



17th Interdisciplinary Research Conference on
Biomaterials
April 1st - 3rd 2007 - St. Catherine's College, Oxford, UK
GRIBOI-OXFORD-2007



ENDORSED BY



BIOMAT.NET

“Injectable and Implantable Biomaterials and Biologics for Tissue Regeneration”

Conference Programme

SUNDAY APRIL 1ST 2007

| | |
|-------------------|---|
| 5.00 PM - 7:00 PM | Registration Desk Open at St Catherine's College |
|-------------------|---|

MONDAY APRIL 2ND 2007

| | |
|---------------------|--|
| 8:00 am - onwards | Registration |
| 8.55 am - 9:00 am | OPENING OF CONFERENCE |
| SESSION 1 | ASPECTS OF STEM CELL THERAPY CHAIRMEN- PIERRE HARDOUIN (Boulogne sur Mer, France) & HARI REDDI (California, USA) |
| 9.00 am - 9.30 am | INVITED LECTURE -1 PAMELA ROBEY National Institutes of Health/NIDCR, Bethesda Maryland, USA SKELETAL (AKA "MESENCHYMAL") STEM CELLS: HOW CAN WE MAKE THEM WORK FOR US? |
| 9.30 am - 9.45 am | Jon Dawson Bone Marrow Stromal Cells and Biomimetic Collagen-Hydroxyapatite Scaffolds for Skeletal Tissue Engineering (Abstract 48): <i>Bone and Joint Research Group, University of Southampton, United Kingdom, Department of Materials, Oxford University, UK.</i> |
| 9.45 am - 10.00 am | Kerong Dai Proliferation and osteoblastic differentiation of human mesenchymal stem cells under different perfusion flow rates (Abstract 25): <i>Department of Orthopaedics, Ninth People's Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, P.R.China</i> |
| 10.00 am - 10.15 am | James Gallagher Differential Growth of Human Osteoblastic Cells on HA and TCP with Different Surface Charge (Abstract 37): <i>Department of Human Anatomy & Cell Biology, University of Liverpool, UK</i> |
| 10.15 am - 10.30 am | Gang Li Repair critical-sized bone defect in rabbit using different resorbable silicon stabilized HA/TCP bioceramics combined with fresh bone marrow cells (Abstract 18): <i>Department of Orthopaedic Surgery, Queen's University Belfast, Belfast, UK</i> |
| 10.30 am - 11.00 am | Coffee, Posters & Exhibits |
| SESSION 2 | TISSUE REGENERATION CHAIRMEN - JAMES TRIFFITT (Oxford, UK) & PAMELA ROBEY (Maryland, USA) |

| | |
|------------------------|---|
| 11.00am - 11.30 am | <p align="center">INVITED LECTURE 2 - A HARI REDDI</p> <p align="center">Orthopaedic Surgery, UC Davis School of Medicine, University of California at Davis, Davis, California, USA</p> <p align="center">ARTICULAR CARTILAGE REGENERATION : SIGNALS, STEM CELLS and SCAFFOLDS</p> |
| 11.30 am - 11.45 pm | <p align="center">Aurelie Quintin</p> <p>Fetal spine cells for intervertebral disc regeneration: Preliminary characterization (Abstract 17); Laboratory of Biomechanical Orthopedics EPFL-HOSR, Swiss Federal Institute of Technology Lausanne, Switzerland</p> |
| 11.45 am - 12.00 pm | <p align="center">Amir Haze</p> <p>In vivo bone, Periodontal Ligament and Cementum Regeneration, Using a Recombinant Human Amelogenin Protein- Possible Biological Mechanisms (Abstract 2); <i>Hebrew University - Hadassah, Jerusalem, Israel</i></p> |
| 12.00 PM - 2.00 PM | LUNCH, POSTERS AND EXHIBITS |
| S E S S I O N 3 | <p>BIOMATERIALS CHAIRMEN - JACQUES LEMAITRE (Lausanne, Switzerland & JAN CZERNUSZKA (Oxford, UK)</p> |
| 2.00 pm - 2.30 pm | <p align="center">INVITED LECTURE - 3 JAN CZERNUSZKA</p> <p align="center">Department of Materials, University of Oxford, Parks Road, Oxford, UK BIOMATERIALS:SCAFFOLDS FOR TISSUE REGENERATION</p> |
| 2.30 PM - 2.45 PM | <p align="center">Xin Zhao</p> <p align="center">Injectable Biodegradable Poly (ester-co-ether) Methacrylate Monomers for Bone Tissue Engineering and Drug Delivery Applications (Abstract 3); <i>Biomaterials and Tissue Engineering Division, UCL Eastman Dental Institute</i></p> |
| 2.45 PM - 3.00 PM | <p align="center">Christele Combes</p> <p align="center">Calcium carbonate cements in vitro and in vivo: influence of the liquid phase composition (Abstract 21); <i>CIRIMAT UMR UPS-INPT-CNRS 5085, ENSIACET, 118 route de Narbonne, France</i></p> |
| 3.00 PM - 3.15 PM | <p align="center">Tingting Tang</p> <p align="center">Bioactive glass /nano-HA gradient coating on metal substrate (Abstract 24); <i>Department of Orthopaedic Surgery, Shanghai Ninth People's Hospital, Shanghai Jiaotong University School of Medicine, Shanghai 200011, China</i></p> |
| 3.15 PM - 3.30 PM | <p align="center">Tobias Brunner</p> <p align="center">Comparison of amorphous TCP nanoparticles to micron-sized α-TCP as starting materials for calcium phosphate cements (Abstract 15); <i>Institute for Chemical and Bioengineering, Department of Chemistry and Applied Biosciences, ETH Zurich, CH-8093 Zurich, Switzerland</i></p> |
| 3.30 PM - 3.37 PM | <p align="center">Nihan Tuncer</p> <p align="center">Production of titanium foams for implant applications (Abstract 32); <i>Department of Materials Science and Engineering, Anadolu University, Turkey</i></p> |
| 3.37 PM - 4.00 PM | Coffee, Posters & Exhibits |
| S E S S I O N 4 | <p>TISSUE GROWTH FACTORS CHAIRMAN - GRAHAM RUSSELL (Oxford, UK) & ALAN BOYDE (London, UK)</p> |
| 4.00 pm - 4.30 pm | <p align="center">INVITED LECTURE - 4 KUBER T. SAMPATH</p> <p align="center">Discovery Research Initiative, Genzyme Corporation, One Mountain Road, Framingham, MA, USA GROWTH FACTOR STIMULATION OF REGENERATION IN THE MUSCULOSKELETAL SYSTEM</p> |

