Scientific Program

Proceedings of
2nd Annual Conference and Expo on
Biomaterials
March 27-28, 2017 Madrid, Spain
Day 1 | March 27, 2017

08:00-09:00 Registrations

Avila

09:00-09:15 Opening Ceremony

Keynote Forum

09:15-09:20 Introduction
09:20-09:55 Title: Tailoring microenvironments for in situ regeneration
Elisabeth Engel, University of Catalonia, Spain
09:55-10:30 Title: An improved biofabrication process to enhance cell survival and distribution in bioprinted scaffolds for cartilage regeneration
Jose Manuel Baena, BRECA Health Care, Spain

Group Photo and Coffee Break: 10:30-10:45 @ Zamora

Sessions:

Tissue Engineering and Regenerative Medicine | 3D Printing of Biomaterials | Biomaterials Applications
Session Chair: Elisabeth Engel, University of Catalonia, Spain
Session Co-Chair: Miguel Angel Mateos Timoneda, CIBER-BBN, Spain

10:45-11:10 Title: Tailoring microenvironments for in situ regeneration
Elisabeth Engel, University of Catalonia, Spain
11:10-11:35 Title: Biomaterials as a tool for teaching and learning training programs on surgery
Avelina Sotres Vega, National Institute of Respiratory Diseases, Mexico
11:35-12:00 Title: Design of a composite bioink for bioprinting applications
Miguel Angel Mateos Timoneda, CIBER-BBN, Spain
12:00-12:25 Title: Development of nanostructured biomaterials for bone and osteo-articular regeneration
Sybille Facca, University of Strasbourg, France
12:25-12:50 Title: Design and characterization of bioinks with hyaluronic acid for tissue and bone-3D bioprinting
Jose Manuel Baena, BRECA Health Care, Spain

Lunch Break: 12:50-13:50 @ Zamora

13:50-14:15 Title: The effect of scaffold topography on behavior of dental pulp stem cells
Deniz Yucel, Acibadem University, Turkey
14:15-14:40 Title: Bio-inspired microstructures for directional liquid transport
Cristina Plamadeala, Johannes Kepler University Linz, Austria

Sessions:

Advanced Biomaterials | Biomaterials and Nanotechnology
Session Chair: Mónica López Fanarraga, Instituto de Investigación Sanitaria Valdecilla, Spain
Session Co-Chair: Isabel Rodriguez, IMDEA-Nanoscience, Spain

14:40-15:05 Title: Bio-degradable carbon nanotubes display intrinsic anti-tumoral effects
Mónica López Fanarraga, Instituto de Investigación Sanitaria Valdecilla, Spain
15:05-15:30 Title: Modulation of cell behavior on artificial materials by functional nano-topographies for applications in regenerative medicine
Isabel Rodriguez, IMDEA-Nanoscience, Spain
15:30-15:55 Title: Two stage, dual action cancer therapy with targeted porous silicon nanoparticles
Anna Cifuentes-Rius, Monash University, Australia
### Keynote Forum

**10:00-10:35**  
**Title:** Fibrin interactions with matrix dependent cells: Applications and mechanism  
**Raphael Gorodetsky,** Hadassah Medical Centre, Israel

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### Sessions:

**Polymer Biomaterials | Dental Biomaterials | Properties of Biomaterials**

- **Session Chair:** Thierry Delair, University of Lyon, France  
- **Session Co-Chair:** Jose Ramon Sarasua, University of the Basque Country, Spain

#### Session Introduction

**10:35-11:00**  
**Title:** Polyelectrolyte nano-complexes-Safe and efficient tools for the delivery of drugs or vaccine  
**Thierry Delair,** University of Lyon, France

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### Networking & Refreshment: 11:00-11:15 @ Zamora

**11:00-11:15**  
**Title:** Biodegradable polyesters for biomedical applications: Alternatives to polylactides and polylactones  
**Jose Ramon Sarasua,** University of the Basque Country, Spain

