Uncovering New Pathways to Promote Regeneration

Courtyard Marriott Downtown Toronto (475 Yonge Street, Toronto, ON)

WEDNESDAY APRIL 26, 2023

7:00 am	Registration Desk opens – outside University Room			
7:00 am	Breakfast Buffet (College and Yonge Rooms)			
8:00 am	Welcome & Introduction of Keynote Speaker – Dr. Sonya MacParland			
	Promoting Self-Repair of the Injured Brain: A Stroke of Genius Dr. Cindi Morshead			
9:10 am	Presentation Guidelines & Grading Panel Introduction – Humna Noman, Teaching Assistant			
Time	Title	Presenter		
Student Ch	Student Chair: Gabriel Siebiger Grading Panel – Humna Noman, Stephen Juvet, Ana Konvalin			
	CELL ENGINEERING TO PROMOTE RECOVERY			
9:15 am	Direct Cellular Reprogramming of Astrocytes to Neurons Leads to Functional Recovery in a Mouse Model of Stroke	Fei Li		
9:30 am	Gene Delivery Approach to Treat ABCA3 Deficient-related Lung Disorders using a Novel Dual AAV Vector	Sahar Salari		
9:45 am	Engineering Repair Schwann Cells for Therapeutic Purposes	Lauren Belfiore		
10:00 am	BREAK (College and Yonge Rooms)			
HARNESSING THE POTENTIAL OF STEM CELLS				
10:10 am	The Role of Microglia in Neural Stem Cell Behaviour Following Irradiation	Julia Handfield		
10:25 am	Assessing the Ability of Decellularized Mouse Kidneys to Direct Human Stem Cells towards a Mature and Functional Vasculature	Anupama Bhadwal		
10:40 am	Standardization of Adipose Mesenchymal Stem Cell Culture Parameters to Maximize Exosome Yield	Heather Booth		
10:55 am	The expansion of human induced pluripotent stem cells in vertical wheel bioreactors using scalable genetic quality control methods	Emilie Gysel		
11:10 am	Investigating the Genetic and Cellular Regulation of the Human and Porcine Segmentation Clocks using Pluripotent Stem Cells	Pranav Ramesh		
11:25 am	The Role of Human Endothelial Progenitor Cells in Bone Healing	Matthew Raleigh		
11:40 am	Mini-MEndR: A Miniaturized In-Vitro Predictive Assay to Evaluate Muscle Stem Cell Mediated Repair	Nitya Gulati		
12:00 pm	LUNCH (College and Yonge Rooms)			

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Student Chair: Gabriel Loesch Siebiger Grading Panel – Humna Noman, Kathryn Lye, Shin Ogawa				
MATERNAL HEALTH AND THE GUT MICROBIOTA				
1:00 pm	Bacteriocins in Human Breast Milk Regulate the Infant's Oral and Gut Microbiomes	Cara Marks		
1:15 pm	Assess the Functional Impact of Tumor-associated Microbiota Secreted Factors on Pancreatic Ductal Adenocarcinoma (PDAC) Tumor Cells Regrowth after Chemotherapy	Chantelle Benxi Shing		
1:30 pm	Lineage-Specific Metabolic Distinctions in the Human Breast Epithelium	Bowen Zhang		
1:45 pm	Evaluation of the Effects of Female Cells and Hormones on Inflammatory Responses to Surgical Mesh	Kaylee A Fennell		
2:00 pm	BREAK (College and Yonge Rooms)			
DISEASE MECHANISMS AND CELL THERAPIES				
2:10 pm	Senescent Cell Clearance Regenerates Aged Burn Wounds in Mice	Sara Faour		
2:25 pm	Investigating the Role of Signal Transducer and Activator of Transcription Factor 3 (STAT3)-mediated Astrogliosis on the Pathogenesis of Degenerative Cervical Myelopathy and decompression-induced Ischemia Reperfusion Injury (IRI)	Sarah Sadat*		
2:40 pm	The Role of CD4 ^{Pos} /CD28 ^{Null} T-cells in Periodontal Diseases and Their Link to Other Inflammatory Diseases	Sina Zargaran		
2:55 pm	Anti-Desmoglein 2 Specific Signalling in Arrhythmogenic Right Ventricular Cardiomyopathy	Shaylyn Joseph		
3:10 pm	Exploring the Cell Therapy Potential of ILC2s for Type 1 Diabetes and Islet Transplant	Sinthuja Jegatheeswaran		
3:25 pm	Exosomal Delivery of Wnt7a as a Therapeutic Approach for Muscle Wasting Diseases	Ehsan Javandoost*		
3:40 pm	Closing Remarks – Dr. Sonya MacParland, Symposium Chair			

