

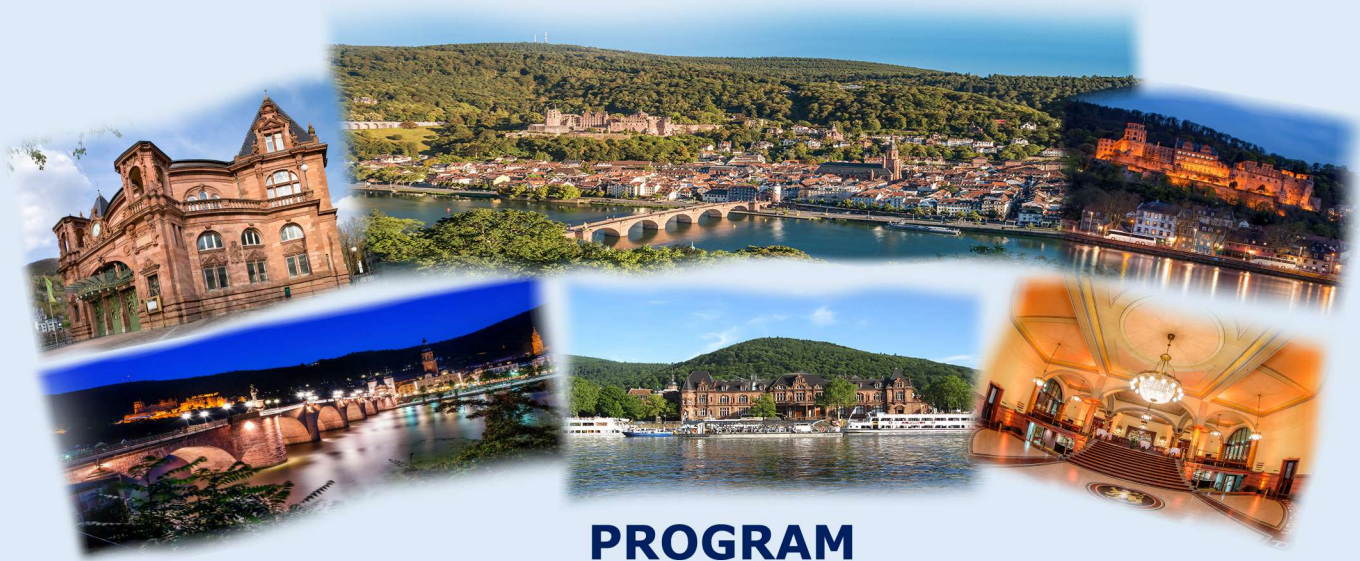


HEIDELBERG  
UNIVERSITY  
HOSPITAL

# FOURTH ESTROT CONGRESS

*European Society of Tissue Regeneration in Orthopaedics and Traumatology*

Chairman: **Gerhard Schmidmaier**



## PROGRAM

16-18 July 2018

Congress Centre "Stadhalle", Heidelberg

**President**  
Gerhard Schmidmaier

**Past - President**  
Giorgio Maria Calori



**Vice President**  
Peter V. Giannoudis

**Treasurer**  
Thierry Bégué

*Local Organiser: Tobias Grossner - Heidelberg, DE*

# EXHIBITORS

## PLATINUM



## GOLD

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Heraeus

## BRONZE

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## OTHERS

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curasan



## FACULTY

Akbar Michael - Heidelberg, DE  
Aktuglu Kemal - Izmir, TK  
Arts Chris - Maastricht, NL  
Ascherl Rudolf - Tirschenreuth, DE  
Aydingoz Onder - Istanbul, TK  
Bégué Thierry - Paris, FR  
Blokhuis Taco - Maastricht, NL  
Brunnemer Ulf - Heidelberg, DE  
Bumbasirevic Marko - Belgrade, SRB  
De Schepper Jo - Sint-Niklaas, B  
Diefenbeck Michael - Lund, S  
Dreher Thomas - Heidelberg, DE  
El-Jawhari Jehan - Leeds, UK  
Felicissimo Paulo - Lisbon, P  
Ferracini Riccardo - Genoa, IT  
Fischer Christian - Heidelberg, DE  
Forriol Francisco - Madrid, ES  
Ghadamgahi Dirk - Norderstedt, DE  
Giannoudis Peter - Leeds, UK

