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Tuesday 25 March 2014

08:30 *Registration and Coffee*

09:00 – 09:30 **Welcome** **Hall A**

INTRODUCTION AND GREETINGS

Peretz Lavie, President of the Technion – Israel Institute of Technology, Haifa

Eliezer Shalev, Dean of the Medical School, Technion – Israel Institute of Technology, Haifa

Matthew Gould, Her Majesty's Ambassador to Israel

OPENING ADDRESS

Rt. Hon David Willetts MP, UK Minister of State for Universities and Science

09:30 – 10:50 **Opening Session 1** **Hall A**

HIGHLIGHTS OF REGENERATIVE MEDICINE

09:30 **Introduction and aims of the conference**

Chris Mason, University College London, United Kingdom

09:50 **Cell and gene therapy strategies for myocardial repair**

Lior Gepstein, Technion – Israel Institute of Technology, Haifa, Israel

10:10 **Human embryonic stem cells – from bench to bedside**

Benjamin E. Reubinoff, Hadassah – Hebrew University Medical Centre, Jerusalem, Israel

10:30 **Suitability of stem cell lines for clinical application**

Glyn Stacey, UK Stem Cell Bank, South Mimms, United Kingdom

10:50 *Coffee, Poster Viewing and Networking*

11:20 – 12:40 Parallel Session 2-A Hall B

**STEM CELL THERAPY – MANUFACTURING AND ADVANCED THERAPY
MEDICINAL PRODUCTS**

Chair: Joseph Itskovitz-Eldor, Israel

- 11:20 New concepts in culturing pluripotent stem cells and derivation of multipotent vasculogenic progenitor cells**
Joseph Itskovitz-Eldor, Technion – Israel Institute of Technology, Haifa, Israel
- 11:40 Manufacturing: The heartbeat of a successful cell therapy industry**
Stephen Ward, Cell Therapy Catapult, London, United Kingdom
- 12:00 Translational research and manufacturing for First in Man Clinical Trials**
Sarah Moyle, Jenner Institute, University of Oxford, United Kingdom
- 12:20 Integration of human pluripotent stem cells with automated platforms to model cardiovascular disease**
Chris Denning, University of Nottingham, United Kingdom

11:20 – 12:40 Parallel Session 2-B Hall C

CARDIOVASCULAR CELL AND GENE THERAPY

Chair: Sian Harding, United Kingdom

- 11:20 SERCA2a Gene therapy clinical trials**
Sian Harding, NHLI, Imperial College, London, United Kingdom
- 11:40 Dll4/Notch dynamics in vascular branching**
Holger Gerhardt, London Research Institute, Cancer Research, London, United Kingdom & Vesalius Research Centre, VIB, KU Leuven, Belgium
- 12:00 Regenerative medicine: new challenges in cardiovascular diseases cardiovascular tissue engineering**
Gianni D. Angelini, Imperial College London, Hammersmith Hospital, London, United Kingdom
- 12:20 Natural biomaterials based on extra cellular matrix as platforms for cardiovascular tissue engineering**
Marcelle Machluf, Technion – Israel Institute of Technology, Haifa, Israel
- 12:40 Lunch**

iPSC REPROGRAMMING AND EPIGENETICS

Chairs: **Nissim Benvenisty**, Israel
Jacob (Yaqub) Hanna, Israel

- 13:30 The epigenetic ‘In’stability of the pluripotent and somatic cell states**
Jacob (Yaqub) Hanna, Weizmann Institute of Science, Rehovot, Israel
- 13:50 Epigenetic regulation of cell fate decisions in embryonic and adult stem cells**
Yehudit Bergman, The Hebrew University Hadassah Medical School, Jerusalem, Israel
- 14:10 Induced pluripotent stem cells as a model for telomeric abnormalities
in ICF type I syndrome**
Sara Selig, Technion – Israel Institute of Technology & Rambam Health Care Campus,
Haifa, Israel
- 14:30 Modelling genetic and epigenetic disorders using human pluripotent stem cells**
Nissim Benvenisty, The Hebrew University of Jerusalem, Israel
- 14:50 Functional, transcriptional and epigenetic hallmarks of human neuroepithelial
establishment and cortical stem cell development**
Yechiel Elkabetz, Tel Aviv University, Israel
- 15:10 A bioengineering approach to study asymmetric stem cell division**
Shukry Habib, King’s College London, United Kingdom

