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914<sup>th</sup> Conference

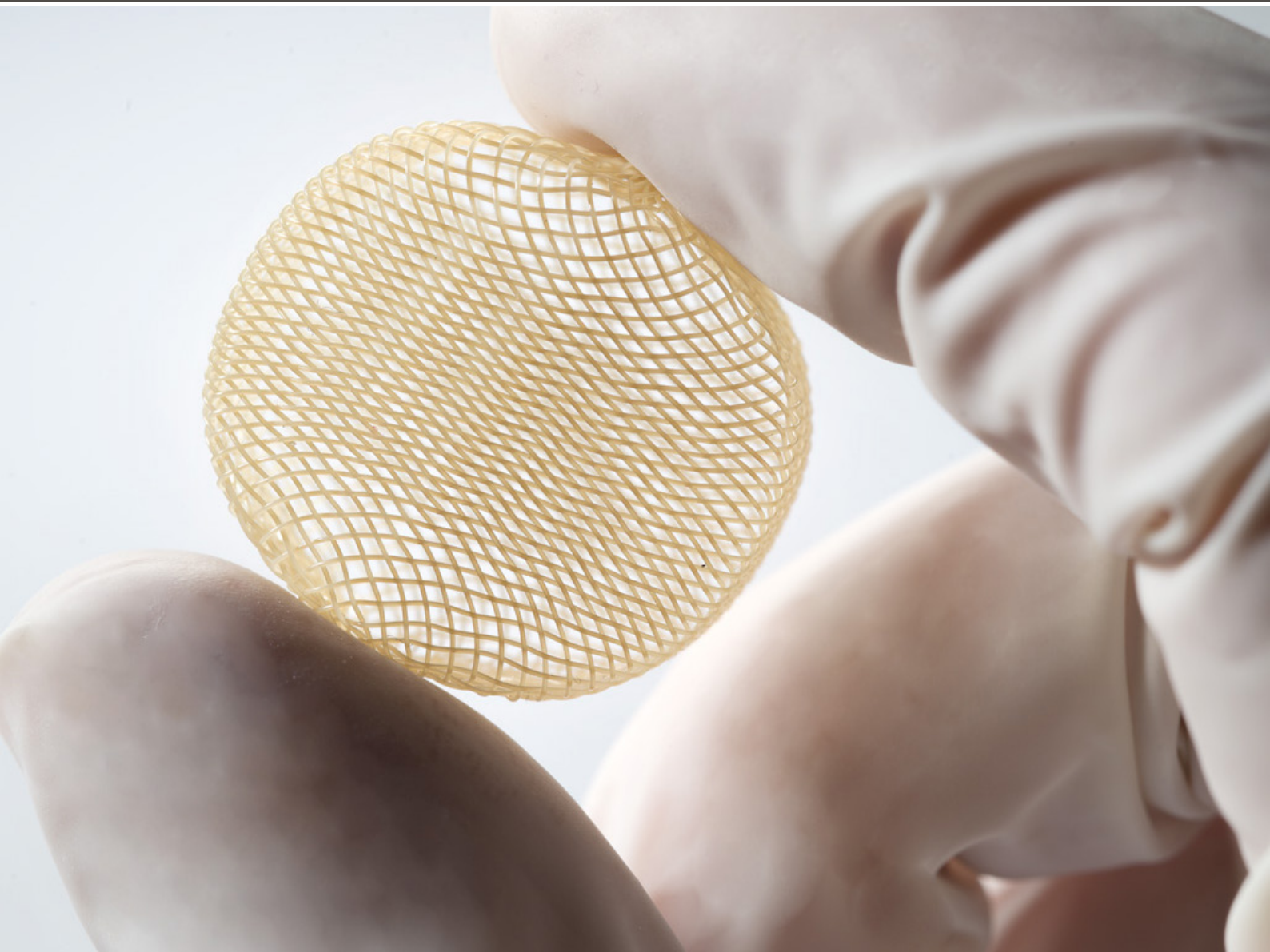
*Scientific Program*

Proceedings of

2<sup>nd</sup> Annual Conference and Expo on

# **Biomaterials**

March 27-28, 2017 Madrid, Spain



**Hosting Organizations: Conference Series**

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09:00-09:15

# Opening Ceremony

## Keynote Forum

09:15-09:20 Introduction

09:20-09:55 Title: Science and technology of multifunctional ultrananocrystalline diamond (UNCD™) coatings and applications to a new generation of implantable medical devices

Orlando Auciello, University of Texas at Dallas, USA

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

### Session Introduction

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

**Networking & Refreshment: 15:55-16:10 @ Zamora**

**16:10-16:35** Title: **Metallic 3D-printing for orthopedic surgery: question of surface and cell compatibility**  
**Michaela Fousova**, UCT Prague, Czech Republic

**Video Presentation**

**16:35-17:00** Title: **Stages for pore formation during fabrication of porous materials**  
**Peng-Sheng Wei**, National Sun Yat-Sen University, Taiwan

**Day 2 | March 28, 2017****Avila****Keynote Forum**

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

**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

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

**11:15-11:40** 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

**Lunch Break: 12:55-13:55 @ Zamora****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**  
**Nakeum Jang**, Raphas Co. Ltd., KOREA (South)

- BM 05** Title: **Novel resorbable and osteoconductive nurse'A phase-silicocarnotite scaffold induced bone formation**  
Patricia Mazon Canales, Universidad Miguel Hernández, Spain
- BM 06** Title: **Evaluation of anti-biofilm properties of titanium nitride coatings. An *in vitro* study**  
Anna Arvidsson, Dentsply IH AB, Sweden
- BM 07** Title: **Isolation of low volumes of silicon nitride particles from tissue**  
Richard Hall, University of Leeds, UK
- BM 08** Title: **Dissolving microneedles: An attractive approach to transdermal drug delivery**  
Jung Dong Kim, Raphas Co. Ltd., KOREA(South)
- BM 09** Title: **Multi-walled carbon nanotubes (MWCNTs) as cytotoxic drug delivery systems in the treatment of cancer**  
Eloisa Gonzalez-Lavado, Universidad de Cantabria-IDIVAL, Spain
- BM 010** Title: **Nanogels preparation for controlled bioactives' delivery**  
Iordana Neamtu, PETRU PONI Institute of Macromolecular Chemistry, Romania

### Poster presentations 15:10-16:00

- BM 011** Title: **Co-immobilization of glucose oxidase and catalase on electrodes' surface: A multifunctional tool for biosensing applications**  
Tiago Monteiro, Universidade NOVA de Lisboa, Portugal
- BM 012** Title: **New method for magnetic composite deposition onto a stent surface**  
Aurica P Chiriac, PETRU PONI Institute of Macromolecular Chemistry, Romania
- BM 013** Title: **Evaluation of anti-biofilm properties of titanium nitride coatings. An *in vitro* study**  
Ingela Mattisson, Dentsply IH AB, Sweden
- BM 014** Title: **Production and characterization of bioceramic nanopowders of biological origin**  
Zeynep Orman, Yildiz Technical University, Turkey
- BM 015** Title: **Nanostructures based on poly(aspartic acid) and bovine albumine by self assembling procedure**  
Loredana Elena Nita, PETRU PONI Institute of Macromolecular Chemistry, Romania
- BM 016** Title: **Formation and characterization of biomimetic Calcium phosphate coatings on nanostructured surfaces of anodized Titanium**  
Shaghayegh Javadi, Tehran university, Iran

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

Award and Closing Ceremony 16:15 onwards @ Avila