Grossner Tobias - Heidelberg, DE  
Gruetzner Paul A. - Ludwigshafen, DE  
Guerado Enrique - Malaga, ES  
Jones Elena - Leeds, UK  
Kasperk Christian - Heidelberg, DE  
Kleber Christian - Dresden, DE  
Kayaokay Kemal - Izmir, TK  
Kneser Ulrich - Ludwigshafen, DE  
Krettek Christian - Hannover, DE  
Lehner Burkhard - Heidelberg, DE  
Liccardo Marco - Rome, IT  
Marzi Ingo - Frankfurt, DE  
McNally Martin - Oxford, GB  
Miska Matthias - Heidelberg, DE  
Moradi Babak - Heidelberg, DE  
Müller Christof - Karlsruhe, DE  
Ollila Fredrik - Turku, FIN  
Pape Hans-Christoph - Zurich, CH

Poeze Martijn - Maastricht, NL  
Pohlemann Tim - Homburg, DE  
Raaben Marco - Utrecht, NL  
Regazzoni Pietro - Lugano, CH  
Schmidmaier Gerhard - Heidelberg, DE  
Schmidt Volker - Ludwigshafen, DE  
Screpis Daniele - Negrar, IT  
Stange Richard - Münster, DE  
Suda Arnold - Mannheim, DE  
Tanner Michael - Heidelberg, DE  
Trampuz Andrej - Berlin, DE  
Tross Anna K. - Heidelberg, DE  
Verdonk René - Ghent, B  
Verhofstad Michiel - Rotterdam, NL  
Wagner Frithjof - Murnau, DE  
Wildemann Britt - Jena, DE  
Zimmermann Gerald - Mannheim, DE

## *Poster Presentations*

*Abazovic Dzihan - Belgrade, SRB*

*Aldeeri Riyadh - Heidelberg, DE*

*Badghish Emran - Maastricht, NL*

*Corbo Valentina Rita - Milan, IT*

*El-Jawhari Jehan - Leeds, UK*

*Eguiraun Santiago - Bilbao, ES*

*Fischer Christian - Heidelberg, DE*

*Godi Nicola - Negrar, IT*

*Gross Sascha - Heidelberg, DE*

*Howe James - USA*

*Jha Animesh - Leeds, UK*

*Krammer Daniel - Heidelberg, DE*

*Langen Friso - Nieuwegein, NL*

*Ober Julian - Heidelberg, DE*

*Piccinni Vincenzo - Rome, IT*





*Pipitone Vincenzo - Rome, IT*

*Sciarretta Fabio V. - Rome, IT*

*Schotanus Michiel - Maastricht, NL*

## MEETING AT A GLANCE

	Monday, 16 July 2018	Tuesday, 17 July 2018	Wednesday, 18 July 2018
08.00-08.30	<b>Registration</b>		
08.30-08.45		<b>Keynote Lecture 2.A - B. Moradi</b> "Do we need arthroplasty in the future? The role of inflammatory pathways in osteoarthritis"	
08.45-09.00			<b>Venue opening - G. Schmidmaier</b>
09.00-09.15	<b>Keynote Lecture 1.A - O. Aydingoz</b> "Future perspective - Trauma care 2050?"	<b>Keynote Lecture 2.B - F. Forriol</b> "What options do we have for cartilage repair?"	<b>Breakfast Symposium:</b> "Fracture Liaison Service - a solution for challenges in the treatment of fragility fractures of the pelvis" Chair: <i>R. Stange</i>
09.15-09.30			
09.30-09.45	<b>Keynote Lecture 1.B - C. Kasperk</b> "Mechanoperception of the endocrine organ bone"	<b>Session 2.A</b> <b>CARTILAGE REGENERATION</b> Chairs: <i>R. Verdonk, F. Forriol, J. El-Jawhari</i>	
09.45-10.00			
10.00-10.15	<b>Session 1.A</b> <b>OSTEOPOROSIS</b> Chairs: <i>M. Poeze, C. Kasperk, C. Fischer</i>		
10.15-10.30			<b>Keynote Lecture 3.A - T. Blokhuis</b> "Scaffolds and bone synthetics"
10.30-10.45			Coffee break
10.45-11.00			

