

## **Scientific Program**

**Day 1: Wednesday, 2<sup>nd</sup> November 2022**

**Registration:**

**8:30 A.M. – 9:00 A.M.**

### **SESSION I: GENETICS AND EPIGENETICS OF HUMAN DISEASES**

**Session In-Charge: Dr. Meenakshi Sharma, ACBR**

**TIME: 9:00 A.M. - 10:30 A.M.**

|  |  |                        |
|--|--|------------------------|
| <b>Chair: Prof. Namita Aggarwal, Dept. of Zoology, DU and<br/>Prof. Vani Brahmachari, ACBR, DU</b> |  |                        |
| PL-1   | <b>Vani Brahmachari, ACBR, DU:</b> The eloquent language of epigenetics; Our efforts at understanding its alphabets & amp; grammar   | 9:00 am -<br>9:30 am   |
| IL-1   | <b>Chandra Shekhar, CCMB:</b> Trophoblast Stem cell derivation and Blastoid generation from pluripotent stem cells follow competing molecular trajectories   | 9:30 am -<br>9:55 am   |
| IL-2   | <b>Debabrata Biswas,, CSIR-IICB:</b> Understanding of Eukaryotic Transcriptional Regulatory Mechanisms Involving Super Elongation Complex and Its Implications in MLL Fusion-mediated Leukemogenesis | 9:55 am -<br>10:20 am  |
| OP-1   | <b>Sakshi Sharma ACBR, DU:</b> Elucidating the functional relevance of Sin3B spliced variants in pathogenesis of Oral Squamous Cell Carcinoma  | 10:20 am -<br>10:30 am |

**TEA BREAK**

**10:30-11:00 A.M.**



**Dr. B.R. Ambedkar Center for Biomedical Research**  
**University of Delhi**  
University Road, Delhi-110007, India  
Presents



**National Symposium on Frontiers in Biomedical Research 2022 (FBR-2022)**

**Communicable and Non-communicable Diseases: Prevention, Cure, and Future Preparedness**

**Programme for Inaugural Function**

**Venue: Conference Centre, University of Delhi North Campus**

**Date: November 2<sup>nd</sup> 2022**

**Time: 11:00 AM – 12:15 PM**

**Welcoming of Chief Guest and Dignitaries to the Dias**

**Lighting of Lamp**

**Saraswati Vandana**

**Opening Remarks and Welcome**

**Prof. Daman Saluja,**  
Director, ACBR

**Felicitation of Dignitaries**

**Release of Symposium Abstract Book**

**Inaugural Remarks**

**Prof. Yogesh Singh**  
Vice Chancellor, University of Delhi

**Introduction to the Inaugural Address Orator**

**Prof. RNK Bamezai**  
Former VC,  
Shri Mata Vaishno Devi University, Katra

**Inaugural Address**

**Prof. Randeep Guleria**  
Former Director, AIIMS-New Delhi

**Vote of Thanks**

**Dr. Sanjay Kumar Dey**  
Organising Secretary, FBR-2022

**(The function will be followed by Lunch at the venue)**

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## SESSION II: INFECTION AND IMMUNITY

Session In-Charge: Prof. K. Natarajan, ACBR

TIME: 2:00 P.M. - 3:40 P.M.

|   |   |                      |
|---|---|----------------------|
| <b>Chair: Prof. Suman Dhar, <i>Special Centre for Molecular medicine, JNU</i></b> |   |                      |
| PL-2  | <b>Pawan Malhotra, <i>ICGEB, New Delhi:</i></b> Unravelling and targeting Plasmodium falciparum merozoite invasion of human RBCs                              | 2:00 pm -<br>2:30 pm |
| IL-3  | <b>Udaykumar Ranga, <i>JNCASR, Bengaluru:</i></b> Sleep like HIV to win the world!  | 2:30 pm -<br>2:55 pm |
| IL-4  | <b>Amit Singh, <i>IISc, Bengaluru:</i></b> Macrophage heterogeneity promotes drug tolerance in <i>Mycobacterium tuberculosis</i>                              | 2:55 pm -<br>3:20 pm |
| OP-2  | <b>Shakuntala S. Saraswati, <i>ACBR, DU:</i></b> Investigations on the Immunological Roles of Host Derived Heat Shock Proteins during Mycobacterial Infection | 3:20 pm -<br>3:30 pm |
| OP-3  | <b>Dhaneshwar Prusty <i>Central University of Rajasthan:</i></b> Rational designing of Peptide-Ligand Conjugates for the treatment of complicated malaria     | 3:30 pm -<br>3:40 pm |

