

# ANNUAL REPORT

2006 - 2007

(From October 2006 to October 2007)



Hon'ble Prime Minister of India, Dr. Manmohan Singh inaugurating the Concluding Function of the Platinum Jubilee Celebrations of the Academy



**The National Academy of Sciences, India**  
5, Lajpatrai Road, Allahabad 211 002

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**POSTAL ADDRESS**

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**Late Prof. Meghnad Saha, Founder President**

***An Academy of Science can do a great deal by educating public opinion, undertaking particular problems, and bringing out scientific workers in various fields for discussion and cooperative research. But the main function of the Academy should be towards cultural improvement by contributions to human knowledge.***

**- Prof. Meghnad Saha on the Inaugural Session of the Academy**

India could justly feel proud for its unique contributions to science in the ancient past. However, successive foreign invasions and alien rule for centuries pushed science in the background and the country went through with what may be described as the dark age for science. Western science attracted Indian intelligentsia after the establishment of the western system of education and the universities; and despite many constraints, the country could produce giants like Sir J.C. Bose and Acharya Prafulla Chandra Ray.

The 1st World War and the world-wide economic depression caused a set back to scientific research globally - much more so in India whose scientists found it difficult even to publish their research work since they had to be almost entirely dependent on foreign journals. The post World War India saw the rise of the freedom movement which incidentally drew attention to the numerous problems of the Indian populace like poverty, hunger, diseases, recurrent floods, droughts, famines etc. Patriotic scientists felt deeply concerned with these.

It was in this background that the idea of establishing a forum for scientists, which would help them in publishing their researches and bring them together to discuss and find scientific solutions to the problems of the country, was mooted by Prof. Meghnad Saha, a great scientist, patriot and the then Professor of Physics at the University of Allahabad in 1929. His views were published in the article entitled 'A Plea for an Academy of Sciences' in December 1929 issue of the University of Allahabad magazine.

The National Academy of Sciences, India was thus established as the first Science Academy of this country in 1930.



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## Foreword

It gives me great pleasure to write this Foreword in my first year as the President of the National Academy of Sciences, India (NASI). It is indeed a honour to follow in the foot steps of great scientists who have held this position earlier. It was the vision and foresight of Prof. Meghnad Saha, who established the first science academy in the country. In his Presidential address at the inaugural session of NASI, Prof. Saha said that "*the main function of the Academy should be towards cultural improvement by contribution to human knowledge*". The Academy has been pursuing this goal and along the way added several activities for the popularization of science amongst the youth and conveying to them the excitement of science in the service of mankind.

The NASI has completed 75 years of glorious existence and we had befitting celebrations on this occasion. The concluding function of the Platinum Jubilee celebrations was inaugurated by Hon'ble Dr, Manmohan Singh, the Prime Minister of India at IIT Bombay, Mumbai on October 6, 2006. In his inaugural address he paid tributes to the contributions of Prof. Meghnad Saha and of the scientists of that generation by recalling that in those days the Universities played the lead role in the development of research in science and technology in India. He commented that the link between teaching and research must be restored to make the science and technology instrumental for socio-economic transformation. He suggested that Platinum Jubilee celebrations of NASI is a fitting occasion for a renewal of its commitment to the development of science and the promotion of scientific temper in the country.

The Hon'ble Prime Minister presented 'Prof. Meghnad Saha Platinum Jubilee Life time Honorary Fellowship' to Prof. M.G. K. Menon; while Prof. P.N. Tandon and Prof. Manju Sharma were honoured with the 'NASI President's Platinum Jubilee Gold Medal' for their enormous contributions to the Academy. He also presented the 'NASI-Reliance Industries Platinum Jubilee Awards for Application Oriented Innovations in Physical and Biological Sciences'. These were presented for the first time and are the major awards sponsored by an industry.

Another noteworthy feature of the concluding function of the Platinum Jubilee celebrations was a symposium on "*Science and Technology in the Service of Society*". This was in continuation of the earlier Symposium on '*Excitement of Science*' held in October 2005 at Allahabad. It was organized with a view to highlight the contributions made by the industry leaders, scientists and educationists to improve the quality of life of mankind and the challenges that lie ahead. It was also aimed at sensitizing our younger generation with excitement, challenges, and opportunities in science and technology, and to highlight the relevance of science & technology to society. This symposium was of significance since a number of leading industrialists, viz. Mr. N.R. Narayanamurthy, INFOSYS, Mr. Ajay Piramal, Nicholas Piramal Group and Mr. Hitel Meshwani, Reliance Industries Ltd. made presentations along with leading scientists and academicians. This was perhaps the first time that industrial leaders participated in a major symposium organized by the NASI.

The Platinum Jubilee celebrations also included organization of two science exhibitions : 1) the Century of Physics, and 2) the Human Genome, particularly for the benefit of public and young students. Additionally, a poster display of history of science with major milestones and achievements was also organized.





Another significant feature of the above symposium was that it was organized jointly with the Tata Institute of Fundamental Research and Bhabha Atomic Research Centre, the two other premier science and technology institutions in Mumbai. The symposium received major financial support from variety of industries (mainly in the Mumbai region), clearly showing their willingness to support the scientific temper in India. The organization of the symposium was done by the Fellows and Members of the NASI at IIT Bombay and made grand success of it. I would also like to mention here the support received from IIT Bombay faculty, students and staff during the three days of deliberations.

The 76<sup>th</sup> Annual Session was coincided with the concluding functions of the Platinum Jubilee celebrations in which the Physical Sciences and Biological Sciences contributed presentations were organized in parallel sessions. These sessions were well excellent and well attended.

I am happy to see that the stature of the NASI has gone up by the number of activities that the Academy has undertaken. It was very heartening to see that excellent nominations were received for the Fellowship and Membership of the Academy. The NASI encourages scientists of all levels through the institution of a number of awards. During the Platinum Jubilee year several activities were taken up by the Academy, which include a number of satellite symposia at different parts of the country, NASI Platinum Jubilee lecture series and lectures in colleges. As a part of the children awareness programme, a science exhibition was organized. These activities are conducted towards popularization of science and inculcating the scientific temper among youth. We hope to continue these activities beyond the Platinum Jubilee year and I appeal to all the Fellows and Members to make efforts in this direction.

The NASI has joined the Indian National Science Academy (INSA) and the Indian Academy of Sciences (IAS) in the "Summer Research Fellowship Programme" under the Joint Science Education Panel and this is progressing very well. We have several Chapters of the NASI through out the country and I would like to appeal to all to organize activities in their Chapters. The NASI Council has decided that all local activities should be organized through the Chapters.

I would like to thank Prof. M.G.K. Menon, Prof. P.N. Tandon, Prof. Manju Sharma and Prof. V.P. Sharma for providing me guidance and support in undertaking this enormous task. They have contributed enormously to the Academy and their commitments and passion to enhance the activities and stature of NASI is worthy of emulation. I would also like to thank Prof. J.P. Mittal and Prof. V.P. Kamboj, our immediate past Presidents, for their help in making my task easier.

I strongly feel that it is our responsibility to make the next generation aware of the excitement in science and the achievements of great scientists through exhibitions and simple Laboratory exercises. For this it is proposed that NASI take the lead in establishing a Science Museum in Allahabad. The Museum would clearly become the focal point for school and college students to gather and attain knowledge outside their formal curriculum.

Dear Fellows, Members, I am sure that you will agree that our Academy has ushered a new era. I call upon you to take active part in the activities of the Academy by spending your valuable time and in turn help in the nation building through spreading awareness of science and technology. We look forward to another exciting year of scientific excitement and accomplishments for the Academy.

With best wishes and warm regards,

**Ashok Misra**  
President





## Introduction

Founded in the year 1930, the National Academy of Sciences, India is the oldest Science Academy of the country. Then the main objective of the Academy was to provide a national forum for the publication of research work carried out by Indian scientists and to provide opportunities for exchange of views among them. The Memorandum of Association was signed by seven distinguished and patriotic scientists namely Prof. Meghnad Saha, Prof. K.N. Bahl, Prof. D.R. Bhattacharya, Prof. P.C. MacMohan, Prof. A.C. Banerji, Prof. Ch. Wali Mohammad and Prof. N.R. Dhar. Of these, the Academy had the good fortune of having the continued association of Prof. N.R. Dhar until December 5, 1986 when he expired at the age of 96 years. Apart from being one of the founders of the Academy and taking continued interest in its welfare, Prof. Dhar had donated the piece of land on which the Academy's newly constructed building stands today.

The Rules and Regulations of the Academy were based on those of the Royal Society of England and Asiatic Society of Bengal. Prof. Meghnad Saha was elected its first President. The Academy started with 57 ordinary Members and 19 Fellows. Today it has 1463 Members and 1321 Fellows from all parts of the country. The Academy also has 29 Honorary Fellows and 72 Foreign Fellows from various disciplines of Science and Technology.

Since its inception, the Academy has been publishing two quarterly journals - Proceedings of the National Academy of Sciences, India (Section A - Physical Sciences) and the Proceedings of the National Academy of Sciences, India (Section B - Biological Sciences). Since 1978 it is also publishing a bi-monthly journal, the National Academy Science Letters for speedy publication of important research work.

The Academy has regularly been holding an Annual Session in a scientific and academic Institution. In the recent past such sessions were held at Bhagalpur, Guwahati, Nagpur, Goa, Cochin, Madurai, Bhavnagar, Gwalior, Jaipur, Tiruchirapalli, Jammu, Hyderabad, Meerut, Udaipur, Bangalore, Chandigarh, Tirupati, Aurangabad, Bhubaneswar, Bhopal, Lucknow, Allahabad, Pune, Shillong, Ahmedabad, Jaipur, Pondicherry and Mumbai. These Annual Sessions provide an opportunity for presentation of research papers by Members and Fellows of the Academy. The sessions are popular and draw young and senior scientists alike from far and wide.

Besides the Annual Session, the Academy holds symposia, seminars, and workshops on subjects of current national and scientific interest, the proceedings of which are mostly published, as special volumes. The Academy and its different local Chapters also hold science communication programmes to generate scientific temperament among the students and general public.

The headquarter of the Academy is located at 5, Lajpatrai Road, Allahabad where the new building of the Academy has been constructed.





## Concluding Function of the Platinum Jubilee Celebrations, Symposium on 'Science and Technology in the Service of Society' and 76th Annual Session of the Academy

**Inaugural Function** - In the glittering charm of Academic and Scientific fervour the Concluding Function of the Platinum Jubilee Celebrations of the National Academy of Sciences, India, Symposium on 'Science and Technology in the Service of Society' and 76th Annual Session were inaugurated by Hon'ble Dr. Manmohan Singh ji, the Prime Minister of India on October 6, 2006 in the Conference Hall of Indian Institute of Technology-Bombay (IITB), Mumbai. The function was attended by the Fellows and Members of the Academy, a number of distinguished academicians, industrialists, faculty members and students of Indian Institute of Technology-Bombay and other institutions. The notables were Prof. M.G.K. Menon, Prof. P.N. Tandon, Prof. Manju Sharma, Prof. J.P. Mittal, Prof. R. Chidambaram, Prof. Suresh Chandra, Prof. S.P.S. Khanuja, Prof. Amit Ghosh, Shri N.R. Narayana Murthy, Shri Rahul Bajaj, Bajaj Auto Ltd., Shri Ajay Piramal, Nicholas Piramal Group and Shri Hitel Meshwani, Reliance Industries Ltd., Prof. V.P. Kamboj, Prof. Ashok Misra, Prof. P.K. Seth, Prof. Akhilesh K. Tyagi and so on. The architects of India's Atomic Energy Programme like Dr. H.N. Sethna and Dr. Anil Kakodkar were also present.



Hon'ble Prime Minister of India, Dr. Manmohan Singh delivering his address

Prof. V.P. Kamboj, President of the Academy welcomed Hon'ble Prime Minister, His Excellency Shri S.M. Krishna, Governor and Hon'ble Shri Vilasrao Deshmukh, Chief Minister of Maharashtra, Shri Prithviraj Chauhan, Hon'ble Minister of State, Government of India, the past Presidents, Fellows and Members of the Academy and other distinguished guests. Prof. Kamboj while delivering his Presidential Address gave a detailed account of the population boom in world specifying its impact on world's economy, employment and other vital dimensions. He stressed on the need to curb the population menace to maintain the pace of socio-economic development as well as ensure survival of the mankind in future.





Prof. M.G.K. Menon gave a brief sketch of Academy's establishment as the first Science Academy of the country; and also fondly remembered Prof. Meghnad Saha's contributions to the science in general and the Academy in particular. Prof. Menon also mentioned briefly about the role of Academy in the development of Science and Technology in India. He further said that the Academy realized the need to create the Excitement in Science, and hence made it a point to spread scientific awareness during its Platinum Jubilee year. The first Symposium on 'Excitement of Science' and today's symposium on 'Science and Technology in the Service of Society' are in consonance with the idea of its founder i.e. to ensure cultural development through scientific knowledge and temperament.

Hon'ble Shri Vilasrao Deshmukh congratulated the Academy for playing a pivotal role in the development of Science and Technology. Shri Deshmukh appealed the scientific community to utilize science for the service of society.

Hon'ble Dr. Manmohan Singh ji, while paying deep regards to Prof. Meghnad Saha, emphasized the contribution of the then scientists and recalled that during those days the Universities played the lead role in the development of research in science and technology in India, but it is sad to confess that now the situation is grim and the spirit of inquisitiveness and inquiring mind is hampered by the atmosphere prevailing these days in the Universities. The link between the teaching and research must be restored to make science and technology instrumental in socio-economic transformation. Dr. Singh also cited the example of China to boost the zeal of budding scientists so that they realize that India has to remain in the forefront of scientific and technological development; the new Indian Institutes of Science Education and Research have been set up with this aim. The growing privatization of scientific research has given a new dimension to the institutionalized set up of our basic research making it directly linked with its applied values and in turn establishing Industry-academia endeavours.



Hon'ble Prime Minister of India, Dr. Manmohan Singh being felicitated by Prof. V.P. Kamboj, President, NASI

Prof. V.P. Kamboj honoured the Prime Minister by presenting him with a shawl and a plaque. On this auspicious occasion Prof. P.K. Seth, General Secretary of the Academy





announced the three very prestigious awards which were given by Hon'ble Prime Minister to the Past Presidents of the Academy. Prof. M.G.K. Menon was honoured with Prof. Meghnad Saha Platinum Jubilee Life-time Honorary Fellowship for his outstanding contributions to the Academy. Prof. P.N. Tandon and Prof. (Mrs.) Manju Sharma were honoured with NASI-Presidents' Platinum Jubilee Gold Medals for their outstanding contributions to the Academy. NASI-Reliance Industries Platinum Jubilee Awards for Innovations in Physical and Biological Sciences were also given by Hon'ble Prime Minister to three distinguished Scientists - Prof. Akhilesh K. Tyagi, University of Delhi, Delhi, Dr. T.K. Chakraborti, Indian Institute of Chemical Technology, Hyderabad and Dr. Sudhanshu Vrat, National Institute of Immunology, New Delhi.

In the end of the Inaugural Session Prof. Ashok Misra, Director IIT Bombay and Convener of the Symposium expressed his deep sense of gratitude to Hon'ble Prime Minister, His Excellency Governor, and Hon'ble Chief Minister of Maharashtra, Past Presidents, Present President Prof. V.P. Kamboj, Fellows and Members of the Academy, Faculty Members and students of IIT Bombay and all other distinguished guests present on the occasion. He also informed that the Academy has instituted the NASI Platinum Jubilee Chairs and which have been awarded to Prof. S. K. Joshi, an eminent physicist and Prof. G. Padmanaban, a renowned molecular biologist.



**Hon'ble Dr. Manmohan Singh, Prime Minister of India presenting Prof. Meghnad Saha Platinum Jubilee Life time Honorary Fellowship to Prof. M.G.K. Menon**



**Hon'ble Dr. Manmohan Singh, Prime Minister of India presenting NASI-Presidents' Platinum Jubilee Gold Medal to Prof. P.N. Tandon**



**Hon'ble Dr. Manmohan Singh, Prime Minister of India presenting NASI-Presidents' Platinum Jubilee Gold Medal to Prof. (Mrs) Manju Sharma**



**Hon'ble Dr. Manmohan Singh, Prime Minister of India presenting NASI-Reliance Industries Platinum Jubilee Award for Innovations in Biological Sciences to Prof. Akhilesh K. Tyagi**







Prof. P.N. Tandon delivering his address



Prof. (Mrs) Manju Sharma delivering her address



From (L to R) Prof. (Mrs) Manju Sharma, Prof. V.P. Kamboj, Prof. Ashok Misra and Prof. P.K. Seth



From (L to R) Prof. M.G.K. Menon, Prof. Ashok Misra, Prof. V.P. Kamboj and Prof. Anil K. Singh



Prof. Ashok Misra, Director, IITB and Convenor of the Symposium delivering his address



Dr. R. Chidambaram delivering his address

**Symposium on Science and Technology in the Service of Society** - The Concluding Function of Platinum Jubilee Celebrations also featured a Symposium on '**Science and Technology in the Service of Society**'. The theme of this symposium was a logical extension of the theme of the earlier symposium 'Excitement in Science', organized at the onset of Platinum Jubilee Celebrations in the year 2005. This theme was chosen with a view to highlight the contributions made by the industry leaders, scientists and educationists to improve the quality of life of mankind and the challenges that lie ahead. It was also aimed at





sensitizing the younger generation with excitement, challenges and opportunities in science and technology and also to highlight the relevance of science and technology to society. Consequently, many eminent leaders from industry and academia were invited to speak at the symposium. These included luminaries like Shri Mukesh Ambani, Dr. R. Chidambaram, Prof. Asis Datta, Prof. (Ms.) K.A. Dinshaw, Prof. M.G.K. Menon, Shri N.R. Narayana Murthy, Shri Ajay Piramal, Prof. (Mrs.) Manju Sharma, Prof. P. Balram and Prof. Anand Mohan. The very first lecture delivered by Dr. R. Chidambaram, Principal Scientific Adviser to the Govt. of India, focused on the relevance and direction of research for the service to society. Prof. Chidambaram in his speech on 'Directed Basic Research' emphasized that directed basic research in its execution and in the requirement of no other deliverables than knowledge generation, is no different from conventional (self-directed) basic research. The selected areas are determined in a national perspective. 'Directed Basic Research' may be in an area where the knowledge generation would benefit Indian Society in the long term, or it may be in an area where the results of the research would benefit Indian Industry or our strategic interests in the long term.



