

INSA MEDAL FOR YOUNG SCIENTISTS- 2009

1. **Dr V Govindan Anand** (b.18.07.1974), PhD, Assistant Professor, Department of Chemistry, Indian Institute of Science Education and Research, Pune.

For his original contributions on synthesis and supramolecular properties of isophlorins.

2. **Dr Hanudatta Sastry Atreya** (b.08.11.1974), PhD, Assistant Professor, NMR Research Centre, Indian Institute of Science, Bangalore.

Innovative methodologies for analyzing NMR spectroscopic data for determining structures of proteins.

3. **Dr Anindita Bhadra** (b.07.05.1977), PhD, Centre for Ecological Sciences, Indian Institute of Science, Bangalore.

For her significant published work demystifying queen selection process in a primitively eusocial wasp.

4. **Dr Gautam Bharali** (b.13.05.1974), PhD, Assistant Professor, Department of Mathematics, Indian Institute of Science, Bangalore.

Has made several non-trivial contributions to the field of several complex variables such as polynomial convexity, spectral Pick-interpolation problem and the controlled bumping of bounded pseudo-convex domains, to mention only a few.

5. **Dr Alok Chandra Bharti** (b.07.07.1974), PhD, Scientist D and Head, Division of Molecular Oncology, Institute of Cytology and Preventive Oncology (ICMR), Noida.

Using a novel spontaneous murine T-cell lymphoma model, he showed that tumors actively release membrane gangliosides capable of inducing apoptosis in bone marrow cells both *in vivo* and *in vitro*. He further showed that the apoptosis is mediated by NFkappa B signaling.

6. **Dr KV Brinda** (b.19.10.1976), PhD, Post Doctoral Fellow, Department of Computer Science, Cornell University, Ithaca, New York.

Insightful work for identifying interactions in protein networks using bioinformatics approaches.

7. **Dr Anirban Chakraborti** (b.10.02.1975), PhD, Charge de Recherche, Laboratoire de Mathematiques Appliquees aux Systems, Ecole Centrale de Paris, Grande Voie des Vignes, Chatenay-Malabry, France.

For his pioneering studies on statistical models related to Econo-physics.

8. **Dr Chandra Prakash Chaturvedi** (b.07.03.1975), PhD, Post Doctoral Fellow, The Sprott Centre for Stem Cell Research, The Ottawa Hospital (General Campus), Ottawa, Ontario, Canada.

Dr Chandra Prakash Chaturvedi, has contributed to the development of a novel two-component expression system involving a TGTA mutation in the TATA box and a mutated transcription factor TBPM3 to achieve a tight regulation of transgenes. The synthetic bi-directional promoter developed by him is another useful contribution to transgenics.

9. **Dr Onkar Jayant Dabeer** (b.15.09.1974), PhD, Reader F, School of Technology and Computer Science, Tata Institute of Fundamental Research, Dr Homi Bhabha Road, Mumbai.

Design of low-precision ADC to reduce cost and power consumption in, and development of uncoordinated access mechanism for wireless communication.

10. **Dr Archana Sunil Gandhe** (b.03.05.1976), PhD, Laboratory of Molecular Genetics, Centre for DNA Fingerprinting and Diagnostics (CDFD), Hyderabad.

For discovering novel molecules involved in innate immunity in insects and for publications in outstanding journals.

11. **Dr Anil Kumar Ghosh** (b.27.08.1974), PhD, Assistant Professor, Theoretical Statistics and Mathematics Unit, Indian Statistical Institute, Kolkata.

Significant work on "Classification based on data" using a combination of parametric and nonparametric methods. Work includes rigorous asymptotic analysis as well as simulation based studies.

12. **Dr Rajesh Ghanshyam Gonnade** (b.21.03.1974), PhD, Scientist C, Center for Materials Characterization, National Chemical Laboratory, Dr Homi Bhabha Road, Pune.

For his wide-ranging studies on halogen bonding and crystal engineering of inositols.

13. **Dr Yamuna Krishnan** (b.25.05.1974), PhD, Fellow E, National Centre for Biological Sciences, TIFR, UAS-GKVK Campus, Bangalore.

Insightful work leading to an understanding of the formation of uncommon i-tetraplex structures of nucleic acids.

14. **Dr Amol Arvindrao Kulkarni** (b.03.12.1976), PhD, Scientist, Chemical Engineering Division, National Chemical Laboratory, Dr Homi Bhabha Road, Pune.

Design of microreactors for continuous flow synthesis and design of microdevices for carrying out exothermic reactions.

15. **Dr Brijesh Kumar** (b.01.06.1976), PhD, Assistant Professor, School of Physical Sciences, Jawaharlal Nehru University, New Delhi.

For developing a new and original approach to treat strongly correlated electron systems.

16. **Dr Manoj Kumar** (b.18.12.1974), PhD, Reader F, School of Mathematics, Harish-Chandra Research Institute, Allahabad.

Dr. Manoj Kumar Yadav has made significant contributions to the study of class preserving automorphisms of a finite p-group. He has found an optimal upper bound for the order of this group and moreover classified those p-groups for which the bound is attained. By solving an analogue of a famous problem of Burnside on the existence of a p-group which has non inner class preserving automorphisms, he generalized some well known results of Atan, Curran and McCaughan.

