

# Preleminary program

BRUSSELS INTERNATIONAL SYMPOSIUM

*16<sup>th</sup> year*

**BONE VASCULARIZATION AND FRACTURE  
HEALING IN THE UPPER EXTREMITY**

**SPECIAL EMPHASIS ON :  
INNOVATIVE TECHNIQUES OF  
OSTEOSYNTHESIS,  
ENHANCEMENT OF FRACTURE HEALING,  
FIXATION OF OSTEOPOROTIC FRACTURES,  
AVASCULAR OSTEONECROSES**

Genval/Brussels, Belgium

February 1-2, 2008

**Presymposium Workshop on Upper Extremity  
Surgical Approaches and Osteosynthesis  
January 31, 2008 (Liège, Belgium)**



**Program Director**

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## AIMS AND FORMAT

The first annual Brussels/Genval Upper Extremity Symposium, held in May 1992, was on Advances in Hand and Wrist Biomechanics. Since this first meeting, the Château du Lac at Genval has hosted, each spring, the Brussels Hand/Upper Extremity Symposium, dedicated to a specific interdisciplinary topic involving the hand and the upper limb. Each meeting has been attended by 80-150 participants from 15-25 different countries.

In the last decade, there have been major advances in our comprehension of fracture healing. The importance to preserve the vascularization to the bone and periosteum and to allow micromovements at the fracture site has been recognized. The local effects of various hormones and growth factors are better apprehended. Bone structure and biomechanics are now better known. Physical methods to enhance callus formation like electromagnetic fields or low intensity pulsed ultrasounds are still used, but seem less efficient than growth factors, obtained either by recombinant technology or simply by blood centrifugation. However, controlled studies are rare, and the current opinion that fracture healing can be accelerated lacks strong evidence. In the treatment of nonunions, the golden standard remains the bone autograft. Vascularized bone autografts seem especially efficient to heal recalcitrant nonunions. Zaidenberg and Mathoulin, among others, have described pedicled vascularized bone autografts for scaphoid nonunions, but if these techniques are superior to the more classical Matti Russe operation remains to be demonstrated. Gene therapy could in the future be indicated in selected fractures or nonunions. A major remaining problem concerns the postoperative monitoring of bone healing.

Another major advance in the last decade concerns the osteosynthesis, whether for fracture, osteotomy or arthrodesis fixation, with the development of various minimally invasive techniques (external, endomedullary, or percutaneous screw fixations), of precontoured and of absorbable implants, and especially with the recent availability of adapted internal fixators, allowing locking of screws within the main implant, providing enhanced stability. The latter implants, which present specific problems, are well adapted to osteoporotic fractures with poor screw anchorage. Indeed, the success of an osteosynthesis depends not only on the implant, but also on the quality of bone and on the forces applied on the composite bone-implant. Bone reinforcement by cement, bone graft or by various bone substitutes may be helpful. Regarding such fragility fractures, the surgeon should act beyond just operating, he should provide a holistic management of the patient with respect to future injury prevention. This implies geriatric evaluation including detection of hypovitaminosis D, recommendations to avoid falls, and

medications active on bone turnover. In addition to their anti-osteoporotic effects, biphosphonates could avoid bone resorption at the level of screwed implants. There is of course still a place in elderly patients for non-operative fracture treatment, but the rate of loss of reduction is especially high. The establishment of new treatment algorithms for the treatment of fragility fractures is one objective of the Symposium.

Upper extremity osteosynthesis presents specific problems : user-friendly and reproducible classifications of various fractures are still lacking ; some comminuted fractures are especially difficult to fix (proximal humerus, elbow), and immediate arthroplasty is sometimes a better option; periprosthetic fractures, or concomitant lesions of soft tissue structures, particularly nerves, deserve special treatments ; special types of infection complicate shoulder surgery ; bulky internal implants may limit postoperative function, especially at the hand ; tendon ruptures still occur after distal radius internal fixation ; the hand tolerates poorly plaster immobilization, and algodystrophy (CRPS) remains an unsolved problem.

The second part of the Symposium will concern upper extremity osteonecroses. Although humeral head avascular osteonecrosis is seen in conditions similar to those causing hip or knee osteonecroses (corticotherapy, sickle cell disease, etc.), other forms of osteonecrosis affecting the upper extremity present specific characteristics. For example, in Kienböck's disease, morphologic wrist variations as well as the particular pattern of bone vascularity may be predisposing factors. The history of a traumatic event is common. The aetiology of the various forms of upper extremity osteonecroses, based on micro-anatomical, biomechanical and blood circulation aspects will be as well discussed during the Symposium, and the results of various surgical options (core decompression, vascularized bone graft, arthroplasty, etc.) will be presented. Traumatic osteonecroses present special problems, including in children (lateral humeral condyle). Anatomical knowledge of microvascular anatomy is essential : for example, due to its particular vascularization, the radial head quite unfrequently undergoes osteonecrosis after neck fracture.