**Prof. Jai Pal Mittal, Past President being felicitated by Prof. Ashok Misra**



**Prof. Ashok Misra felicitating Dr. Anil Kakodkar**

The objectives of the symposium were fulfilled as evidenced by the participation of top leaders from industry and academia, as well as large number of students, faculty and public in general.



**A View of the audience**







**Prof. M.G.K. Menon inaugurating the Science Exhibition**

Another important feature of the celebrations included organization of two science exhibitions: 1) the Century of Physics, and 2) The Human Genome. These events were organized with the help of Nehru Science Centre, Mumbai. The exhibits attracted a very large number of visitors including the delegates, students and faculty. Additionally, a poster display of history of science with major milestones and achievements was also arranged. It is noteworthy that a large number of school and college students and their teachers were especially invited from all over western region of the country to participate in the symposium and the science exhibitions.



**A View of Science Exhibition**

The celebration also included a memorable evening' on October 6, 2006, when the noted flutist Pt. Hari Prasad Chaurasia mesmerized the delegates and other invitees with his magical performance, 'Vigayan', especially composed for the function. Also worth mentioning is the cultural programme of exhilarating music, dance and drama that the IIT Bombay students presented in the evening of October 7, 2006.

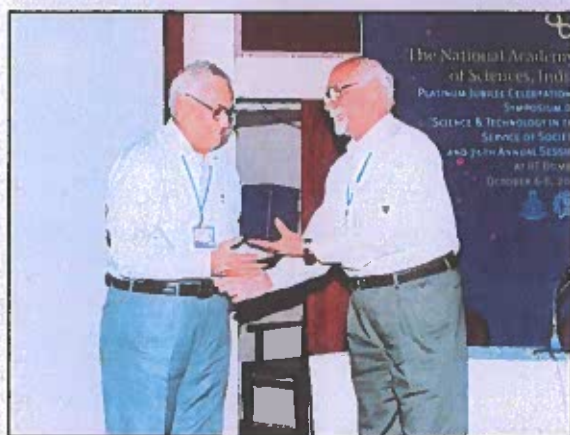






Pt. Hari Prasad Chaurasia playing the flute

**76<sup>th</sup> Annual Session** - The 76th Annual Session of the Academy included Addresses of the Sectional Presidents, Invited Speakers and presentation of research papers by the Members and Fellows of the Academy on October 7 and 8, 2006.



Prof. V.P. Kamboj felicitating Prof. Suresh Chandra



Prof. V.P. Kamboj felicitating Prof. S.P.S. Khanuja

The Presidential Address, in the Section of Physical Sciences, was delivered by Prof. Suresh Chandra, Emeritus Scientist, Department of Physics, Banaras Hindu University, Varanasi on 'Advancements in Physics'. Prof. Chandra in his illustrative Address traced the advancements from earlier to modern times.

In the scientific sessions of Physical Sciences Section, Prof. Anand Mohan of Department of Geology, Banaras Hindu University, Varanasi delivered an informative lecture on 'Metamorphism under extreme conditions: A window to earth's interior'.

The Presidential Address, in the Section of Biological Sciences, was delivered by Prof. S.P.S. Khanuja, Director, Central Institute of Medicinal and Aromatic Plants, Lucknow on 'The power of plant metabolome: Secondary metabolites as high value bioactive phytochemicals'.

Prof. Khanuja described the characteristics of plants with an epithet derived from Dr. Norman E. Borlaug, the Nobel Laureate ***'Plants do not speak, they just whisper! Therefore, you have to be real close to them to understand them'***. He emphasized that plants have offered valuable and safe natural sources of medicines and agents of therapeutic, industrial and environmental utilities, across the varied cultures and civilizations. The actual credit goes to the plant secondary metabolites, perhaps synthesized and accumulated in various tissues





for its own defense, making the given plant species much more valuable for the biological activities they possess with therapeutic and/or industrial applications including the aromas, flavours and fragrances. After giving a detailed account of different kinds of secondary metabolites, pathway engineering to modulate secondary metabolite production and biology of active plant molecules (phytochemicals), Prof. Khanuja stressed on '**Farming to Pharming**' strategy for exploiting the phytochemicals leading to the cultivation of designed genotypes of medicinal and aromatic plants with defined chemotypes in terms of metabolites' composition and quality.

Three invited lectures were also delivered by the distinguished scientists during the scientific sessions on October 7 & 8, 2006, to encourage the young scientists attending the session. Prof. R.P. Sharma of Indian Agriculture Research Institute, New Delhi, Prof. Debi P. Sarkar of the Department of Biochemistry, and Dr. A.K. Pradhan of the Department of Genetics, University of Delhi South Campus, New Delhi gave conceptual and illustrative talks on 'Genomics for Designer Crops', 'Role of histidine residue of a synthetic lipid in enhancing virosome mediated targeted gene delivery to liver cells *invitro* and in whole animal : Implications in somatic gene therapy' and 'Is conventional plant breeding and modern biotechnological genomics approaches at cross roads', respectively.

In both the sections 50 oral presentations and 150 poster presentations were made.

During the Valedictory Function on October 8, 2006 the following awards were given by Prof. V.P. Kamboj, President of the Academy.

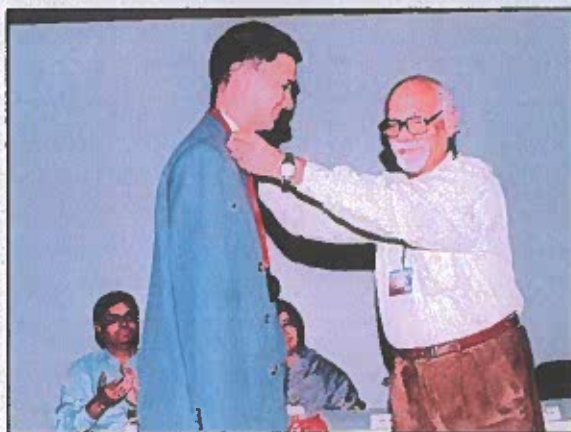
1. NASI Young Scientist Platinum Jubilee Awards to four young scientists viz. Dr. Mohd. Sohail Akhtar, Scientist Gr.IV(1), Division of Molecular & Structural Biology, Central Drug Research Institute, Lucknow; Dr. Saurabh Raghuvanshi, Assistant Professor, University School of Biotechnology, CGS Indraprastha University, Delhi; Dr. M. Jayakannan, Scientist-C, Specialty Polymers, Chemical Sciences and Technology Division, Regional Research Laboratory, Thiruvananthapuram and Dr. Ankush Mittal, Assistant Professor, Department of Electronics and Computer Engineering, Indian Institute of Technology, Roorkee.
2. NASI-Swarna Jayanti Puraskar to Dr. Madhura Y. Narkar of National Institute for Research in Reproductive Health, Mumbai.
3. NASI-Platinum Jubilee Appreciation Awards in Oral presentation and Poster presentation, one in each category in Biological and Physical Sciences.



Prof. V.P. Kamboj presenting NASI-Young Scientist Platinum Jubilee Awards





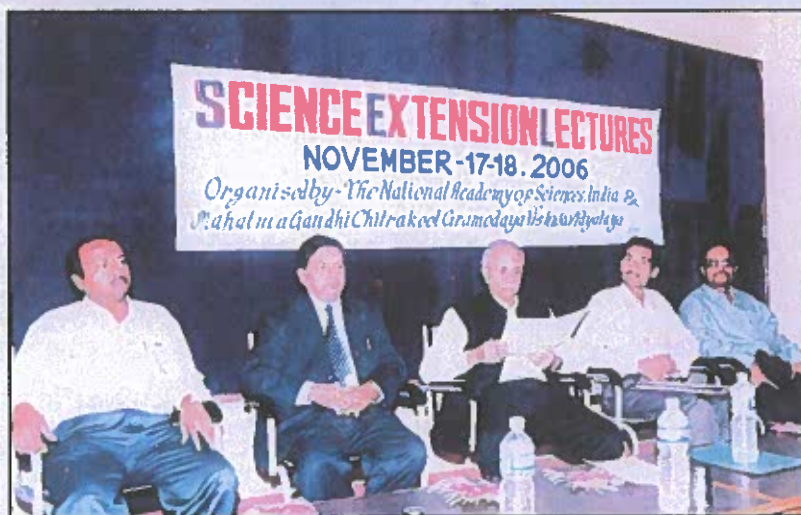


Prof. V.P. Kamboj presenting NASI-Young Scientist Platinum Jubilee Awards

## Activities

### (A) Science Communication Activities and National Science Day Celebrations -

Like previous years, the Academy organized science communication activities to stimulate the students for cultivation of scientific temperament and to opt science as a career. The activities organized during the year included science extension lectures, summer school, science quiz, debate, oration, exhibition, essay, creative writing and painting contest, talent search, vigyan-chaupal and workshops for the teachers.



Science Extension Lecture at Chitrakoot

**(I) Science Extension Lectures** - A lecture on **Neurobiological basis of alcohol addiction** was delivered by Professor Subhash C. Pandey, Director, Department of Psychiatry, Anatomy and Cell Biology, University of Illinois at Chicago & Jesse Brown VA Medical Centre, Chicago, on December 12, 2006 in the Auditorium of the Academy. Prof. B.N. Dhawan, Formerly Director, CDRI, Lucknow presided in the lecture and Prof. G.K. Srivastava, Managing Editor, Proceedings of NASI (Biological Sciences), proposed the vote of thanks.

The lecture was attended by the Fellows and Members of the Academy and a large number of students and teachers.



**(a) Outstation Lectres - The following outstation lectures were held –**

**Datia, MP**

Sl. No.	Name of the Institution	Speakers	Topic	Date	No. of students/ teachers
1.	Sri Rawatpura Sarkar Institute of Technology & Science	Prof. S.L. Srivastava Prof. C.B.L. Srivastava Prof. Deepak Chandra Dr. Pankaj Srivastava Prof. Santosh B. Joshi Prof. B. Ramakrishna	Smart Devices Bioethics Biotechnology Cybercrime Computer Science Mathematical Modeling	4 <sup>th</sup> Nov., 2006	500
2.	Holy Cross Ashram School	Prof. S.L. Srivastava Dr. Pankaj Srivastava	Advances in Science and Technology Cryptography	4 <sup>th</sup> Nov., 2006	200
3.	Rani Laxmi Bai Public School	Prof. U.C. Srivastava Dr. Mohd. Masood	Endocrine Diseases Experiments on Food Adulteration	5 <sup>th</sup> Nov., 2006	150
4.	Navodaya Vidyalaya, Biker	Prof. S.L. Srivastava Prof. U.C. Srivastava Dr. Niraj Kumar Dr. Mohd. Masood	<b>Vigyan Chaupal on Education, Health, Nutrition and Food</b>	5 <sup>th</sup> Nov., 2006	250
5.	Sri Rawatpura Sarkar Institute of Technology and Science	Prof. U.C. Srivastava Dr. Niraj Kumar Dr. Abhai Pandey Dr. Mohd. Masood Dr. Pankaj Srivastava Dr. S.K. Chaturvedi	Antioxidants Nutrition Biochemical Aspects of Vaccination Experiments on Food Adulteration Mathematical Modeling Remote Sensing	6 <sup>th</sup> Nov., 2006	500

**Chitrakoot (UP and MP)**

1.	M.G. Chitrakoot Gramodaya Vishwavidyalaya	Prof. S.L. Srivastava Prof. C.B.L. Srivastava Prof. Krishna Misra Prof. B. Ramakrishna Prof. Thangadurai Prof. S.D. Adhikari	Rural Development Brain Biotechnology Mathematics and Computer Science Number Theory Applications of Mathematics	17 <sup>th</sup> Nov., 2006	150
2.	S.P.G. Vidyalaya	Prof. S.L. Srivastava	Advances in Physics	17 <sup>th</sup> Nov., 2006	100
3.	Chitrakoot Inter College, Karvi	Dr. Brijesh Pandey	Experiments in Physics	17 <sup>th</sup> Nov., 2006	300
4.	M.G. Gramodaya Vishwavidyalaya	Prof. U.C. Srivastava Prof. Deepak Chandra Dr. Pankaj Srivastava	Antioxidants Biotechnology Fuzzy Technology	18 <sup>th</sup> Nov., 2006	150
5.	Vidyadham School	Dr. Brijesh Pandey	Experiments in Physics	18 <sup>th</sup> Nov., 2006	100
6.	Sri Ganga Prasad Jan Sewa Inter College	Dr. Pankaj Srivastava Dr. Brijesh Pandey	Applications of Mathematics Experiments in Physics	18 <sup>th</sup> Nov., 2006	200





### Pratapgarh (UP)

1.	Sri Kripaluji Maharaj Girls Inter College, Kunda	Prof. S.L. Srivastava Prof. U.C. Srivastava Dr. Niraj Kumar Dr. Md. Masood	Smart Devices Waterborne Diseases Nutrition Experiments on Food Adulteration	14 <sup>th</sup> Nov., 2006	200
2.	Prabhat Academy	Dr. Md. Masood Prof. U.C. Srivastava	Experiments on Food Adulteration Diseases and Health	22 <sup>nd</sup> Dec., 2006	150
3.	Brahmi Balika Inter College	Prof. S.L. Srivastava Prof. U.C. Srivastava Dr. Md. Masood Dr. Niraj Kumar	Vigyan Chaupal on Education, Health, Food and Nutrition	22 <sup>nd</sup> Dec., 2006	150
4.	Kripaluji Maharaj Inter College Kunda	Prof. C.K. Dwivedi	Electronics	22 <sup>nd</sup> Sept., 2007	200
5.	Rani Girjadevi Inter College Kunda	Prof. C.B.L. Srivastava	Brain	22 <sup>nd</sup> Sept., 2007	150
6.	M.B.S. Inter College	Prof. U.C. Srivastava	Role of free Radicals in Human body	28 <sup>th</sup> and 29 <sup>th</sup> Sept., 2007	100
7.	G.P.S. Inter College	Dr. Sharda Sundaram	Atoms & Molecules		100
8.	Prabhat Academy	Prof. S.L. Srivastava	Smart Devices		150
9.	Shweta G.I. Collge	Dr. Abhay Pandey	Biotechnology & its Scope		75

### Chapra (Bihar)

1.	Prof. U.C. Srivastava	Antioxidants	Lectures and Demonstrations at Chapra Central School & 3 other institutions of Chapra	18 <sup>th</sup> and 19 <sup>th</sup> Sept., 2007	300 on each day
2.	Prof. S.L. Srivastava	Green House Effect			
3.	Prof. C.B.L. Srivastava	Brain			
4.	Dr. Sharda Sundaram	Chemical Pollution			

### (b) Lectures at Allahabad -

Sl. No.	Name of the Institution	Speakers	Topic	Date	No. of students/ teachers
1.	Bal Bharati Inter College	Dr. Sharda Sundaram	Causes of Global Warming	19 <sup>th</sup> Aug. 2007	150
2.	Ewing Christian College	Prof. Alok Srivastava	Nuclear Radiation and Hazards	22 <sup>nd</sup> Aug. 2007	200
3.	NASI	Prof. Alok Srivastava	Nuclear Accidents : Myth & Reality	22 <sup>nd</sup> Aug. 2007	275
4.	Jwala Devi Inter College	Prof. C.K. Dwivedi	Electronics; and Telecommunications	28 <sup>th</sup> Aug. 2007	235
5.	G.G.I.C.				
6.	Swami Vivekanand Vidyashram	Prof. C.B.L. Srivastava	Colour Vision	13 <sup>th</sup> Sept. 2007	150
7.	Coloneiganj Inter College	Prof. U.C. Srivastava	Antioxidants-a boon for the life of human beings	14 <sup>th</sup> Sept. 2007	200
8.	NASI	Prof. Narayanan Srinivas	Mind & Consciousness	15 <sup>th</sup> Sept. 2007	175





9.	Crosthwaite Girls Inter College	Prof. S.L. Srivastava	Green House Effect	27 <sup>th</sup> Sept. 2007	200
10.	Umrao Singh Memorial School	Prof. S.L. Srivastava	Science Teaching-Physics	28 <sup>th</sup> Sept. 2007	200
11.	Umrao Singh Memorial School	Prof. C.B.L. Srivastava	Science Teaching-Biology	28 <sup>th</sup> Sept. 2007	200

**(II) Centenary Celebrations of Miracle Decade of Discoveries in Science** - The Academy organized several lectures and a Seminar on "Centenary of Miracle Decade (1895-1905) of Discoveries in Science" during November 2006 – January 2007. The decade is marked by remarkable discoveries in the areas of Physics and Biology.