**EVENING TEA 3:40 P.M. – 4:00 P.M.**

### SESSION III: CANCER STEM CELLS & LEUKEMIA

Session In-Charge: Prof. Daman Saluja, ACBR

TIME: 4:00 P.M. - 5:15 P.M.

|  |  |                      |
|--|--|----------------------|
| <b>Chair: Prof. Ramesh K. Bamezai, Former VC, Shri Mata Vaishno Devi University, Katra</b> |  |                      |
| PL-3   | <b>Jacqueline Cloos</b> , <i>University of Amsterdam Cancer Center, Netherlands</i> : Relevance of leukemia stem cells for acute myeloid leukemia                                | 4:00 pm -<br>4:30 pm |
| IL-5   | <b>Tulika Seth</b> , <i>AIIMS, New Delhi</i> : Leukemias: unanswered questions<br>Leukemia stem cells: holding the answers?  | 4:30 pm -<br>4:55 pm |
| OP-4   | <b>Ankit Mathur</b> , <i>ACBR, DU</i> : Induction of terminal differentiation in leukemic blast cells with esculetin: Role of “axis shifts” of Wnt signaling                     | 4:55 pm -<br>5:05 pm |
| OP-5   | <b>Sumeet</b> , <i>ACBR, DU</i> : Ricolinostat suppresses proliferation and promotes apoptosis alone as well as in combination with topotecan/etoposide in cervical cancer cells | 5:05 pm -<br>5:15 pm |

**Day 2: Thursday, 3<sup>rd</sup> November 2022**

**SESSION IV: SYSTEMIC INFLAMMATION VS NEUROINFLAMMATION: THE TWO DRIVERS OF NEURODEGENERATIVE DISORDERS**

**Session In-Charge: Prof. Anju Katyal, ACBR**

**TIME: 9:00 A.M. - 10:40 A.M.**

|   |  |                        |
|---|--|------------------------|
| <b>Chair: Dr. Shashi Bala Singh, Director, NIPER, Hyderabad</b> |  |                        |
| PL-4  | <b>Vaibhav Kumar</b> , <i>University of Augusta Georgia</i> : Immune interaction in brain injury: what we know so far  | 9:00 am -<br>9:30 am   |
| IL-6  | <b>M. Udayabanu</b> , <i>Jaypee University of Information Technology, Himachal Pradesh</i> : Quercetin Attenuates Neurological Complications Associated with Chronic Diabetes                  | 9:30 am -<br>9:55 am   |
| IL-7  | <b>Tauheed Ishrat</b> , <i>University of Tennessee Health Science Center (UTHSC)</i> : Role of TXNIP in Brain Aging and Alzheimer's Disease  | 9:55 am<br>10:20 am    |
| OP-6  | <b>Meetali</b> , <i>ACBR, DU</i> : PPAR- $\beta/\delta$ agonist GW501516 attenuates neuroinflammation and blood-brain barrier breakdown in <i>Plasmodium berghei</i> ANKA-infected Balb/c mice | 10:20 am -<br>10:30 am |