11.00-11.15	Coffee break	<b>Keynote Lecture 2.D - P. Giannoudis</b> "Induced membrane: The Leeds experience and lessons learned"	Coffee break		
11.15-11.30		<b>Keynote Lecture 2.C - C. Arts</b> "Antimicrobial resistance - a global health threat in orthopaedics and trauma surgery"			
11.30-11.45	<b>Keynote Lecture 1.C - M. Diefenbeck</b> "The need for antibiotics-loaded bone graft substitutes"	<b>Session 2.B</b> <b>BONE REGENERATION 1</b> Chairs: <i>P. Giannoudis, C. Arts, E. Jones</i>	<b>Session 3.A</b> <b>SOFT TISSUE MANAGEMENT</b> Chairs: <i>M. Bumbasirevic, E. Guerado, K. Aktuglu</i>		
11.45-12.00	<b>Keynote Lecture 1.D - M. McNally</b> "Local antibiotics in the management of osteomyelitis and infected fractures"		<b>Keynote Lecture 3.C - M. Tanner</b> "Antibiotica loaded bone cements"		
12.00-12.15	<b>Session 1.B</b> <b>INFECTIONS 1</b> Chairs: <i>C. Müller, M. McNally, O. Aydingoz</i>			<b>Session 3.B</b> <b>BONE REGENERATION 3</b> Chairs: <i>T. Bégué, T. Blokhuis, P. Regazzoni</i>	
12.15-12.30		<b>Lunch Break / Symposium 2.A</b> 1. Recent developments in using S53P4 bioactive glass for bone regeneration - <i>F. Ollila</i> 2. S53P4 Bioactive glass highly cost-effective in clinical treatment of chronic osteomyelitis - <i>C. Arts</i> 3. Maastricht experience in using S53P4 in open fracture surgery - <i>T. Blokhuis</i> 4. Initial Heidelberg experience in using S53P4 bioactive glass for managing bone infections – <i>G. Schmidmaier</i>			
12.30-12.45					
12.45-13.00					
13.00-13.15					
13.15-13.30	<b>Lunch Break / Lunch Symposium 1.A</b> "Challenging cases for tissue regeneration and bone healing" Chair: <i>M. Diefenbeck</i> Case Presentation by <i>M. McNally, B. Lehner and G. Schmidmaier</i>	<b>Key Note Lecture 2.E - T. Bégué</b> "Advanced experience with Bioglass in management of osteitis and septic non unions of the limbs"	<b>Lunch Break / Symposium 3.A</b> "Bone marrow concentrate for enhancement of bone healing" <i>P. Giannoudis, T. Bégué, T. Grossner, A. Tross</i>		
13.30-13.45					
13.45-14.00					
14.00-14.15					
14.15-14.30					
					

14.30-14.45	<b>Key Note Lecture 1.E - A. Trampuz</b> "Infections in Trauma and Orthopaedics - The microbiological perspective"	<b>Keynote Lecture 2.F - B. Wildemann</b> "Stimulation in bone healing - a biological perspective"	
14.45-15.00			<b>Closing Lecture</b> "ESTROT 2018 - What have we learned?" <i>O. Aydingoz, P. Giannoudis</i>
15.00-15.15	<b>Session 1.C - INFECTIONS 2</b> Chairs: <i>M. Poeze, A. Trampuz, R. Ascherl</i>	<b>Session 2.C BONE REGENERATION 2</b> Chairs: <i>R. Verdonk, G. Zimmermann</i>	<b>Awards &amp; Venue closing</b> <i>G. Schmidmaier</i>
15.15-15.30			<b>ESTROT Member Meeting</b>
15.30-15.45			
15.45-16.00	<b>Keynote Lecture 1.F - A. Suda</b> "Management of infected non unions"		
16.00-16.15			
16.15-16.30	Coffee break	Coffee break	
16.30-16.45		<b>Keynote Lecture 2.G - U. Kneser</b> "Soft tissue reconstruction after trauma and Infection"	
16.45-17.00	<b>Keynote Lecture 1.G - G. Schmidmaier</b> "Clinical experiences in the use of antibiotica coated implants"		
17.00-17.15		<b>WHAT WOULD YOU DO?</b> "My worst trauma case" <i>P. Gruetzner, C. Krettnek, C. Pape</i>	
17.15-17.30	<b>WHAT WOULD YOU DO?</b> "My worst infection case" <i>T. Pohlemann, M. Verhofstad</i>		
17.30-18.00			
18.15-19.30	<b>POSTER SESSION</b> Chairs: <i>P. Felicissimo, A. Suda</i>		

