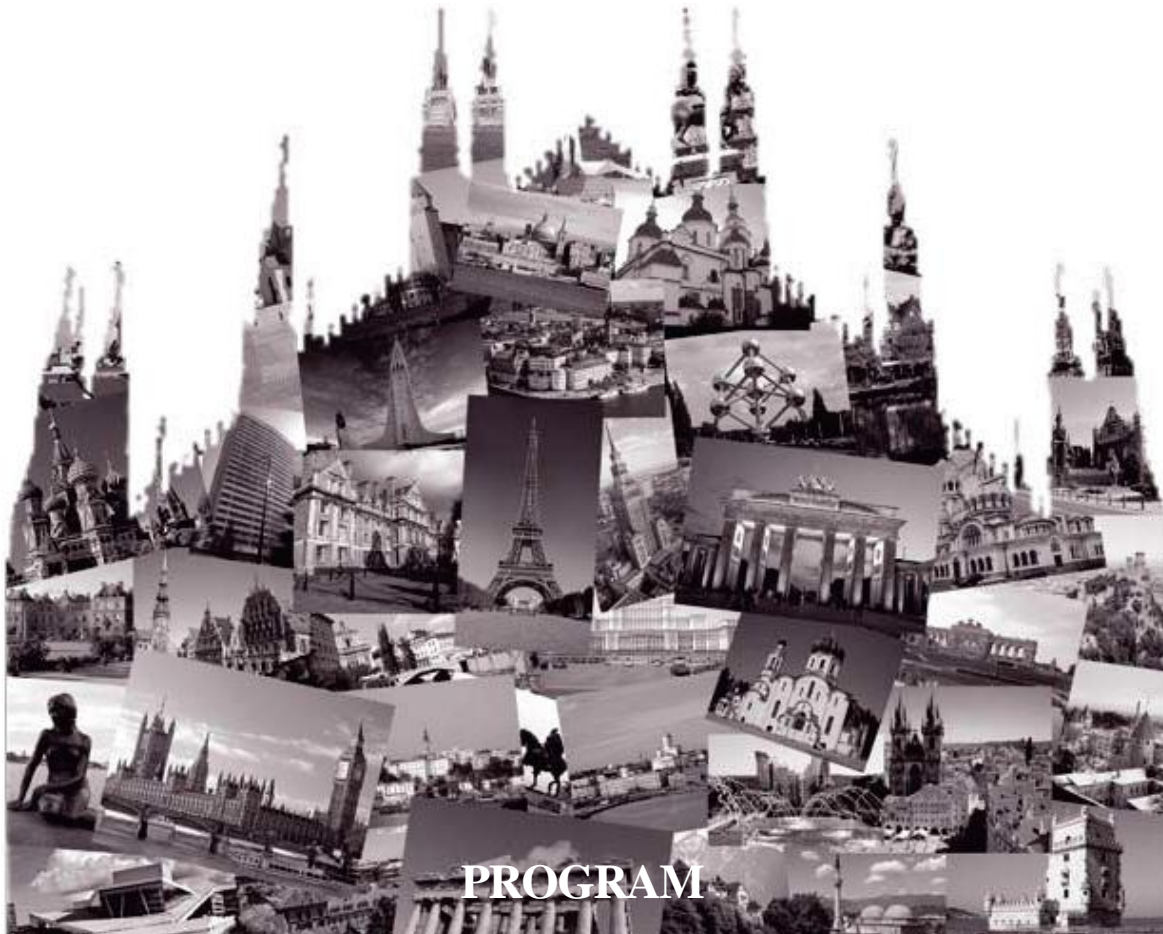




1st EUROPEAN CONGRESS

**“DEFINING A RECONSTRUCTION LADDER
FOR THE TREATMENT OF MUSCULOSKELETAL
CONDITIONS USING REGENERATIVE
APPROACHES:
A CONSENSUS CONFERENCE”**



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January 14-15-16, 2013 - Università degli Studi di Milano





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Norian Drillable

Dear Colleague, Dear Friend,

Over the years, there has been a lot of interest between the different European Countries and amongst the different Trauma & Orthopaedic European Societies to establish a common language and a common treatment approach for the management of clinical conditions associated with impaired bone healing;

For this reason, we are pleased to inform you that we have taken the executive decision to organize on January 14th to 16th 2013, in Milan Italy, the 1st European Congress on the development and definition of a reconstruction ladder for the treatment of musculoskeletal conditions using regenerative approaches.

We believe that this meeting will set the foundation for the establishment of a common aim to treat patients requiring regenerative approaches for both hard and soft tissue defects within the European Trauma and Orthopaedic community.

We are pleased to invite you to take part to the meeting to give your scientific contribution; in particular a Young Section (under 45 years old) is proposed to promote the involvement of young orthopaedic surgeons. It will be a great honour for us to have your support at the Congress. We are looking forward to hearing you as soon as possible. We would be pleased to meet you all in Milan.

Yours sincerely



Prof. Thierry Bégue

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Prof. Giorgio M. Calori

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Prof. Peter V. Giannoudis

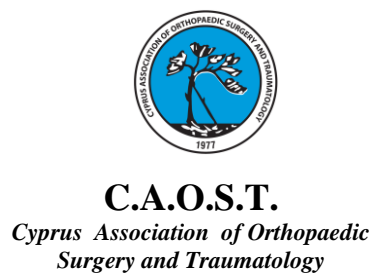
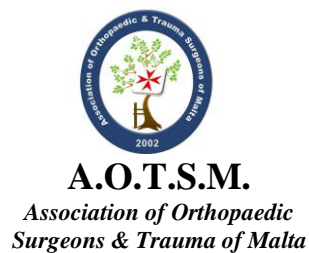
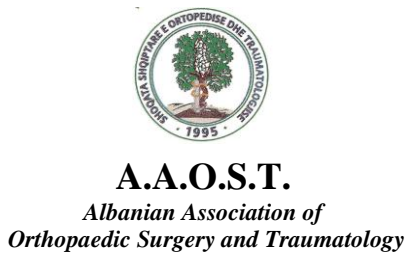
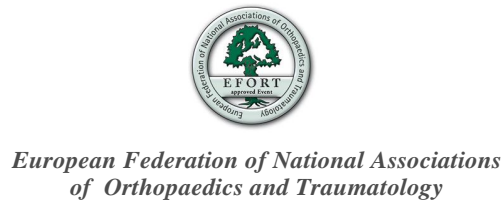
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Carlo Ambrogio Maria Ripamonti

SYNOPTIC TABLE

N. 14th	AULA MAGNA	AULA CROCIERA - 211	AULA LAUREE SCIENZE	AULA LAUREE MEDICINA
08.30-09.00	OPENING REMARKS - AULA MAGNA			
09.00-11.40	I SESSION: CARTILAGE	I SESSION: BONE		
09.00-09.10	Keynote Lecture (<i>P. Volpi</i>)	Keynote Lecture (<i>R. Accetta</i>)	AO Symposium	Commercial Workshop
09.10-10.10	E.B.M.	Keynote Lecture (<i>M.B. Gallazzi</i>)		
09.20-11.40		Thematic Lectures		
10.10-10.25	Lectio Magistralis (<i>M. Marcacci</i>)			
10.25-10.40	Lectio Magistralis (<i>R. Verdonk</i>)			
10.40-11.40	ROUND TABLE Reaching a Consensus		SITOD Symposium	
13.00-14.00			Workshop Olympus	
11.40-12.15	OPENING CEREMONY			
12.15-13.00	E.S.T.R.O.T. PRESENTATION - AULA MAGNA			
13.00-14.00	<i>lunch</i>			

JAN. 14th	AULA MAGNA	AULA CROCIERA - 211	AULA LAUREE SCIENZE	AULA LAUREE MEDICINA
14.00-18.50	II SESSION: BONE NON UNION WITHOUT BONE DEFECT	II SESSION: CARTILAGE		Commercial Workshop
14.00-14.10	Keynote Lecture (<i>G.F. Zinghi</i>)	Keynote Lecture (<i>G. Bentley</i>)	AITOG Symposium	
14.10-14.20	Keynote Lecture (<i>G.M. Calori</i>)	Keynote Lecture (<i>M. Ronga</i>)		
14.20-14.30	Keynote Lecture (<i>P.V. Giannoudis</i>)	Keynote Lecture (<i>A. Zerbi</i>)		
14.30-15.50	E.B.M.	Thematic Lectures		
14.40-14.50				
14.50-16.40				
15.00-16.00				
15.50-17.00	ROUND TABLE Reaching a Consensus		AIP-ESPA Symposium	
16.00-18.00				
16.40-18.40		III SESSION: RESEARCH		
16.40-16.50		Keynote Lecture (<i>A. Pace</i>)		
16.50-17.00		Thematic Lectures		
17.00-19.00		Thematic lectures		
18.00-19.00				

JAN. 15th	AULA MAGNA	AULA CROCIERA - 211	AULA LAUREE SCIENZE	AULA LAUREE MEDICINA
09.00-13.00	III SESSION: BONE DEFECT	IV SESSION: SOFT TISSUE		
09.00-09.10	Keynote Lecture (<i>A.M. Phillips</i>)	Keynote Lecture (<i>F. Benazzo</i>)		Commercial Workshop
09.10-10.10	E.B.M.	Thematic lectures		
10.10-10.25	Lectio Magistralis (<i>P.V. Giannoudis</i>)			
10.25-10.40	Lectio Magistralis (<i>T. Bégué</i>)			
10.30-13.00			Bayer Symposium	
10.30-10.40				
10.35-13.00			V SESSION: MISCELLANEOUS	
10.35-10.45		Keynote Lecture (<i>C.L. Romanò</i>)		
10.40-10.55	Lectio Magistralis (<i>R. Capanna</i>)			
10.45-13.00	ROUND TABLE Reaching a Consensus	Keynote Lecture (<i>D. Marsh</i>) Thematic Lectures		
10.55-13.10				
11.50-13.10	Thematic lectures			
12.15-13.15			Workshop Olympus	
13.10-14.00	<i>lunch</i>			

