

# 14<sup>th</sup> FAOBMB Congress and 84<sup>th</sup> Annual Meeting of SBC (I)

## Current Excitements in Biochemistry and Molecular Biology for Agriculture and Medicine

Centre for Cellular and Molecular Biology, Hyderabad, India

27 – 30 November 2015

Venue: BITS Pilani, Hyderabad Campus



### PROGRAMME

Time (h)	Day 1; Friday, 27 November 2015		
11.00 - 13.00	Registration		
12.30 - 13.30	Lunch		
13.30 - 14.00	Inauguration (Auditorium)		
14.00 - 14.05	Announcement of President Elect, IUBMB		
14.05 - 14.45	<b>Plenary Lecture 1: Kanury V S Rao, India (Takashi Murachi Memorial Lecture)</b> <i>Deciphering the host-pathogen interplay in human macrophages infected with Mycobacterium tuberculosis</i>		<b>Chairperson:</b> <b>Andrew H.-J. Wang, Taiwan</b>
14.45 - 15.25	<b>Plenary Lecture 2: Shubha Tole, India (Kunio Yagi Lecture)</b> <i>Towards a Blueprint for Building the Brain</i>		
15.25 - 15.55	High Tea & Inauguration of Exhibition Stalls		
16.00 - 18.00	<b>Hall No: F102</b> <b>Protein Folding and Disease</b> <i>Chairperson: Kim Chu-Young, Singapore</i>	<b>Hall No: F105</b> <b>Developmental Biology</b> <i>Chairperson: Polani B. Seshagiri, India</i>	<b>Hall No: F106</b> <b>Epigenetics and miRNA</b> <i>Chairperson: Hansel Fletcher, USA</i>
16.00 - 16.30	<b>Manajit Hayer-Hartl, Germany</b> <i>The complex chaperone machineries for the folding and assembly of RuBisCO</i>	<b>L. S. Shashidhara, India</b> <i>A comparative genomic analysis of targets of Hox protein Ultrabithorax amongst distant insect species: new insights into evolution of halteres in Drosophila</i>	<b>Rakesh K. Mishra, India</b> <i>Functional Compartmentalization of the Genome and Epigenetic Regulation of Genes</i>
16.30 - 17.00	<b>Kunihiro Kuwajima, Japan</b> <i>The problem of protein folding</i>	<b>Subramaniam Ganesh, India</b> <i>Mitochondrial homeostasis and neurodegeneration: Insight from Lafora disease</i>	<b>Tapas Kundu, India</b> <i>Lysine Acetylation and Arginine Methylation of Histones are critical for Neural Differentiation and Memory</i>
17.00 - 17.30	<b>Jayant Udgaonkar, India</b> <i>Mechanism of misfolding of the prion protein</i>	<b>Surendra Ghaskadbi, India</b> <i>Identification and characterization of BMP inhibitors Noggin and Gremlin from Hydra</i>	<b>Sanjeev Khosla, India</b> <i>Mycobacteria modulate host epigenetic machinery by deploying Rv1988 to atypically methylate Histone H3</i>
17.30 - 18.00	<b>Zengyi Chang, China</b> <i>Understanding the Unusual Biological Function and Action Mechanism of the acid resistant molecular chaperone HdeA: from in vitro to in vivo</i>	<b>Anu Bashamboo, France</b> <i>Cellular Models to Understand Cell Fate Choice During Human Sex-Determination</i>	<b>Ritu Kulshreshtha, India</b> <i>Hypoxic Regulation of MicroRNAs: Implications for Cancer Biology</i>
18.05 - 18.35	<b>SBC(I) Award: B. J. Rao, India (Prof. M. Shadakshara Swamy Endowment Lecture Award)</b> <i>Genome Dynamics: Chromosome Territories &amp; Replication Forks are dynamically regulated in mammalian genomes</i>		<b>Chairperson:</b> <b>Ch. Mohan Rao, India</b>
18.35 - 19.30	EC meeting of SBC(I) / fixing of Posters		
20.00 - 21.00	Dinner		