**Lectures at Allahabad under Centenary Celebrations of Miracle Decade of Discoveries in Science** - The following lectures were held -

S. No.	Name of the Institution	Speakers	Topic	Date
1.	Mary Lucas Inter College	Prof. A.K. Gupta	Electronics and Telecommunication	4 <sup>th</sup> Nov., 2006
2.	Narayani Ashram Inter College	Prof. C.K. Dwivedi	Electronics and Telecommunication	9 <sup>th</sup> Nov., 2006
3.	USM Girls Inter College	Dr. Anjana Pandey	Genetics	9 <sup>th</sup> Nov., 2006
4.	NASI	Prof. Indira Mehrotra Dr. Anjana Pandey	Atom to Quarks Genetics to Biotechnology	14 <sup>th</sup> Nov., 2006
5.	M.L. Convent Inter College	Prof. S.L. Srivastava	Quantum Physics	15 <sup>th</sup> Nov., 2006
6.	D.P. Girls Inter College	Prof. Krishna Mishra	Genetics	15 <sup>th</sup> Nov., 2006
7.	Tagore Public School	Prof. C.K. Dwivedi	Electronics and Telecommunication	21 <sup>st</sup> Nov., 2006
8.	CAV Inter College	Prof. Krishna Misra	Genetics	22 <sup>nd</sup> Nov., 2006
9.	Prayag Mahila Vidyalaya	Prof. Indira Mehrotra	Atom to Quarks	22 <sup>nd</sup> Nov., 2006
10.	St. Joseph Convent Inter College	Prof. Rajiv Sharan	Health	22 <sup>nd</sup> Nov., 2006
11.	Army School, New Cantt.	Dr. G.C. Nandi	Electronics and Robotics	23 <sup>rd</sup> Nov., 2006
12.	Bharat Scouts & Guide Inter College	Dr. Manvendra Tripathi	Communicable Diseases	23 <sup>rd</sup> Nov., 2006
13.	B.B.S. Inter College	Prof. U.C. Srivastava	Endocrine and Diseases	30 <sup>th</sup> Nov., 2006
14.	Kendriya Vidyalaya, New Cantt.	Prof. S.L. Srivastava	Quantum Physics	30 <sup>th</sup> Nov., 2006
15.	Colonelganj Inter College	Dr. Niraj Kumar Dr. Pankaj Srivastava Prof. C.K. Dwivedi	Psychoanalysis-I Psychoanalysis-II Electronics and Telecommunications	6 <sup>th</sup> Dec., 2006 8 <sup>th</sup> Dec., 2006

**A Seminar on the Centenary Celebrations of Miracle Decade of Discoveries in Science** was held on January 21-22, 2007 at the Academy. While inaugurating the Seminar in the Auditorium of NASI, Prof. Murli Manohar Joshi, Member of Parliament and Former Union Minister, S&T and Ocean Development, emphasized the rich Indian heritage of scientific enquiry and temperament *vis-a-vis* global scenario. He recalled the outstanding contributions of Sir Jagdish Chandra Bose and other scientists of India and exhorted the young scientists to undertake basic research on problems important to society. Appreciating the organization of this seminar, Prof. Joshi asked the Academy to regularly organize such seminars. He said, "Every year like Magh Mela the Academy should organize a "Vigyan Kalp Vikas" in the month of "Magh" in which eminent scientists interact with young minds and generate excitement in them.







Hon'ble Prof. Murli Manohar Joshi lighting the lamp.  
Hon'ble Prof. M.G.K. Menon is also seen in the photograph



Seated on the dais (R to L) Hon'ble Prof. M.G.K. Menon,  
Hon'ble Prof. Murli Manohar Joshi, Prof. Ashok Misra  
and Prof. (Mrs) Krishna Misra

Dr. (Mrs.) Manju Sharma, Executive Director and Chairperson, Governing Body of Indian Institute of Advanced Research, Gandhinagar, Gujarat and Former Secretary, Department of Biotechnology, Govt. of India, delivered a very informative lecture on "New Horizons of Biotechnology". She traced back the development and adoption of biotechnology in every sphere of life be in agriculture, medicine, health care or environment. She said biotechnology is knowledge intensive industry, which offers numerous career opportunities. One can become a teacher, researcher or a service provider. The industry has shown a growth of 37% in last year. She said young children have a great future in biotechnology. She appealed the NASI and other Academies to take the advancement in science to young children and make them aware about the potential.



Scientists delivering their addresses (Clockwise Prof. Ashok Misra,  
Prof. S.K. Joshi, Prof. Anil Kumar Singh and Prof. P.N. Tandon)





Prof. P.N. Tandon, an eminent neurosurgeon and President of National Brain Research Centre, Manesar delivered a talk on "Human Brain". He said that brain is a mysterious organ we know what it does but yet no body knows how it works.

In post lunch session, an illustrative and interesting lecture was delivered by Prof. S.K. Joshi, Formerly Director General, CSIR, New Delhi; after which an interactive session was organized in which the queries raised by the participants were suitably satisfied by the learned speakers. Prof. Krishna Misra, Convener of the Seminar proposed vote of thanks in the end of the first day.

On the next day Dr. Ashok Pandey, Head, Biotechnology Division, Regional Research Laboratory, Trivandrum, dealt in detail about the various methods of biotechnology for welfare of human being. Prof. C.L. Khetrapal, Director, Centre for Bio-Medical Magnetic Resonance, SGPGI, Lucknow also delivered a lecture on "Role of MRI in detection and diagnosis of several diseases". In the post-lunch session Prof. Shakti Prosad Ghosh, Kolkata, Prof. Anil Kumar Singh, IIT-Bombay, and Prof. K.D.S. Mudhar, BARC, Mumbai delivered lectures on varied topics of interest on which several questions were asked by the student-participants. Prof. M.C. Chattopadhyaya, Co-convener of the Seminar proposed vote of thanks in the end of the second day.

On both the days, the Seminar was attended by a large number of students and teachers, Fellows and Members of NASI and other distinguished guests.

### **(III) Science Communication Programmes and Celebration of National Science Day**

On the eve of National Science Day (February 28, 2007) the Academy organized the following activities, under its Science Communication Programme.



**Prof. S.L. Srivastava delivering his address**

**Allahabad District Level Talent Search for the Student of Class XI - Biological Sciences** (February 12, 2007), **Chemical Sciences** (February 14, 2007) and **Physical & Computer Sciences** (February 15, 2007)

**Science Creative Writing & Painting Contest** (February 15, 2007)

**Allahabad District Level - Science Exhibition** (February 19, 2007), **Science Oration** (February 20, 2007), **Science Debate** (February 21, 2007) and **Science Quiz** (February 22, 2007).





### UP State Level -

Science Quiz (February 24, 2007), Science Debate (February 25, 2007), Science Oration (February 26, 2007), Essay Contest (February 26, 2007) and Science Exhibition (February 27, 2007).



A view of Science Quiz (L) and Oration (R) contests



A view of Science Exhibition

Topics for Debate, Oration and Essay were "Use of Conventional Energy Sources be restricted", "Green Power : Challenges for the Millennium" and "More crop per drop" respectively.

In all these activities a total of more than 1000 students participated.

During the science week, a series of lectures were also delivered to the students and teachers of state level contests by the following speakers :

Prof. H.C. Verma on Science in Ancient India, Prof. (Mrs.) Krishna Misra on Biotechnology, Prof. U.C. Srivastava on Antioxidants, Dr. Abhay Pandey on Blood groups, Dr. Brijesh Pandey on Experiments in Physics, Dr. Mohd. Masood on Testing of Food adulterations and Dr. Pradeep Tandon on Tobacco menace.

**National Science Day Celebrations** - The National Science Day was celebrated on February 28, 2007 in the jam-packed auditorium of the Academy at Allahabad. Prof. C.L. Khetrapal, Director, Centre for Bio-Medical Magnetic Resonance, SGPGI, Lucknow was the Chief Guest. Prof. S.L. Srivastava, Coordinator, Science Communication Programme of the Academy gave a brief introduction of the speakers and the programmes held on the eve of National Science





Day. He appreciated the efforts of all the resource persons and expressed his deep sense of gratitude for their valuable co-operation which made the programme very successful. On this day the NASI-Science Teacher Awards for generation of scientific temperament and motivating students to participate in scientific activities were given by Prof. Khetrpal to Dr. Mohammad Masood, Lecturer in Chemistry, Jamuna Christian Inter College, Allahabad and Sri Brajesh Dixit, Assistant Teacher (Science), Sri Narayan Inter College, Badera, Auriya, UP.



Prof. C.L. Khetrpal presenting NASI-Science Teacher Awards to Dr. Mohammad Masood (L) and Sri Brajesh Dixit (R). Prof. S.L. Srivastava is also seen in the photograph



Prof. Khetrpal also delivered a 10+2 level lecture on Principles of Nuclear Magnetic Resonance and Magnetic Resonance Imaging, a powerful medical diagnostic technique. He also discussed the role of liquid crystal materials in modern technology.

The winners of debate and oration re-delivered their speeches on this occasion.

Prof. C.L. Khetrpal distributed the certificates and prizes to the winners of the activities



Prof. C.L. Khetrpal presenting the certificate and prizes to winners



Mrs. Mamata Khare presenting Prof. H.C. Khare Memorial Gold Medal to the winner

The name of the winners are given below

### Allahabad District Level Contests

SCIENCE QUIZ - 1st M.L. Convent - Mr. Aditya Singh, Ms. Neelam Yadav, Mr. Brijendra Yadav and 2nd Rama Devi Balika Inter College - Ms. Pankhuri Singhal, Ms. Shruti Srivastava, Ms. Divya Kesherwani.





SCIENCE DEBATE - Ist Mr. Gagan Tripathi, Tagore Public School, Ist Ms. Arpita Tripathi, Rama Devi Balika Inter College and 2nd Mr. Fazal Masood, Tagore Public School, 2nd Ms. Shivani Chandra, St. Anthony's Girls Inter College.

SCIENCE ORATION - Ist Ms. Nikita Misra, Gauri Pathshala Girls Inter College, Ist Mr. Siddharth Srivastava, St. Joseph's College and 2nd Ms. Nikita Kaushik, St. Anthony's Girls Inter College, 2nd Mr. Alankar Bhattacharya, Boy's High School.

SCIENCE EXHIBITION NON-WORKING MODEL - Ist Ms. Anjali Srivastava, Rama Devi Balika Inter College and 2nd Mr. Tejal Gupta, St. Anthony's Girls Inter College.

CREATIVE WRITING CONTEST - Ist Mr. Pranav Saluja, St. Joseph's Convent and 2nd Mr. Abhishek Misra, Maharishi Patanjali Vidya Mandir.

CREATIVE PAINTING CONTEST - Ist Mr. Akash Kushwaha, Maharishi Patanjali Vidya Mandir and 2nd Ms. Farha Siddiqui, Tagore Public School.

TALENT SEARCH PHYSICAL AND COMPUTER SCIENCES - Ist Mr. Himanshu Agarwal, St. Joseph's Convent and 2nd Mr. Tarun Kalra, Tagore Public School.

TALENT SEARCH CHEMICAL SCIENCES - Ist Mr. Dhawal Kirti Tiwari, St. Joseph's College and 2nd Mr. Aayush Agarwal, Boy's High School.

TALENT SEARCH BIOLOGICAL SCIENCES - Ist Mr. Vibhav Srivastava, Boy's High School and 2nd Ms. Abha Singh, Bishop Johnson School (Girls Wing).

#### **UP STATE LEVEL CONTESTS**

SCIENCE QUIZ - Ist - Allahabad - Mr. Aditya Singh, Ms. Neelam Yadav, Mr. Brijendar Yadav and 2nd Ghaziabad - Mr. Ashish Patel, Mr. Suveen Kumar, Mr. Shailesh Yadav.

SCIENCE DEBATE - Ist Ms. Ankita Goel, Agra (Prof. H.C. Khare Memorial Gold Medal), Ist Ms. Neha Gupta, Meerut, Ist Mr. Gagan Tripathi, Allahabad and 2nd Mr. Amit Kumar, Noida, 2nd Mr. Yashaswini Pratap, Noida, 2nd - Ms. Priti Tiwari, Kanpur

SCIENCE ORATION - Ist Mr. Nitin Kushwaha, Etawah (Prof. U.S. Srivastava Memorial Gold Medal) and Consolation Prize - Mr. Dhruv Pratap Tripathi, Ghazipur, and Ms. Nikita, Mishra, Allahabad

SCIENCE EXHIBITION (NON-WORKING MODEL) - Ist Mr. Amit Kumar, Bulandshahar and 2nd Mr. Tejal Gupta, Allahabad

SCIENCE EXHIBITION (WORKING MODEL) Ist Mr. Ankur Trivedi, Kanpur (Prof. Krishnaji Memorial Gold Medal), Ist Mr. Ankit Sharma, Kanpur and 2nd Mr. Ashish Anjan, Muzaffarnagar, 2nd Mr. Vinit Sharma, Muzaffarnagar

CONSOLATION PRIZES - Quiz - Mr. Manish Upadhyay, Deoria; Working Model - Ms. Manvi Srivastava, Agra





UP STATE LEVEL SCIENCE ESSAY - 1st Mr. Shivaseesh Khare, Jhansi, 2nd Mr. Kawstov Singh, Allahabad and 3rd Kashfi Fatima, Allahabad

In the end Prof. C.B.L. Srivastava proposed the vote of thanks to the Chief Guest, invitees, participants resource persons (listed below), members of the NASI staff and to the Press and Media.

#### Resource Persons :

Prof. S.L. Srivastava, Prof. G.K. Srivastava, Prof. U.C. Srivastava, Prof. Krishna Misra, Prof. C.K. Dwivedi, Prof. H.C. Verma, Prof. M.C. Chattopadhyay, Prof. (Mrs.) Indira Mehrotra, Prof. D.K. Chauhan, Dr. Pankaj Srivastava, Prof. A.K. Srivastava, Prof. Rajiv Sharan, Dr. Brijesh Pandey, Dr. Ravindra Dhar, Dr. Abhay Pandey, Dr. (Mrs.) Sharda Sundaram, Dr. Rajeev Srivastava, Dr. (Mrs.) Anjana Pandey, Dr. (Mrs.) Shanti Sundaram, Dr. Mohd. Masood, Prof. (Ms.) Anita Gopesh, Prof. Thangadurai, Prof. B. Ramakrishna, Prof. A.K. Gupta, Prof. S.D. Adhikari, Prof. M.M. Verma, Dr. Manvendra Tripathi, Dr. (Mrs.) Uttara Ratna, Dr. Kailash Uttam, Prof. Deepak Chandra, Prof. Santosh B. Joshi, Dr. Surya Kant Chaturvedi, Dr. Ramesh Chandra, Dr. G.C. Nandi, Dr. (Mrs.) Sarita Pandey, Dr. Bechan Sharma, and Dr. G.S. Darbari.

**(IV) Summer School** - The Summer School (2007) was organized by the Academy from 12<sup>th</sup> to 22<sup>nd</sup> June 2007 in which about 65 science students of +2 level from 30 schools/colleges of Allahabad participated. They were selected on the basis of the recommendations of their Principal/Science Teacher. The School was inaugurated on June 12, 2007 with the Keynote Address delivered by Prof. S.P. Misra, Gastroenterology Department, Motilal Nehru Medical College, Allahabad, on "Ten Commandments" for science students with interesting anecdotes on important discoveries. Before the lecture, Prof. S.L. Srivastava, Coordinator, Science Communication Programme welcomed the Fellows, Members, teachers and students present on this occasion. Prof. U.C. Srivastava, Convenor of the Summer School, gave a detailed account of the 11 days programme. In the end of the Inaugural Session Prof. C.B.L. Srivastava proposed a vote of thanks.

