

বসু বিজ্ঞান মন্দির



# BOSE INSTITUTE NEWS

বসু বিজ্ঞান মন্দির

A NEWSLETTER OF BOSE INSTITUTE

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The 74th Acharya J. C. Bose Memorial Lecture will be delivered by Hon'ble Shri Gopal Krishna Gandhi, Ex-Governor of West Bengal on 'Does India Know Itself?'

## DIRECTOR'S DESK

We are celebrating the 96<sup>th</sup> Foundation Day of Bose Institute, the great legacy that the doyen of modern Indian science, Acharya Jagadis Chandra Bose, left to the Nation, indeed to the entire humankind. It is only a few years from now that we would cross a landmark, the centenary of our beloved institution. We can unhesitatingly claim that the Acharya's dream has been kept alive; Bose Institute, rather than showing signs of ageing, has striven to remain young and vibrant, rejuvenating itself time and again.

This year, we can proudly report some such new developments, prominent among which is the realisation of our long-cherished dream, the establishment of a unified academic campus of Bose Institute where world-class facilities in a modern state-of-the-art environment would be set up. The institute has of late made substantial investment in terms of manpower, through the appointment of a number of very talented, young scientists to its faculty. Now the responsibility of providing them with a research environment which would allow them to compete with their international peers is being addressed. We record our gratitude to the Ministry of Science & Technology, Government of India, whose support is making this possible.

I wish all readers of this Newsletter happy reading.

*Sibaji Raha*

**Foundation Stone of the Unified Academic Campus of Bose Institute laid by Hon'ble Prime Minister Dr. Manmohan Singh**



A long-felt need of the members of Faculty of the Institute for consolidation of their expertise for pursuing their scientific endeavours was considered and approved by the Scientific Advisory Committee (SAC) of the Institute in its meeting held on 19<sup>th</sup> July, 2006. The Council of the Institute warmly responded to this recommendation of the Scientific Advisory Committee and requested the Director to submit the Detailed Project Report



(DPR) to the Department of Science & Technology, Government of India for its administrative as well as financial approval. A Detailed Project Report was submitted to the DST for the Unified Academic Campus on a plot of land measuring 5.0 acres at Plot No. 80, Block-EN, Sector-V, Salt Lake City, Kolkata 700 091, that had been allotted by the Government of West Bengal.

After our long and continuous persuasion with the DST, the project was finally approved by the Department of Science & Technology, Government of India for 4,38,000 sq.ft. in the first phase at a cost of 99.66 crore at the end of the financial year 2011-12 with the request to complete the project within two financial years.

Shri Bilas Rao Deshmukh, Hon'ble Minister of Science & Technology and Dr. T. Ramasami, Secretary, Department of Science & Technology, Government of India, with their sincere efforts obtained the consent of the Hon'ble Prime Minister to lay the foundation stone of the Unified Academic Campus of Bose Institute.

Dr. Manmohan Singh, Hon'ble Prime Minister of India, in presence of Shri M. K. Narayanan, Hon'ble Governor of West Bengal, Late Bilas Rao Deshmukh, the then Hon'ble Minister of Science & Technology, Dr. Aswini Kumar, Hon'ble Minister of State for Science & Technology, Government of India, Dr. Amit Mitra, Hon'ble Finance Minister, Shri Partha Chatterjee, Hon'ble Industries Minister, Shri Subrata Mukherjee, Hon'ble Minister for Panchayet, Government of West Bengal and Hon'ble Shri Pradip Bhattacharyya, President, WBPC and many other dignitaries, laid the foundation stone of the Unified Academic Campus of Bose Institute on 2<sup>nd</sup> June, 2012.

M/s. Development Consultants Pvt. Ltd., Kolkata has been selected as Architect through open design competition for designing the building. The construction work upto plinth level has been awarded to M/s. Mackintosh Burn, Kolkata and the piling work has already been commenced.

## CURRENT EVENTS

### 95th Foundation Day Celebrated



The 95th Foundation Day of Bose Institute was celebrated on 30<sup>th</sup> November 2011. **Swami Atmapriyananda, Vice-Chancellor**, Ramakrishna Mission Vivekananda University, Belur Math, Howrah, graced the occasion as Guest of Honour and delivered the **73rd Acharya Jagadis Chandra Bose Memorial Lecture on Ethics and Values in Learning and Teaching: Challenges for the Human and Social Development Role of Higher Education**.

The celebration started with floral offerings and garlanding of *SAMADHI* and *BUST* of Acharya J. C. Bose at both the campuses of the Institute. Prof. Suranjan Das, Vice-Chancellor, University of Calcutta, presided over the programme. Prof. Sibaji Raha, Director, Bose Institute, delivered the welcome address and presented the Institute Report. **Sir Nilratan Sirkar Prize 2011** was awarded jointly to Shri Arghya Adhikary, Extended Senior Research Fellow, Division of Molecular Medicine and Ms. Debadrita Mukherjee, Senior Research Fellow, Department of Biochemistry. **Prof. B. B. Biswas Outstanding Student Award 2011** was presented to Shri Soumyananda Chakraborti, Senior Research Fellow, Department of Biochemistry.