# 14<sup>th</sup> FAOBMB Congress and 84<sup>th</sup> Annual Meeting of SBC (I)

Time (h)	Day 4; Monday, 30 November 2015		
09.25 - 10.05	<b>Plenary Lecture 8: Keshav K. Singh, USA (Jisnuson Svasti Lecture)</b> <i>MipiGenetic and MipiGenomic: Integration of mitochondria-induced cellular mayhem at epigenetic and genetic level</i>		<b>Chairperson:</b> <b>Yau-Huei Wei, Taiwan</b>
10.10 - 13.10	<b>Hall No: F102</b> <b>Alternate Model System for Human Disease</b> <b>Chairperson: William Y Tsang, Canada</b>	<b>Hall No: F105</b> <b>Ancient and Traditional Medicine in Modern Context</b> <b>Chairperson: P. Kondaiah, India</b>	<b>Hall No: F106</b> <b>Evolutionary Biology</b> <b>Chairperson: G. Kumaramanickavel, India</b>
10.10 - 10.40	<b>John Mercer, USA</b> <i>A multilevel approach to inherited sarcomeric cardiomyopathies</i>	<b>Bhushan Patwardhan, India</b> <i>Ancient and Traditional Medicine in Modern Context</i>	<b>Marie Allen, Sweden</b> <i>Novel tools for Forensic DNA testing</i>
10.40 - 11.10	<b>Sridhar Sivasubbu, India</b> <i>Non-Protein Coding RNA Based Regulation of Vascular Development in Zebrafish</i>	<b>K. Satyamoorthy, India</b> <i>Prakriti Relationship to DNA Methylation Differences for Phenotype Descriptions</i>	<b>B. Venkatesh, Singapore</b> <i>The slow -evolving genome of elephant shark: a valuable reference genome</i>
11.10 - 11.40	<b>Tea/Coffee Break</b>		
11.40 - 12.10	<b>Chetana Sachidanandan, India</b> <i>From Fish to Men: drugging Iron Regulatory Disorders</i>	<b>Ashwini Godbole, India</b> <i>Medhyarasayana (Ayurvedic nootropics) for enhanced cognition and protection from neurodegenerative disease</i>	<b>Gyaneshwer Chaubey, Estonia</b> <i>Migration, admixture and assimilation: case of Jewish and Parsi populations in India</i>
12.10 - 12.40	<b>Chiranjib Chakraborty, South Korea</b> <i>Zebrafish model: an Absolute Animal Model to Study in vitro Drug Discovery, Different Diseases Mechanism and miRNA Research</i>	<b>Bhavana Prasher, India</b> <i>Ayurgenomics: Exploring the genomic basis of Ayurveda principles for development of predictive and personalized medicine</i>	<b>Kamani Tennekoon, Sri Lanka</b> <i>Maternal lineages of major ethnic groups in Sri Lanka including the Vedda population</i>
12.40 - 13.10	<b>Upendra Nongthomba, India</b> <i>Indirect flight muscles of Drosophila as a model system to study myogenesis and myopathies</i>	<b>Mitali Mukerji, India</b> <i>Ayurgenomics : An integrative genomics approach for partitioning the human genome variability for stratified medicine</i>	<b>Heui Soo Kim, South Korea</b> <i>Alternative Splicing and Transcriptional Regulation of Functional Genes by Transposable Elements</i>
13.10 - 14.25	<b>Lunch / Poster</b>		
14.25 - 15.05	<b>Plenary Lecture 9: Ikuro Abe, Japan (Osamu Hayaishi Lecture)</b> <i>Engineered Biosynthesis of Medicinal Natural Products</i>		<b>Chairperson:</b> <b>Tej P. Singh, India</b>
15.10 - 16.40	<b>Hall No: F102</b> <b>Eye Disease</b> <b>Chairperson: Kamani Tennekoon, Sri Lanka</b>	<b>Hall No: F105</b> <b>Nanotechnology and Stem Cell</b> <b>Chairperson: John Mercer, USA</b>	<b>Hall No: F106</b> <b>Neurobiology</b> <b>Chairperson: Chiranjib Chakraborty, South Korea</b>
15.10 - 15.40	<b>William Y Tsang, Canada</b> <i>Characterization of NPHP5, A Ciliary Protein Mutated in Eye Disease</i>	<b>Rama Shanker Verma, India</b> <i>Hybrid Tissue Engineered scaffold for Fabrication of a Bioprosthetic Heart Valve</i>	<b>Kiyoshi Fukui, Japan</b> <i>Chiral Science and Pathophysiology of Amino Acid Metabolism: regulation of human D-amino acid oxidase gene expression and implication for human psychiatric disorders</i>
15.40 - 16.10	<b>G. Kumaramanickavel, India</b> <i>Ophthalmic Genomics: Current Trends and its Applications in Clinical Practice</i>	<b>Ambarish Ghosh, India</b> <i>Biological applications with magnetic nanoswimmers</i>	<b>G. Venkatasubramanian, India</b> <i>Translational Implications of Neuroimmune - Neuroplastic Interactions in Schizophrenia: Insights from Imaging Genetics</i>
16.10 - 16.40	<b>P. Sundaresan, India</b> <i>Ocular Disease Gene discovery</i>	<b>Bibin Nair, India</b>	<b>Ramakrishnan Kannan, India</b> <i>Cellular pathogenesis of Spatacsin and Spastizin in autosomal recessive (AR) hereditary spastic paraplegia (HSP)</i>
16.40 - 17.10	<b>Tea/Coffee Break</b>		
17.10 - 18.00	<b>Closing Session</b>		