A brief of the activities held during the Summer School is given below –

Date	Experiments/Demonstrations/ Lectures held	Experts
June 12, 2007	Fundamentals of Physics	Prof. S.L. Srivastava
	Experiments on Electronic Circuits	Prof. C.K. Dwivedi and Dr. Ravindra Dhar
June 13, 2007	Biodiversity	Dr. Shonali Chaturvedi
	Visit to Medicinal Botanical Garden and Herbarium preparation, BSI, Allahabad	Prof. G.K. Srivastava, Dr. K.K. Khanna and Dr. Shonali Chaturvedi
	Environment, Pollution and Green House Effect	Prof. J.S. Singh
	Demonstration and Lecture on Photosynthesis	Prof. A.S. Raghuvanshi
	Film show and Interactive Session on Global Warming	Dr. Amit P. Sharma
June 14, 2007	Lecture on Computer Applications	Prof. R.K. Srivastava
	Demonstration of Electronic circuits and hardware of computer	Prof. C.K. Dwivedi
	A show on Stars & Planets in the Jawahar Planetarium, Allahabad	Sri Pramod Pandey
June 15, 2007	Experiments on Heat, Light and Mechanics	Dr. O.P. Gupta
	Demonstration on software and hand on practice of CAD	Dr. Rajeev Srivastava





June 16, 2007	Experiments in Inorganic, Organic and Analytical Chemistry	Dr. Sharada Sundaram
	Challenges and Opportunities in Physics Research	Prof. H.C. Verma
	Experiments on Heat, Mechanics and Electromagnetism	Dr. Brajesh Pandey and Mrs. Sarita Pandey
June 17, 2007	Experiments on Heat, Mechanics and Electromagnetism	Dr. Brajesh Pandey and Mrs. Sarita Pandey
	Film Show on Brain	Dr. Kartikeya Sharma
	Respiratory Diseases	Dr. Ashish Tandon
	ENT Diseases	Dr. A. Srivastava
June 18, 2007	Food and Water	Prof. C.B.L. Srivastava
	Experiments to analyse water	Dr. Mohd. Masood
June 19, 2007	Experiments on Inorganic and Analytical Chemistry	Dr. Sharada Sundaram
	Calculation of Nutritive/Energy Value & BMI	Dr. Niraj Kumar
	Experiments on testing of food adulteration	Dr. Mohd. Masood
June 20, 2007	<b>Bio-Session</b>	
	Lecture and demonstration on medicinal plants and development of plant products	Dr. Sharad Srivastava and Dr. Manjusha Srivastava
	Lecture on Flora	Dr. Pradeep Srivastava
	Visit to Botany Museum and Garden, Department of Botany, Allahabad University	Prof. D.K. Chauhan and Dr. S.P. Tiwari
	Experiments on Plant Physiology	Prof. G.K. Srivastava and Dr. Sheo Mohan Prasad
	<b>Maths Session</b>	
	Set and Counting	Dr. D. Pandey
	Challenges in Mathematics	Dr. Pankaj Srivastava
	Polar Coordinate System	Dr. S.N. Singh
June 21, 2007	<b>Joint Session</b>	
	Lecture with slide show on Endoscopy	Prof. S.P. Misra
	Antioxidants	Prof. U.C. Srivastava
	<b>Bio-Session</b>	
	'How big and how small: Ultrastructure'	Prof. C.B.L. Srivastava
	Experiments on mitochondrial slide preparation, Barr body detection and polytene chromosomes	Prof. U.C. Srivastava
	<b>Maths Session</b>	
	Cryptography	Dr. Pankaj Srivastava
	Geometry	Dr. D. Pandey
	Partition of number and contribution of Ramanujan	Dr. S.N. Singh
June 22, 2007	Applications of Biotechnology	Prof. Krishna Misra
	Tools of Biochemistry/Biotechnology	Dr. Abhay Pandey
	Communicable Diseases	Dr. Manvendra Tripathi

On the last day after the concluding lecture session, a group discussion was held among the students on Global Warming : Myth or Reality; and after three rounds Richa Pandey of St. Anthony's Convent Girls Inter College and Anurag Maurya of R.R.D. Inter College were declared the first and second winners of the event, who were given the prizes in the Valedictory Function. An assessment test was also conducted before the Valedictory Function. During the Summer School, about 200 experiments were demonstrated to the students out of which 75 experiments were performed by them.

**(V) Teachers Workshop** - The National Academy of Sciences India in collaboration with Trees for Life, U.S.A. organized a Teachers Workshop on 'Experiments in Science and Total Physical Response (TPR) Stories' from May 16 to 18, 2007 at Allahabad. About 125 teachers from 30 different intermediate colleges of Uttar Pradesh and Madhya Pradesh participated in this workshop. The Workshop was inaugurated by Sri Balbir Mathur, President, Trees for Life,





U.S.A. on May 16, 2007, in the Auditorium of the Academy at Allahabad. Prof. Mathur, in his address explained the methodology adopted by his group for making the expression more effective; and pointed out that this could be an exercise to impart training among the teachers for improving their communication skill by creating stories on the principles of science. Thus, by the application of TPR stories, scientific teaching could be made interesting. Before the inauguration Prof. S.L.Srivastava, Co-ordinator of Science Communication Programme of the Academy, welcomed the Fellows and Members of the Academy, teachers and other distinguished guests. Prof. Srivastava introduced Mr. Blaine Ray, the expert of TPR stories from U.S.A.. In the end of the Inaugural Session Prof. C.B.L.Srivastava proposed a vote of thanks.

In the technical sessions, Mr. Blaine Ray conducted the Workshop on 16-18 May 2007 from 10.00 a.m. to 1.00 p.m.. On all three days the afternoon sessions were packed with demonstration and experiments on Physics and Chemistry; the experts were Dr. Brajesh Pandey, Mrs. Sarita Pandey, Dr.O.P.Gupta and Dr. Mohd. Masood.

The teachers learnt effective methods of scientific teaching and techniques of effective communication during these three days.

#### **(VI) Workshop on Biological Sciences & Orientation Programme for the DNA Club -**

The workshop on Biological Sciences & Orientation Programme for the DNA Club was inaugurated on Sept 07, 2007 in the auditorium of the National Academy of Sciences India. The Academy organised the programme as a part of its Science Communication Activities as well as Orientation for the Members of the DNA Club. Recently a **Project on "Establishment of Regional Resource Agency for the Department of Biotechnology's Natural Resources Awareness Club"** has been sanctioned by the D B T , Govt of India to the Academy. Prof J.S. Singh, Emeritus Professor of the Department of Botany, B.H.U., Varanasi while delivering his Key- note Address on Biodiversity in the Inaugural Session emphasized the importance of biodiversity for checking mass extinction of the species. Prof. S.L. Srivastava, Coordinator of the Science Communication Programme, welcomed the teacher-participants of the intermediate colleges from about 45 schools of the three states - U.P., M.P. and Bihar, the Fellows & Members of the Academy, Teachers of Allahabad University and other Institutions of Allahabad. Dr Niraj Kumar, Principal Investigator for the Project and Assistant Executive Secretary of the Academy conducted the Inaugural Session of the workshop. Prof. U.C. Srivastava, Convener, gave a brief account of the activities to be held in three days. Prof. C.B.L. Srivastava, formerly Professor and Head of the Department of Zoology, Allahabad University, proposed the vote-of-thanks. Also present on this occasion were Dr. M.S. Sinha, Executive Secretary of the Academy, Prof. Dipika Kaul, Prof Pratima Gaur, Prof. Anita Gopesh, Prof. D.K. Chauhan, Prof. S.P. Tiwari, Dr. O.N. Srivastava, Dr. K.P. Singh, Dr. V.C. Srivastava, Dr. Balbir Singh and others.

In the First Technical Session Prof.G.K. Srivastava, formerly Professor and Head of the Department of Botany, Allahabad University, gave a talk on 'Recent Advances in Taxonomy'. Technical Session II was held in the Department of Botany, A.U. under the supervision of Prof. D.K. Chauhan and Prof. S. P. Tiwari.

On the next day the workshop started with the lecture of Prof. C.B.L. Srivastava on Evolutionary Systematics; after which an interesting lecture on 'Five Kingdom System' was delivered by Prof. U.C. Srivastava .The participants also visited the Animal Museum in the Department of Zoology, Allahabad University under the guidance of Prof. Anita Gopesh and Prof. Krishna Kumar, followed by Experimental Work and Demonstration under overall supervision of Prof. U.C. Srivastava.





The morning session on the third day was devoted to Biotechnology and an illustrative lecture was delivered by Prof. Krishna Misra, a senior Fellow of the Academy; followed by demonstrations on microbiology under the supervision of Prof. G.L.Tiwari, Dr. Rama Kant Ojha and Dr. Richa Tandon. A lecture on Lessons on Ecology for Aquarium keeping was also delivered by Prof. C.B.L. Srivastava.

The Valedictory Session was Chaired by Prof. P.K. Seth, General Secretary of the Academy and Chief Executive Officer, Biotech Park, Lucknow. Prof. Seth, in his address appealed to the participants to spread the message of conserving nature, among the students and general mass. In the end, Dr. M.S. Sinha proposed the vote-of-thanks; and the certificates of participation were given to the teachers.

### **An Exercise to Broaden the Horizon of Science Communication Programmes -**

The expectations and the demands of twenty-first century are very challenging. This is an era of revolution in Information Technology. Several other advancements in Science & Technology as nanoscience, genetic engineering, gene therapy, cloning, have given a new dimension to the old beliefs and thoughts. The system needs a rapid change. The society requires graduates of school systems to identify and solve problems of day to day life. This requires innovative way of teaching, where students actively participate in the process of learning. Therefore the Academy decided to prepare a Vision Paper elaborating broad programmes for Science Communication Activities of the Academy for next five years for a target group of school students. A Sub-Committee comprising Prof. S.K. Joshi, the then President, Prof. V.G. Bhide, Prof. H.Y. Mohan Ram, Dr. D. Balasubramanian, Dr. Narendra Sehgal, Dr. B.R. Sitaram, Dr. Anil Joshi, a Science Teacher Awardee of the Academy and Prof. H.C. Khare, the then General Secretary of the Academy, were assigned with this task.

In the light of the recommendations of this Sub-Committee a Vision Paper was prepared. The Vision Paper has been sent to the National Council for Science and Technology Communication, New Delhi for financial assistance.

**An Assessment** - The popularity graph and the impact of Academy's Science Communication Programme is increasing significantly as shown in Figs 1-4, and, therefore, there is a need that the role of Headquarter and Chapters may be defined to extend the ongoing Science Communication Programmes to as many students as possible in the country.

### **Popularity Graph of Science Communication Programmes is given below -**

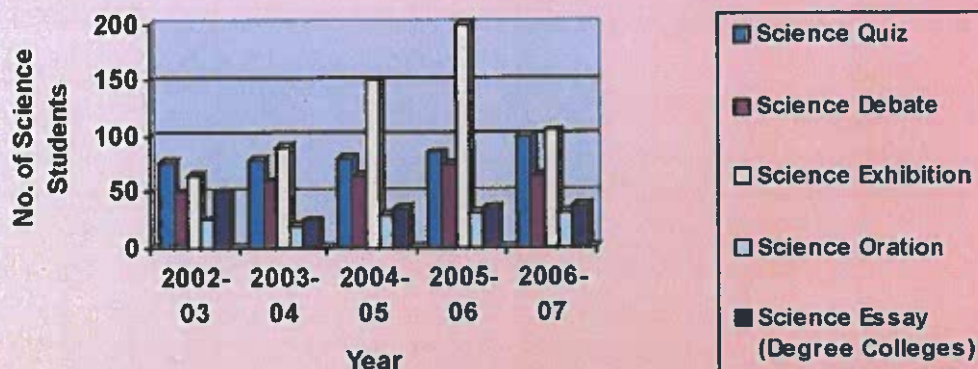


Fig. 1 - Number of science students (+ 2 level) who participated in Science Contests (i.e. Science Quiz, Debate, Exhibition, Oration and Essay at U.P. State level) during different years.



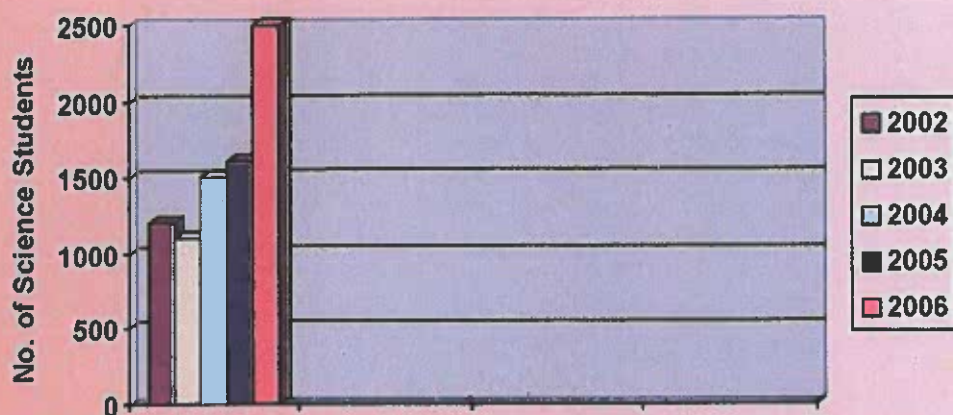


Fig. 2 - Number of science students who attended science extension lectures during different years

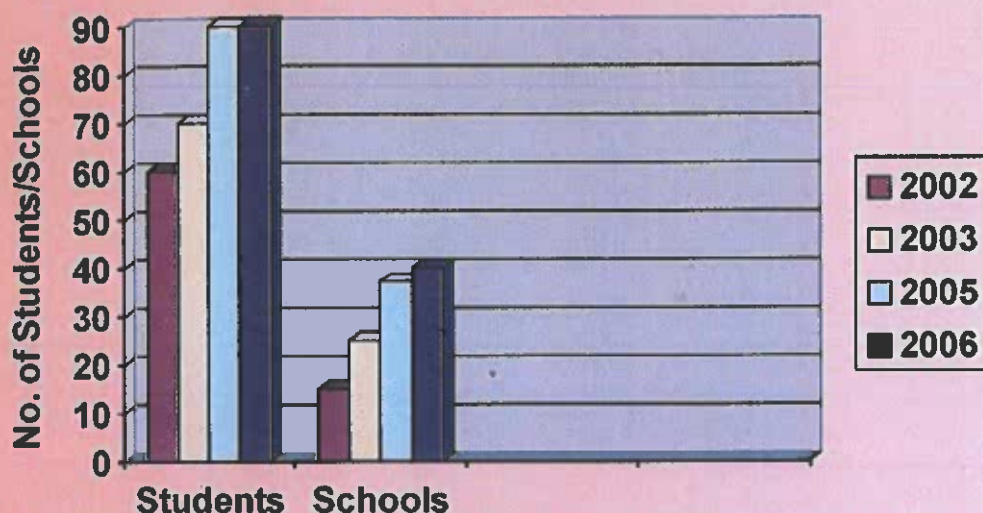


Fig. 3 - Number of science students who participated and the schools involved in the summer school during different years

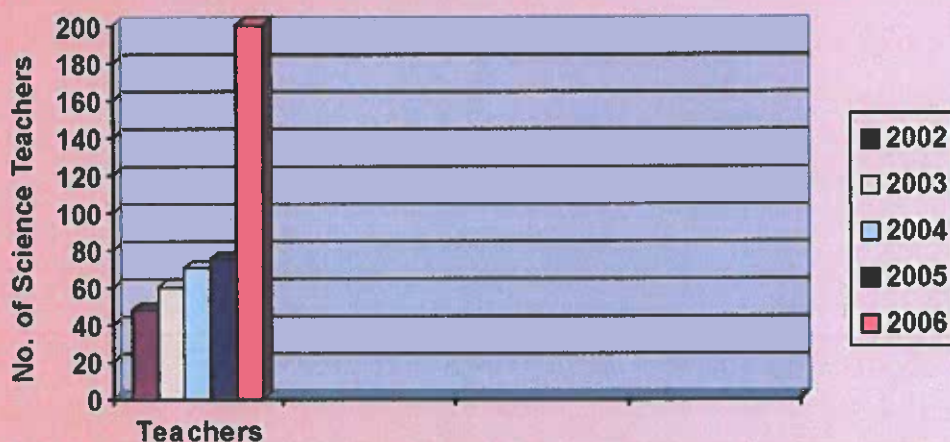


Fig. 4 - Number of Science Teachers who participated in Teachers' Workshops during different years

#### (B) Celebration of National Technology Day and Symposium on 'Medical Technology' -

This year the National Technology Day on the theme Medical Technology was celebrated on May 11, 2007 in the Academy. Prof. C.B.L.Srivastava, the Chief Guest traced the history of the celebration of the National Technology Day and said that it inspires the young scientists, entrepreneurs and technocrats to accept the challenges of rapid changes and problems of the modern world. Dr. S.P. Misra, Director, Kamala Nehru Memorial Hospital, Allahabad in his Key-note Address illustrated many tools and techniques like X-ray, CAT Scan, MRI, PET Scan etc. being adopted these days for making fast and accurate diagnosis of





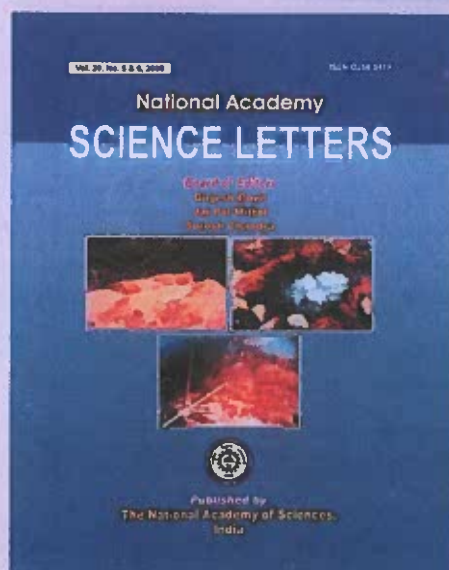
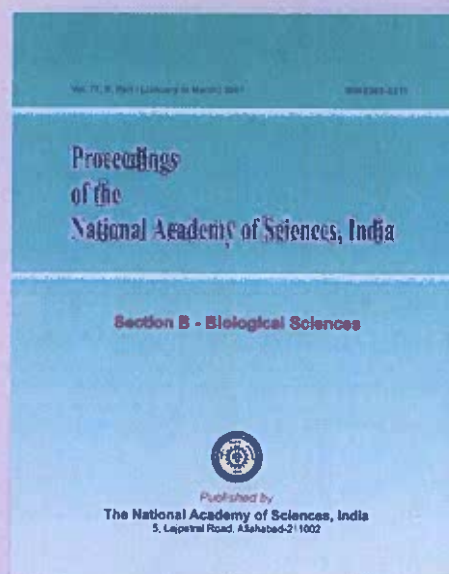
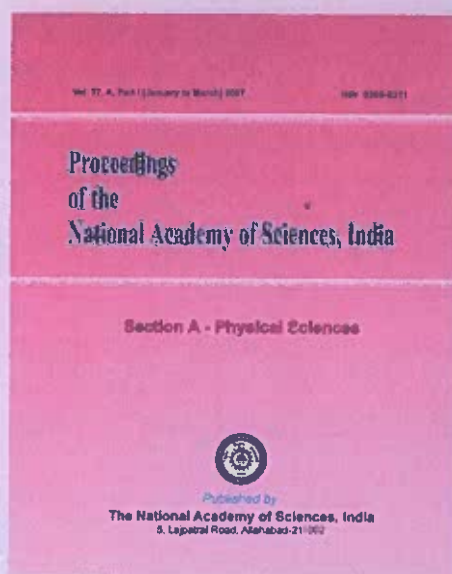
Several diseases. Prof. S.P. Misra, Department of Gastroenterology, M.L.N. Medical College, Allahabad also spoke on the occasion.

