## Event Highlights

- 32 hours of academic extravaganza
- Topics covering cutting research and clinical applications in cellular analysis
- MI-FlowCyt standard \& Flow Cytometry Data Presentation
- Assay validation of quantitative rare event analysis
- Cytometry Analysis and Deep Learning
- Changing Paradigms of Automation in Flow Cytometry
- Flow-cytometry to Single-cell Sequencing
- Understanding Disease Biology at Single Cell Level
- Travel awards; TCS award for Basic and Clinical Cytometry work; Awards poster \& oral presentations
- CME Credit hours from Delhi Medical Council*
- Multiple workshops covering Basics to Multi-Omics
*Awaited


## Workshops

Measurable Residual Disease (MRD)
Basics of Flow Cytometry
Transplant Immunology
Primary Immunodeficiency Disorders
Advancing Research Through Cell Sorting
Multi-Omics at the Single Cell Level

Dear Friends
On behalf of the organizing committee of the $15^{\text {th }}$ Annual conference of The Cytometry Society (TCS) [www.tcs.res.in], India, it gives us immense pleasure to invite you for an academic extravaganza in the speciality of cytometry at the All India Institute of Medical Sciences (AIIMS), New Delhi. The programme is scheduled from 26th October -29th October 2023, with two days dedicated to the Annual Meeting of The Cytometry Society (28th \& 29th October) preceded by multiple parallel hands-on workshops on 26th \& 27th October 2023. This meeting will be a realistic opportunity for better understanding of the technology of Cell cytometry and its impact in medical and basic sciences. The objective of this meeting is to share the valuable research along with very valuable expert perspectives gathered while managing the clinical and research facilities in this arena. The guidelines, recommendations, and expert opinions presented here will be an amalgamation of the current information with the pre-existing knowledge.
Confirmed international faculty include Prof. (Dr) Sindhu Cherian (University of Washington, Seattle, WA, USA), besides, all the key opinion leaders at the National level will be participating in this event. The meeting is envisaged to provide a unique platform for medical practitioners as well as basic scientists and researchers to meet and exchange ideas and information on the most recent innovations, trends, and concerns with the experienced faculty of internationally recognized authorities in the fields of Cytometry. We hope that this meeting will disseminate the new information far and wide and benefit all the attendees.
The organizing committee of the 15th TCS Annual Conference \& Workshops welcomes you one \& all. We are extremely delighted to host this integrative event at our center and sincerely hope that you shall enjoy the scientific deliberations in similar enthusiasm as we have had in getting this together.

The Cytometry Society-India 15th Annual Conference \& Workshops 26th -29th October, 2023
Theme: From Basics to Multi-Omics


## Patrons

Dr. M. Srinivas
Director, AIIMS, New Delh
Dr. Sushma Bhatnagar
Chief, Dr. BRAIRCH, AIIMS, New Delhi
Organizing Chairperson
Dr. Ritu Gupta
President, The Cytometry Society-India

## Organizing Secretary

Dr. Anil Handoo
Vice-President, The Cytometry Society-India
Co-Organizing Secretary
Dr. Nitin Dayal
EC Member, The Cytometry Society-India
Organizing Committee

| Dr. Sanjeev K. Gupta | Dr. Sachin Jain |
| :--- | :--- |
| Dr. Smeeta G. | Dr. Gurvinder Kaur |
| Dr. Deepshi Thakral | Dr. Lata Rani |
| Dr. Rupesh Srivastava | Mr. G.Srinivas |
| Dr. Sandeep Rai | Mrs. Saroj Singh |
| Dr. Kamal Gulati |  |

