

Scientific Program

4th International Conference on

Tissue Science and Regenerative Medicine

July 27-29, 2015 Rome, Italy



Exhibitors



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OLIMPICA 2



08:30-9:00

Opening Ceremony

Keynote Forum

- 09:00-09:05 **Introduction**
- 09:05-09:30 **Giorgio Calori Maria**
University of Milan, Italy
- 09:30-09:55 **Denis Barritault**
University Paris-Est Creteil, France
- 09:55-10:20 **Babak Kateb**
Brain Mappings Society, USA

Networking & Refreshments Break 10:20-10:35

Track 1: Regeneration & Therapeutics

Session Introduction

Session Chair: Todd K Rosengart, Baylor College of Medicine, USA

Session Co-chair: Kristin Comella, Bioheart Inc., USA

- 10:35-10:55 **Myocardial regeneration via cellular reprogramming**
Todd K Rosengart, Baylor College of Medicine, USA
- 10:55-11:15 **Adipose stem cells in vasculogenesis and angiogenesis**
Kristin Comella, Bioheart Inc., USA
- 11:15-11:35 **Functions of natural pigments on gastric ulcer and cancer**
Hyo Ihl Chang, Korea University, Republic of Korea
- 11:35-11:55 **Strategies to improve regeneration after peripheral nervous system trauma**
Ana Maria Blanco Martinez, Federal University of Rio de Janeiro, Brasil
- 11:55-12:15 **Quality assurance for cell based therapeutics in 2D and 3D products**
Karin Schütze, CellTool GmbH, Germany
- 12:15-12:35 **Protein phosphatase/Smek complex negatively regulate Par3 and promote neuronal differentiation**
Vicky Yamamoto, Keck School of Medicine of USC, USA

Lunch Break 12:35-13:20

- 13:20-13:40 **New approach for damaged fasial nerve regeneration based on stem cells**
Aysegul Batioglu-Karaaltin, Istanbul University, Turkey
- 13:40-14:00 **Neuron point of care stem cell therapy: Intrathecal transplant of autologous bone marrow-derived stem cells in patients with cerebral palsy. Preliminary Results**
Francisco Ruiz Navarro, Austrian Society of Regenerative Medicine, Austria

Track 4: Tissue Regeneration

Track 5: Materials & Designs for Tissue Engineering

Session Introduction

Session Chair: Shiva Akbarzadeh, Monash University, Australia

Session Co-chair: Christopher L. Antos, Technische Universität Dresden, Germany

- 14:00-14:20 **Use of clotted human plasma and aprotinin in skin tissue engineering - A novel approach to engineering composite skin on a porous scaffold**
Shiva Akbarzadeh, Monash University, Australia
- 14:20-14:40 **Adult stem cell aging and skeletal regenerative medicine**
Shuanhu Zhou, Harvard Medical School, USA
- 14:40-15:00 **Adhesion, growth and osteogenic differentiation of human adipose stem cells isolated by liposuction under low and high negative pressure**
Lucie Bacakova, Academy of Sciences of the Czech Republic, Czech Republic
- 15:00-15:20 **Calcineurin instructs when to stop regenerating once the correct size of zebrafish appendages is reached**
Christopher L. Antos, Technische Universität Dresden, Germany

Networking & Refreshments Break 15:20-15:35

- 15:35-15:55 **3D imaging of cell interactions with nanofibers scaffolds**
Urszula Stachewicz, AGH University of Science and Technology, Poland
- 15:55-16:15 **Hydrogel scaffolds in tissue engineering of the enteric nervous system**
Paola Brun, University of Padova, Italy
- 16:15-16:35 **Vascularized cardiac tissue from induced pluripotent-derived cardiomyocytes and endothelial cells**
Kara E. McCloskey, UC Merced, USA

Track 2: Stem Cells-Tools to Battle Cancer

Track 3: Bone and Cartilage Tissue Engineering

Session Introduction

Session Chair: Norman L. Lehman, The Ohio State University, USA

Session Co-chair: Mei Wan, Johns Hopkins University School of Medicine, USA

- 16:35-16:55** **Introducing a polydopamine-laced hydroxyapatite-gelatin nanocomposite for customized scaffolding in bone tissue engineering**
Ching-Chang Ko, University of North Carolina- Chapel Hill, USA
- 16:55-17:15** **Glioma tumor stem cell based models for evaluation of anti-glioma therapeutics**
Norman L. Lehman, The Ohio State University, USA
- 17:15-17:35** **Menstrual blood derived stem cells as a renewable source of adult stem cells: Features and advantages**
Somaieh Kazemnejad, Avicenna Research Institute, Iran
- 17:35-17:55** **Neural progenitor cells for treating retinal degeneration**
Shaomei Wang, Regenerative Medicine Institute, USA
- 17:55-18:15** **Safety study of intravenously administered human cord blood stem cells in the treatment of symptoms related to chronic inflammation**
Brian Mehling, Blue Horizon International, USA

