

**Symposium on “Accelerating Biology 2023: Discovery to Delivery”**

Feb 28-Mar 2, 2023

**Technical Programme**

**Day 1: Feb 28, 2023**

| <b>Time</b>   | <b>Title</b>  | <b>Speaker</b>                                    |
|---------------|---|---|
| 08:00 - 08:45 | <b>Registration &amp; Breakfast</b>   |   |
| 09:00 – 10:30 | <b>Session I: Inaugural Programme</b>   |   |
| 10:30 – 11:00 | <i>Tea Break</i>  |   |
| 11:00 – 12:00 | <b>Poster Inauguration and Poster Session-I</b>   |   |
| 12:00 – 13:00 | <b>Panel Discussion</b><br><b>Title: Building the “Indian Biological Data Centre” (IBDC)</b><br>Chair: Dr. Debasisa Mohanty, NII<br>Panelists: Prof. Saurabh Raghuvanshi (IBDC), Prof. B.Gopal (IISc), Dr. Dinesh Gupta (ICGEB), Prof. Binay Panda (JNU), Prof. Deepak T. Nair (RCB)    |   |
| 13:00 – 14:00 | <i>Lunch Break</i>  |   |
| 14:00 – 14:30 | Integrative multi-omics analysis of cancer datasets   | Dr. Dinesh Gupta, ICGEB, New Delhi                |
|               | <b>Session II: <i>In-silico</i> Drug Discovery and Repurposing: Designing the Blockbuster</b><br>Session Chair: Prof. B. Gopal, IISc, Bengaluru   |   |
| 14:30 – 15:00 | Designing novel inhibitors for EGFR kinase by combining atomistic simulations with machine learning   | Dr. Debasisa Mohanty, NII, New Delhi              |
| 15:00 – 15:30 | Quantum Chemistry Big Data: Trends and Challenges   | Dr. Raghunathan Ramakrishnan, TIFR, Hyderabad     |
| 15:30 – 16:00 | A model proposal for SARS-CoV2 endocytosis mediated by Human TMPRSS2 ectodomain-SARS-CoV2 S2' subunit interaction and virtual screening for potential drug molecules to inhibit this interaction  | Prof. H. A. Nagarajaram, University of Hyderabad  |
| 16:00 – 16:15 | <i>Tea Break</i>  |   |
|               | <b>Session III: Quantum and Exascale Computing</b><br>Session Chair: Col. A. K. Nath (Retd.), C-DAC   |   |
| 16:15 – 16:45 | Update on American Exascale computing and computational biology: We have arrived at Exascale. Now what?   | Prof. Laxmikant Kale, University of Illinois, USA |
| 16:45 – 17:15 | Quantum dots and Quantum materials  | Dr. B.B. Kale, C-MET, Pune                        |
| 17:15 – 17:45 | Molecular Building Blocks for Brain Inspired Computing  | Dr. Sreetosh Goswami, IISc, Bengaluru             |
| 17:45 – 18:15 | Quantum Simulations for Molecular Structures  | Dr. P.V. Sriluckshmy, IQM, Germany                |
| 18:15 – 19:15 | <b>Panel discussion</b><br><b>Title: Driving the “National Supercomputing Mission” (NSM) of India</b><br>Chair: Dr. Hemant Darbari, Mission Director, NSM<br>Panelists: Ms. Sunita Verma, MeitY, Mr. Sanjay Wandhekar, C-DAC, Shri. B.S. Jagadeesh, C-DAC, Shri. Ashish Kuvelkar, C-DAC |   |
| 20:00         | <b>Dinner at Hotel Orchid</b>   |   |