In the afternoon session Dr. Pradeep Tandon, ENT specialist Allahabad, delivered an informative and illustrative lecture on different methods of diagnosis and surgery for ENT disorders and diseases. Dr. Niraj Kumar explained in detail the scope and opportunities in the field of medical technology; and also the courses/ training offered at the reputed institutions.

Prof. R.K.Srivastava, CAD Lab, Motilal Nehru National Institute of Technology, Allahabad and Dr.Kailash Uttam, Physics Department , University of Allahabad were the convenor and co-convenor to organize the celebration of National Technology Day. Dr. M.S.Sinha, Executive Secretary of the Academy proposed a vote of thanks in the end of the Concluding Session.

## Publications of the Academy

The Academy published the following scientific periodicals and other publications as per schedule of publication -





1. Proceedings of the National Academy of Sciences, India Section A, Physical Sciences (Quarterly) Year 2007, Vol.77, Parts I to IV have been published.
2. Proceedings of the National Academy of Sciences, India Section B, Biological Sciences (Quarterly) Year 2007, Vol.77, Parts I to III have been published.
3. National Academy Science Letters (Bi-monthly) Year 2007, Vol.30, Nos. 1 to 10 have been published.
4. Year Book 2007.
5. A book on Vector Biology (Authors Prof. V.P. Sharma and Dr. Jagbir S. Kirti)
6. Annual Report (2006-2007).
7. Presidential Address on 'Population Growth : India in World Scene' by Prof. V.P. Kamboj, the then President of the Academy.
8. Address of Prof. S.P.S. Khanuja, Sectional President, Biological Sciences Section of 76<sup>th</sup> Annual Session.
9. Abstract of Papers of Physical Sciences Section of 76th Annual Session.
10. Abstract of Papers of Biological Sciences Section of 76th Annual Session.

## Memorial Award Lectures

1. The **Uttarakhand Chapter** of the Academy organized the first **Prof. Shri Ranjan Memorial Award Lecture** on October 12, 2006 at Dehradun. Dr. L.M.S. Palni delivered the Award Lecture.

Prof. M.G.K. Menon, F.R.S., Past President of the Academy presented the Medal, citation and Rs.10,000/- to Dr. Palni. The lecture was attended by distinguished scientists like Prof. (Mrs.) Manju Sharma, Prof. P.N. Tandon, Prof. V.P. Sharma, Prof. A.N. Purohit, Prof. G.S. Rawat, other Fellows and Members of the Academy, scientists from Forest Research Institute, and Wild Life Institute of India; and teachers and students from H.N.B. Garhwal University, Dehradun.

2. The **Lucknow Chapter** of the Academy organized **Prof. N.R. Dhar Memorial Award Lecture** delivered by Dr. C.L. Khetrapal, Distinguished Professor, SGPGI, Lucknow in the Small Auditorium, CDRI (Main Campus), Lucknow on 12 October 2006. The awardee was presented with a Medal, Citation and Rs.20,000/- by Prof. V.P. Kamboj, President of the Academy. A large number of Fellows besides Prof. P.K. Seth and Dr. M.M. Singh, Chairman and Secreary respectively of the Chapter, other office-bearers of the chapter, Members, faculty and students of the institute were present.

3. The first **Prof. Krishnaji Memorial Award Lecture** was delivered by Prof. M.G.K. Menon, F.R.S.; Adviser in the Department of Space, ISRO, on January 21, 2007 at NASI, Allahabad. Prof. M.G.K. Menon, while delivering the Lecture traced the developments in microwave physics, which has become the basis for development of communication technology, RADAR, TV and mobile phones. Also, he paid rich tributes to Prof. Krishnaji the illustrious son of India who worked at Allahabad University.







Hon'ble Prof. M.G.K. Menon receiving Prof. Krishnaji Memorial Lecture Award, Hon'ble Prof. Murli Manohar Joshi, Prof. Ashok Misra and Prof. P.K. Seth are also seen in the photograph

Prof. Menon was presented with a Medal, a Citation and Rs.10,000/- by Prof. Ashok Misra, President of the Academy. Besides Hon'ble Prof. Murli Manohar Joshi, Prof. Ashok Misra, Prof. P.N. Tandon, Prof. V.P. Sharma, Prof. (Mrs) Manju Sharma, Prof. S.K. Joshi, Prof. V.P. Kamboj and Prof. P.K. Seth, a large number of Council Members, Fellows, Members, teachers and students were present.

4. **The Bangalore Chapter** of the Academy organized **Prof. U.S. Srivastava Memorial Award Lecture** on February 14, 2007 at Bangalore. Prof. Raghavendra Gadagkar, Centre for Ecological Sciences, Indian Institute of Science, Bangalore delivered the lecture. The awardee was presented with a Medal, Citation and Rs.20,000/-. A large number of Fellows and Members of the Academy besides office-bearers of the chapter, faculty and students of the Institute were present.



Prof. Raghavendra Gadagkar receiving Prof. U.S. Srivastava Memorial Lecture Award

## **NASI-Platinum Jubilee Chairs/Fellowships/Awards**

1. **NASI-Platinum Jubilee Chairs** have been awarded to Prof. S.K. Joshi (New Delhi) and Prof. G. Padmanaban (Bangalore).
2. **NASI-Senior Scientist Platinum Jubilee Fellowships** have been awarded to -
  - (i) Prof. Suresh Chandra, Formerly Coordinator, CAS and Dean, Faculty of Science; Physics Department, Banaras Hindu University, Varanasi - 221 005.





- (ii) Prof. J.S. Singh, Professor Emeritus, CAS in Botany, Banaras Hindu University, Varanasi 221005 and
- (iii) Prof. S.P. Vij, Botany Department, Panjab University, Chandigarh 160014.

**3. NASI-Reliance Industries Platinum Jubilee Awards (2007) for Application Oriented Innovations** have been awarded to the following

***In Biological Sciences***

- (i) Dr. P.N. Rangarajan, Associate Professor, Dept. of Biochemistry, Indian Institute of Science, Bangalore 560012
- (ii) Dr. Tirlochan Mohapatra, Principal Scientist, NRC on Plant Biotechnology, Indian Agricultural Research Institute, New Delhi - 110012.

***In Physical Sciences***

- (i) Prof. Bimal Kumar Roy, Dean of Studies, Indian Statistical Institute, 203, B.T. Road, Kolkata - 700108.
- (ii) Dr. G.V. Madhava Sharma, Scientist - F (Deputy Director), D-211, Discovery Laboratory, Org.Chem.Div.III, Indian Institute of Chemical Technology, Hyderabad - 500007.

**4. NASI-Young Scientist Platinum Jubilee Awards (2007)** have been awarded to the following -

***In Biological Sciences (Plant Sciences)***

- (i) Dr. Rajeev K. Varshney, Senior Scientist, Applied Genomics Laboratory, (Global Theme Biotechnology), International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru 502324 (Near Hyderabad), Andhra Pradesh.
- (ii) Dr. Gopaljee Jha, C/o Dr. Ramesh V. Sonti, E-309, Centre for Cellular and Molecular Biology, Uppal Road, Hyderabad 500007.
- (iii) Dr. Lily Goswami, Junior Research Fellow, Bose Institute, Centenary Campus, P.M.C.G. Section, P1/12, C.I.T. Scheme VII M, Kankurgachhi, Kolkata 700054.

***In Biological Sciences (Biomedical Sciences)***

- (i) Dr. Mohan Mondal, Scientist, National Research Centre on Mithun (ICAR), Jharnapani, Medziphema, Via Dimapur, Nagaland 797106.
- (ii) Dr. Deepak Narhari Modi, Sr. Research Officer, National Institute for Research in Reproductive Health (ICMR), JM Street, Parel, Mumbai - 400012.
- (iii) Dr. Subhabrata Chakrabarti, Staff Scientist (HERF), L.V. Prasad Eye Institute, Brien Holden Eye Research Centre, Road No. 2, Banjara Hills, Hyderabad - 500034.

***In Chemical Sciences***

- (i) Dr. Manoj Kumbhakar, Scientific Officer D, Radiation and Photochemistry Division, Chemistry Group, Mod. Lab., Bhabha Atomic Research Centre, Trombay, Mumbai-400 085.
- (ii) Dr. (Ms.) Suman Lata Jain, Research Associate, Process Engineering Applied Chemistry and Biotechnology Division (PEACBD), Indian Institute of Petroleum, Dehradun - 248 005





- (i) Dr. Suman Chakraborty, Assistant Professor, Department of Mechanical Engineering, Indian Institute of Technology, Kharagpur - 721 302.
- (ii) Dr. Deepankar Choudhury, Assistant Professor, Department of Civil Engineering, Indian Institute of Technology Bombay, Powai, Mumbai - 400 076.

## **Fellowship and Membership**

The National Academy of Sciences, India, distinguishes itself from the other two Science Academies in the very basic nature of its structure. This Academy has a two-tier composition comprising, Members and Fellows, right from its inception. Both categories participate in the activities of the Academy

The Academy has a total of 1422 Fellows including 29 Honorary Fellows and 72 Foreign Fellows. These include scientists from all disciplines of Science and Technology from India and abroad. These numbers also include the Fellows and Foreign Fellows elected during the year 2007 (Annexure I). Out of 51 Fellows elected during the year 2007, 6 have been the Members of the Academy. At present the Academy has 1463 Members on its roll of which 50 were admitted during the year 2007 (Annexure II).

## **Recognitions/Awards**

The Academy felicitates the following Fellows of the Academy for the Awards/ Recognitions conferred on them -

1. **Prof. (Mrs.) Manju Sharma**, New Delhi - Padma Bhushan
2. **Dr. Shiv Kumar Sarin**, GBPH, Delhi - Padma Bhushan
3. **Dr. Vilayanur S. Ramachandran**, University of California at San Diego, USA - Padma Bhushan
4. **Dr. Baldev Raj**, IGCAR, Kalpakkam - Padma Shri
5. **Prof. (Dr.) Khadag Singh Valdiya**, JNCASR, Bangalore - Padma Shri
6. **Prof. Sudhir Kumar Sopory**, ICGEB, New Delhi - Padma Shri
7. **Dr. Thanu Padmanabhan**, IUCAA, Pune - Padma Shri
8. **Dr. Thekkethil Kochandy Alex**, ISRO Lab, Bangalore - Padma Shri
9. **Prof. Ashok Misra**, IITB, Mumbai - National Systems Society Gold Medal, S.S. Bhatnagar Memorial Award (ISCA 2006-2007); and D.Sc.(Honoris Causa) from Thapar University, Patiala.
10. **Prof. M. Barma**, TIFR, Mumbai- S. N. Bose Birth Centenary Award (ISCA 2006-2007).
11. **Dr. Krishan Lal**, NPL, New Delhi- S. K. Mitra Centenary Award (ISCA 2006-2007).
12. **Dr. P. S. Goel**, DOD, New Delhi- Vikram Sarabhai Memorial Award (ISCA 2006- 2007).
13. **Prof. Yash Pal**, Noida- D.S. Kothari Memorial Award (ISCA 2006-2007).
14. **Prof. M. K. Chandrasekharan**, JNCASR, Bangalore- Millennium Plaques of Honour (ISCA 2006-2007).
15. **Prof. Goverdhan Mehta**, IISc, Bangalore- Excellence in Science and Technology Award (ISCA 2006-2007).
16. **Dr. V.P. Dimri**, NGRI, Hyderabad- G. P. Chatterjee Memorial Award (ISCA 2006-2007).
17. **Prof. Girjesh Govil**, TIFR, Mumbai- Prof. R.C. Mehrotra Memorial Life Time Achievement Award (ISCA 2006-2007).
18. **Dr. Anil Kumar**, NCL, Pune - FICCI Award (2005-2006).





19. **Prof. P.K. Seth**, General Secretary (HQ), NASI & CEO, Biotech Park, Lucknow- Prof. B.K. Bachhawat Life Time Achievement Award of the Indian Academy of Neurosciences, India- 2006.
20. **Prof. A.K. Tyagi**, General Secretary (outstation), NASI & Director, ICPG, Department of Plant Molecular Biology, Delhi University South Campus, New Delhi- Birbal Sahni Gold Medal of Indian Botanical Society.
21. **Prof. M.S. Swaminathan**, MSSRF, Chennai Lal Bahadur Shastri National Award for Excellence in Public Administration, Academics and Management (2006).
22. **Dr. A.P.J. Abdul Kalam**, Former President of India Honorary Doctorate from Carnegie Mellon University, Pittsburgh.
23. **Prof. Anil K. Singh**, IIT-B - Vice-Chancellor, Bundelkhand University, Jhansi.

## Obituary

The Academy condoled the sad demise of the the following Fellows, Foreign Fellows and Honorary Fellows

Sri Herman Bondi (Cambridge, U.K.)  
 Prof. B.D. Nag Chaudhuri (Kolkata)  
 Dr. G.I. Sankaranarayanan (Bangalore)  
 Dr. C.B. Sharma (Roorkee)  
 Dr. Satya P. Srivastava (Lucknow)  
 Dr. Siya Ram Srivastava (Vadodara)  
 Dr. H.H. Swift (Chicago, Illinois)  
 Prof. Sheo Prakash (Allahabad)  
 Dr. V.V.R. Varadachari (Goa)  
 Prof. A.P. Mitra (New Delhi)  
 Prof. W.U. Malik (Aligarh)

## Chapters of the Academy

Now with the addition of Uttarakhand Chapter, the Academy has 14 Chapters, located at Allahabad, Bangalore, Chandigarh, Chennai, Hyderabad, Jammu, Kharagpur, Kolkata, Lucknow, Mumbai, Patna, Shillong (N.E. Chapter), Dehradun and Varanasi. These Chapters also organized lectures and science communication activities for students of schools and colleges in their cities/regions..

(1) **Allahabad Chapter** has organized the following activities in the Auditorium of the Academy -



Seated (L-R) Prof. S.L. Srivastava, Prof. M.M. Verma, Prof. S.P. Misra, Dr. Mohd. Masood, Dr. Balbir Singh



**Demonstration on Methods of Prevention of Food Adulteration** by Dr. Mohd. Masood, MNASc of Jamuna Christian Inter College on July 15, 2007 which was attended by a large number of housewives/working ladies/girls besides Fellows and Members of the Academy.

**Lecture and Interactive Session on 'Awareness about Hepatitis B'** in collaboration with Department of Hepatology and Gastroenterology, M.L.N. Medical College and Indian National Society for Liver Studies on July 30, 2007 for students and general mass in which Prof. S.P. Misra, Prof. Manisha Dwivedi and Prof. Vatsala Misra, threw light on various aspects of the disease. A film show on the disease was also screened. A large number of Fellows, Members, teachers, students and others interacted with the experts.

**Lecture on 'Sahitya Evam Vigyan Ka Rachnatmak Swarup'** by Prof. Rajendra Kumar, Former Head, Department of Hindi, University of Allahabad on September 20, 2007 during Hindi fortnight. An educational film 'Gandhi, Hindi Aur Ghulami' was also screened. A large number of Fellows, Members, teachers and students were present.

The General Body Meeting of the Allahabad Chapter of the NASI was held on Tuesday, October 23, 2007 at 11:30 a.m. in the Council Room of the Academy. 18 Fellows and Members attended the meeting.

The following set of Office-Bearers were elected unanimously for a term of 2 years in the presence of Prof. S.L. Srivastava, Returning Officer.

**Chairman** Prof. S.P. Misra, F.N.A.Sc. (MLNMC, Allahabad)

**Secretary** Prof. G.K. Srivastava, F.N.A.Sc. (University of Allahabad)

**Advisors** Prof. (Mrs.) Manisha Dwivedi (MLNMC, Allahabad), Dr. Pankaj Srivastava (MNNIT, Allahabad), Dr. Mohd. Masood (JCIC, Allahabad)

The General Body also recommended the names of Dr. Ajit Paul, M.N.A.Sc., (AAI-DU, Allahabad) and Prof. (Ms.) Anita Gopesh, M.N.A.Sc. (University of Allahabad) as co-opted Advisors.

**(2) Chandigarh Chapter** Prof. R.C. Sobti, F.N.A.Sc. (Panjab University, Chandigarh) has been nominated the Chairman of the Chapter.

**(3) Hyderabad Chapter** In the General Body Meeting of the Chapter held on October 26, 2007, Dr. J.S. Yadav, F.N.A.Sc., (IICT, Hyderabad) and Prof. A.S. Raghavendra F.N.A.Sc., (University of Hyderabad) have been elected as Chairman and Secretary respectively of the Chapter.

**(4) Kharagpur Chapter** - Celebrated the National Science Day on February 28, 2007 in a befitting manner. The main thrust was on science awareness/popularization of science in rural areas. A programme at a Higher Secondary School located in a rural area of the neighbouring district was organized. All students and teachers of all schools in the entire region were invited.