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8:00 am	Breakfast Buffet (College and Yonge Rooms)					
8:55 am	Welcome – Dr. Sonya MacParland Presentation Guidelines & Grader Introduction – Humna Noman					
Time	Title	Presenter				
Student Ch	Student Chair: Lauren Belfiore Grading Panel – Humna Noman, Dr. Sonya MacParland, Dr. Elmar Jaeckel					
	ENGINEERING APPROACHES IN REGENERATIVE MEDICINE					
9:00 am	3D Bioprinted Decellularized Skin Substitute Reinforced with PCL/PEG for Enhanced Burn Healing	Faraz Chogan				
9:15 am	Bioresorbable Hydrogel-nanoparticle Release System for the Controlled Local Delivery of Therapeutics to the Central Nervous System	David Li				
9:30 am	Evaluation of Collagen-based Hydrogels and Nicotinamide on Lens Epithelial Cell Migration and Behaviour	Kathryn Jalink				
9:45 am	In vivo Monitoring of Conductive Cardiac Patches in Arrhythmic Mice using Iron Nanoparticles	Adrian Dychiao				
10:00 am	Characterization of Fibroblasts-collagen Modular Microtissues in a Foreign Body Reaction In Vitro Model	Fredrick Bulondo				
10:15 am	Identifying Biomarkers to Detect Congenital Heart Block	Stephanie W Benjamin				
10:30 am	Evaluating Immunogenicity of Partial Heterotopic Hindlimb Allografts in Mice	Angela (Jiahui) Sun				
10:45 am	BREAK (College and Yonge Rooms)					
11:00 am	Introduction of Keynote speaker - Dr. Sonya MacParland Opportunities and Challenges of Machine Learning in Regenerative Medicine Dr. Bo Wang					
	INNOVATIONS IN ORGAN TRANSPLANTATION: THE KIDNEY					
12:00 pm	Generating an Ex-vivo Organ Perfusion System to Model Murine Kidney Fibrosis	Jorge David Castillo-Prado				
12:15 pm	Ex-vivo Delivery of Autologous Regulatory T Cells during Normothermic Machine Perfusion in Porcine Kidney Transplantation	Kaitlin Lees				
12:30 pm	Defining Protective and Pathogenic Resident Immune Cells in Kidney Transplantation	Martin Louis Mak				
12:45 pm	LUNCH (College and Yonge Rooms)					

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	INNOVATIONS IN ORGAN TRANSPLANTATION: THE LUNGS				
1:45 pm	Ex Vivo Treatment of Infected Donor Lungs with Antimicrobial Doses of inhaled Nitric Oxide	Vanessa Costa Menezes			
2:00 pm	The Clinical Relevance of Necroptosis in Ischemia Reperfusion Injury in Human Lung Transplants	Kimberly Main			
2:15 pm	Mitochondrial Isolation in a Porcine Model for Autologous Mitochondrial Transplantation in Ex-Vivo Lung Perfusion	Gabriel Siebiger			
2:30 pm	Identifying and Characterizing Autoantibodies in Chronic Lung Rejection	Daniel Vosoughi			
2:45 pm	Exploring Druggable Targets for Tissue Repair and Blood Vessel Regeneration in Fibroproliferative Acute Respiratory Distress Syndrome (FP-ARDS) Using a High Throughput Human Lung on a Chip System	Kelsie Volek			
3:00 pm	BREAK (College and Yonge Rooms)				
MECHANISMS IN ORGAN DISEASES					
3:10 pm	The Role of PBX1 in Kidney Development and Maldevelopment	Caoimhe Costigan			
3:25 pm	Investigating Hepatocyte Nuclear Factor 4 Alpha as a Central Regulator of Kidney Graft Repair	Slaghaniya Neupane			
3:40 pm	Understanding the Mechanisms of Human Liver Regeneration via Characterization of Circulating Extracellular Vesicles	Yilin Sun			
3:55 pm	Ex Vivo Perfusion of the Native and Humanized Murine Pancreas to Model Type 1 Diabetes	Marwa Sadat			
4:10 pm	Examining the Effect of Supra-Physiological Insulin in an In Vitro Human Insulin Infusion Cannula Host Response Model	Grace Riddell			
4:25 pm	Protease-Based Tailoring Of 3D Hepatic Organoids	Soumili Sarkar*			
4:40 pm	Closing Remarks - Sonya MacParland, Symposium Chair				