Venue
All India Institute of Medical Sciences, New Delhi

15th TCS Annual Meeting 2023 Venue: JLN Auditorium, AllMS, New Delhi

Dates: 28th \& 29th October, 2023
Theme: From Basics to Multi-Omics

| Scientific Program: Day 1 |  |  |
| :---: | :---: | :---: |
| 28th October, 2023 |  |  |
| Plenary Session |  |  |
| Session Chaired By - Prof. Tejinder Singh \& Prof. DK Mitra |  |  |
| Time Slot | Topic/Event | Speaker |
| 9:00-9.45 | Journey of Flow Cytometry in India | Dr. Sumeet Gujral |
|  |  |  |
| 9:45-10:15 | Inauguration \& Welcome Address |  |
|  |  |  |
| 10:15-10:45 | TEA/COFFEE BREAK |  |
| Session 1: Chaired By - Prof. Sameer Bakhshi \& Prof. Punit Kaur |  |  |
| 10:45-11:30 | MIFlowCyt standard \& Flow Cytometry Data Presentation - Issues and remedies thereof | Dr. Sindhu Cherian |
| 11:30-12:00 | Dissecting hematological malignancies: Flowcytometry \& Single-cell sequencing | Dr .Ritu Gupta |
| 12.00-12.30 | The Ooh, The Aah and The Ouch of - Assay validation of quantitative rare event data acquisition | Dr. Urmi Chatterjee |
| 12.30-13:00 | Cytometry Analysis and Deep Learning | Dr. Anubha Gupta |
|  |  |  |
| 13.00-14:00 | LUNCH BREAK |  |
| Session 2: Chaired By - Prof. Vibha Tandon \& Prof Kalpana Luthra |  |  |
| 14:00-14:30 | The cellular path to pathogenesis- A tale of 3 viruses | Dr. Vainav Patel |
| 14:30-15:00 | Flow-cytometry approach for diagnosis, classification and monitoring of T-cell CLPD | Dr. Prashant Tembhare |
| 15:00-15:30 | Chasing the immune checkpoint molecules in HIVTB co-infection | Dr. Sunil Arora |
| 15:30-16:00 | The Future of Discovery: Bridging the intersection of spatial imaging with high parameter spectral flow cytometry | Dr. Robert Balderas |
|  |  |  |
| 16:00-16:15 | TEA/COFFEE BREAK |  |
| Session 3: TCS Best Paper Awards' Presentations <br> Chaired By - Prof Jyoti Kotwal, Prof. Amar Das Gupta, Prof. H. Krishnamurthy |  |  |
| 16:15-16:30 | TCS Best Paper Awards' Presentation-Basic Science |  |
| 16:30-16:45 | TCS Best Paper Awards' Presentation- Clinical |  |
| Session 4: Poster Evaluation \& TCS EC Meeting <br> Poster-Clinical: Judge- Dr. Arul Selvi, Dr. Manupdesh Sachdeva, Dr. Nitin Dayal Poster-Basic: Judge- Dr. Gurvinder Kaur, Dr, Mayank Singh, Maya R. Gupta |  |  |
| 16.45-17:30 | Poster Session Evaluation \& Networking |  |
| 17:30-18:15 | TCS Executive Committee Meeting | For EC members only |