Note: Inauguration, Plenary Lectures & SBC(I) Award Lectures are in the Auditorium

# 14<sup>th</sup> FAOBMB Congress and 84<sup>th</sup> Annual Meeting of SBC (I)

Time (h)	Day 2; Saturday, 28 November 2015		
09.15 - 09.55	Plenary Lecture 3: <b>Ulrich Hartl</b> , Germany (IUBMB Lecture) <i>Molecular Chaperones: Guardians of the Proteome</i>		<b>Chairperson:</b> <b>Kiyoshi Fukui, Japan</b>
09.55 - 10.35	Plenary Lecture 4: <b>David Craik</b> , Australia (FAOBMB Award for Research Excellence) <i>Discovery and applications of cyclic peptides in drug design</i>		
10.40 - 13.30	<b>Hall No: F102</b> <b>Agriculture</b> <b>Chairperson: Samit Adhya, India</b>	<b>Hall No: F105</b> <b>Cardiovascular and Metabolic Diseases</b> <b>Chairperson: K. Muniyappa, India</b>	<b>Hall No: F106</b> <b>Infection and Disease</b> <b>Chairperson: Masatsune Kainosho, Japan</b>
10.40 - 11.10	<b>Appa Rao Podile, India</b> <i>Chitooligosaccharides and immunity in plants</i>	<b>B. K. S. Sastry, India</b> <i>Clinical perspective of translational research in cardiovascular diseases</i>	<b>Aruni Wilson, USA</b> <i>Community microbial consortia of yet-un-culturable bacteria and their implications in health and disease</i>
11.10 - 11.40	<b>Ramesh V. Sonti, India</b> <i>Induction and suppression of host innate immunity in plant-pathogen interactions</i>	<b>Shantanu Sengupta, India</b> <i>Understanding Coronary Artery Disease in India using multilayer-omics analysis</i>	<b>Joon Kim, Korea</b> <i>Ribosomal proteins play important roles in DNA repair, cancer and Candida infection with respect to cellular stress</i>
11.40 - 12.00	<b>Tea/Coffee Break</b>		
12.00 - 12.30	<b>Rajeev K. Varshney, India</b> <i>Next generation genomics for crop improvement- some examples in chickpea</i>	<b>P. S. Dhandapany, USA</b> <i>Cardiomyopathies: From Genes to Therapies</i>	<b>Leann Tilley, Australia</b> <i>Targeting the Cell Stress Response of Plasmodium falciparum to Overcome Artemisinin Resistance</i>
12.30 - 13.00	<b>Ajit Kumar Shasany, India</b> <i>Channelling of intermediates for secondary metabolite biosynthesis: essential for metabolic engineering?</i>	<b>Nitish R. Mahapatra, India</b> <i>Chromogranin A Gly364ser variant profoundly alters the risk for hypertension in human populations via modulation of endothelial nitric oxide levels</i>	<b>Kim Chu-Young, Singapore</b> <i>Structural Biology of Enzymes Involved in Natural Product Antibiotic Biosynthesis</i>
13.00 - 13.15	<b>*Veena S. Anil, India</b> <i>Inherent and induced mechanisms of Late Blight resistance in potato crop</i>	<b>*M. Balasubramanyam, India</b> <i>Excitements versus Deliverables of Omics Advancements in Diabetes</i>	<b>Apurba Kumar Sau, India</b> <i>Structural and Functional Insights into the Regulation of Helicobacter pylori Arginase Activity by an Evolutionary Non-conserved Motif</i>