**Day 2: Mar 1, 2023**

| <b>Time</b>    | <b>Title</b>   | <b>Speaker</b>  |
|----------------|--|---|
| 08:00-08:45    | <b>Breakfast</b>   |   |
|                | <b>Session IV: Multi-omics for Healthcare</b>  |   |
|                | Session Chair: Prof. Alok Bhattacharya, Ashoka University, Sonipat   |   |
| 09:00 – 09:30  | Accelerating Rare Genetic Disease Research in India: Understanding Functional Consequence of Protein Mutations Associated with Rare Genetic Diseases | Dr. Akash Ranjan, CDFD, Hyderabad                     |
| 09:30 – 10:00  | Bioprospection of marine samples through metagenomics: A gateway for potential discoveries in healthcare   | Mr. Vijaya Raghavan R, NIOT, Chennai                  |
| 10:00 – 10:30  | Role of genomic surveillance and novel pathogen discovery in the context of public health  | Dr. Pragya D. Yadav, ICMR-NIV, Pune                   |
| 10:30 – 10:45  | <i>Tea Break</i>   |   |
| 10:45 – 11:15  | Integrative epigenome-transcriptome analysis unravels cancer-specific over-expressed genes as potential therapeutic targets                          | Dr. Sanjay Gupta, ACTREC, Navi Mumbai                 |
| 11:15 – 11:45  | Genomics, Surveillance and Epidemiology of Emerging Infectious Diseases – Learnings from India   | Dr. Vinod Scaria, CSIR-IGIB, New Delhi                |
|                | <b>Session V: Ayurveda and Traditional Medicine</b>  |   |
|                | Session Chair: Dr. Viswajanani Sattigeri, CSIR-TKDL, Delhi   |   |
| 11: 45 – 12:15 | Accelerating Reverse Translation through ayurveda: Delivery to Discovery   | Prof. Rama Jayasundar, AIIMS, New Delhi               |
| 12:15 – 12:45  | The synergy between Ayurveda Standards (AS) and Ayurvedic Biology (AB) for pragmatic, integrative healthcare   | Dr. T. Saketh Ram, CCRAS, Hyderabad                   |
| 12:45 – 13:15  | Role of Ayurveda in Healthcare emergencies, lessons learnt from COVID-19 pandemic  | Dr. Manohar S. Gundeti, RRAP-CCRAS, Mumbai            |
| 13:15 – 14:15  | <i>Lunch Break</i>   |   |
|                | <b>Session VI: Biological Data Integrators</b>   |   |
|                | Session Chair: Prof. J. K. Pal, Dr. D.Y. Patil Vidyapeeth, Pune  |   |
| 14:15 – 14:45  | Indian Biological Data Center: An overview   | Prof. Saurabh Raghuvanshi, IBDC, Faridabad            |
| 14:45 – 15:15  | Profiling Breast Cancers in India  | Dr. Madhura Kulkarni, CTCR: PCCM and IISER Pune, ICGA |
| 15:15 – 16:15  | <b>Poster Session-II</b>   |   |
| 16:15 – 16:30  | <i>Tea Break</i>   |   |
|                | <b>Session VII: Artificial Intelligence in Biology and Medicine</b>  |   |
|                | Session Chair: Dr. Manisha Nene, DIAT, Pune  |   |
| 16:30 – 17:00  | Single and multi-analyte deep learning-based analysis framework for class prediction in biological images  | Prof. Binay Panda, JNU, New Delhi                     |
| 17:00 – 17:30  | Automated bone aging from X-rays of Indian children  | Dr. Pranay Goel, IISER, Pune                          |
| 17:30 – 18:00  | Cancer "Module"-omics: Computational analysis of a global network of cancer disease/gene associations to identify the prime movers of the disease    | Prof. Sitabhra Sinha, IMSc, Chennai                   |
| 18:00 – 18:30  |  | Bioinfo Group presentation/demo (Ms. Ruma Banerjee)   |
| 20:00          | <b>Dinner at Hotel Orchid</b>  |   |

**Day 3: Mar 2, 2023**

| <b>Time</b>   | <b>Title</b>  | <b>Speaker</b>  |
|---------------|---|---|
| 08:00-08:45   | <b>Breakfast</b>  |   |
|               | <b>Session VIII: Industry Meet</b><br>Session Chair: Dr. Premnath V. , NCL Venture Centre, Pune   |   |
| 09:00 – 09:30 | Therapeutic Antisense Oligonucleotides for rare diseases  | Dr. Arun Shastry, Hanugen Therapeutics, Bengaluru       |
| 09:30 – 10:00 | Keeping an eye on Digital Disruptions in Drug Discovery   | Dr. Samiron Phukan, Aragen Life Sciences, Hyderabad     |
| 10:00 – 10:30 | Multi-omics Challenges in personalized medicine: Tailback for transforming Healthcare   | Dr. Jayashankar Das, Hubsect Global Corporation, Norway |
| 10:30 – 11:00 | Liquid biopsy: Translation of OncoDiscover Circulating Tumor Cells Tech from Bench to Bedside   | Prof. Jayant J. Khandare, MIT, Pune                     |
| 11:00 – 11:15 | <i>Tea Break</i>  |   |
| 11:15 – 11:45 | Role of high performance bioinformatics in delivering synthetic biology solutions to the growing bioeconomy.  | Dr. Rishita Changede, TeOraLife, Bengaluru              |
| 11:45 – 13:00 | <b>Panel discussion</b><br><b>Title: Facilitating Industry Academia Interactions</b><br><b>Chair:</b> Dr. Prasad Kulkarni, Serum Institute<br><b>Panelists:</b> Mr. Aditya Phatak, Velsera, Dr. Asha Kembhavi Chr Hansen, Dr. Prasad Kulkarni Serum Institute |   |
| 13:00 – 14:00 | <i>Lunch Break</i>  |   |
| 14:00 – 15:30 | <b>Poster Oral Presentations</b><br>Chair: Prof. Binay Panda, JNU, Prof. Arnab Mukherjee, IISER, Pune   |   |
|               | <i>Valedictory Session</i><br><i>Session Chair: Dr. Rajendra Joshi, C-DAC</i>   |   |
| 15:30 – 16:00 | Prof. (Distinguished) Shekhar Mande, Bioinformatics Centre, SP Pune Univ (Former DG CSIR)   |   |
| 16:00 – 16:30 | Poster awards and feedback  |   |
|               | Tea and GoodBye   |   |