

## **HEADQUARTERS ACTIVITIES**

The CSIR Headquarters is the hub of its 38 laboratories, whose prime activities include strategic planning; repository of organizational learning; policy guidelines; managing intellectual property; front face to the Planning Commission; gateway to international linkages and collaborations; business development; extramural human resource development; legal handling and advising on vigilance related matters. These are carried out through the technical and administrative divisions set up for the purpose. Some of the major activities carried out by the divisions during the year are summarized below:

### **3.1 R&D PLANNING DIVISION (RDPD)**

R&D Planning Division is the nerve center of CSIR Hqrs. with intensive and wide ranging activities encompassing regular interactions with Government departments; Demand for grants; Annual Plan; Five Year Plan and related matters; Annual Report; Reports to Cabinet, Planning Commission etc.; Advisory Board; Performance Appraisal Board; Directors' Conference; Research Councils and matters pertaining to S&T plan projects/ proposal, databank of whole CSIR R&D activity, execution of New Idea Fund and implementation of CSIR-National Innovation Foundation Scheme.

With reference to the network and similar projects, the division has the responsibility to coordinate externally with Planning Commission, Finance Ministry, and other sector specific departments and internally with Finance division and laboratories. It also has the responsibility to provide technical support to Investment Sub Committee and GB.

#### **Annual Plan 2006-07**

The year 2006-07 being the terminal year of TFYP, the Annual Plan 2006-07 was formulated accordingly. As a publicly funded organization, CSIR derives its finances from the three major sources, namely: budgetary support from the Government; funding from contract R&D, consulting activities and technical services (External Cash Flow); and internal receipts. The TFYP was formulated with an assumed annual GDP growth rate of the economy of 8 percent and the national R&D expenditure increasing to around 2 percent of GDP by the end of the Plan period. In the TFYP of CSIR, there are six schemes in total, of which five are continuing and one is a new scheme (two schemes of the Ninth Plan

period have been closed or merged with others). The emphasis on continuing schemes is on consolidation of ongoing activities and building on the existing investments and infrastructure to initiate new priority programmes. The division sought detailed information from the national laboratories/ institutes through a comprehensive proforma, wherein the progress of network programmes against the planned activities as envisaged and approved by the competent authority were ascertained along with the future targets vis-à-vis financial requirements. In addition, information on non-networked activities/ progress was also sought. The information was analyzed and keeping in view of the priorities through operational planning, the Annual Plan document 2006-07 was formulated and sent for the consideration of the Planning Commission. A plan investment of Rs. 940.00 crore for various schemes as projected with the Planning Commission was approved for CSIR.

### **Network Projects**

The key feature of CSIR's programmes during the Tenth Plan is the creation of major and innovative knowledge networks across and beyond CSIR laboratories. These programmes which were categorized in 3 distinct philosophy of level of implementation were formulated through a detailed exercise. The focus of the programmes was to synergise the vast competencies developed in CSIR Laboratories and to implement the programmes/projects in network mode. Accordingly, categorisation of programmes under National Laboratories was carried out keeping in view the requirement at the national level, at CSIR level and at the laboratory level.

The Division had the responsibility to facilitate the implementation of the projects. The Division had participated in Monitoring Committee meetings of the network projects held periodically. The Committees evolved suitable and monitorable parameters for each network project, monitored the progress half yearly, assessed and advised the mid course changes in network composition and recommended additional fund release in some of the network projects.

The progress of the projects was reviewed by the DG-CSIR in meetings held at Lucknow, Pune and Delhi. The basic purpose of the review meetings was not only to assess the status of projects but to ensure that projects reach their logical conclusion. Officials from Planning Commission were also present in the meetings. The outcome of the review revealed, very noticeably that in the CSIR system resides strength and power not only to do things differently and synergistically, but the expertise from diverse sections have come together to address the different aspects of products/ processes. The meetings provided a

critical evaluation of each network project and provided an insight to plan strategy for implementing large scale network projects for the Eleventh Five Year Plan.

### **Outcome budget**

Hon'ble Finance Minister in his Budget speech 2005-06 announced a new instrument of governance the outcome budget. Accordingly, the Government put in place a mechanism to measure the developmental outcome of all the major programmes during the current year. These are monitored at the highest level on half yearly basis now (earlier on quarterly basis). It was further categorically stated that Government would ensure that programmes and schemes were not allowed to continue indefinitely from one plan period to the next without an independent and in-depth evaluation. The Division has played a major role to ensure that the activities were completed with due envisaged outcomes, prepared and submitted the consolidated report to the Ministry of Finance. The report, later, became public document and has appeared on the website of the Finance Ministry.

### **R&D Management Conference 2005**

CSIR (RDPD) has been organizing annual R&D Management Conference since 1999. The Conference has emerged as an unique platform for exchange of ideas/views, experience and knowledge on diverse issues related to R&D management amongst academicians, scientists, technocrats, senior corporate executives/ managers etc. All India Management Association (AIMA) and Confederation of Indian Industry (CII), the apex associations of Management & Industry, respectively, joined hands with CSIR to organize the Conference this year. The global competition is forcing organizations of all sectors, particularly the high performing ones, to look for means to become more innovative. Organizations are required to be continuously innovating, come up with newer initiatives rapidly to meet the ever-increasing challenges and stay ahead of competition. Keeping these points in mind, the theme of the conference was aptly chosen as 'Innovation: A route to competitiveness in global economy'. The focus of the conference was the role of innovation to gain competitive advantage. Dr. Vijay Kelkar, an eminent economist and Chairman, IDFC Private Equity Co. Ltd. Inaugurated the conference and gave the key note address. Another new feature of the conference this year was the invited talks from key industry leaders viz. M/s Satish Kaura, Chairman & MD, Samtel Colour Ltd.; Harsh Mariwala, Marico Industries Ltd.; V. Sumantran, former ED, Tata Motors Ltd.; V.L. Deshpande, Chairman & CEO, Encore Software Ltd. etc. The topics covered in this RDMC

were 'Creating and nurturing innovation culture', 'Innovative management of R&D', 'Managing innovative people', 'Innovations in marketing' and 'Innovative management of technology'. Technical papers were published in the proceedings brought out on the occasion. About 150 participants were attended the conference.

### **Consolidation of core competencies of CMRI and CFRI**

CSIR in today's competitive and fast changing environment has embarked upon consolidating its core competencies spread across different laboratories. The consolidation of different core competencies with rich knowledge and background can be expected to herald a new dimension in CSIR and as well indicate a new trend worldwide to notice. The Performance Appraisal Boards (PABs) of CMRI and CFRI in their review report had suggested for the possibilities of consolidation of core competencies of these two laboratories keeping in view their resource endowments, programmes, activities and performance as both are located at Dhanbad. Based on the "suggested action" by the High Level Committee on consolidation of core competencies of CMRI and CFRI, the Vice President, CSIR had constituted a Review Committee for thorough reexamination of the charter of these laboratories and possibilities of consolidation of their core competencies. The Review Committee submitted its report on June 2005 and recommended for the consolidation of core competencies of CMRI and CFRI in to a new entity namely "**Central Institute of Mining and Fuel Research (CIMFR)**". The recommendations of the Review Committee were considered and approved by the GB of CSIR in its 165<sup>th</sup> meeting held on 13.09.2005. The Division has coordinated the meetings of Review Committee and its proceedings in submitting the report to VP, CSIR.

