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12th World
Biomaterials Congress

WBC
2024

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

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WBC 2024
12th World Biomaterials Congress
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Concurrent Symposium 13 (S13-5)

09:30~11:00 Room 323

Microfabrication techniques for vascularization of tissue engineered constructsOrganizer Gulden Camci-Unal / *University of Massachusetts Lowell, USA*Chair Gulden Camci-Unal / *University of Massachusetts Lowell, USA*Syam Nukavarapu / *University of Connecticut, USA*

Keynote Speaker 09:30 **S13-5-1**
3D EXTRUDABLE HYBRID BIO(MATERIAL) INK FORMULATION: PROCESS SCIENCE AND BIOCOMPATIBILITY
 Bikramjit Basu / *Indian Institute of Science, Bangalore, India*

Invited Speaker 09:55 **S13-5-2**
The Integration of Tailored Peptides into Bioinks via Photo Induced Crosslinking of Unmodified Proteins
 Yeong-Jin Choi / *Korea Institute of Materials Science, Korea, Republic of*

10:10 **S13-5-2**
Application of advanced, various tissue-specific bioinks for engineering vascularized in vitro multiorgan/disease constructs
 Jungbin Yoon / *POSTECH, Korea, Republic of*

Oral Presenter 10:25 **S13-5-4**
The use of proteomics in extrusion and volumetric-based biofabrication for optimal bone regeneration
 Laurens Parmentier / *Ghent University, Belgium*

10:35 **S13-5-5**
Coaxial 3D Bioprinting of Blood Vessel Grafts and Vascular Disease Models
 Ge Gao / *School of Medical Technology, Beijing Institute of Technology, China*

10:45 **S13-5-6**
Mimicking the vascularized cortical bone: an advanced in vitro osteon model to study bone (patho)physiological conditions
 Clarissa Tomasina / *Complex Tissue Regeneration Department, MERLN Institute for Technology-Inspired Regenerative Medicine, Maastricht University, Universiteitssingel 40, 6229 ET Maastricht, The Netherlands, Netherlands*

Concurrent Symposium 13 (S13-6)

09:30~11:00 Room 322

Regenerative Approaches for ENT FieldOrganizer Seong Keun Kwon / *Seoul National University Hospital, Korea, Republic of*Chair Seong Keun Kwon / *Seoul National University Hospital, Korea, Republic of*Tsong-Lin Yang / *National Taiwan University, Chinese Taipei*

Keynote Speaker 09:30 **S13-6-1**
Strategies and considerations in regenerative medicine of the larynx
 Nathan Welham / *University of Wisconsin-Madison, USA*

Invited Speaker 09:55 **S13-6-2**
Salivary gland regeneration
 Tsong-Lin Yang / *National Taiwan University, Chinese Taipei*

10:10 **S13-6-3**
Tracheal reconstruction using an artificial trachea
 Yo Kishimoto / *Kyoto University, Japan*

Oral Presenter 10:25 **S13-6-4**
Mesenchymal Stem Cell Spheroids for Inducing Angiogenesis
 JI SUK CHOI / *Seoul National University Hospital, Korea, Republic of*

Concurrent Symposium 13 (S13-7)

09:30~11:00 Room 306-A

Calcium phosphate biomaterials design: Bioactivity, materials property and mechanisms of biomineralizationOrganizer Nicola Doebelin / *RMS Foundation, Switzerland*Chair Nicola Doebelin / *RMS Foundation, Switzerland*Takahisa Anada / *Kyushu University, Japan*

Keynote Speaker 09:30 **S13-7-1**
Involvement of inorganic ion exchange and protein accumulation during spontaneous hydrolysis of octacalcium phosphate with enhancing new bone formation
 Osamu Suzuki / *Tohoku University, Japan*

Invited Speaker 09:55 **S13-7-2**
Calcium phosphate-based biomineralizations: the physico-chemical point of vue
 Christele Combes / *Institut National Polytechnique de Toulouse, France*

10:10 **S13-7-3**
In vivo mineralization to induce ectopic bone formation
 Marc Bohner / *RMS Foundation, Switzerland*

Oral Presenter 10:25 **S13-7-4**
Chitosan-apatite wollastonite composites for bone tissue engineering formulated using chitosan solutions varied in ionic strength.
 Meng Pan / *School of Engineering, Newcastle University, Newcastle upon Tyne, NE1 7RU, United Kingdom*

10:35 **S13-7-5**
Calcium phosphates as drug delivery vehicles for cancer treatment
 Ilijana Kovrija / *Riga Technical University, Latvia*

Concurrent Symposium 13 (S13-8)

09:30~11:00 Room 306-B

Biomaterial Design for ImmunoengineeringOrganizer Abhinav Acharya / *Arizona State University, USA*Chair Junsang Doh / *Seoul National University, Korea, Republic of*

Keynote Speaker 09:30 **S13-8-1**
Multidimensional immunoengineering approaches to enhanced cancer immunotherapy
 Li Tang / *EPFL, Switzerland*

Invited Speaker 09:55 **S13-8-2**
Research on the extrahepatic targeting delivery of siRNA therapeutics
 Huining He / *School of Pharmacy, Tianjin Medical University, China*

10:10 **S13-8-3**
One stone fourbirds: application of ginsenosides to prepare multifunctional liposomal delivery system for cancer therapy
 Jianxin Wang / *School of Pharmacy, Fudan University, China*

Oral Presenter 10:25 **S13-8-4**
Evaluation of an osteoinductive bone graft with submicron surface topography in a clinically-relevant sheep posterolateral lumbar spine fusion model
 Nathan Kucko / *Kuros Biosciences, Netherlands*

10:35 **S13-8-5**
One Produces Multi: A Drug-free Cardiovascular Stent Functionalized with Tailored Collagen Supports in-situ Healing of Vascular Tissues
 Haoshuang Wu / *Sichuan University, China*

10:45 **S13-8-6**
Photocrosslinked silk fibroin microgels and microgel scaffolds for biomedical applications
 Jelena Rnjak-Kovacina / *University of New South Wales, Australia*