3rd ANNUAL SYMPOSIUM

POSTER SESSION

	MUSCLE ENGINEERING (ME) & TISSUE ENGINEERING (TE)			
	PRESENTER	**LAB**	**INSTITUTION**	**TITLE**
ME-1	Miranda Carleton	Sefton	UofT	Altering the macrophage response in skeletal muscle using methacrylic acid-based biomaterials
ME-2	Sadegh Davoudi	Gilbert	UofT	Single cell RNA sequencing analysis of mono-nucleated cells in adult skeletal muscle
ME-3	Wahiba Dhahri	Laflamme	UHN	In vitro matured hESC-derived cardiomyocytes electrically couple and form improved intra-cardiac grafts in injured guinea pig hearts
ME-4	Gertraud Eylert	Jeschke	Sunnybrook	A novel design of a hand-held bio-printer for burn treatment
ME-5	Erin Jacobs	Licht	SickKids	Skeletal muscle injury and repair: A role for complement
ME-6	Hank Lee	Amon	UofT	Simulation of epithelial cell seeding within an improved double-chamber, rotating trachea bioreactor
ME-7	Olga Mastikhina	Vasconcelos	UHN	Human fibrosis-induced heart failure-on-a-chip
ME-8	Shouka Parvin Nejad	Simmons	UofT	Evaluating human umbilical cord perivascular cells as an alternative to bone-marrow derived mesenchymal stromal cells for heart valve tissue engineering
ME-9	Daniel Teitelbaum	Marsden	St. Michael's	The effect of hemodynamics on the hypoxia response in the vascular endothelium
ME-10	Thinh Ngoc Tran	Bader	UofT	Analysis and visualization of time-series single-cell transcriptomics of developing systems
ME-11	Jill Weyers	Ghugre	Sunnybrook	Induction of porcine acute myocardial infarction depends on breed and coronary anatomy: insights from 3D fluoroscopy and cardiac magnetic resonance imaging
TE-1	Morvarid Farhang Ghahremani	Simmons	UofT	A microfluidic platform for high-throughput drug metabolism and toxicity screening in vascularized 3D liver tissue models
TE-2	Mohammad Samani	Hopyan	SickKids	Dynamic finite-element 3-dimensional modeling of cell migration and proliferaton
TE-3	Nima Vaezzadeh	Guenther	UofT	Bioprinting tubular collagen structures for developing perfusable epithelial and endothelial tissues

GENE ENGINEERING (GE)