JAN. 15th	AULA MAGNA	AULA CROCIERA - 211	AULA LAUREE SCIENZE	AULA LAUREE MEDICINA	
14.00-16.10	IV SESSION: ECONOMIC FEASABILITY				
14.00-14.15	Lectio Magistralis (<i>L. Bresciani</i>)				
14.15-14.30	Lectio Magistralis (<i>P. Hoffmeyer</i>)				
14.30-14.45	Lectio Magistralis (<i>M. Oren, H. Mairov</i>)		GIS Symposium		
14.45-15.00	Lectio Magistralis (<i>H. Mizuno, D. Dembski, F. Kemmerich</i>)				
15.00-15.15	Lectio Magistralis (<i>S. Dompé</i>)				
15.15-15.30	Lectio Magistralis (<i>L. Pani</i>)				
15.30-16.10	ROUND TABLE				
16.00-17.30				GISTIO Symposium	
16.10-19.00		VI SESSION: Traditional Techniques and Biotechnologies			
16.10-17.40	V SESSION: BONE				
16.10-16.25	Lectio Magistralis (<i>G. Schmidmaier</i>)				
16.10-16.20		Lectio Magistralis (<i>F. Pipino</i>)			
16.20-19.00		Thematic lectures			
16.25-16.40	Lectio Magistralis (<i>G.M. Calori</i>)				
16.40-17.40	Thematic lectures				
17.30-18.15			1° Starter Symposium Multicentrica		
17.40-19.00	VI SESSION: MISCELLANEOUS				
17.40-17.50	Keynote Lecture (<i>A. Piccioli</i>)				
17.50-18.50	Thematic lectures				
18.50-19.00	Keynote Lecture (<i>C. Conti</i>)				

JAN. 16th	AULA MAGNA	AULA CROCIERA - 211	AULA LAUREE SCIENZE	AULA LAUREE MEDICINA
08.30-10.00			SICM Symposium	
09.00-11.00	VII SESSION: RESEARCH “What’s new? PRP, Substitutes, Nanotechnology...”	VII SESSION: BONE – NECROSIS & CYSTS		
09.00-09.10	Keynote Lecture (<i>E. Kon</i>)	Keynote Lecture (<i>J. Vaquero</i>)		Commercial Workshop
09.10-09.20	Keynote Lecture (<i>P.V. Giannoudis</i>)	Thematic lectures		
09.20-09.30	Keynote Lecture (<i>U. Tarantino</i>)			
09.30-09.40	Keynote Lecture (<i>A.Moghaddam</i>)			
09.40-09.50	Keynote Lecture (<i>A. Blom</i>)			
09.50-10.00	Keynote Lecture (<i>N. Kanakaris</i>)			
10.00-11.00	Round Table: Scaffold			
10.50-13.00		VIII SESSION: Legal and Juridic Instructional Course		
10.50-11.00		Keynote lecture (<i>F.M. Donelli</i>)		
11.00-13.10	VIII SESSION: RESEARCH			
11.00-11.10	Keynote Lecture (<i>W. Schneiders</i>)	Keynote lecture (<i>L. Polo</i>)		
11.10-11.25	Lectio Magistralis (<i>S. Giannini</i>)	ROUND TABLE Reaching a consensus		
11.25-11.40	Lectio Magistralis (<i>M. d’Imporzano</i>)			
11.40-13.10	Thematic lectures			
12.00-13.20				
13.20-14.00	<i>lunch</i>			

JAN. 16th	AULA MAGNA	AULA CROCIERA - 211	AULA LAUREE SCIENZE	AULA LAUREE MEDICINA
13.55-18.00	IX SESSION: SOFT TISSUES			
13.55-14.05	Keynote Lecture (<i>G.M. Peretti</i>)			
14.00-16.10		IX SESSION: BONE	CIO Symposium	Commercial Workshop
14.05-14.15	Keynote Lecture (<i>P. Rebullà</i>)			
14.15-14.25	Keynote Lecture (<i>C. Verdoia</i>)			
14.25-14.40	Lectio Magistralis (<i>M. L. Brandi</i>)			
14.40-15.30	E.B.M.			
15.30-16.30	Round Table (Reaching a Consensus) Nanotechnology			
16.00-17.00		X SESSION: RESEARCH (7 minutes each talk)	FONDAZIONE FILARETE	
16.20-17.20				
16.30-16.45	Lectio Magistralis: (<i>M. Klinger</i>)			
16.45-18.00	Thematic lectures			
17.20-18.50		XI SESSION: RESEARCH (7 minutes each talk)		
18.50-19.00	CLOSING REMARKS AND CEREMONY			

08.00 **Registration**

08.30 **Opening Remarks**

I SESSION: CARTILAGE - "What's alternative to mosaicoplasty?"

Moderators: G. Bentley, L. Gala, L. Polli, M. Ronga, R. Verdonk, V. Zottola

09.00 **Keynote Lecture: Treatment of cartilage lesions: current status**

P. Volpi

09.10 **E.B.M. (Evidence-Based Medicine)**

- (1) Classification (*P. Adravanti*)
- (2) Mosaicoplasty (*C. Zorzi*)
- (3) Autologous chondrocyte implantation (*F. Forriol*)
- (4) Allograft (*G. Filardo, E. Kon*)
- (5) Growth factors in cartilage lesions (*C. Ripamonti*)
- (6) Combine therapies (BMPs - cells, etc.) (*E. Guerado*)

10.10 **Lectio Magistralis: My philosophy in cartilage reconstruction**

M. Marcacci

10.25 **Lectio Magistralis: indication and limits of meniscus allograft**

R. Verdonk

10.40 **Round Table - Cartilage**

F. Benazzo, G. Bentley, M. Berruto, P. Cabitza, F. Forriol, P. Hoffmeyer,

11.40 **Opening Ceremony**

G.M. Calori, A. Tropiano, R.C. Rossi, M. Melazzini, G. Vago, P. Cherubino, M. d'Imporzano, P. Hoffmeyer

12.15 **E.S.T.R.O.T. Presentation**

(European Society of Tissue Regeneration in Orthopaedics and Traumatology)

13.00 **Lunch**

II SESSION: BONE - "Non Union without bone defect"

Moderators: T. Bégué, A. Corradi, I.M. Gavrankapetanovic, E. Malagoli, E. Mazza, G. Schmidmaier

14.00 **Keynote Lecture: Current management of non-unions without bone defect (to give an overview of all treatment options and what is common practice)**

G. F. Zinghi

14.10 **Keynote Lecture: Non Union Scoring System**

G. M. Calori

14.20 **Keynote Lecture: The Diamond Concept**

P. Giannoudis

14.30 **E.B.M. (Evidence-Based Medicine)**

- (1) Autologous bone grafting (*T. Bégué*)
- (2) RIA (*T. Blokhuis*)
- (3) Cellular therapies (*P. Hernigou*)
- (4) Allograft – Demineralized bone matrix (*G. Drosos, D.A. Verettas*)
- (5) BMPs (*H. Simpson*)
- (6) Autograft vs BMP in non union (*G. Zimmermann*)
- (7) BMP vs PRP in the treatment of long bone non unions (*M. Colombo*)

15.50 **Round Table Discussion (Reaching a consensus)**

P. De Biase, F. Falez, P. Gallinaro, P. Giannoudis, E. Jones, M. Phillips, P. Regazzoni, O. Roise, M. Ronga, W. Schneiders, C. Verdoia

17.00 **Thematic Lectures**

Moderators: M. Berlusconi, G. Guida, N. Kanakaris, E. Mazza, F. Randelli, F. Wagner

- (1) Non union risk factors (*A. Meersseman*)
- (2) Is the time of healing of a fracture predictable? The A.R.C.C.O project (*D. Perugia*)
- (3) Which kind of mechanical stability? How to do (*P. Regazzoni*)
- (4) Autologous bone grafting (*M. Phillips*)
- (5) Tips and tricks in the management of non-union of supracondylar femoral fractures (*E. Panagiotopoulos*)
- (6) Biological potential of autologous bone grafting (*C. Josten*)
- (7) BMP-7 in clinical application: results from the German BMP database project (*F. Wagner*)
- (8) Non-Union: Rates and Causes, data from 4500 patients (*H. Simpson*)
- (9) Cells and BMPs in non union (*G. Zimmermann*)
- (10) The growth factor choice in the treatment of non union (*M. Ronga, G. Zappalà, P. Cherubino*)
- (11) Osi-graft and resistant long bone non unions : when it works and what we learned (*L. Obert*)

19.00 **End of the day**

I SESSION: BONE

Moderators: *M. D'Arienzo, F. Grassi, E. Lanzani, T. Mascitti, L. Tagliabue*

09.00 **Keynote Lecture: Epidemiology: Factors contributing to non union**

R. Accetta

09.10 **Keynote Lecture: Choice of radiological investigations: diagnostic work up**