### **CSIR-Advanced Institute of Science Training (AIST) - a deemed university.**

CSIR laboratories are making significant contributions to the national pool of high quality scientific manpower by producing Ph.Ds degree holders in diverse areas of science. CSIR as a whole contributes about 300 Ph.Ds and hosts over 2000 research scholars annually. Some of the CSIR laboratories have excelled in this endeavour and have strong student base carrying out Ph.D work. At present there are over 1800 students working in various CSIR laboratories but are registered for their Ph.D. degrees under different Universities with varying academic standards, a need was thus felt to establish a standardized Ph.D. programme. CSIR realizing the growing need for highly trained scientific manpower, especially in trans-disciplinary areas, and taking the advantage of the available excellent infrastructure and existing training culture and ethos at HRDC,

Ghaziabad, proposed to expand the scope of HRDC and register an autonomous society named **CSIR-Advanced Institute of Science Training (CSIR-AIST)** functioning from the HRDC premises. Accordingly, a proposal was made by CSIR to UGC on 17<sup>th</sup> February 2005 proposing establishment of an independent entity CSIR-AIST with a deemed university status for teaching and training for Ph.D. programme. The GB of CSIR in its 165<sup>th</sup> meeting held on 13.09.2005 considered and approved the CSIR proposal for seeking deemed university status to CSIR-AIST. The proposal is under the consideration of UGC. The Division steered the meetings of the Committee constituted by DG, CSIR for obtaining deemed university status to CSIR-AIST.

**National facility for Advanced Proteomic and Protein Research for development of drugs and therapeutic proteins at IICB, Kolkata.**

The proposal involves the creation of an integrated state-of-the-art infrastructure for advanced research on protein and proteomes encompassing the areas of; clinical proteomics, structural proteomics, functional proteomics, protein engineering, and bioinformatics. The proposal was initiated as one of the new facilities to be created under strengthening India's vast S&T infrastructure as contained in the S&T section of the Common Minimum Programme (CMP). The facility would be created by joint funding of CSIR and DST at a total cost of Rs. 2256.50 lakhs. The facility would offer an excellent opportunity to carryout world class research in the important area of drug development. The proposal was duly considered and approved by the GB in their 166<sup>th</sup> meeting held on 16<sup>th</sup> Feb.2006. The Division coordinated with IICB Kolkata in preparing the SFC proposal and with DST & Planning Commission for obtaining the necessary financial and administrative approvals.

**Prof. G.N. Ramachandran award for excellence in Biological Sciences & Technology**

CSIR had instituted a Gold Medal award from the year 2004 for excellence in Biological Sciences in the fond memory of Prof. G.N. Ramachandran, pioneer in protein chemistry research founding father of Structural Biology in India. The award is given each year at the annual meeting of Indian Science Congress for notable and outstanding contributions in biological science & technology. Prof. P. Balaram, Director, IISc, Bangalore, was honoured with the gold medal award for the year 2005. The Division steered & handled the whole proceedings of the Advisory Committee constituted by DG, CSIR for selection of a Scientist for the award.

### **Programme on 'Discovery, Development & Commercialization of New Bioactives and Traditional preparations'**

Programme on 'Discovery, Development & Commercialisation of New Bioactives and Traditional Preparations'" was initiated for discovering new leads from Indian biodiversity. The strategy evolved has been able to give many leads for various diseases in discovering single molecules and taking them to the stage where IND can be contemplated. The programme has been converted into a Task Force Networked Project of CSIR. The project has made a steady progress and sixty drug discovery groups formed which are *in-vitro* and *in-vivo* active.

Around 16000 samples (12000 plants and~ 4000 microbial) have been screened for various diseases. Presently there are 65 Discovery Groups on promising entities for 20 disease conditions. Out of 65 discovery groups 13 groups have reached advanced stages of single molecules (9 samples) and herbal preparations (4 samples). The four herbal formulations are for ulcer, dementia and cancer and nine single molecules are for cancer, dementia, hypertension, leishmania, hepatoprotective and immunostimulatory conditions.

### **3.2 INTELLECTUAL PROPERTY MANAGEMENT DIVISION (IPMD)**

The Division strives for enhancing the value and volume of IP. The efforts have led CSIR to maintain its dominant position in IP arena by filing 570 foreign and 407 Indian Patent Applications during the year.

#### **Fourth CSIR Diamond jubilee invention award for school children-2005**

Four inventions were selected for 'Fourth CSIR Diamond Jubilee Invention Award for School Children-2005'. The selected inventions included, i) an improved low cost artificial limb for above –knee amputees, ii) improved design of Tri-cycle Rickshaw, iii) composition of litchi leaves and black pepper useful for lowering hyperglycemia, and iv) click herbal stick.

#### **Third CSIR Diamond jubilee invention award for school children**

The winners of the 2004 competition for Third CSIR Diamond Jubilee Invention Award for School children were given prizes on the 26<sup>th</sup> September, 2005, CSIR Foundation Day

#### **Licensing of IP Portfolio**

The Division has facilitated licensing of four US patents pertaining to anticancer drug molecules to M/s. Indus Pharmaceuticals Inc., USA.

### **Best Patent Award**

US patent No. 6,800,622 for “Pyrene-linked pyrrolo(2,1-c)(1-4) benzodiazepine hybrids useful as anti-cancer agents” from IICT, Hyderabad, earned the ‘Best Patent Award’ for the year 2004-05 given by Indian Drug Manufacturers Association.

### **Rejection of the opposition to the European patent granted to CSIR**

For the first time, a European patent granted to CSIR, India was opposed by Trifolio-MGmbH, Germany, a leading manufacturer of neem based products. The opposition was contested by CSIR using fingerprinting chromatography analysis (based on CSIR’s another European patent) and generated the necessary evidence to convince the Opposition Board, EPO that CSIR’s process was simple and economical and aimed at purifying and isolating better yield of azadirachtin as a powder with larger amount of salanin. Based on evidence provided by CSIR, the Opposition Board, EPO rejected the opposition.

### **Workshop on “Negotiating Technology Licensing Agreements”**

A five-day CSIR-WIPO Workshop on “Negotiating Technology Licensing Agreements” was organized by WIPO jointly with CSIR (IPMD and NISCAIR) during July 4 to 8, 2005. Shri Kapil Sibal, Hon’ble Minister of Science and Technology and Ocean Development inaugurated the Workshop. The five day workshop covered wide range of topics including mining patent information; developing a patent strategy; establishing a marketing plan for technology commercialization; basic principles of technology licensing including licensing negotiations and preparing agreements; commercial and financial considerations in licensing; confidentiality issues and litigation. The faculties for the Workshop were drawn from EPO, WIPO, UOP, and Consulting firms from Australia and India.