### Annual Sports Day

The Annual Sports Day was celebrated on 20<sup>th</sup> January 2012 with the active participation of academic as well as non-academic members of Bose Institute.



### Science Day Celebration 2012 and Lecture of Dr. Srikumar Banerjee



Bose Institute celebrated **National Science Day** on February 28, 2012, through various activities. The theme of the National Science Day 2012 was **"Clean Energy Options and Nuclear Safety"**. **Dr. Srikumar Banerjee, Chairman**, Atomic Energy Commission of India and the *Secretary* of Department of Atomic Energy (DAE), delivered a lecture as part of National Science Day

celebration on March 24, 2012. A large number of participants including guests, scientists, students and other professionals attended. Prof. Bikash Sinha, Homi Bhabha Professor, DAE, VECC, Kolkata, presided over the programme.

### Organization of Blood Donation Camp



4<sup>th</sup> Blood Donation Camp was organized by Bose Institute Blood Donation Committee on 19<sup>th</sup> September 2012 in the Seminar Room of the Centenary Campus. The Director, Bose Institute, inaugurated the programme. Prof. Sujoy Dasgupta, Chairman, CMS of Bose Institute convened the whole programme. A total of 102 members donated their blood. Prof. Dasgupta handed over 30 numbers of donor cards to Thalassaemia Guardians' Association on behalf of the Committee.

### Dipta Memorial Symposium

The 20<sup>th</sup> Dipta Memorial Symposium on **Crime Science in Social Safety** was organized at the main campus of the Institute on 28<sup>th</sup> September, 2012 by the Dipta Memorial Symposium Committee in association with Bose Institute Research Scholars' Forum. Prof. Sibaji Raha, Director, Bose Institute chaired the lecture session which comprised of a grand opening followed by lectures delivered by eminent personalities in the field related to the topic. Dr. V. K. Kashyap, former Director of NIB, Noida and of DFSS, MHA, New Delhi, was the inaugural speaker on the Day's theme followed by Prof. D. C. Nath of the Dept. of Applied Psychology, University of Calcutta and Amit Chaudhuri, Jt. Director of CDAC, Kolkata. Prof. Anuradha Lohia served as the Convenor of the symposium and Mr. Kinkar Saha and Mrs. Upala Roy served as joint Secretaries of BIRSF. A large number of faculties, staffs and scholars of Bose Institute attended the Symposium.

### 146<sup>th</sup> Birth Anniversary of Sister Nivedita Celebrated

The 146<sup>th</sup> Birth Anniversary of Sister Nivedita was celebrated on 28<sup>th</sup> October 2012, in the Lecture Hall of the Bose Institute, Main Campus, jointly by Bose Institute and Vivekananda Janmotsava Samity. Mr. Dhiraj Basu, Hony. General Secretary of the Samiti delivered the welcome address. Hon'ble Justice and ex-Governor of West Bengal, Shri Shyamal Kr. Sen, presided over the occasion. A number of distinguished guests and members of Bose Institute attended the auspicious occasion. Prof. Kalyan Mukherjee of Bose Institute delivered a talk on Sister Nivedita and her contributions for India. Other speakers included Paribrajika Hitaprana, Paribrajika Sadanandaprana, Shri Himadri Mukhopadhyay, Smt. Shyamali Bhattacharya and Shri Subhra Majumder.

### Rural Biotechnology Programme

In the Rural Biotechnology Programme at Falta Experimental Farm, three training programmes were conducted. During 8<sup>th</sup> February to 2<sup>nd</sup> March 2012 eleven trainees were trained on "Mushroom cultivation, Vermicompost production, Apiculture, Sericulture and Commercial utilization of dry flowers"; during 27<sup>th</sup> August to 4<sup>th</sup> September 2012 fifteen trainees were trained on "Fish Breeding & Cultivation and Horticultural Biotechnology" and during 9<sup>th</sup> to 15<sup>th</sup> October 2012, a special training programme was organized on "Mushroom cultivation, Vermicompost production, Apiculture and Sericulture" for trainees mostly from tribal community of Santiniketan, District Birbhum. In the last programme eleven

trainees were trained. Recently a survey was conducted in collaboration with Visva-Bharati and Ghosaldanga-Bishnubati Adibasi Trust during 19<sup>th</sup> to 20<sup>th</sup> November 2012 in five Santhal villages near Santiniketan for Tribal Area Development.



Some villagers along with delegation from Bose Institute headed by Prof. Sibaji Raha, Director Bose Institute during Survey for Tribal Area Development in a tribal village, Alinagar. This survey work was conducted during 19<sup>th</sup> & 20<sup>th</sup> November 2012 in collaboration with Visva-Bharati and Ghosaldanga-Bishnubati Adibasi Trust, P. O. Sattore, District: Birbhum. The other members of the delegation were Mr. Hirak Ghosh, Chairman, Advisory Committee, Rural Biotechnology Programme, Prof. S. R. Sikdar, Coordinator, Rural Biotechnology Programme, Dr. K. C. Mondal, Dr. Subhas Jana, Mr. L. C. Porel, Mr. B. Bhakta and Mr. Sobhan Roy Chowdhury.