13:30 – 15:30 Parallel Session 3-B Hall C

BIOMATERIALS AND NANOTECHNOLOGY

Chairs: **Che J. Connon**, United Kingdom
Ehud Gazit, Israel

- 13:30 Engineering materials for regenerative medicine**
Smadar Cohen, Ben-Gurion University of the Negev, Beer Sheva, Israel
- 13:50 Cardiac tissue engineering on the nanoscale**
Tal Dvir, Tel Aviv University, Israel
- 14:10 Approaches to corneal tissue engineering: Top-down or bottom-up?**
Che J. Connon, University of Reading, United Kingdom
- 14:30 Cell Therapy for Parkinson's disease**
Sharona Even-Ram, Hadassah – Hebrew University Medical Centre, Jerusalem, Israel
- 14:50 Self-Assembled nano-scaffolds, hydrogels, and hydrogel nano-particles for drug delivery and tissue engineering applications**
Ehud Gazit, Tel Aviv University, Israel
- 15:10 Macromolecular building blocks for the structural and functional mimicking of the extracellular matrix**
Matteo Santin, Brighton Centre for Regenerative Medicine, United Kingdom
- 15:30 *Coffee, Poster Viewing and Networking***

16:00 – 17:40 Parallel Session 4-A Hall A

REJUVENATION OF ENDOGENOUS STEM CELLS

Chairs: **Benjamin Dekel**, Israel
Francis Szele, United Kingdom

- 16:00 Challenges in the translation of cell therapy for multiple sclerosis**
Tamir Ben-Hur, Hadassah – Hebrew University Medical Centre, Jerusalem, Israel
- 16:20 The inflammatory protein Galectin-3 regulates neural progenitor migration in health and disease**
Francis Szele, University of Oxford, United Kingdom

16:40 Enhancing adult neurogenesis through manipulation of the stem cell niche
Eli Keshet, The Hebrew University Hadassah Medical School, Jerusalem, Israel

17:00 Microenvironmental control of mesenchymal stromal cell fate
Cay M. Kielty, University of Manchester, United Kingdom

17:20 Generating optimal human kidney stem/progenitor cells
Benjamin Dekel, Sheba Medical Centre, Ramat Gan, Israel

16:00 – 17:40 Parallel Session 4-B Hall B

IMMUNOGENICITY CHALLENGES FOR CELL-BASED THERAPIES AND OTHER IMMUNOLOGICAL ASPECTS

Chairs: Yair Reisner, Israel
Craig J. Taylor, United Kingdom

16:00 Novel regulatory perforin positive dendritic cells in metabolic syndrome and autoimmunity
Yair Reisner, Weizmann Institute of Science, Rehovot, Israel

16:20 The brain's choroid plexus at the nexus between the brain and the immune system plays a key role in brain aging and neurodegenerative diseases
Michal Schwartz, Weizmann Institute of Science, Rehovot, Israel

16:40 The immunogenicity of autologous iPSC cells: Towards a resolution of the current controversy
Paul J. Fairchild, University of Oxford, United Kingdom

17:00 Populating a therapeutic iPSC bank to enable large-scale clinical application of stem cell therapy
Craig J. Taylor, Cambridge University Hospitals, United Kingdom

17:20 Hematopoietic stem cells and their BM stromal microenvironment share a dynamic inverse metabolic state during quiescence and proliferation via ROS transfer between the two populations
Tsvee Lapidot, Weizmann Institute of Science, Rehovot, Israel

16:00 – 17:40 Parallel Session 4-C Hall C

CONVERGENCE OF CELL AND GENE THERAPIES

Chairs: **Yuval Dor**, Israel
Susan J. Kimber, United Kingdom

- 16:00 Targeting neurogenesis in a mouse model of Alzheimer’s disease**
Daniel Offen, Tel Aviv University, Tel Aviv, Israel
- 16:20 Glucose control of pancreatic beta cell fate**
Yuval Dor, The Hebrew University Hadassah Medical School, Jerusalem, Israel
- 16:40 Strategies to prevent or reverse Type 1 diabetes**
Anne Cooke, University of Cambridge, United Kingdom
- 17:00 Understanding chondrogenesis from pluripotent stem cells in vitro**
Susan J. Kimber, University of Manchester, United Kingdom
- 17:20 Modelling skin/corneal pathophysiology and developing novel therapies with pluripotent stem cells**
Ruby Shalom-Feuerstein, Technion – Israel Institute of Technology, Haifa, Israel
- 17:40 Networking opportunity, or option to return briefly to the hotel to change for dinner.**
- 19:30** *Conference Dinner*

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Wednesday 26 March 2014

08:30 *Registration and Coffee*

09:00 – 10:00 Q&A Session Hall C

BIRAX Regenerative Medicine Initiative 2nd Call for Proposals

10:00 – 11:40 Parallel Session 5-A Hall B

INDUCED PLURIPOTENCY AND STEM CELL DERIVATION

Chairs: **Majlinda Lako**, United Kingdom
Ludovic Vallier, United Kingdom

10:00 Transdifferentiation of human liver cells into insulin producing cells – the mechanism of reprogramming adult cells