### **3.3 TECHNOLOGY NETWORKING & BUSINESS DEVELOPMENT**

Pursuing activities under its assigned mandate, the Technology Networking and Business Development Division (TNBD) steered Govt. of India’s unique programme, the New Millennium Indian Technology Leadership Initiative (NMITLI) on one hand and CSIR’s overarching business development activities on the other. The TNBD Division also facilitates functioning of two CSIR units namely Unit for Research & Development of Information Products (URDIP) and Customer Satisfaction Evaluation Unit (CSEU). In addition, it also undertook various challenging tasks assigned time to time, and facilitated putting in place farsighted policy measures for better functioning of CSIR. Highlights of some of

the important activities undertaken and managed by the TNBD Division during the year are given hereunder:

In the Industry Originated Proposal (IOP) category, around 100 conceptual proposals were received during the year in response to open advertisement and letters from CSIR. The Screening Committee constituted to screen the proposals short listed 12 proposals for further consideration. Among the 8 proposals in the area of Biosciences and Drugs & Pharmaceuticals, 2 proposals were short listed by Area-wise Expert Group for projectization. One proposal on “Development of an integrated micro PCR system with in-situ identification” has been developed with the help of Domain Experts, which was put up to High Powered Committee (HPC) for further consideration.

The six projects under NMITLI, which were taken up earlier for necessary R&D have graduated to second phase for further development. These projects are: (i) Biotechnology for Leather: Towards Cleaner Processing Phase-II; (ii) Development of production system for tea polyphenols and their condensed products; (iii) A prospective study to correlate gene signatures with clinical outcome of astrocytomas and identification of potential therapeutic target(s); (iv) Development of DNA microchips for the detection of eye infections and Glaucoma; (v) Lactic acid and lactic acid based polymers- establishment of a 300 TPA Pilot plant for lactic acid production; and (vi) A cost effective Simple Office Computing (Sofcomp) platform to replace PC.

### **Business development and marketing of knowledgebase**

In the domain of business development the Division has taken several new initiatives to put CSIR on a higher pedestal. These range from undertaking revision of the marketing guidelines (so as to align them with the changes in the external policy settings and making them more customer friendly) to exposing CSIR’s knowledgebase in a strategic way to facilitate building up of a long term business relationships with Indian as well as international companies to putting in place enabling mechanism for enhancing pace of innovation led research and development in CSIR. The Division organized CSIR-Industry meet for enhancing and deepening public-private partnership and to create awareness as well as demand for CSIR’s knowledgebase. The focus of this unique meet was on Life Sciences, Chemicals, Drugs & Pharmaceuticals and Materials & Nano Materials. Several industries have signed agreements with CSIR namely: Actavis Pharmaceuticals Ltd. (non disclosure agreement); Johnson & Johnson Consumer Company and Johnson & Johnson Vision Care Inc., Japan (non disclosure agreement); Colgate-Palmolive Company (confidential disclosure



agreement); Novakos LLC (confidentiality and non-disclosure agreement and master agreement); BP International Ltd. (letter of intent and confidentiality agreement); Indigene (umbrella agreement); and Procter & Gamble Company (MCA non-analysis agreement). Further, the Division continued to provide necessary assistance to laboratories for business development and marketing of knowledgebase. It also provided hands on training in the domain of business development to a scientist each from CDRI and NEERI.

### **Global Research Alliance (GRA)**

With the objective of providing safer, faster and cheaper therapeutics in the long run, GRA has launched a new initiative with World Bank on Indigenous Knowledge (IK) for Health. CSIR India, supported by the World Bank and their associates, organized the 2<sup>nd</sup> Indigenous Knowledge Workshop in India in February 2006. Fifty delegates from 14 countries and 5 continents participated in the workshop. The forum was utilized to built on the learning from the 1st IK workshop and develop a plan to take this initiative forward.

Based on the feedback from visit of GRA team in August 2005, it has been agreed to take up the Tanga Project as a pilot project. CSIR- South Africa has offered to fund the first part of the first Phase of the project viz. report on the legal framework for this work. In the next part of the first phase an ethno-botanical study is to be conducted, which will be funded by the World Bank.

Contacts established with global funding bodies like the WB, USAID, ID, Melinda Gates and Rockefeller Foundations to enhance mutual understanding and to promote high-level dialogue. These efforts are enabling GRA to enter the mainstream for meaningful contributions to meeting the Millennium Development Goals (MDGs) and other large S&T for development challenges. These efforts are expected to translate into harnessing S&T and knowledge for development.

CSIR with NEERI in the lead has submitted an Expression of Interest on behalf of GRA for carrying out detailed EIA & SIA studies for the Kalpasar Project in Gujarat. The EOI has participation of NEERI, NIO & CSMCRI from Indian side and CSIR-SA and CSIRO & SMEC from Australia.

### **Security and sensitivity clearance**

The R&D proposals involving foreign scientists/ agencies were examined and assessed in the division from security and sensitivity angle. The proposals covered basically contract R&D. During the year, about fifty-eight such proposals were processed. Some of the clientele covering these proposals included DuPont, Invista, ISIS Pharmaceuticals, Honeywell, Bayer, FAO, ESCOM,

Lanxess, Bell Helicopters, Procter and Gamble, Solvay, Schenectady Herdillia, GE, etc. The list also includes clients from France, Italy, Australia, Sri Lanka, Nepal, Malaysia, Kyrgyz Republic, Singapore, Dubai, South Korea, etc.

### **CSIR Technology Awards 2005**

Following the methodology in place, Division invited nominations for the CSIR Technology Awards for the year 2005. A total of 21 nominations were received. These nominations were processed for perusal and consideration of the Technology Awards Selection Committee constituted by DG, CSIR. Awardees were selected for three Technology Awards namely: Prize for Chemical Technology jointly to Indian Institute of Chemical Technology, Hyderabad for Enzymatic degumming of rice bran oil (50 tpd capacity) and to National Chemical Laboratory for Development of a complete process technology for manufacture of 2-Acrylamido-2-methyl-1-propane sulfonic acid (ATBS); Prize for Engineering Technology to National Aerospace Laboratories, Bangalore for the Development of advanced composite technologies for aerospace applications; and Prize for Biological Sciences to NBRI for the “Development of artificial promoters, novel  $\delta$ -endotoxin coding genes and indigenous transgenic to cotton lines for resistance to insect pests”.

### **Customer Satisfaction Evaluation Unit**

A new version of questionnaire was designed for Customer satisfaction activities for in-depth understanding based on the customer feedback for the year 2004-05. It was made available to all the CSIR laboratories for collecting customer Satisfaction feedbacks on projects. The Oracle database were also upgraded and updated based on the customer satisfaction feedback received. The software was developed to record CSI Report on compact disk to the layout design of Project Information. Customer Profile and Customer Satisfaction Feedback databases were changed to give relevant information in a particular format.

### **3.4 GENERAL ADMINISTRATION**

General Administration is yet another important functionary of the Headquarters, which facilitates the general functioning of all CSIR laboratories. It has different arms to assist its day-to-day functioning. The following paragraphs present significant activities of the sections:

- (i) Establishment-I (E-I): It is the cadre controlling section of all the common cadre officers (CCO) of CSIR dealing with their personnel matters including their appointment, verification of caste certificates, confirmation,

- training, promotion, transfer, posting, deputation, disciplinary issues, apart from other service matter that may come up from time to time.
- (ii) Establishment-II (E-II): The major functions of this section includes maintenance of personal file of Directors of CSIR laboratories, extension of service of Directors and of Group IV staff beyond superannuation, recognition of hospitals, counting of service, fixation of sanctioned strength of S&T staff, verification of character – from IB in case of candidates who had resided abroad, preparation of Agenda items of Governing Body of CSIR, policy matters related to assessment promotion of S&T staff, issues related to CCO (R&A) rules.
  - (iii) Establishment-III : Also known as Central Office, this section provides performance-driven administrative support. It maintains personal files, service books and Annual Confidential Report (ACR) folders of around 500 staff members. The section also initiates action to convene Department Promotion Committee (DPC) meetings for non-technical staff (except common cadre), S&T Staff (Group I, II, & II of MANAS) of Headquarters, timely action with respect to CCS (CCA) rules in cases of violation of conduct rules. The section also deals with allotment of staff quarters & scientist apartments, matters pertaining to estates, leaves for Headquarter staff, deputation/foreign services, pension, medical reimbursement etc.