| Scientific Program: Day 2 |  |  |
| :---: | :---: | :---: |
| 29th October, 2023 |  |  |
| Plenary Session |  |  |
| Chaired By - Prof. Sanjeev K Gupta \& Dr. Tanima Dwivedi |  |  |
| Time Slot | Topic/Event | Speaker |
| 9:00-9.45 | Getting Ready for MRD Assessment in the Era of Immunotherapy | Dr. Sindhu Cherian |
| 9.45-10.30 | Special Session Chaired By - Dr. Anil Handoo \& Dr. Sindhura Laxmi | Dr. H. Krishnamurthy |
| 10:30-11:00 | TEA/COFFEE BREAK |  |
| Session 1: Parallel Sessions - Basic Sciences (Conference Hall, First Floor) Chaired By - Dr. Vineeta Agarwal \& Dr. Deepshi Thakral |  |  |
| 11:00-11:20 | Tumour associated MDSCs in WM | Dr. Vaishali Bhardwaj |
| 11:20-11:40 | Disease Biology at Single Cell Resolution | Dr. Sunil Raghav |
| 11.40-12.00 | Unlocking the role of proinsulin in type-1 diabetes; from a key autoantigen to a primary therapeutic target | Dr. Naresh Sachdeva |
| 12.00-12.20 | Mesenchymal Stem Cells-Platelet interactions and wound healing | Dr. Anugya Bhatt |
| Session 1: Parallel Sessions - Clinical Sciences (JLN Auditorium) Chaired By - Dr. Manu Goyal, Dr. Namrata Awasthi, Dr. Chandan Kumar |  |  |
| 11:00-11:20 | Translational approach for assay menu expansion in a clinical flow cytometry lab | Dr. Paresh Jain |
| 11:20-11:40 | Immunophenotype variants of normal populationsCircumventing pitfalls in MRD reporting | Dr. Kunal Sehgal |
| 11.40-12.00 | Diagnosis beyond typical immunophenotypic fingerprint entities - Myelodysplasia - A Pattern Approach | Dr. P.G.Subramanian |
| 12.00-12.20 | Going beyond conventional flow cytometric testing Platelet Activation Tests | Dr. Rutvi Dave |
| 12.20-13:00 | General Body Meeting of TCS |  |
| 13.00-14:00 | LUNCH BREAK |  |
| Session 2: Parallel Sessions (Oral Papers) <br> Clinical Science- Judges: Dr. Mrinalini Kotru, Dr. Tushar Sehgal, Dr. Sarika Singh Basic Sciences- Judges: Prof. Sunil Raghav, Dr. Surender Sherawat, Dr. Priyavadhana |  |  |
| 14:00-15:30 | Oral Papers-Clinical Sciences (JLN Auditorium) |  |
| 14:00-15:30 | Oral papers- Basic Sciences (Conference Hall) |  |
| 15:30-15:45 | TEA/COFFEE BREAK |  |
| Session 3: Chaired By-Dr. Garima Jain \& Dr. Amrita Saraf |  |  |
| 15:45-16:00 | Single Cell Sorting | Dr. Sushil K. Ramadasi |
| 16:00-16:20 | PCPRO and Myeloma-MRD screening | Dr. Dragan Jevremovic |
| 16:20-16:40 | TBA | TBA |
| 16.40-17:00 | AWARDS, VALEDICTORY \& TEA |  |

15th TCS Annual Conference \& Workshops 2023
Theme: Workshop on Measurable Residual Disease (MRD) Venue: Dr. Ramalingaswamy Board Room, AlIMS, New Delhi

Dates: 26th \& 27th October, 2023

Workshop Coordinators: Dr. Sachin Jain \& Dr. G. Smeeta

## FACULTY

Dr. Sindhu Cherian [LEAD FACULTY]
Associate Director of the Hematopathology Laboratory at the University of Washington Dr Ritu Gupta
Professor \& Head, Laboratory Oncology, AIIMS, New Delhi

| Scientific Program: Day 1 |  |  |
| :---: | :---: | :---: |
| 26th October, 2023 |  |  |
| Session 1: 9:00-11:30 |  |  |
| Time | Topic | Speaker |
| 09:00-09:15 | Importance of MRD in Hematological Malignancies | Dr. Ranjit K Sahoo |
| 09:15-10:30 | Introduction to MRD: Basics \& Methods of MRD monitoring | Dr. Sindhu Cherian |
| 10:30-11:00 | Do's \& Don'ts of MRD: Sample preparation \& Instrument set up | Dr. Sindhu Cherian |
| 11:00-11:30 | Assay Performance Characteristics: Concept of LLOQ \& LLOD | Dr Anil Handoo |
| 11:30-11:45 | TEA/COFFEE BREAK |  |
| Session 2: 11:45-13:30 |  |  |
| 11:45-12:15 | Approach to B ALL MRD: Panel design, template generation, internal controls \& analysis | Dr. Karthik Bommannan |
| 12:15-13:30 | B-ALL MRD - Concepts \& Case Studies | Dr G Smeeta/Dr Nupur Das |
| 13:30-14:00 | LUNCH BREAK |  |
| Session 3: 14:00-15:30 |  |  |
| 14:00-14:30 | Approach to T ALL MRD : Panel design, template generation, internal controls \& analysis | Dr Jasmita Das |
| 14:30-15:30 | T-ALL MRD: Concepts \& Case Studies | Dr Manupdesh Sachdeva |
| 15:30-15:45 | TEA/COFFEE BREAK |  |
| Session 4: 15:45-17:15 |  |  |
| 15:45-16:30 | Approach to Myeloma MRD: Panel design, template generation, internal controls \& analysis | Dr Ritu Gupta |
| 16:30-17:15 | Myeloma MRD - Concepts \& Case Studies | Dr Khaliq-Ur-Rahman |