	PRESENTER	LAB	INSTITUTION	TITLE
GE-1	Sally Cheung	Pelletier	MSH	Growing gut spheroids: 3D culture and light-sheet microscopy
GE-2	Sabyasachi Dasgupta	Goyal	UofT	Predicting the arrow of developmental time: Building cell type lineages from sc-RNA-seq data during cardiac development
GE-3	Mitchell Doughty	Ghugre	Sunnybrook	MRI-driven augmented reality guidance system for targeted cardiac procedures
GE-4	Mardi Fink	Wrana	LTRI	Examining the role of Yap in post-injury regenerative signaling and tumorigenesis in intestinal tissue
GE-5	Hima Gohil	Wheeler	UofT	GABA: Potential agent of β-cell proliferation
GE-6	Matthew Hildebrandt	Ellis	SickKids	Directed multi-lineage differentiation, functional phenotyping and gene editing of genomically annotated healthy iPSC from the Personal Genome Project Canada
GE-7	Brendan Hussey	McMillen	UofT	Towards engineering a programmable universal transcription activation system
GE-8	Margot Karlikow	Pardee	UofT	Synthetic biology for gut regenerative medicine
GE-9	Elli Kubarakos	Angers	UofT	Context-specific CRISPR-Cas9 screen reveals novel Wnt signalling regulators in early mesoderm differentiation
GE-10	Lida Langroudi	Mitchell	UofT	Transcriptional association of MYRF with SOX2 in mouse embryonic stem cells
GE-11	Hunsang Lee	Taipale	UofT	Deorphanizing the secretome in the hESC niche
GE-12	Barbara Mair	Moffat	UofT	Genome-scale CRISPR screening defines substrate-dependent essentialome in human pluripotent stem cells
GE-13	Christopher McFaul	Yip	UofT	Light-sheet microscopy of living tissues and organoids
GE-14	Sophie McGibbon-Gardner	Goyal	UofT	Quantitative lineage tracking identifies fit lineages in reprogramming experiments
GE-15	Kumi Mesaki	Keshavjee	UHN	CRISPR mediated in vivo IL-10 gene regulation: A novel whole organ gene regulation strategy for lung transplantation
GE-16	David Philpott	Kelley	UofT	High-resolution, high-throughput, non-destructive sorting platform for large cell populations
GE-17	Payman Samavarchi-Tehrani	Gingras	MSH	Extracellular BioID: Looking for partners on the outside of a cell
GE-18	Ritu Sarpal	Tepass	UofT	Identification of novel genes regulating tissue growth and regeneration
GE-19	Gordana Scepanovic	Fernandez-Gonzalez	UofT	The effects of p38 on embryonic wound closure
GE-20	Luka Sheppard	Tepass	UofT	α-Catenin-mediated mechanosensing regulates tissue growth through modulating the Hippo signaling pathway
GE-21	Suja Shrestha	Santerre	UofT	Synthetic non-viral nanoparticles for CRISPR-Cas9 delivery as treatment intervention for duchenne muscular dystrophy: Cytotoxicity and transfection evaluation
GE-22	Nardnisa Sintupisut	Reimand	OICR	Expanding the repertoire of tissue regeneration genes through integrative analysis of multi-species proteomics and transcriptomics data.
GE-23	James St. Pierre	Parkinson	SickKids	Highly-scalable, robust metatranscriptomics analysis with MetaPro
GE-24	Noeline Subramaniam	Marsden	St. Michael's	The role of angiogenic lncRNAs in the vascular endothelium

GENE ENGINEERING (GE)

	PRESENTER	LAB	INSTITUTION	TITLE
GE-25	Daniel Szulc	Cheng	UofT	Non-invasive MRI tracking of human embryonic stem cells and cardiomyocyte derived cells with bright-contrast DMT-1 MR Reporter Gene
GE-26	Ceryl Tan	Kafri	UofT	Challenging the dogma: Cell size regulation in embryonic wound repair

NEURAL ENGINEERING (NE)

	PRESENTER	LAB	INSTITUTION	TITLE
NE-1	Priscilla Chan	Fehlings	UofT	Self-tracing human neural stem cells to map transplant integration
NE-2	Emerson Daniele	Faiz	UofT	Direct reprogramming of astrocytes as a novel therapy for stroke repair
NE-3	Daniel Dennis	Miller	SickKids	Investigating oligodendrocyte precursor cell niche differences in the neocortex
NE-4	Thomas Gonatopoulos-Pournatzis	Blencowe	UofT	Investigation of the functional complexity of alternative splicing in neurons
NE-5	Jessica Gosio	Wrana	MSH	Tracking growth of brain tumours through noninvasive imaging in human cerebral organoid allografts
NE-6	Margaret Ho	Shoichet	UofT	Combinatorial strategies to deliver cells and biomolecules to the retina
NE-7	Brendan Innes	Bader	UofT	scClustViz – Single-cell RNAseq cluster assessment and visualization
NE-8	Rehnuma Islam	Morshead	UofT	The role of transplanted neural precursor cells in mediating functional recovery following ischemic stroke
NE-9	Saeed Khalili	van der Kooy	UofT	Induction of cone and rod photoreceptor-restricted progenitors from retinal stem cells and embryonic neural retinal precursors
NE-10	Mahmoud Labib	Kelley	UofT	A multi-marker approach for enrichment of retinal stem cells using microfluidics
NE-11	John Laver	Calarco	UofT	A neuronal Atlas of RNA-binding protein expression and localization at single-cell resolution
NE-12	Arturo Ortin Martinez	Wallace	UHN	Give and take: Understanding intercellular photoreceptor material exchange
NE-13	Jessica Pressey	Woodin	UofT	Cortical interneuron-mediated inhibition delays the onset of amyotrophic lateral sclerosis in the SOD1 mouse model
NE-14	Reza Raeisossadati	Schuurmans	Sunnybrook	MRI guided focused ultrasound, a novel strategy to deliver therapeutics across the blood-retinal-barrier to treat retinal diseases
NE-15	Deivid Rodrigues	Ellis	SickKids	Shifts in ribosome engagement impact key gene sets in neurodevelopment and Rett Syndrome neurons
NE-16	Samantha Yammine	van der Kooy	UofT	Fate specification of embryonic neural precursors at single cell resolution
NE-17	Nicole Yan	Wallace	UHN	Give and take: Using an in vitro assay to elucidate donor and host photoreceptor material exchange