13.15 - 13.30	<b>*Sharmila Chattopadhyay, India</b> <i>Interaction of Glutathione with ethylene to control necrotrophic fungal infection in crop plant</i>	<b>*Shakila Srikumar, Malaysia</b> <i>Hyperhomocysteinemia and Cardiovascular Disease: The Process and Prevention</i>	
13.30 - 14.45	<b>Lunch / Poster</b>		
14.45 - 15.15	SBC(I) Award: <b>G. Suresh Kumar, India (C. R. Krishna Murti Award)</b> <i>Nucleic acid interaction of small molecules: From lac repressor protein fragments, mitomycins to natural alkaloids</i>		<b>Chairperson:</b> <b>Ch. Mohan Rao, India</b>
15.15 - 15.45	SBC(I) Award: <b>Subrata Chattopadhyay, India (P. B. Rama Rao Memorial Award)</b> <i>A Tale of Three Molecular Sisters</i>		
15.50 - 18.45	<b>Hall No: F102</b> <b>Chromosome and Reproductive Biology</b> <b>Chairperson: Tapas K. Kundu, India</b>	<b>Hall No: F105</b> <b>Cancer Biology</b> <b>Chairperson: L. S. Shashidhara, India</b>	<b>Hall No: F106</b> <b>IUBMB Education Session</b> <b>Chairperson: Koh Siok Im, Singapore</b>
15.50 - 16.20	<b>Polani B. Seshagiri, India</b> <i>Cellular and Molecular Control of Blastocyst Hatching</i>	<b>P. Kondaiah, India</b> <i>Role of Insulin like Growth Factor Binding Protein-2 in the pathogenesis of Glioblastoma</i>	<b>D. Balasubramanian, India</b> <i>Popularization of Science as an additional/alternate career</i>
16.20 - 16.50	<b>Tatsuo Fukagawa, Japan</b> <i>Molecular architecture of vertebrate centromeres</i>	<b>Rana P. Singh, India</b> <i>An adjuvant for enhancing radiotherapeutic efficacy in prostate cancer</i>	<b>Martin Stone, Australia</b> <i>Mapping skills training onto target competencies for PhD research and beyond</i>
16.50 - 17.15	<b>Tea/Coffee Break</b>		
17.15 - 17.45	<b>Rima Dada, India</b> <i>Sperm DNA damage: Clinical Implications</i>	<b>Kumaravel Somasundaram, India</b> <i>Tumor-stroma interactions in glioblastoma: Identification of a novel angiogenic factor</i>	<b>Gracia Fe B Yu, Philippines</b> <i>From basic research to livelihood: a Ph.D as social entrepreneur</i>
17.45 - 18.15	<b>Rajender Singh, India</b> <i>Aldose reductase may regulate blood testis barrier via focal adhesion kinase pathway</i>	<b>Sagar Sengupta, India</b> <i>The role of RECQL4 helicase, the protein mutated in Rothmund Thomson Syndrome, in mitochondrial functions</i>	<b>Hansel Fletcher, USA</b> <i>Diversity in the biomedical workforce – future anticipated career opportunities</i>
18.15 - 18.45	<b>Deepak Modi, India</b> <i>HOXA10 Functions in Endometrial Implantation and Decidualization</i>	<b>Suresh Mathivanan, Australia</b> <i>Intercellular transfer of mutant <math>\beta</math>-catenin via exosomes activates Wnt signalling pathway in the tumor microenvironment</i>	- Discussion
18.45 - 19.45	<b>General Body Meeting of SBC(I)</b>		
19.30 - 20.15	<b>Cultural Programme (Sitar Recital by Prof. A. V. Raja)</b>		
20.30 - 21.30	<b>Dinner</b>		