M. B. Gallazzi

09.20 **Thematic Lectures**

- (1) Biomarkers of predicting patients predisposed to non union (*C. Crapanzano*)
- (2) Third fragment in NU: framing of the problem and possible solutions (*E. Mazza*)
- (3) Bone defect treatment in forearm (*G. Longo, G.C. Salvo, S. Bonfiglio, F. Carluzzo, S. Milazzo, D. Lo Vano*)
- (4) Defect augmentation in tibial plateau fractures using calcium phosphate cement (*J. Messner, N. Kanakaris, P.V. Giannoudis*)
- (5) Management of clavicular non unions: my preferred choice of treatment (*R. Leo*)
- (6) Our experience in the treatment of clavicular non union (*D. Gaietta*)
- (7) Our experience in the treatment of ulnar non-union with intramedullary nail together with PRP (*L. Pedretti*)
- (8) Humeral shaft aseptic non union in elderly patients: treatment with opposite cortical allograft combine with BMP-7 and MSC (*L. Murena, P. Cherubino*)
- (9) Proximal femur failures (*M. Colombo*)
- (10) Management of femoral non union with compression-distraction techniques (*R. Mora*)
- (11) Management of forearm non union: my preferred choice of treatment (*C. Ripamonti*)
- (12) Tissue engineered osteogenic devices for the treatment of bone defects (*G. Zatti, D. Gaddi*)

11.00 **Discussion**13.00 **Lunch****II SESSION: CARTILAGE**

Moderators: *E. Borgo, P. Hoffmeyer, E. Kon, A. Meersseman, L. Renzi Brivio, A. Tassi*

14.00 **Keynote Lecture: The Use and Results of Cartilage Cell Transplantation for treatment of Joint Surface Defects in the Knee**

G. Bentley

14.10 **Keynote Lecture: The Medium and long term experience with MACI for the treatment of cartilage defects**

M. Ronga

14.20 **Keynote Lecture: MRI of articular cartilages: the present and the future**

A. Zerbi

14.30 **Thematic Lectures**

- (1) PRP and cartilage repair (*G. Filardo, E. Kon*)
- (2) Meniscal allograft transplantation: our experience at 2-5 years follow-up (*A. Ventura*)
- (3) Treatment of chondral defects in the knee by autologous matrix-induced chondrogenesis (AMIC) (*S. Avondo, G. Condorelli, G. Caff, G. Sessa*)
- (4) ACIC for the treatment of chondral lesions (*M. Cervellin*)
- (5) Treatment of chondral lesions, comparison of surgical techniques: update and evidence (*G. Potalivo, G. Cerulli*)
- (6) Autologous cartilage fragments in a composite scaffold: an alternative for one stage cartilage repair (*A. Marmotti, G.M. Peretti, S. Mattia, D. Bonasia, R. Rossi, C. Tarella, F. Castoldi*)
- (7) Current strategies of tissue engineering for osteochondral defect of the talus: state of the art (*N. Martinelli, C. Bonifacini, L. Tagliabue, F. Malerba*)
- (8) Autologous chondrocytes implantation for the treatment of rizoarthrosis (*J. Messina*)
- (9) Fresh osteochondral allograft is a suitable alternative for wide cartilage defect in the knee (*A. Giorgini, D. Donati, F. Catani*)

- (10) One year results of Chondron, a Gel-Type Chondrocyte Transplantation technique (*J. Rahman, B. Kayani, E. Gillott, G. Bentley, J. A. Skinner, J. Miles, R. Carrington, T. W. R. Briggs*)
- (11) Combined anterior cruciate ligament (ACL) reconstruction and autologous chondrocyte (ACI) implantation. (*J.S. Bhamra, B. S. Dhinsa, S. Z. Nawaz, R. Carrington, T.W.R. Briggs, J. A. Skinner, G. Bentley*)

16.30 **Discussion**

III SESSION: RESEARCH

Moderators: V. Amorese, T. Blokhuis, G. Cerulli, A. Parafioriti, C. Ripamonti, P. Rossi

16.50 **Keynote Lecture: Growth factors in long bone fracture healing: a literature review**
A. Pace

17.00 **Thematic lectures**

- (1) Regenerative processes of articular cartilage using stem cells: experimental study (*A. Manunta, P. Tranquilli Leali*)
- (2) Variability of mesenchymal stromal cells because of aging and estrogen deficiency (*F. Veronesi*)
- (3) Osteogenic differentiation of muscle derived human stem cells (*F. R. Evola, E. Leonardi, L. Costarella, V. Pavone*)
- (4) RIA as a source of CD271 positive cells (*T. Blokhuis*)
- (5) Bone marrow mobilization by G-CSF to enhance osteointegration. A prospective phase II clinical trial (*A. Marmotti, D. Blonna, S. Mattia, D. Bonasia, R. Rossi, C. Tarella, F. Castoldi*)
- (6) Techniques of autologous bone marrow and peripheral blood factors concentration: comparison with different methods (*M. Villano, M. Giorgini, A. Macera, B. Redl, S. Soderi, A. Del Prete, M. Innocenti*)
- (7) Mesenchymal stem cells as “drugstores” and advanced scaffolds for skeletal tissues repair (*R. Cancedda*)
- (8) In vitro validation of antibacterial activity of PRP (*J.M. Taglioretti, B. Osnaghi*)
- (9) Comparison of BMPs and PRP on a rabbit critical size defect. An histomorphometric analysis (*S. Cecconi*)
- (10) Minced umbilical cord fragments as a source of cells for musculoskeletal tissue engineering (*A. Marmotti, G.M. Peretti, S. Mattia, D. Bonasia, R. Rossi, C. Tarella, F. Castoldi*)
- (11) Femoral augmentation in osteoporotic rat using injectable autologous mesenchymal stem cells (*Y. Folman*)
- (12) Bone healing in critical size defects of the rat femur after application of Bone marrow aspirate and rh-BMP7 in different doses (*F. Högel, S. Hoffmann, M. Göttlinger, E. Fleischacker, T. Ullmann, P. Augat, O. Betz*)

19.05 **Discussion**

- 09.00 **AO (Associazione Osteosintèse) Biotechnology is nothing without right principles: clinical cases from AOTrauma Italy**
Faculty: AOTI delegates
- 09.00 Introduction (*A. Pace*)
09.05 Case 1 (*M. Berlusconi*)
09.25 Case 2 (*F. Randelli*)
09.45 Case 3 (*A. Belluati*)
10.05 Case 4 (*R. Buzzi*)
10.25 Conclusion (*P. Regazzoni*)
- 10.40-11.40 **SITOD Symposium**
Moderatori: *E. Amelio, P. Romeo*
- Biological mechanism and relative clinical indications and contraindications of extracorporeal shock waves therapy (*S. Russo*)
 - Shock waves therapy in soft tissue wound (*B. Moretti, A. Notarnicola*)
 - Extracorporeal Shock Waves drive differentiation of human mesenchymal stem cells towards osteoblasts (*R. Frairia, F. Marano, L. Ribella, L. Berta, M.G. Catalano*)
 - Shock waves therapy in the treatment of post-traumatic myositis ossificans (*P. Buselli, S. Messina, V. Coco*)
- 13.00 **Workshop Olympus Minimally-invasive Regenerative Therapies**
Presenters:
Florian Kemmerich, President, Olympus Biotech International
Christophe Geisert, Vice President Global Product Development, Olympus Biotech Corporation
- 13.00 **Lunch**
- 14.00 **AITOG (Associazione Italiana di Traumatologia e Ortopedia Geriatrica) Symposium (relazioni di 8')**
Induzione e rigenerazione tissutale nell'anziano
Moderatori: *R. Facchini, B. Moretti*
- La riparazione delle fratture nell'anziano osteoporotico (*L. Pietrogrande*)
 - Ortopedico e osteoporosi: rationale per la gestione medica del paziente, (*R. Capelli, V. Galmarini, G.P. Molinari*)
 - Le cellule mesenchimali nell'anziano (*A. Siclari*)
 - L'osteoinduzione veicolata (*R. Giancola, A. Savoia, G. Antonini*)
 - Ipotesi etiopatogenetica delle fratture osteoporotiche vertebrali nell'anziano (*D. Vittore*)
 - Osteosintesi con augmentation nelle fratture laterali del collo di femore: studio densitometrico comparativo (*G. Vicenti, G. Solarino, G. Maccagno, L. Moretti, B. Moretti*)
Discussione
- 15.00 **SIFE (Società Italiana Fissazione Esterna) Symposium**
Nuovi orientamenti in tema di fissazione esterna
Moderatori: *R. Mora, M. Catagni*
- Camera biologica e fissazione esterna nella consolidazione delle fratture (*G.M. Calori, M. Colombo, E. Malagoli, E. Mazza, C. Ripamonti*)
 - Il rigenerato nel trasporto osseo (*M. Catagni, F. Guerreschi, L. Lovisetti*)
 - I sistemi esapodalici di fissazione esterna: indicazioni e limiti (*B. Bertani, S. Lucanto, M. Bettani, C. Chittaro, L. Pedrotti, G. Tuvo, R. Mora*)
 - Le fratture di calcagno: nuovi trattamenti con la fissazione esterna (*M. Di Francesco, V.N. Galante, G. Gatto*)

ESPA (*European Society of Pelvis and Acetabulum*) **and AIP** (*Associazione Italiana per lo Studio della Traumatologia della Pelvi e dell'Acetabolo*)

