

## ENGINEERING CELL BIOLOGY POSTER LIST: SESSION A

- 1. S2N': NEW GENE FILTERING METHOD FOR GENE EXPRESSION DATA**  
*Hiro Takahashi*, Genetics Division, National Cancer Center Research Institute, Japan
- 2. DEVELOPMENT OF TRANSFORMATION BACTERIA ARRAY**  
*Shuhei Hayashi*, Department of Applied Life Science, Sojo University, Japan
- 3. ISOLATION AND CHARACTERIZATION OF PHAGE DISPLAYED PEPTIDES FOR THE RECOGNITION OF P19 EMBRYONIC CARCINOMA STEM CELLS**  
*Yasutaka Morita*, KINKI University, Japan
- 4. CHEMICAL MODIFICATION OF SILK FIBROIN TO CONTROL BIOMATERIAL PROPERTIES AND MODULATE HMSC INTERACTIONS**  
*Amanda Murphy*, Tufts University, USA
- 5. NOVEL CULTURE SYSTEMS FOR HUMAN STEM CELLS PROLIFERATION AND NEURONAL DIFFERENTIATION**  
*Manuel J. T. Carrondo*, IBET, Portugal
- 6. IMPROVEMENT OF 3D CULTURE SYSTEMS FOR EXPANSION OF UNDIFFERENTIATED ADULT STEM CELLS IN FULLY CONTROLLED BIOREACTORS**  
*Paula M. Alves*, IBET/ ITQB, Portugal
- 7. A BIO-MOLECULAR DELIVERY AND SINGLE CELL ANALYSIS SYSTEM USING A NANONEEDLE AND AN AFM**  
*Sung-Woong Han*, Department of Chemistry and Biotechnology, The University of Tokyo, Japan
- 8. FORCE MECHANICAL ANALYSIS OF NANONEEDLE INSERTION INTO A LIVING CELL USING AFM**  
*Chikashi Nakamura*, National Institute of Advanced Industrial Science and Technology, Japan
- 9. THE SPATIAL ARRANGEMENTS OF DRUG-METABOLIZING ENZYMES INFLUENCES METABOLITE FORMATION**  
*Tai ning Lam*, University of California, San Francisco, USA  
(Presented by C.A. Hunt, University of California)
- 10. UNDERSTANDING COOPERATION AMONG LIVER CELLS IN TOXIN CLEARANCE**  
*Shahab Sheikh-Bahaei*, University of California, San Francisco, USA

- 11. AGENT-BASED MODELS OF HEPATIC CELLS THAT USE FUZZY CLUSTERING TO LEARN CAN PREDICT HUMAN HEPATIC DRUG CLEARANCES**  
*Shahab Sheikh-Bahaei, University of California, San Francisco, USA*
- 12. SPATIALLY LOCALIZED BONE MORPHOGENETIC PROTEIN (BMP)-4 SIGNALING ALLOWS PATTERNING OF EMBRYONIC STEM CELL (ESC) - DERIVED MESODERM AND BLOOD DEVELOPMENT**  
*Kelly A. Purpura, University of Toronto, Canada*
- 13. SINGLE-CELL PICOLITER MICROFLUIDIC SYSTEMS FOR HIGH-THROUGHPUT SCREENING AND ANALYSIS OF ANTIGEN-SPECIFIC B-CELLS FROM BULK SUSPENSIONS**  
*Ramachandra Rao Sathuluri, 1Toyama New Industry Organization, Japan*
- 14. SINGLE-CELL MICROARRAY FOR HIGH-THROUGHPUT ANALYSIS OF DIOXIN-SPECIFIC B-CELLS**  
*Shohei Yamamura, Japan Advanced Institute of Science and Technology, Japan*
- 15. PARSING ECM CHEMICAL AND MECHANICAL EFFECTS IN 3-D USING A NOVEL BIOMIMETIC MICROENVIRONMENT**  
*Andrew J. Putnam, University of California, Irvine*
- 16. TISSUE-ENGINEERED 3D LIVER MICROREACTOR AS AN IN VITRO SURROGATE ASSAY FOR GENE DELIVERY**  
*Artemis Kalezi, MIT, USA*
- 17. MODELING GROWTH RATES AND DIVISION TIMES OF CELLS IN CULTURE**  
*Michael Halter, National Institute of Standards and Technology, USA*
- 18. SURFACE PLASMON RESONANCE IMAGING FOR CELL BIOLOGY**  
*Alexander W. Peterson, National Institute of Standards and Technology, USA*
- 19. A PROTEIN ENGINEERING APPROACH TO BIOMATERIALS DESIGN**  
*Stacey A. Maskarinec, California Institute of Technology, USA*
- 20. INTRACELLULAR MEASUREMENT OF DISSOCIATION CONSTANT**  
*Nur Aida Abdul Rahim, Massachusetts Institute of Technology, USA*
- 21. PERFUSED MULTIWELL TISSUE CULTURE PLATFORM FOR 3D TISSUE ENGINEERING**  
*Bryan Owens, Massachusetts Institute of Technology, USA*

