



Dear colleagues,

we cordially invite you to the second international conference "Frontiers in biomaterial science" organized by our collaborative research centre TRR SFB 67 ([www.trr67.de](http://www.trr67.de)).

The symposium will provide an update on topics like

- > Innovative Biomaterials
- > GAG – protein interactions
- > Multifactorial microenvironments for regeneration
- > Skin and bone regeneration
- > From innovation to product
- > Highlights from the TRR67

We are very happy to announce the participation of internationally reknown key note speakers who will cover these topics. In addition, we will present the most interesting projects from our collaborative research centre. Moreover, the city of Leipzig situated in the heart of Europe has a rich history both in culture and science and offers a multitude of historic sites to visit.

We are very grateful to the Deutsche Forschungsgemeinschaft, the Technische Universität Dresden and the Leipzig University for their support of our meeting of our Symposium.

We hope, we see you in Leipzig.

Jan C. Simon  
Speaker TRR 67

Dieter Scharnweber  
Co-Speaker TRR 67



### Registration

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### Location

Studienzentrum of Leipzig University  
Liebigstr. 27  
04103 Leipzig



**E**  
Studienzentrum; Dekanat;  
Fakultätsverwaltung

## Frontiers in Biomaterial Science

2. International Symposium  
of the Transregio 67  
2016



June 24-25 Leipzig Germany



# PROGRAM

June 24, 2016

## **Innovative Biomaterials** 08.30 – 10.30 am

Chair: Carsten Werner

Tunable hydrogel matrices through photo-click reactions

**Kristi Anseth**

University of Colorado, Boulder, USA

Synthetic and Natural ECM scaffolds in Regenerative Medicine

**Jennifer Elisseff**

Johns Hopkins University Baltimore, USA

Design and synthesis of synthetic materials for humanized tissues

**Jörg Lahann**

University of Michigan, USA / Karlsruhe Institute of Technology, Germany

Bioactive materials and biofabrication approaches in hard and soft tissue regeneration

**Aldo R. Boccaccini**

University Erlangen-Nürnberg, Germany

## **GAG-protein interactions** 11.00 – 12.30 am

Chair: Annette Beck-Sickingler

Heparan sulfate control of growth factors for tissue regeneration: from bench to bedside

**Victor Nurcombe**

Imperial College London - NTU Singapore, Singapore

Multiple functionalities of LbL films: from bench to clinics

**Thomas Boudou**

Université Grenoble Alpes, France

Injectable Hydrogels for Growth Factor and Stem Cell Delivery in Tissue Engineering

**Antonios Mikos**

Rice University, Houston, USA

## **Designing multifactorial microenvironments for regeneration** 01.30 – 03.00 pm

Chair: Dieter Scharnweber

Fully defined matrices for the culture and expansion of intestinal stem cells and organoids

**Nikolche Gjorevski**

Ecole polytechnique fédérale de Lausanne, Switzerland

Rethinking mechanotransduction mechanisms: from the ECM to the cell nucleus

**Viola Vogel**

ETH Zurich - Swiss Federal Institute of Technology, Switzerland

Engineering hydrogels to control and recruit stem cells

**Jason A. Burdick**

University of Pennsylvania, Philadelphia, USA

## **Highlights from the TRR 67** 03.00 – 04.00 pm

Chair: Jan-Christoph Simon

Structural and functional studies on GAG-protein interactions using defined sulfated oligohyaluronanes

**Jörg Rademann**

Free University of Berlin, Germany

Functional and structural insights into TIMP-3-GAG interactions implications for the design of functional biomaterials

**Sandra Rother**

Technische Universität Dresden, Germany

Promoting bone regeneration with novel GAGs that scavenge sclerostin

**Lorenz Hofbauer**

Technische Universität Dresden, Germany

StarPEG-GAG hydrogels for reprogramming of pro-inflammatory chemokine gradients to promote wound healing

**Sandra Franz**

Leipzig University, Germany

# PROGRAM

June 25, 2016

## **Skin and bone regeneration** 08.30 – 10.30 am

Chair: Ulf Anderegg

Modeling healing processes in hard and soft tissue: possibilities and limitations in vitro

**James C. Kirkpatrick**

University of Mainz, Germany

Rebuilding skin from the top down

**George Cotsarelis**

University of Pennsylvania, Philadelphia, USA

Clinical bone engineering using scaffolds, stem cells and miRNA.

**Martijn van Griensven**

TU Munich, Germany

Mesenchymal stem cells in wound healing and tissue regeneration

**Karin Scharffetter-Kochanek**

Universityhospital Ulm, Germany

## **From innovation to product** 11.00 – 01.00 pm

Chair: Stefan Rammelt

Chemical and mechanical aspects in designing regenerative implants

**Joachim Rychly**

University of Rostock, Germany

Biodegradable thermoplastic elastomer development for applications in cardiovascular disease

**William Wagner**

University of Pittsburgh, USA

Convergence of tissue engineering & regenerative medicine towards development & validation of clinically relevant humanized mice models

**Dietmar W. Hutmacher**

Queensland University of Technology, Australia