### **Parliament Cell**

It deals with Parliament Questions which involve collection of inputs from concerned sections/divisions of the CSIR Hqrs. and from CSIR Labs./Institutes and compiling replies for submission to the Parliament.

It also deals with other Parliamentary matters and the visits of the Parliamentary Standing Committee on Science & Technology to various CSIR Labs./Institutes.

### **Committee Section**

The section deals with Agenda/Proceedings of Management Council meetings of CSIR Labs./ institutes. It collects comments from the concerned Sections/Divisions at CSIR Hqrs. and after compiling the same, the comments are sent to the Labs./institutes. It also convenes meetings of the Governing Body & Society, prepares agenda papers/minutes and takes follow up action on the recommendations of the GB/Society meetings.

### **Raj Bhasha Unit**

Raj Bhasha unit deals with the implementation of Official Language Act at CSIR

Hqrs. & coordinates with the Labs./institutes of CSIR. Arrangements for visits of the Raj Bhasha Sansdiya Samitis are also made by this Unit.

### **SC/ST Cell**

It deals with the grievances of SC/ST & Physically Handicapped employees and ensures implementation of instructions and provisions made for the welfare of SC/ST & Physically Handicapped employees and also coordinates with the concerned Departments/bodies.

### **3.5 HUMAN RESOURCE DEVELOPMENT GROUP (HRDG)**

The Division has a mandate to develop and nurture S&T manpower at the national level. It also promotes, guides and co-ordinates scientific & industrial research through scientific projects. The activities include: Award of Shanti Swarup Bhatnagar Prizes (SSB) and CSIR Young Scientist Awards (YSA); Selection of Junior Research Fellows (JRF) through National Eligibility Test (NET); Selection of Senior Research Fellows (SRF), SRF Extended Research Associates (RA), Senior Research Associates (SRA) and Shyama Prasad Mukherjee Fellows (SPMF); Funding of Extra Mural Research (EMR) Schemes at universities/ R&D organizations; Visiting Associateship Scheme; Travel / Conference / Symposium grants; CSIR Programme on Youth for Leadership in Science (CPYLS).

#### **Shanti Swarup Bhatnagar Prize**

CSIR gives recognition to a scientist for doing outstanding research work in the country, in the form of prizes/awards. The Shanti Swarup Bhatnagar Prize (SSB) for Science & Technology is given every year to outstanding scientists in 7 disciplines of Science & Technology. The Shanti Swarup Bhatnagar Prizes for the year 2004 and 2005 were presented by Dr. Manmohan Singh, the Hon'ble Prime Minister of India & President, CSIR to twenty one outstanding scientists at a glittering function organized at Vigyan Bhawan on 28<sup>th</sup> September, 2005. Bhatnagar Laureates (2004) symposium was also organized in which Bhatnagar awardees of 2004 presented their award winning work.

#### **Young Scientist Award**

Young Scientist Award (YSA) is meant for scientists below the age of 35 years, working in CSIR laboratories, to recognize in-house excellence. YSA is given in 5 disciplines of Science & Technology. In the year 2005, only three scientists were selected for Young Scientists Awards, one each from Chemical Sciences; Engineering Sciences; Earth, Atmosphere, Ocean & Planetary Sciences. These Awards were presented by Shri Somnath Chatterjee, Hon'ble Speaker of Lok

Sabha at the CSIR Foundation Day function held at Convention Hall, Ashoka Hotel on 26 September, 2005. Dr. Swati Piramal of M/s Nicholas Piramal India Ltd. delivered the CSIR Foundation Day Lecture.

### **Junior Research Fellowship (JRF)**

CSIR conducts National Eligibility Test (NET) for Junior Research Fellowship and Eligibility for Lectureship twice a year at 23 centres throughout the country.

The result of CSIR-UGC NET June 2005 examination was announced on 25<sup>th</sup> November 2005. A total number of 1134 candidates qualified for CSIR/UGC Junior Research Fellowship and lectureship and 1300 qualified for lectureship only.

The subject-wise split of the result is given below.

|              | Chemistry | Earth Science | Life Science | Mathematics | Physics | Total |
|--------------|-----------|---------------|--------------|-------------|---------|-------|
| JRF Selected | 332       | 55            | 437          | 146         | 164     | 1134  |
| Lecture-ship | 383       | 71            | 587          | 109         | 150     | 1300  |

The CSIR-UGC NET December examination was held on 18<sup>th</sup> December 2005. A total of 79,416 candidates registered for the examination.

### **Shyama Prasad Mukherjee Fellowship (SPMF)**

The SPM Fellowship Scheme was started in the year 2001 with the objective to nurture budding scientific talent towards pursuit of scientific research. The Scheme is open to top 20% CSIR-UGC JRF-NET scholars along with top 100 GATE qualified candidates with percentile 99 and above who have to qualify a specially designed written test followed by an interview to be eligible for the fellowship.

The examination for SPMF for the year 2005 was held on 10<sup>th</sup> July. Out of 545 candidates called for written examination, 350 appeared and 29 were selected for interview. Eight candidates finally qualified for SPM fellowship, two each from Chemistry, Life Sciences, Mathematics and Physics.

### **Senior Research Fellowship (SRF), SRF Extended and Research Associateship (RA)**

A total of 2220 applications were received in 16 subject categories. The Selection Committees selected 355 candidates for SRF, 31 candidates for SRF (Ext) and 65 candidates for RA.

### **Junior Research Fellowship for GATE qualified engineering graduates (JRF-GATE)**

CSIR has introduced a new research fellowship in 2002 for the GATE qualified candidates with B.E./ B. Tech. / B. Arch./ B. Pharm. degree to pursue research leading to Ph.D. This is known as the GATE qualified Junior Research Fellowship (JRF-GATE). JRFs selected under this scheme get excellent opportunity to work with the CSIR scientists with state-of-the-art R&D facility and obtain Ph.D. degree.

Around 155 JRF-GATE Fellows are at present working in different laboratories of CSIR.