08:00 - 08:45 Registration

08:45 - 09:00 Venue opening - *G. Schmidmaier*

09:00 - 09:30 **Key Note Lecture 1.A:** Future perspective - Trauma care 2050? - *O. Aydingoz*

09:30 - 10:00 **Key Note Lecture 1.B:** Mechanoperception of the endocrine organ bone - *C. Kasperk*

### **SESSION 1.A - OSTEOPOROSIS**

Chairs: *M. Poeze, C. Kasperk, C. Fischer*

10:00 - 10:15 Studies on the mineralization and morphology of the trabecular osteoporotic bone - *E. Guerado*

10:15 - 10:30 Clinical experience with a novel local osteo-enhancement procedure to treat osteoporotic bone loss in the proximal femur - *J. De Schepper*

10:30 - 10:45 Stabilization of osteoporotic fractures - *U. Brunnemer*

10:45 - 11:00 Tips and tricks by the use of RIA in osteoporotic bone - *M. Poeze*

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

11:30 - 11:45 **Key Note Lecture 1.C:** The need for antibiotic-loaded bone graft substitutes - *M. Diefenbeck*

11:45 - 12:00 **Key Note Lecture 1.D:** Local antibiotics in the management of osteomyelitis and infected fractures  
*M. McNally*

### **SESSION 1.B - INFECTIONS 1**

Chairs: *C. Müller, M. McNally, O. Aydingoz*

12:00 - 12:15 Management of severe open fractures - *F. Wagner*

12:15 - 12:30 Various strategies in the operative treatment of infections after osteosynthesis - *C. Müller*

12:30 - 12:45 Management of the infected spondylodesis after major spine trauma - *M. Akbar*

12:45 - 13:00 Management of infected pelvic and acetabulum osteosynthesis - *C. Kleber*

13:15 - 14:15 **Lunch Break / Symposium 1.A**  
"Challenging cases for tissue regeneration and bone healing"

*Chair: M. Diefenbeck*

*Case Presentation by M. McNally, B. Lehner and G. Schmidmaier + Panel Discussion*



14:30 - 15:00 **Key Note Lecture 1.E:** Infections in trauma and orthopaedics - The microbiological perspective  
*A. Trampuz*

## SESSION 1.C - INFECTIONS 2

Chairs: *M. Poeze, A. Trampuz, R. Ascherl*

15:00 - 15:15 Treatment of periprosthetic infections - one step versus two steps? - *R. Ascherl*

15:15 - 15:30 Two-stage revision of infected total knee arthroplasty - *M. Kayaokay*

15:30 - 15:45 Management of non unions/malhealings after pelvis/acetabulum fractures - *T. Pohlemann*

15:45 - 16:15 **Key Note Lecture 1.F:** Management of infected non unions - *A. Suda*

16:15 - 16:45 **Coffee Break**

16:45 - 17:15 **Key Note Lecture 1.G:** Clinical experiences in the use of antibiotica coated implants - *G. Schmidmaier*

17:15 - 18:00 **WHAT WOULD YOU DO? My worst infection case** - *T. Pohlemann, M. Verhofstad*

18.15 - 19.30 **POSTER SESSION - Kammermusiksaal**  
Moderators: *P. Felicissimo, A. Suda*



20.30 - 22.30 Faculty Dinner

## POSTERS

- 1 Alternative treatment in discogenic low back pain through intradiscal platelet rich plasma injections  
***S. Eguiraun, I. Andia, F. Krappel***
- 2 Real time US guided needle joint puncture and PRP injection technique. Preliminary results  
***M. Liccardo, V. Piccinni, A. Petrella, S. Pano, V. Pipitone, A. Ursone***
- 3 Arthroscopic Biologic Reconstruction of Large Chondral Defect Treatment: Oxy-Flow Trick  
***M. Boga, R. Milani, E. Battista, V. Corbo, M. D'Errico, U. Alfieri Montrasio, L. Mangiavini***
- 4 Autologous cartilage scaffold in chondral lesions of talus  
***D. Abazovic, G. Gavrilovic, O. Dulic, T. Palibrk, R. Jevtic, D. Stefik, D. Pagnacco, D. Maric***
- 5 Tibia as a potential (valuable) source of bone marrow stem cell population; Comparison of tibia versus iliac crest in children and adults  
***D. Abazovic, D. Maric, I. Stanojevic, M. Milivojevic, R. Jevtic, D. Stefik, D. Vojvodic***
- 6 A novel local osteo-enhancement procedure to replace bone lost in the proximal femurs of post-menopausal osteoporotic women  
***J. Howe, B. Huber, M. Chin, J. Stroncek, R. Cheng, R. Hill, T. Keaveny, K. Engelke, M. Bouxsein, H. Genant***
- 7 Use of BMAC combined to morselized bone chips and fibrin glue in nonunion  
***N. Godi, M. Bonomo, S. Rigotti, G. Piovan, D. Screpis, C. Zorzi***
- 8 Mid-Term Outcomes of cartilage repair using the LIPO-AMIC Technique - ***F. V. Sciarretta***
- 9 PRP in Knee Osteoarthritis: preliminary results looking for standardization in orthopedic practice  
***M. Liccardo, V. Piccinni, A. Petrella, S. Pano***