IMMUNE ENGINEERING (IE)

	PRESENTER	LAB	INSTITUTION	TITLE
IE-1	Mohammadali Ahmadipour	Waddell	UofT	Utilizing negative pressure to enhance the re-epithelialization of the decellularized lung scaffold
IE-2	Sheena Bouch	Post	SickKids	Human alveolar-like macrophages derived from fail-safe embryonic stem cells for the treatment and prevention of lung disease
IE-3	Donny Chan	Parkinson	SickKids	Cell4D: Using a spatial stochastic simulator to model biological systems
IE-4	Jason Chan	Bazylak	UofT	Multiscale network extraction of decellularized mouse lung scaffolds for modelling whole lung de- and recellularization
IE-5	Ileana Co	McGuigan	UofT	Probing the interaction of macrophages in the pancreatic cancer microenvironment using TRACER
IE-6	Dzana Dervovic	Schramek	MSH	The quest for novel immunotherapies in lung cancer
IE-7	Roshane Francis	Kim	SickKids	Delivery of NOD2 ligands (MDP) by engineered bacteria to combat intestinal inflammation during Crohn's disease
IE-8	Blair Gage	Keller	UHN	Generation of functional liver sinusoidal endothelial cells from human pluripotent stem cells
IE-9	Lei Huang	Liu	UHN	Using cell culture as a model system to test, design and select new perfusates for ex vivo lung perfusion (EVLP) in lung transplantation
IE-10	Irene Lau	Mallevaey	UofT	Developing CD1d Multimers to study lipid-reactive natural killer T cells
IE-11	Alba Elena Marin	Amon	UofT	Critical shear stress for re-epithelialization of tracheal grafts
IE-12	Ei Miyamoto	Juvet	UHN	Pre-transplant ex vivo recipient-derived regulatory T cell therapy of the lung allograft
IE-13	Vlora Riberdy	Santyr	UofT	Hyperpolarized 129Xe MRI of embryonic stem cell-derived alveolar-like macrophages in rat lungs: Proof-of-concept study using superparamagnetic iron-oxide nanoparticles
IE-14	Apiraam Selvabaskaran	Philpott	UofT	Targeting peptidoglycan recycling pathways in synthetic microbes as an approach for intestinal regenerative medicine
IE-15	Mohammadali Sheikholeslam	Jeschke	Sunnybrook	A gelatin-polyurethane scaffold for skin tissue engineering
IE-16	Ashton Trotman-Grant	Zúñiga-Pflücker	Sunnybrook	Progenitor T cells for thymic regeneration and as a platform for genetically-engineered T cells
IE-17	Shuailong Zhang	Wheeler	UofT	Light-driven micro-robot: A useful toolbox for particle and cell manipulation