| | |
|---------------------|---|
| 4.30 PM - 4.45 PM | Gary Balian Bone targeting peptides potentiate osteogenesis (Abstract 9); <i>University of Virginia, Department of Orthopaedic Surgery, PO Box 801016, Charlottesville, VA 22908</i> |
| 4.45 PM - 5.00 PM | Monika Rumpfer Impact of a three-dimensional hydroxylapatite scaffold on differentiation of osteoblasts and tissue formation in vitro (Abstract 4); <i>Max Planck Institute of Colloids and Interfaces, Department of Biomaterials, Potsdam, Germany</i> |
| 5.00 PM - 5.30 PM | GENERAL ASSEMBLY OF GRIBOI AGM - FOR ALL REGISTRANTS TO THIS MEETING |
| 5.30 PM | CLOSE OF FIRST DAY |
| 6.45 PM FOR 7.30 PM | RECEPTION IN THE JCR LOUNGE WITH EARLY ENGLISH MUSIC PROVIDED BY <i>DOWNWIND</i> |
| 7.30 PM | CONFERENCE DINNER |

TUESDAY 3RD APRIL 2007

| | |
|---------------------|---|
| SESSION 5 | CLINICAL AND BIOMECHANICAL FEATURES CHAIRMEN - K.DAI (Shanghai, China) & MARC BOHNER (Bettlach, Switzerland) |
| 8.50 am - 9:10 am | INVITED LECTURE - 5 JEREMY FAIRBANK Nuffield Department of Orthopaedic Surgery, Nuffield Orthopaedic Centre, Oxford, UK CLINICAL REQUIREMENTS FOR SPINAL BIOMATERIALS RESEARCH |
| 9.10 am - 9.30 am | INVITED LECTURE - 6 GAMAL BAROUD Universite de Sherbrooke, Faculté de génie, Département de génie mécanique, 2500 boul. Université, Sherbrooke, QC, Canada BIOMECHANICAL RESEARCH AT THE INTERFACE OF ENGINEERING AND MEDICINE-CEMENT AUGMENTATION OF OSTEOPOROTIC BONE |
| 9.30 am - 9.45 am | Vassilis Likomitros Biomaterial injection under local anesthesia in a case of spinal compression fracture (Abstract 23); <i>3rd Department of Orthopaedics, Aristotle University, Thessaloniki, Greece</i> |
| 9.45 am - 10.00 am | Hakan Engqvist An injectable high strength bioceramic for treatment of vertebral compression fractures (Abstract 16); <i>Doxa AB, Uppsala, Sweden and Materials Science Department, The Angstrom Laboratory, Uppsala University, Sweden</i> |
| SESSION 6 | B I O - I M A G I N G CHAIRMEN - ZHANFENG CUI (Oxford, UK) & RICHIE GILL (Oxford, UK) |
| 10.00am - 10.30 am | INVITED LECTURE - 7 RALPH MULLER Ralph Mueller, Institute for Biomechanics, ETH Zurich, Moussonstrasse 18, 8092 Zurich, Switzerland HIERARCHICAL MICRO-IMAGING IN BIOMATERIALS RESEARCH AND TISSUE REGENERATION |
| 10.30 am - 10.45 am | INVITED LECTURE 8 ALAN BOYDE Biophysics OGD, Queen Mary, University of London, Dental Institute, New Rd., London, UK HIGHER ARCHICAL IMAGING OF BIOMATERIAL - TISSUE INTERACTIONS |
| 10.45 am - 11.15 am | Coffee, Posters & Exhibits |