- 10 Near-IR Mode-locked Laser Assisted Sintering and Morphological Engineering of Biomaterials - a new approach for integrative manufacturing of hard-soft tissues for in-theatre use!  
**A. Anastasiou, N. Iqbal, E. Al-Shubhe, C. Maddi, J. Addis, T. Edwards, C. Amorese, S. Srafford, N. Hondow, A.P. Brown, C.T.A. Brown, P.V. Giannoudis, A. Jha**
- 11 Serum Inflammatory Cytokines in Long Bone Fractures  
**J. El-Jawhari, G. Kleftouris, Y.M. El-Sherbiny, E. Jones, P.V. Giannoudis**
- 12 The Hexagon Model: a practical guide for the determining in which clinical scenario bone graft substitute have added value - **F. Langen, C. Arts**
- 13 Dynamic contrast-enhanced magnetic resonance imaging (DCE-MRI) for the prediction of non-union consolidation - **C. Fischer, M. Nissen, G. Schmidmaier, T. Bruckner, H.U. Kauczor, M.A. Weber**
- 14 Dynamic contrast-enhanced ultrasound (CEUS) and elastography assess deltoid muscle integrity after reverse shoulder arthroplasty - **D. Krammer, A. Hug, M.A. Weber, H.U. Kauczor, M. Krix, T. Bruckner, P. Kunz, G. Schmidmaier, F. Zeifang, C. Fischer**
- 15 Contrast-enhanced ultrasound (CEUS) identifies perfusion differences between tibial fracture unions and non-unions - **C. Fischer, T. Haug, M.A. Weber, H.U. Kauczor, T. Bruckner, G. Schmidmaier**
- 16 Contrast-enhanced ultrasound (CEUS) determines supraspinatus muscle atrophy after cuff repair and correlates to functional shoulder outcome - **S. Groß, C. Fischer, F. Zeifang, G. Schmidmaier, M.A. Weber, P. Kunz**
- 17 Management Of Tibia Fractures Using Expert Tibia Nail (ETN), Suprapatellar Vs. Infrapatellar Approach  
**R. Aldeeri, M. Tanner, U. Brunner, S. Penzkofer, C. Rehnitz, A. Moghaddam, G. Schmidmaier, M. Miska**
- 18 Factors associated with failure of outpatient arthroplasty - **E. Badghish, M. Schotanus**
- 19 Using The Objective Structured Assessment Of Technical Skills-Score (OSATS) For Training Of Chest Tube Insertion In 'Direct' And 'Indirect' Rating: Analysis Of The Scores Intermodal Reliability  
**J. Ober, P. Haubruck, F. Nickel, T. Walker, C. Bergdolt, F. Forchheim, M. Friedrich, B.P. Müller-Stich, G. Schmidmaier, M. Tanner**

08:30 - 09:00 **Key Note Lecture 2.A:** Do we need arthroplasty in the future? The role of inflammatory pathways in osteoarthritis - **B. Moradi**

09:00 - 09:30 **Key Note Lecture 2.B:** What options do we have for cartilage repair? - **F. Forriol**

### **SESSION 2.A - CARTILAGE REGENERATION**

Chairs: **R. Verdonk, F. Forriol, J. El-Jawhari**

09:30 - 09:45 Regenerative medicine and surgery: PRP management - **M. Liccardo**

09:45 - 10:00 Meniscus allograft versus meniscus repair - **R. Verdonk**

10:00 - 10:15 Autologous and micro-fragmented adipose tissue for the treatment of diffuse degenerative knee osteoarthritis - **D. Screpis**