\* Short presentation (15 min.)

# 14<sup>th</sup> FAOBMB Congress and 84<sup>th</sup> Annual Meeting of SBC (I)

Time (h)	Day 3; Sunday, 29 November 2015		
09.25 - 10.05	Plenary Lecture 5: <b>Giulio Superti-Furga</b> , Austria (FEBS Lecture) <i>Molecular networks, drug action and genome-informed medicine</i>		<b>Chairperson:</b> <b>Ikuro Abe</b> , Japan
10.10 - 13.10	<b>Hall No: F102</b> <b>DNA Damage, Recombination and Repair</b> <b>Chairperson: Rana P. Singh</b> , India	<b>Hall No: F105</b> <b>Emerging Technologies</b> <b>Chairperson: Kumaravel Somasundaram</b> , India	<b>Hall No: F106</b> <b>Young Scientist Award Session</b> <b>Chairperson: Sheila Nathan</b> , Malaysia
10.10 - 10.40	<b>K. Muniyappa</b> , India <i>Molecular Insights into Meiotic Chromosome Pairing from Single Molecule Analysis</i>	<b>Erich Gnaiger</b> , Austria <i>Differences in mitochondrial function in brain microsomes in health and disease revealed by high-resolution respirometry</i>	<b>Urmi Dhagat</b> , Australia <i>The molecular basis of Interleukin-3 receptor signaling and strategies for targeting IL-3 activity in Acute Myeloid Leukaemia</i>
10.40 - 11.10	<b>Anindya Roy</b> , India <i>RecA protein stimulates demethylation of DNA</i>	<b>Ashok Gopinath</b> , Singapore <i>Recent Progresses in Genomics and their Applications in Oncology</i>	<b>Victor Anggono</b> , Australia <i>Molecular Mechanisms of AMPA Receptor Trafficking</i>
11.10 - 11.40	<b>Tea/Coffee Break</b>		
11.40 - 12.10	<b>Manas Kumar Santra</b> , India <i>Dedicated DNA damage checkpoint protein FBXO31 facilitates p53-mediated growth arrest following genotoxic stresses</i>	<b>Stephen Rudd</b> , Singapore <i>SMRT sequencing: from structural aberration to epigenetic modification</i>	<b>*Oral Presentation from Selected Abstracts</b> <b>Sathish Kumar Ramalingam</b> , India <i>Next Generation DNA Barcoding for the Authentication of Herbal Admixtures</i> <b>B. Padmanabhan</b> , India <i>Structure based drug discovery of small molecules for the BRD2 bromodomain associated with cancer and neurodegenerative diseases</i> <b>Kartik Sunagar</b> , Israel <i>The rise and fall of an evolutionary innovation</i> <b>Megha Bansal</b> , India <i>Optineurin mediates autophagosome formation and the delivery of membrane from transferrin receptor-positive endosomes to autophagosomes.</i> <b>Saurabh Mishra</b> , India <i>WhiB4 regulates <math>\beta</math>-lactam stress response in Mycobacterium tuberculosis</i> <b>Tulika Mitra</b> , India <i>TGFB1 induces stem-like characteristics in the ovarian cancer cell and renders chemoresistance through EMT</i>
12.10 - 12.40	<b>Akira Shinohara</b> , Japan <i>Prophase pathway for removal of a meiosis-specific cohesin from arms of chromosomes during late prophase I of meiosis</i>	<b>Jay Fox</b> , USA <i>Proteomic Analysis of Human Blister Fluids Following Envenomation by Three Snake Species: Differential Markers for Venom Mechanisms of Action and Potential for Personalized Therapeutic Intervention</i>	