| Scientific Program: Day 2 |  |  |
| :---: | :---: | :---: |
| 27th October, 2023 |  |  |
| Session 1: 9:30-11:15 |  |  |
| Time | Topic | Speaker |
| 09:30-09:45 | Re-cap of Day 1 | Dr Anil Handoo |
| 09:45-10:15 | Approach to CLL/Hairy Cell Leukemia MRD: Panel design, template generation, internal controls \& analysis | Dr Prashant Tembhare |
| 10:15-11:15 | CLL/Hairy Cell Leukemia MRD - Concepts \& Case Studies | Dr Naveen Aggarwal Dr Prashant Tembhare |
| 11:15-11:30 | TEA/COFFEE BREAK |  |
| Session 2: 11:30-13:30 |  |  |
| 11:30-12:00 | Approach to AML MRD: Panel design, template generation, internal controls \& analysis | Dr. Sindhu Cherian |
| 12:00-13:00 | AML MRD - Concepts \& Case Studies | Dr. Tina Dadu |
| 13:00-13:30 | Challenges in MPAL Through Case Studies | Dr. Sanjeev K. Gupta |
| 13:30-14:00 | LUNCH BREAK |  |
| Session 3: 14:00-16:00 |  |  |
| 14:00-15:00 | Infinicyt Software | Dr. Sachin Jain |
| 15:00-15:30 | Report formats - What's it that makes a good report? | Dr. Kunal Sehgal |
| 15:30-16:00 | Conclusion, Feedback and plans for subsequent meetings | All Faculty |
| 16:00-16:30 | TEA |  |

Workshop Theme: Advancing Research Through Cell Sorting

## 26th October, 2023

Coordinators: Dr. Rupesh Srivastava; Dr. Rahul Sharma; Dr. Sandeep Rai ; Mr. G. Sriniva FACULTY
Dr. Kalpana Luthra
Department of Biochemistry, AIIMS, New Delh
Dr. Rupesh Shrivastava
Department of Biotechnology, AIIMS, New Delhi
Dr. Rahul Sharma
Centralized Core Research Facility (CCRF), AIIMS, New Delhi
Dr. Sandeep Rai
Technical Officer, Laboratory Oncology, Dr. BRA IRCH , AIIMS, New Delhi
Mr. G Srinivas
Senior Technical Officer, Center for Cellular \& Molecular Biology (CCMB), Hyderabad


[^0]| Workshop Theme: Multi-Omics at the Single Cell Level |  |  |
| :---: | :---: | :---: |
| 27th October, 2023 |  |  |
| Coordinators: Dr. Deepshi Thakral; Dr. Lata Rani; Dr. Murali Manohar* |  |  |
| FACULTY |  |  |
| Dr. Ritu Gupta* <br> Laboratory Oncology, Dr. BRA-IRCH, AIIMS, New Delhi <br> Dr. Arindam Maitra <br> Associate Director, NIBMG, Kalyani, West Bengal <br> Dr. Rajesh Pandey <br> Principal Scientist, CSIR-IGIB, New Delhi <br> Dr. Deepshi Thakral <br> enior Scientist, Laboratory Oncology, Dr. BRA-IRCH, AIIMS, New Delhi <br> Dr. Lata Rani <br> ientist, Centralized Core Research Facility (Genomics), AIIMS, New Delhi <br> Dr. Murali Manohar* <br> Scientist, Laboratory Oncology, Dr. BRA-IRCH, AIIMS, New Delhi |  |  |
| Scientific Program |  |  |
| Registration: 8:45-9:15 |  |  |
|  | Session 1: 9:15-11:30 (Conference Hall) |  |
| Chair: Dr. Madhulika Kabra |  |  |
| Time | Topic | Speaker |
| 09:15-09:30 | Welcome Address | Dr. Ritu Gupta |
| 09:30-10:00 | Single Cell Omics facilitating Canonical and Non-Canonical understanding of the host immune response | Dr. Rajesh Pandey |
| 10:00-10:45 | Our journey from bulk to single-cell transcriptomics in oral cancer: Novel insights and new horizons | Dr. Arindam Maitra |
| 10:45-11:30 | TEA/COFFEE BREAK |  |
|  | Session 2: 11:30-13:00 (CCRF) |  |
| 11:30-11:45 | Overview of the workshop |  |
| 11:45-12:30 | Latest trends in Single Cell Multiomics and its applications | Dr. Deepshi Thakral |
| 12:30-13:00 | Tips and tricks of sample preparation |  |
| 13:00-14:00 | LUNCH BREAK |  |
|  | Session 3: 14:00-16:00 (Wet Lab Demonstration) |  |
| 14:00-15:00 | Cartridge loading |  |
| 15:00-15:30 | PCR product purification | All Faculty |
| 15:30-16:00 | QC analysis by Qubit and Fragment Analyser |  |
| 16:00-16:15 | TEA/COFFEE BREAK |  |
|  | Session 4: 16:15-17:15 |  |
| 16:15-17:00 | Data Visualization and analysis |  |
| 17:00-17:15 | Conclusion \& Feedback | All Faculty |