Whether after fracture fixation or after surgery for avascular osteonecrosis, postoperative physiotherapy and rehabilitation are an essential part of the treatment. The evaluation of the results, whatever the treatment modalities, is another topic of the Symposium.

As always, the primary goals of the Brussels/Genval annual upper extremity Symposium, gathering together in a first-class resort close to Brussels experts from different fields (the previous Symposia have been attended by orthopedic, plastic and general surgeons, anatomists, physiotherapists, rheuma-

tologists, anesthesiologists, pain specialists, radiologists, nuclear medicine scientists, pathologists, engineers and basic scientists), are to promote the exchange of ideas, to establish guidelines on a consensual basis, and to foster collaborative investigations among various specialists. Much time will be set aside for the discussions.

## **SPECIFIC AIMS**

- To summarize the state of knowledge of fracture healing and of bone union enhancement, on the basis of experimental and clinical research ;
- To specifically present new concepts of osteosynthesis, especially for the treatment of osteoporotic fractures (and how to measure bone fragility at the upper extremity) ;
- To review the various forms of upper extremity osteonecroses, their possible aetiologies, clinical expressions and recommended treatments ;
- To discuss research and clinical experience in bone healing and bone blood flow ;
- To evaluate alternative techniques, in particular non-operative treatment options of fractures and osteonecroses ;
- To discuss rehabilitation and to determine the most appropriate methods for objective assessment of the results ;
- To formulate on these bases recommendations to the medical community ;
- To discuss unsolved problems and potential solutions ;
- To explore future directions of investigation.

## **ADVANCED COURSE ON UPPER EXTREMITY SURGICAL APPROACHES AND OSTEOSYNTHESIS**

As an introduction to the Symposium, an optional anatomic hands-on training course will be organized on January 31. The number of participants for this one-day course of surgical anatomy is strictly limited to 50 participants, on a first-come first-served basis.

The workshop will provide an opportunity to review normal anatomy and implants, view surgical demonstrations, and practice technique, through cadaveric dissections, demonstrating the major upper extremity approaches for bone fixation, and through demonstrations of various implants. Experts will first present their anatomical demonstration, which the participants will follow on TV monitors. Each participant will then be invited to reproduce the dissection on a fresh specimen (one arm per two participants). After the course, a CD-rom, based on the videos and dissections presented by the faculty, will be made

available to the participants. Scrubs and instruments will be provided. Please bring also your camera. Participants will be driven from Genval to Liège and back in a luxury coach.

## **INTERNATIONAL FACULTY**

<i>Y. Andrienne (Brussels, Belgium)</i>	<i>D. Mouraux (Brussels, Belgium)</i>
<i>J. Bahm (Aachen, Germany and Brussels, Belgium)</i>	<i>Fl. Mulpas (Brussels, Belgium)</i>
<i>O. Barbier (Brussels, Belgium)</i>	<i>M. Mukisi (Point à Pitre, Guadeloupe, France)</i>
<i>E. Brassinne (Brussels, Belgium)</i>	<i>J. Orbay (Miami, Fl, USA)</i>
<i>F. Burny (Brussels, Belgium)</i>	<i>Th. Pepersack (Brussels, Belgium)</i>
<i>A. Carlier (Liège, Belgium)</i>	<i>J. Quintin (Brussels, Belgium)</i>
<i>E.Y.S. Chao (Irvine, CA, USA)</i>	<i>P. Remy (Brussels, Belgium)</i>
<i>T. De Baere (Brussels, Belgium)</i>	<i>Ch. Robert (Brussels, Belgium)</i>
<i>L. De Smet (Leuven, Belgium)</i>	<i>Ph. Rotsaert (Brussels, Belgium)</i>
<i>I. Degreef (Leuven, Belgium)</i>	<i>F. Schuind (Brussels, Belgium)</i>
<i>K. Drossos (Brussels, Belgium)</i>	<i>M. Shahabpour (Brussels, Belgium)</i>
<i>W. El Kazzi (Brussels, Belgium)</i>	<i>F. Stockmans (Kortrijk, Belgium)</i>
<i>N. Goddard (London, United Kingdom)</i>	<i>F. Van Glabbeek (Antwerp, Belgium)</i>
<i>M. Hinsenkamp (Brussels, Belgium)</i>	<i>R. van Riet (Breda, The Netherlands)</i>
<i>M. Janyankura (Brussels, Belgium)</i>	<i>M. Vancabeke (Brussels, Belgium)</i>
<i>P. Ledoux (Brussels, Mons, Belgium)</i>	<i>H. Von Schroeder (Toronto, Canada)</i>
<i>T. Leloup (Brussels, Belgium)</i>	<i>A. Zyluk (Szczecin, Poland)</i>
<i>D. Lichtman (Ft Worth, Texas, USA)</i>	