| | |
|------------------------|---|
| 11.15 AM - 11.30 AM | <p style="text-align: center;">Jianping Wu</p> <p>3D Study of Microstructure of Articular Cartilage for Development of a Real Time Histology for Articular Cartilage (Abstract 29); <i>3D Image Laboratory, School of Mechanical Engineering, the University of Western Australia, Australia</i></p> |
| 11.30 AM - 11.45 AM | <p style="text-align: center;">Uday Tirlapur</p> <p>High Resolution 3D Resolved Non Invasive In situ Nonlinear Optical Imaging (NLOI) of Ex Vivo Tissues and Various Scaffolds Adopted for Tissue Engineering Applications with Human Mesenchymal Stem Cells (Abstract 36); <i>Oxford Centre for Tissue Engineering and Bioprocessing, University of Oxford, UK</i></p> |
| S E S S I O N 7 | <p style="text-align: center;">PHARMACEUTICAL AGENTS AFFECTING BONE METABOLISM CHAIRMEN - KUBER SAMPATH (Massachusetts, USA) & JEREMY FAIRBANK (Oxford, UK)</p> |
| 11.45 am - 12.15 pm | <p style="text-align: center;">INVITED LECTURE - 9 GRAHAM RUSSELL</p> <p>The Botnar Research Centre and Oxford University Institute of Musculoskeletal Sciences, Nuffield Department of Orthopaedic Surgery, Nuffield Orthopaedic Centre, Oxford, UK BISPHOSPHONATES AND TISSUE RESTORATION CURRENT & FUTURE OPPORTUNITIES</p> |
| 12:15 pm - 12:30 pm | <p style="text-align: center;">Pascal Janvier</p> <p>Characterization of new injectable biomaterials containing bisphosphonates (Abstract 20); <i>Université de Nantes, UMR 6513, 2 rue de la Houssinière - BP 92208 - 44322 Nantes Cedex 3 - France</i></p> |
| 12.30 PM - 2.25 PM | LUNCH, POSTERS AND EXHIBITS |
| 2.25 pm - 2.30 pm | GRIBOI-MONTREAL-2008 |
| S E S S I O N 8 | <p style="text-align: center;">ENGINEERING SCIENCE AND ORGAN RECONSTRUCTION CHAIRMEN - G BAROUD (Sherbrooke, Canada) & RALPH MUELLER (Zurich, Switzerland)</p> |
| 2.30 pm - 3.00 pm | <p style="text-align: center;">INVITED LECTURE - 10 RICHIE GILL</p> <p>Oxford Orthopaedic Engineering Centre, Nuffield Department of Orthopaedic Surgery, Nuffield Orthopaedic Centre, Oxford, UK ENGINEERING REQUIREMENTS FOR TISSUE REPLACEMENT</p> |
| 3.00 PM - 3.15 PM | <p style="text-align: center;">Michael Liebschner</p> <p>Biomechanical efficacy of intervertebral disc augmentation (Abstract 10); <i>Department of Bioengineering, Rice University, Houston, TX, USA</i></p> |
| 3.15 PM - 3.30 PM | <p style="text-align: center;">Gamal Baroud</p> <p>Geometric and Fluid Transport Analysis of Calcium-Phosphate Scaffolds (Abstract 47); <i>Biomechanics Laboratory, Sherbrooke University, Sherbrooke, Quebec, Canada</i></p> |
| 3.30 PM - 3.45 PM | <p style="text-align: center;">Jaroslav Wasikiewicz</p> <p>The new packaging systems for implantable electronic devices (Abstract 30); <i>IRC in Biomedical Materials, University of London, UK</i></p> |
| 3.45 PM - 4.00 PM | <p style="text-align: center;">Mark Thompson</p> <p>Mechanical characterisation of the Bioflex® system (Abstract 64); <i>Department of Engineering Science, University of Oxford, Oxford, UK</i></p> |
| 4.00 PM - 4.05 PM | POSTER AND ORAL AWARDS |
| 4 . 0 5 P M | CLOSE OF MEETING |