### 128<sup>th</sup> Birthday Celebration of Prof. Debendra Mohan Bose



The 128<sup>th</sup> Birthday of Prof. Debendra Mohan Bose was celebrated on 26<sup>th</sup> November 2012 at the Main Campus Lecture Hall of Bose Institute. **Professor Sushanta Dattagupta**, Vice-Chancellor of Visva-Bharati, Santiniketan, graced the occasion as Guest of Honour and delivered the D. M. Bose Memorial Lecture on **The Tagore Model of Inclusive Education – from Grassroots to Higgs Boson**. Prof. Kankan Bhattacharyya Director, Indian Association for the Cultivation of Science, Kolkata, presided over the programme. Many distinguished scientists/ students/ other professionals were present from all over India. The lecture was interspersed by live music performed by artists from Sangit Bhavan, led by its Principal, Smt. Indrani Mukhopadhyay.

### SYMPOSIA AND CONFERENCES HELD

**Bioinformatics Centre** organized “Conference on Informatics and Integrative Biology” (CIIB) during December 14<sup>th</sup> to 16<sup>th</sup>, 2011.



**Division of Molecular Medicine** : Organized “International Workshop on Trends in Resources on Biomedical Sciences for the South Asian Association of Physiologists (SAAP)” in collaboration with Indian Physiological Society during June 19<sup>th</sup> & 20<sup>th</sup>, 2012.



**Division of Molecular Medicine** : Organized “2<sup>nd</sup> International Conference on Perspectives of Cell Signaling and Molecular Medicine” during January 8<sup>th</sup> to 11<sup>th</sup>, 2012.

### 2<sup>nd</sup> Workshop and Hands-on-training on (Medicinal) Plant DNA Fingerprinting at Bose Institute (Main Campus), 20<sup>th</sup> September to 4<sup>th</sup> October, 2012



Plant scientists of Bose Institute (Joint Conveners: Prof. Swati Sen-Mandi and Prof. Samir R. Sikdar) organized the second workshop and hands-on-training programme on Plant DNA Fingerprinting during 20<sup>th</sup> September to 4<sup>th</sup> October 2012 at Bose Institute (Main Campus) under the ICMR sponsored “Centre for Advanced Research on DNA Fingerprinting and Diagnostics of Medicinal Potential in Plants of Eastern and North Eastern India”. After good participation from the North East in the first year, this year more NE universities were brought under the purview. Prof. Swati Sen-Mandi delivered invited lectures at these universities to raise awareness in this area of scientific endeavor among young researchers. At the workshop in Bose Institute, participants included young faculty members and research scholars from Mizoram University, Rajiv Gandhi University, Itanagar, NEHU, Shillong, as well as from other parts of the country viz. Tamil Nadu, Karnataka, Maharashtra, Orissa, Uttarakhand and West Bengal. Activities at the workshop included Hands-on-Training and Lectures by Subject Experts aiming at Human Resource Development in the area of medicinal plant diversity Documentation and Utilization. The practical classes consisted of a) different methods of DNA Fingerprinting for precise Characterization and Documentation of Plant Genetic Resource for development of Species Specific DNA Markers, b) Assay of medicinally important compounds (particularly antioxidants) and c) development of Medicinal Trait Related DNA markers. The ultimate goal of this study is bioprospecting of useful genes through use of statistical correlative analysis between Molecular (DNA) profiling and chemical analysis data and appropriate Bioinformatics tools.

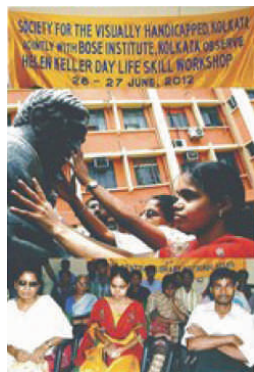
### Bose Institute Library organized

(i) Training on “Thomson Innovation, Patent Information Solution” on 19<sup>th</sup> April, 2012 for faculty and scholars of Bose Institute. Dr. Arun Kr. Chakraborty coordinated the programme and representatives from CGCRI and IACS also attended the programme.

(ii) “International Workshop on Current Trends in Resources on Biomedical Sciences for the South Asian Association of Physiologists (SAAP) Young Scientists of SAARC member Countries---2012” during 19<sup>th</sup> & 20<sup>th</sup> June 2012. The programme jointly organized by The Physiological Society of India (PSI) in association with Bose Institute Library, Molecular Medicine Division of Bose Institute, IICB and NICED. Thirty five faculty/Scientist(s)/Doctor(s) from SAARC member

Countries actively participated in the programme. The programme inaugurated by Prof. Sibaji Raha, Director, Bose Institute. Valedictory address delivered by Prof. Dhruvajyoti Chattopadhyay, Pro-Vice-Chancellor, University of Calcutta. Prof. Amar K Chandra was the organizing Secretary of the workshop.

(iii) Society for the Visually Handicapped, Kolkata jointly with Bose Institute, Kolkata observe Helen Keller Day Life skill workshop on 26<sup>th</sup> & 27<sup>th</sup> June, 2012. The programme organized at Bose institute on 26<sup>th</sup> June, 2012 in association with Bose Institute Library.



(iv) Workshop Series on Koha NMEICT project entitles "Library Automation & Resource Sharing Network" during 19<sup>th</sup> to 22<sup>th</sup> July, 2012 sponsored by Ministry of Human Resource Development (MHRD), Govt. of India. More than forty senior professionals from Universities, Colleges and Scientific Institutes participated in the programme.