Workshop Theme: Transplant Immunology

## 26th October, 2023

Coordinators: Dr. Gurvinder Kaur \& Dr. Nitin Dayal

## FACULTY

## Dr Dolly Daniel

Head, Department of Immunohaematology \& Transfusion Medicine, CMC Vellore Dr Aseem Tiwari
Director, Department of Transfusion Medicine, Medanta -The Medicity, Gurugram Dr. Nitin Dayal
HOD Hematology, Max Super Speciality Hospital, Saket, New Delhi Duper Speciality Ho
Scientist, Laboratory Oncology, AIIMS New Delhi
Dr Mohit Chowdhary

Head, Department of Transfusion Medicine, Indraprastha Apollo Hospital, New Delhi

| Scientific Program |  |  |
| :---: | :---: | :---: |
| Registration: 8:45-9:00 |  |  |
| Session 1: 9:00-11:30 |  |  |
| Time | Topic | Speaker |
| 09:00-10:00 | Basics of HLA and Transplant Immunology | Dr. N.K. Mehra |
| 10:30-10:30 | An approach to Antibody testing in transplantation | Dr. Dolly Daniel |
| 10:30-11:00 | CDC Crossmatch - Principle, methodology, analysis, interpretation, modifications \& pitfalls | Dr. Aseem Tiwari |
| 11:00-11:30 | CDC Crossmatch - Concepts \& Case Studies | Dr Gurvinder Kaur |
| 11:30-11:45 | TEA/COFFEE BREAK |  |
| Session 2: 11:45-13:30 |  |  |
| 11:45-12:15 | Flow Cytometry Crossmatch - principle, methodology, analysis, interpretation, modifications \& pitfalls | Dr. Nitin dayal |
| 12:15-12:45 | Flow Crossmatch - Case Studies | Dr Gurvinder Kaur |
| 12:45-13:30 | The Good, The Bad and The Ugly of Luminex Crossmatch principle, methodology, analysis, interpretation and Cases | Dr Mohit Chowdhary |
| 13:30-14:00 | LUNCH BREAK |  |
| Session 3: 14:00-16:00 |  |  |
| 14:00-14:30 | HLA Antibody screening PRA - Flow cytometry Vs Luminex | Dr. Aseem Tiwari |
| 14:30-15:30 | SAB - principle, methodology, analysis, interpretation | Dr. Dolly Daniel |
| 15:30-15:45 | TEA |  |
| 15:45-17:00 | Case Studies | All faculty |


| Workshop Theme: Primary Immunodeficiency Diseases |
| :---: |
| 27th October, 2023 |
| Coordinators: Dr. Sabina Langer \& Dr. Ananthvikas Jayaram |
| FACULTY |
| Dr. Manisha Madkaikar |
| Scientist G \& Director, ICMR National Institute of Immunohaematology, MUMBAI |
| Dr. Nita Radhakrishnan |
| Head of Pediatric Hematology Oncology, Post Graduate Institute of Child Health, Noida, UP |
| Dr. Sabina Langer |
| Sr. Consultant Hematology, Sir Ganga Ram Hospital, New Delhi |
| Dr. Ananthvikas Jayaram |
| Pathologist. Neuberg Anand Reference Laboratory, Bangaluru |
| Dr. Manas Kalra |