## **SCIENTIFIC DIRECTORS**

*J. Bahm (Belgium)*  
*W. El Kazzi (Belgium)*  
*F. Schuind (Belgium)*

## Daily Program at a Glance

	January 30 (Wednesday)	January 31 (Thursday)	February 1 (Friday)	February 2 (Saturday)
06.30		Transfert by luxury coach Genval-Liège		
			07.30	Registration – Coffee and Croissants
			08.30	Session 1 : An introduction to the Symposium
08.45		Change and Preparation to Dissection		Session 7 : Distal Radius
08.55		Course, Session A		
10.30		Coffee-Break		
			10.40	Coffee-Break and Visit of the Commercial Exhibition
10.50		Course, Session B	10.50	Coffee-Break and Visit of the Commercial Exhibition
			11.00	Session 8 : Carpus
			11.20	Session 2 : Taking Care of Ortho-Geriatric Patients
			12.30	Lunch and Visit of the Commercial Exhibition
12.35		Box Lunch	12.40	Lunch and Visit of the Commercial Exhibition
			13.30	Session 3 : Enhancement of Bone and Soft Tissue Healing
13.00		Course, Session C	13.40	Session 9 : Hand
			14.20	Session 10 : Upper Extremity Osteonecroses
15.00		Coffee-Break	15.20	Coffee-Break and Visit of the Commercial Exhibition
15.20		Course, Session D	15.40	Session 4 : Proximal Humerus
16.00	Course and Congress Registration		16.25	Session 5 : Elbow and Proximal Forearm
			16.40	Session 11 : Bone Vascularization and Fracture Healing in the Upper Extremity. Avascular Necroses – General Conclusions
			17.05	Health Break (Sports or Access to the Center of Fitness)
			17.50	Session 6 : Round Table and Case Presentations : Management of Osteoporotic Bone Fractures, New Techniques of Bone Fixation
18.00		Change	18.00	Social Program (Optional)
18.15		Return to Genval by luxury coach		
			18.30	Cocktail in the Château
19.30		Free evening	19.30	Free evening

# Program

## Wednesday, January 30, 2008

16.00-19.30 Course and congress registration

## Thursday, January 31, 2008

06.30 Transfer by luxury coach Genval-Liège

08.45 Change and Preparation to Dissection

### *Hands-on Course, Session A*

08.55 **Welcome Address** – A. Carlier, F. Schuind (Liège, Brussels, Belgium)

09.00 Demonstration 1  
**Anterior, Transdeltoid and Martini Approaches to the Shoulder**  
M. Jayankura (Brussels, Belgium)

09.15 Demonstration 2  
**Approach to Infraclavicular Plexus**  
A. Carlier (Liège, Belgium)

09.30 Demonstration 3  
**Posterior Approach to the Gleno-Humeral Joint**  
W. El Kazzi (Brussels, Belgium)

09.45 Dissection  
**Anterior Approaches to the Shoulder and Plexus**

10.15 Demonstration 4  
**Arthroscopic Portals to the Shoulder**  
Fl. Mulpas, Ph. Rotsaert (Brussels, Belgium)

10.30 Coffee-Break

### *Hands-on Course, Session B*

10.50 Demonstration 5  
**Approaches to the Humeral Diaphysis and Radial Nerve**  
T. De Baere (Brussels, Belgium)

11.05 Dissection  
**Approaches to the Humeral Diaphysis and Radial Nerve**

11.35 Demonstration 6  
**Posterior Approaches to the Elbow**  
F. Van Glabbeek, R. van Riet (Antwerp, Belgium, and Breda, The Netherlands)

11.50 Demonstration 7  
**Medial Approach to Coronoid ; Anterior Approaches**  
R. van Riet, F. Van Glabbeek (Breda, The Netherlands and Antwerp, Belgium)