(v) "Workshop & Hands on Training: SciFinder Update Session" organized at both campuses of Bose Institute Library on 28<sup>th</sup> August, 2012 for faculty, scholars and students of Bose Institute.

## VISITS ABROAD

**Prof. P. Chakrabarti** (Biochemistry) attended (i) 20<sup>th</sup> INPEC meeting of the International Network of Protein Engineering Centres, Academia Sinica, Taipei, April 18<sup>th</sup> to 20<sup>th</sup>, 2012; (ii) 23<sup>rd</sup> General Meeting & 12<sup>th</sup> General Conference of TWAS, Tianjin, China, September 18<sup>th</sup> to 21<sup>st</sup>, 2012; and visited (iii) IBPC, Paris during May 8<sup>th</sup> to 22<sup>th</sup>, 2012 as part of a collaborative project under the Indo-French Centre for the Promotion of Advanced Research.

**Soumyananda Chakraborti** (SRF working under Prof. P. Chakrabarti) attended Colloids and Nanomedicine, Amsterdam, The Netherlands, July 15<sup>th</sup> to 17<sup>th</sup>, 2012.

**Debadrita Mukherjee** (SRF working under Prof. P. Chakrabarti) attended The 17<sup>th</sup> International Biophysics Congress, Beijing, China, October 30<sup>th</sup> to November 3<sup>rd</sup>, 2011.

**Prof. Tapash C Ghosh** (Bioinformatics) visited and delivered a talk at EMBO Workshop on "Evolution in the time of Genomics", Venice, Italy, May 7<sup>th</sup> to 9<sup>th</sup>, 2012.

**Dr. S Ghosh Dastidar** (Bioinformatics) visited Nanyang Technological University at Singapore to deliver a talk and to setup collaborations, March 12<sup>th</sup> to 13<sup>th</sup>, 2012.

**Prof. Joyoti Basu** (Chemistry) visited and delivered lectures in the following conferences (i) 20<sup>th</sup> Federation Meeting of Korean Basic Medical Scientists held in Seoul, South Korea on April 26, 2012; (ii) "INMUNOPERU 2012" held in Lima, Peru, from May 29<sup>th</sup> to June 2<sup>nd</sup>, 2012 and (iii) Systems Approach to TB Biology and Host Response held in July 26<sup>th</sup> to 27<sup>th</sup>, 2012 at the University of California at Berkeley, USA; presented a paper in the Gordon Research Conference on "Bacterial Cell Surfaces" held in Mount Snow Resort in West Dover, VT, USA, from June 24<sup>th</sup> to 29<sup>th</sup> 2012; and visited the laboratory of Prof. E. K. Jo, Chungnam National University, Daejeon, South Korea in connection with a collaborative Indo-Korean project from April 23<sup>rd</sup> to 28<sup>th</sup>, 2012.

**Prof. Manikuntala Kundu** (Chemistry) visited the laboratory of Prof. E.K. Jo, Chungnam National University, Daejeon, South Korea in connection with a collaborative Indo-Korean project from October 7<sup>th</sup> to 13<sup>rd</sup>, 2012 and delivered a lecture in the 2012 International Meeting of the Federation of Korean Microbiological Societies held on October 10<sup>th</sup> and 11<sup>th</sup>, 2012 in Seoul, South Korea.

**Ranjeet Kumar, SRF** (Chemistry) visited the laboratory of Prof. Maria Lerm, Division of Medical Microbiology, Linköping University, Sweden, in connection with the Indo-Swedish project "Latency of mycobacteria: evaluating drugs and drug targets using innovative models" from January 21<sup>st</sup> to February 21<sup>st</sup>, 2012.

**Sourav Sanyal, SRF** (Chemistry) presented poster in the conference "TUBERCULOSIS 2012" held in Paris, France from 11<sup>th</sup> to 15<sup>th</sup> September, 2012.

**Shamba Gupta, SRF** (Chemistry) presented poster in the conference "Reconstructing the essential bacterial cell cycle machinery" held in Segovia, Spain from 16<sup>th</sup> to 19<sup>th</sup> September, 2012.

**Prof. Gaurisankar Sa** (Division of Molecular Medicine) visited Cleveland Clinic, Ohio, USA, during July to November, 2011 for a collaborative work. Prof. Sa delivered a special lecture in the Pathobiology Department of Cleveland Clinic, Ohio, USA. Prof. Sa participated and delivered an invited lecture in 16<sup>th</sup> Human Genome Meeting 2012 at Sydney, Australia in March 2012. He was invited to deliver a special guest lecture at A Star, Singapore, in March, 2012.

**Prof. Tanya Das** (Division of Molecular Medicine) visited Cleveland Clinic, Ohio, USA, in 2011 for a collaborative work. She delivered a special lecture on *Unveiling the mechanism of angiogenesis: Role of smooth muscle cell and endothelial cell cross-talk* in the Pathobiology Department of Cleveland Clinic, Ohio, USA, in November, 2011. Prof. Das delivered a lecture on *Chemogenetic approach to regulate the functional interplay between ATM signalling network during sensitization of resistant tumor* in 16<sup>th</sup> Human Genome Meeting at Sydney, Australia, in March 2012. She was invited to deliver a special guest lecture on *Multi-focal signal modulation of cancer and cancer stem cells: 'p53' or 'not p53' that is the question* at A Star, Singapore, in March, 2012.

