SYNERGY RESEARCH DAY

AUGUST 13, 2024

Trainee Poster List

	POSTER TITLE	PRESENTER
1	Huntington's Disease Mouse Model: The Role of Extrasynaptic NMDAR and PV Interneurons in Cortical Sensory Spread	Alyssa Aguason
2	Does Synovitis Cause Osteoarthritis: A Retrospective Analysis of Magnetic Resonance Images	Amit Sharma
3	Evaluation of collective emergent behavior of hPSCs using single-cell analysis and fixed cell imaging	Bhavya Sabbineni
4	How AI uses tissue images to diagnose rare metastatic cancers	Bjorn Holst
5	IBD microbiota modulates mucus & butyric acid production in human microbiota-associated mouse model	Brian Deng
6	Utilizing cell-free DNA to characterize DNA damage repair gene alterations in metastatic prostate cancer	Catherine Wang
7	Clinical Applications of AI in Prostate Cancer Diagnosis	Christian Thorson
8	Advancing "Off-the-Shelf" CAR-T Therapy: Enhancing Transduction Efficiency and Memory T Cell Phenotypes	Edward Melnyk
9	Mitigating Fibrosis in Skeletal Muscle Regeneration through Engineered scFv Antibodies Targeting TGFb	Elaine (Yi Jun) Han
10	Psilocybin macrodoses improve decision-making and impulsivity in gambling rats.	Elena Greenall
11	Comparative Analysis of mRNA and saRNA-Mediated Protein Expression in Senescence	Gopika Makhija
12	Magnetically Responsive Structures to Guide Spinal Cord Regeneration: Scaling up synthesis of SPION-loaded PLGA Nanoparticles	Isabella Coccimiglio
13	Player Movement Dynamics in Soccer: Implications For Injury	Jason Fu
14	Characterizing Head Impact Biomechanics Using Instrumented Mouthguards in Women's Rugby	Jeremi Kolakowski
15	Soft Electronic Implant for Bladder Management	Jordan Thompson

	POSTER TITLE	PRESENTER
16	Characterizing the Expansion and Functionality of Invariant Natural Killer T cells	Karina Akhmedova
17	Inside-Out: A Modular Cell Surface Reporter for Tracking Intracellular Gene Activity	Katrina Jewell
18	Immunogenicity of CAR-Treg therapies and the impact on organ transplantation and tolerance	Kisa Naqvi
19	Developing a High Throughput Assay for Characterizing Bacteriophages	Kriti Verma
20	XSCAPE: Microfluidics-assisted spatial mRNA barcoding to study gene eXpression landSCAPE in heterogeneous prostate cancer	Laura Ing
21	Optimization of U-Net deep learning model for Segmentation of the Lacunocanalicular network	Lily Lim
22	Determining Reliability of Hip Microtranslation Measurements in Upright Open MRI Scanner	Lily Fishman
23	Enhancing iPSC-derived CAR-T Cell production via small molecule inhibition of Lin28B	Matthew Chan
24	Projection-specific morphology in subicular neurons drives unique computation	Ming Zhang
25	Investigating Silicon Photonic Biosensor For Hormone Measurements During Perimenopause	Myra Wei
26	Bile acids metabolites restrain the inflammatory properties of ROR⍰-dependent pathogenic ILC3 and Th17 cells to protect from type 3 mediated gut fibrosis	Natalia Nayyar
27	A Deep Learning Model to Segment Types of Lacunae in Bone	Nok Yee Chang
28	Interferon-α Drives Myeloid Progenitor Bias in Pluripotent Stem Cell-Derived Hematopoietic Stem and Progenitor Cells	Nora Kotkas
29	Development of a Novel Retinal-Graft Migration Assay to Enhance Photoreceptor-Bipolar Cell Synaptogenesis	Owen Liu
30	Designing a Comprehensive Platform for Assessing Motor Learning in Mice	Selina (Eunyoung) Park

	POSTER TITLE	PRESENTER
31	Calibration and Time Synchronization of Inertial Measurement Units (IMUs)	Simrit Boparai
32	Integrating Environmental Sustainability into Biomedical Engineering Design: Transforming BMEG 357 Curriculum at UBC	Sogand Golshahian
33	Development and Testing of an Omnidirectional Biofidelic Surrogate Neck for Transportation and Sports Safety	Sophia Katramadakis
34	Using CRISPR base editors to knock out phosphorylation from DGCR8 in mouse embryonic stem cells	Stephanie Chow
35	Creating a Scalable, Miniaturized System for Efficient Hematopoietic Stem and Progenitor Cell Production from Pluripotent Stem Cell	Sze Lok Ng
36	Enhanced MRI Segmentation of White Matter Lesions: A Multi-Scale Approach	Tarek Alkabbani
37	Biomimetic 3D Printed Scaffolds with Interconnected Porosity for Spinal Cord Injury	Teela Moore
38	High-throughput investigation to overcome transgene silencing in gene therapy	Yuqing(Phoenix) Jin

ABOUT SBME SYNERGY

The SBME Synergy Undergraduate Summer Research Program is a fantastic opportunity for students to gain paid hands-on research experience in one of UBC's world-class biomedical engineering labs; partners include researchers from the Djavad Mowafaghian Centre for Brain Health (DMCBH), the Genome Science and Technology Graduate Program (GSAT), and of course, SBME.

During the program, students work on a defined research project with a UBC supervisor, participate in professional development programming, network at student socials, and present their research at our Synergy Research Day.

SBME Synergy awards are open to all undergraduate and medical students.

In partnership with:

GSAT

UBC THE UNIVERSITY OF BRITISH COLUMBIA
Michael Smith Laboratories

Djavad Mowafaghian
CENTRE FOR BRAIN HEALTH

CONNECT WITH US: