GRIBOI Congress

20th Interdisciplinary Research Conference on Injectable Biomaterials

25-27 March 2010
Turin - Italy

Congress venue:
AUDITORIUM
FONDAZIONE SANDRETTO RE REBAUDENGO
Via Modane, 16 a - 10141 Turin (Italy)
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Email: info@griboicongress.org
### Scientific Committee

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<tr>
<th>Giovanni Carlo Anselmetti</th>
<th>Antonio Manca</th>
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<td>Giuseppe Bonaldi</td>
<td>Daniele Regge</td>
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<td>Giovanni Gandini</td>
<td>Enrica Vernè</td>
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<td>Giancarlo Isaia</td>
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### Organizing Committee

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<tr>
<th>Gabriele Chiara</th>
<th>Gabriella Iussich</th>
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### Scientific Board

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<tr>
<th>Giovanni Carlo Anselmetti</th>
<th>Salvatore Masala</th>
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<tr>
<td>Gamal Baroud</td>
<td>Nouredine Sahraoui</td>
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<td>Marc Bohner</td>
<td>Patrick Sharrok</td>
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<td>Enrica Vernè</td>
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Dear Collegues,

it is our great pleasure to invite you to attend the 20th GRIBOI Congress in Turin following our successful congress in La Martinique (France) which was chaired by Prof. Hervé Deramond, the father of vertebroplasty.

The GRIBOI (Groupe de recherche interdisciplinaire sur les biomatériaux ostéo-articulaires injectables) was informally started in 1980 by a group of French physicians and it was focused on minimally invasive bone therapies using Injectable bone substitutes.

Even after 20 years, this topic continues to be the major focus of the GRIBOI conference and a research theme of several international research groups. Thousands of patients have already benefited from minimally invasive bone treatments and many major Companies have been built to develop new materials for these applications.

We are privileged to host 2010 GRIBOI Congress and we look forward to welcome you in Turin.

Giovanni Carlo Anselmetti
Thursday, 25 March 2010

8:00-8:30  Welcoming and Registration

8:30-9:00  Opening
Maria Teresa Flecchia - Paolo Maria Comoglio
Institute for Cancer Research and Treatment - Candiolo (Turin) - Italy

SESSION 1 – OSTEOPOROSIS
Chairmen: Giancarlo Isaia - Kieran Murphy
Giangiacomo Osella - Paolo Rossi
9:00-9:30  Osteoporosis and Vertebral compression fractures
Fergus E. McKiernan
9:30-10:00  Vertebroplasty, inception and initial ideas
Harvé Deramond - John Mathis
10:00-10:30 Questions, Answers & Comments

10:30-11:00  Coffee Break

SESSION 2 – BIOMATERIALS
Chairmen: Gamal Baroud - Marc Bohner
Nouredine Sahraoui - Enrica Verné
11:00-11:20  Stones and bones: new inorganic strategies for bone repair
Jake Barralet
11:20-11:40  Complex nanocomposites for bone regeneration
Antoni P. Tomsia
11:40-12:00  Surface Activated Particles for Magnetic Drugs Targeting
Enrica Verné
12:00-12:30 Questions, Answers & Comments

12:30-13:00  GRIBOI General Assembly

13:00-14:30  Lunch, Posters & Technical Exhibition
**SESSION 3 – VERTEBROPLASTY**

Chairmen: Giuseppe Bonaldi - Alexis Kelekis
Gianluca Maestretti - Kieran Murphy

14:30-14:50 **Biomechanics in vertebroplasty**
Gamal Baroud

14:50-15:10 **Results and complications in vertebroplasty**
John Mathis

15:10-15:30 **Augmentation in a Post-NEJMC RCT world**
Joshua Hirsch

15:30-15:50 **Vertebroplasty versus kyphoplasty**
John Mathis

15:50-16:10 **New device for kyphoplasty**
Mario Muto

16:10-16:30 Questions, Answers & Comments

16:30-17:00 *Coffee Break*

17:00-19:00

**SESSION 4 – SCIENTIFIC COMMUNICATIONS (BIOMATERIALS)**

Chairmen: Jake Barralet - Marc Bohner
Nouredine Sahraoui - Antoni P. Tomsia

**SETTING TIME AND INITIAL COMPRESSIVE STRENGTH OF A RADIO-OPAQUE PREMIXED CALCIUM PHOSPHATE CEMENT**
J. Åberg, C. Persson, G. Hulsart, P. Thomsen, H. Brisby, H. Engqvist

**A NEW METHOD FOR CHARACTERIZING THE INJECTABILITY PROPERTIES OF HYDRAULIC BONE CEMENTS**
V. Krüger, C. Ehrenborg, E. Lidén

**IN-VITRO STUDY OF CALCIUM PHOSPHATE-CALCIUM CARBONATE INJECTABLE CEMENT LOADED WITH STRONTIUM AS SUSTAINED RELEASE SYSTEM**
S. Tadier, S. Cazalbou, O. Marsan, C. Rey, C. Combes

**OSTEOGENIC PROPERTIES OF ZN AND ZNSR-SUBSTITUTED BRUSHITE CEMENTS**
S. Pina, S.I. Vieira, P.M.C. Torres, S. Kannan, E.F. da Cruz e Silva, J.M.F. Ferreira
INJECTABLE BIODEGRADABLE COMPOSITES FOR THE DEGENERATED INTERVERTEBRAL DISC
A. López, C. Persson, J. Hilborn, H. Engqvist

NEW BISPHOSPHONATE-LOADED CALCIUM PHOSPHATE CEMENT FOR THE LOCAL TREATMENT OF OSTEOPOROSIS: DESIGN AND CHARACTERIZATION
V. Schnitzler, P. Janvier, J.-M. Bouler, C. Despas, A. Walcarius, F. Fayon, G. Montavon, D. Massiot, C. Mellier, B. Bujoli

AUGMENTATION OF BURST FRACTURES - PART 1: DESIGNING AN OPTIMUM CALCIUM PHOSPHATE CEMENT

AUGMENTATION OF BURST FRACTURES - PART 2: MECHANICAL PROPERTIES OF AUGMENTED SPECIMENS

GALLIUM: A PROMISING CANDIDATE FOR A NEW BONE BIOACTIVE DRUG DELIVERY SYSTEM

IN-SITU INVESTIGATION OF TEMPERATURE INFLUENCE ON $\alpha$-TCP CEMENT HYDRATION
F. Goetz-Neunhoeffer, J. Neubauer, F. Deschner

20:30-23:00 Social Dinner
Friday, 26 March 2010

**SESSION 5 – TUMORS**

Chairmen: Massimo Aglietta - Giovanni Gandini
Alexis Kelekis - Daniele Regge

9:00-9:20 **Bone Metastases: Clinical Relevance and Treatment**
Cinzia Ortega

9:20-9:40 **Vertebroplasty in the metastatic spine**
Jacques Chiras

9:40-10:00 **Combined treatment in bone cancer**
Afshin Gangi

10:00-10:30 Questions, Answers & Comments

10:30-11:00 **Coffee Break**

11:00-12:30 **SESSION 6 – SPONSORED WORKSHOPS**

Discussants: Cosma Andreula - Alexis Kelekis
Gamal Baroud - Gianluca Maestretti
Jake Barralet - Stefano Marcia
Stephan Becker - John Mathis
Marc Bohner - Luigi Manfré
Giuseppe Bonaldi - Fergus E. McKiernan
Jacques Chiras - Kieran Murphy
Harvé Deramond - Mario Muto
Thomas Faciszewski - Cinzia Ortega
Afshin Gangi - Nouredine Sahraoui
Bassem A. Georgy - Antoni P. Tomsia
Joshua Hirsch - Enrica Verné

11:00-12:30 Questions, Answers & Comments on Recorded LIVE cases

12:30-14:00 **Lunch, Posters & Technical Exhibition**
NOVEL INTEGRATED APPROACHES IN VERTEBROPLASTY WITH UNIPEDICULAR ASPIRATION
S. Becker, F. Poulin, J. Adam-Côté, D. Imbeault, G. Baroud

A REVIEW OF MODERATE CONSCIOUS SEDATION AND MONITORED ANESTHESIA CARE IN 477 PATIENTS UNDERGOING PERCUTANEOUS VERTEBROPLASTY
T.A. Farrell

FEMOROPLASTY USING AN INJECTABLE AND RESORBABLE CALCIUM PHOSPHATE BISPHOSPHONATE LOADED BONE SUBSTITUTE BY MINI-INVASIVE TECHNIQUE TO PREVENT CONTRA-LATERAL HIP FRACTURE IN THE ELDERLY: A CADAVERIC BIOMECHANICAL STUDY
T. Amphoux, S. Parratte, S. Kolta, O. Gagey, W. Skalli, J.-M. Bouler, J.-N. Argenson

POSTOPERATIVE TREATMENT COSTS AFTER CEMENTOPLASTY, A COMPARATIVE ANALYSIS TO CONSERVATIVE TREATMENT AFTER OSTEOPOROTIC VERTEBRAL FRACTURES
S. Becker, K. Pfeiffer