Sarah Ferber, Sheba Medical Centre, Tel Hashomer & Tel Aviv University, Israel

10:20 The developmental potential of iPSCs is greatly influenced by the selection of the reprogramming factors

Yosef Buganim, Hadassah – Hebrew University Medical Centre, Jerusalem, Israel

10:40 Fluorescent libraries in embryonic stem cells in search of novel regulators of pluripotency

Eran Meshorer, The Hebrew University of Jerusalem, Israel

11:00 Seeing through stem cells

Majlinda Lako, Newcastle University, United Kingdom

11:20 Cell cycle rules stem cell fate

Ludovic Vallier, Wellcome Trust Sanger Institute / Cambridge Stem Cell Institute, United Kingdom

10:00 – 11:40 Parallel Session 5-B Hall C

TISSUE ENGINEERING

Chairs: **Shulamit Levenberg**, Israel
Kevin M. Shakesheff, United Kingdom

- 10:00 Vascularisation dynamics in engineered tissues**
Shulamit Levenberg, Technion – Israel Institute of Technology, Haifa, Israel
- 10:20 Three dimensional scaffolds for tissue engineering**
Jan T. Czernuszka, University of Oxford, United Kingdom
- 10:40 Single-cell gene expression in tissues and tumours**
Tomer Kalisky, Bar Ilan University, Ramat Gan, Israel
- 11:00 Elucidating the role of microvascular branching in liver morphogenesis**
Yaakov (Koby) Nahmias, The Hebrew University of Jerusalem, Israel
- 11:20 The UK regenerative medicine platform Hub for Acellular Technologies**
Kevin M. Shakesheff, University of Nottingham, United Kingdom
- 11:40 *Coffee, Poster Viewing and Networking***

12:00 – 13:20 Session 6 Hall A

ROAD TO CLINICAL TRANSLATION – PART I

Chair: **Jonathan Leor**, Israel

- 12:00 Does elimination of clinical relapses prevent disease progression in a model of MS?**
Siddharthan Chandran, University of Edinburgh, United Kingdom
- 12:20 Targeting myocardial inflammation, fibrosis and regeneration**
Jonathan Leor, Tel Aviv University, Sheba Medical Centre, Tel Hashomer, Israel
- 12:40 Road to clinical translation: Arteriogenesis therapy from bench top to bedside**
Moshe Y. Flugelman, Technion – Israel Institute of Technology, Haifa, Israel
- 13:00 Islet cell transplantation for diabetes – clinical success and unmet needs**
James A.M. Shaw, Newcastle University, United Kingdom

13:20 – 13:30 POSTER AWARDS CEREMONY Hall A

Presented by:

Raymond Dwek

Director of the Glycobiology Institute, University of Oxford, UK
and Co-chair of the UK-Israel Life Sciences Council

Ronit Praver

Science and Innovation Officer, British Embassy, Israel

13:30 *Lunch*

14:20 – 15:50 Session 6 (continued) Hall A

ROAD TO CLINICAL TRANSLATION – PART II

Chair: **Roger A. Barker**, United Kingdom

14:20 **Translation of stem cell therapies for skeletal disorders**

Dan Gazit, The Hebrew University of Jerusalem, Israel

14:40 **The challenges of matching therapies to patients in Parkinson's disease**

Roger A. Barker, University of Cambridge, United Kingdom

15:00 **Cell therapy for mitigation of lethal acute radiation syndrome and regeneration of affected bone marrow by IV or IM delivery of human placental stromal cells**

Raphael Gorodetsky, Hadassah – Hebrew University Medical Centre, Jerusalem, Israel

15:20 Open Discussion

15:50 *Coffee, Poster Viewing and Networking*

16:20 – 17:20 Session 7 Hall A

ROAD TO CLINICAL TRANSLATION – THE VIEWPOINT FROM INDUSTRY

Chair: **Iris Geffen Gloor**, Biomed Manager, UK Israel Tech Hub, The British Embassy, Israel

16:20 Cell Therapy – From the Bench to Multi-National Clinical Studies

Racheli Ofir, Pluristem Therapeutics Inc., Haifa, Israel

16:30 Producing autologous blood-derived cell therapy in a single day

Yael Porat, BioGenCell Ltd, Netanya, Israel

16:40 The viewpoint of Kadimastem, a biotech company who develops human pluripotent stem cell-based cellular therapy products

Arik Hasson, Kadimastem, Nes-Ziona, Israel

16:50 Panel Discussion

17:20 – 17:40 Closing Address Hall A

CONCLUDING REMARKS

Matthew Gould, Her Majesty's Ambassador to Israel