Aggiornamento nella chirurgia della pelvi e del cotile

Moderatori: *G. Zinghi, M. d'Imporzano* Coordinatore: *Vincenzo Zottola*

- 16.00 Introduzione del presidente dell' AIP (*M. d'Imporzano*)
- 16.05 Innesti ossei, fattori di crescita, cellule staminali nelle perdite ossee (*G.M. Calori, E. Mazza*)
- 16.20 Le fratture della pelvi e del cotile. Classificazione e iter diagnostico-strumentale (*V. Zottola*)
- 16.35 Anatomia chirurgica (*A. Pace*)
- 16.50 Pelvi ed acetabolo: quando l'innesto osseo (*R. Pascarella*)
- 17.05 Acetabolo, fratture inveterate. Inquadramento nosologico e soluzioni chirurgiche (*G.F. Zinghi*)
- 17.20 La protesi d'anca nel cotile fratturato (*M. d'Imporzano*)
- 17.35 Presentazione di casi clinici e discussione (*M. Berlusconi*)
- 17.50 Considerazioni conclusive (*P.V. Giannoudis, G.F. Zinghi*)

I relatori sono obbligati ad attenersi rigorosamente ai tempi loro attribuiti

III SESSION: BONE - "Bone defect"

Moderators: *S. Bastoni, P.V. Giannoudis, A. Martson, A. Piccioli, C. Sforza, L. Tagliabue*

- 09.00 **Keynote lecture: Current management of non-unions with bone defect (to give an overview of all treatment options and what is common practice)**
A. M. Phillips
- 09.10 **E.B.M. (Evidence-Based Medicine)**
- (1) Distraction osteogenesis (*M. Catagni*)
 - (2) Induced membrane technique (*T. Bégué*)
 - (3) The role of the membrane and the biological chamber (*P.V. Giannoudis*)
 - (4) Free fibula (*P. De Biase*)
 - (5) Allograft (*F. Wagner*)
 - (6) Combination (Diamond Concept) (*G. Schmidmaier*)
- 10.10 **Lectio Magistralis: The contribution of scaffolds in bone repair**
P.V. Giannoudis
- 10.25 **Lectio Magistralis: Tips and tricks on Masquelet technique**
T. Bégué
- 10.40 **Lectio Magistralis: Types of vascularized bone graft after tumor resection**
R. Capanna
- 10.55 **Round Table Discussion (Reaching a consensus)**
T. Bégué, G.M. Calori, M. Catagni, P. De Biase, S. Grässel, G. Maccauro, B. M. Marelli, L. Pierannunzii, G. Randelli, O. Roise, P. Ruggieri, N. Tartaglia, G. Zimmermann
- 11.50 **Thematic lectures**
Moderators: E. Mazza, L. Obert, S. Pavolini, C. Ripamonti, G. Schmidmaier
- (1) Challenges in bone defect treatment (*J. Rueger*)
 - (2) Lateral fibula transfer for tibial reconstruction (*L. Lovisetti*)
 - (3) Distraction osteogenesis in the management of bone defects (*R. Varsalona, S. Caruso*)
 - (4) Bone transport in severe post-traumatic bone loss in the lower limb (*F. Santolini*)
 - (5) Problems and limitations in bone defect reconstruction with distraction osteogenesis (*C. Josten*)
 - (6) Our experience in the treatment of long bone non unions by using PRP and equine bone substitutes (*B. Di Maggio*)
 - (7) Management of humeral non union with critical bone defect: the role of biotechnologies (*E. Mazza*)
 - (8) Treatment of traumatic tibia bone loss with the Masquelet technique: a preliminary report (*M. Ronga, A. Fagetti, E. Paiusco, M. Cherubino, P. Cherubino*)
- 13.10 **Lunch**

IV SESSION: ECONOMIC**"Economic feasibility of application of regenerative approaches for bone repair: an industry perspective"**

Moderators: *M. Colombo, L. Gala, B. M. Marelli, E. Mazza, G. Mineo, B. Misaggi, C. Ripamonti*

- 14.00 **Lectio Magistralis: The new alliance among politics, administration, health and research (in terms of prices)**
L. Bresciani
- 14.15 **Lectio Magistralis: European Perspective**
P. Hoffmeyer
- 14.30 **Lectio Magistralis: Israeli Perspective/Trauma Strategies**
M. Oren, H. Mairov
- 14.45 **Lectio Magistralis: MTRs from a health economical perspective**
H. Mizuno, D. Dembski, F. Kemmerich
- 15.00 **Lectio Magistralis: Farminindustria**
S. Dompé
- 15.15 **Lectio Magistralis: Tissues or Drugs: who regulates which?**
L. Pani

15.30 **Round Table**

T. Bégué, L. Bresciani, G.M. Calori, P. Cherubino, P. Conti, D. Dembski, M. d'Imporzano, S. Dompé, P. Felicissimo, V. F. Ferrario, L. Franzì, F. Gellona, P.V. Giannoudis, P. Hoffmeyer, F. Kemmerich, H. Mizuno, M. Oren, L. Pani, R.C. Rossi, L. Sanfilippo, G. Schmidmaier, A. Tropiano

V SESSION: BONE

Moderators: M. Colombo, G. Cusmà, D.M. Donati, G. Grappiolo, A. Meersseman, G. Schmidmaier, G. Sessa, G. Zappalà

16.10 **Lectio Magistralis: Tissue engineering: What should we expect in the future?**

G. Schmidmaier

16.25 **Lectio Magistralis: AVN – The concept of biological chamber: optimization of the molecular environment**

G.M. Calori

16.40 **Thematic lectures**

- (1) Bone marrow aspirates in bone necrosis (*D.M. Donati*)
- (2) Biotechnologies for the treatment of acetabular bone defects in hip prosthesis revision (*F. Falez*)
- (3) Large bone defects treatment in hip revision surgery: our experience with trabecular metal devices plus biomimetic scaffolds (*G. Cusmà*)
- (4) Equine bone graft in acetabular revision: our experience (*L. Costarella, V. Pavone, E. Leonardi, F. R. Evola, G. Sessa*)
- (5) Demineralized bone matrix in acetabular revisions: our experience (*M. Ceretti, A. Teti, F. Falez*)
- (6) Bone regeneration in difficult Total Joint Replacement (*C. Carulli, C. Martini, F. Matassi, M. Villano, R. Civinini, M. Innocenti*)

VI SESSION: MISCELLANEOUS

Moderators: G. A. La Maida, S. Mapelli, E. Mazza, H. Simpson, H. Tsibidakis

17.40 **Keynote lecture: bone metastases: new frontiers in surgical management**

A. Piccioli

17.50 **Thematic lectures**

- (1) Antibacterial activity of platelet gel: analysis, synergy with antibiotic, employment in orthopaedic surgery (*J.M. Taglioretti, B. Osnaghi*)
- (2) Bone defects in chronic infections of long bones (*F. Da Rin*)
- (3) Bone ingrowth on knee and hip prosthesis in rheumatoid patients (*R. Viganò*)
- (4) The place of the Ilizarov method for the treatment of infected non-unions after IMN (*K. Aktuglu*)
- (5) Role of bone substitutes and preventive osteosynthesis in curettage of large defects due to benign bone tumors (*G. Maccauro*)
- (6) Integration and evolutionary aspects of simple, mixed and growing vascularized bone grafts (*P.A. Daolio*)
- (7) Collagen-hydroxiapatite sponge with autologous bone marrow aspirate for lumbar spine fusion: 10 years of follow up (*G.A. La Maida*)

19.00 **Keynote lecture: Pharmaco-economy**

C. Conti

19.10 **End of the day**

IV SESSION: SOFT TISSUE

Moderators: B. Battiston, N. Boriçi, R. Capanna, F. Laurenza, F. Randelli

09.00 Keynote Lecture: Biotechnologies in soft tissue lesions: current status

F. Benazzo

09.10 Thematic lectures

- (1) PRP in Achilles tendon pathology: a valid alternative or a trend? (*F. Caroli*)
- (2) The treatment of rotator cuff injuries by reinforcing cell-free scaffold: a clinical study (*P. Ciampi*)
- (3) Scaffold and growth factors in the treatment of the acute lesions of anterior talo-fibular ligament (*A. Siclari*)
- (4) PDGF and laser stimulation in skin scars correction (*A. Ventura*)
- (5) Microsurgical corticoperiosteal free flaps in long bones non-unions (*A. Ferretti, M. Guzzini*)
- (6) Full-thickness skin grafts from the groin in Pediatric hand surgery (*C. Origo, M.C. Rossi*)
- (7) Elastasonography follow-up of muscular strain treated with PRP: preliminary results (*F. Battistella, P. Minafra, C. Francavilla*)

10.20 Discussion**V SESSION: MISCELLANEOUS**

Moderators: D. M. Aloj, A. Gigante, E. Meani, A. Meersseman, F. Santolini

10.35 Keynote Lecture: current management of bone defect in infections

C.L. Romanò

10.45 Keynote Lecture: The effect of osteoporosis and ageing on the healing of bone

D. Marsh

10.55 Thematic Lectures

- (1) Use of human parathyroid hormone (1-34) in reparative complications of fractures (*G. Resmini*)
- (2) Alendronate improves screw fixation in osteoporotic bone (*A. Moroni*)
- (3) Teriparatide in the treatment of non-unions: scientific and clinical evidences (*E. Raimondo, L. Pietrogrande*)
- (4) Biophysical Enhancement of Bone Healing (*R. Cadossi*)
- (5) Harvest of tricortical iliac bone graft as donor site and replacement with allografts or synthetic bone substitutes: radiographical and clinical long and short term results (*R. Ballis, G. Laurà*)
- (6) Tissue regeneration: trends and clinical applications (*A. Vescovi, G.M. Tartaglia*)
- (7) Use of calcium sulfate in lumbar spinal fusions (*S. Fokter*)
- (8) The role of bone substitutes in spine surgery (*S. Brambilla*)
- (9) Human mesenchymal stem cells and biomaterials interaction: a promising Synergy for spine fusion (*G. Barbanti Brodano*)
- (10) Intervertebral disc regeneration: towards the clinical application (*G. Vadalà, V. Denaro*)