**Dr. N. Mandal** (Division of Molecular Medicine) visited and delivered a lecture on "Importance of DNA markers linked to disease resistance in marine shrimp (*Penaeus monodon*)" at BIT's 2<sup>nd</sup> Annual World Congress of Marine Biotechnology (WCMB-2012) held on September 20<sup>th</sup> to 23<sup>rd</sup>, 2012 at Dalian, China.

**Rhitajit Sarkar** (SRF (Institute) under the supervision of Dr. N. Mandal Division of Molecular Medicine) presented a poster entitled "Remediation of iron-overload induced oxidative stress by *Caesalpinia crista*" at 16<sup>th</sup> Biennial Meeting of Society for Free Radical Research International (SFRRRI 2012) held on September 6<sup>th</sup> to 9<sup>th</sup>, 2012 at the Imperial College, London, UK.

**Dr. Kuladip Jana** (Division of Molecular Medicine) attended and delivers lectures in "17<sup>th</sup> International Congress on Animal Reproduction (ICAR)" in Vancouver, British Columbia, Canada, on July 29<sup>th</sup> to August 2<sup>nd</sup>, 2012 and also in "1<sup>st</sup> International Conference on Dog Population Management" held at Food & Environmental Research Agency, York, U.K. on September 4<sup>th</sup> to 8<sup>th</sup>, 2012.

**Prof. A.N.Lahiri Majumder** (Division of Plant Biology) delivered an invited talk at the Gordon Research Conference on "Salt and water stress in plants" at the Chinese University at Hong Kong during June 24<sup>th</sup> to 30<sup>th</sup>, 2012.

**Prof. Sampa Das** (Division of Plant Biology) attended the 12<sup>th</sup> International Symposium on Biosafety or Genetically Modified Organisms 2012 (ISBGMO) during 16<sup>th</sup> to 21<sup>st</sup> September 2012 held at Millenium Hotel, St Louis, USA and delivered a talk entitled "Exploring the biosafety aspect of insecticidal *Allium sativum* leaf lectin for its effective application in insect resistant plant development programme."

**Bodhisattwa Saha** (SRF, working under Prof. S. Gupta Bhattacharya, Division of Plant Biology) made a Poster presentation at the European Academy of Allergy and Clinical Immunology (EAACI) held at Geneva Switzerland from 16<sup>th</sup> to 20<sup>th</sup> June, 2012.

**Kavita Ghosal** (SRF, working under Prof. S. Gupta Bhattacharya, Division of Plant Biology) gave an oral presentation at the 5<sup>th</sup> European Symposium on Aerobiology" (5<sup>th</sup> ESA) held at KRAKOW, POLAND from 3<sup>rd</sup> to 7<sup>th</sup> September, 2012.

**Prof. Dipankar Home** (Physics) visited the following Institutes/Universities abroad for research collaboration and to deliver talks during September to October 2012: (i) Department of Physics and Astronomy, University College London, UK; (ii) Laboratoire de Physique Theorique et Modelisation, CNRS UMR 8089 Universite de Cergy-Pontoise, Cergy, France

## RECENT AWARDS AND HONOURS

- **Prof. P. Chakrabarti** (Biochemistry) elected (I) as Fellow TWAS (The Academy of Sciences for the Developing World); (ii) Awarded the Distinguished Alumnus Award, IIT Kharagpur, 2012; (iii) Delivered the Bires Chandra Guha Memorial Lecture, INSA (2011).
- **Prof. Subrata Majumder** (Division of Molecular Medicine) acted as Convener of 81<sup>st</sup> Annual Meeting of the Society of Biological Chemists (India). Held at Science City during Nov. 8<sup>th</sup> to 11<sup>th</sup>, 2012.
- **Prof. Tanya Das** (Division of Molecular Medicine) received (i) Sananda Nihar Samman, India, for Academic Excellence, 2012. (ii) Elected "Fellow of West Bengal Academy of Science", India, 2011.
- **Dr. Kuladip Jana** (Division of Molecular Medicine) received "Young Scientist Travel Award to attend "17th International Congress on Animal Reproduction (ICAR)" in Vancouver, British Columbia, Canada, on July 29<sup>th</sup> to August 2<sup>nd</sup>, 2012 and also awarded "Young Scientist (Clinical) Award-2012" from Parsemus Foundation, Berkley, California, U.S.A. in "1<sup>st</sup> International Conference on Dog Population Management" held at Food & Environmental Research Agency, York, U.K. on September 4<sup>th</sup> to 8<sup>th</sup>, 2012.
- **Swatilekha Ghosh** (Division of Molecular Medicine) received best poster award at the 2<sup>nd</sup> International Conference on Perspective of Cell signaling and Molecular Medicine organized by Bose Institute, Kolkata, in January, 2012. She also received Prof. D.P. Burma best poster award -2012 from the Society of Biological Chemists (India) in November 2012.
- **Shilpi Saha** (Division of Molecular Medicine) received 'Best Poster Award' at the 2<sup>nd</sup> International symposium on perspective of cell signaling and molecular medicine organized by Bose Institute, Kolkata, in January, 2012.
- **Arghya Adhikary** (Division of Molecular Medicine) received 'Special Award' at the 2<sup>nd</sup> International symposium on perspective of cell signaling and molecular medicine organized by Bose Institute, Kolkata, in January, 2012.
- **Abir K. Panda** (Division of Molecular Medicine) selected for 'Top-10 papers' at the 81<sup>st</sup> Society of Biological Chemists Meeting held at, Kolkata, in November, 2012.
- **Prof. A.N.Lahiri Majumder** (Division of Plant Biology) elected Fellow of West Bengal Academy of Science & Technology.
- **Prof. Sampa Das** (Division of Plant Biology) elected Fellow of West Bengal Academy of Science & Technology
- **Prof. Swati Gupta Bhattacharya** (Division of Plant Biology) elected Fellow of West Bengal Academy of Science and Technology
- **Prof. Swati Sen-Mandi** (Division of Plant Biology) awarded Emeritus Medical Scientist by Indian Council of Medical Research
- **Prof. Dibyendu Narayan Sengupta** (Division of Plant Biology) elected Fellow of West Bengal Academy of Science and Technology.
- **Sonali Sengupta** (Division of Plant Biology) has been awarded a DST FAST Track research grant of Rs 21, 25,000/- for three years on "Study of plant mechanosensitivity using *Mimosa pudica* with special reference to Calcium signalling in touch reception and relay.