| Scientific Program |  |  |
| :---: | :---: | :---: |
| Registration: 8:45-9:15 |  |  |
| Session 1: 9:15-11:30 |  |  |
| Time | Topic | Speaker |
| 09:15-09:30 | Welcome Address | Dr. Sabina Langer |
| 09:30-10:00 | Introduction to IEIs with emphasis on lymphocyte disorders | Dr Nita Radhakrishnan |
| 10:00-10:45 | The role of flow cytometry in the array of diagnostic tools for diagnosis of IEI - An overview | Dr. Manisha Madkaikar |
| 10:45-11:30 | Normal lymphocyte phenotypes - Variations in reactive conditions relevant to clinical practice | Dr. Ananthvikas Jayaram |
| 11:30-11:45 | TEA/COFFEE BREAK |  |
|  | Session 2: 11:45-13:30 |  |
| 11:45-12:30 | Panel design for a lymphocyte subset assay in the context of IEI basic recommendations and best practices |  |
| 12:30-13:00 | Case based discussion on interpretation of Lymphocyte Sub-set Analysis in IEI | Dr. Sabina Langer |
| 13:30-14:00 | LUNCH BREAK |  |
| Session 3: 14:00-16:00 (Wet Lab Demonstration) |  |  |
| 14:00-15:00 | Case based discussion on interpretation of LSSA in IEI | Dr. Ananthvikas Jayaram |
| 15:00-15:30 | What happens after flow? Role of genomics \& phenocopies | Dr Manas Kalra |
| 15:30-15:45 | Report formats - What's it that makes a good report? | Dr. Ananthvikas Jayaram |
| 15:45-16:00 | Conclusion, Feedback and plans for subsequent meetings | All faculty |
| 16:00-16:30 | TEA |  |

# 15th TCS Annual Conference \& Workshops 2023 <br> Theme: Basics of Flow Cytometry <br> Venue: FACS Academy Jamia Hamdard, New Delhi 

## Coordinators: Dr. Vivek Singh \& Mr. Swapnil Walke

## FACULTY

Dr H Krishnamurthy (Lead Faculty)
Scientific Officer 'G' , National Institute of Biological Sciences (NCBS), Tata Institute of Fundamental Research, Bengaluru
Dr Hemant Agrawal
Head Department of Pediatric Hematology Oncology, Post Graduate Institute of Child Health, Noida, UP
Dr. Vivek Singh
Scientist, Laboratory Oncology, Dr. BRA-IRCH, New Delhi
Mr. Swapnil Walke
Senior Application Manager, BD Biosciences

| Scientific Program |  |  |
| :---: | :---: | :---: |
| Registration: 8:45-9:30 |  |  |
|  | Session 1: 9:30-11:30 |  |
| Time | Topic | Speaker |
| 09:30-09:45 | Welcome \& Introduction | Dr. Vivek Singh |
| 09:45-11:30 | An approach to Antibody testing in transplantation | Dr. H. Krishnamurthy |
| 11:30-11:45 | TEA/COFFEE BREAK |  |
| Session 2: 11:45-13:30 |  |  |
| 11:45-12:45 | Concept of Instrument QC | Dr. Swapnil Walke |
| 12:45-13:30 | Flow Cytometry Data Analysis and Presentation | Dr. Hemant Agrawal |
| 13:30-14:00 | LUNCH BREAK |  |
| Session 3: 14:00-16:00 |  |  |
| 14:00-15:00 | Instrument overview \& QC | Dr. Manisha Suthar |
| 15:00-15:30 | Voltage optimization and compensation | Dr. H. Krishnamurthy |
| 15:30-16:30 | Six-Color T-B-NK data acquisition and analysis | Dr. Swapnil Walke |
|  | TEA |  |


[^0]:    * Supported by Research Grant from SERB, DST (SPG/2021/004460)