12.35 Discussion**13.10 Lunch**

VI SESSION: TRADITIONAL TECHNIQUES AND BIOTECHNOLOGIES

Moderators: *S. Bastoni, L. Gala, E. Malagoli, D. Perugia, L. Pietrogrande, R. Varsalona*

16.10 **Lectio Magistralis: Scientific Pondering on the Evolution on the Discipline**

F. Pipino, T. Villa, M. Pipino

16.25 **Thematic lectures**

- (1) Treatment of bone defects without the use of biotechnologies (*M. Berlusconi, F. Chiodini, L. Di Mento,*)
- (2) Treatment of long bone non union with plate fixation and autologous bone graft: personal experience (*N. Annicchiario*)
- (3) Tissue regeneration using Ilizarov tension-stress effect (*A. Kirienko*)
- (4) Clinical strategies at the docking point: are open procedures superior to the simple compression of Ilizarov? (*G. Lovisetti*)
- (5) The challenges of bone transport with Ilizarov in tibial non-unions (*K. Aktuglu*)
- (6) The treatment of tibial septic non union with the external fixation (*R. Varsalona, S. Caruso*)
- (7) Monofocal distraction osteosynthesis of hypertrophic non unions (*B. Bertani*)
- (8) PRP in orthopaedics: a systematic review (*G. Potalivo, G. Cerulli*)
- (9) The absorbable osteotrans screws (*F. Simeone*)
- (10) Allograft as biomechanical support in long bone non unions (*N. Tartaglia*)
- (11) Bone marrow concentrate and PRP for spinal fusion (*G. Vadalà, V. Denaro*)
- (12) Nastructured materials: a new approach to design innovative scaffolds for the treatments of bone defects (*P.D. Parchi, O. Vittorio, M. Cecchini, A. Poggetti, S. Marchetti, M. Lisanti*)
- (13) Results of the treatment of pseudoarthrosis of distal radius (*S. Odella, C. Bonora, R. Sartore, F. Torretta*)
- (14) Distractional osteogenesis therapeutic options (*M. Vigo*)

18.30 **Discussion**

10.30 **Bayer Symposium** (relazioni di 15')

Thromboembolic oral prophylaxis (DVT - PE) in major orthopedic surgery. Practical ward management and future directions in bridging therapy

La profilassi orale in chirurgia protesica maggiore. La gestione chirurgica e di reparto
(*E. L. Mazza*)

La profilassi orale in chirurgia protesica maggiore. La gestione internistica e di reparto
(*M. C. Ferrari*)

La profilassi orale in chirurgia protesica maggiore. La gestione infermieristica in reparto
(*A. Caniglia*)

Discussione di casi clinici aperta al pubblico (15')

12.15 **Workshop Olympus**

BACK TO LIFE

Current trends in the treatment of avascular necrosis of the femoral head

Presenters: *G.M. Calori, P.V. Giannoudis, P. Hernigou*

12.15 Lecture 1: AVN of the femoral head: An overview (Incidence, aetiology, classification, evolution of treatment)
P.V. Giannoudis

12.27 Lecture 2: The role of cellular therapies: Clinical results
P. Hernigou

12.39 Lecture 3: Treatment with advanced biological based therapies: Clinical results
G.M. Calori

12.51 Round table discussion and presentation of case
All faculty

13.11 Summary and Closure
P.V. Giannoudis

13.15 **Lunch**

14.30 **GIS (Gruppo Italiano Scoliosi) Symposium**

Biotechnologies in spine surgery

Presidenti: *D. Fabris Monterumici, B. Misaggi*

14.30 Biomaterials and regenerative medicine approaches in spine diseases. State of the art and clinical trials.
C. Arts (Dept of Orthopaedic Surgery, Maastricht University Medical Centre)

14.40 Degenerative Disc Disease: from degenerative cascade to regeneration.
G. Vadalà (Campus bio-medico, Roma)

14.50 Inhibition of NF- κ B activity ameliorates age-associated disc degeneration in an animal model of accelerated aging
L. Nasto, E. Pola (Università Cattolica del Sacro Cuore, Roma)

15.00 Tissue engineering for bone formation and fracture healing: in vivo animal models.
E. Pola, L. Nasto (Università Cattolica del Sacro Cuore, Roma)

15.10 Hydroxyapatite based biomaterials vs autologous bone graft in spine fusion. An in vivo animal study.
G. Barbanti Bròdano (Istituti Rizzoli, Bologna)

15.20 Autologous bone graft vs autologous bone graft associated to osteoconductive biomaterials. Preliminary results of a comparative in vivo study.
G. Calvosa (Università di Pisa)

15.30 Collagen-hydroxyapatite sponge with autologous bone marrow aspirate for lumbar spine fusion: 10 years of Follow up
G.A. La Maida, L. Zottarelli, M. Ferraro, B. Misaggi (Istituto Ortopedico Gaetano Pini, Milano)

15.40 Discussione

16.00 **GISTIO Symposium**

Moderators: *C. Salomone, C. Romanò*

1) The osteomyelitis of the lower limb: anatomy-pathologic classification and principles of treatment
G. Cicero, F. Boggio, K. Zoccola, S. Artiaco

2) Bioceramic added with antibiotic, for the treatment of the bone defect in infections. Study In vitro and clinical applications".
C.L. Romanò, N. Logoluso, D. Romanò

3) The management of distractional osteogenesis and of the docking point in septic bone defects of the lower limb
D. Aloj, E. Petruccelli, S. Artiaco, D. Santoro

4) Diaphyseal osteomyelitis of long bones: therapeutic options in the multidisciplinary treatment
C. Salomone, A. Antonini, G. Burastero

- 5) Femoral modular prosthetic of resection in the infections with bone loss. Results in the medium term
S. Artiano, F. Boggio, K.M. Zoccola, F.M. Bellomo
- 6) Loss of substance of the lower limb: the point of view of the plastic surgeon
L. Vaienti

Cases report - Moderators: *E. Meani, F. Da Rin*

Participants: *G. Cicero, S. Artiano, D. Aloj, C. Salomone, C. L. Romano*

- a case of prosthesis infection
- a case of trauma infection
- a case of bone defect

17.30 **Symposium starter Multicentrica Nazionale del Gruppo Italiano Osteosintesi in fibre di carbonio**

VII SESSION:**RESEARCH - "What's new? PRP, Substitutes, Nanotechnology..."**

Moderators: *D. Enea, P. Gallinaro, N. Kanakaris, F. Postacchini, G. Schmidmaier*

- 09.00 **Keynote lecture: What's new in cartilage repair and future directions?**
E. Kon
- 09.10 **Keynote lecture: Genetic predisposition to non-union: evidence today**
P.V. Giannoudis, N. Kanakaris
- 09.20 **Keynote lecture: Can bioactive molecules accelerate fracture healing anabolic effect on osteoporosis fractures**
U. Tarantino
- 09.30 **Keynote lecture: predicting impaired**
A. Moghaddam
- 09.40 **Keynote lecture: Application of scaffolds for bone for regeneration strategies: the present the past and the future**
A. Blom
- 09.50 **Keynote lecture: Filling the bone void: Which material and why?**
N. Kanakaris
- 10.00 **Round Table: Scaffolds (Reaching a consensus)**
C. Fabbriani, M. Franceschini, C. Josten, N. Kanakaris, N. Logoluso, R. Magri, P. Milani, A. M. Phillips, M.R. Popescu, G. Schmidmaier

VIII SESSION: RESEARCH

Moderators: *J. J. Arts, T. Blokhuis, F. Fischer, M. Innocenti, A. Moroni, G. Sessa*

- 11.00 **Keynote Lecture: Modification of HA with Collagen 1 and Components of the Extracellular Matrix**
W. Schneiders
- 11.10 **Lectio Magistralis: Evolution of cartilage repair**
S. Giannini
- 11.25 **Lectio Magistralis: Biotechnologies in the treatment of periprosthetic osteolysis and early mobilization**
M. d'Imporzano
- 11.40 **Thematic lectures**
- (1) cDNA-Array analysis of osteogenic and chondrogenic genes in regular and failed bone healing
(*G. Zimmermann, K. H. K. Schmeckenbecher, S. Boeuf, S. Weiss, R. Bock, W. Richter*)
 - (2) New imaging techniques of bone healing and bone remodeling (*J.J. Arts*)
 - (3) Italian multicentric study with BMP-7 for the management of non union (*G. Zappalà, M. Ronga, F. Baldo, P. Cherubino*)
 - (4) A new heparin carrier for BMP-7, in vitro and in vivo results (*T. Blokhuis*)
 - (5) A new concept for bone regeneration: artificial periosteum (*M. Stella*)
 - (6) Novel approaches for using Minimally Manipulated Autologous Stem Cells in orthopaedic surgery (*E. Jones*)
 - (7) Safety on the reimplantation of autologous concentrated mesenchymal stems cells: a 20 years experience on more than 25000 patients (*P. Hernigou*)
 - (8) Regeneration of critical osteochondral defects in a minipig model by autologous and heterologous adipose-derived stem cells (*L. De Girolamo, S. Niada, E. Arrigoni, A. Di Giancamillo, C. Domeneghini, V. Sansone, G. M. Peretti, A.T. Brini*)
- 13.10 **Lunch**

IX SESSION: SOFT TISSUES - "What's else?"