**11:40-12:05**  
**Title:** A novel design of low cost Mastitis level measurement based on electrical resistivity  
**Ruchi Singla,** Chandigarh Engineering College, India

**12:05-12:30**  
**Title:** An analysis of dental implant materials with an exclusive focus on Zirconia Vs Titanium  
**Saurabh Gupta,** Axiss Dental Pvt Ltd, India

**12:30-12:55**  
**Title:** The use of Silica nano-particles and microwave irradiation in dental PMMA repairs: Experimental investigation into the mechanical properties and dimensional stability of the repaired PMMA after aging  
**Nour el Houda,** University of Monastir, Tunisia

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### Lunch Break: 12:55-13:55 @ Zamora

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### Poster presentations 14:00-15:00

| BM 01 | Title: Development of scaffolds for Regenerative Medicine  
|       | **Jose Manuel Baena,** BRECA Health Care, Spain |
| BM 02 | Title: Novel extended-released polymeric matrix for Monascus fermented rice extract (RYR) delivery  
|       | **Marco Consumi,** University of Siena, Italy |
| BM 03 | Title: Wear particle embedded 3D agarose gels for biocompatibility testing of orthopedic medical devices  
|       | **Richard Hall,** University of Leeds, UK |
| BM 04 | Title: Dissolving microneedles: An attractive approach to transdermal drug delivery  
<p>|       | <strong>Nakeum Jang,</strong> Raphas Co. Ltd., KOREA (South) |</p>
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>BM 05 Novel resorbable and osteoconductive nurse’A phase-silicocarnotite scaffold induced bone formation</td>
<td>Patricia Mazon Canales, Universidad Miguel Hernández, Spain</td>
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<td>BM 06 Evaluation of anti-biofilm properties of titanium nitride coatings. An in vitro study</td>
<td>Anna Arvidsson, Dentsply IH AB, Sweden</td>
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<td>BM 07 Isolation of low volumes of silicon nitride particles from tissue</td>
<td>Richard Hall, University of Leeds, UK</td>
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<tr>
<td>BM 08 Dissolving microneedles: An attractive approach to transdermal drug delivery</td>
<td>Jung Dong Kim, Raphas Co. Ltd., KOREA(South)</td>
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<td>BM 09 Multi-walled carbon nanotubes (MWCNTs) as cytotoxic drug delivery systems in the treatment of cancer</td>
<td>Eloisa Gonzalez-Lavado, Universidad de Cantabria-IDIVAL, Spain</td>
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<td>BM 10 Nanogels preparation for controlled bioactives’ delivery</td>
<td>Iordana Neamtu, PETRU PONI Institute of Macromolecular Chemistry, Romania</td>
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<td>BM 011 Co-immobilization of glucose oxidase and catalase on electrodes’ surface: A multifunctional tool for biosensing applications</td>
<td>Tiago Monteiro, Universidade NOVA de Lisboa, Portugal</td>
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<td>BM 012 New method for magnetic composite deposition onto a stent surface</td>
<td>Aurica P Chiriac, PETRU PONI Institute of Macromolecular Chemistry, Romania</td>
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<td>BM 013 Evaluation of anti-biofilm properties of titanium nitride coatings. An in vitro study</td>
<td>Ingela Mattisson, Dentsply IH AB, Sweden</td>
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<td>BM 014 Production and characterization of bioceramic nanopowders of biological origin</td>
<td>Zeynep Orman, Yildiz Technical University, Turkey</td>
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<td>BM 015 Nanostructures based on poly(aspartic acid) and bovine albumine by self assembling procedure</td>
<td>Loredana Elena Nita, PETRU PONI Institute of Macromolecular Chemistry, Romania</td>
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<td>BM 016 Formation and characterization of biomimetic Calcium phosphate coatings on nanostructured surfaces of anodized Titanium</td>
<td>Shaghayegh Javadi, Tehran university, Iran</td>
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**Poster presentations 15:10-16:00**

**Networking & Refreshment: 16:00-16:15 @ Zamora**

**Award and Closing Ceremony 16:15 onwards @ Avila**