

20th
GRIBOI Congress
Interdisciplinary Research
Conference on Injectable Biomaterials

25-27 March 2010
Turin - Italy



Congress venue:

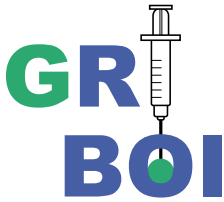
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Scientific Committee

Giovanni Carlo Anselmetti

Giuseppe Bonaldi

Giovanni Gandini

Giancarlo Isaia

Antonio Manca

Daniele Regge

Enrica Vernè

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Giovanni Carlo Anselmetti

Gamal Baroud

Marc Bohner

G. Maestretti

Antonio Manca

Salvatore Masala

Nouredine Sahraoui

Patrick Sharrok

Enrica Vernè

Invitation

Dear Colleagues,

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

R. O'Hara, S. Tarsuslugil, D. Barton, R. Wilcox, F. Buchanan, J. Orr, N. Dunne

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

S.M. Tarsuslugil, R. O'Hara, N. Dunne, F. Buchanan, J. Orr, D.C. Barton, R.K. Wilcox

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

E. Verron, M. Masson, S. Khoshniat, L. Duplomb, Z. Badran, B. Bujoli, P. Janvier, J.-C. Scimeca, J.-M. Bouler, J. Guicheux

IN-SITU INVESTIGATION OF TEMPERATURE INFLUENCE ON α -TCP CEMENT HYDRATION

F. Goetz-Neunhoeffler, J. Neubauer, F. Deschner

20:30-23:00 **Social Dinner**

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*

14:00-15:30

SESSION 7 – SCIENTIFIC COMMUNICATIONS (CLINICAL)

Chairmen: Stephan Becker - Afshin Gangi
Alexis Kelekis - Gianluca Maestretti

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. Boulter, 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

SUITABILITY 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

15:30-16:30

SESSION 8 – 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

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

16:30-17:00 *Coffee Break*

17:00-19:00

SESSION 9 – SCIENTIFIC COMMUNICATIONS (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. Doebelinx, 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. Böhner, G. Baroud

PRINTABILITY OF TRICALCIUM PHOSPHATE POWDER FOR BONE
TISSUE ENGINEERING SCAFFOLDS

A. Butscher, W. Hirsiger, N. Doebelin, M. Böhner, R. Müller

ACCURACY OF CEMENT DELIVERY WITH A MOTORIZED INJECTION
SYSTEM WITH CEMENT CURING

F. Poulin, J. Adam-Côté, D. Imbeault, G. Baroud

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*

INJECTABILITY OF Zn AND ZnSr-SUBSTITUTED β -TCP BRUSHITE FORMING CEMENTS

P.M.C. Torres, S. Pina, S. Kannan, J.M.F. Ferriera

SELF-HARDENING HYDROXYAPATITE FOAMS FOR MINIMAL INVASIVE BONE GRAFTING

E.B. Montufar, T. Traykova, E. Schacht, L. Ambrosio, M. Santin, J.A. Planell, M. P. Ginebra

THE STUDY OF CROSS-TALKING BETWEEN ERK AND SMAD PATHWAY IN CHONDROGENESIS OF MSCS INDUCED BY TGF- β 3

G.-H. Liu, J. Song, H. Guan, D. Zheng, W. Wu, S.-H. Yang

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	<i>Italy</i>
Giovanni Carlo Anselmetti	<i>Italy</i>
Gamal Baroud	<i>Canada</i>
Jake Barralet	<i>Canada</i>
Stephan Becker	<i>Austria</i>
Marc Bohner	<i>Switzerland</i>
Giuseppe Bonaldi	<i>Italy</i>
Jacques Chiras	<i>France</i>
Sanjukta Deb	<i>United Kingdom</i>
Harvé Deramond	<i>France</i>
Thomas Faciszewski	<i>USA</i>
Afshin Gangi	<i>France</i>
Joshua Hirsch	<i>USA</i>
Alexis Kelekis	<i>Greece</i>
Gianluca Maestretti	<i>Switzerland</i>
Antonio Manca	<i>Italy</i>
John Mathis	<i>USA</i>
Luigi Manfré	<i>Italy</i>
Fergus E. McKiernan	<i>USA</i>
Kieran Murphy	<i>Canada</i>
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Daniele Regge	<i>Italy</i>
Nouredine Sahraoui	<i>France</i>
Antoni P. Tomsia	<i>USA</i>
Enrica Verné	<i>Italy</i>

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

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20th GRIBOI Congress

Turin - Italy, 25-27 March 2010

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