

SBME 3RD ANNUAL SYMPOSIUM

TRAINEE POSTERS

JUNE 8 & 9, 2021



POSTER	POSTER TITLE	PRESENTER	PI/LAB
1	POD0447 antibody binds to a tumor-restricted glycoform of podocalyxin express on immune-excluded ovarian tumors.	Julyanne Brassard	Kelly McNagny
2	A gene cytometry cell sorting technology	Rina Sakata	Nozomu Yachie
3	Image-guided Prostate Nerve-sparing Surgery using Photoacoustic Imaging	Hamid Moradi	Tim Salcudean
4	IQCELL: A platform for predicting the effect of gene perturbations on developmental traBjectories using single-cell RNAseq data	Tiam Heydari	Peter Zandstra
Trainee Rapid-Fire Presenter (Day One)			
5	Investigating critical process parameters for long-term expansion of thymus-derived regulatory T cells	Katherine MacDonald	Megan Levings & James Piret
6	Depletion of SCFA-fermenting gut bacteria alters the epigenome of hematopoietic stem and progenitor cells	William Yip	Kelly McNagny
7	Nuclei isolation from frozen human heart tissue for single-nucleus RNA sequencing	Sina Safabakhsh	Zachary Laksman
8	Development of a new generation of neurovascular device for the treatment of cerebral aneurysms with complex anatomy	Mehdi Jahandardoost	Dana Grecov
9	Multi-objective Optimization Reveals Dynamic Regulation of In Vitro Human T-cell Development by Inflammatory Cytokines	John Edgar	Peter Zandstra
10	Improved Prostate Cancer Risk Stratification by Digital Histopathology and Deep Learning	Yanan Shao	Tim Salcudean
11	Creating tools to study engineered antigen receptors	Andrew Brown	Megan Levings
Trainee Rapid-Fire Presenter (Day Two)			
12	Control of symmetry-breaking in mammalian developmental models	Daniel Aguilar-Hidalgo	Peter Zandstra
13	A Model-based Fusion Techniques for Ocular Motion Sensing	Hiroshan Gunawardane	Mu Chiao
14	The Role of Transforming Growth Factor Beta-3 in Muscle Repair and Fibrosis.	Morten Ritso	Fabio Rossi
15	Intelligent Ureteral Stent for Wireless Monitoring and Early Detection of Hydronephrosis	Mohammad Reza Yousefi Darestani	Kenichi Takahata



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16	Fractal Analysis of the fMRI BOLD Signal during Naturalistic Viewing Conditions	Olivia Campbell	Alexander Weber
17	Investigating the role of paracrine signalling in NETosis	Pan Deng	Hongshen Ma
18	The Palmitoylating Enzyme zDHH9 in Intellectual Disability	Rocio Hollman	Shernaz Bamji
19	Non-equilibrium Structural Dynamics of Supercoiled DNA Plasmids	Cameron Hastie	Sabrina Leslie
20	A Comparison of Cytotoxicity Induced by Traditional vs. Electronic Cigarettes In-Vitro with Applications to a Novel Airway-On-Chip	Avineet Randhawa	Karen Cheung
21	Metabolic reprogramming of skeletal muscle by resident macrophages points to CSF1R inhibitors as muscular dystrophy therapeutics.	Farshad Babaeijandaghi	Fabio Rossi
22	Activation of β -CATENIN in Fibro/Adipogenic Progenitors Leads to Muscle Mass Loss	Nasim Kajabadi	Fabio Rossi
23	Engineering the Design of Cell Encapsulated Alginate Fibres for the Treatment of Diabetes	Rene Pedroza	James Piret
24	PET-based detection of dopamine release via PCA of residuals	Connor Bevington	Vesna Sossi
25	Glycocalyx engineering approaches for organ transplantation via localized immunomodulation	Haiming Daniel Luo	Jayachandran N. Kizhakkedathu
26	Non-specific RNase activity of Cas13d in mammalian cells	Janella Schwab	Nika Shakiba
27	Visualizing the spatial organization of gut bacteria	Kisa Navqi	Carolina Tropini
28	Mapping a high-resolution cell lineage of mouse embryogenesis	Nanami Yamaguchi	Nozomu Yachie
29	Effect of environmental surroundings on muscle synergy postural control	Rael Gumbe	Calvin Kuo
30	Development of an Upper Cervical Spine Model for use in an Omnidirectional Surrogate Neck	Sarah Romani	Peter Crompton
31	Multi-parameteric single-particle microscopy platform for high-throughput, tether-free measurements of drug-delivery nanoparticle size, loading, and dynamics in cell-like conditions	Kamanzi Albert	Sabrina Leslie
32	Uncovering the Role of Cell Competition in Human Stem Cell Lineage Commitment	Omar Bashth	Nika Shakiba



