology.

Federation of Industry and Commerce of North Eastern Region (FINER) - CFTRI Meet

An interactive one day technology awareness programme on opportunities and prospects for food processing industries in north eastern region for the members of FINER was organized on July 9, 2007 at CFTRI, Mysore. Dr. R.S. Saxena, Head, Customer Satisfaction and Evaluation Unit, CSIR, New Delhi, Dr. P.G. Rao, Director, North East Institute of Science and Technology (NEIST), Jorhat, Mr. Pradyut Bhuyan, Director, FINER and Dr. V. Prakash, Director, CFTRI were present on the occasion. The programme included presentations on various topics of relevance to the north

eastern region with the focus on value addition to raw materials and adopting successful marketing strategies.



Shelf-stable Chapati

Chapati which is also known as the *roti*, is a flat unleavened baked wheat product and it is a major staple food in the Indian subcontinent. It is served hot at breakfast, lunch or dinner and are eaten along with other adjuncts in households, restaurants and industrial canteens.

Chapatis, being a high moisture product (water activity 0.90-0.95), it contains 25-35% moisture. *Chapati* stales like bread or cake and become hard and brittle on storage, making it unacceptable for consumption. Mold growth also occurs after 3-4 days of storage.

CFTRI has standardized an appropriate formulation and process for making shelf-stable *chapati* using a continuous *chapati* making

machine (extrusion, cutting & baking) – developed in the Institute which can cater to the large requirement of *chapatis* in a short span of time. As part of this technology package, an automated *chapati* making unit (1500 *chapatis*/hour), developed by CFTRI, is also available. Alternatively it can be done by manual sheeting, cutting and baking on hot plates.

The shelf-stable *chapatis* with a life span of 12 days can be marketed through bakeries, groceries and departmental stores. It is a convenient, ready-to-serve product after heating on a microwave oven or tawa at low temperature. The developments would cut down drudgery of housewives and working women in the kitchen.

Method and composition for clonal propagation of *Pandanus amaryllifolius* (US Patent No. 7189568)

Plant Tissue Culture is a major area of plant biotechnology which has direct impact on present day agriculture/horticulture. There are various advantages of tissue cultured plants over those produced by conventional methods of plant propagation. Also the plants are induced to multiply at a tremendous rate by formulating a specific medium.

Scented *Pandanus amaryllifolius* produces high levels of 2 – acetyl – pyrroline, a major flavourant in *Basmati* rice. CFTRI has developed a medium formulation for the clonal propagation of scented *Pandanus amaryllifolius* Roxb., wherein the development of specific nutrient medium with growth regulators help establishment of shoot cultures and rapid aseptic multiplication of

Pandanus shoots which may subsequently be hardened to obtain high quality planting material.

The advantages of the composition are:

- It is for the first time, a medium formulation has been made that efficiently supports shoot bud establishment to form aseptic shoot cultures of *Pandanus amaryllifolius*.
- Also there is a 10-fold increase in the shoot number in 4 weeks period, which is a high rate of multiplication using tissue culture methods.
- The process involves a nutrient medium formulation for continuous multiplication of *Pandanus* plants throughout year and planting material remain free from saprophytic fungal and bacterial diseases.



National Nutrition Week

National Nutrition Week was observed during September 1 - 7, 2007 with “ **Promotion of Nutrition for Stronger Nation**” as the theme. Various competitions on food and nutrition were held for School children to create awareness of nutrient deficiency, importance of balanced diets and role of micronutrients in health. Dr. V. Prakash, Director, CFTRI presided over the valedictory function.

In a special lecture delivered on this occasion, Prof. G. Saraswati, Department of Food Science and

Nutrition, University of Mysore, elaborated the importance of balanced diet and how one could achieve the nutritional security through locally available low-cost food items.

Dr. Prakash, in his presidential address, stressed the importance of nutrition and how Science is helping to create a roadmap of nutrition to every segment of the population. Prizes were also distributed to winners of various competitions in the function.

Visit of Canadian High Commissioner to CFTRI

Dr. David M Malone, Canadian High Commissioner to India, New Delhi, accompanied by Mr. D.P. Vittal Nath, Trade Commissioner, Canadian Office, Bangalore, made a short visit to CFTRI on September 29, 2007.

The High Commissioner was taken around Institute’s facilities and the International Food Technology Training Centre (IFTTC) Hostel Complex, which was constructed with the assistance of the Canadian Government. Dr. Malone appreciated CFTRI’s role in the area of nutrition.