### **Senior Research Associateship (SRA)**

The Senior Research Associateship (SRA ship) is primarily meant to provide temporary placement to highly qualified Indian scientists, engineers, technologists, and medical personnel who are not in regular employment in the country, including those returning from foreign countries. 122 Senior Research Associates were selected and 84 joined during the year 2005-06.

| <b>Year</b> | <b>No of SRA Selected</b> | <b>No. of SRA Joined</b> | <b>Total No. as on 31<sup>st</sup> March 2006</b> |
|-------------|---------------------------|--------------------------|---|
| 2005-2006   | 122                       | 84                       | 150   |

### **Extra Mural Research Schemes and Special Support Programs**

CSIR provides financial assistance to promote research in the field of science and technology including Agriculture, Engineering and Medicine. It is given in the form of research grants to Professors/ Scientists in regular employment in Universities/ Academic Institutes/ IITs etc. The number of research schemes recommended during 2005-2006 is as given below:

| <b>Schemes</b>     | <b>Proposals considered</b> | <b>Proposal Recommended</b> | <b>Proposal Renewed</b> |
|--------------------|-----------------------------|-----------------------------|-------------------------|
| General            | 539                         | 208                         | 514                     |
| Emeritus Scientist | 86                          | 24                          | 101                     |
| Sponsored          | 23                          | 6                           | 41                      |
| One Time Grant     | 14                          | 4                           | -                       |

Under General schemes, financial assistance was provided to 208 schemes out of a total of 539 proposals considered and 514 renewals were made during the year 2005-06 whereas under the Emeritus Scientists Scheme, financial assistance was provided to 24 outstanding superannuated scientists out of a total of 86 proposals received, and 101 renewals were made during the year. In the Sponsored Scheme category, 9 schemes were sanctioned out of 23 proposals received, and 41 ongoing schemes were renewed. Under the one time grant category, out of 14 proposals received 4 were granted.

#### **Travel/Conference Grants**

Travel grant is provided by CSIR to young researchers for presenting research papers at International Conferences held abroad. The travel grant committee considered a total of 1043 applications and out of which 426 cases were recommended. The same committee considered 683 proposals from scientific societies/ institutes etc for organizing national / international conference/ symposium/ workshops, etc. and recommended 554 cases for organizing these events.

#### **CSIR Programme on Youth for Leadership in Science (CPYLS)**

The CPYLS scheme is a unique 'hand holding' program started for school children at secondary level. The scheme was started to attract the meritorious young school children towards science.

Till March 2006, most of the CSIR laboratories had organized 2 open days programme for the year 2005. The reports received from coordinators of these programmes show a very good response both in terms of participation and appreciation of the scheme.

### **CSIR Diamond Jubilee Research Interns Award Scheme**

The CSIR Diamond Jubilee Research Interns Award Scheme is a preparative scheme through which young interns are trained in the tools and techniques of research under supervision of experienced CSIR scientists. Each CSIR laboratory can have a maximum number of 30 Interns at any time and the selection of interns is carried out by concerned laboratory itself.

### **Technological Entrepreneurship Programme for Research Scholars**

The objective of this program is to broad base the perspective of the research scholars so that they can make linkages of their scientific and technical knowledge to the buoyant world of business and industry. The 3<sup>rd</sup> training program on technological entrepreneurship was organized from 20<sup>th</sup> Feb, 06 to 22<sup>nd</sup> March, 06 at CLRI. Fifty three participants from 21 CSIR Labs attended the programme.

### **Faculty Training & Motivational Programme and adoption of Schools and Colleges by CSIR laboratories.**

The objective of this scheme is to organize training and motivational programmes for selected science teachers from schools and colleges around CSIR labs to upgrade their knowledge base in new and emerging areas of science thereby raising the standard of science education in selected schools & colleges. It also envisages to promote the interaction of science students with CSIR labs thereby motivating them to take up science as a career. The scheme is being implemented by almost all the CSIR laboratories.

### **3.6 HUMAN RESOURCE DEVELOPMENT CENTRE**

Human Resource Development Centre (HRDC), Ghaziabad continued and intensified its human resource development activities for meeting multiple competency needs of CSIR personnel. The campus of the Centre has become functional and residential training programmes have commenced during the period.

The Centre, during the year 2005-06, conducted 23 customized training programmes for different categories of CSIR staff viz. scientific & technical, administrative, finance and purchase personnel. These programmes which included induction, refresher and skills development activities were meant to address the training requirements of the staff at different levels, both new inductees as well as in-service personnel. In continuation to the Centre's earlier initiatives to bring quality in value added R&D services offered by the laboratories, the Centre conducted training programmes in Laboratory



Accreditation under ISO 17025 standard (NABL). Some of the laboratories have taken initiatives for the ISO 17025 accreditation process as an outcome of these programmes.

With the coming in force of the Right to Information Act, the Centre took initiatives to conduct a series of awareness programmes on the same for better appreciation of diverse provisions of the Act & implementation thereof.

The Centre completed the training need analysis and using the inputs of this analysis, is developing modules for different training programmes for CSIR personnel.

The infrastructural development work was completed during the year and CSIR has now a modern training Centre with state-of-the-art facilities.

### **3.7 INTERNATIONAL S&T AFFAIRS DIRECTORATE**

In order to achieve its mandate of identifying, facilitating, and promoting international cooperation in the emerging and frontier areas of science and technology, ISTAD's major activities during the current year include the following:-

#### **A. Bilateral cooperation**

##### **CHINA: CSIR-NNSFC Co-operation**

###### **a) Working Programme for 2006-08 signed**

A new working programme for the years 2006-2008 for S&T cooperation between CSIR & National Natural Science Foundation of China (NNSFC) was signed during the visit of a CSIR delegation during 13-21 March 2006. Areas identified were materials research and technology, chemical sciences, food safety, biotechnology, drug design, discovery and development, oceanography and Earth sciences including natural disasters, S&T policy.

Both sides also agreed to organize four joint workshops/symposia in the following areas, two each in India and China, with a view to bring forth state-of-the-art in both the countries and to identify challenging areas of common interest for collaboration:

- i) Designing Materials through Nano-technology (March 2007, China)
- ii) Organic Chemistry & Chemical Biology: Bridging Bonds for 21<sup>st</sup> Century (March 2007, India)
- iii) Global Change: Oceano-Atmosphere-Land Interactions driven by Asian Monsoon (December 2006, India)

- iv) Modern Methods and Techniques of Research involving Laboratory Animals (October 2008, China).

**b) Joint Workshop on Genome - Informatics**

The 2<sup>nd</sup> CSIR-NSFC Workshop on Genome Informatics was organized at IGIB, New Delhi during 22-26 February, 2006 under the MoU signed between IGIB and Beijing Genomics Institute (BGI) China. The main aim of the Workshop was to initiate bilateral collaboration between China and India to harness the potential of genome sequencing efforts. The major topics identified for joint research in the area of genomics are cancer research, study of population diversity and genome informatics.

**c) Joint Workshop on Traditional Medicine**

The second joint workshop on Traditional Medicine under the CSIR-NSFC Cooperation was organized at Wuhan, China, in September, 2005. Five scientists from NBRI, RRL-Jammu & IICT participated from the Indian side. Major recommendations include:-

- a. joint research programmes in selected diseases or metabolic disorders (diabetes) and neurodegenerative disorders;
- b. establish digitized database and informatics in traditional medicine for IPR protection/management and prevent piracy;
- c. share experience in identifying rare, endangered and endemic medicinal plants and preparing passport data of the species;
- d. develop joint research ventures in discovering bioactive molecules from plants used in traditional medicine for diseases for which there is no cure available in modern medicine;
- e. joint effort to make evidence based traditional remedies by integrating traditional medicine with modern scientific methods and tools and modern medicine in line with the Golden triangle in positioning traditional medicine as a global mainstream health care system.
- f. identify institutions for initiating scientists exchange/training programmes;
- g. identify medicinal plants found common in both the countries for developing GAP and GCP in line with WHO guidelines. Also consider a common pharmacopoeia in line with the European Union; and
- h. To continue to joint workshop/conference at every alternate year for continuing the dialogue in traditional medicine between China and India.