17. **Dr Namit Mahajan** (b.22.06.1975), PhD, Reader, Theoretical Physics Division Physical Research Laboratory, Ahmedabad.

For his excellent work on weak decays of B-mesons and CP violation.

18. **Dr Chandrashekara Mallappa** (b.22.03.1977), PhD, Postdoctoral Research Associate, UMass Medical School, Department of Cell Biology, Worcester, USA.

Dr Chandrasekhara Mallappa, has performed excellent research by studying light regulated plant gene expression and development. His work on ZBF1 transcription factor demonstrated for the first time that it acts as a factor at the cross-talk among three signal transduction pathways. He has also studied mechanistic aspects of light signaling controlled by ZBF2 / GBF1. The work is novel and provides very important information on environmental effects on gene regulation.

19. **Dr Jajati Keshari Mohapatra** (b.12.06.1976), PhD, Scientist (Veterinary Microbiology), Project Directorate on Foot and Mouth Disease (ICAR), IVRI Campus, Mukteswar-Kumaon, Nainital, Uttarakhand.

Dr JK Mahapatra has used molecular tools to examine the diversity and genomic complexity of the Foot and Mouth Disease virus. Information generated through his work will be useful for diagnosis and management of this important disease through development of new vaccines.

20. **Dr Soumik Mukhopadhyay** (b.21.10.1976), PhD, Senior Research Fellow, Saha Institute of Nuclear Physics, Bidhannagar, Kolkata.

For his original contributions to Tunnel Magnetoresistance in nanosystems and spintronics.

21. **Dr Satish A Patil** (b.01.07.1974), PhD, Assistant Professor, Solid State and Structural Chemistry Unit, Indian Institute of Science, Bangalore.

For his imaginative and innovative work on conjugated polymers for organic electronics and photo-catalysis.

22. **Dr Beena R Pillai** (b.09.12.1974), PhD, Scientist, Comparative Genomics and Gene Expression, Institute of Genomics and Integrative Biology, CSIR, Delhi.

Insightful work on relationship between polyglutamine expansions and neuro degenerative disorders.

23. **Dr Kalika Prasad** (b.08.07.1974), PhD, Padualaan 8, Utrecht University, Utrecht, The Netherlands.

Dr Kalika Prasad, has made critical contributions in understanding transcription regulation of rice flowering. His work on the RFL gene showed that RFL gene has acquired a unique pattern in all branching meristems. These RFL regulatory elements contribute to a function in plant architecture. Dr Kalika Prasad has also explored functions for two other rice transcription factors regulating rice organs: lemma, palea and lodicules. His approach of functional genomics has brought new knowledge on regulation of rice flowering and plant architecture.

24. **Dr Mihir Kumar Purkait** (b.16.10.1974), PhD, Associate Professor, Department of Chemical Engineering, Indian Institute of Technology, Guwahati.

Development of novel waste water treatment, membrane separation technologies and enhanced oil recovery technology.

25. **Dr Paramel Pattathil Rajeev** (b.05.05.1976), PhD, Gemini Experimental Science Section Leader, Central Laser Facility, Rutherford Appleton Laboratory, Chilton, Didcot, UK.

For his pioneering work on intense, Femtosecond, Laser-solid interactions in nanoscales.

26. **Dr KV Ramesh** (b.12.07.1975), PhD, Scientist, CSIR Centre for Mathematical Modelling and Computer Simulation, Bangalore.

Dr KV Ramesh has made significant contributions in understanding air-sea interactions on intraseasonal time scale over Indian monsoon region using global general circulation model and new oceanic data.

27. **Dr Manish Tiwari** (b.26.11.1975), PhD, Scientist-B, National Centre for Antarctic and Ocean Research, Vasco-da-Gama, Goa.

Dr Manish Tiwari has used multiple proxies to decipher various aspects of past monsoon using sediments from the Arabian Sea, with high resolutions dating using radiocarbon, for the past 35Ka. He has provided quantitative climate data useful to test models.

28. **Dr Ganesan Venkatasubramanian** (b.24.01.1975), MD, Assistant Professor of Psychiatry, Department of Psychiatry, National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore.

For his innovative use of quantitative and functional imaging of the brain in patients with schizophrenia and carefully matched controls and linking these data to clinical and epidemic logic parameters leading to a new hypothesis of a “neuro immuno metabolic model” for its etiopathogenesis. This model has been partially validated by available results and exciting work is continuing.

Anil Kumar Bose Memorial Medal - 2009

1. **Dr Joseph Selvin** (b.1972), Senior Lecturer, Department of Micrology, Bharathidasan University, Tiruchirappalli 620 024.

For his paper on “Exploring the Antagonistic Producer *Streptomyces* MSI051: Implications of Polyketide Synthase Gene Type II and a Ubiquitous Defense Enzyme Phospholipase A2 in the Host Sponge *Dendrilla nigra*” published in *Current Microbiology (Springer)*, 2009, DOI 10.1007/s00284-008-9343-1.