





Annual Symposium of the INDIAN BIOPHYSICAL SOCIETY

IISER Mohali, India ♦ 22 - 25 March

Biophysics of Molecules, Cells and Organs : Form, Function & More....

22 March
Pre-Symposium Lecture Series

23 - 25 March
Main Symposium

Facilitated By
SELECTBIO

Scientific Program

| Time | 23-Mar-2017 | | |
|---------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 08:00 - 08:30 | Symposium Registration | | |
| 08:30 - 08:45 | Opening Remarks | Convener and President of the IBS | |
| 08:45 - 09:45 | G.N. Ramachandran Memorial Lecture Chairperson: Raghavan Varadarajan | | |
| 08:45 - 09:45 | Sriram Subramaniam | National Cancer Institute, NIH, Bethesda, USA | High-resolution 3D Electron Microscopy: Progress and New Opportunities |
| 09:45 - 10:30 | Group Photo and Tea | | |
| 10:30 - 13:00 | Session 1 Chairperson: G. Krishnamoorthy | | |
| 10:30 - 11:00 | Amitabha Chattopadhyay | CCMB, Hyderabad | Dipole Potential: A Novel Approach to Explore Membrane Organization and Function |
| 11:00 - 11:30 | Rupa Mukhopadhyay | IACS, Kolkata | Atomic Force Spectroscopy Approach to MDR-TB Detection |
| 11:30 - 12:00 | R. Sowdhamini | NCBS, Bangalore | Computational Studies to Understand Mechanism of Action of Prolyl oligopeptidases |
| 12:00 - 12:30 | Ashutosh Kumar | IIT, Bombay | Structures-Toxicity Link of Protein Aggregates in Parkinson's Disease |
| 12:30 - 13:00 | Gautam Basu | Bose Institute, Kolkata | Protein Structure and Dynamics Specific to cis-Proline |
| 13:00 - 14:00 | Lunch and Executive Committee Meeting | | |
| 14:00 - 15:30 | Poster Evaluation and Tea | | |
| 15:30 - 18:00 | Session 2 Chairperson: Sriram Subramaniam | | |
| 15:30 - 16:00 | D. Balasubramanian | L V Prasad Eye Institute, Hyderabad | Eye Lens Transparency and the Role of the Greek Key Super-secondary Structural Motif in the Human β -y Crystalins |
| 16:00 - 16:30 | N. Srinivasan | IISc, Bangalore | Roles of Interfacial Residues in Conferring Specificity and Stability of Transient Protein-Protein Complexes |
| 16:30 - 17:00 | Faizan Ahmad | JMI, New Delhi | Mechanism of Survival of Ethanol Producing Organisms: Role of Cellular Compatible Osmolytes In Counteracting the Deleterious Effects of Ethanol on Structure, Stability and Function of Proteins |
| 17:00 - 17:30 | Sanjib Senapati | IIT Madras, Chennai | Lipid Transfer Mechanism of Cholesteryl Ester Transfer Protein between HDL and LDL |
| 17:30 - 18:00 | Apurba Kumar Sau | NII, Delhi | Arginase of Helicobacter Gastric Pathogens Utilizes a Unique Non-Catalytic Triad for Catalysis; a Possible Strategy to Develop Specific Inhibitors |
| 18:00 - 18:30 | FREE | | |
| 18:30 - 19:15 | Hindustani Classical & Semi-Classical Recital (Vocal): Prof Subhendu Ghosh, Delhi University, Delhi | | |
| 19:15 - 20:00 | Punjabi Cultural Program | | |
| 20:00 - 21:30 | Conference Dinner | | |
| 21:30 - 22:30 | Session 3 Chairperson: D. Balasubramanian | | |
| 21:30 - 22:00 | Jayant Udgaonkar | NCBS, Bangalore | How Does the Prion Protein Misfold? |
| 22:00 - 22:30 | Rajan Sankaranarayanan | CCMB, Hyderabad | Chiral Proofreading: Mechanistic and Functional Implications |
| END OF DAY 1 | | | |