**22. HEPATOCYTE-ENDOTHELIUM COCULTURE IN THE MICROFLUIDIC SYSTEM**

*Ryo Sudo, Massachusetts Institute of Technology, USA*

**23. DEFINED PRESENTATION OF EXTRACELLULAR MATRIX LIGANDS FOR CELL CULTURE APPLICATIONS**

*Shara M. Dellatore, Northwestern University, USA*

**24. MICROFLUIDIC CELL MIGRATION ASSAY TO EVALUATE ANGIOGENIC FACTORS**

*Seok Chung, Massachusetts Institute of Technology, USA*

**25. HYDROGELS FOR THE DELIVERY OF ANTIMETABOLITES IN A GLAUCOMA DRAINAGE DEVICE**

*Nurettin Sahiner, Tulane Univ, USA*

**26. AUTOMATED ANALYSIS OF SUBCELLULAR PROTEIN PATTERNS ACROSS DIFFERENT HUMAN TISSUE TYPES**

*Justin Newberg, Carnegie Mellon University, USA*

**27. CHEMOMECHANICAL MAPPING OF CELL SURFACE RECEPTORS**

*Sunyoung Lee, Krystyn Van Vliet, Massachusetts Institute of Technology, USA*

## **ENGINEERING CELL BIOLOGY POSTER LIST: SESSION B**

**1. METABOLIC CHARACTERIZATION OF RAT EMBRYONIC BRAIN CELL AGGREGATES CULTURED IN STIRRED TANKS**

*Paula M. Alves*, IBET/ITQB, Portugal

**2. CUE-SIGNAL-RESPONSE ANALYSIS OF MESENCHYMAL STEM CELL ADHESION AND SURVIVAL BEHAVIOR ON LIGAND-COATED SCAFFOLDS**

*Manu O. Platt*, Massachusetts Institute of Technology, USA

**3. SYSTEMS BIOLOGY ANALYSIS OF RAS MUTATION EFFECTS IN APOPTOSIS**

*Pamela Kreeger*, Massachusetts Institute of Technology, USA

**4. MULTI-SCALE MODELING OF CELL MATRIX INTERACTIONS**

*Muhammad H. Zaman*, University of Texas at Austin, USA

**5. IDENTIFYING THE RULES OF ENGAGEMENT ENABLING IN SILICO LEUKOCYTE ROLLING, ACTIVATION, AND ADHESION**

*Jonathan Tang*, University of California, San Francisco, USA

**6. TIME-DEPENDENT MORPHOLOGICAL DYNAMICS OF CELL NUCLEI DURING ALTERED LAMIN A/C EXPRESSION**

*Kris Noel Dahl*, Carnegie Mellon University, USA

**7. INCREASED MAB PRODUCTION VIA INVESTIGATION OF EFFECTS OF ENHANCING COMPOUNDS ON THE BIOCHEMICAL NETWORK**

*Tiffany D. Rau*, Vanderbilt University, USA

**8. APPLICATION OF THREE DIMENSIONAL CELL CULTURE MODELS TO DRUG DISCOVERY: MODELING THE EFFECT OF SMALL MOLECULES IN BREAST CANCER CELLS.**

*Marcia V. Fournier*, GlaxoSmithKline, USA

**9. THREE DIMENSIONAL CULTURE OF HUMAN MESENCHYMAL STEM CELLS IN TYPE I COLLAGEN HYDROGELS ACTIVATES DDR1 AND ENHANCES OSTEOGENIC DIFFERENTIATION**

*Amanda W. Lund*, Rensselaer Polytechnic Institute, USA

**10. QUANTITATIVE ANALYSIS OF RECEPTOR TRAFFICKING AND SIGNALING PROCESSES IN INTERLEUKIN-7-DEPENDENT NAÏVE T CELL SURVIVAL**