12.05 Dissection  
**Approaches to the Elbow**

12.35 Box Lunch

### *Hands-on Course, Session C*

13.00 Demonstration 8  
**Arthroscopic Portals to the Elbow**  
I. Degreeef (Leuven, Belgium)

13.15 Demonstration 9  
**Anterior Approach to the Proximal Radius**  
R. van Riet, F. Van Glabbeek (Breda, The Netherlands and Antwerp, Belgium)

13.30 Dissection  
**Anterior Approach to the Proximal Radius**

14.00 Demonstration 10  
**Anterior Approach to the Distal Radius**  
J. Orbay, K. Drossos (Miami, FL, USA, and Brussels, Belgium)

14.15 Dissection  
**Anterior Approach to the Distal Radius**

14.45 Demonstration 11  
**Arthroscopic Portals to the Wrist**  
L. De Smet (Leuven, Belgium)

15.00 Coffee-Break

### *Hands-on Course, Session D*

15.20 Demonstration 12  
**Vascularized Pedicle Bone Graft from Palmar Radius (Mathoulin)**  
W. El Kazzi (Brussels, Belgium)

15.35 Demonstration 13  
**Vascularized Pedicle Bone Grafts from Dorsal Radius**  
 L. De Smet (Leuven, Belgium)

15.50 Demonstration 14  
**Dorsal Approach to the Carpus**  
 F. Stockmans (Kortrijk, Belgium)

16.05 Dissection  
**Vascularized Pedicle Bone Grafts from Dorsal Radius**

16.35 Demonstration 15  
**Arthrodesis of the Rheumatoid Arthritic Wrist**  
 O. Barbier (Brussels, Belgium)

16.50 **Free dissections**

18.00 Change

18.15 Return to Genval by luxury coach

19.30 Free evening

## Friday, February 1<sup>st</sup>, 2008

07.30-08.30 Registration - Coffee and Croissants

08.30-10.50 **Session 1 : An Introduction to the Symposium**  
 (Moderators : F. Burny, E.Y.S. Chao)

08.30 **Opening Address**  
 F. Schuind (Brussels, Belgium)

08.40 **Ortho-Geriatrics : Supportive Evidence**  
 Th. Pepersack (Brussels, Belgium)

08.55 **A Short History of Osteosynthesis**  
 Y. Andrianne (Brussels, Belgium)

09.10 **Mechanics of External and Internal Fixation**  
 E.Y.S. Chao (Irvine, CA, USA)

09.25 **Biomechanics and Biology of Fracture Healing**  
 F. Burny (Brussels, Belgium)

09.40 **Enhancement of Fracture Healing**  
 M. Hinsenkamp (Brussels, Belgium)

09.55 **The Biology of Scaphoid Pseudarthroses : Towards Innovative Osteosynthesis**  
 H. von Schroeder (Toronto, Canada)

10.10 **Avascular Bone Necroses of the Wrist and Hand**  
 L. De Smet (Leuven, Belgium)

10.25 Discussion

10.50 Coffee-break and Visit of the Commercial Exhibition

11.20-12.30 **Session 2 : Taking Care of Ortho-Geriatric Patients**  
 (Moderators : Th. Pepersack, Y. Andrianne)

11.20 **Challenges of Fragility Fracture Treatment**  
 A. Poposka, J. Nikolov (Skopje, Macedonia)

11.30 Discussion

11.35 **Management of Osteoporotic Bone Fracture**  
 E.Y.S. Chao (Irvine, CA, USA)

11.50 Discussion

11.55 **Sarcopenia and Aging**  
 Th. Pepersack (Brussels, Belgium)

12.10 **Electrovibrostimulation applied to Improve Muscle Strength**  
 K.J. Van Zwieten, I. Verhaegen, B. Op't Eijnde, A.V. Zinkovsky, I.A. Zubova, K.P. Schmidt, P.L. Lippens (Hasselt, Belgium, and Saint-Petersburg, Russia)

12.20 Discussion

12.30 Lunch and Visit of the Commercial Exhibition

13.30-15.20 **Session 3 : Enhancement of Bone and Soft Tissue Healing**  
 (Moderators : M. Hinsenkamp, H. von Schroeder)

13.30 **Clinical and Biological Aspects of Demineralized Bone Matrix Grafts in the Upper Limb**  
 O. Barbier (Brussels, Belgium)

