

# Symposium 2015 Programme

**Day 1: Tuesday, 17<sup>th</sup> November 2015**

08.00 to 16.45 **Symposium Registration**  
08.30 to 08.45 **Welcome & Opening Address: Vivek TANAVDE, Chairman Organizing Committee**

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## **Session 1. Centre for Commercialization of Regenerative Medicine Session (CCRM): Industrialization of Cell Therapies through Collaborative Public-private Consortia**

Chair: Steve OH, Vice-President SCSS & *Bioprocessing Technology Institute, Singapore*

8.45 to 9.10 **CCRM: A Canadian Made Model for Commercializing Regenerative Medicine (RM) and Cell Therapies**  
Michael MAY, *CCRM, Canada* (Abstract S1)

9.10 to 9.35 **The Practical Aspects of Preparing for GMP**  
Kim WARREN, *CCRM, Canada* (Abstract S2)

9.35 to 10.00 **Scaling the Unscalable: Envisioning an Industrial Cell Therapy Manufacturing Ecosystem**  
Phil VANEK, *GE Healthcare, USA* (Abstract S3)

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10.00 to 10.30 MORNING TEA BREAK

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## **Session 2. Opportunities and Challenges of Pluripotent Stem Cells & Derivatives**

Chair: Huck Hui NG, President SCSS & *Genome Institute of Singapore*

10.30 to 10.55 **Chemically Defined Xeno-free Human Embryonic Stem Cells (hESC) for Clinical Treatment**  
Outi HOVATTA, *Karolinska Institute, Sweden* (Abstract S4)

10.55 to 11.20 **Adrenergic Hypertrophic Responses in Cardiomyocytes from Human Pluripotent Cells**  
Gabor FOLDES, *Imperial College London, United Kingdom* (Abstract S5)

11.20 to 11.35 **Selected Short Talk: Towards Parallelised Human Pluripotent Stem Cell-Derived Vascular Constructs for Pre-clinical Screening of Drug-Induced Vascular Injury**  
Drew TITMARSH, *Institute of Medical Biology, Singapore* (Abstract S6)

11.35 to 12.00 **Laminin-based Matrices in Defined Human Stem Cell Differentiation Protocols**  
Karl TRYGGVASON, *Duke-NUS, Singapore* (Abstract S7)

12.00 to 12.25 **Improving Stem Cell-based Therapies for Parkinson's disease: Learning from Development**  
Ernest ARENAS, *Karolinska Institute, Sweden* (Abstract S8)

12.25 to 12.40 *Industry Themed Talk*  
**Understanding Your Biology from Every Single Stem Cell**  
Xiangxu KONG, *Fluidigm Corporation, USA* (Abstract L1)

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12.40 to 14.15 LUNCH BREAK & EXHIBITION

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## **Session 3. Organoids / Extracellular Matrix**

Chair: Ray DUNN, Vice-Secretary SCSS & *Institute of Medical Biology*

14.15 to 14.40 **The Extracellular Matrix in Reprogramming, Differentiation and Promotion of Stemness**  
Andrew WAN, *Institute of Bioengineering and Nanotechnology, Singapore* (Abstract S9)

14.40 to 14.55 **Selected Short Talk: *In vivo* analysis of Neural Progenitors Derived from Human Pluripotent Stem Cells on Microcarriers**  
Yu Ming LIM, *Bioprocessing Technology Institute, Singapore* (Abstract S10)

14.55 to 16.20 **Extracellular Matrix and Stem Cells – a STARTling Bioactive Dialogue**  
Udi Sarig, *NTU-Technion, Israel-Singapore* (Abstract S11)

16.20 to 16.45 **CRISPR/Cas9 Mediated Gene Correction in Stem Cell Organoids**  
Gerald SCHWANK, *ETH, Switzerland* (Abstract S12)

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15:45 to 16:05 Short Coffee/Tea Break

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**KEYNOTE LECTURE**

Chair: Shigeki SUGII, *Vice-Treasurer SCSS & Singapore Bioimaging Consortium*

16:05 to 16.50 **The Cell and Gene Therapy Soup: Disentangling Hope, Realism and Quackery**  
John RASKO, *Centenary Institute, Australia* (Abstract S13)

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16.50 to 20.00 POSTER SESSION & SYMPOSIUM NETWORKING (*Wine & Cheese*)

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## DAY 2: Wednesday 18th November 2015

### 08.15 to 12.00 Symposium Registration

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#### Session 5: Opportunities and Challenges of Adult Stem Cells & Derivatives

