Information

Date
November 19th to 20th 2009
Festival Evening, Thursday, November 19th 2009
Internationaler Club im Auswärtigen Amt GmbH
Kunstraße 36, 10117 Berlin

Location
Centrum für Sportwissenschaft
und Sportmedizin Berlin (CSSB)
Philippstraße 13, Haus 11 in 10099 Berlin
No parking place available.

Scientific organization
Prof. Dr. G. N. Duda
Julius Wolff Institut and Center for Musculoskeletal Surgery,
Charité - Universitätsmedizin Berlin

Prof. Dr. S. Mundlos
Institute for Medical Genetics, Charité - Universitätsmedizin
Berlin and Max Planck Institute for Molecular Genetics
Augustenburger Platz 1, 13353 Berlin
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Abstracts
Abstracts for posters and presentations are now being accepted. The deadline for submission of abstracts is September 1st 2009. The best quality abstract submissions of no more than 300 words will be accepted for the sessions presented above. Please find further details, including the submission form on the web site at www.bonehealing.de/abstracts.

Prizes
The best student and best regular rated abstracts will receive awards including a free registration to the event.

Registration, organization
P & R Kongresse GmbH
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Tourist information
www.berlin.de
www.berlin-tourist-information.de

Certification
The certification of the symposium is required by the „Berliner Ärztekammer“. 
Biomechanics and Biology of Bone Regeneration

The symposium will allow highlighting the state of the art in the research field of bone regeneration. We will focus on new developments regarding the molecular basis for bone regeneration, the understanding of the structural constrains of native and artificial tissue (biomaterials) and the clinical implications and experimental models of bone regeneration. We will offer a platform for clinicians and researchers to share experiences and experiences on latest developments in this field.

Thursday – November 19th 2009

**Morning**
- Welcome and Introduction
  - G. Duda (Germany)
- Clinical background and challenges in orthopaedic trauma surgery
  - D. Marsh (UK)

**Afternoon**
- Learning from endogenous bone healing for guided tissue regeneration
  - A. Ignatius (Germany)
  - J. Lienau (Germany)
- Modelling of cell seeded bone tissue engineered scaffolds
  - P. Prendergast (Ireland)
- Mechanobiological simulation of bone healing
  - R. Weinkamer (Germany)
- Tissue mineralization in bone development, maintenance, disease and repair
  - P. Roschger (Austria)
- Micromechanical and ultrastuctural properties of bone and callus tissue
  - P. Fritzi (Germany)

**Free Presentations**

**Musculoskeletal loading conditions in regeneration**
- M. Heller (Germany)

**Mathematical modelling in regenerative therapy**
- O. Sander (Germany)

**Mechano-biological constrains to bone healing**
- G. Duda (Germany)

**Lunch**

**Friday – November 20th 2009**

**Morning**
- What intra- and what intra-cellular signalling drives healing?
  - Mechanotransduction in bone remodelling
  - C. Perka (Berlin)
  - Molecular mechanisms of fracture repair
  - M. Hadjiargyrou (USA)
  - Interaction of BMPs and their antagonists during bone regeneration
  - H. Li (USA)

**Free Presentations**

**Musculoskeletal loading conditions in regeneration**
- M. Heller (Germany)

**Mathematical modelling in regenerative therapy**
- O. Sander (Germany)

**Mechano-biological constrains to bone healing**
- G. Duda (Germany)

**Biomechanics and Biology of Bone Regeneration**

**Local Organizing Committee**
- Dipl.-Ing. F. H. Beier, Charité Berlin, Germany
- Prof. Dr. G. N. Duda, Charité Berlin, Germany
- Prof. Dr. N. P. Haas, Charité Berlin, Germany
- Dr. F. J. Lienau, Charité Berlin, Germany
- Prof. Dr. S. Mundlos, Max Plank Institute Berlin, Germany

**Invited Faculty**
- Dr. J. Adjaye, Max Planck Institute Berlin, Germany
- Prof. Dr. M. Ameling, University Medical Center Hamburg, Germany
- Prof. Dr. A. Arampatzis, Humboldt Universität Berlin, Germany
- PD Dr. H. J. Bail, Charité Berlin, Germany
- Prof. Dr. G. Bergmann, Charité Berlin, Germany
- Prof. Dr. A. El Haj, Keele University, Staffordshire, United Kingdom
- Prof. Dr. P. Fratz, Max Planck-Institut Potsdam, Germany
- Prof. Dr. R. E. Guldberg, Georgia Institute of Technology, Atlanta, USA
- Prof. Dr. M. Hadjiargyrou, State University of New York, USA
- Dr. M. Helle, Charité Berlin, Germany
- Prof. Dr. A. Ignatius, Universitätsklinikum Ulm, Germany
- Prof. Dr. F. Jakob, Universität Würzburg, Germany
- Prof. Dr. P. Knaus, FU Biochemistry, Berlin, Germany
- Prof. Dr. A. Lendlein, GKSS Teltow, Germany
- Prof. Dr. D. Marsh, University College London, London, UK
- Prof. Dr. I. Martin, Universitätsspital Basel, Switzerland
- Prof. Dr. C. Perka, Charité Berlin, Germany
- Prof. Dr. P. Prendergast, Trinity College Dublin, Ireland
- Prof. Dr. P. Roschger, Unfallklinikum Wien, Austria
- Prof. Dr. J. Rubin, University of North Carolina, USA
- Dr. G. Sander, Freie Universität Berlin, Germany
- Dr. H. Schell, Charité Berlin, Germany
- Prof. Dr. R. Schnettler, Universitätsklinikum Giessen, Germany
- Prof. Dr. M. Stevens, Imperial College London, UK
- Dr. P. Strube, Charité Berlin, Germany
- Dr. R. Weinkamer, Max Planck Institute Potsdam, Germany
- PD Dr. B. Wildemann, Charité Berlin, Germany

**Free Presentations**

**Biomimetic materials for bone regeneration**
- Biermechanisch-biologische Konstrains to bone healing
- R. Weinkamer (Germany)

**Micromechanical and ultrastructural properties of bone and callus tissue**
- P. Fritzi (Germany)

**Free Presentations**

**Musculoskeletal Interactions – from biomechanics to mechanobiology**
- From function to joint loading in the elderly
  - A. Arampatzis (Germany)
- Loads in human joints
  - G. Bergmann (Germany)

**from 7:00 pm**
- **Festival Evening (International Club)**