KYPHX HV-R, ACTIVOS TM AND KYPHOS TM IN VERTEBROPLASTIC AND KYPHOPLASTIC PROCEDURES
M. Dragani, A. Occhiocupo, S. Fantini

EFFICACY OF PERCUTANEOUS VERTEBROPLASTY WITH CALCIUM SOLFATE: A PRELIMINARY EXPERIENCE
S. Marcia, M. Dragani, S. Marini, C. Boi, E. Piras, M. Marras, G. Mallarini

PERCUTANEOUS ANTERIOR COLUMN STABILIZATION OF FOCAL METASTATIC LESIONS OF THE SPINE: THE VALUE OF PLASMA-MEDIATED RADIOFREQUENCY ABLATION BEFORE CEMENT INJECTION
B.A. Georgy

PERCUTANEOUS VERTEBROPLASTY FOR OSTEOPOROTIC FRACTURES: EXPERIENCE WITH HIGH VISCOSITY CEMENT USING A HYDROLIC INJECTION DEVICE, THE “CONFIDENCE” SYSTEM
B.A. Georgy

VERTEBROPLASTY WITH CONTROLLED CEMENT VISCOSITY REDUCES LEAKAGE
F. Tancioni, R. Rodriguez y Banea

SUITEABILITY OF A CALCIUM ALUMINATE CERAMIC IN BALLOON-KYPHOPLASTY OF OSTEOPOROTIC VERTEBRAL BODY FRACTURES. RESULTS OF A PROSPECTIVE CLINICAL TRIAL
T.R. Blattert, S. Glasmacher, C. Josten
**SESSION 8 – SPONSORED WORKSHOPS**

**Discussants:**
- Cosma Andreula
- Gamal Baroud
- Jake Barralet
- Stephan Becker
- Marc Bohner
- Giuseppe Bonaldi
- Jacques Chiras
- Harvé Deramond
- Thomas Faciszewski
- Afshin Gangi
- Bassem A. Georgy
- Joshua Hirsch
- Alexis Kelekis
- Gianluca Maestretti
- Stefano Marcia
- John Mathis
- Luigi Manfré
- Fergus E. McKiernan
- Kieran Murphy
- Mario Muto
- Cinzia Ortega
- Nouredine Sahraoui
- Antoni P. Tomsia
- Enrica Verné

15:30-16:30  Questions, Answers & Comments on Recorded LIVE cases

16:30-17:00  Coffee Break

17:00-19:00  

**SESSION 9 – SCIENTIFIC COMUNICATIONS (BIOMATERIALS)**

**Chairmen:**
- Gamal Baroud - Marc Bohner
- Stephan Becker - Enrica Verné

**RESORPTION SIMULATION OF POROUS SUBSTITUTES FOR BONE REPAIR**
M. Bashoor Zadeh, M. Bohner, G. Baroud

**CHARACTERIZATION OF POROUS CALCIUM PHOSPHATE SUBSTITUTES USING MICRO-COMPUTED TOMOGRAPHY AND FUZZY IMAGE PROCESSING METHODS**
M. Bashoor Zadeh, C. Stähli, N. Doebeлинx, M. Bohner, G. Baroud

**IN VIVO EVALUATION OF COTTON WOOL-LIKE AMORPHOUS-TCP/PLGA NANOCOMPOSITES**
O.D. Schneider, B. von Rechenberg, P.R. Schmidlin, F. Weber, W.J. Stark

**SILICON DOPED CALCIUM PHOSPHATE CEMENT: PHYSICO CHEMICAL PROPERTIES AND IN VITRO CELL RESPONSE**
G. Mestres, C. Le Van, M.P. Ginebra

**INFLUENCE OF SINTERING TEMPERATURE, SINTERING TYPE AND Ca/P RATIO ON INJECTABILITY OF CAP-BASED PASTES**
L. Galea, G. Baroud, M. Bohner

**LIGHT-CURABLE BIOACTIVE POLYMERIC COMPOSITE GLUES FOR BONE DEFECT TREATMENT**
A. Stepuk, O.D. Schneider, D. Mohn, W.J. Stark
INVESTIGATING THE EFFECT OF THE PERMEABILITY ON THE INJECTABILITY OF CALCIUM PHOSPHATE PASTES
M. Habib, F. Gitzhofer, M. Bohner, G. Baroud

PRINTABILITY OF TRICALCIUM PHOSPHATE POWDER FOR BONE TISSUE ENGINEERING SCAFFOLDS
A. Butscher, W. Hirsiger, N. Doebelin, M. Bohner, R. Müller