Moderators: *F. Bove, A. Ferretti, M. Ferrari, F. Grassi, N. Maroudias, G.G.S. Pivato, M. Randelli*

- 13.55 **Keynote Lecture: Regenerative medicine for meniscus repair and regeneration**
G. M. Peretti
- 14.05 **Keynote lecture: Regulatory issues in regenerative medicine**
P. Rebutta
- 14.15 **Keynote lecture: New metabolic evidences in callus formation**
C. Verdoia, C. Corradini
- 14.25 **Lectio Magistralis: Fat Tissue as source of osteoblasts for bone cell therapies**
M. L. Brandi
- 14.40 **E.B.M. (Evidence-Based Medicine)**
- Tendon and ligament (*F. Battistella*)
 - Skin (*G.G.S. Pivato*)
 - Nerve (*C. Romana, P. Soucacos*)
 - Muscle (*F. Benazzo*)
 - Vessel (*G. Di Luca*)
- 15.30 **Round Table (Reaching a consensus)**
The role of nanotechnology in soft tissue reconstruction
T. Blokhuis, P. Giannoudis, E. Ippolito, M. Lisanti, M. Marcacci, G.M. Pajardi
- 16.30 **Lectio Magistralis: Fat graft: from scars treatment to ultracentrifuged characterization**
M. Klinger
- 16.45 **Thematic lectures**
Moderators: P. Bianchi, F. Caviggioli, M. Franceschini, G. Peretti, G.G.S. Pivato, L. Vaienti
- (1) Reconstruction of ACL with biomimetic lars (*V. Migonney*)
 - (2) Healing response PLUS for partial tears of ACL: technical notes and biological background (*G. Cerulli*)
 - (3) Free flaps for the coverage of the distal third of the leg (*G.G.S. Pivato*)
 - (4) Platelet gel rich in growth factors used for diabetic foot ulcers and problematic soft tissue repair (*N. Boriçi*)
 - (5) Skin plastic coverage or bone and skin transfer: indication and results following the Lecco experience (*F. Guerreschi*)
 - (6) Fracture repair and peripheral nervous system (*T. Niedermair, S. Grässel*)
 - (7) Regenerative surgery in traumatic wounds of the limbs: our experience with hyaluronan matrix devices (*L. Vaienti*)
 - (8) The treatment of bone and soft tissue in open tibial fractures (*R. Varsalona, S. Caruso*)
 - (9) Effect of extracorporeal shock waves therapy on primary cultured human tenocytes (*V. Visco, M. Vetrano, M.C. Vulpiani, M.R. Torrisi, A. Ferretti*)
 - (10) Novel one stage enhanced method for using adipose stromal cells in joint surface defects in the knee (*F. V. Sciarretta*)
- 18.30 **Closing Remarks and Ceremony**

VII SESSION: BONE – NECROSIS & CYSTS

Moderators: *R. Buzzi, E. Giussani, P. Hernigou, E. Mazza, L. Murena, S. Romagnoli*

09.00 **Keynote lecture: Differencies in bone marrow aspirates and its use in treatment in femoral head osteonecrosis**
J. Vaquero

09.10 **Thematic lectures**

- (1) Bone marrow concentrate and a new bioceramic in the treatment of osteonecrosis of the femoral head: mid-term clinical results and bone remodeling (*F. Matassi, C. Martini, L. Nistri, P. De Biase, R. Civinini, M. Innocenti*)
- (2) Adipose stem cells in the treatment of femoral head necrosis (*A. Chessa, C. Tremolada, L. Pietrogrande*)
- (3) Use of bone allografts added with mesenchymal stem cells and growth factors in the treatment of necrosis of femoral head. (*P. Di Benedetto, V. Cainero, R. Gisondi, A. Beltrame, F. Mancuso, A. Causero*)
- (4) Treatment of osteonecrosis of the femoral head with regenerative medicine and mini-invasive surgery (*T. Frisoni, D. Donati, L. Cevolani, A. Giorgini, F. Catani*)
- (5) Treatment of femoral condyle osteonecrosis using biotechnologies (*E. Malagoli*)
- (6) Bone substitutes and PRP for the surgical treatment of unicameral bone cyst (*G. Maccauro*)
- (7) Can juvenile cysts be treated with MSC? Preliminary outcome (*A. Memeo*)
- (8) The use of DBM and MSC concentrated for the treatment of the simple bone cysts (*L. Cevolani*)
- (9) Treatment of resistance juvenile bone cysts by percutaneous injection of MSC and DBM. Preliminary report (*C. Gigante, A. Olmeda, A. Borgo*)
- (10) Treatment of aseptic osteonecrosis in children: our experience (*M. B. Michelis*)

VIII SESSION: LEGAL AND JURIDIC INSTRUCTIONAL COURSE

Presidents: *S. Fiorentino, P. Giuggioli, A. Marra*

10.40 **Keynote lecture: growth factors in tendon pathologies: forensic issue**
F. M. Donelli

10.50 **Keynote lecture: The refund of medical expenses and treatment in the insurance field**
L. Polo

11.00 **Round Table (Reaching a consensus)**
P. Accardo, S. Fiorentino, U. Genovese, L. Lamberti, G. Migliaccio, A. Pellegrino

13.00 **Lunch**

IX SESSION: BONE

Moderators: *W. Albisetti, S. Cecconi, B. Di Maggio, L. Pedretti, R. Pessina, L. Pierannunzii*

- 14.00 (1) Long term results of bone augmentation of the femoral head treated with hip resurfacing (*A. Moroni*)
- (2) Bone healing and osteoporosis (*U. Tarantino*)
- (3) Extracorporeal shock waves therapy and bone regeneration: from basic science to clinical practice (*C. D'Agostino*)
- (4) External fixation: indication to preventing complications in trauma (*C. Salomone*)
- (5) Management of aseptic tibial shaft non-unions: my preferred choice of treatment (*P. Maniscalco, M. Caforio*)
- (6) rhOP-1 role in human distraction osteogenesis. an italian randomized clinical study (*B. Pavolini*)
- (7) Non Union of the surgical neck of the humerus (*R. Erasmo*)
- (8) Induced membrane technique at upper limb and in emergency (*L. Obert*)
- (9) Ten years experience with BMP-7 in both post-traumatic non-union and congenital pseudoarthrosis (*E. Ippolito, R. Caterini, P. Farsetti, P. Maglione*)
- (10) Treatment of post-traumatic old humeral non-union with autograft, calcium phosphate and BMP-7 – A report of 22 cases (*R. Caterini, P. Farsetti, P. Maglione, E. Ippolito*)
- (11) Treatment of bone defect using external fixation (*F. Verdoni*)
- (12) Bioglass in the treatment of the infected bone defect (*N. Logoluso, L. Polli, M. Calamita, C.L. Romanò*)
- (13) Bone loss of the fingers: reconstructive surgical solutions (*J. Messina*)

X SESSION: RESEARCH

Moderators: *M. Bumbasirevic, M. Ferrari, M. Manca, C. Ripamonti, R. Rossi, L. Tagliabue*

- 16.10
- (1) Reconstruction of joint with demineralised bone matrix after severe trauma (*J. Salo*)
 - (2) Inhibition of RANK ligand: a new option for preventing fragility fractures (*U. Tarantino*)
 - (3) New pharmaceutical targets in fragility fractures healing (*C. Corradini, C. Verdoia*)
 - (4) Cartilage graft from rib : from biopsies to patient, 20 years of assesment (*L. Obert*)
 - (5) The influence of PRP on vertebral posterolateral fusion. An experimental study on rats (*F. Postacchini, G. Cinotti, P. Bianco*)
 - (6) Adipose Stem Cells: the importance of characterization of cellular products before clinical application (*E. Leonardi, R. Ebola, L. Costarella, C. Ricordi, G. Sessa*)
 - (7) Adipose tissue for the treatment of degenerative pathologies of the hand (*F. Torretta*)
 - (8) Adipose MSC in pre-arthritic lesions of the knee (*P. Palombi*)
 - (9) Cartilage repair of the knee with AMIC technique: 2 years follow up of 147 procedures (*A. Siclari, E. Boux*)
 - (10) The treatment of articular results of the knee and the ankle in posttraumatic infections of the lower limb (*W. Leonardi, P. Barbato*)

XI SESSION: RESEARCH

Moderators: *K. Aktuglu, V. Denaro, E. Mazza*

- 17.20
- (1) The MarrowStim application in hip revision surgery (*C. Cucciniello, F. Curti, C. Borsotti, D. Duci*)
 - (2) Growth factors in hip prosthesis revision: a literature review (*L. Gala*)
 - (3) Biomechanical and clinical research on carbon-fibre radiolucent intramedullar nail: could radiology help to monitor bone healing? (*Y. Folman*)
 - (4) Carbon fibers in trauma surgery. Our experience (*C. De Roberto, C. Latte, G. Monteleone, M. Longo*)
 - (5) The Osteotrans Devices in trauma surgery (*E. Mazza*)
 - (6) Septic nonunions of the lower limb: options to treat (*C. Salomone*)
 - (7) Pain control: a new strategy with fat cells (*F. Caviglioli*)
 - (8) From dawn till dusk. 25 years of personal experience in CFM bone regeneration (*E. Marini, A.M. Messina*)
 - (9) Mixed autologous and juvenile chondral fragments for cartilage repair: in vitro and in vivo study on a rabbit model (*D. Bonasia*)
 - (10) Vocal fold lipostructure: preliminary results changing from Coleman to lipogems technique (*S. Portaleone, C. Pipolo, C. Tremolada, G. Felisati, P. Lozza*)
 - (11) Reconstructive strategies in pelvic tumors: indications, limits and complications (*M. S. Spinelli*)
 - (12) Subchondral bone reconstruction after curettage for benign bony lesions: the Regina Elena National Cancer Institute Experience (*C. Zoccali, U. Prencipe, V. Ferraresi, N. Salducca, R. Biagini*)