Dr. David M Malone in a discussion with Director and other scientists

Food and Technology Expo - 2007

CFTRI participated in the “**Food and Technology Expo**” held at Pragathi Maidan, New Delhi during 22-24 August 2007, organized by the National News Service Group. Shri Subodh Kant Sahay, Hon’ble Union Minister of State for Food Processing, Govt. of India, inaugurated the exhibition. Products, samples and charts related to ongoing and emerging R&D activities of the institute were displayed in the exhibition. Valedictory function was graced by several VVIPs including Shri S.P. Jaiswal, Hon’ble Union Minister of State for Home, Govt. of India, New Delhi.



Shri Subodh Kant Sahay, Union Minister of State for Food Processing in the CFTRI Stall

Ph.D. degree awarded

The following research students and scientists received Ph.D. degree from the University of Mysore during July - September 2007.

- Anand S
Microbiological and molecular methods for the study of Ochratoxin A in foods and its control
(Guide: Dr. Rati Rao E)
- Ramesh Yadav Avula
Rheological and functional properties of potato and sweet potato flour and evaluation of its application in some selected food products
(Guide: Dr. Ramteke RS)
- Kumaresan N
Characterization of novel pigments produced by *Aspergillus carbonarius* and an approach towards integrated fermentation process for pigments and polygalacturonase production using the fungus
(Guide: Dr. Vijayalakshmi G)
- Suresh D
Studies on the bioavailability of active principles from processed spices
(Guide: Dr. Srinivasan K)
- Govindaraju K
Studies on the preparation and characterization of protein hydrolysates from groundnut and soybean isolates
(Guide: Dr. Srinivas H)

Forthcoming events

Short term training programmes (Jan. - Mar. 2008)

- Isolation of lactic acid bacteria with probiotic properties (7 - 11 Jan. 2008)
- Escort services for management of food processing industry (21 - 25 Jan. 2008)
- Nutrition labelling of packaged foods (28 Jan. - 1 Feb. 2008)
- Advances in the Science and Technology of baking (4 - 8 Feb. 2008)
- Food quality and safety management in meat and poultry processing (11 - 15 Feb. 2008)
- Sensory analysis of aroma and flavour of food ingredients and packaged foods (20 - 22 Feb. 2008)
- Product development and marketing strategy for food processing industry (25 - 29 Feb. 2008)
- Microbiological and chemical analysis of water (3 - 7 Mar. 2008)
- Nutrition perspective of food : The current scenario (10 - 14 Mar. 2008)
- Post-harvest management of fisheries for quality and value addition in the food chain (17 - 21 Mar. 2008)

For the details on the short term courses,

Please contact :

**Head, HRD Dept.
CFTRI, Mysore - 570 020
email : hrd@cftri.res.in**

Visitor(s) to CFTRI

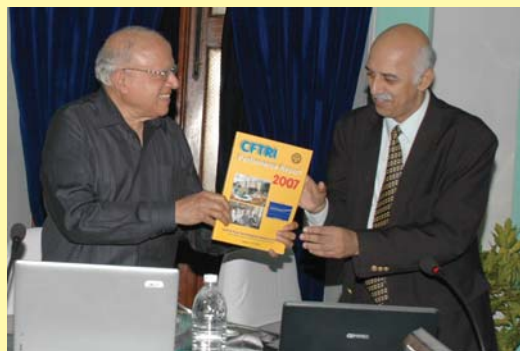
- Dr. K Ravindranathan Thampi, Laboratory of Photonics and Interfaces, Institute of Chemical Sciences and Engineering, Swiss Federal Institute of Technology, Lausanne, Switzerland, gave a technical lecture on "A few applications of nanomaterials" on July 27, 2007
- Dr. Premila Achar, Associate Professor of Biotechnology, Department of Biological & Physical Sciences, Kennesaw State University, USA gave a technical lecture on "Molecular characterization of toxin producing mold in corn and peanuts" on July 31, 2007
- Six trainee scientists attending the Seventh Foundation Training for Scientists & Technologists at Indian Institute of Public Administration, New Delhi, visited CFTRI during September 24-25, 2007



CFTRI: An ISO 9001:2000, 14001:2004 and 17025:2005 (NABL) Organisation

CFTRI Performance Report 2007 Released

Prof. M.S. Swaminathan, Chairman, MS Swaminathan Research Foundation, Chennai and Chairman, CFTRI Research Council, released the CFTRI Performance Report 2007, during the Research Council Meeting of CFTRI held on September 21, 2007. An abridged electronic version of the report can be accessed at institute's website, www.cftri.com.



*Published by the Planning, Monitoring & Coordination Department, CFTRI on behalf of Director, CFTRI, Mysore
e-mail: pmc@cftri.res.in; website: www.cftri.com*