ACCURACY OF CEMENT DELIVERY WITH A MOTORIZED INJECTION SYSTEM WITH CEMENT CURING
F. Poulin, J. Adam-Côté, D. Imbeault, G. Baroud
Saturday, 27 March 2010

SESSION 10 – FUTURE TRENDS

Chairmen: Cosma Andreula - Afshin Gangi
Alexis Kelekis - Mario Muto

9:00-9:20 Injectable biomaterials: cements and scaffolds for tissue engineering
Sanjukta Deb

9:20-9:40 Prophylactic bone augmentation
Luigi Manfré

9:40-10:00 New trends in vertebral body augmentation
Kieran Murphy

10:00-10:20 Clefts, vertebroplasty, and future directions
Thomas Faciszewski

10:20-10:40 Cementoplasties, changed landscape and implication for the future
Stephan Becker

10:40-11:00 Questions, Answers & Comments

11:00-12:00 Final Remarks
Posters

INJECTABILITY OF Zn AND ZnSr-SUBSTITUTED \( \beta \)-TCP BRUSHITE FORMING CEMENTS
P.M.C. Torres, S. Pina, S. Kannan, J.M.F. Ferreira

SELF-HARDENING HYDROXYAPATITE FOAMS FOR MINIMAL INVASIVE BONE GRAFTING

THE STUDY OF CROSS-TALKING BETWEEN ERK AND SMAD PATHWAY IN CHONDROGENESIS OF MSCS INDUCED BY TGF-\( \beta \)3

DETAILED EXPERIMENTAL CHARACTERISATION OF THE MATERIAL BEHAVIOUR OF BONE CEMENT FOR A THERMOMECHANICAL-CHEMICALLY COUPLED MATERIAL MODEL
S. Kolmeder, A. Lion, R. Landgraf, J. Ihlemann, G. Baroud

INJECTABLE APATITE / BLOOD COMPOSITE: DEVELOPMENT AND CHARACTERIZATION
C. Mellier, B. Fellah, P. Janvier, I. Khairoun, B. Bujoli, T. Balaguer, N. Rochet, J. M. Bouler

THE USE OF CALCIUM CARBONATE CEMENTS AS A DRUG CARRIER
C. Persson, I. Ajaxon, J. Åberg, A. Mihranyan, H. Engqvist

CHARACTERISATION OF A SOUTH CHINA SEA CORALLINE HYDROXYAPATITE/CALCIUM CARBONATE AND ITS CLINICAL APPLICATION
K. Fu, J. T. Triffitt, Z. Xia

A CALCIUM SULPHATE / CALCIUM PHOSPHATE AS AN INJECTABLE, BIOACTIVE AND RESORBABLE BONE SUBSTITUTE
A. Bignon, F. Bouville, S. Meille, A. Martin, J. Chevalier

X-PRESS BKP: A PRELIMINARY EXPERIENCE
S. Marcia, S. Marini, E. Piras, C. Boi, M. Marras, G. Mallarini
VERTEBROPLASTY - RATIONALE (AUT IRRATIONALE?)
G. Salmè, S. Barbero, D. Salmè, L. Luberto, A. Rapellino, G. Gandini

CERAMENT: OSTEOCONDUCTIVE MATERIAL: USE IN VERTEBROPLASTIC AND KYPHOPLASTIC PROCEDURES
M. Dragani, A. Occhiocupo, S. Fantini

PERCUTANEOUS CEMENT AUGMENTATION FOR TREATMENT OF METASTATIC LESIONS OF THE SPINE AND PELVIS USING A NOVEL HIGHLY VISCOUS CEMENT: EXPERIENCE IN 17 CONSECUTIVE PATIENTS
B.A. Georgy
Faculty

Cosma Andreula  
Giovanni Carlo Anselmetti  
Gamal Baroud  
Jake Barralet  
Stephan Becker  
Marc Bohner  
Giuseppe Bonaldi  
Jacques Chiras  
Sanjukta Deb  
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Mario Muto  
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Antoni P. Tomsia  
Enrica Verné
Abstract submission

Deadline: January, 1st
Notice of acceptance: February, 1st

Registration Fees

- Regular registration
  by 01 February 2010  euro 250,00
- Student registration  euro 100,00
- Late registration  euro 400,00

Inscription

The inscription fee is to be paid to Fara Congressi S.r.l. through the bank as follows:
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20TH GRIBOI CONGRESS
ORGANIZING SECRETARIAT

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