18.50 **Closure**

08.30 **SICM (Società Italiana di Chirurgia della Mano) Symposium****Applicazioni delle tecniche regenerative in chirurgia della mano**Moderatori: *G. Pajardi, R. Luchetti*

(comunicazioni da 10 min + 20 min discussione finale di tutti i membri con i moderatori)

- Case Report: Finger Lengthening without Consolidation. Titanium "Cage" and Stem Cells (*F. Curini Galletti*)
- Limb trauma reconstruction with autologous stem cells from bone marrow" (*M. Cherubino*)
- In vitro reconstruction of a vascularized tendon-like structure: a novel application for adipose derived stem cells (ADSCs) (*F. Bassetto*)
- Treatment of scaphoid nonunion with bone substitutes and stem cells (*M. D'Arienzo, N. Galvano e coll.*)
- The treatment of painful end-neuromas in hand and upper extremity with Perineural Fat Grafting (PFG) (*L. Vaianti, R. Gazzola, A. Marchesi*)
- Fat grafting as regenerative adjuvant treatment in Dupuytren's contracture: preliminary clinical insights – (*C. Tiengo, Pontini, G. Giatsidis, F. Bassetto*)
- Experimental approach for tissue engineered tendon" (*G.M. Peretti*)

10.00 **EFSM (European Federation of Societies for Micro Surgery) Symposium****Microsurgical reconstructions vs. biotechnologies and tissue engineering : specific indications and possible overlapping**

- **Skin** - Chairman *G. De Santis – Modena - Italy*
When microsurgery for skin defects? (*A. Georgescu – Cluji - Romania*) 10'
Actualities of skin engineering (*M. Schiavon – Udine – Italy*) 10'
Debate 10'
- **Bone** - Chairman *B. Battiston – Turin - Italy*
Advantages of vascularized bone grafts (*A. Korompilias - Greece*) 10'
The regeneration chamber (*G.M. Calori – Milano- Italy*) 10'
Debate 10'
- **Nerves** – Chairman: *S. Geuna – Torino - Italy*
Nerve autografts : still the golden standard? (*P. Tos - Turin – Italy*) 10'
Bioengineered guides for nerve defects (*P. Vogt – Hannover - Germany*) 10'
Debate 10'
- **Breast** - Chairman: *R. Cipriani – Bologna - Italy*
Microsurgical reconstructions by DIEP flap (*F. Santanelli – Rome - Italy*) 10'
Reconstruction by lipofilling (*S. Kauhanen- Helsinki - Finland*) 10 - 15'
Debate 10'

12.00 **Olympus Symposium****The Final Battle****Osigraft vs BMAC, The strategy for bone healing**Presenters: *G. Schmidmaier, G. Zimmermann*13.20 **Lunch**14.00 **CIO (Club Italiano Osteosintesi) Symposium****The bone repair: the biological and mechanical factors involved**Chairmen: *D. Perugia, F. Benazzo*

Participants:

B. Di Maggio, G. Falzarano, V. Caiaffa, G.M. Calori, C. Formica, R. Erasmo, F. Laurenza, P. Maniscalco, E. Mazza, F. Santolini, R. Varsalona

Periprosthetic NU: algorithm of treatment

G.M. Calori, M. Colombo

FONDAZIONE FILARETE Symposium

Moderators: *P. Milani, G.V. Mineo*

The use of bone graft substitutes in bone defects: any specific needs?

(G.M. Calori, M. Colombo, E. Malagoli, E. Mazza, C. Ripamonti, N. Marelli)

Bioreactors, intraoperative approaches, developmental engineering: which path to bone regeneration?

(C. Scotti)

Innovative scaffolds with provascular channels for large bone tissue regeneration

(F. Martello – Fondazione Filarete and Tensive srl)

Nanostructured Hydrogels for Tissue Engineering

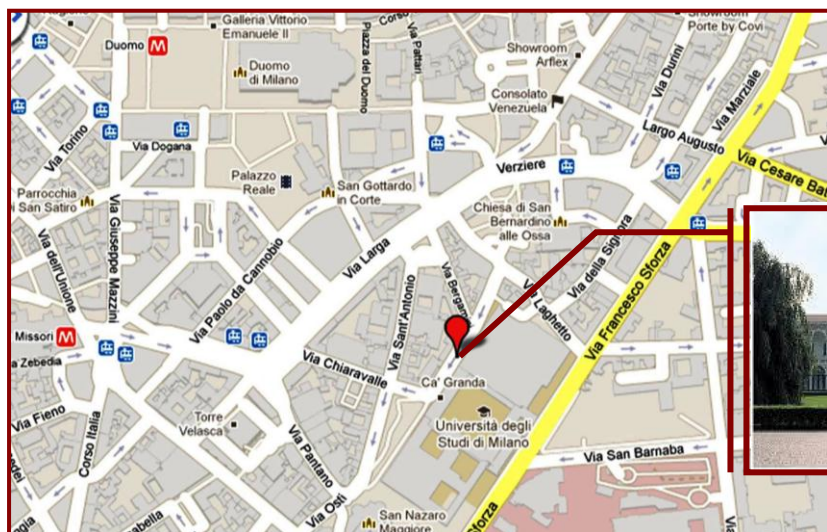
(C. Lenardi - Università di Milano and Fondazione Filarete)

Discussion: *T. Blokhuis, G.M. Calori*

GENERAL INFORMATION

CONGRESS VENUE

Università degli Studi di Milano
Via Festa del Perdono, 7
Milan – Italy



OFFICIAL LANGUAGE

The Official Language is English

Simultaneous translation English-Italian is provided in AULA MAGNA

REGISTRATION FEE:

Students and Residents	FREE
Scientists and Researchers (no symposia participation)	€ 100,00
Medical doctors under 45	€ 250,00
Medical doctors over 45	€ 350,00

(fees include all taxes)

Registration fee includes: participation to scientific sessions, congress bag, badge and attendance certificate, lunches, open coffees.

Online registration : www.estrot2013.eu

ORGANIZING SECRETARIAT



KEYWORD Europa

Via Lodovico Mancini, 3 - 20129 Milan - Italy

Tel. +39 0254122513-79 Fax +39 02 54124871

Email: info@keywordeuropa.com www.keywordeuropa.com

HOW TO REACH THE CONGRESS VENUE

Arriving by plane

- from **Malpensa** Airport:
A **bus** (every 20') and a **train** (every 30') connect Malpensa Airport to Milan. The bus arrives to Milan Central Railway Station (Milano Centrale), while the train arrives to Milan Cadorna Railway Station.
- from **Linate** Airport:
A **bus connection** (every 30') takes from Linate Airport to Milan Central Railway Station (Milano Centrale).

Arriving by train

- from **Central Railway station** (Milano Centrale):
take the subway M3 line (direction San Donato) and after 5 stops reach **MISSORI** subway station. The venue is at a 5-minutes walking distance.
Alternatively, a **bus service** takes from Central Railway Station to the congress venue:
Take Line 60 from piazzale Duca d'Aosta to Largo Augusto. The venue is at a 5-minutes walking distance
- from **Cadorna Railway station**:
take the tram 27 line at Corso Magenta corner Via Nirone (direction viale Ungheria) and after 5 stops reach **MISSORI** subway station. The venue is at a 5-minutes walking distance

Please note that access by car to downtown Milan requires a toll, to be paid when entering the area. Gates to the restricted downtown area are recognizable by signs like the one beside.



TOURS AND SOCIAL PROGRAM

MONDAY JANUARY 14^h – AFTERNOON

13.45 Meeting point in the Hotel Hall

14.00 Departure from the Hotel Dei Cavalieri



**GUIDED TOUR OF THE FAMOUS
GOTHIC CATHEDRAL "DUOMO"**



**VISIT TO THE "VITTORIO EMANUELE"
GALLERY TO SEE THE BEAUTIFUL
MOSAIC ART WORK**



**GUIDED TOUR OF THE
"TEATRO DELLA SCALA"
AND MUSEUM**



**GUIDED TOUR
OF THE "POLDI PEZZOLI"
MUSEUM**

RETURN TO HOTEL

Price per person € 60,00

TOURS AND SOCIAL PROGRAM

TUESDAY JANUARY 15th

09.45 Meeting point in the Hotel Hall

10.00 Departure from the Hotel Dei Cavalieri



**GUIDED VISIT TO "CENACOLO" BY LEONARDO DA VINCI AND
SANTA MARIA DELLE GRAZIE CHURCH, DOMINICAN
CONVENT INCLUDED IN THE UNESCO**

WORLD HERITAGE SITES LIST

**GUIDED TOUR OF THE "CASTELLO
SFORZESCO"**



**LUNCH
AT THE RESTAURANT MAIO**



**VISIT TO THE FAMOUS
MILAN FASHION AREA**



RETURN TO HOTEL

Price per person € 90,00

TOURS AND SOCIAL PROGRAM

TUESDAY JANUARY 15th – EVENING 8.30 P.M.