Chair: Simon COOL, *Institute of Medical Biology, Singapore*

- 8.30 to 8.55 **World's First Approved Allogeneic Cell Therapy Product CARTISTEM® for Osteoarthritis: 3-year Market Experience from Korea**  
Antonio LEE, *MEDIPOST America, Inc., USA* (Abstract S14)
- 8.55 to 9.10 **Selected short talk: Stem Cell-based Nanomedicine for Cartilage Repair and Regeneration**  
Shiping ZHANG, *National University Hospital, Singapore* (Abstract S15)
- 9.10 to 9.25 **Selected short talk: Comparative Analysis of the Differentiation Potential of Human Exfoliated Deciduous Teeth and Wharton's Jelly Stem Cells into Dopaminergic-Like Cells Using a Single Differentiation Protocol**  
Wijenthiran KUNASEKARAN, *University of Malaya, Malaysia* (Abstract S16)
- 9.25 to 9.50 **Thymus: a Flavor of Skin**  
Yann BARRANDON, *EPFL/CHUV, Switzerland* (Abstract S17)
- 9.50 to 10.15 **Lgr5+ Stem Cells in Epithelial Homeostasis, Regeneration and Disease of the Stomach**  
Nick BARKER, *Institute of Medical Biology, Singapore* (Abstract S18)
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10.15 to 10.45 MORNING TEA BREAK

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#### Session 6: Stem Cells in Translation

Chair: Larry STANTON, *ExCo Member SCSS & Genome Institute of Singapore*

- 10.45 to 11.10 **Challenges towards Stem Cell Therapy for Parkinson's Disease**  
Jun TAKAHASHI, *Kyoto University, Japan* (Abstract S19)
- 11.10 to 11.35 **OncomiR-138: A Therapeutic Target for Malignant Gliomas**  
Prabha SAMPATH, *Institute of Medical Biology, Singapore* (Abstract S20)
- 11.35 to 12.00 **Molecular Signatures of Adipose-derived Stem Cells: Potential for Metabolic Reprogramming**  
Shigeki SUGII, *Singapore Bioimaging Consortium* (Abstract S21)
- 12.00 to 12.15 **An Improved Micro-carrier Based Platform for Differentiating Human Embryonic and Pluripotent Stem cells into Mature Red blood Cells under Chemically Defined Conditions**  
Jaichandran SIVALINGAM, *Bioprocessing Technology Institute, Singapore* (Abstract S22)
- 12.15 to 12.40 **Best in Class: Enhanced Self-renewal and Therapeutic Potential of Adult Human Mesenchymal Stem Cells Cultivated in Selected Heparan Sulfates**  
Victor NURCOMBE, *Institute of Medical Biology, Singapore* (Abstract S23)
- 12.40 to 13.05 *Industry Themed Talk*  
**Towards Clinical Workflows for Generating iPSCs and Functional Derivatives**  
Thorsten DECKER, *Miltenyi Biotec* (Abstract L2)
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13.05 to 14.30 LUNCH BREAK & EXHIBITION

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#### Session 7: Regulatory & Funding Issues in Translation

Chair: Karl TRYGGVASON, *ExCo Member SCSS & DUKE-NUS*

- 14.30 to 14.55 **Fast-tracking Regenerative Medicine in Japan: Challenge or Opportunity for Stem Cell Science?**  
Tamra LYSAGHT, *National University of Singapore* (Abstract S24)

14.55 to 15.20 **Challenges and successes of Advanced Therapy Medicinal Products (ATMPs): the European perspective**  
Paula SALMIKANGAS, *EMA, Finland* (Abstract S25)

15.20 to 15.45 **The 'Forgotten' Data: Opportunities & Challenges in the Assessment and Utilisation of Intellectual Property Landscapes to Support Regenerative Medicine Translation**  
David BRINDLEY, *Centre for the Advancement of Sustainable Medical Innovation, UK* (Abstract S26)

**Session 8: Clinical Stem Cell Therapies**

Chair: TBA

15.45 to 16.10 **GMP Culture Media Development for Therapeutical Stem Cells**  
Mohan VEMURI, *ThermoFisher* (Abstract S28)

16.10 to 16.35 **Retinal Cell Therapy Using iPS Cells**  
Masayo TAKAHASHI, *RIKEN Centre for Developmental Biology, Japan* (Abstract S29)

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16.35 to 17.00 SHORT TEA BREAK

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**Keynote Lecture**

Chair: Vivek TANAVDE, *Secretary SCSS & Bioinformatics Institute, Singapore*

17.00 to 17.45 **Making and Using iPSC derived Products - Regulations and Development**  
Mahendra RAO, *New York Stem Cell Foundation, USA* (Abstract S30)

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17.45 POSTER PRIZE PRESENTATION (supported by Institute of Medical Biology)  
CLOSING REMARKS  
Larry STANTON, *Chairman Organizing Committee 2016 & Genome Institute of Singapore*

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