

SCHOOL OF BIOMEDICAL ENGINEERING

## SYNERGY RESEARCH DAY

**AUGUST 16, 2022** 

## **TRAINEE POSTER LIST**

IN PARTNERSHIP WITH:











	POSTER TITLE	PRESENTER	SUPERVISOR
1	Identifying Ribosomal Protein and Biogenesis Factors Involved in Virus Translation	Nathan Louie	Brenna Hay
2	Immunomodulating Polymer Conjugates for Targeting and Treating Glycocalyx Dysfunction	Kate Halverson- Kolkind	Anna Herrmann & Jayachandran Kizhakkedathu
3	The Effects of Pen Ink and Surface Disinfectants on Red Blood Cells Stored in Plasticized Polyvinylchloride Transfusion Bags	Ralph Uy	Katherine Serrano
4	Fatty Whole Blood Donation and Red Blood Cell Quality	Marcus Shew	Narges Hadjesfandiari
5	Synergistic Effects of Antibiofilm Peptides and Conventional Antibiotics on Pseudomonas Aeruginosa and Methicillin Resistant Staphylococcus Aureus Biofilms	Tien Do	Evan F. Haney
6	The Role of Microtubule in Platelet Function	Quan Nguyen	Hugh Kim
7	Bridging the Lifespan Gap: Why Do Women Living with HIV Age Faster?	Sofie Levy	Helene Cote
8	Investigating MALT1 Substrate Specificity with Different CARD- BCL10-MALT1 Complexes	Christina Pan	Peter Bell
9	Development of Anti-Inflammatory Coatings for Biomedical Devices	Paniz Ghavimi	Edward Conway
10	Evaluating the Effects of Calcium Flashers on Increasing Calcium  Administration Rates and Improving Markers of Blood Coagulation	Arman Adel	Andrew Shih
11	Development of Universal/Stealth Red Blood Cells by Novel Enzymatic Cell Surface Engineering	Waris Bhatia	Jayachandran Kizhakkedathu
12	Characterizing the Role of miRNAs in Fibroadipogenic Progenitors in Pancreatic Cancer Cachexia	Jasmin Malhi	Ed Pryzdial
18	Assessing Cohort-based Health- and Vaccine-related Interventions in Newcomer Women	Emilie (Ou Jia) Wang	Jenna Usprech
19	Identification of Cell-Cell Communication and Signaling Pathways Required During Blood Development Using the Computational Method NicheNet	Emily Flaschner	Peter Zandstra
20	Genome-Wide Nanopore Karyotyping of CRISPR-Cas9 Edited Human Pluripotent Stem Cells	Sze Lok Ng	Da Hai Zhang & Francis Lynn

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21	Optimizing the Freeze-Drying of Lipid Nanoparticles for Long-Term Storage	Allison Dummel	Anna Blakney
22	Novel Diagnostic Method for Chronic Kidney Disease using Ultrasound and Speed of Sound Imaging	Yasmine Yuen Man Lau	Kelly McNagny
23	Inside and Out: A Modular Cell Surface Reporter for Tracking Intracellular Transcription Factor Activity During T-Cell Differentiation from Induced Pluripotent Stem Cells	Katrina Jewell	Ross Jones & Peter Zandstra
24	Airway-On-A-Chip model for studying smoke exposure in COPD	Karolina Moo	Karen Cheung
25	Spinal Contusion Frame Design	Katelin Flick	Carolyn Sparrey
26	Developing a novel in vivo random mutagenesis tool for cell lineage tracing	Jason Sunardi	Nozomu Yachie
27	Tissue Clearing and Lightsheet Microscopy to Visualize and Track Electrode Locations in the Rat Brain	Jessica Jung	Manu Madhav
28	Establishing a Model to Study Human Liver Development in Vitro Through Comparison of 2D hiPSC Cell Culture and 3D hiPSC-derived Organoids	Makenna Clement- Ranney	Pamela Hoodless
29	Developing a Model of the Pre-Implantation Embryo Solely Using a Heterogeneous Population of Naive Mouse Embryonic Stem Cells	lpek Egilmez	Nika Shakiba
30	Force of Contraction and Optical Mapping Characterization of Engineered Heart Tissue	Ardin Sacayanan	Zachary Laksman
31	Impact of Confluence on Human Pluripotent Stem Cell Differentiation Outcomes to Definitive Endoderm	David Mackay	Priye Iworima
32	Inter-Organelle Communication: An Insight into Mitochondria- Endoplasmic Reticulum Contact Sites	Sana Ahmed	Ivan Robert Nabi
33	Optimizing the Visualization of MS5 Stromal Cells and DLL4 ligand for T and B Cell Co-Culture Systems	Sarah Lim	Connie Eaves
34	Robustness Testing for Achilles Tendon Rehabilitation Device Using Biomechanical Simulation	Xavier Lam	Calvin Kuo

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35	Evaluation of Central Drive to Recipient Muscles following Nerve Transfer Surgery	Amy Ker	Michael Berger
36	The Role of the Palmitoylating Enzyme ZDHHC9 Myelination and Oligodendrocyte Development in the Corpus Callosum	Angie Peng	Shernaz Bamji
37	Potential Improvements of Risky Lung Nodule Management using Al and Microwave Ablation	George Xu	Roger Tam
38	A Modified Model to Establish Cross-Disciplinary and Cross- Institutional Student Collaboration	Stephanie Nguyen	Gabrielle Lam
39	Activation of b-CATENIN in Fibro/Adipogenic Progenitors Leads to Muscle Mass Loss	Tiffany Huang	Fabio Rossi
40	Tensorflow Implementation of Dense V-Net with Attention Gating	Christian Michael Thorson	Tim Salcudean



## **ABOUT SBME SYNERGY**

SBME SYNERGY is our new Undergraduate Summer Research Program, running May-August 2022. Participating undergraduate students have the opportunity to get hands-on research experience with researchers from the Centre for Blood Research (CBR), the Djavad Mowafaghian Centre for Brain Health (DMCBH), the International Collaboration on Repair Discoveries (ICORD), the Genome Science and Technology Graduate Program (GSAT), and of course, SBME.

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

**CONNECT** 