12.40 - 13.10	<b>Mrinal Kanti Bhattacharya</b> , India <i>The non-redundant homologous recombination pathway of malaria parasites is essential for DNA double strand break repair</i>	<b>Prathap Naidu</b> , India <i>Ion S5™ and Ion S5™ XL Next-Generation Sequencing Systems for Targeted Sequencing</i>	
13.10 - 14.25	<b>Lunch / Poster</b>		
14.25 - 15.05	Plenary Lecture 6: <b>Sathees C. Raghavan</b> , India (FAOBMB Lecture) <i>Homology and Enzymatic Requirements of an Alternate, Microhomology Dependent NHEJ and its Relevance in Generation of DNA Deletions and Rearrangements</i>		<b>Chairperson:</b> <b>David Craik</b> , Australia
15.05 - 15.45	Plenary Lecture 7: <b>Tej P. Singh</b> , India (GN. Ramachandran Lecture) <i>Structural basis of action of peptidoglycan recognition proteins and their possible applications as protein antibiotics</i>		
15:45 - 16.15	<b>Tea/Coffee Break</b>		
16.15 - 18.15	<b>Hall No: F102</b> <b>Structural Biology</b> <b>Chairperson: Erich Gnaiger</b> , Germany	<b>Hall No: F105</b> <b>Computational and System Biology</b> <b>Chairperson: Jay Fox</b> , USA	<b>Hall No: F106</b> <b>Mitochondria in Health and Disease</b> <b>Chairperson: Keshav K. Singh</b>
16.15 - 16.45	<b>Masatsune Kainosho</b> , Japan <i>Recent Progress in the Selective SAIL Method for Studying Structures and Dynamics of Proteins and Protein Complexes</i>	<b>Alok Bhattacharya</b> , India <i>Whole Genome based analysis of Bacterial Evolution</i>	<b>Samit Adhya</b> , India <i>Mitochondrion-regulated mTORC activation of satellite cell proliferation: role of microRNAs</i>
16.45 - 17.15	<b>R. Sankaranarayanan</b> , India <i>Chiral Proofreading During Translation of the Genetic Code</i>	<b>Vinod Scaria</b> , India <i>Personal Genomes to precision Medicine</i>	<b>Yau-Huei Wei</b> , Taiwan <i>Dysregulation of Ca<sup>2+</sup> Homeostasis Caused by Dysfunction of Mitochondria-associated ER membranes Contributes to Insulin Insensitivity and Diabetes</i>
17.15 - 17.45	<b>R. Manjunatha Kini</b> , Singapore <i>Design of a Novel, Highly Selective Factor Xla Inhibitor from Banded Krait (Bungarus fasciatus) Venom</i>	<b>Jitendra K. Thakur</b> , India <i>Understanding the importance of KIX domain proteins</i>	<b>Patrick D'Silva</b> , India <i>Uncovering the role of ISCU protein in the Fe/S cluster biogenesis: Implications in the development of mitochondrial myopathy</i>
17.45 - 18.15	<b>K.V.R. Chary</b> , India <i><math>\beta\gamma</math>-crystallins: Intrinsic Order and Disorder</i>	<b>Shailza Singh</b> , India <i>Paradoxical components in Biological circuits and Negative Autoregulation of Transcriptional Factors: A Systems-theoretic model in Leishmaniasis</i>	<b>Naresh B.V. Sepuri</b> , India <i>Import of Cytosolic tRNAs into Mammalian Mitochondria</i>
18.30 - 19.30	<b>Cultural Programme (Dance Recital by Dr. Ananda Shankar Jayant &amp; Ensemble)</b>		
20.00 - 21.00	<b>Dinner</b>		

\* Short presentation (15 min.)