**(5) Lucknow Chapter** - Dr. Linda Powers, Co-founder and Managing Director, Toucan Capital Corporation, Bethesda, MD, USA delivered a lecture on 'From the Lab Bench to the Marketplace to the Bank : Building Successful Biotech Start-up Companies' under the joint auspicious of the National Academy of Sciences, India (Lucknow Chapter), Uttar Pradesh Association for Science and Technology Advancement and Biotech Park, Lucknow in the small auditorium of the Central Drug Research Institute, Lucknow on August 17, 2007. The lecture was well attended.

**(6) Mumbai Chapter** (i) Participation in the Concluding Function of Platinum Jubilee



## **Celebrations, Symposium on 'Science & Technology in the Service of Society' and 76<sup>th</sup> Annual Session.**

The National Academy of Sciences, India- Mumbai Chapter (NASI-MC) had the privilege and honor of participating in the organization of the "Concluding Function of Platinum Jubilee Celebrations, Symposium on 'Science & Technology in the Service of Society' and Seventy-Sixth Annual Session of the Academy, which was held on 6th to 8th October, 2006 at IIT Bombay. The Fellows and Members of NASI-MC actively participated in this mile-stone activity of the Academy, which was organized in the manner most befitting to the occasion.

(ii) Mumbai Chapter supported the Indian Physics Association in conducting the National Physics Talent Search for (a) IX-X-XI Std. Students, and (b) Undergraduate and Postgraduate students, and also for (c) College teachers.

(iii) In a General Body Meeting of the Members/Fellows of the NASI-MC held on April 14, 2007 at IIT Bombay, the President, NASI, in consultation with Members/Fellows of NASI-MC re-constituted the set of office-bearers of the NASI-MC with the following composition.

**Chairman:** Prof. Anil K. Singh F.N.A.Sc. (IIT Bombay)

**Secretary:** Prof. Kandala V.R. Chary, F.N.A.Sc. (TIFR, Mumbai)

**Advisors:** Prof. Naba K. Mondal, F.N.A.Sc. (TIFR, Mumbai), Dr. Krishna B. Sainis, F.N.A.Sc. (BARC, Mumbai) and Prof. Jayesh R. Bellare, F.N.A.Sc. (IIT Bombay).

The NASI-MC now also has a Secretariat with the following address: NASI-MC Secretariat, C/o Director's Office Main Building, Indian Institute of Technology Bombay, Powai, Mumbai-400 076 (India)

### **(7) NE Region Chapter Celebration of National Science Day at North Eastern Hill University (NEHU) - 28th February, 2007.**

A one-day programme on the National Science Day was organized on 28<sup>th</sup> February, 2007 at the Science Lecture Complex, NEHU Permanent Campus, Shillong by the School of Life Sciences (Departments of Biochemistry, Biotechnology & Bio-Informatics, Botany and Zoology) and the School of Physical Sciences (Departments of Chemistry, Mathematics, Physics, and Statistics) of NEHU to mark the novel discovery of "Raman Effect" by the great physicist Sir C.V. Raman on 28<sup>th</sup> February, 1928. This discovery had brought the first and the only Nobel Prize in Science for the country till date. The programme was organized under the auspices of the National Academy of Sciences, India - N.E. Region Chapter and Indian Science Congress Association (ISCA) Local Chapter, Shillong. Prof. V. Tandon extended a warm welcome to all the participants of the function, and addressed the gathering. She emphasized on the need for developing scientific temperament and science education in the North-East region of India.

The function was inaugurated by the Vice-Chancellor, Prof. Pramod Tandon, FNASc, and attended by over four hundred participants including M.Sc. students, research scholars and faculty of all the Science Departments. Prof. Pramod Tandon highlighted the advances made in the field of biotechnology and nanotechnology, and encouraged students and faculty to undertake research in the emerging disciplines of biotechnology and nanotechnology. He also briefed the gathering about the contributions made by the Indian scientists in various fields, and emphasized on an urgent need to exploit the rich faunal and floral biodiversity and rich knowledge of traditional medicines in the N.E. Region. As part of the programme, a special lecture was delivered by Prof. P. Nongkynrih (Head, Department of Physics, NEHU) on "Raman Effect" and two science quiz-competitions were organized, in which students of the Schools of Life Sciences and Physical Sciences participated actively with great enthusiasm.





The Vice-Chancellor distributed prizes to members of the winning teams. He also encouraged M.Sc. students to pursue career in science, and appreciated the whole science fraternity of NEHU for their efforts towards betterment of science and society in the region. Prof. K. Ismail, Dean, School of Physical Sciences extended the vote of thanks.

### **Celebration of National Science Day at BSF Higher Secondary School, Shillong (28th February, 2007).**

A one-day programme to celebrate the National Science Day was organized at BSF School, Shillong on 28<sup>th</sup> February, 2007 sponsored by NASI N.E. Region Local Chapter and Indian Science Congress Association. Prof. B. Jyrwa from Department of Physics, NEHU and Mr. J.P. Pandey from the host school coordinated the programme.

The programme commenced with the lighting of the lamp and chanting of hymns. The welcome speech was given by Mr. J.P. Pandey, Senior School Teacher followed by the keynote address by the Principal of the School.

Prof. Pramod Tandon, Vice-Chancellor of NEHU was the Chief Guest at the programme. Prof. Tandon while inaugurating the programme delivered a stimulating and informative speech emphasizing the need of computer aided learning, rain water harvesting and the use of biotechnology in farming, medicine and clean environment to find solutions to present day problems for healthy and sustainable development as well as survival of life forms including humans.

Prof. N. Rajan delivered an illuminating talk on 'Climate Change and its implications' with illustrative examples.

Mr. Rahul Chatterjee spoke on "Our Star in the Neighborhood" focusing his talk on Sun. The presentation supplemented by multimedia links generated lot of interest among the students as was evident by the interaction with the speaker.

Prof. B. Jyrwa spoke on the wonders of colours and how colours can effect our daily life. The phenomenon of colour mixing and their utility in fashion designing, food technology, interior decoration and architecture was presented to the students and participants.

The programme ended with vote of thanks and light refreshment.

### **17<sup>th</sup> October 2006: At Assam Rifles Residential School, Laitkor, Shillong**

Both NASI NE Region Chapter and Assam Rifles Public School, Laitkor, Shillong co-hosted a popular science lecture in the school premises. Mr. Rahul Chatterjee delivered an hour long lecture on the 'Sun and the Solar System'. It was very well illustrated with real time slides. The audience of 500 students and 70 Staff Members were enthralled as was evident from their spontaneous request for another such programme in the near future. The programme ended with a vote of thanks by the programme co-coordinator Dr. Gaurangi Miatra. A special note of thanks was given to Dr. V.P. Sharma, and Professor V.Tandon, Chairperson, NASI NE Region Chapter, for bringing this programme to school children.

### **4th November 2006:**

The programme was held simultaneously on the same day in two different schools in the outskirts of Shillong town. This was aimed at utilizing the availability of scientists in the town who were in Shillong in connection with other activities in NEHU, Shillong.

#### **(a) Gorkha Pathshala Higher Secondary School, Garikhana, Shillong**

The programme started with the welcome address from the Secretary of the School Shri D.B.Gurung and presentation of bouquets to the speakers. Dr. S.R. Joshi introduced the audience to the activities of NASI as part of Platinum Jubilee celebration, the resource





persons and the purpose of such science awareness programmes.

Mr. Rahul Chatterjee took the first session and spoke on 'The Sun - our neighbouring star'. Dr.V.P.Sharma took the second session and spoke on 'Mosquito Biology'. Dr.V.P. Kamboj, President of NASI also spared his time to speak to students and presented an exciting talk on Virtual Water and its relevance to our needs. There were about 350 students participating in the awareness programme drawn from five schools namely: Gorkha Pathshala Higher Secondary School, Anath Ashram School, Kanya Pathshala Secondary School, Little Angels School and Gorkha Secondary School.

These students looked highly motivated to meet the resource persons as the schools being underprivileged in terms of the students group and location seldom get such opportunity to witness such programmes. There were requests made by the students to have similar programme for their benefit in future too.

#### **(b) At Jail Road Boys Higher Secondary School, Shillong**

The programme started with welcome address by the Principal of the school and presentation of bouquets to the speakers. It was organized at the Sikdar Memorial Hall of the School, where about 300 students and teachers of other local schools participated.

The speakers were Dr.V.P. Sharma, Formerly Director of Malaria Research Centre, and Dr.S.R.Joshi of Department of Biotechnology and Bioinformatics, NEHU.

In his speech, Dr Sharma informed the students and teachers on the finer aspects of mosquito biology and the burden of vector borne diseases like malaria, filariasis, chikengunia, dengue fever and Japanese encephalitis on the human population and consequently, the economy.

Dr. Joshi exhorted the gathering on the possibilities of biotechnology and the revolution it is set to bring in, in the future. He, however, reminded the students that while biotechnology has a huge potential today, for anyone to be successful the basic criterion is hard work, thus underlining the need for hard work for success.

Both lectures were well appreciated by the students and teachers, who said that they had a new insight into the havoc that a tiny insect can cause and also understood the importance of detailed scientific study.

The schools which participated in the lecture session were: Shillong Jail Rd Boys' Hr Sec School (host), Lady Keane School, R.B. Anoopchand Hindi High School, Laban Bengalee Boys' Higher Sec School and Shillong Secondary School.

At the end of the lectures, Ms A. Paul of Jail Road Boys' Hr Sec School thanked NASI and the NE Local Chapter for giving the school the opportunity of having luminaries such as Dr V.P. Sharma as a speaker.

#### **7th November 2006 : St. Xavier's School Tura, Meghalaya**

The programme at Tura was coordinated by Prof. S.S. Khare, Pro Vice Chancellor NEHU, Tura Campus and Secretary, NASI N.E. Region Chapter. He welcomed the participants and introduced the speakers to the audience of about 500 students. Mr. Tony Marak, Chairman of the Meghalaya Board of School Education was the Chief Guest and spoke on the importance of such programme to a remote place like Tura. Prof. Veena Tandon,





Chairperson N.E Region Chapter of NASI highlighted the objectives of the programme and introduced the speakers to the audience and talked on the excitement of Science.



Prof. B.N. Dhawan interacting with the students at the programme in Tura

Students from 13 different institutions of Tura participated along with 28 teachers from the following schools/colleges: Don Bosco College, Tura Govt. College, Don Bosco School, St. Xavier School, Central School, Tura, Govt. Boy's School, Tura, Aerovill School, Tura Hindi Secondary School, Sherwood School, Govt. Girls Higher Secondary School, Tura Christian Girls Higher Secondary School, St Mary's School and Tura Town Higher Secondary School.

The first lecture was taken by Prof. P. Tandon, in which he dwelt in detail about the richness of natural resources in terms of biodiversity in India, and NE region in particular and emphasized on the sustainable utilization of the same for the generation of income and livelihood emphasizing the role of students as the citizens of tomorrow. He stated how developments in science can come handy in the conservation and sustainable utilization of biodiversity.



Prof. (Mrs.) Veena Tandon briefing the gathering on NASI-NE chapter's activities at Tura, Meghalaya during science awareness programme

The second lecture was taken by Prof. V.P Kamboj, Formerly Director, Central Drug Research Institute, Lucknow, who spoke on 'The drugs, their production and importance of life forms as their source and utility'. He also elaborated on the importance of water and the concept of virtual water.



Prof. Arun Chattopadhyaya from IIT Guwahati spoke on the concept and scope of 'Nanotechnology' to the students.

The post lunch session started with the lecture by Prof. B.N. Dhawan also a former Director, Central Drug Research Institute, Lucknow, who spoke on the birth of a new drug, steps in its production and clinical trials before it can be brought for human utility.

Prof. S.S. Khare took the last session and talked about the 'Wonders of Mathematics' with illustrations and demonstration of mathematical skill to the students.

Dr. J. Prodhoni was the comperer of the programme. Dr. S.R.Joshi gave the concluding remarks on the programme. Principal St. Xavier's School, proposed the vote of thanks and requested NASI to have similar programme for the benefit of students of Tura in future, too.

#### **17th February 2007 : Rajiv Gandhi University (RGU), Itanagar, Arunachal Pradesh**

A one-day programme was organized in the School of Life Sciences, RGU, Itanagar, Arunachal Pradesh. The audience comprised school students from the neighbouring areas and the students of the university as well.

Prof. Veena Tandon, Chairperson, NASI NE Region Chapter outlined the objectives of such programmes and narrated the role played by the NE Region Chapter in popularizing science and reaching out to the rural students of North East for the development of scientific temperament.

Prof. P. Tandon, Vice Chancellor, NEHU gave a lecture on the role of biotechnology in conservation and sustainable utilization of plant wealth which has great opportunities for wealth generation together with environmental preservation.

Dr. Alok Dhawan, Scientist, Predictive Toxicology Group at Indian Toxicology Research Centre, CSIR, Lucknow spoke on 'Nanobiotechnology'. A special session in the afternoon was organized for the Faculty of Life Sciences and researchers of the University where Prof. P. Tandon, Prof. V. Tandon and Dr. Alok Dhawan addressed the gathering and spoke on issues like biodiversity, conservation of threatened plants and nanotechnology.



Prof. V.P. Kamboj, Prof. P. Tandon, Prof. S.S. Khare and Prof. B.N. Dhawan at a programme in Tura, Meghalaya

Prof. Tamo Mibang, Pro Vice Chancellor and Prof. A.K Das, Dean, Faculty of Life Sciences, RGU thanked the visiting scientists and requested them to have more such lectures arranged in Arunachal Pradesh for the benefits of students and scientific fraternity.





In the evening, Mr. Gegong Apang, the Chief Minister of Arunachal Pradesh invited the visiting scientists, Prof. P. Tandon, Prof. V. Tandon and Dr. Alok Dhawan and requested the team to organise more programmes in Arunachal Pradesh which will help in inculcating scientific temper among students of his State. Prof. P. Tandon and Prof. V. Tandon apprised the Chief Minister about the initiatives taken by the NASI NE Chapter for the rural areas of the North East region in providing scientific exposure to the rural children.

**Programme in Meghalaya** - After having conducted a series of programmes in Meghalaya (Cherrapunjee, Nongpoh, Shillong, Laitkor, Tura), Assam (Sonapur), Sikkim (Tadong) during September-November 2006, it was decided to take the Science Awareness programmes to remote and lesser accessible areas of the region in Meghalaya and Arunachal Pradesh during September 2007. The team for this phase of Science Awareness Programme comprised of Prof. V P Sharma, MN Saha Distinguished Fellow of NASI, Prof. Pramod Tandon, Vice-Chancellor North-Eastern Hill University (NEHU), Shillong, Prof. (Mrs.) Veena Tandon, Dean, School of Life Science, NEHU and Chairperson, N-E Region Local Chapter of NASI, Dr Basil Koikara, Reader, Department of Mathematics, NEHU, Dr S.R. Joshi, Department of Biotechnology and Bioinformatics, NEHU, Mr. Rahul Chatterjee, Senior Lecturer in Physics, Jail Road Boys Higher Secondary School, Shillong, Dr. Gaurangi Maitra, Senior Teacher in Biology, Assam Rifles Public School Laitkor, Shillong.

Programme in Meghalaya.

A rain spattered morning of September 10, 2007 saw the NASI Science Awareness Team led by Dr. V.P. Sharma travel 70 km from Shillong to Jowai in the Jaintia Hills district in Meghalaya. At Jowai clear weather and smiling faces of the staff and students of St. Mary's School greeted the team. The school hall had been made to substitute for the large district auditorium that was denied at the last moment by the District administration. The school authorities valiantly rose to the occasion. Their 350 capacity auditorium gaily decorated was filled with about 500 students. The following schools from in-and-around Jowai participated in the programme: St Mary's Mazzarello Girls Higher Secondary School, Public School, Tpep Pale School, Marian Hill Higher Secondary School, H.K. Singh School, Tome Memorial Secondary School, Sein Raij School, Jowai Persbyterian School, K J P School.

The programme was inaugurated by the Inspector of Schools, Shri W. Lyngdoh. Dr V.P. Sharma talked on Mosquito and Malaria Menace followed by the talk by Shri Rahul Chatterjee on Sun-The Star in our Neighbourhood. Dr Basil Koikara presented a talk on Mathematics is Fun, while Dr Gaurangi Maitra presented Darwin's Voyage. The last talk was given by Dr S.R. Joshi on Biotechnology and its Prospects. The programme generated avid interest as evidenced by the very active interactive question and answer session at the end of the programme. The school authorities earnestly requested the team to return with more programmes in future for they were far from satiated. Besides, this programme was the first of its kind in their area.

**Programme in Arunachal Pradesh** - On the 12th September 2007 by 8.30 a.m. the team was at the school premises of sixty year old school founded in 1947 and therefore named Independence Golden Jubilee Higher Secondary School in Pasighat district, Arunachal Pradesh. The programme was inaugurated by Shri Tako Dabi, Minister Water Resource Development, Election and Parliamentary Affairs, Govt Of Arunachal Pradesh. Dignitaries like Ninong Ering, Former Deputy Speaker of Arunachal Pradesh Assembly, Inspector of Schools, Deputy Commissioner were also present. A warm welcome was extended to the team.

The programme started with a briefing on NASI and significance of such programmes by Prof. Veena Tandon, Chairperson NASI NE Region Local Chapter. The pre-lunch session had three lectures by Prof Pramod Tandon, Vice-Chancellor, North Eastern Hill University, Dr.



