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WBC 2024

12th World
Biomaterials Congress

May 26-31, 2024 | EXCO, DAEGU, KOREA

Program Book

HOST |



The Korean Society for Biomaterials

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DAEGU METROPOLITAN CITY



DAEGU
Convention & Visitors Bureau



KOREA
TOURISM
ORGANIZATION

Concurrent Symposium 6 (S6-4)

16:30~18:00 Room 324-B

Granular Biomaterials for Tissue Engineering

Organizer Amir Sheikhi / Penn State University, USA

Chair Amir Sheikhi / Penn State University, USA

Tatiana Segura / Duke University, USA

Keynote Speaker 16:30 **S6-4-1**
Engineering hydrogel microparticle-based materials for bioprinting, tissue regeneration, and biosensing
 Daniel L. Alge / Texas A&M University, USA

Invited Speaker 16:55 **S6-4-2**
Gelatin Methacryloyl (GelMA) Granular Biomaterials for Patterning Soft Tissues
 Amir Sheikhi / Penn State University, USA

Oral Presenter 17:10 **S6-4-3**
Functionalized injectable microgels for the treatment of osteoarthritis
 Yiting Lei / The First Affiliated Hospital of Chongqing Medical University, China

17:20 **S6-4-4**
Developing vascularized *in vitro* 3D jammed microgel scaffolds without RGD
 Natasha Claxton / University of Virginia, USA

17:30 **S6-4-5**
Mineralized Collagen Building Blocks Fabrication for Bottom-Up Bone Tissue Engineering
 Esra Güben Kaçmaz / Maastricht University, Netherlands

17:40 **S6-4-6**
Granular hydrogel model of hematopoietic stem cells in bone marrow
 Gunnar Thompson / University of Illinois Urbana-Champaign, USA

Concurrent Symposium 6 (S6-5)

16:30~18:00 Room 323

Biomaterials meets glia: biomaterials applications to study glia and gliopathologies

Organizer Ana Paula Pego / i3S / INEB - University of Porto, Portugal

Chair Ana Paula Pego / i3S / INEB - University of Porto, Portugal

Shelly Sakiyama-Elbert / University of Washington, USA

Keynote Speaker 16:30 **S6-5-1**
Glial engineering and interfaces: multifunctional bio(nano) materials and devices to dialogue with glia
 Valentina Benfenati / Consiglio Nazionale delle Ricerche, Istituto per la Sintesi Organica e Fotoreattività, Italy

Invited Speaker 16:55 **S6-5-2**
Unravelling glia mechanobiology in bioengineered models to tackle neural repair failure
 Ana Paula Pego / i3S / INEB - University of Porto, Portugal

17:10 **S6-5-3**
Biomaterials scaffolds to modulate the role of astrocytes after spinal cord injury
 Shelly Sakiyama-Elbert / University of Washington, USA

Oral Presenter 17:25 **S6-5-4**
Extracellular Matrix-based Biocompatible Adhesive Hydrogel for Neural-electrode Interface
 Yeonggwon Jo / Pohang University of Science and Technology, Korea, Republic of

17:35 **S6-5-5**
Piezoelectric stimulation of microglia as an innovative approach for glioma immunotherapy
 Gianni Ciofani / Istituto Italiano di Tecnologia, Italy

Concurrent Symposium 6 (S6-6)

16:30~18:00 Room 322

Smart biomaterials for the modulation of inflammation and coagulation process

Organizer Wendong Gao / Queensland University of Technology, Australia

Chair Yingying Du / Huazhong University of Science and Technology, China

Keynote Speaker 16:30 **S6-6-1**
INFLAMMATION AND BONE REGENERATION
 Yin Xiao / Griffith University, Australia

Invited Speaker 16:55 **S6-6-2**
Immunomodulation Based Strategy for Improving Metal Implant-Soft Tissue Integration
 Zetao Chen / Sun Yat-sen University, China

17:10 **S6-6-3**
Multifunctional magnetic nanovesicles for treating severe bacteremia
 Joo Hun Kang / Ulsan National Institute of Science & Technology, Korea, Republic of

Oral Presenter 17:25 **S6-6-4**
Rendering antimicrobial hernia meshes without an adverse immune reaction
 Cynthia Calligaro / SPARTHA Medical, France

17:35 **S6-6-5**
Superhydrophilic poly(ϵ -caprolactone)/Tween-20 electrospun fiber coated with chitosan/heparin - A promising material for developing cardiac patches
 Roberta Maia Sabino / University of Wyoming, USA

Concurrent Symposium 6 (S6-7)

16:30~18:00 Room 306-A

Canadian Biomaterials Society Award Presentation Symposium

Organizer Marta Cerruti / McGill University, Canada

Chair Marta Cerruti / McGill University, Canada

Sophie Lerouge / École de Technologie Supérieure, Canada

Keynote Speaker 16:30 **S6-7-1**
Delivering Gene Medicines without Viruses
 Hasan Uludag / University of Alberta, Canada

Invited Speaker 17:10 **S6-7-2**
PEPTIDE-BASED MATERIALS FOR SOFT TISSUE AND ORGAN REPAIR
 Emilio Alarcon / University of Ottawa, Canada

17:30 **S6-7-3**
Nanoparticle nanoassemblies with stimulus-responsive properties for enhanced local drug delivery
 Todd Hoare / McMaster University, Canada