13.45	<b>Bone Graft Substitutes in Nonunions and Osteonecroses</b> J.P. Deleuze, P. Massagé, Ch. Ronsmans, H. Van Cauwenberghe, A. Carlier (Liège, Belgium)	16.00	<b>Radiological Evolution of Delta III Reverse Total Shoulder Replacement for Acute Complex Fractures of the Proximal Humerus in Elderly Population with a Follow-Up from 1 to 13 Years</b> J.F. Cazeneuve, Y. Hassan, F. Kermad, A. Brunel (Laon, France)
14.00	Discussion		
14.10	<b>Does BMP-2 Accelerate Bone Healing in Scaphoid Nonunions?</b> E. Vögelin (Bern, Switzerland)	16.10	Discussion
14.20	<b>Gene Therapy and Bone Healing : State of the Art</b> M. Jayankura (Brussels, Belgium)	<b>16.25-17.50</b>	<b>Session 5 : Elbow and Proximal Forearm</b> (Moderators : W. El Kazzi, R. van Riet)
14.35	Discussion	16.25	<b>Approaches to the Elbow</b> R. van Riet, F. Van Glabbeek (Breda, The Netherlands and Antwerp, Belgium)
14.45	<b>Low-Intensity Pulsed Ultrasound Stimulation in the Enhancement of Healing of Bone-Tendon Junction and Regenerated Bone after Lengthening</b> H. Lu, J. Hu, L. Qin, K. Li, Y. Yang, C. Zeng, J. Zhou, W. Cheung, W. Wong, K. Leung (Changsha and Hong Kong, China)	16.40	Discussion
15.00	Discussion	16.45	<b>Radial Head Dislocation</b> W. El Kazzi, J. Quintin, F. Schuind (Brussels, Belgium)
15.05	<b>Healing of Pediculated Osteo-Cutaneous Flaps in the Hand</b> J. Jablecki, L. Laczmarzyk, A. Domanasiewicz, J. Kaczmarzyk (Trzebnica, Poland)	17.00	Discussion
15.15	Discussion	17.05	<b>General Considerations Regarding Radial Head Fractures</b> R. van Riet, F. Van Glabbeek (Breda, The Netherlands and Antwerp, Belgium)
15.20	Coffee-break and Visit of the Commercial Exhibition	17.15	<b>Radiocapitellar Joint Contacts after Bipolar Radial Head Arthroplasty</b> F. Mougondo, W. El Kazzi, R. van Riet, V. Feipel, M. Rooze, F. Schuind (Brussels, Belgium)
<b>15.40-16.25</b>	<b>Session 4 : Proximal Humerus</b> (Moderators : M. Jayankura, E. Brassinne)	17.25	<b>Proximal Forearm Fractures</b> R. van Riet, F. Van Glabbeek (Breda, The Netherlands and Antwerp, Belgium)
15.40	<b>Complex Proximal Humeral Fracture treated by Telegraph Nail : Results and Limitations</b> M. Jayankura, L. Spinato, T. Bourdoux, P. Remy, A. Bogdan, S. Devos, F. Schuind (Brussels, Belgium)	17.35	Discussion
15.50	<b>Results with LPHP-Plate for Proximal Humeral Fractures</b> T. De Baere (Brussels, Belgium)	<b>17.50-18.30</b>	<b>Session 6 : Round Table and Case Presentations : Management of Osteoporotic Bone Fractures, New Techniques of Bone Fixation</b> (Moderators : F. Schuind, F. Van Glabbeek)
		18.30	Cocktail in the Château
		19.30	Free Evening

## Saturday, February 2, 2008

### 08.30-10.40 **Session 7 : Distal Radius**

(Moderators : K. Drossos, J. Orbay)

- 08.30 **Bone Vascularization of the Distal Radius and Ulna : an Anatomical Study using the Spalteholz Technique. Clinical Implications**  
A. Carrera, C. Lamas, J.R. Ballesteros, A. Méndez, P. Forcada, M. Llusá (Barcelona, Spain)
- 08.40 Discussion
- 08.45 **Wrist Arthrodesis using External Fixation**  
F. Burny, M. Donkerwolcke, W. El Kazzi, F. Moulart, M.J. Panda, F. Schuind (Brussels, Belgium)
- 08.55 Discussion
- 09.00 **Principles of Treatment of Distal Radius Fractures**  
K. Drossos (Brussels, Belgium)
- 09.15 Discussion
- 09.20 **Internal Fixation of Distal Radius Fractures : an Evolving Concept**  
J. Orbay (Miami, USA)
- 09.35 Discussion
- 09.40 **Osteosynthesis of Distal Radius Fractures by External Fixation or Kapandji Pinning. A Prospective, Randomized Study**  
M. Vancabeke, Ph. Bouté, Ph. Putz (Brussels, Belgium)
- 09.55 **Prospective Cohort Study comparing External Fixation and Internal Volar Fixed Angle Plate Fixation of Unstable Distal Radius Fractures**  
F. Stockmans, K. Libberecht, J. Vanhaecke, F. Moulart, E. Moest, G. Putzeys, F. Schuind (Kortrijk, Brussels, Belgium)
- 10.10 Discussion
- 10.20 **Imaging of Wrist Abutment and Impingement Syndrome**  
M. Shahabpour, Y. Baeten, K. Buedts, P. Ceuterick, N. Pouliart (Brussels, Belgium)
- 10.35 Discussion