*Megan J Palmer*, Massachusetts Institute of Technology, USA

- 11. RETINOIC ACID AND BMP SIGNALING SYNERGIZE TO EFFICIENTLY DIRECT EPITHELIAL DIFFERENTIATION OF HUMAN EMBRYONIC STEM CELLS**  
*Christian M. Metallo, University of Wisconsin-Madison, USA*
- 12. NANOSCALE DYNAMICS OF FORCE TRANSMISSION BY SINGLE FILOPODIA**  
*Clarence E. Chan, University of Minnesota, USA*
- 13. UNDERSTANDING THE CONTRIBUTIONS OF MICROTUBULE STABILITY AND DYNAMIC INSTABILITY TO ADENOVIRUS NUCLEAR LOCALIZATION EFFICIENCY**  
*James C. Warren, Merck & Co., Inc, USA*
- 14. FORCE DEPENDENT MALIGNANT TRANSFORMATION**  
*Kandice R. Johnson, University of Pennsylvania, USA*
- 15. REGULATION OF 3-D CAPILLARY MORPHOGENESIS: CONTRIBUTIONS OF MATRIX DENSITY, INTERSTITIAL CELLS, AND DIFFUSION**  
*Cyrus M. Ghajar, University of California, Irvine*
- 16. DESIGN AND UTILIZATION OF A GENETIC REPORTER/SELECTION SYSTEM FOR THE DERIVATION OF EMBRYONIC STEM CELL (ESC)-DERIVED PARAXIAL MESODERMAL CELLS IN VITRO**  
*Elaine Waese, University of Toronto, Canada*
- 17. MODELING GROWTH RATES AND DIVISION TIMES OF CELLS IN CULTURE**  
*Michael Halter, National Institute of Standards and Technology, USA*
- 18. SURFACE PLASMON RESONANCE IMAGING FOR CELL BIOLOGY**  
*Alexander W. Peterson, National Institute of Standards and Technology, USA*
- 19. A PROTEIN ENGINEERING APPROACH TO BIOMATERIALS DESIGN**  
*Stacey A. Maskarinec, California Institute of Technology, USA*
- 20. TETHERED EGF INCREASES HUMAN CONNECTIVE TISSUE PROGENITOR OSTEOGENIC COLONY FORMATION**  
*Nicholas A. Marcantonio, Massachusetts Institute of Technology, USA*
- 21. QUANTITATIVE ANALYSIS OF CYTOKINE-INDUCED HEPATOCYTE PROLIFERATION, APOPTOSIS, AND TOXICITY**  
*Benjamin D. Cosgrove, Massachusetts Institute of Technology, USA*
- 22. INVESTIGATING CUE-SIGNAL-RESPONSE RELATIONSHIPS IN MESENCHYMAL STEM CELL MIGRATION**  
*Shan Wu, Massachusetts Institute of Technology, USA*

**23. A 3D HYBRID SIMULATION OF ANGIOGENIC SPROUTING  
INCORPORATING DELTA-NOTCH SIGNALING**

*A.A. Qutub*, Johns Hopkins University, USA

**24. COMPUTATIONAL SYSTEMS BIOLOGY OF CELLULAR HYPOXIC  
RESPONSE**

*A.A. Qutub*, Johns Hopkins University, USA

**25. THE STIMULATORY POTENCY OF T CELL ANTIGENS IS INFLUENCED BY  
THE FORMATION OF THE IMMUNOLOGICAL SYNAPSE**

*Jayajit Das*, Massachusetts Institute of Technology, USA

**26. INTEGRIN AND GROWTH FACTOR-MEDIATED CONTROL OF  
ERYTHROPOIESIS**

*Shawdee Eshghi*, Massachusetts Institute of Technology, USA

**27. DIRECTIONAL PERSISTENCE IN EGFR-MEDIATED GLIOBLASTOMA  
MIGRATION IN A 3D COLLAGEN MATRIX**

*Hyung-Do Kim*, Massachusetts Institute of Technology, USA

**28. A LOCAL MECHANISM GENERATES SATURATION IN AN IN SILICO MODEL  
OF IN VITRO MULTICELLULAR TUMOR SPHEROID GROWTH**

*Jesse A. Engelberg*, University of California, San Francisco, USA  
(Presented by C.A. Hunt, University of California)