V.P. Sharma and Mr. Rahul Chatterjee followed by two lectures in the post-lunch by Dr. Basil Koikara and Dr. Gaurangi Maitra. The programme concluded with a question and answer interactive session lasting for more than an hour followed by the summing up and Vote of thanks proposed by Dr. S.R. Joshi. The valedictory ceremony was enlivened by the genial chief guest Ninong Ering. He spoke in flawless Hindi and ended the programme on the right note by asking the children to sing 'Hum Honge Kamyab'. As the team took down the banners and equipment the children came forward in large numbers to interact with the team members. The following schools, IGJ Govt Higher Secondary School, Pasighat,. Govt. Secondary School, Balek, Govt. Secondary School, Ruksin, D. Ering Memorial Govt HS School, Pasighat, Kendriya Vidhyalaya, Pasighat, Govt. Higher Secondary School, Bilat, Govt. Secondary School, Mirku, Govt. Higher Secondary School, Sille, Govt. Secondary School, Koyu, Govt. Secondary School, Nari, which participated made a crowd of almost 600 students; and about 80 teachers from these schools also attended the programme.

The final programme began on 14th September, 2007 at 8.30 am. in R,K.Mission School at Along, Arunachal Pradesh. Maharaj Vashishtanandji began the proceeding with an inspiring talk, followed by the chief guest Shri S.P. Jain, IPS, Superintendent of Police, West Siang addressing the gathering. We felt honoured to receive a copy of Selections from Works of Swami Vivekananda.

The programme started with a briefing on NASI and significance of such programmes by Prof. Veena Tandon, Chairperson NASI NE Region Local Chapter. The pre-lunch session had three lectures by Prof. Pramod Tandon, Vice Chancellor, North Eastern Hill University, Dr. V.P. Sharma and Mr. Rahul Catterjee followed by two lectures in the post-lunch by Dr. Basil Koikara and Dr. Gaurangi Maitra. The one hour interactive session was truly rewarding. The programme concluded with the summing up and formal vote of thank proposed on behalf of NASI by Dr. S.R. Joshi. A strength of about 400 students were drawn from Ramakrishna Mission School Along as other schools were distantly located and could not be invited for the programme.

The resource persons at various places spoke on areas like Mosquito and Malaria Menace, Biodiversity, Bioresource conservation and sustainable utilization, Sun- The Star in our Neighbourhood,. Mathematics is Fun, Darwin's Voyage, Penicillin- The first Antibiotic, Biotechnology A New Biology etc.

This programme that had begun in Cherrapunjee RKM in Meghalaya a year ago, has covered states in Northeast like Meghalaya, Assam, Sikkim and Arunachal Pradesh. It brought together various resource persons led by Dr. V.P. Sharma. They contributed expertise in fields like Biodiversity, Parasitology, Biotechnology, Amphibian, Solar System, Mathematics, History of Science etc.

The report from other Chapters of the Academy is awaited.





## COUNCIL 2007

### President

1. Prof. Ashok Misra, Director, Indian Institute of Technology-Bombay, Powai, Mumbai - 400 076.

### Two Past Presidents (including the Immediate Past President)

2. Prof. V.P. Kamboj, Formerly Director, Central Drug Research Institute, Lucknow & Formerly Chairman, BIBCOLD, Bulandshahr; Chairman, Board of Directors, Biotech Consortium India Ltd., New Delhi; Res. : C1111, Indira Nagar, Lucknow - 226 016.
3. Prof. Jai Pal Mittal, Raja Ramanna Fellow, Formerly Director, Chemistry & Isotope Group, Bhabha Atomic Research Centre, Mumbai; Res. : 11B, Rohini Coop. Hsg. Soc., Sector 9-A, Vashi, Navi Mumbai - 400 703.

### Vice-Presidents

4. Prof. S.P.S. Khanuja, Director, Central Institute of Medicinal & Aromatic Plants (CIMAP), P.O. CIMAP, Lucknow - 226 015.
5. Dr. Anil Kumar, Scientist, Physical Chemistry Division, National Chemical Laboratory, Dr. Homi Bhabha Road, Pune - 411 008.

### Treasurer

6. Prof. S.L. Srivastava, Formerly Professor & Head, Physics Department, A.U. and Formerly Coordinator, K. Banerjee Centre of Atmospheric and Ocean Studies, Meghnad Saha Centre for Space Studies, Nehru Science Centre, University of Allahabad; Res. 129, Allenganj, Allahabad - 211 002.

### Foreign Secretary

7. Prof. (Mrs.) Veena Tandon, Professor, Department of Zoology, North-Eastern Hill University, Shillong - 793 022.

### General Secretaries

8. Prof. P.K. Seth, Chief Executive Officer, Biotech Park and Formerly Director, Industrial Toxicology Research Centre; Sector G, Jankipuram, Kursi Road, Lucknow 226 021.
9. Prof. Akhilesh Kumar Tyagi, Professor & Director, Interdisciplinary Centre for Plant Genomics (ICPG), Department of Plant Molecular Biology, University of Delhi, South Campus, Benthia Jaurez Road, New Delhi- 110 021.

### Members

10. Prof. Suresh Chandra, Emeritus Scientist, Physics Department, Banaras Hindu University, Varanasi - 221 005.
11. Prof. Sushanta Dattagupta, Hon. Professor, JNCASR, Bangalore; Director, Indian Institute of Science Education & Research, Kolkata, IIT Kharagpur Extn. Centre, Block HC, Sector III, Salt Lake, Kolkata - 700 106.
12. Prof. B.N. Dhawan, Formerly Director, Central Drug Research Institute, Lucknow; Res. 3, Ram Krishna Marg, Lucknow - 226 007.
13. Prof. S.K. Gupta, Professor, Department of Chemical Engineering, Indian Institute of Technology, Kanpur - 208 016.
14. Prof. Shrikant Lele, Rector, B.H.U. & Professor, CAS in Metallurgical Engineering, Banaras Hindu University, Varanasi - 221 005.
15. Prof. Rahul Mukerjee, Professor of Statistics, Indian Institute of Management, Joka,



Diamond Harbour Road, Kolkata - 700 104.

16. Prof. Rajani Satish Nadgauda, Indian Institute of Advanced Research, School of Biological Sciences & Biotechnology, Block-2, Floor-1, Udhog Bhavan, Sector-11, Gandhinagar - 382011
17. Prof. Vijayalakshmi Ravindranath, Director, National Brain Research Centre, Near NSG Campus, Nainwal Mode, Manesar - 122 050 (Haryana).
19. Dr. Ram Sagar, Director, Aryabhatta Research Institute of Observational Sciences, Manora Peak, Nainital - 263 129.
19. Prof. Dinakar M. Salunke, Staff Scientist VII, National Institute of Immunology, Aruna Asaf Ali Marg, New Delhi - 110 067.
20. Prof. Anil Kumar Singh, Professor, Department of Chemistry, Indian Institute of Technology Bombay, Powai, Mumbai - 400 076.
20. Prof. Ajay Kumar Sood, Chairman, Division of Physical and Mathematical Sciences; Professor, Department of Physics, Indian Institute of Science, Bangalore - 560 012.
21. Prof. C.B.L. Srivastava, Formerly Emeritus Fellow (UGC), Professor & Head, Department of Zoology, University of Allahabad; Res. 78, Balrampur House, Allahabad - 211 002.
23. Prof. Rakesh Tuli, Director, National Botanical Research Institute, Rana Pratap Marg, Lucknow - 226 001.

### Special Invitees

- 1 Prof. (Mrs.) Manju Sharma, Formerly Secretary to the Govt. of India; President & Executive Director, Indian Institute of Advanced Research, Gandhinagar; Res. C5/10 (GF), Vasant Kunj, New Delhi - 110070.
2. Prof. V.P. Sharma, M.N. Saha Distinguished Fellow, NASI, Allahabad; Formerly Additional Director General, ICMR & Director, Malaria Research Centre, Delhi; Res. C5/10 (GF), Vasant Kunj, New Delhi - 110070.
3. Prof. P.N. Tandon, Formerly Prof. Megh Nad Saha Distinguished Fellow, NASI; President, National Brain Research Centre, Manesar; Res. No. 1, Jagriti Enclave, Vikas Marg Ext., Delhi - 110092.

## Meetings

Four Council Meetings, two Meetings of the Fellows, one ordinary Meeting of the General Body and one Annual General Body Meeting were held during the year. Several other meetings as of Fellowship Scrutiny Committee, Membership Scrutiny Committee, Standing Committees of Finance, and Purchase, Lecture Award Scrutiny Committees, Science Teacher Award Scrutiny Committee, Library Committee and other Sub committees also met during the year.

## Finance

The financial position of the Academy for the year ending March 2007 is given as an Annexure III.

The Academy records its grateful thanks to the following for financial assistance.

- (a) Department of Science & Technology, New Delhi.
- (B) Council of Science & Technology, U.P., Lucknow





## Building

The Academy is now functioning from its newly constructed magnificent building which has an auditorium having a capacity of about 200 persons, Council Room, Committee Room, Rooms of the Office-bearers and the office space. The networking of the building with 2 MBPS Internet Port has been completed.

## Dr. Sir Padampat Singhanian Library

The Library exchanges its publications with 23 organizations and is receiving 30 journals (20 of Physical Sciences, 10 Biological Sciences) from India and abroad in exchange or *et gratis*. 9 important journals and 18 scientific magazines are also being subscribed by the Library. Library has 5596 bound volumes of journals including 1071 journals of non-english languages and 1851 useful books, excluding 410 books donated by Prof. M.G.K. Menon, 279 books of Late Prof. A.C. Banerji, donated by his son Shri M.K. Banerji, 578 books of Late Prof. H.C. Khare donated by his wife Mrs. Mamata Khare, 118 books donated by Dr. S. Prakash and 17 books by Sri Prasoon Jaiswal.

Since the Singhanian Library building was constructed a large number of journals have been bound and most of these have been systematically arranged leading to a greater use of the Library. The Library is available to the Academy's Fellows and Members as well as to teachers, research scholars and others for consultation.

During the period under report 342 new books have been added.

A Section in the Library especially for science students of plus two level has been opened. A large number of books have been donated by Prof. H.S. Mani, Late Prof. U.S. Srivastava, Prof. Chandrika Prasad and others; besides those which have been purchased. It is worth mentioning that a large number of students (on an average 40) daily visit the Library and find it useful.

As a new activity, Internet facility for educational purpose is also being provided to the students free-of-cost.

## Acknowledgements

We take this opportunity to thank all our Fellows and Members for their cooperation and useful suggestions. We are particularly grateful to the Presidents, Prof. V.P. Kamboj and Prof. Ashok Misra; and Members of the Council for their guidance; to Chief Editors (Prof. Suresh Chandra and Prof. B.N. Dhawan), Managing Editors (Prof. S.L. Srivastava and Prof. G.K. Srivastava), Members of the Board of Editors of National Academy Science Letters (Prof. Jai Pal Mittal, Prof. Girjesh Govil and Prof. Suresh Chandra) and the Members of the Editorial Boards of the Proceedings of the National Academy of Sciences, India (Sections A & B) and referees, for their valuable suggestions and cooperation. We also record our gratitude to M/s Amit Ray and Company, Chartered Accountants, Allahabad for auditing our accounts. Lastly, we thank Dr. M.S. Sinha, Executive Secretary, Dr. Niraj Kumar, Assistant Executive Secretary, Shri A.K. Srivastava, Accounts Officer and the staff of the Academy for their ungrudging assistance and cooperation in every possible way.

IASI



## Fellows elected during the year 2007.

1. **Prof. Sukumar Das Adhikari**, Ph.D., Professor, Harish-Chandra Research Institute, Chhatnag Road, Jhusi Allahabad - 211019
2. **Prof. Rakesh Aggarwal**, M.B.B.S., M.D., D.M., F.A.Sc., Professor, Dept. of Gastroenterology and Human Nutrition, All India Institute of Medical Sciences, New Delhi - 110029
3. **Prof. Manindra, Agrawal**, Ph.D., N. Rama Rao Chair Professor, Dept. of Computer Science & Engineering, Indian Institute of Technology Kanpur, Kanpur - 208016
4. **Dr. Ajai**, D.Phil., Scientist G & Group Director, Forestry, Landuse and Photogrammetry Group, Space Applications Centre (ISRO) Ahmedabad - 380015
5. **Dr. Anand K. Bachhawat**, Ph.D., F.A.Sc., Scientist F, Institute of Microbial Technology, Sector 39 A, Chandigarh - 160036
6. **Prof. Balram Bhargava**, M.B.B.S., M.D., D.M., Professor, Department of Cardiology, All India Institute of Medical Sciences, Ansari Nagar, New Delhi - 110029
7. **Dr. (Ms.) Purnima Bhargava**, Ph.D., Scientist EII, Centre for Cellular & Molecular Biology, Uppal Road, Hyderabad - 500007
8. **Dr. (Ms.) Shinjini Bhatnagar**, M.B.B.S., Ph.D., Scientist (Grade III), Centre for Diarrhoeal Diseases & Nutrition Research, Department of Pediatrics, AIIMS, New Delhi - 110029
9. **Prof. Kankan Bhattacharyya**, Ph.D., F.A.Sc., F.N.A., Professor & Head, Deptt. of Physical Chemistry, Indian Association for the Cultivation of Science, Jadavpur, Kolkata - 700032
10. **Prof. Gautam Biswas**, Ph.D., F.N.A.E., Professor, Dept. of Mechanical Engineering Indian Institute of Technology Kanpur, Kanpur - 208016
11. **Prof. Vadapalli Chandrasekhar**, Ph.D., F.A.Sc., Professor, Department of Chemistry, Indian Institute of Technology Kanpur, Kanpur - 208016
12. **Dr. Samrath Lal Chaplot**, Ph.D., Outstanding Scientist & Head, Solid State Physics Division, Bhabha Atomic Research Centre, Mumbai - 400085
13. **Prof. Probal Chaudhuri**, Ph.D.(Berkely), F.A.Sc., Professor, Stat & Math Div., Indian Statistical Institute, 203 B.T. Road, Kolkata - 700035
14. **Prof. Anjaneya Murthy Chivukula**, Ph.D., F.N.A.E., Professor, Machine Intelligence Unit, Indian Statistical Institute, 203, B.T. Road, Kolkata - 700108
15. **Dr. Abhijit Chowdhury**, M.B.B.S., M.D., D.N.B., D.M., Associate Professor & Head, Dept. of Gastroenterology, Institute of PG Medical Education & Research, Ronald Ross Building, 244, AJC Bose Road, Kolkata-700020
16. **Prof. Namasivayam Gautham**, Ph.D., Professor, Department of Crystallography and Biophysics, University of Madras, Guindy Campus, Chennai-600025
17. **Prof. (Ms.) Rohini Madhusudan Godbole**, Ph.D.(SUNY), F.A.Sc., F.N.A., Professor, Centre for High Energy Physics Indian Institute of Science, Bangalore - 560012
18. **Prof. Yashwant Gupta**, Ph.D.(Calif.), Professor & Chief Scientist, GMRT, NCRA-TIFR, Pune University Campus, Post Bag 3, Pune 411007
19. **Dr. Rakesh Kapoor**, M.B.B.S., M.S., M.Ch., Additional Professor, Dept. of Urology & Renal Transplantation, S.G.P.G.I.M.S., Raebareli Rd., Lucknow - 226014
20. **Prof. Bhagwati Prasad Kashyap**, Ph.D., F.N.A.E., Professor, Dept. of Metallurgical Engg. & Materials Science, Indian Institute of Technology Bombay, Mumbai - 400076
21. **Prof. Ajit Keshav Kumbhavi**, Ph.D., Distinguished Professor, Dean, Visitors Prog., IUCAA, Post Bag 4, Ganeshkhind, Pune - 411007
22. **Dr. Harinarayana Kota**, Ph.D., F.N.A.E., Raja Ramanna Fellow, Structures Division, National