- 10.40 Coffee-break and Visit of the Commercial Exhibition

### 11.00-12.40 **Session 8 : Carpus**

(Moderators : L. De Smet, N. Goddard)

- 11.00 **Percutaneous Scaphoid Osteosynthesis**  
N. Goddard (London, UK)
- 11.15 Discussion
- 11.20 **Prognostic Factors in the Treatment of Scaphoid Nonunions**  
F. Schuind (Brussels, Belgium)
- 11.30 Discussion
- 11.35 **Experience with Vascularized Pedicled Bone Graft for Scaphoid Nonunions**  
M. Dezillie, J. Vanhaecke, F. Stockmans (Kortrijk, Belgium)
- 11.45 **Results in the Treatment of Scaphoid Nonunion with Pedicled Bone Graft from the Distal Radius**  
A. Zyluk, I. Walaszek (Szczecin, Poland)
- 12.00 Discussion
- 12.10 **Four-Corner Arthrodesis with a Retrograde Compressing Screw : Technique and Preliminary Results**  
K. Libberecht, J. Vanhaecke, F. Stockmans (Kortrijk, Belgium)
- 12.20 Discussion
- 12.25 **Biomechanics of First Carpal Row Resection**  
Ph. Rotsaert, S. Sobczak, F. Gaede, Ch. Verbeurgt, M. Vancabeke, P. Salvia, M. Rooze (Brussels, Belgium)
- 12.35 Discussion
- 12.40 Lunch and Visit of the Commercial Exhibition
- 13.40-14.20 **Session 9 : Hand**  
(Moderators : A. Carlier, A. Zyluk)
- 13.40 **Hand Minifixation**  
F. Schuind, F. Burny (Brussels, Belgium)



13.55	<b>Design of an Articulated Mini-Fixation Device for Proximal Interphalangeal Joint Finger Fractures</b> Th. Leloup, A. De Greef, S. Bantuelle, W. El Kazzi, G. Mannaert, N. Warzée, A. Delchambre, F. Schuind (Brussels, Belgium)	16.25	<b>Preiser's Disease after Chimino-Shunt Surgery</b> I. Kuhfuss, S. Deichstetter (Würzburg, Germany)
14.10	Discussion	16.35	Discussion
14.20-16.40	<b>Session 10 : Upper Extremity Osteonecroses</b> (Moderators : O. Barbier, D. Lichtman)	16.40-17.05	<b>Session 11 : Bone Vascularization and Healing in the Upper Extremity. Avascular Necroses – General Conclusions</b> (Moderators : F. Schuind, W. El Kazzi)
14.20	<b>Osteonecrotic Joint Collapse and Reconstruction</b> E.Y.S. Chao (Irvine, CA, USA)	16.40	<b>Ten Questions to the Floor and the Faculty - Case Presentations</b>
14.35	Discussion	17.00	<b>Summary and Conclusions</b> F. Schuind, W. El Kazzi (Brussels, Belgium)
14.40	<b>Kienböck's Disease : Past, Present and Future</b> D. Lichtman (Fort Worth, TX, USA)	17.05	<b>Health Break (Sports or Access to the Center of Fitness)</b>
14.55	Discussion	18.00	<b>Social Program : optional</b>
15.00	<b>Finite Element Analysis of Kienböck's Disease</b> P. Ledoux, D. Lamblin, A. Wuilbaut, F. Schuind (Mons, Brussels, Belgium)		
15.15	Discussion		
15.20	<b>Radial Shortening Osteotomy for Lichtman Stage II and III-A Kienböck's : Good but not Great</b> M.M.E. Wijffels, J.B. Jupiter (Boston, MA, USA)		
15.30	<b>Long Term Results using STT-Arthrodesis for Treatment of Kienböck's Disease</b> K. Kalb, O. Schmitt, J. van Schoonhoven, K.J. Prommersberger (Bad Neustadt, Germany)		
15.40	Discussion		
15.50	<b>Vascularized Bone Graft for Kienböck's Disease</b> L. De Smet (Leuven, Belgium)		
16.05	Discussion		
16.10	<b>Kienböck's Disease in Children and Adolescents</b> T. Pillukat, K. Kalb, J. van Schoonhoven, K.J. Prommersberger (Bad Neustadt, Germany)		
16.20	Discussion		

# Congress Information

## Venue

Château du Lac, avenue du Lac, 87  
B-1332 Genvall, Belgium  
Tel. +32 2 655 74 25 – Fax +32 2 655 74 44  
E-mail : seminars.cdl@martins-hotels.com

## Language

English.