#### **d) Joint workshop on MEMS Devices**

An Indo-Chinese workshop on MEMS Devices and related technologies from April 5-7, 2006 was organised at NPL under the collaboration between DST and NSFC with the participation of 12 Chinese Scientists and equal number of Indian Scientists.

#### **NAL-CAE Co-operation**

The 9<sup>th</sup> Joint Committee meeting of the NAL-CAE, was held at Beijing, China during 24-26 October, 2005. A project on structural health monitoring was approved.

### **2. FRANCE**

#### **a) CSIR -CNRS Agreement signed**

First Joint Committee meeting of the Indo-French Programme for Weather & Climate was held in Paris, France during 16-18 May, 2005. The participating labs are C-MMACS and NIO from the Indian side and five labs from French Institut of Pierre-Simon-Lapac(IPSL). Under this umbrella, NIO is carrying out the following work: (i) Monsoons and the Tropical Intraseasonal – Interannual variations (MOTIV) and (ii) biological response of the Indian ocean (BRIO)

#### **b) Symposium on Nanotechnology**

Under the Inter-Governmental S&T collaboration between India and France, NIO organized an Indo-French Symposium on “Nanotechnology: Promising domain for young scientists” during 22-25 January, 2006 at NIO. The event discussed nanomaterial synthesis; nanostructured objects and devices; simulation and modelling in nano scale; and drug delivery and nanomedicine, biomedical nanotechnology, agriculture and environment cosmetics and textiles, industrial applications

The main objective of the conference was to develop few collaborative projects between the scientists of India and France.

#### **c) Joint Projects**

- A project entitled “Resource of Assessment and Quality of Ground Water in Hard Rock Environment (granite-gneiss)” submitted by Indo-French Centre for Groundwater Research with NGRI was approved for funding by DST and French Ministry for Foreign Affairs.

The following projects were approved for funding from Indo French Centre for the Promotion of Advanced Research (IFCPAR).

- “Preparation of nanoporous ceramic membranes over clay-alumina support for water treatment” submitted by Dr. S. Bandyopadhyay of CGCRI with Prof. Andre Larbot of CNRS, France;
- “Genomics and biotechnology of fruit quality” submitted by Dr.Pravendra Nath of NBRI with Dr. Jean-Claude PECH of France;
- “Mannolipids and Mannose Metabolism in Mycobacterium tuberculosis” submitted by Dr. K.Madhavan Nampootheri, of RRL-Trivandrum with Dr. Jerome Negou of France;
- “Deciphering history of the Indo-Eurasia collision from detailed plate tectonics of the Indian Ocean” submitted by Dr.G.C.Bhattacharya of NIO for collaboration with Dr. Jerome Dymont of CNRS, France; and
- A project entitled “Palaeomagnetic study of Great Dyke and Vindhyan Supergroup rocks of India: A contribution to Precambrian geodynamics” submitted by NGRI.

### **3. GERMANY**

#### a) Bilateral CSIR- FzJ Cooperative Science Programme

A Project on “Surface effect based on charge accumulation phenomenon in ferroelectric and antiferroelectric liquid crystal materials” between NPL & Institute of Physical Chemistry, TU Darmstadt was approved in the programme for a period from April 2005 – December 2007.

#### b) DST-DAAD PPP

A project entitled “Kinetic and Mechanistic Investigations of Oxo-Transfer Reactions catalysed by Ruthenium Model Complexes of Cytochrome P-450 Mono-Oxygenase” of CMERI and University of Erlangen, Nuernberg was approved for implementation during June 2005-June 2007.

#### c) CSIR-Humboldt Reciprocity Research Award

Two eminent German experts were granted the prestigious Research Award for the year 2005. Both the awardees have visited India and the visits have resulted in assured long-term research ties between their institutes and the Indian host institutions:-

- Prof. Juergen Kurths, Institute of Physics, Potsdam University, Potsdam, Germany on the invitation of IICB.
- Prof. Michael Hunger, University of Stuttgart, Instt. of Chemical Technology, Stuttgart, Germany on the invitation of IIP.

#### d) CSIR-DAAD Exchange Programme

Three scientists each from India and Germany exchanged visits under this programme.

Nominations of six scientists each from CSIR and German institutions were approved for visiting counterpart country under collaborative projects and in addition three nominations each of CSIR and German scientists were approved for stand-alone visits during 2006.

e) Inter-Agency Cooperation

NPL signed an MoU with Physikalisch-Technische Bundesanstalt (PTB), Germany for cooperation in the field of metrology.

#### **4. JAPAN**

a) Indo-Japanese Inter-Governmental S&T Cooperation

The 7<sup>th</sup> meeting of the Indo-Japanese Joint Committee for S&T was held on 3<sup>rd</sup> November 2005 at New Delhi.

b) NEERI-NIMS S&T Co-operation

Under the NEERI-NIMS collaboration in the field of “Development of Advanced Materials for Environmental Applications” three joint workshops have been organized, two at Nagpur and one at Tsukuba. The 4<sup>th</sup> workshop is in pipeline. A joint research project was considered for funding by the 7<sup>th</sup> joint Committee Meeting.

c) Asian Pacific S&T Seminars – JISTEC

The Japan International S&T Exchange Center (JISTEC) has been organizing a series of Science & Technology Management Seminars among the Asia-Pacific regions for the past ten years on various themes of Science Management. The 11<sup>th</sup> seminar, renamed as 1<sup>st</sup> Asian S&T Seminar (ASTS), entitled “Appropriate Intellectual Property Right Regime & Practical System for Utilization of IPR for Asia” was held at Bangkok (Thailand) during March 19-21, 2006.

d) Security/sensitivity clearance

The following projects were cleared from security/sensitivity angle:-

1. “Investigation of the Magneto-Superconductivity of Ruthenocuprates” submitted under Indian National Science Academy (INSA) New Delhi, India and the Japan Society for the Promotion of Science (JSPS), Japan between NPL, New Delhi and Advanced Materials Laboratory, National Institute for Materials Sciences, Japan.

2. "Asian ozone pollution in Eurasian perspective" submitted by NPL, India under Asian-Pacific Network for Global Change (APN), Kobe, Japan. The collaboration is based on sharing of ozone and carbon monoxide data observed at Hanle, India. The collaborating Indian Institutes are (a) National Physical Laboratory (b) Physical Research Laboratory, and (c) Indian Institute of Astrophysics whereas the collaborating foreign institutes are (a) Frontier Research Centre for Global Change, Japan (b) Chinese Academy of Metrological Sciences, China (c) Departmental of Civil and Structural Engineering, Hong Kong, China & (d) Environmental Studies Division, Malaysian Meteorological Service, Malaysia.

## **5. NEPAL**

### a) Indo-Nepal intergovernmental S&T Co-operation

Three Nepalese Scientists from Royal Nepal Academy of Science & Technology (RONAST), Nepal were trained in the areas of medicinal plants at IHBT, RRL-Jammu & CIMAP.