Aerospace Labs, P.B.No. 1779, Air Port Road, Bangalore - 560017

23. **Dr. Maripi Dileep Kumar**, Ph.D., F.A.Sc., F.N.A., Scientist F, National Institute of Oceanography, Dona Paula, Goa - 403004
24. **Dr. Pradeep Kumar**, Ph.D., Scientist F, Division of Organic Chemistry, National Chemical Laboratory, Pune - 411008
25. **Prof. Shyam Lal**, Ph.D., F.A.Sc., F.N.A., Professor, Space & Atmospheric Sciences Division, Physical Research Laboratory, Navrangpura, Ahmedabad - 380009
26. **Dr. Bansi Dhar Malhotra**, Ph.D., Scientist F & Head, Biomolecular Electronics & Conducting Polymer Research Group, National Physical Laboratory, New Delhi - 110012
27. **Dr. Ranjan Kumar Mallik**, Ph.D., F.N.A.E., F.I.E.T.E., Associate Professor, Dept. of Electrical Engineering, Indian Institute of Technology Delhi, Hauz Khas, New Delhi - 110016
28. **Dr. Venkat Rajam Manchikarla**, Ph.D., Reader, Department of Genetics, University of Delhi-South Campus, Benito Juarez Road, New Delhi - 110021
29. **Dr. Debashis Mitra**, Ph.D., Scientist - E, National Centre for Cell Science, Pune University Campus, Pune 411007
30. **Prof. Valakunja Nagaraja**, Ph.D., F.A.Sc., F.N.A., Professor, Dept. of Microbiology and Cell Biology, Indian Institute of Science, Bangalore - 560012
31. **Prof. Yadati Narahari**, Ph.D., F.N.A.E., Professor, Department of Computer Science & Automation, Indian Institute of Science, Bangalore - 560012
32. **Prof. Tarasankar Pal**, Ph.D., D.Sc., Professor, Department of Chemistry, Indian Institute of Technology Kharagpur - 721302
33. **Prof. Yash Pal Singh Pangtey**, Ph.D., D.Sc., Formerly Professor, Department of Botany, Kumaun University, Nainital - 263002
34. **Prof. Appa Rao Podile**, Ph.D., Professor, Department of Plant Sciences, School of Life Sciences, University of Hyderabad, Hyderabad 500046
35. **Prof. P. Ramamurthy**, Ph.D., Professor, Director, National Centre for Ultrafast Processes, University of Madras, Chennai 600113
36. **Prof. (Ms.) Mythily Ramasawamy**, Ph.D. (Paris), Professor, T.I.F.R. Math Centre, Indian Institute of Science Campus, Bangalore - 560012
37. **Dr. Mallireddy Kodandarami Reddy**, Ph.D., Senior Research Scientist, Plant Molecular Biology Lab, International Centre for Genetic Engineering & Biotechnology, Aruna Asaf Ali Marg, New Delhi-110067
38. **Prof. (Ms.) Madhubala Rentala**, Ph.D., Professor, School of Life Sciences, Jawaharlal Nehru University, New Delhi - 110067
39. **Prof. Malkiat Singh Saini**, Ph.D., Professor & Head, Department of Zoology, Punjabi University, Patiala - 147002
40. **Dr. Rajendra Singh Sangwan**, Ph.D., F.N.A.A.S., Scientist E-II, Central Institute of Medicinal & Aromatic Plants, Lucknow - 226015
41. **Dr. Tilak Raj Sharma**, Ph.D., F.N.A.A.S., Sr. Scientist (Biotechnology), National Research Centre on Plant Biotechnology, LBS Centre R.No.39, IARI, New Delhi - 110012
42. **Dr. Kumaravel Somasundaram**, Ph.D., Associate Professor, Microbiology and Cell Biology, Indian Institute of Science, Bangalore - 560012
43. **Dr. Narayanaswamy Srinivasan**, Ph.D., F.A.Sc., Associate Professor, Molecular Biophysics Unit, Indian Institute of Science, Bangalore - 560012
44. **Prof. Nishikant K. Subhedar**, Ph.D., Professor, Department of Pharmaceutical Sciences, R.T.M. Nagpur University, Nagpur - 440033
45. **Prof. Musti Joginadha Swamy**, Ph.D., F.A.Sc., Professor, School of Chemistry, University of Hyderabad, Hyderabad - 500046
46. **Prof. Mahendra Kumar Thakur**, Ph.D., Professor, Department of Zoology, Banaras Hindu



University, Varanasi - 211005

47. **Prof. Kailash C. Upadhyaya**, Ph.D., F.N.A., Professor, School of Life Sciences, Jawaharlal Nehru University, New Delhi - 110067
48. **Dr. Yogendra Pathak Vlyogi**, Ph.D., Director, Institute of Physics, Sachivalaya Marg, Bhubaneswar - 751005
49. **Prof. Dashavantha Reddy Vudem**, Ph.D., Professor & Director, Centre for Plant Molecular Biology, Osmania University, Hyderabad - 500007
50. **Dr. Umesh Vasudeo Waghmare**, Ph.D.(Yale), Associate Professor, Theoretical Sciences Unit, Jawaharlal Nehru Centre for Advanced Scientific Research, Jakkur, Bangalore 560064

***In the area of Science and Society***

51. **Prof. Arvind Kumar**, Ph.D., Professor & Centre Director, Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research, V.N.P. Marg, Mankhurd, Mumbai - 400088

**Foreign Fellows elected during the year 2007.**

1. **Prof. Robin J. Clark**, FRSA, FRSC, FUCL, Hon. FRI, Hon. FRSNZ, Hon. F.R.S., Sir William Ramsay Professor, University College, London WC1H 0AJ UK
2. **Prof. Shrawan Kumar**, Ph.D., D.Sc., F.R.S.C. (Canada), Professor, Department of Physical Therapy University of Alberta, Edmonton, Alberta, Canada - T6G 2G4
3. **Prof. Timothy John Pedley**, Ph.D.(Camb.), D.Sc.(Camb.), FRS, GI Taylor Professor of Fluid Mechanics, Dept. of Applied Mathematics & Theoretical Physics, University of Cambridge, Cambridge, UK CB3 0WA
4. **Prof. M. Ram Murty**, Ph.D.(MIT), Professor, Department of Mathematics, Jeffrey Hall, Queen's University Kingston, Ontario, K7L 3N6, Canada
5. **Prof. Alan H. Windle**, FIP, FRS, Professor, Department of Materials Sci. & Metallurgy, University of Cambridge Cambridge - CB2 3Q7, UK





### Members admitted during the year 2007.

1. **Dr. Krishna Kumar Mishra**, Scientist (Fellow E), Homi-Bhabha Centre for Science Education, Tata Institute of Fundamental Research, V.N. Purav Marg, Mankhurd, Mumbai - 400 088.
2. **Dr. S. Raghothama**, Senior Scientific Officer, NMR Research Centre, Indian Institute of Science, Bangalore - 560 012.
3. **Dr. Srungarpu Nagabhusan Achary**, Scientific Officer (E), Chemistry Division, Bhabha Atomic Research Centre, Mumbai - 400 085.
4. **Dr. Diwan Singh Rawat**, Reader, Department of Chemistry, University of Delhi, Delhi - 110 007.
5. **Dr. Abhey Ram Bansal**, Scientist C, Fractals in Geophysics Group, National Geophysical Research Institute (NGRI), Uppal Road, Hyderabad - 500 007.
6. **Dr. Viswanathan Shankar**, Assistant Professor, Department of Chemical Engineering, Indian Institute of Technology, Kanpur - 208 016.
7. **Dr. Debjani Chakraborty**, Assistant Professor, Department of Mathematics, Indian Institute of Technology, Kharagpur - 721 302.
8. **Dr. Guruprasad Samanta**, Assistant Professor of Mathematics, Bengal Engineering and Science University, Shibpur, Howrah - 711 103.
9. **Dr. Akambadath K. Nandakumaran**, Associate Professor, Department of Mathematics, Indian Institute of Science, Bangalore - 560 012.
10. **Dr. Parukuttyamma Sujatha Devi**, Scientist E-1, Central Glass and Ceramic Research Institute, Kolkata - 700 032.
11. **Prof. Anantharaman Chandrasekar**, Department of Physics & Meteorology, Indian Institute of Technology, Kharagpur - 721 302.
12. **Prof. Radhey Shyam Tiwari**, Department of Physics, Banaras Hindu University, Varanasi - 221 005.
13. **Dr. Sukhdev Roy**, Reader, Department of Physics & Computer Science, Dayalbagh Educational Institute, (Deemed University), Dayalbagh, Agra - 282 005.
14. **Prof. Mayank Vahia**, Department of Astronomy & Astrophysics, Tata Institute of Fundamental Research, Homi Bhabha Road, Colaba, Mumbai - 400 005.
15. **Dr. J.J. Rawal**, President, The Indian Planetary Society, 102, Gorai Herumb Building, Plot No. 54, L.T. Road, Near Gorai Creek, Borivali (W), Mumbai - 400 091.
16. **Dr. Shashi Kant Mishra**, Head, Germplasm Evaluation Division, National Bureau of Plant Genetic Resources, Pusa Campus, New Delhi - 110 012.
17. **Dr. Gyanendara Singh**, Senior Scientist (Plant Breeding), Directorate of Wheat Research, Post Box - 158, Karnal - 132 001.
18. **Dr. G. Muralikrishna**, Scientist EII, Department of Biochemistry & Nutrition, Central Food Technological Research Institute, Mysore - 570 020.
19. **Dr. Gopinatha Suresh Kumar**, Scientist EII and Head, Biophysical Chemistry Laboratory, Indian Institute of Chemical Biology, Kolkata - 700 032.
20. **Prof. Anjan Kumar Dasgupta**, Department of Biochemistry, University of Calcutta, 35, Ballygunge Circular Road, Kolkata - 700 019.
21. **Dr. Anjana Pandey**, Lecturer, Nanotechnology & Molecular Biology Lab, Centre of Biotechnology, University of Allahabad, Allahabad - 211 002.
22. **Dr. Ravi Sarada**, Scientist Gr. IV (3), Plant Cell Biotechnology Department, Central Food Technological Research Institute, Mysore - 570 020.
23. **Prof. K.K. Baruah**, Head, Department of Environmental Sciences, Tezpur University, Tezpur - 784 028.



24. **Dr. Rakesh Kumar Maikhuri**, Scientist D, G.B. Pant Institute of Himalayan Environment & Development, Garhwal Unit, P.Box 92, Srinagar Garhwal - 246 174.
25. **Dr. Rishi Shanker**, Scientist E-II & Head, Environmental Microbiology Division, Industrial Toxicology Research Centre, P.O. Box 80, M.G. Marg, Lucknow - 226 001.
26. **Prof. Sheikh Raisuddin**, Reader, Jamia Hamdard, Department of Medical Elementology & Toxicology, Hamdard Nagar, New Delhi - 110 062.
27. **Dr. Manoj Prasad**, Scientist III, National Centre for Plant Genome Research, Aruna Asaf Ali Marg, JNU Campus, P.B. No. 10531, New Delhi - 110 067.
28. **Prof. Jayanta K. Pal**, Department of Biotechnology, University of Pune, Pune.
29. **Dr. Nihar Ranjan Jana**, Assistant Professor, National Brain Research Centre, Manesar, Gurgaon - 122 050.
30. **Prof. Vijay L. Kumar**, Department of Pharmacology, All India Institute of Medical Sciences, Ansari Nagar, New Delhi - 110 029.
31. **Prof. Phanithi Prakash Babu**, Centre for Biotechnology & Department of Animal Sciences, University of Hyderabad, Hyderabad - 500 046.
32. **Dr. R. Vijendra Rao**, Scientist F & Head, Wood Properties and Uses Division, Institute of Wood Science & Technology, 18th Cross, Malleswaram, Bangalore - 560 003.
33. **Dr. Sher Singh Samant**, Scientist 'D' & Scientist In-charge, G.B. Pant Institute of Himalayan Environment & Development, Himachal Unit, Mohal-Kullu - 175 126.
34. **Dr. Santa Ram Joshi**, Lecturer, Department of Biotechnology & Bioinformatics, North-Eastern Hill University, Shillong - 793 022.





Ref. No. ....

Date .....

## AUDIT REPORT

We have audited the attached Receipts and Payments Account of The National Academy of Sciences, India, Allahabad for the year ended on March 31, 2007. These financial statements are the responsibility of the Academy's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We have conducted the Audit in accordance with the Auditing Standards generally accepted in India. These Standards require that we plan and perform our audit in a manner to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit includes examining, on test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the Accounting Principles used and significant estimates made by the management, as well as evaluating the overall financial statement presentation. We believe our audit provides a reasonable basis for our opinion.

Subject to the limitations stated above we report that:

We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of the audit.

In our opinion proper books of accounts have been kept by the Academy so far as it appears from our examination of such books.

The account dealt with by this report is in agreement with the books and records maintained by the Academy and produced before us for our verification.

In our opinion and to the best of our information and according to the explanations given to us, the said account gives a true and fair view of the receipts and payments for the year ended on March 31, 2007.

Place: Allahabad  
Date: 26.07.2007



Also at : NEW DELHI, BANGALORE, KOLKATA, LUCKNOW



5 Laipatrai Road, New Katra, Allahabad - 211 002

[illegible]

Subject to ~~an~~ even date annexed

Ch Sivadas  
(A.K. Sivastava)

Accounts Officer

National Academy of Sciences  
Allahabad

Treasure

The National Academy of Sciences, India

The National Academy of Sciences, India  
The National Academy of Sciences, India  
5, Lajpat Rai Road, Alahabad - 211002  
5, Lajpat Rai Road, Alahabad - 211002

Place: Allahabad  
Date: 26.07.2007



Ref. No. ....

Date .....

## AUDIT REPORT

We have audited the attached Income and Expenditure Account of The National Academy of Sciences, India, Allahabad for the year ended on March 31, 2007. These financial statements are the responsibility of the Academy's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We have conducted the Audit in accordance with the Auditing Standards generally accepted in India. These Standards require that we plan and perform our audit in a manner to obtain reasonable assurance about whether the financial statements are free from material misstatement.

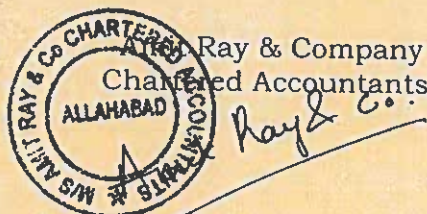
An audit includes examining, on test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the Accounting Principles used and significant estimates made by the management, as well as evaluating the overall financial statement presentation. We believe our audit provides a reasonable basis for our opinion.

Subject to the limitations stated above we report that:

The account dealt with by this report is in agreement with the books and records maintained by the Academy and produced before us for our verification.

In our opinion and to the best of our information and according to the explanations given to us, the said account gives a true and fair view of the excess of income over expenditure for the year ended on March 31, 2007.

Place: Allahabad  
Date: 26.07.2007



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Also at : NEW DELHI, BANGALORE, KOLKATA, LUCKNOW



INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED ON MARCH 31, 2007

EXPENDITURE	Schedule No.	Amount (Rs.)	Amount (Rs.)	INCOME	Schedule No.	Amount (Rs.)	Amount (Rs.)
<b>NON-PLAN EXPENDITURE</b>	<b>A</b>			<b>NON-PLAN EXPENDITURE</b>			
Salary		1,778,350.00		Grant-in-aid from Department of Science & Technology, New Delhi		1,900,000.00	1,900,000.00
Staff Welfare Expenses		121,850.00					
<b>PLAN EXPENDITURE</b>	<b>B</b>			<b>PLAN EXPENDITURE</b>	<b>E</b>		
1. Regular Publications		2,378,301.00		1. Unspent Grant-in-aid BIF from previous year		26,867,302.80	
2. Annual Session (including Sym.)		1,102,555.00		2. Grant-in-aid from DST, New Delhi during the year		17,500,000.00	
3. Platinum Jubilee Celebration Exp		3,981,571.00		3. Grant-in-aid from CST, Lucknow (for Publications)		270,000.00	
4. Singhania Library		2,975,228.00		4. Receipts for Platinum Jubilee Celebrations		2,150,000.00	
5. Office Expenses		2,583,072.00		5. Interest on M N Saha Distinguished Fellowship Fund		509,291.00	
6. Council & Other Meeting Expenses		1,815,422.00		6. Interest on NASI Reliance Industries Awards Fund		766,666.00	48,163,259.80
7. T A & Conveyance		12,830.00					
8. Equipment		3,292,202.00					
9. Local Chapters		38,093.00					
10. Science Communication Programmes		1,646,400.00					
11. Symposia / Seminars / Workshops		87,015.00					
12. Fellowships, Memorial Lectures & Endowment Funds		994,991.00					
13. NASI Reliance Industries Awards		766,666.00					
14. Salary		2,795,123.15					
15. Land & Building		21,307.00	24,490,776.15				
<b>WATER QUALITY SYMPOSIUM</b>				<b>WATER QUALITY SYMPOSIUM</b>			
Advance made in connection with the symposium				Financial Assistance from Hindustan Lever Ltd., Mumbai			250,000.00
<b>OTHER ACTIVITIES</b>	<b>C</b>			<b>OTHER ACTIVITIES</b>	<b>F</b>		
Unspent Balances carried forward				Unspent Balances brought forward			3,148,531.50
<b>SPECIFIED DEPOSITS</b>	<b>D</b>			<b>SPECIFIED RECEIPTS</b>	<b>G</b>		
1. Endowment Funds				1. Endowment Funds		328,188.00	
2. Life Membership Fee			250,000.00	2. Life Membership Fee		57,102.00	
3. Sessional Membership Fee				3. Sessional Membership Fee		7,380.00	
4. Proceeds of Publications				4. Proceeds of Publications		61,395.50	
5. Interest on Life Membership Fund FDRs			3,148,531.50	5. Interest on Life Membership Fund FDRs		508,900.17	
6. Miscellaneous Receipts				6. Miscellaneous Receipts		10,560.00	
7. Interest on specified deposits/accounts				7. Interest on specified deposits/accounts		161,353.96	
8. Interest on Endowment Funds for Lectures & Awards				8. Interest on Endowment Funds for Lectures & Awards		87,155.80	1,222,035.43
		87,155.80	1,222,035.43				
<b>Excess of Income over Expenditure during the year</b>			23,672,483.65				

Grand Total 54,683,826.73

Place: Allahabad  
Date: 26.07.2007

*(P. K. Sethi)*  
General Secretary

*(S. L. Srivastava)*  
Treasurer

*(A. K. Srivastava)*  
Accounts Officer

*(Amit Vaidya & Co.)*  
Chartered Accountants

General Secretary

The National Academy of Sciences, India  
5, Lalpatrai Road, Allahabad - 211 002

Treasurer

The National Academy of Sciences, India

5, Lalpatrai Road, Allahabad - 211 002

Accounts Officer

The National Academy of Sciences, India

5, Lalpatrai Road, Allahabad - 211 002





राष्ट्रीय विज्ञान अकादमी, भारत  
The National Academy of Sciences, India

