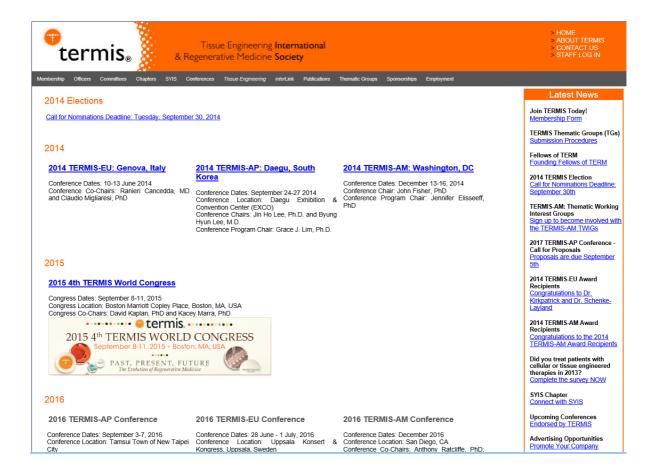
## Tissue Engineering & Regenerative Medicine International Society (http://www.termis.org)



#### **About TERMIS**

To accomplish its mission, the Society brings together the international community of persons engaged or interested in the field of tissue engineering and regenerative medicine and promotes education and research within the field of tissue engineering and regenerative medicine through regular meetings, publications and other forms of communication. The Society also serves as an international forum to promote the informed discussion of challenges and therapeutic benefits of the application of tissue engineering and regenerative medicine technologies.

Most importantly, the Society is committed to bringing you closer to key professionals to support your mutual understanding of the field, accelerate your research in the field and to enable you to contribute to the ultimate care of patients in this very important way. The TERMIS World Congress Meeting will be held every three years. In the interim years the Continental Chapters will host annual meetings to promote tissue engineering and regenerative medicine research regionally.

#### 2014 TERMIS-AM (Americas)

학회기간: December 13-16, 2014

장소: Washington, DC

#### **Selected Presentations**

#### **Cardiac Tissue Engineering**

- Cardiac Tissue Engineering for Modeling of Disease and Drug Screening Gordana Vunjack-Novakovic
- Electrical Maturation & Integration of hESC-Derived Cardiomyocyte Grafts Michael Laflamme
- The Age-Dependent Effects of Extracellular Matrix Signaling in Cardiac Tissue Engineering and Regenerative Medicine Lauren Black
- Chemical Surface Modification of 3D Printed Poly(Propylene Fumarate) Vascular Grafts Anthony Melchiorri
- A Cellularized Electrospun Vascular Scaffold for Blood Vessel Regeneration Young Min Ju
- Development of an A-Cellular Vascular Graft Capable of Complete Host Integration Maxwell Koobatian
- Tissue-engineered Aortic Heart Valve Based On Novel Tubular Tissue Design Zeeshan Syedain
- Dual and Controlled Delivery of Fibroblast Growth Factors from Poly(ester amide) Fibers for Therapeutic Angiogenesis Somiraa Said
- Use Of Three-dimensional Tissue Engineered Cardiac Fibers To Assess Cardiac Contractility
  Nikki Posnack

#### **Drug Delivery**

- In Vivo Delivery of MYC gene to Regenerate Hair Cells for Restoring Hearing and Balance Sazzad Hassan
- Implant Infection Was Controlled By Sustained Release of Doxycyclin From A Nanofiber Coating Weiping Ren
- Cellular and Nuclear Uptake Rates and Expression of Poly(β-amino ester)-DNA Nanoparticles: a Structure-Function Analysis Corey Bishop
- Dual BMP2 and VEGF Delivery from a Polycaprolactone/Collagen Sponge Scaffold to Increase Bone Growth for Bone Flap Prefabrication Janki Patel

- Heparin Microparticle Delivery of Bone Morphogenetic Protein-2 (BMP-2) for Bone Regeneration Marian Hettiaratchi
- Biodegradable Polymeric Nanoparticles Effectively Deliver DNA and siRNA for Regenerative Medicine Jordan Green

#### Micro/Nano Biomaterials and Scaffold Building Blocks

- Microsphere-Based Gradient Plugs for Osteochondral Regeneration Michael Detamore
- Phosphate-Containing Poly(ethylene glycol) (PEG) Hydrogel Nanoparticles for Prevention of Gut-Derived Sepsis Georgia Papavasiliou
- Evaluation and Control of Alginate Microbead Stability for Islet Encapsulation Veronica Ibarra
- HUVEC Response to Applied Flow on Micropatterned Poly(Propylene) Fumarate Scaffolds Jesse Placone
- Chondrogenesis in Cell-Encapsulating Chondroitin Sulfate/Chitosan Polyelectrolyte Complex Microbeads for Cartilage Tissue Engineering Ethan Daley

