

# 3rd Annual Ajmera Transplant Research Day Conference June 14th, 2024

MaRS Discovery District – 9<sup>th</sup> Floor Transplant Innovation Centre (Rooms: 9005, 9006, 9119 and 9032) + Poster Presentations - DeGasperis Conservatory, Toronto General Hospital (Peter Munk Building, 4th floor)

#### New Insights into Allograft Rejection

| 8:30 am – 9:00 am   | Registration  |
|---------------------|---|
| 9:05 am – 9:10 am   | Introduction by <b>Stephen Juvet, MD, PhD, FRCPC</b><br>Assistant Professor, Division of Respirology and Toronto Lung Transplant Program,<br>Department of Medicine,<br>University Health Network, University of Toronto  |
|                     | <u>CHAIR:</u> Tereza Martinu, MD, MHS<br>Clinician-Scientist, Toronto Lung Transplant Program, Ajmera Transplant Centre<br>Associate Professor of Medicine, University of Toronto<br>Scientist, Toronto General Hospital Research Institute   |
| 9:10 am – 9:55 am   | Keynote Speaker<br>Stephen Juvet, MD, PhD, FRCPC<br>Assistant Professor, Division of Respirology and Toronto Lung Transplant Program,<br>Department of Medicine, University Health Network<br>Beyond Repair? Looking Under the Hood at the Cellular Engines Driving Lung Allograft<br>Failure |
|                     | (8mins present + 3 mins questions)  |
| 9:56 am - 10:07 am  | <b>Martin Mak</b><br>Defining Protective and Pathogenic Resident Immune Cells In Kidney Transplantation   |
| 10:07 am - 10:18 am | <b>Ankita Burman</b><br>Single-cell RNA Sequencing Provides Insights into Intragraft B cell Complexity in Chronic<br>Lung Allograft Dysfunction (CLAD)  |
| 10:18 am - 10:29 am | <b>Stefan Petrovic</b><br>Molecular Landscape of Kidney Allograft Tissues Data Integration Portal (NephroDIP): A<br>Curated Database to Improve Integration of High-throughput Kidney Transplant Datasets   |
|                     |   |
| 10:30 am – 10:45 am | Health Break  |

#### Ajmera Research Fellowship Recipient Presentations (10 mins each Presentation + 2 mins Discussion)

| <i>Session</i><br>10:45 am – 12:00 pm | <u>CHAIR:</u> Cynthia Tsien/(Trainee Fellow)<br>Cynthia Tsien, PhD, MDCM, MPH, FRCPC<br>Assistant Professor, University of Toronto<br>Transplant Hepatologist, Education Director, Ajmera Transplant Centre  |
|---------------------------------------|--|
| 10:50 am – 11:02 am                   | <b>Yajin Zhao, Post-Doctoral Research Fellow</b><br>PANoptosis as a Notable Characteristic in Ischemia-Reperfusion During Human Lung<br>Transplants and Its Clinical Relevance   |
| 11:02 am – 11:24 am                   | <b>Tsukasa Ishiwata, Clinical Fellow (recorded)</b><br>Transcriptome profiling of lung allograft biopsies to predict chronic lung allograft<br>dysfunction   |
| 11:24 am – 11:36 am                   | <b>Brunna Martins, Post-Doctoral Research Fellow</b><br>Protection against hypoxia-induced cell death of Hepatocytes and Kupffer cells by NINJ1<br>inhibition  |
| 11:36 am – 11:48 am                   | <b>Kieran P. Manion, Post-Doctoral Research Fellow</b><br>Parsing the Role of miRNA in Kidney Transplant ABMR  |
| 11:48 am – 12:00 pm                   | <b>Sasan Hosseini, MD, MSc, MPH</b><br>Comparison of the incidence trends and outcomes of Pneumocystis pneumonia in solid-<br>organ transplant (SOT) recipients and non-transplant patients: a provincial population<br>based study 2002-2022, Ontario, Canada |

