



CMaT

NSF Engineering Research Center
for Cell Manufacturing Technologies

2022 CMaT Annual Retreat Poster Directory

August 24 - 26, 2022

Poster #	Last Name	First Name	Poster Title	Thrust
1	Colonna	Max	Identification of Putative Critical Quality Attributes Identified by Extracellular Metabolic Analysis of Mesenchymal Stem/Stromal Cells	1
2	Daga	Kanupriya	Development of a High-throughput Microglia Morphological Profiling Assay to Assess Mesenchymal Stromal Cell Extracellular Vesicle (MSC-EV) Potency	1
3	Didonna	Isabella	Examining the WNT Pathway as a Treatment for Glioblastoma	1
4	Golan	Morgane	Lyophilization of Extracellular Vesicles	1
5	Jain	Ritika	Improving Feeder-Free NK Cell Manufacturing Processes for Adoptive Cell Therapy	1
6	Jimenez	Angela	Non-Destructive Monitoring During MSC Manufacturing Identifies Features Correlative to Immunomodulatory Potential	1
7	Kanwar	Bharat	Digital Twin Design and Implementation of Hollow Fiber Bioreactor for Therapeutic MSC Expansion	1
8	Nikitina	Arina	Computational Analysis Methodologies for Evaluating Metabolism Changes in iPSCs Undergoing Differentiation	1
9	Ochoa	Miguel	Degradable Microscaffolds for Therapeutic T Cell Manufacturing	1
10	Priyadarshani	Priyanka	Integration of Imaging Modalities with Lipidomic Characterization to Investigate MSCs Potency Metrics	1
11	Riya	Sen	Computational Optimization of System-Wide Metabolic Activity to Improve iPSC-CM Differentiation	1
12	Sarkar	Md Marzan	Inhibition of AKT/ β -catenin Blocks Glioblastoma Cell Growth	1
13	Simmons	Aaron	Systems-level Discovery of Quality Attributes and Candidate Pathways for Optimized Production of Human Pluripotent Stem Cell-derived Cardiomyocytes	1
14	Van Grouw	Alexandria	Non-Targeted Metabolomics Identification of Predictive Potency Markers in MSCs	1
15	Wang	Bryan	Automation for the Improved Efficacy, Yield, and Reproducibility of the Manufacturing of Human Umbilical Cord Tissue Mesenchymal Stromal Cells for Clinical Therapeutic Use	1
17	Schneider	Rebecca	High-throughput on-chip MSC Potency Assay	1
18	Arrieta-Viana	Luis	Synthetic Scaffolds as 3D Matrices for Cardiomyocyte Culture	2
19	Cappaianca	Dan	Development of a GMP-Compatible, Virus-Free CRISPR CAR T Cell Manufacturing Process	2
20	Culberson	Austin	Dynamic Sampling Platform (DSP) for Intracellular Analysis & Dynamic Bioreactor Monitoring	2
21	Davarzani	Amin	Using a Microfluidic Device for Testing Therapeutic Potency of Anti-GD2 CART Cells Against GD2+ Glioblastoma	2
22	Denne	Nina	Anti-GD2 Virus-Free CRISPR CAR T Cells to Treat Canine Sarcomas	2
23	Dhillon	Arushi	Label-free Optical Metabolic Imaging for functional evaluation of CAR T cells	2
24	Echeverria-Altamar	Karla	Monitoring Differentiation of hiPSC-derived Cardiomyocytes Using Raman Spectroscopy and Multivariate Methods on Cell Culture Supernatant	2
25	Elmasri	Sameera	Comparing Mesenchymal Stromal Cells to Different Donors During Expansion	1
26	Ghoshal	Delta	Multi-niche human bone marrow on-a-chip for studying the interactions of adoptive cell therapies with multiple myeloma	2
27	González Vázquez	Miguel	Determining the Activation Mechanism for NK Cells Exposed to Cancer Vaccine	2
28	Patel	Raj	Monitoring Cell State During iPSC Differentiation to Cardiomyocytes	2
29	Pham	Dan	Label-free Optical Metabolic Imaging for functional evaluation of CAR T cells	2
30	Ramasubramanian	Shanmathi	Studying the Potency of Anti-GD2 CART Cells Against GD2+ Glioblastoma using Thermoresponsive Terpolymer	2
31	Sarko	Lauren	Virus-Free CRISPR CAR T Cells to Target Senescence and Alleviate Tissue Dysfunction	2
32	Shankar	Keerthana	Virus-free Transgene Insertion in Natural Killer Cells using CRISPR-Cas9	2
33	Skinner	Will	Magnetoelastic Microcarriers for Real-time Tracking of Cell Loading	2
34	Zhang	Xiangyu	Analysis of Genome-wide Chromatin Accessibility in Human iPSC-Derived Cardiac Progenitor Cells with High Differentiation Potency	2
35	Tran	Reginald	Practical Considerations for Viral Vector-mediated Deterministic Gene Transfer	2
36	Arifuzzman	A	Closed-Loop Cell Engineering via Inline Electronic Immunophenotyping of Products	2
37	Amitrano	Margot	Hydrogels for Improved Differentiation and Maturation of hiPSC-Cardiomyocytes	3
38	Anyosa	Melanie	My CMaT Research Experience for Teachers at Georgia Tech Summer 2022	3
39	Barreto Gamarra	Carlos	Development Of Integrin-Guided Substrates To Improve Cardiac Cell Yields and Potency	3
40	Colon	Carolina	Naive T-Cell Gene Editing using Novel Microfluidic Device for Biomolecule Delivery	3
41	Feeney	Austin	Multi-omic Characterization of Human Pluripotent Stem Cell-derived Cardiomyocytes following Longterm in Vitro Maturation	3
42	Kim	Sungwoong	Scalable Nanowires to Engineer CAR-T cells and Modulate T Cell Fitness	3
43	Li	Zhaowei	Novel Supply Chain and Process Modeling for Cell Therapy Manufacturing and Distribution	3
44	Little	Candice	An Incredible Journey through a CMaT Lab Summer 2022	3
45	Mote	Zoe	Room Temperature Transport of Mesenchymal Stromal Cells	3
46	Reddy	Yenamala	Development of a Continuum Robot for Dynamic Cell Imaging	3
47	Shabnam	Fathima	Identifying Differences Between Valvular and Ventricular Cardiac Cells	3
48	Smerchansky	Madeline	Predicting Ligands that Direct T Cell Maturation	3
49	Smith	Mishae	Mesenchymal Stromal Cell Viability in Ambient Temperature HA Gels	3
50	Suarez	Natalia	Impact of Collagen-Heparan Sulfate Surface Bilayers on Ligand Release Dynamics for Mesenchymal Stem Cell Manufacturing Applications	3
51	Swingle	Steven	A Continuous Flow Microfluidic Device for Cell Buffer and Media Exchange	3
52	Washington	Britney	The Exploration of Vitrification on Post-Thaw Cellular Viability	3
53	Thomas	Abel	Patient-Specific, Multi-Niche Bone Marrow On-A-Chip To Study Multiple Myeloma	
54	Soltis	Ira	Smart Bioreactor with Wireless, Integrated Soft Hybrid Sensors and Electronics	3