**TEA BREAK 10:30 A.M. - 11:00 A.M.**

**SESSION V: PROTEIN FOLDING DISEASES: MOLECULAR MECHANISMS AND THERAPEUTIC APPROACHES**

**Session In-Charge: Prof. L. R. Singh, ACBR**

**TIME: 11:00 A.M. - 12:40 P.M.**

|  |   |                        |
|--|---|------------------------|
| <b>Chair: Prof. Rajiv Bhat, School of Biotechnology, JNU</b> |   |                        |
| PL-5   | <b>Ipsita Roy, NIPER Mohali:</b> Development of aptamers as therapeutic agents for C9 ALS-FTD   | 11:00 am -<br>11:30 am |
| IL-8   | <b>Krishnananda Chattopadhyay, CSIR-IICB, Kolkata:</b> Metal cofactor Zn and interacting membranes modulate conformation-aggregation landscape in SOD1                | 11:30 am -<br>11:55 am |
| IL-9   | <b>Athi N. Naganathan, IIT Madras (Online):</b> Dynamic Homo- versus Hetero-Oligomerization Drives the Thermo-Osmo Responsiveness of Enterobacterial Sensory Proteins | 11:55 am -<br>12:20 pm |
| OP-7   | <b>Snigdha ACBR, DU:</b> Taurine & derivates as enhancers of thyroxine-binding affinity transthyretin: an insight towards therapeutic intervention of pre-eclampsia   | 12:20 pm -<br>12:30 pm |
| OP-8   | <b>Reshmee Bhattacharya, ACBR:</b> Organosulfurs, S-allyl cysteine and N-acetyl cysteine sequester dicarbonyls and reduces carbonyl stress                            | 12:30 pm –<br>12:40 pm |

**LUNCH BREAK AND POSTER SESSIONS**

**12:40 P.M. – 2:20 P.M.**

**SESSION VI: APPLICATIONS OF STRUCTURAL BIOLOGY TO TREAT HUMAN DISEASES**

**Session In-Charge: Dr. Sanjay K. Dey, ACBR**

**TIME: 2:20 P.M. – 4:00 P.M.**

|   |  |                      |
|---|--|----------------------|
| <b>Chair: Prof. T. P. Singh, AIIMS, New Delhi</b> |  |                      |
| PL-6  | <b>Christian Betzel, Hamburg University, Germany:</b> Past and Future in Structure-Based Drug Discovery to identify Lead Compounds                                 | 2:20 pm –<br>2:50 pm |
| IL-8  | <b>S. Gourinath, JNU:</b> Structural based inhibitor development against cysteine biosynthetic pathway enzymes of <i>E. histolytica</i>                            | 2:50 pm –<br>3:15 pm |
| IL-9  | <b>Manidipa Banerjee, IIT Delhi:</b> Molecular pathways for non-enveloped capsid disassembly   | 3:15 pm –<br>3:40 pm |
| OP-9  | <b>Prakash Jha, ACBR, DU:</b> Drug repurposing to treat Tuberculosis and SARS-CoV-2 infections: Insights from computational design into their mechanisms of action | 3:40 pm -<br>3:50 pm |

**EVENING TEA 4:00 P.M. – 4:30 P.M.**

## SESSION VII: NEUROBIOLOGY AND EXPERIMENTAL NEUROLOGY

Session In-Charge: Dr. Aparna Dixit, ACBR

TIME: 4:30 P.M. - 6:10 P.M.

| <b>Chair: Prof. P. M. Luthra, ACBR, DU</b> |  |                      |
|--|--|----------------------|
| PL-7                                       | <b>Annamaria Vezzani</b> , <i>Department of Neuroscience, Mario Negri Institute for Pharmacological Research in Milano, Italy:</i><br>Neuroinflammatory pathways in epilepsy as treatment targets and biomarker candidates in epilepsy   | 4:30 pm -<br>5:00 pm |
| IL-9                                       | <b>Surajit Sarkar</b> , <i>DU:</i> A multi-target based novel combinatorial approach to dominantly restrict human Tau mediated neurotoxicity in <i>Drosophila</i> disease models   | 5:00 pm -<br>5:25 pm |
| IL-10                                      | <b>Baby Chakrapani</b> , <i>Centre for Neuroscience, Department of Biotechnology, Cochin University of Science and Technology, Kerala:</i> Differentiation of peripheral blood mononuclear cell (PBMC) into tyrosine hydroxylase expressing Dopaminergic neurons for cell replacement therapy in Parkinson's disease | 5:25 pm -<br>5:50 pm |
| OP-10                                      | <b>Nitin Yadav</b> , <i>ACBR, DU:</i> Src Kinase mediates differential regulation of excitatory synaptic transmission in the hippocampus and ATL in temporal lobe epilepsy   | 5:50 pm -<br>6:00 pm |
| OP-11                                      | <b>Tuithung Sophronea</b> , <i>ACBR, DU:</i> A <sub>2A</sub> R antagonists mediate the restoration of mitochondrial calcium dysfunction using the 6-OHDA model of Parkinson's in primary neuronal cells of P <sub>0</sub> /P <sub>1</sub> rat pups   | 6:00 pm -<br>6:10 pm |