## RECENT Ph. Ds.

(From April 1, 2011 to March 31, 2012)

- Mr. Arumay Pal Chakrabarti (Biochemistry) Structural studies on macromolecular interactions. *Supervisor*: Prof. P. Chakrabarti
- Mr. Prabal Chakrabarti (Biochemistry) Identifying proteins that interact with selected cell cycle proteins of *entamoeba histolytica*. *Supervisor*: Prof. A. Lohia
- Ms. Bratati Kahali (Bioinformatics Centre) Studies on the evolutionary forces on codon and amino acid usages in prokaryotic and eukaryotic genomes. *Supervisor*: Prof. T.C. Ghosh
- Ms. Sangeeta Kundu (Bioinformatics Centre) Modeling and Molecular Dynamics Simulation of Biotechnologically Important Proteins. *Supervisor*: Dr. Debjani Roy / Prof. P. Chakrabarti
- Ms. Srabani Karmakar (Chemistry) Characterization of the interactions of some bivalent metal ions and other substrate molecules with  $\alpha$ -crystallin by biophysical, mutational and mass spectrometric approach. *Supervisor*: Prof. K. P. Das
- Ms Sanchita Basu (Chemistry) Understanding the innate immune response mycobacterial infection. *Supervisors*: Prof. M. Kundu and Prof. J. Basu

- Mr. Partha Mukherjee (Chemistry) Antigens of *Mycobacterium tuberculosis*: their potential as diagnostic tools and their role in immune response in tuberculosis. *Supervisor*: Prof. M. Kundu
- Ms. Chaitali Basak (Chemistry) Host cell signaling modulated by bacterial pathogen. *Supervisor*: Prof. M. Kundu
- Mr. Gaurav Gupta (Division of Molecular Medicine) An approach towards understanding the mechanism of CD4<sup>+</sup>/CD4<sup>+</sup>CD25<sup>+</sup> T regulatory cell function and involvement of chemokines in the regulation of Visceral leishmaniasis: Role of immunomodulators in regulating these T cells. *Supervisor*: Prof. Subrata Majumdar
- Mr. Rajib Panchadhayee (Division of Molecular Medicine) Synthesis of Complex Oligosaccharides Related to Microbial Polysaccharides. *Supervisor*: Dr. Anup Kumar Misra
- Mr. Samir Ghosh (Division of Molecular Medicine) Synthetic studies on oligosaccharides related to some bacterial polysaccharides. *Supervisor*: Dr. Anup Kumar Misra
- Mr. Dewan Md. Sakib Hossain (Division of Molecular Medicine) Molecular mechanisms of immune evasion by tumor: Role of curcumin. *Supervisors*: Prof. G. Sa and Prof. T. Das
- Mr. Arghya Adhikary (Division of Molecular Medicine) Inhibition of mammary epithelial carcinoma cell migration by curcumin: Evaluation of the molecular mechanisms. *Supervisors*: Prof. G. Sa and Prof. T. Das
- Mr. Pallab Roy (Division of Molecular Medicine) Regulation of cancer cell apoptosis by plant polyphenols: A mechanistic study. *Supervisors*: Prof. G. Sa and Prof. T. Das
- Dr. Himadri Shekhar Chakraborty (Division of Plant Biology) Fungal aerosol monitoring over an agricultural field in greater Kolkata, West Bengal, India and their allergenic significance. *Supervisor*: Prof. S. Gupta Bhattacharya
- Nilanjana Banerjee (Division of Plant Biology) Structural Characterization and Functional Studies of Some Clinically and Agronomically Potential Biomolecules. *Supervisor*: Prof. Sampa Das
- Ms. Myo Ma Ma Than (Division of Plant Biology) Clonal propagation, germplasm conservation and DNA fingerprinting pattern in *Bulbophyllum auricomum* Lindl. *Supervisor*: Prof. Amita Pal (Co-supervisor).
- Soumitra Maiti (Division of Plant Biology) Development of functional markers for genotyping MYMIV resistance in *Vigna* and characterization of putative R gene/s in *Vigna mungo*. *Supervisor*: Prof. Amita Pal
- Ms. Subhra Talai (Division of Plant Biology) Development of Bio-Molecular markers for vigour in rice seeds. *Supervisor*: Prof. S. Sen Mandi
- Ms. Sudeshna Bhattacharya (Division of Plant Biology) Cell Molecular Studies on Spontaneous Radiation namely UV stress tolerance in plants. *Supervisor*: Prof. S. Sen Mandi
- Ms. Madhumita Roy (Microbiology) Identification and functional characterization of catabolic versatilities of polycyclic aromatic hydrocarbons degrading *Sphingobium* sp strain PNB: Biochemical and molecular analyses. *Supervisor*: Dr. Tapan K. Dutta
- Mr. Prasanna Kumar Mondal (Physics) Investigations on the Existence of More Than One Metastable State of Superheated Liquids. *Supervisor*: Prof. Barun K. Chatterjee
- Mr. Atanu Maulik (Physics) Characterization of Solid State Nuclear Track Detectors to Search for Heavy Ions and Strangelets in Cosmic Rays. *Supervisor*: Prof. Swapan K. Saha