### Posters & Lunch Break

|                    | Lunch and Posters Set up- DeGasperis Conservatory, Toronto General Hospital            |
|--------------------|--|
| 12:00 pm 1:00 pm   | (Peter Munk Building, 4th floor)   |
| 12:00 pm – 1:00 pm | Lunch - MaRS Discovery District – 9th Floor Transplant Innovation Centre (Rooms: 9005, |
|                    | 9006, 9119 and 9032)   |

Update of Clinical and Translational Research at Ajmera Transplant Centre (12 mins. + 3 mins discussion each)

| 1:00 pm – 1:05 pm | <u>CHAIR:</u><br>Stephen Juvet, MD, PhD, FRCPC<br>Assistant Professor, Division of Respirology and Toronto Lung Transplant Program,<br>Department of Medicine, University Health Network  |
|-------------------|---|
| 1:05 pm – 1:20 pm | Atul Humar, MD, MSc, FRCPC<br>George & Terrie Eaton Family Chair in Transplant Infectious Diseases Research, Ajmera<br>Transplant Centre, University Health Network<br>Professor of Medicine, Infectious Diseases, University of Toronto<br><i>CMV in SOT</i> |

| 1:20 pm – 1:35 pm | Ana Konvalinka, MD, PhD, FRCPC<br>Transplant Nephrologist, Clinician Scientist<br>Department of Medicine, Division of Nephrology<br>University Health Network<br>Associate Professor, University of Toronto<br>Senior Scientist, Toronto General Hospital Research Institute<br>Director, Ajmera Transplant Centre Multi-organ Transplant Biobank<br><i>Proteomics in SOT</i> |
|-------------------|---|
| 1:35 pm – 1:50 pm | <b>Dr. Megan Aversa &amp; Aizhou Wang</b><br>ABO incompatible Transplantation   |
| 1:50 pm – 2:05 pm | (Oral Abstracts - 8 mins each Presentation + 2 mins Discussion)<br><b>Daniel Vosoughi</b><br>A Combinatorial Serum Autoantibody (AAB) Biomarker Associated with Future CLAD   |
| 2:05 pm – 2:15 pm | <b>Michael J. Cooper</b><br>DynaMELD: A Dynamic Model of End-Stage Liver Disease for Equitable Prioritization   |
| 2:15 pm – 2:25 pm | <b>Joseph Chon</b><br>Predict Chronic Renal dysfunction in Liver Transplant Patients using Machine Learning   |
| 2:25 pm – 2:35 pm | <b>Rayoun Ramendra</b><br>Early post-transplant airway IL-5 and eosinophilia are associated with baseline lung<br>allograft dysfunction and impaired allograft survival   |
| 2:35 pm – 2:45 pm | <b>Lebei Pi</b><br>Moving Beyond the Perfect Donor: Quality Improvement (QI) Initiative to Optimize Donor<br>Utilization  |
| 2:45pm – 3:00 pm  | <b>Dr. Gonzalo Sapisochin, MD, PhD, MSc</b><br>LeGresley Chair in Transplant Oncology at UHN<br>Associate Professor of Surgery<br>Abdominal Transplant & HPB Surgical Oncology<br>Toronto General Hospital & Princess Margaret Cancer Centre<br>University Health Network, University of Toronto<br><i>Liver Transplantation in Patients with Malignancy</i>                  |
| 3:01 pm – 3:09 pm | *Short Break While the Rooms are Seperated for Parallel Sessions*   |

## \*Parallel Sessions\* (Rooms; 9006 & 9005 w/ 9119 as overflow for room 9005)

| Ex Vivo (45 mins  | 6) 7 mins + 2 mins each            | Quality Improvem<br>Disciplines in Trans<br>(45 mins) 7 mins + 2 |                              |
|-------------------|------------------------------------|--|------------------------------|
| 3:10 pm – 3:15 pm | <u>CHAIR:</u><br>Dr. Marcelo Cypel | 3:10 pm – 3:15 pm  | <u>CHAIR:</u><br>Nikki Marks |

