TECHNICAL PROGRAM

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	Session 5: Novel Approaches for Embryon	ic Stem Cell Growth and Differentiation
	Chair: Ralph Brandenburger, Geron Corporation	
10:30am – 11:10am	Invited Speaker: Mick Bhatia, McMaster University	Controlling Human Embryonic Stem Cells by Niche Regulation
11:10am – 11:30am	Emmanuel E. Baetge, <i>Novocell, Inc.</i>	Engineering Embryonic Stem Cells to Create a Cell Therapy for Diabetes
11.30am – 11.30am	Clark K. Colton, massachusetts insulute of rechnology	Reduced Oxygen
11:50am – 12:10pm	Jennifer Blundo, Stanford University	Molecular Imaging of Cardiac Constructs Derived from Human Embryonic Stem Cells
12:10pm – 12:30pm	Shelly Sakiyama-Elbert, Washington University	The Effect of Controlled Growth Factor Delivery on Embryonic Stem Cell Differentiation inside of Fibrin Scaffolds
12:30pm – 2:00pm	Lunch	La Terrasse
	Session 6: Novel Approaches for Adult Ste	em Cell Growth and Differentiation
	Chair: Irina Conboy, University of California, Berkeley	
2:00pm – 2:40pm	Invited Speaker: Fred Gage, Salk Institute	Neurogenesis in the Adult Mammilian Brain
2:40pm – 3:00pm	Pin Wang, University of Southern California	Engineering Stromal Cells for Supportive Differentiation of TCR-Transduced Hematopoietic Stem Cells into CD4 T Cells <i>in Vitro</i>
3:00pm – 3:20pm	Irina Conboy, University of California, Berkeley	Understanding Bio-Chemical Changes in the Aged Muscle Niche
3:20pm – 3:40pm	Kartik Subramanian, University of Minnesota	Directed Differentiation of Multipotent Adult Progenitor Cells into the Cells of the Hepatic Lineage
3:40pm – 4:00pm	C. Lobato da Silva, National Institute of Health	Maximization of the Ex-Vivo Expansion of Human Hematopoietic Stem/Progenitor Cells by Direct Contact Culture with Mesenchymal Stem Cells
4:00pm – 5:30pm	Poster Session with Refreshments	St. Tropez Foyer
	Chairs: Julie Audet, Univerity of Toronto; Karen McClos	key, University of California at Merced; and Sean Palecek, University of Wisconsin-Madison
5:30pm – 6:30pm 6:30pm – 0:30pm	Keynote Address: Irving Weissman, Stanford University	Normal and Neoplastic Stem Cells
Wednesday, January (23	St. https://st.
, , , , , , , , , , , , , , , , , , , ,	Session 7: Biomaterials for Stem Cell Gro	wth and Differentiation
	Chair: Shelly Sakiyama-Elbert, University of Washington,	St. Louis
8:30am – 9:10am	Invited Speaker: Dennis Discher,	Matrix Elasticity Directs Stem Cell Lineage Specification
9:10am – 9:30am	Kevin Healy, University of California, Berkeley	High Throughput Identification of Novel Peptide Ligands for Engineering Surfaces for Stem Cells
9:30am – 9:50am	Sean P. Palecek, University of Wisconsin - Madison	3D Microwell Array Culture of Human Embryonic Stem Cells Reveals Effects of Colony Morphology on Cell Growth and Differentiation
9:50am – 10:10am	Todd McDevitt, Georaia Institute of Technoloay / Emory University	Microparticle Delivery of Morphogenic Factors within Embryoid Bodies for Directed Embryonic Stem Cell Differentiation
10:10am – 10:30am	David Brafman, University of California, San Diego	Arrayed Cellular Microenvironments for Exploring Cell Fate
10:30am – 10:50am	Break	St. Tropez Foyer
	Session 8: Bioreactors and Bioprocesses fo	or Cell Expansion and Differentiation
	Chair: Joachim Cabral, Institute for Biotechnology and Bioe	ngineering, Portugal
10:50am – 11:30am	Invited Speaker: Ramkumar Mandalam, Cellerant Therapeutics	Novel Universal Cell-Based Drug from Adult Hematopietic Stem Cell
11:30am – 11:50am	Matt Croughan, Keck Graduate Institute	Manufacturing Stem Cells: Lessons Learned from 15 Years of CHO Cell Culture for Recombinant Protein Production
11:50am – 12:10pm	Behnam A. Baghbaderani, University of Calgery	Large-Scale Production of Human Neural Precursor Cells in Computer-Controlled Suspension Bioreactors and Applications to the Treatment of Neuropathic Pain
12:10pm – 12:30pm	Rosario Scott, Merck	A Platform for Predictive Bioprocessing of Autologous Cells for Therapy Based on Automated Microwell Cultures
12:30pm – 2:00pm	Lunch	La Terrasse
Session 9: Biomterial Scaffolds for Stem Cell Therapeutic Applications		
	Chair: Kevin Healy, University of California, Berkeley	
2:00pm – 2:40pm	Invited Speaker: Jennifer Ellisseff, Johns Hopkins University	Adult and Embryonic Stem Cells in Musculoskeletal Tissue Repair
2:40pm – 3:00pm	Song Li, University of California, Berkeley	Nanofibrous Scaffolds and Mesenchymal Stem Cells for Vascular Regenration
3:00pm – 3:20pm	Michael Sacks, University of Pittsburgh	Tissue-to-Cellular Deformation Coupling in Cell-Microintegrated Elastomeric Scaffolds
3:20pm – 3:40pm	Paul. Critser, Indiana University School of Medicine	Engineered Inree-Dimensional Collagen-Based Extracellular Matrices Provide Microenvironmental Guidance of Endothelieal Colony Forming Cell Proliferation Potential and Vascular Network Formation <i>in Vitro</i>
3:40pm – 4:00pm	Sherry L. Voytik-Harbin, Purdue University	Fibril Microstructure-Mechanical Design Features of Engineered 3D Collagen-Based Extracellular Matrices Modulate Mesenchymal Stem Cell Proliferation and Lineage Specific Differentiation
4:00pm – 4:15pm	Closing Remarks by David Schaffer, Conference Chair	St. Tropez C,D