## GRANTS RECEIVED

The following research proposals have been granted to the Bose Institute during the last one year by different funding agencies. The title of the project, funding agency involved, principal investigator, amount of grant and duration of the projects are indicated.

- **Development of sheath blight resistance in rice through transgenic approach**; DBT; Prof. Sampa Das (Plant Biology); ₹. 35,98,000; 2 years.
- **Understanding of correlation between "auxin homeostasis" and *Alternaria brassicicola* infection in *Brassica juncea***; DBT; Dr. Debabrata Basu (Plant Biology); ₹. 31,16,000; 2 years.
- **Identification of the genetic loci for development of MYMIV-resistance in *Vigna***; DBT; Prof. Amita Pal (Plant Biology); ₹. 33,67,000; 2 years.
- **Role of protein complexes and protein interaction network in eukaryotic protein evolution**; DBT; Prof. Tapash C. Ghosh (Bioinformatics Centre); ₹. 24,11,400; 3 years.

- **Structural study of *de novo* designed novel antifreeze peptides from *leucosporidium antacticum* antifreeze protein-1(AFP-1);** CSIR; Dr. Anirban Bhunia, (Biophysics); ₹. 24,38,600; 3 years.
- **Role of micro RNAs in the immune response to mycobacterial infection;** CSIR; Prof. Joyoti Basu (Chemistry); ₹. 25,38,600; 3 years.
- **Understanding the origin(s), evolution and interaction(s) of different molecular mechanisms of chemotrophic sulfur oxidation : Elucidating the metabolic strategies of early life;** CSIR; Dr. Wriddhiman Ghosh (Microbiology); ₹. 23,88,600; 3 years.
- **Theoretical and experimental analyses of bacterial GlxRS-tRNA<sup>Glx</sup>-GatCAB Co-evolution and the molecular basis of their interaction;** CSIR; Prof. Gautam Basu (Biophysics); ₹. 25,38,600; 3 years
- **Synthesis of oligosaccharides corresponding to *shigella dysenteriae* for the preparation of glycoconjugates to treat shigellosis;** CSIR; Dr. Anup Kumar Misra (Molecular Medicine); ₹.18,50,000; 3 years.
- **Exploration of Lichens from Barak Valley of Southern Assam and Arunachal Pradesh (North East India) and Isolation of Phytochemicals and Bioprospecting of some selected Lichens species;** DBT; Dr. Nripendranath Mandal (Molecular Medicine); ₹. 19,98,000; 3 years.
- **Molecular signaling involved in pathophysiological action of common air pollutant 'benzo(a)pyrene' in testicular DNA damage and apoptosis in connection to male infertility: possible protection by natural aryl hydrocarbon receptor antagonists;** SERB(DST); Dr. Kuladip Jana (Molecular Medicine); ₹. 17,74,000; 3 years.
- **Sys TB : A Network Program for Resolving the Intracellular Dynamics of Host Pathogen Interaction in TB infection;** DBT; Prof. Joyoti Basu (Chemistry); ₹. 2,20,24,800; 5 years
- **DBT Award of Ramalingaswami Re-entry Fellowship to Dr. Sudipto Saha** (Bioinformatics Centre); ₹.74,50,000; 5 years.
- **Study of cosmic ray interactions and cosmic ray aerosol cloud connection in the context of regional climate change;** SERB(DST); Prof. Sibaji Raha (Physics); ₹. 16,26,16,000; 5 years.
- **Mechanistic insight into the role of conformational Modulations in driving BC12s apoptotic network : Structural dynamics to therapeutic design;** DBT; Dr. Shubhra Ghosh Dastidar (Bioinformatics Centre); ₹. 64,00,000; 3 years.
- **Role of DNA-dependent protein kinase in transcription control in human cells;** DBT; Dr. Mahadeb Pal (Molecular Medicine); ₹. 40,42,930; 3 years.
- **Identification and characterization of a 19S proteasomal component of the early diverging eukaryote *Giardia lamblia*;** DBT; Dr. Srimonti Sarkar (Biochemistry); ₹. 48,11,800; 3 years.
- **Comprehensive Geo-microbiology of two high temperature hydrothermal system of India : Paradigms of primitive metabolisms and biochemical evolution, prospect of biotechnological resources ;** DST; Dr. Wriddhiman Ghosh (Microbiology); ₹. 14,00,000, 3 years.
- **Targeted alteration of MAPK family members ERK and p38MAPK/JNK to channelize oncogenic Ras-induced proliferative- signaling into apoptotic-signaling;** SERB (DST); Prof. Gaurisankar Sa (Molecular Medicine); ₹. 49,96,000; 3 years.
- **The role of two-component systems and cell division proteins in mycobacterial physiology;** DBT; Prof. Manikuntala Kundu (Chemistry); ₹. 89,21,600; 3 years.
- **Study on Biosphere-Atmosphere Exchange of Carbon dioxide, Water Vapor and Energy in a Tropical High Altitude Forest Canopy at Eastern Himalaya;** IITM (MoES); Dr. Abhijit Chatterjee (Environment Science); ₹. 62,62,400; 3 years.