GALA DINNER AT SOCIETÀ DEL GIARDINO Palazzo Spinola – Via San Paolo, 10

INFORMATION AND BOOKING:

KEYWORD EUROPA

**TEL. +39 02 54122513 - FAX +39 02 54124871
info@keywordeuropa.com**

AND AT THE RECEPTION DESK OF THE MEETING

AVAILABILITY IS LIMITED.

Registrations on site will be accepted according to availability

HOTEL ACCOMMODATION

★★★★Hotel

	Dus (double room single use)	Double room
Hotel NH President **** (within 6 min walking distance to/from the congress venue)	€ 245 ,00	€ 255,00
Hotel Brunelleschi**** (within 4 min walking distance to/from the congress venue)	€ 225,00	€ 233,00
Hotel NH Touring **** (within 15 min walking distance to/from the congress venue)	€ 167,00	€ 182,00
Hotel D'Este **** (within 15 min walking distance to/from the congress venue)	€ 155,00	€ 179,00
Hotel Romana Residence **** (within 7 min walking distance to/from the congress venue)	€ 105,00	€ 125,00

- *Prices are per room, per night, breakfast included*
- *Tourist tax Euro 4 per person per day*
- *Agency fee : € 20,00*

Please contact the Organizing Secretariat for rooms availability

FOR BOOKING OR INFORMATION:

KEYWORD Europa - Via L. Mancini, 3 - 20129 Milano
Fax 02-54124871 Tel 02-54122513/79 e-mail: project@keywordeuropa.com



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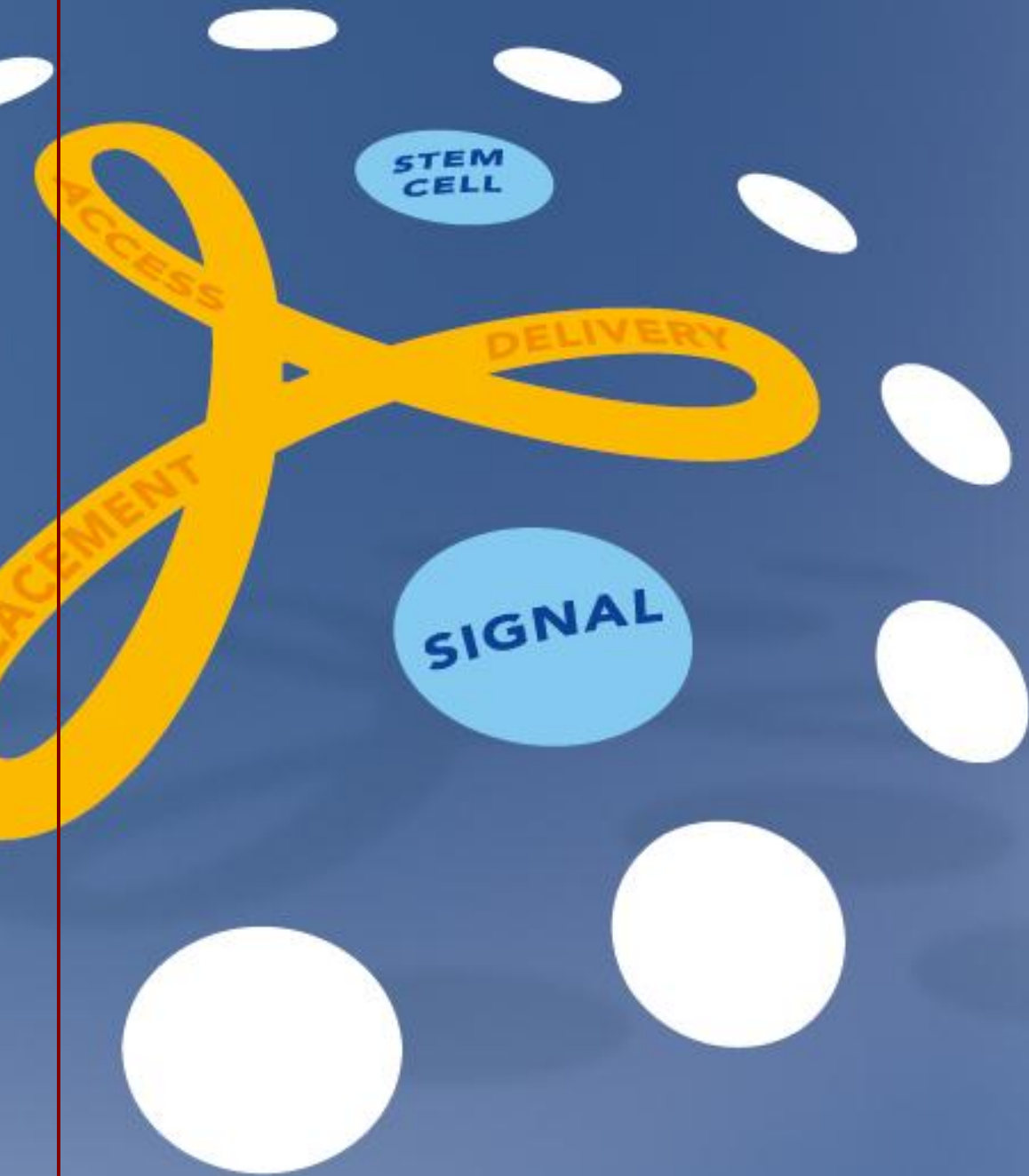
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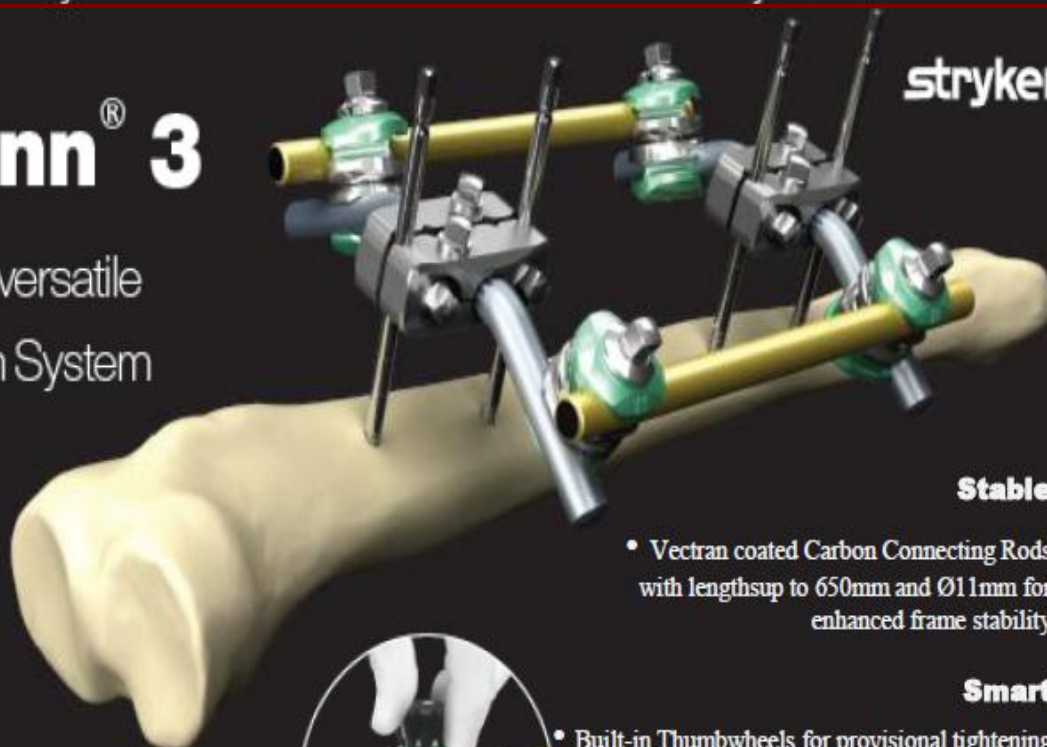
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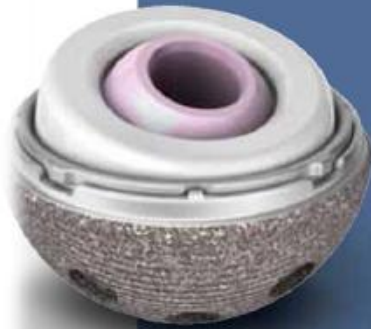


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¹ Koval et al., Mismatch of current intramedullary nails with the anterior bow of the femur. *J Orthop Trauma*, 2004 Aug; 18(7): 410-5

² Koval KJ, Intramedullary Nailing of Proximal Femur Fractures. *A Supplement to the American Journal of Orthopedics*. April 2007: 4-7

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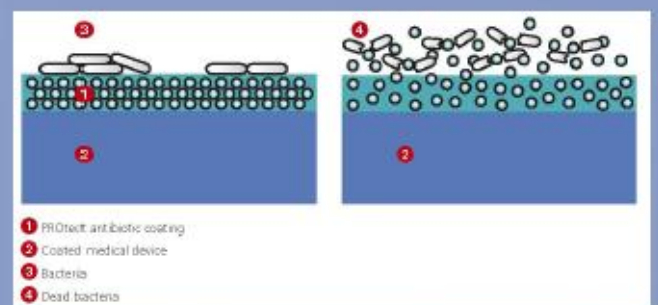
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