## Information for Presenters

The allocated time of presentation should be strictly respected (10 min for most free papers).

**The standard presentation format is by computer. The audiovisual projection system in the meeting room will include a Personal Computer (PC) along with PowerPoint for Windows and a standard CD-ROM drive and USB port. Request to use any equipment other than this must be arranged at the presenter's expense.**

Each presenter should check with the technician 20 min. before the session, and introduce himself to the moderators of the session. The technician will be available in the meeting room from 07.00 on both congress days.

## Accommodation

### **Château du Lac (5 stars hotel) – meeting place**

15 km south of Brussels. An invigorating and sophisticated ambience, exquisite décor, fine cuisine. Free access available at the 'John Harris Fitness Centre' for participants accommodated at the Château.

Indicative rate : Single 170 to 195 €/night with breakfast

Address : Château du Lac  
avenue du Lac, 87, B-1332 Genvall, Belgium  
Tel. +32 2 655 74 25  
Fax +32 2 655 74 44  
E-mail : seminars.cdl@martins-hotels.com

When contacting the hotel, please indicate that you are attending the "Bone Vascularization and Fracture Healing in the Upper Extremity Symposium" to receive the reduced rate for the dates January 30 through February 3.

Participants can also be accommodated at the hotel "Le Lido", a 3 stars hotel located about 2 km from the Château du Lac (no transport will be provided).

Indicative rate : Single 110 to 140 €/night with breakfast

Address : Le Lido  
rue de Limal Sart 20, B-1332 Rixensart,  
Belgium  
Tel +32 2 634 34 34  
Fax +32 2 634 34 44  
E-mail : lelido@martins-hotels.com

## Continuing Medical Education Credit

A certificate will be provided to interested participants.

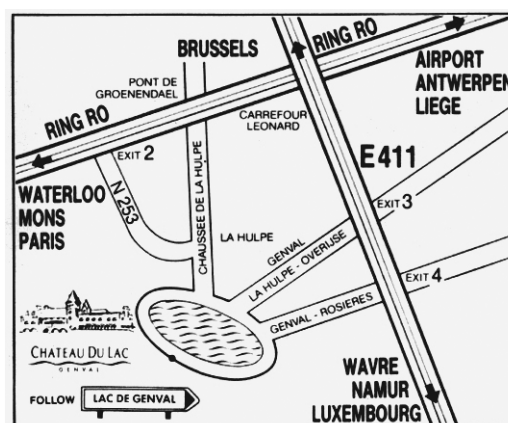
## Travel Information

The Brussels International Airport has flight connections from many major cities in Europe and overseas. Coach transport from and to the airport is organized on January 30 and February 3. One of us will meet you 15 min prior to the departure of the bus, at the Airport meeting point (level arrivals) and at the railway station meeting point (gare du Midi).

Timetable :

	January 30	February 3
Zaventem Airport	15.30	
Gare du Midi	16.15	
Genvall	17.30	07.00
Zaventem		09.30

Genvall can also be reached by car, by taxi (about 60 € from the airport). Although there is a railway station in Genvall, we do not recommend the train as there are no taxis' at the station, about 5 km from the hotel. If you need however a taxi, call the hotel so that they can send you a car to pick you up.



## Social Program, February 2

Visit and dinner at the Folon foundation (La Hulpe, drève de la Ramée 6-A, B-1310 La Hulpe - <http://www.fondationfolon.be>). More than five hundred watercolours, engravings, posters and sculptures of the famous Belgian artist Folon are presented in the farm of the castle of La Hulpe, close to Genval. A guided tour of this magical exhibition is organized, followed by a nice banquet in the museum.