| Time | 24-Mar-2017 | | |
|---------------------|----------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 08:30 - 11:00 | Session 4 Chairperson: Amitabha Chattopadhyay | | |
| 08:30 - 09:00 | B. Padmanabhan | NIMHANS, Bangalore | The Impact of Crystallization Conditions on Structure Based Drug Design: A Case Study of the Brd2 Bromodomain Complex |
| 09:00 - 09:30 | Samudrala Gourinath | JNU, New Delhi | Structural and Functional Studies of Myosin Ib: Understanding the Role in Phagocytic Cup Formation of Entamoeba Histolytica |
| 09:30 - 10:00 | Govardhan Reddy | IISc, Bangalore | Protein Collapse and Folding |
| 10:00 - 10:30 | Shivprasad Patil | IISER Pune, Pune | Viscoelasticity of Single Proteins and Its Significance in Protein Dynamics |
| 10:30 - 11:00 | Pramit Chowdhury | IIT Delhi, New Delhi | Local Modulations in Conformations of Proteins in Presence of Macromolecular Crowding |
| 11:00 - 11:30 | Tea Break | | |
| 11:30 - 13:00 | Session 5 (Young Researcher Talks) Chairperson: R. Sowdhamini | | |
| 11:30 - 11:50 | Shanti Swaroop Srivastava | CCMB, Hyderabad | Ratna Phadke Award Talk: Enigmatic World of $\beta\gamma$ -Crystallins Beyond the Eye Lens |
| 11:50 - 12:02 | Neha Jain | University of Michigan, Ann Arbor, USA | Inhibition of Curli Assembly and Biofilm Formation in E.coli by the Human Systemic Amyloid Precursor Transthyretin |
| 12:02 - 12:14 | Ranjit Nivrutti Shinde | IMTECH, Chandigarh | Ion Transfer into the Active Site of DHBPS: Mechanistic Insights from MD Simulations |
| 12:14 - 12:26 | Sanchita Mukherjee | IISER, Kolkata | Computational Approach to Engineer Rationally Designed Nanostructured Molecular Transporters for siRNA Delivery |
| 12:26 - 12:38 | Prateek Jain | NABI, Mohali | Designed Dominant Negative: A Potent Technology to Study Gene Regulation |
| 12:38 - 12:50 | Pritha Ghosh | NCBS, Bangalore | A Tale of Two Paralogs: Human Transformer2 Proteins with Differential RNA-Binding Affinities |
| 12:50 - 13:00 | Discussion with Oral Presenters | | |
| 13:00 - 14:00 | Lunch Break | | |
| 14:00 - 15:30 | Poster Evaluation and Tea | | |
| 15:30 - 17:30 | Session 6 Chairperson: M. K. Mathew | | |
| 15:30 - 16:00 | Chaitali Mukhopadhyay | Calcutta University, Kolkata | Structure and Dynamics of Ternary Bilayers Containing Ganglioside Gm1 |
| 16:00 - 16:30 | Prasenjit Bhaumik | IIT Bombay, Mumbai | Studies on p. Falciparum Plasmeepsins to Decipher their Functional Mechanism, and Acquire Knowledge for Developing Antimalarial Drugs |
| 16:30 - 17:00 | Rajesh Kumar | Central University of Punjab, Bhatinda | Role of Macromolecular Crowding on Structural, Kinetic and Thermodynamic Properties of Metalloproteins |
| 17:00 - 17:30 | S. Kumaran | IMTECH, Chandigarh | Substrate-Induced Dissociation of Competitive Inhibitor: Evidence for Competitive-Allostery |
| 17:30 - 17:45 | Tea Break | | |
| 17:45 - 19:45 | Session 7 Chairperson: N. Srinivasan | | |
| 17:45 - 18:15 | Bishwajit Kundu | IIT Delhi, New Delhi | Insights of Amyloid Interaction Network and Designing Structure based Anti-Amyloidogenic Biomolecules |
| 18:15 - 18:45 | Neelanjana Sengupta | IISER Kolkata, Kolkata | Cold Thermal Denaturation in a Globular Protein: Signatures of Early Unfolding Investigated with Computer Simulations |
| 18:45 - 19:15 | Deepak Sharma | IMTECH, Chandigarh | Anion Size and Charge modulate Mechanical Stability of Protein: A Single Molecule Force Spectroscopy Study |
| 19:15 - 19:45 | M.S. Madhusudhan | IISER Pune, Pune | 3D Structure and Mechanism of Intermediate Filament Assembly |
| 20:00 - 21:30 | Conference Dinner | | |
| 21:30 - 22:30 | Session 8 Chairperson: Jayant Udgaonkar | | |
| 21:30 - 22:00 | Sudipta Maiti | TIFR, Mumbai | Inter-Residue Contacts as Critical Targets for Modulating Amyloid Properties |
| 22:00 - 22:30 | M. K. Mathew | NCBS, Bangalore | Notes from the Underground: Role of a Transmembrane Helix in Transmitting Information across a Bilayer |
| END OF DAY 2 | | | |

| Time | 25-Mar-2017 | | |
|---------------|---------------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 08:30 - 11:00 | Session 9 Chairperson: Sudipta Maiti | | |
| 08:30 - 09:00 | Balaji Prakash | CFTRI, Mysore | Exploring Substrate Promiscuity in Sugar Nucleotidyltransferases and Identifying Two Commercially Employable Enzymes for Glycorandomisation |
| 09:00 - 09:30 | Srikrishna Subramanian | IMTECH, Chandigarh | Evolutionary Classification of Zinc Finger Proteins |
| 09:30 - 10:00 | Aravind Penmatsa | IISc, Bangalore | Mechanism and Pharmacology of Neurotransmitter Transport |
| 10:00 - 10:30 | Ravi Venkataramani | TIFR, Mumbai | Towards Quantitative Descriptions of Biomolecular Dynamics: Molecular Descriptors for Sorting Ubiquitin Family Proteins |
| 10:30 - 11:00 | Neel Bhavesh | ICGEB, New Delhi | RNA Recognition Motifs (RRMs): A Story of one Fold with Different Partners |
| 11:00 - 11:30 | Tea Break | | |
| 11:30 - 13:30 | Session 10 Chairperson: K V R Chary | | |
| 11:30 - 12:00 | Ashish | IMTECH, Chandigarh | "I Can't Wait for High Resolution Structures to Discover Lead Compounds": Story of Isodesmosine |
| 12:00 - 12:30 | Arockiasamy Arulandu | ICGEB, New Delhi | Structural Basis of Ascorbate Recycling |
| 12:30 - 13:00 | Manisha Goel | Delhi University, Delhi | Chaperone Repertoires and Networks in Archaeal Genomes |
| 13:00 - 14:00 | Lunch Break | | |
| 14:00 - 1:430 | General Body Meeting | | |
| 14:30 - 15:00 | Concluding Session & Awards Proclamation | | |
| | Tea and Depart | | |

