

PROGRAM

Friday, October 12, 2018

- 12:00 – 19:00** **REGISTRATION**
- 14:00** **WELCOME REMARKS**
Robert A. Fisher, MD, & Klearchos K. Papas, PhD
- 14:15** **KEYNOTE: Stem cell therapy, opportunities and challenges from a pharmaceutical perspective**
Allan Ertmann Karlsen, PhD
- 15:05** **KEYNOTE: The role of the innate versus the adaptive immunity in cell transplantation**
Maria Koulmanda, PhD
- 15:55 – 16:15** **COFFEE BREAK**
- 16:15** **KEYNOTE: Macroencapsulation as a safe means to deliver therapeutic cells and proteins to patients**
Robert C. Johnson, PhD
- 17:05** **KEYNOTE: Clinical application of fetal liver cell transplantation: results and new horizons**
Giada Petrosi, PhD
- 17:55** **ROUNDTABLE PANEL DISCUSSION**
- 18:30** **WELCOME RECEPTION**
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Saturday, October 13, 2018

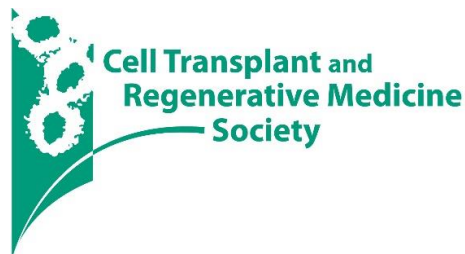
- 7:00 – 8:00** **BREAKFAST**
- 8:00** **OPENING REMARKS**
- 8:15** **KEYNOTE: Non-Invasive Tracking of Naked, Scaffolded or Encapsulated Cells In Vivo**
Jeff W.M. Bulte, PhD
- 9:15 – 11:45** **SESSION 1: TARGETING AND NOVEL NON-INVASIVE IMAGING TECHNIQUES FOR B-CELL REPLACEMENT**
Chairs – Athanassios Sambanis, PhD, & Klearchos K. Papas, PhD
- 9:15 1.1 IMAGING β -CELL MASS IN THE HUMAN PANCREAS (CLINICAL)
Gary W. Cline, PhD
- 9:40 1.2 CELL TARGETING AND IMAGING OF β -CELLS
Nathaniel J. Hart, PhD

- 10:05 1.3 MULTIMODAL IMAGING OF VASCULARIZATION AND OXYGENATION OF CELLS AND TISSUES
Art Gmitro, PhD
- 10:30 1.4 ¹⁹F NUCLEAR MAGNETIC RESONANCE (NMR) MEASUREMENTS OF OXYGEN WITHIN MACROENCAPSULATION DEVICES IN VIVO
Paul Wang, PhD Candidate
- 10:55 1.5 OPTICAL MEASUREMENTS OF OXYGEN IN VIVO AT TRANSPLANT SITES
Elliot Botvinick, PhD
- 11:20 1.6 NOVEL TECHNOLOGIES FOR OXYGEN MEASUREMENTS IN ENCAPSULATED CELLS - ELECTRON PARAMAGNETIC RESONANCE OXYGEN MAPPING (EPROI)
Mrignayani Kotecha, PhD
- 11:45 ROUNDTABLE PANEL DISCUSSION
- 12:05 – 12:25 COFFEE BREAK**
- 12:25 – 14:05 SESSION 2: OXYGENATION OF CELLS (FREE/ENCAPSULATED) IN CULTURE AND AFTER TRANSPLANTATION - *LUNCH PROVIDED***
Chairs – Jeff W.M. Bulte, PhD, & Robert C. Harland, MD, FACS
- 12:25 2.1 OXYGENATION OF FREE AND ENCAPSULATED ISLETS
Per-Ola Carlsson, MD, PhD
- 12:50 2.2 OXYGEN DELIVERY TO ISLETS IN VITRO AND IN VIVO
Hirotake Komatsu, MD, PHD
- 13:15 2.3 IN VITRO AND IN VIVO ENHANCED OXYGEN AND NUTRIENT DELIVERY TO ENCAPSULATED CELLS
Thomas Loudovaris, PhD
- 13:40 2.4 TOWARDS AN OPTIMIZED BIOARTIFICIAL PANCREAS: ADAPTIVE OXYGEN SUPPLY WITH CHANGING OXYGEN CONSUMPTION REQUIREMENTS
Clark Colton, PhD
- 14:05 – 15:20 SESSION 3: CRYOPRESERVATION OF CELLS/SPHEROIDS (FREE/ENCAPSULATED)**
Chairs – Toshio Miki, PhD, & Alexandra P. Turner, MD
- 14:05 3.1 CRYOPRESERVATION OF STEM-CELL DERIVED B-CELLS FOR CLINICAL TRANSPLANTATION
Louise Winkel, PHD
- 14:30 3.2 CRYOPRESERVATION OF AMNIOTIC STEM CELLS FOR DONOR MATCHED CINICAL APPLICATION
Todd McAllister, PhD
- 14:55 3.3 LONG TERM BANKING OF STEM CELLS AND TISSUES FOR CLINICAL USE
Davis Harris, PhD
- 15:20 – 15:40 COFFEE BREAK**

15:40 – 17:45	SESSION 4: REAL-TIME QUALITY ASSESSMENT OF CELLS PRIOR TO AND POST TRANSPLANTATION (VIABILITY AND POTENCY) <i>Chairs – Clark Colton, PhD, & Robert C. Johnson, PhD</i>
15:40	4.1 CELL PRODUCT QUALITY ASSESSMENT BASED ON MEASUREMENTS OF OXYGEN CONSUMPTION Thomas Suszynski, MD, PhD
16:05	4.3 USING BILE ACID METABOLISM TO ASSESS FUNCTIONS OF ISOLATED HEPATOCYTES Ewa C.S. Ellis, PhD
16:30	4.4 VIABILITY AND POTENCY ASSESSMENT OF ENCAPSULATED ISLETS AND MESENCHYMAL STEM CELLS BEFORE AND AFTER TRANSPLANTATION Raphael PH Meier, MD, PhD
16:55	4.5 NONINVASIVE MONITORING OF HEPATOCYTE TRANSPLANTATION BY MRI: LESSONS LEARNED FROM STUDIES IN LARGE ANIMALS Nathanael Raschzok, PD, MD
18:00 – 21:00	DINNER

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