#### **Biofabrication and Bioreactors**

- High-throughput Robotic Fabrication of Stem Cell Spheroids Using Gellan Gum Based Hydrogels Vasudha Surampudi
- Rapid 3D printing Anatomically Shaped Bone Scaffolds Using Novel Molding and Perfusion Techniques Yonggang Pang
- Bioreactor Design for Real-time Conditioning and Monitoring of Tissue Engineered Muscle Grafts Colin Cook
- Bioprinting Of Vascularised Hepatic Tissues Jing Yang
- Development of Parallel Pulsatile Flow Bioreactors for 3D Printed Tissue Engineered Heart Valve Conditioning Daniel Cheung
- Cultivation of Functional Tendon Graft Material in Novel Bioreactor Daniel Youngstrom

#### **Dental and Craniofacial Regeneration**

- Tailoring Porous Degradable Biomaterials For Guided Tissue Regeneration in Dental Tissue Engineering Riddhi Gangolli
- Space Maintenance and New Bone Formation with Polyurethane Biocomposites in a Canine Saddle Defect Anne Talley
- Poly(glycerol sebacate) Elastomer Supports Bone Regeneration by Its Mechanical Properties Similar to Osteoid Tissue Samer Zaky

- Effect of Statin with Biphasic Calcium Phosphate on Differentiation and Mineralization of Human Dental Pulp Cells Sarah Abdul Qader
- Nano-drop Printing of SDF-1β on DermaMatrix Augments BMP-2-induced Repair of Critical Size Mouse Calvarial Defects William Hill
- A Biomimetic 3D Model for Tooth Regeneration Elizabeth Smith
- Extensively Expanded Auricular Chondrocytes Form Neocartilage In Vivo Cathryn Sundback
- Use of Autologous Adipose Stem Cells To Reconstruct 13 Patient Cases with Cranio-maxillofacial Hard-tissue Defects Susanna Miettinen
- Whole Tooth Regeneration Using Decellularized Tooth Bud Scaffolds Weibo Zhang
- Localized Low Dose rhBMP-2 is Effective at Promoting Bone Regeneration in Pre-clinical Mandibular Segmental Defect Model Patricia Carlisle
- Hypoxia Induces Undifferentiated Phenotype of Oral Keratinocytes In Vitro Hiroko Kato
- Development of an Animal Model to Tissue Engineer Human Lips Stephen Feinberg

#### **Implants and Host Response to Biomaterials**

- Gene Silencing within ROS Degradable Scaffolds to Modulate Wound Healing Craig Duvall
- In Vivo Evaluation of a Cortical-Bone-Mimetic Resorbable Matric in a Load-Bearing Segmental Defect Model Esmaiel Jabbari
- In Vivo Osteogenic Environment Promoted by Polyanionic Collagen Matrices Lenaldo Rocha
- Growth Factor Loaded Keratin Hydrogels for Treatment of a Sheet-like VML Injury in Mice
  Hannah Baker

#### **Engineering Tissues for In Vitro Screening and Diagnostics Imaging**

- Microfabricated Perfusable Cardiac Biowire: A Platform That Mimics Native Cardiac Bundle Yun Xiao
- Non-Invasive Image-Based Assessment of Human Induced Pluripotent Stem Cell-Derived Cardiomyocytes Christopher Heylman
- A Human iPS-derived In Vitro Model of 3D Vascularized Cardiac Muscle Yosuke Kurokawa
- Stem cell and Matrix-based Therapies Differentially Enhance Beating Dynamics in an In Vitro Human Induced Pluripotent Stem Cell-derived Cardiomyocyte Model Mikella Robinson

- Tissue and Organ Microarrays For Probing Extracellular Matrix-derived Materials Vince Beachley
- Integration of 3-D Organoid Bioprinting and Microfluidic Device Technology for Functional Primary Cell-Based Liver-on-a-Chip Operation Aleksander Skardal

#### **Nerve Repair and Integration**

- Chemotactic Attraction of Neural Stem/Progenitor Cells through Sustained Release of Stromal Derived Factor- 1 Dipankar Dutta
- Tissue Engineered Nerve Grafts with Aligned Axonal Tracts Facilitate Regeneration Across 5cm Peripheral Nerve Lesions in Swine D. Cullen
- Gene Therapy For Spinal Cord Injury Using Hypoxia-inducible Neuron-specific VEGF Expression System Yeomin Yun
- Electrospun Micro-fibrous Conduits Composed Of Poly(l-lactic Acid) and Elastin-laminin Mimicking Protein For Peripheral Nerve Regeneration Sachiro Kakinoki
- Directing Ventral Interneuron Differentiation from Embryonic Stem Cells Shelly Sakiyama-Elbert
- Restoring Brain Circuitry Using Novel Biomaterial Strategies to Encapsulate Micro-Tissue Engineered Neural Networks James Harris

#### **Engineered Biomaterials to Regulate Cell Fate and Function**

- Interim Analysis of Nerve Regeneration Using Novel Tissue-Engineered Nerve Guides in a Non-Human Primate Model Kacey Marra
- Multifunctionalized Silk Conduit as New Promising Materials for Nerve Guidance Pascale Vigneron
- Regulation of Mesenchymal Stem Cell Differentiation towards Valve Interstitial Cell Phenotypes in Three-Dimensional Hybrid Hydrogels with Covalently Immobilized Growth Factors Bin Duan
- Influence of Sparse Electrospun Fibers on the Differentiation of Mesenchymal Stem Cells in Collagen Gels Patrick Thayer
- Development and Characterization of a Cardiac ECM-derived Porous Scaffold as an In Vitro Model System Valerio Russo
- Analysis of Cell Shape and Signaling Response to Engineered 3D Environments Jennie Leach
- Role for Stiffness in Vascular Fate Lian Wong
- Optimization of Surface-Modified Biodegradable Scaffolds for Mesenchymal Stem Cell Adhesion and Differentiation Kimberly Ferlin