## PATENTS

(Indian: 1032/KOL/2012) "A novel surface-functionalized ZnO-nanoparticles exhibiting therapeutic properties, and process for preparing the same"; S. Chakraborti, P. Joshi, T. Das, P. Chakrabarti, R. Chakraborty, A K Mandal.

Prof. Amita Pal : "Precise Identification of appropriate bamboo species as raw materials for industrial applications with a novel pair of primers" (No. 1239/KOL/2011 dated 23.09.2011).

## STAFF NEWS

### Appointment :

#### Academic

1. **Dr. Partha Sarathi Joarder** joined as Associate Professor on September 21, 2012.

#### Non-academic

1. **Shri Vineet Kr. Tandon** joined as Office Supdt. on December 01, 2011
2. **Shri Narender Chauhan** joined as Office Supdt. on December 02, 2011
3. **Shri Surajit Panigrahi** joined as Registrar on June 01, 2012
4. **Ms. Arpita Bose** joined as Stenographer on October 01, 2012
5. **Shri Hemanta Kr. Sahoo** joined as Driver-cum-mechanic on October 08, 2012
6. **Shri Goutam Behera** joined as Driver-cum-mechanic on October 08, 2012
7. **Shri Raju Ch. Paul** joined as Workshop Supdt. on October 30, 2012

### Retirement on Superannuation :

1. **Shri Ram Raj Pandey**, Asstt. Registrar, on January 31, 2012
2. **Mr. Sukumar Das**, Helper-E, on January 31, 2012
3. **Mr. Arup Kr. Sengupta**, AR-II, on February 29, 2012
4. **Mr. Swapan Kr. Das**, Sr. Asstt., on February 29, 2012
5. **Mr. Sisir Kr. Ghosal**, Technical Officer-B, on March 31, 2012
6. **Mr. Tapan Kr. Mondal**, Technician(Sr. Gr.), on March 31, 2012
7. **Mr. Debidas Saha**, AR-II, on March 31, 2012
8. **Mr. Ramesh Ch. Sarkar**, Helper E, on March 31, 2012
9. **Mr. Jubaraj Pal**, Sr. Asstt., on April 30, 2012
10. **Mr. Prasanta Kr. Pal**, Technical Officer-II, on April 30, 2012
11. **Mr. Kalachand Sen**, Helper-D, on April 30, 2012
12. **Mr. Amit Kr. Mahinder**, Technical Officer-C, on April 30, 2012
13. **Mr. Subhas Ch. Maikap**, Technical Officer-II, on June 30, 2012
14. **Mr. Sanat Kr. Dey**, Technician Gr. I, on July 31, 2012
15. **Mr. Durga Charan Das**, Asstt. Registrar-II, on September 30, 2012
16. **Mr. Bhabani Pd. Banerjee**, Tech. Officer, on October 31, 2012

#### Resigned

1. **Dr. Anupam Pal**, Associate Professor, on March 13, 2012

## FORTHCOMING EVENTS

- **Prof. Joyoti Basu and Prof. Manikuntala Kundu** (Chemistry) Workshop on "Tuberculosis 2012: moving towards strategies for prevention and intervention" from December 3<sup>rd</sup> & 4<sup>th</sup>, 2012.
- **Bose Institute will be one of the major host Institute for ensuing Centenary Session of the Indian Science Congress to be held at Kolkata from January 3<sup>rd</sup> to 7<sup>th</sup> 2013. Prof. Sibaji Raha, Director, Bose Institute is one of the Local Secretary for this Centenary Science Congress.**

**Editorial Board :**  
D. Home, G. Basu, P. Parrack, D. Basu  
Assisted by : T. K. Maji  
Visit us : <http://www.boseinst.ernet.in>

*We condole the passing away of*  
**Shri Rabindranath Karmakar, Overseer**  
on May 17, 2012