Day 2 July 28, 2015

OLIMPICA 2

Keynote Forum

- 09:00-09:25** **Nagy Habib**
Imperial College London, UK
- 09:25-09:50** **Gordon Blunn**
University College London, UK
- 09:50-10:25** **Richard G Pestell**
Thomas Jefferson University, USA

Networking & Refreshments Break 10:25-10:40

Track 6: Scaffolds

Track 7: Whole Organ Engineering & Approaches

Session Introduction

Session Chair: Joseph Purita, Institute of Regenerative and Molecular Orthopedics, USA

Session Co-Chair: Andrea Barbetta, Sapienza University of Rome, Italy

- 10:40-11:00** **Cutting edge concepts in the use of stem cell and PRP injections in an office setting**
Joseph Purita, Institute of Regenerative and Molecular Orthopedics, USA
- 11:00-11:20** **Bioprinted 3D vascularized network tissue constructs using cell-laden bioink**
Andrea Barbetta, Sapienza University of Rome, Italy
- 11:20-11:40** **Increasing concentration of self-assembling peptides finely tunes properties of electrospun scaffolds and improves osteoblast cells adhesion**
Paola Brun, University of Padova, Italy
- 11:40-12:00** **Hydrogel scaffolds in tissue engineering of the enteric nervous system**
Ignazio Castagliuolo, University of Padova, Italy
- 12:00-12:20** **Biomimetic polyurethane scaffolds for a stem cell based therapy in myocardial regeneration**
Valeria Chiono, Politecnico di Torino, Italy
- 12:20-12:40** **Reciprocal interactions between iPS-derived neural cell-seeded modified collagen scaffolds and nerve tissue**
Marzena Zychowicz, Polish Academy of Sciences, Poland

Lunch Break 12:40-13:30

Workshop on "New frontiers in hard tissue regeneration: State of art"

Session Chair: Roberta Di Pietro, G. d'Annunzio University of Chieti-Pescara, Italy

Session Co-Chair: Ivo Kalajzic, University of Connecticut Health Center, USA

- 13:30-13:50** **Dental pulp stem cells: State of the art and suggestions for a true translation of research into therapy**
Gianpaolo Papaccio, University of Naples Federico II, Italy
- 13:50-14:10** **α Sma expressing perivascular and satellite cells contribute to muscle heterotopic ossification**
Ivo Kalajzic, University of Connecticut Health Center, USA
- 14:10-14:30** **Triggering osteocytogenesis *in vitro* and *in vivo***
Gunter Lepperdinger, University Salzburg, Austria
- 14:30-14:50** **Potential of human amniotic fluid stem cells (AFSC) and natural scaffolds in bone regeneration and repair**
Roberta Di Pietro, G. d'Annunzio University of Chieti-Pescara, Italy

Track 8: Novel Approaches in Guided Tissue Regeneration

Session Chair: Aysegul Batioglu-Karaaltin, Istanbul University, Turkey

Session Co-Chair: Livia Visai, University of Pavia, Italy

- 14:50-15:10** **Treatment of AVN using the chamber induction technique and biotechnologies: Indications and clinical results**
Massimiliano Colombo, University of Milan, Italy
- 15:10-15:30** **Scaffolds, stem cells, biophysical stimulations and nanotechnology in tissue engineering and regenerative medicine**
Livia Visai, University of Pavia, Italy
- 15:30-15:50** **Leukocyte-Platelet Rich Fibrin Membrane (L-PRF) alone or associated with a biomimetic implant surface act as a biological scaffold for hard and soft tissue regeneration**
Nelson R Pinto, University of the Andes, Chile
- 15:50-16:10** ***In vivo* tissue engineering trachea using adipose derived mesenchymal stem cell and cadaveric tracheal scaffold**
Aysegul Batioglu-Karaaltin, Istanbul University, Turkey
- 16:10-16:30** ***In vivo* imaging modalities to visualize mouse brain regenerative response after stroke and stem cell and biomaterial applications**
Srecko Gajovic, University of Zagreb School of Medicine, Croatia