Effects of Silver Nanoparticles on the Differentiation of Human Mesenchymal Stem Cells - Christina Sengstock

The Effect of Alginate Capsule Composition on Pancreatic Differentiation of Human Embryonic Stem Cells - Thomas Richardson

#### **Tools and Platforms for Stem Cell Therapies**

Scalable Enzyme-free Protocols For The Isolation And Maintenance Of Human Induced Pluripotent Stem Cells (hiPSC) Without Manual Colony Picking or Scraping - Erik Hadley

Magnetic Targeting for Enhanced Stem Cell Therapies - Richard Harrison

3D Micropatterning of Biological Structures using Holographic Optical Tweezers - Emily Britchford

Micro-Engineered ECM array as a Platform for Deciphering Cell-ECM Interaction During Stem Cell Differentiation - Saik Kia Goh

Engineering Tissues with Controllable Synthetic Circuits - Amy Anderson

Primed 3D Injectable Micro-Niches as Cell Delivery Vehicle and Enabling Low-dosage Cell Therapy - Yaqian Li

#### 2014 TERMIS-AP (Asia-Pacific)

학회기간: September 24-27, 2014

장소: Dague, Korea

#### **Plenary Speakers**

Anthony Atala (Wake Forest University), "Regenerative Medicine: Current Concepts and Changing Trends"

Kam W. Leong (Columbia University), "Direct Cellular Reprogramming via Endogenous and Exogenous Approaches"

#### **Selected Presentations**

Eben Alsberg (Case Western Reserve University), "Modular Hydrogels for Spatiotemporal Control of Cell Function"

You Han Bae (University of Utah), "Drug Delivery and Engineered Tissue"

Ranieri Cancedda (University of Genova), "From Tissue Engineering to Regenerative Medicine: Learning from Natural Tissue Healing"

Yilin Cao (Shanghai 9th People's Hospital), "Cartilage Engineering Research and Its Application"

Chong-Su Cho (Seoul National University), "Gene Therapy for Bone Regeneration"

James Goh (National University of Singapore), "Functional Regeneration of Musculoskeletal Tissue"

David Kaplan (Tufts University), "3D Tissue Models: Challenges and Opportunities"

Byung-Soo Kim (Seoul National University), "Stem Cell Differentiation Control with Biomaterials"

Hyunjoon Kong (University of Illinois at Urbana-Champaign), "Nanobiomaterials for Diagnosis and Treatment of Vascular Diseases"

Sang Jin Lee (Wake Forest School of Medicine), "3-D Integrated Organ Printing for Producing Living Tissue Constructs"

João F. Mano (University of Minho), "Biomimetic Substrates for High-Throughput and High-Content Analysis of Combinations of Cells, Biomaterials and Soluble Factors"

Hai-Quan Mao (Johns Hopkins University), "Engineered Nanofibrous Materials for Stem Cell Differentiation"

- Antonios G. Mikos (Rice University), "Co-Cultures of Articular Chondrocytes and Mesenchymal Stem Cells for Cartilage Engineering"
- Michael Raghunath (National University of Singapore), "Tuning the Extracellular Microenvironment with Macromolecular Crowding for Tissue Engineering and Stem Cell Differentiation"
- Tatsuya Shimizu (Tokyo Women's Medical University), "Cell Sheet-Based Organ Engineering"
- Hsing-Wen Sung (National Tsing Hua University), "Injectable Cell Delivery Systems for Myocardial Tissue Engineering"
- Yasuhiko Tabata (Kyoto University), "Tissue Regeneration Technology to Enhance In Vivo Cells Recruitment"
- Yadong Wang (University of Pittsburgh), "Biomaterials for In Situ Tissue Engineering"
- Yin Xiao (Queensland University of Technology), "The Immunomodulatory Property of Bone Substitute Biomaterials and Osteogenesis"
- Xuebin B Yang (University of Leeds), "Cartilage and Osteochondral Tissue Engineering Using Different Cell Sources and Biomaterial Scaffolds In Vitro and In Vivo"
- James J. Yoo (Wake Forest Institute for Regenerative Medicine), "Combination of Small RNAs for In Situ Skeletal Muscle Regeneration"

#### **Future Meetings**

2015 4th TERMIS World Congress

September 8-11, 2015

Boston Marriott Copley Place, Boston, MA, USA



#### **Related Publications**

**TERMIS Newsletters** 

Tissue Engineering Part A

Tissue Engineering Part B: Reviews

Tissue Engineering Part C: Methods

# 한국조직공학·재생의학회(Korean Tissue Engineering and Regenerative Medicine Society)

(http://www.kterms.or.kr)



### 학회지 Tissue Engineering and Regenerative Medicine