| 3:15 pm – 3:24 pm | <b>Aizhou Wang, PhD</b><br><i>Ex vivo modifications of donor</i><br><i>lung endothelium to remove blood</i><br><i>group antigens</i>   | 3:15 pm – 3:24 pm | <b>Sahar Sohrabipour</b><br>Characterizing Rehabilitation<br>Programs for Solid Organ<br>Transplant Patients Across<br>Canada   |
|-------------------|--|-------------------|---|
| 3:24 pm – 3:33 pm | <b>Thomas Borrillo</b><br><i>Clinical validation of a machine</i><br><i>learning model that predicts</i><br><i>donor organ suitability during ex</i><br><i>vivo lung perfusion</i>                             | 3:24 pm – 3:33 pm | <b>Sonia Rodriguez</b><br><i>Re-imagining transplant day unit</i><br><i>at the ATC: TDU 2.0 - developing</i><br><i>clinical pathways</i>  |
| 3:33 pm – 3:42 pm | <b>Yamato Suzuki</b><br><i>A model for mouse ex vivo lung</i><br><i>perfusion (EVLP) followed by</i><br><i>orthotopic lung transplantation</i>   | 3:33 pm – 3:42 pm | Chaya Shwaartz, MD<br>Assistant Professor of Surgery<br>Abdominal Transplant & HPB<br>Surgical Oncology,<br>University Health Network,<br>University of Toronto<br>Animated education modules to<br>assess satisfaction and shared<br>decision making in liver<br>transplant recipients and<br>candidates |
| 3:42 pm – 3:51 pm | <b>Gabriel Siebiger</b><br>Itaconate Supplementation in<br>Organ Preservation Solution Leads<br>to Improvement in Donor Lung<br>Function After Extended<br>Hypothermic Preservation in a<br>Pre-Clinical Model | 3:42 pm – 3:51 pm | <b>Nikki Marks, MN NP<br/>&amp; Danielle Jepson, MScPT</b><br><i>TG-TRI Care Collab: enhancing</i><br><i>collaboration between TGH and</i><br><i>TRI to optimize quality of care</i>  |
| 3:51 pm – 4:00 pm | <b>Guillermo Garza</b><br>Membraneless Perfusion - a Novel<br>Technique for Ex Vivo Lung<br>Perfusion  | 3:51 pm – 4:00 pm | <b>Pei Xuan (Rachel) Chen, RN,<br/>BScN, HBSc</b><br>Improving the quality and<br>continuity of discharge patient<br>education at the ATC   |

4:00 pm – 4:15 pm Health Break

**New Horizons in Transplantation** 

4:15 pm – 4:20 pm <u>CHAIR:</u> Blayne Sayed

State of the Art LectureDr. Anita S. Chong, Ph.D4:20 pm - 5:05 pmProfessor, Department of Surgery, University of Chicago<br/>Allogeneic Conflict in Pregnancy and Transplantation

|                   | (9 mins + 3 mins)<br>Shiyuan Bian  |
|-------------------|--|
| 5:05 pm – 5:14 pm | Moderate Mechanical Ventilation Results in Enhanced Re-epithelialization of<br>Decellularized Lung Scaffolds                               |
| 5:14 pm – 5:23 pm | <b>Nicole Chrysler</b><br><i>Measurement of T Cell Alloreactivity in Lung Transplant Recipients Using Imaging Flow</i><br><i>Cytometry</i> |
| 5:23 pm – 5:32 pm | <b>Faraz Chogan</b><br>Enhancing Burn Healing with Decellularized 3D Bioprinted Skin Substitute Reinforced by<br>Biodegradable Polymers    |
|                   |  |
| 5:35 pm – 5:50 pm | Award Presentations  |
| 5:50 pm – 6:00 pm | Concluding Remarks (5 – 10 mins)   |
| 6:00 pm – 7:30 pm | Poster Presentations & Post Conference Social Event  |

We would like to thank the sponsors of the 3<sup>rd</sup> Annual Ajmera Transplant Centre Education & Research Day Conference series held June 13 – 14, 2024