Special Session on "Developments, innovations and breakthroughs in regenerative medicine"Chair: **Jonathan Schwartz**, Medical Marvels, USA

- 16:45-17:05** **Lipogems a game changer in the field of regenerative stem cell therapy**
Joseph Purita, Institute of Regenerative and Molecular Orthopedics, USA
- 17:05-17:25** **Basics and clinical applications of laserneedle acupuncture, intravenous, interstitial, intraarticular and photodynamic laser therapy**
Michael Weber, Webermedical Laser Treatment and Research Centers, Germany
- 17:25-17:45** **A novel chondral defect repair strategy: Biologic resurfacing through innovative bone marrow concentration system**
Sciarretta Fabio Valerio, Clinica Nostra Signora della Mercede, Italy
- 17:45-18:05** **Cracking the telomere code: The first step to reverse aging**
Al Sears, Dr. Al Sears' Center for Health and Wellness, USA

Young Research Forum

Session Introduction

Session Chair: **Karin Schütze**, CellTool GmbH, Germany

- 18:05-18:20** **A direct differentiation of hiPSCs towards erythroid cells under serum-free and hypoxia condition**
Nihal AIMuraikhi, Imperial College London, UK
- 18:20-18:35** **Bioceramic filler nature influence on acrylic cement properties after immersion in biological fluid**
Celine Aubrun, University d'Artois, France
- 18:35-18:50** **Polybutyleneadipate-co-terephthalate (PBAT) scaffolds for tissue engineering applications**
Aysu Arslan, Hacettepe University, Turkey
- 18:50-19:05** **Influence of electron beam irradiation onto physical and chemical properties of electrospun produced 3D matrices**
Alena O Stepanova, Meshalkin Novosibirsk State Research Institute of Circulation Pathology, Russia
- 19:05-19:20** **Nanohydroxyapatite/polyhedral oligomeric silsesquioxane poly(carbonate-urea) urethane (nHA/POSS-PCU): Applications in bone tissue engineering and regenerative medicine**
Shima Salmasi, University College London, UK

Poster Sessions

- 10:00-11:00** Morning Session P01 to P16
16:00-17:00 Evening Session P17 to P33

Day 3

July 29, 2015

OLIMPICA 2

Track 9: Clinical Medicine

Track 10: Regenerative Medicine

Track 11: Applications of Tissue Engineering & Regenerative Medicine

Session Introduction

Session Chair: **Lewis K Clarke**, Bay Area Rehabilitation Medicine Associates, USASession Co-Chair: **Ion N Mihailescu**, National Institute for Lasers, Romania

- 09:00-09:20** **Optimizing intrinsic mechanisms of neuroregeneration in the CNS: Utilizing mitochondrial and neurosteroid chemistry**
Lewis K Clarke, Bay Area Rehabilitation Medicine Associates, USA
- 09:20-09:40** **Pot1a regulates self-renewal activity of hematopoietic stem cells**
Fumio Arai, Kyushu University, Japan
- 09:40-10:00** **Safety study of intravenously administered human cord blood stem cells in the treatment of symptoms related to chronic inflammation**
Brian Mehling, Blue Horizon International, USA
- 10:00-10:20** **Soft transfer pulsed laser technologies for applications in regenerative medicine**
Ion N Mihailescu, National Institute for Lasers, Romania

Networking & Refreshments Break 10:20-10:35

- 10:35-10:55** **Nanoencapsulation of stem cells and regenerative medicine**
Roberto Ebensperger, Pontificia Universidad Católica de Chile, Chile
- 10:55-11:15** **The role of LRP5 in lung angiogenesis and regeneration**
Akiko Mammoto, Harvard Medical School, USA
- 11:15-11:35** **Direct digital manufacturing trends for regenerative medicine**
Pedro G Morouco, Polytechnic Institute of Leiria, Portugal
- 11:35-11:55** **Biobanking of subcutaneous adipose tissue: effect of site, cryopreservation, age and BMI**
Wanda Lattanzi, Università Cattolica del Sacro Cuore, Italy
- 11:55-12:15** **Artificial bone substitutes for bone repair purposes**
Samin Eftekhari, Ryerson University, Canada

Award Ceremony

Lunch Break 12:35-13:15

Bookmark your dates5th International Conference on**Tissue Science and Regenerative Medicine**

November 07-09, 2016 Istanbul, Turkey

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