*You are cordially invited to  
join us for*

## **परवाज़**

**(Parvaaz)**

**A Cultural Program**

**On**

**Thursday, November 3, 2022 at 6:30 PM**

**at**

**National Symposium on Frontiers in Biomedical Research 2022 (FBR-2022)  
Communicable and Non-communicable Diseases: Prevention, Cure, and Future  
Preparedness**

**(Venue: Conference Centre, University of Delhi North Campus)**

**Featuring**

**Hindustani Vocal Music**

**By**

**Prof. Subhendu Ghosh (Rampur Sahaswan Gharana)**

**(Former Professor, Department of Biophysics, University of Delhi)**

**Bharatanatyam**

**By**

**Ms. Ishita Bhatia**

**Solo Performance**

**by**

**Ms. Srishti Srivastava and Ms. Sarika Bano**

**Classical and Semiclassical Group Dance**

**By**

**Ms. Surbhi Tripathi, Ms. Milky Mittal, Ms. Shreya Bhattacharjee, Ms. Shahjahan, Ms. Smaranjot Kaur, Ms. Neha Dixit, Ms. Diksha Saini, Ms. Bhawna Solanki, Ms. Riya Jain, Ms. Tejaswini, Ms. Shivam Yadav, Ms. Pratima, Mr. Dipesh Talukdar, Mr. Bhashkar Paul, Mr. Wilson Gbedema, Mr. Ashish Yadav, Mr. Altaf Asghar, and Mr. Jai Prakash**

**A Short Story with Guitar and Stand-up Poetry**

**By**

**Mr. Anish Vashisht**

**Song**

**By**

**Ms. Sumedha Sengupta, Mr. Dipesh Talukdar, and Ms. Vidhi**

**(The function will be followed by a Banquette Dinner at the venue)**

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**Day 3, Friday, 4<sup>th</sup> November 2022**

**SESSION VIII: NEW PARADIGM IN DRUG DISCOVERY RESEARCH**

**Session In-Charge: Prof. Madhu Chopra, ACBR**

**TIME: 9:00 AM - 10:40 A.M.**

|  |   |                        |
|--|---|------------------------|
| <b>Chair: Prof. Diwan S. Rawat, Dept. of Chemistry, DU</b> |   |                        |
| PL-8   | <b>Anil K. Mishra, DRDO, INMAS, New Delhi:</b> Chemical Chaperones in Theragnostic using Nuclear Technology   | 9:00 am -<br>9:30 am   |
| IL-11  | <b>Debashisa Mohanty, NII, New Delhi:</b> Designing Allosteric inhibitors for PfCDPK1 by combining atomistic simulations with machine learning                          | 9:30 am -<br>9:55 am   |
| IL-12  | <b>Tavpritesh Sethi, IIIT-Delhi:</b> Understanding DNA Sequences with Artificial Intelligence   | 9:55 am -<br>10:20 am  |
| OP-12  | <b>Priya Poonia, ACBR, DU:</b> Virtual screening combined with molecular modelling and designing approaches to identify HDAC6 selective inhibitors as anticancer agents | 10:20 am -<br>10:30 am |
| OP-13  | <b>Ayush Thakur, Kirori Mal College, DU:</b> Exploring the Therapeutic Potential of Nanotechnology based Phyto-pharmaceuticals  | 10:30 am -<br>10:40 am |