### b) CSIR-RONAST

A four member Nepalese delegation from RONAST led by their Vice Chancellor visited New Delhi during 12-18 February 2006 to learn about some facilities in testing Genetically Modified Foods/Organisms.

A project proposal entitled "Molecular Characterization and Bioprospecting of *Swertia* species of Napalese Himalayas" submitted by RONAST, Nepal for collaboration with IHBT has been approved by both the sides under this cooperation.

## **6. SOUTH KOREA**

### a) India – Korea Intergovernmental S&T Co-operation

The first India-Korea joint Committee on S&T was held in Seoul on 31<sup>st</sup> August, 2005. The salient features of mutual agreement were: exchange of S&T personnel also on complimentary basis; holding academic meeting in the form of workshops/seminars etc., exchange of personnel on complimentary basis at organizational costs by the host country; joint research projects as identified in academic meetings (two areas of work already agreed, biotechnology, nano-technology); joint funding of the order of US \$30000 towards meeting costs of events above.

b) MoU between NML and KIGAM, Korea

NML and Korea Institute of Geoscience & Mineral Resources (KIGAM), Korea signed an MoU for undertaking a joint project on “Development of Technology for Recovering Heavy Minerals from Sea Sand by Flotation”.

## 7. SWEDEN

Following joint projects were approved:

- “Sources and sinks of atmospheric aerosols in India” (IICT and International Meteorological Institute, Sweden);
- “Monitoring Network of aerosol and precipitation chemistry measurements in south Asia under Atmospheric Brown Cloud Project” (IICT and International Meteorological Institute, Sweden);
- “Physico-Chemical Characterization of Wet deposition”(NPL and Department of Meteorology, Stockholm University (MISU), Sweden); and
- “3<sup>rd</sup> phase continuous long-term measurements to establish the trend of acidification both in dry and wet depositions”. (RRL, Bhubaneswar and Department of Meteorology, Stockholm University).

## 8. TAIWAN

a) Visit of Taiwanese delegation to CSIR labs

- A six member Taiwanese delegation led by Prof. Ching Jyh Shieh, Deputy Minister from National Science Council of Taiwan visited IGIB, NPL & NAL. During the visit to NPL, they showed keen interest in the area of Bio-molecular electronics like DNA biosensors, cholesterol biosensors & glucose sensors etc.
- A six member delegation led by Dr. Hsin-Sheng Tsay, Dean, College of Science & Engineering visited CSIR to discuss the development of India's Biotechnology and Herbal Medicine sector. A brief overview of CSIR's capabilities & achievements in this area was presented to the delegation. The delegation also visited NBRI, CIMAP and NCL.

b) Joint Workshops on functional genomics

- An Indo Taiwanese joint Workshop on Functional Genomics under the Indo-Taiwanese inter-Governmental S&T Cooperation was organized at IGIB, New Delhi during 20-21 Oct 2005;

- The second Indo Taiwan Joint Workshop on Functional Genomics was organised at Taipei between 3-5 March 2006 under the DST's of Indo-Taiwanese Bilateral Co-operation. Bioinformatics was identified as one of the major areas for collaboration between the two sides;

c) MoU between IGIB and Vita-Genomics Inc, Taiwan

IGIB and Vita-Genomics Inc, Taiwan have signed a Memorandum of Understanding and are in the process of joint project formulation in the field of asthma pharmacogenomics. Also a liver proteomics project between Taiwan and India is in pipeline in which IGIB will be a major participant.

## 9. VIETNAM

Indo-Vietnam intergovernmental S&T Co-operation:

The sixth meeting of the Indo-Vietnam Joint Committee on S&T was held at New Delhi, during 19-20 May,2005. Areas agreed were:

- Biotechnological methods for improvement and production of high-yielding hybrid rice varieties for growing in Vietnam and India;
- Cultivation techniques in the drought and semi-arid regions;
- Bioinformatics for assessment and exploration of plant and animal genetic resources;
- Cultivation of grass and green plants suitable for feeding dairy and meat cattle in the northern provinces of Vietnam; and
- Renal and kidney function disorders.

The new PoC for the years 2005-2007 was also signed during the meeting.

## 10. Poland

A project proposal entitled "Studies on separation and removal of metals using solvent extraction and liquid membrane methods" to be undertaken by NML with Institute of Chemistry and Environment Protection, Poland under the Inter-Governmental Indo-Polish collaborative programme of DST was approved.

## 11. RUSSIA

ILTP Projects:

The following projects were approved for implementation under ILTP



- “Design of Highly Stable and Low Pd Containing for Hydrodechlorination and Methane Combustion: Structure, Reactivity and Reaction Modeling” (Dr. P.S. Sai Prasad, IICT and Prof. E.F. Stefalgo, Institute of Coal and Coal Chemistry, Russia; 3 years);
- “Catalytic Reforming of Coal for Value-added Chemicals” ( Dr. G.S. Salvapati and Prof. E.F. Stefalgo, Institute of Coal and Coal Chemistry, Russia);
- “Study and prediction of noble-metal Mineralization in non-traditional geological formations and developing methods for identification of such mineralization in East Russia and South India” (Dr V. Balaram, NGRI and Dr. Nikolay V. Berdnikov, Institute of Tectonics and Geophysics, Khabarovsk; 3 years);
- “Dense ceramic nano-composites by SHS process” ( Dr. S.K. Mishra and Dr. V.A. Shcherbakov, Institute of Structural Mackrokinetics and Materials Sciences (ISMAN) RAS, Chernogolovka, Moscow Region, Russia – 3 years); and
- “Oxidation of hydrocarbons by molecular oxygen and peroxides” (Dr. S.B. Halligudi and Dr. Georgiy B. Shul’pin, Semenov Institute of Chemical Physics, RAS, Moscow)

## **12. SWITZERLAND**

A Project proposal entitled “Improving rust resistance in wheat suitable for marginal rain fed and semi arid zone of central and peninsular India through molecular markers” submitted by Dr.(Mrs.) V.S. Gupta, NCL for collaboration with Institute of Plant Biology, Zurich, Switzerland under the Indo-Swiss collaboration in Biotechnology with Switzerland was approved.

### **B. Regional S&T cooperation**

#### **EUROPEAN UNION**

The project entitled “Sustainable shrimp aquaculture” was approved for funding by EU with NIO as a partner.

CSIR co-hosted the following two meetings with UNESCO on 17<sup>th</sup> and 18<sup>th</sup> March, 2006 respectively:

- “Heritage at Risk: the forgotten victims of earthquakes, floods and the *tsunami* in South Asia; and

- Peer review meeting for the field manual on repair and retrofitting of the earthquake-damaged vernacular structures in the Kashmir region

Financial provision for the first year of this five-year project is Euro 90,600.

### **C. Fellowships**

#### **CFTRI-UNU**

Under the CFTRI-UNU(United Nations University), Japan fellowship programme 5 foreign nationals from Bhutan, Ethiopia and Nigeria have been awarded 12-months fellowship enabling them to carryout advanced research at CFTRI in the area of Food Science and Technology.

### **D. Human Resource Development**

During the year Division processed the deputation 129 CSIR Scientists. Of these 99 were deputed to attend international conferences, 6 for fellowships, 13 under bilateral S&T Programmes, 8 on leave, 2 for training & one for business development.