POSTER	POSTER TITLE	PRESENTER	PI/LAB
Trainee Rapid-Fire Presenter (Day Two)			
33	Prediction of Childhood Allergic Disease from Alterations in Umbilical Cord Blood Immune Cell Signatures	Melina Messing	Kelly McNagny
34	Analysis of Early Steps in the Human T-cell Differentiation Process	Laura Isabel Gonzalez	Connie Eaves
35	Uncharacterized diversity during heart valve EMTs revealed by single-cell transcriptomics	Jeremy Lotto	Pamela Hoodless
36	Clonal tracking of human B lymphoid and neutrophil/monocyte lineage restriction	Fangwu Wang	Connie Eaves
37	Morphological control of receptor-mediated endocytosis	Daniele Agostinelli	Mattia Bacca
38	DNA Synergizer – a versatile tool to process highly structured sequencing reads	Yusuke Kijima	Nozomu Yachie
39	Vascularized Airway-On-A-Chip: Development and In Vitro Validation of A Microfluidic Cell Culture Model for Chronic Obstructive Pulmonary Disease	Tanya Bennet	Karen Cheung
40	Comparison of Frequency-Domain Features in Near-Falls and Falls based on Inertial Measurement Unit Location	Alexi Michael	Calvin Kuo
41	Culprit-Prune-Net: Efficient Continual Sequential Multi-Domain Learning with Application to Skin Lesion Classification	Nourhan Bayasi	Rafeef Garbi
42	Improving regeneration in traumatic skeletal muscle injuries through complex coordination of biotechnologies	Mark Hamer	Fabio Rossi
43	dGEMRIC T1 is Reduced in Cartilage Overlying Bone Marrow Lesions in the Hip	Carly Jones	David Wilson
Trainee Rapid-Fire Presenter (Day One)			
44	Material Characterization of Electroactive Conducting Polymer Actuators for Tactile Displays in Upper Limb Prosthetics	Freya Hik	John Madden
45	Engineering chimeric antigen receptors for optimal function in regulatory T cells.	Isaac Rosado Sánchez	Megan Levings
46	Spatial multi-omics to map T cell development in the human thymus	Laura Stankiewicz	Peter Zandstra & Fabio Rossi



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47	Simulating Epithelial-Mesenchymal Transition in Cell Sheets	Naba Mukhtar	Leah Keshet
48	Controlling size to improve cell yield of stem cell-derived islet-like clusters	Priye Iworima	Timothy J. Kieffer
49	Adult Mesenchymal Progenitors are a cell of origin for Synovial sarcoma	Wilder Scott	Michael Underhill
50	Fretting corrosion of CoCrMo hip implants and laboratory simulation	Qiong Wang	Rizhi Wang
51	Stepping towards intra-operative treatment planning for low-dose-rate prostate brachytherapy with rapid automatic AI-based planner	Tajwar Abrar Aleef	Tim Salcudean
52	Ammonia-induced Calcium Phosphate Nanostructure: A Potential Assay for Studying Osteoporosis and Bone Metastasis	Christina Chen	Rizhi Wang
53	Development of an Airway-on-a-Chip to Study Fibroblast-ECM Interactions	Jessica Hua	Karen Cheung
54	Generation of Human Blood and Lymph Vessel organoids	Nico Werschler	Josef Penninger
55	In-vitro Modelling of a Brain Capillary Vessel for Studying Alzheimer's Disease	Tiffany Cameron	Karen Cheung
56	Trainee Rapid-Fire Presenter (Day Two) A novel method for observing hip fracture during simulated sideways fall impact	Emily Bliven	Peter Crompton
57	Trainee Rapid-Fire Presenter (Day One) Understanding the Impact of Osmotic Stress on Bacterial Abundance	Hans Ghezzi	Carolina Tropini
58	Smart Sheet: A soft flexible and stretchable pressure sensor array designed for pressure ulcer prevention	Justin Wyss	John Madden & Babak Shadgan
59	Trainee Rapid-Fire Presenter (Day Two) Minimally Invasive Delivery of CounterFlow Hemostatic Powder can Manage Non-Compressible Truncal Hemorrhage in Swine	Massimo Cau	Christian Kastrup
60	Spatially Patterned Excitatory Neuron Subtypes and Circuits Within the Claustrum	Brianna Bristow	Mark Cembrowski
61	Source Decomposition and Accelerometer-Assisted Sparse EEG Motion Artifact Removal	Eric Liu	Lyndia Wu



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62	Denoising of pre-beamformed photoacoustic data using generative adversarial networks	Corey Kelly	Tim Salcudean
63	Electro-mechanical stimulation and functional characterization of engineered heart tissue	Ardin Sacayanan	Zachary Laksman
Trainee Rapid-Fire Presenter (Day One)			
64	Exploring the contribution of “silent spreaders” to COVID-19 disease dynamics in British Columbia	Karen Hwang	Nika Shakiba
65	Dissecting mesenchymal stromal cell heterogeneity at the single cell resolution: from mouse to human heart	Henry Tung	Fabio Rossi
66	Overcoming Heat Released from Thermally Driven Artificial Muscles for Invasive & Non-Invasive Biomedical Applications	Sukhneet Dhillon	John Madden

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MARK BUSS
mark.buss@10xgenomics.com



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Created in 2017 through a partnership between the Faculties of Applied Science and Medicine, and enabled by the leadership of British Columbia's provincial government, the SBME is unique as UBC's first inter-faculty school and as Canada's living laboratory for new models of convergent research and education. With access to world-leading research infrastructure, and with close partnerships with our research-intensive hospitals and local industry, the School aims to provide a clear route from the discovery of new fundamental biomedical technologies to their innovative application and development to benefit human health.

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