## Registration Fees

Before Oct. 1, 2007	470 € (1)
After Oct. 1, 2007	500 € (1)
Resident/Student/Physiotherapist/Nurse	350 € (2)
Presymposium Workshop on January 31	300 € (3)
Optional : Folon foundation and banquet	100 € (4)

(1) Fees include meeting attendance, congress bag with the abstract book and all related documents (certificates of payment and attendance, badge etc.), lunches and transport by coach from and to the airport on January 30 and February 3. Not included: hotel accommodation, meals except 2 lunches, access to sport facilities. Acknowledgement of registration and receipt of fees will be sent soon after the registration form and full payment are received. Upon request, a letter of invitation will be sent. Payments should be made free of all bank charges and commissions. A 3 % commission will be added to all payments made by credit card. The organizers cannot be held responsible for any personal injury, loss, damage, accident to private property, or additional expenses incurred as a result of delays or changes in air, rail, sea, road or other services, strikes, sickness, weather, war, sports and other causes. Luggage is at owners risk throughout unless insured. The symposium is organized by the 'Groupe pour l'Etude du Membre Supérieur', ASBL, Brussels.

(2) Please include a certificate signed by head of department.

(3) Fees include participation in the one-day course, CD-rom, disposal of basic instruments and scrub, box-lunch at noon, and transport by luxury coach from Genval to Liège and return. The course is organized in the Faculty of Medicine of the University of Liège (Pr A. Carlier).

(4) Included : coach transport Genval-La Hulpe, visit of the Folon Foundation, and dinner in the museum.

## Bank transfer

Account holder « GEMS »

Account number : BE51 0012 3439 9162 (international)  
001-2343991-62 (Belgium)

BIC or SWIFT code : GEBABEBB

with Fortis Bank, Route de Lennik 808, B-1070 Brussels, Belgium

Kindly instruct your bank that all charges are at your expenses, and indicate name and address on your payment order form.

## Cancellation

In the event of cancellation, a full refund (less 100 € as a handling fee) of the registration fees may be obtained provided that written notification is received by December 15, 2007. A 50 % refund will be made for cancellations received by January 15, 2008. No refunds will be made thereafter.

## Registration Desk

The registration desk will be open at the Château du Lac during the following hours :

January 30 : 16.00-19.30

January 31 : 16.00-19.30

February 1 : 07.30-17.00

February 2 : 07.30-17.00

## Certificate of Attendance

Available at the registration desk. Upon request, a letter of invitation will be sent.

## Congress Secretariat : Ms J. Kabamba

Department of Orthopaedics

Erasme University Hospital

Route de Lennik 808, B-1070 Brussels

Tel. +32 2 555 68 44 - 555 36 45

Fax + 32 2 555 83 60

E-mail : [Hand.congress@ulb.ac.be](mailto:Hand.congress@ulb.ac.be)

# REGISTRATION FORM

To be filled in and returned as soon as possible

Name .....

First name .....

Specialty .....

Title .....

Institution .....

Address .....

City ..... Country ..... Zip .....

Phone ..... Fax .....

E-mail : .....

Arrival date ..... Departure date .....

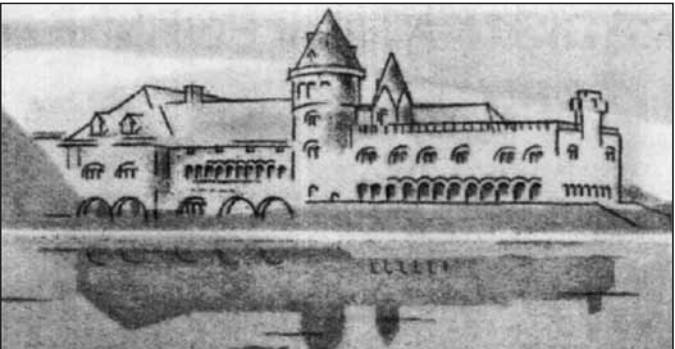
Special requests (diets, etc.) .....

Please fill in below as appropriate.

- I will participate in the *Bone Vascularization and Fracture Healing in the Upper Extremity Symposium (February 1-2, 2008)*.
- I would also like to participate in the *Presymposium Hands-on Course on Upper Extremity Surgical Approaches and Osteosynthesis (January 31, 2008)* ; the number of participants is limited; if some participants cannot be accepted, the fees will be reimbursed at no charge.
- I would like to attend the banquet and the visit of the Folon foundation on February 2, 2008.
- My registration fees are paid as follows :
  - Enclosed check
  - Money order to Belgian account  
BE51 0012 3439 9162 (International)  
001-2343991-62 (Belgium)
  - Credit card (Euro/Master, Visa)  
Card type : .....  
Card account number : .....  
Cardholders' name : .....  
Expiration date (mo./yr.) : .....

.....  
SIGNATURE

.....  
DATE



**Ms J. Kabamba**  
**Department of Orthopaedic Surgery**  
**(Prof. F. Schuind)**  
**Erasmee University Hospital**  
**Université libre de Bruxelles**  
**Route de Lennik 808**  
**B-1070 BRUSSELS**  
**BELGIUM**

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