**TEA BREAK      10:40 A.M. - 11:00 A.M.**

**SESSION IX: THERAPEUTIC VENTURE TO TARGET CANCER CELL AND ITS REPROGRAMMED BIOLOGY**

**Session In-Charge: Prof. Ajay K. Yadav, ACBR**

**TIME: 11:00 A.M. - 12:15 P.M.**

|   |   |                     |
|---|---|---------------------|
| <b>Chair: Prof. S. N. Das, Adjunct Faculty, Jamia Hamdard</b> |   |                     |
| PL-9  | <b>Durga Prasad Mishra, CSIR-CDRI:</b> Therapeutic Targeting of Metabolic Reprogramming in Glioma   | 11:00 am - 11:30 am |
| IL-13   | <b>Ritu Kulshreshtha, IIT-Delhi:</b> miR-210: An attractive target for cancer therapy   | 11:30 am - 11:55 am |
| OP-14   | <b>Sachin Bhardwaj, ACBR, DU:</b> SMAC mediating a switching point in TRAIL drive sensitization   | 11:55 am - 12:05 pm |
| OP-15   | <b>Akansha Chauhan, Amity Univ, Noida UP:</b> Targeting NF- $\kappa$ B50 DNA binding region through active phytochemicals from <i>Spaheeranthus indicus</i> | 12:05 pm - 12:15 pm |

**SESSION X: RECENT ADVANCES IN ALTERNATIVE MEDICINE: WITH EMPHASIS ON AYURVEDA**

**Session In-Charge: Prof. Pratibha M. Luthra and Prof. Manisha Tiwari, ACBR**

**TIME: 12:15 P.M. - 1:30 P.M.**

|   |  |                        |
|---|--|------------------------|
| <b>Chair: Prof. Veena Aggarwal, Dept. of Botany, DU</b> |  |                        |
| PL-10   | <b>VM Bhandari, CSIR-NCL:</b> SWASTIIK Technology- Exploiting knowledge of Ayurveda for water disinfection and for possible health benefits.         | 12:15 pm -<br>12:45 pm |
| IL-14   | <b>Sunita Dhawan, CIMAP:</b> <i>To be announced</i>  | 12:45 pm -<br>1:10 pm  |
| OP-16   | <b>Shruti Shalini, ACBR, DU:</b> Biological evaluation of hydro-alcoholic extract of <i>Bacopa monnieri</i> for the treatment of Alzheimer's disease | 1:10 pm -<br>1:20 pm   |
| OP-17   | <b>Rambir Singh, Mizoram University:</b> Standardization and quality control in medicinal and aromatic plants for phtopharmaceutical drug discovery  | 1:20 pm -<br>1:30 pm   |

**LUNCH BREAK AND POSTER SESSION III**

**1:30 P.M. – 3:00 P.M.**

**SESSION XI: ART OF WAR AGAINST CARDIOVASCULAR DISEASE  
PROGRESSION AND OUTCOMES**

**Session In-Charge: Dr. Kamna Srivastava, ACBR**

**TIME: 3:00 P.M. - 4:30 P.M.**

|   |   |                      |
|---|---|----------------------|
| <b>Chair: Prof. Jagriti Bhatia, AIIMS New Delhi</b> |   |                      |
| PL-11   | <b>Dhavendra Kumar, Spire Cardiff Hospital, UK:</b> Cardiovascular disease in the Genome era                        | 3:00 pm -<br>3:30 pm |
| IL-15   | <b>R. Lakshmy, AIIMS, New Delhi:</b> Endothelial progenitor cells in cardiovascular disease                         | 3:30 pm -<br>3:55 pm |
| IL-16   | <b>Vivek Chaturvedi, Amrita Institute of Medical Sciences, Faridabad:</b> Art of war against cardiovascular disease | 3:55 pm –<br>4:20 pm |
| OP-18   | <b>Shelly Aggarwal, ACBR, DU:</b> Elevated expression of SORT1 gene in patients with Coronary Artery Disease        | 4:20 pm -<br>4:30 pm |

**EVENING TEA 4:30 P.M. – 5:00 P.M.**



*You are cordially invited to*

*join us for*

*Valedictory Lecture*

**By**

***Prof. Sudhanshu Vrati***

*(Director, Regional Centre for Biotechnology, Faridabad)*

*On*

***“Rotavirus vaccine development: The India story”***

**On Friday, November 4, 2022 at 5:00 PM**

**at**

**National Symposium on Frontiers in Biomedical Research 2022 (FBR-2022)**

**Communicable and Non-communicable Diseases: Prevention, Cure, and Future Preparedness**

**(Venue: Conference Centre, University of Delhi North Campus)**

**Chaired by**

***Prof. Yogendra Singh***

*(Former Dean, Life Sciences & Director, DSPH, IoE, University of Delhi)*

***Poster Awards by Dignitaries***

***Vote of Thanks***

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