### **E. Partial financial assistance (PFA) to non-CSIR scientist, R&D professionals**

229 applicants from academia and medical fraternity were awarded PFA to enable them to attend International Conferences/Workshops/Seminars.

## **3.8 UNIT FOR SCIENCE DISSEMINATION**

The Unit for Science Dissemination is fully responsible for furthering favorable public image of CSIR as a whole. During the year several image-building activities were executed to achieve the overall objective.

### **Image building through print media**

#### ***Publicity efforts***

- Effective media relations helped in furthering result-oriented relationship with the key press persons covering science in their respective dailies. Appropriate logistics support was ensured to all of them to earn their confidence in this Unit; several features/ stories were published with the support of inputs provided by this Unit.
- Press coverage was successfully organized during important CSIR events, including: Bhatnagar Awards Function; Election of Dr. R. A. Mashelkar, DGSIR, as Foreign Associate of US National Academy of Sciences at its Annual General Meeting on 3<sup>rd</sup> May 2005; Release of SofComp products by Minister S&T and Ocean Development, Shri Kapil Sibal on 10<sup>th</sup> May 2005;

CSIR Society Meeting held on 25<sup>th</sup> May 2005; Declaration of Shanti Swarup Bhatnagar Prizes 2005; Presentation of Shanti Swarup Bhatnagar Prizes 2004 & 2005 by Hon'ble Prime Minister of India; Indo-US Symposium on Scientific approaches to quality, safety and efficacy assessment of ayurvedic & botanical products; seminar on bitumen emulsion & cold mix technologies, organized by CRRRI, presentation of **Stars of Asia** award to Dr. R. A. Mashelkar, DG,CSIR, at Beijing; Launch of a campaign on the National Geographic Channel highlighting the innovative and path breaking trends in S&T in India by Shri Kapil Sibal, the Hon'ble Minister of Science & Technology and Ocean Development; Three-day Indigenous Knowledge Workshop in pursuance of a joint venture of the Global Research Alliance (GRA) and the World Bank in the area of Health; Press Announcement of the organisation of Fair-cum-Exhibition on Rural Technologies - Reaching Technology to Rural India: A step towards Rural Transformation.

This Unit successfully organized a Press Meet by DG, CSIR, in connection with 'India Science Report' of INSA, on the eve of its release by the Hon'ble Prime Minister of India, on 27<sup>th</sup> September 2005.

### **Advertising Efforts**

Special advertisement campaigns were released exclusively on CSIR events that include: Diamond Jubilee Technology Awards; S S Bhatnagar Awards and CSIR Foundation Day; IPMD Innovation Awards; Exhibition-cum-fair on Rural Technologies - Reaching Technology to Rural India: A step towards Rural Transformation.

Advertisements were released in special issues of several publications.

### **Image building through broadcast media**

Technical help was provided for the production of short films on CSIR achievements in various theme areas.

### **Image building through interactive media (exhibitions, etc.)**

CSIR participates in the various national/ international exhibitions and other related events with two main objectives: (i) Creating awareness about CSIR and its achievements, and (ii) Supporting its business development efforts.

This important activity was consolidated and efforts were made to project, as far as possible, an integrated picture of CSIR's overall contribution to the theme areas of each event through extensive coordination with the participating CSIR labs. The Unit organized CSIR pavilion in the following events:

- Bio Bangalore 2005, 22-24 April, 2005, Bangalore;
- 3rd Infra Educa 2005, 17-19 June 2005, Jaipur;
- 3rd Infra Educa 2005, 24 – 26 June 2005, New Delhi;
- 3rd Infra Educa 2005, 2-3 June 2005, Chandigarh;
- Pharma 2005 & Chemtech 2005, 20-22 October 2005, Mumbai;
- Destination Uttaranchal-2005, 6 – 11 November 2005, Dehradun;
- India R&D 2005, 7 – 9 November 2005 at Vigyan Bhawan, New Delhi;
- Ninth Technology Trade Pavillion, 14 – 27 November 2005, India International Trade Fair, Pragati Maidan, New Delhi. It is worth mentioning here that CSIR Pavilion has been awarded Silver Prize for Excellence in Presentation of Special Display;
- Destination Uttaranchal-2005, 7 – 11 December 2005, Dehradun;
- Kisan 2005- Agricultural Trade Fair, 14-18 December 2005, Pune;
- PHARMAceutical Expo 2005, 2-4 December 2005, Hyderabad;
- 93<sup>rd</sup> Indian Science Congress, 3-7 January 2006, Hyderabad;
- EMEX (Engineering & Manufacturing Excellence) World Expo 2006 11-14 January 2006, Mumbai;
- Bio-Asia 2006, 9-11 February 2006, Hyderabad;
- AgriExpo 2006, 11-14 February 2006, Lucknow;
- Exhibition-cum-Fair on Rural Technologies - Reaching Technology to Rural India: A step towards Rural Transformation, 18-22 February 2006, Rai Bareilly. Shri Kapil Sibal, Union Minister of Science & Technology and Ocean Development inaugurated the exhibition. CSIR participated in the following international exhibitions
  - India Trade Fair, 19-23 October 2005, Mauritius;
  - “Made in India” show, 17-20 November, Johannesburg, South Africa; and
  - EABEX 05, 10-14 December 2005, Kuala Lumpur (Malaysia).

### **Other information dissemination services**

#### **Press clipping service**

The Unit provides press-clipping service to the office of the Minister of Science & Technology, DG, CSIR and other top management of CSIR after scanning about 25 papers and 14 magazines on a regular basis. This activity was consolidated to make more professional and timely.

### **Publicity Campaign on National Geographic Channel**

CSIR coordinated the launch of a campaign on the National Geographic Channel (NGC). The campaign would revolve around a 45 minutes Science Safari Film and 15 short films covering different aspects of Indian S&T that would be produced and telecast on NGC.

### **3.9 RECRUITMENT & ASSESSMENT BOARD**

The Division carried out following activities during the year:

#### **Recruitment**

Selection Committees were constituted for recruitment to about 275 posts of scientists in 28 CSIR laboratories. These positions were at entry as well as lateral levels.

#### **Assessment**

Eligibility screening and assessment interviews were carried out for the assessment promotion of around 300 scientists at the level 'F' pertaining to the period 2002-2004. Assessment interviews of around 700 scientists at other levels were also organized for the year 2003-2004 in the areas of Engineering & Materials; Physical, Earth & Environmental Sciences and S&T Management & Policy Studies.

#### **Advisory Committee**

An Advisory Committee was constituted with a view to review from time to time the procedures adopted for recruitment & assessment and approve of its broad framework and any modification thereto besides providing necessary policy guidelines for RAB. The first meeting of the newly constituted Advisory Committee was held in May 2005 wherein quality of experts, backlog in assessments, transparency in the procedures, internal screening process, recruitment procedures, firming up of area of work of the candidate, etc. were discussed in details.

#### **Department Core Members**

The second meeting of the Department Core Members was organized in March 2006. Interactive sessions on the screening process, assessment procedures and firming up of procedures were organized and various meaningful suggestions arrived at. These members have been intimately associated with the recruitment and assessment process of RAB.