10:15 - 10:30 New strategies in the treatment of posttraumatic articular destruction using allografts - **C. Krettek**

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

11:00 - 11:15 **Key Note Lecture 2.C:** Induced membrane: The Leeds experience and lessons learned - **P. Giannoudis**

11:15 - 11:45 **Key Note Lecture 2.D:** Antimicrobial resistance - a global health threat in orthopaedics and trauma surgery - **C. Arts**

## SESSION 2.B - BONE REGENERATION 1

Chairs: *P. Giannoudis, C. Arts, E. Jones*

- 11:45 - 12:00 New approaches for bone repair - development of a one-step Masquelet membrane and options for stem cell therapy - *I. Marzi*
- 12:00 - 12:15 Delay in weight bearing in surgically treated tibial shaft fractures is associated with impaired healing  
*M. Raaben*
- 12:15 - 12:30 Masquelet versus distraction osteogenesis - when to use which technique? - *M. Verhofstad*

### 12:45 - 13:45 **Lunch Break / Symposium 2.A**

1. Recent developments in using S53P4 bioactive glass for bone regeneration - *F. Ollila*
2. S53P4 Bioactive glass highly cost-effective in clinical treatment of chronic osteomyelitis - *C. Arts*
3. Maastricht experience in using S53P4 in open fracture surgery - *T. Blokhuis*
4. Initial Heidelberg experience in using S53P4 bioactive glass for managing bone infections  
*G. Schmidmaier*



- 14:00 - 14:30 **Key Note Lecture 2.E:** Advanced experience with Bioglass in management of osteitis and septic non unions of the limbs - *T. Bégué*

14.30 - 15.00 **Key Note Lecture 2.F:** Stimulation in bone healing - a biological perspective - **B. Wildemann**

## **SESSION 2.C - BONE REGENERATION 2**

Chairmen: **R. Verdonk, G. Zimmermann**

15.00 - 15:15 Mesenchymal stem cells of adipose tissue in regenerative/reconstructive problems in orthopaedics  
**R. Ferracini**

15:15 - 15:30 The fitness of RIA waste-MSCs for bone regenerative therapies - **J. El-Jawhari**

15.30 - 15:45 Reasons for therapy failure and treatment options after failed nonunion therapy with the diamond concept - **M. Miska**

15:45 - 16:00 Why do polytrauma patients heal different? - **C. Pape**

16:00 - 16:30 **Coffee Break**

16:30 - 17:00 **Key Note Lecture 2.G:** Soft tissue reconstruction after trauma and infection - **U. Kneser**

17:00 - 18:00 **WHAT WOULD YOU DO? My worst trauma case** - **P.A. Grützner, C. Krettek, C. Pape**

**19.00 - 23.00 Reception and Social Dinner**

09:00 - 10:00 **Breakfast Workshop: “Fracture Liaison Service - a solution for challenges in the treatment of fragility fractures of the pelvis”**  
*R. Stange*

The Lilly logo is displayed in a red, cursive script font within a white rectangular box with a thin black border.

10:00 - 10:30 **Key Note Lecture 3.A:** Scaffolds and bone synthetics - *T. Blokhuis*

10:30 - 11:00 **Key Note Lecture 3.B:** Soft tissue management - Use of vacuum therapy - *B. Lehner*

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

### **SESSION 3.A - SOFT TISSUE MANAGEMENT**

Chairs: *M. Bumbasirevic, E. Guerado, K. Aktuglu*

11:30 - 11:45 Complex deformity corrections: Soft tissue management and limitations - *T. Dreher*

11:45 - 12:00 Plastic surgery for severe soft tissue defects using generated and intrinsic vascularized flaps  
*V. Schmidt*

12:00 - 12:15 **Key Note Lecture 3.C:** Antibiotica loaded bone cements - *M. Tanner*

**SESSION 3.B - BONE REGENERATION 3**

Chairs: *T. Bégué, T. Blokhuis, P. Regazzoni*

12:15 - 12:30 Mass spectrometry imaging to analyse fracture hematoma - *T. Blokhuis*

12:30 - 12:45 Use of contrast-enhanced ultrasound (CEUS) for the identification of infected non unions - *C. Fischer*

12:45 - 13:00 MSC based tissue therapy - *G. Zimmermann*

13:00 - 13:15 Advantages of bone retaining around megaprosthesis in non union of the lower limb - *T. Bégué*

13:30 - 14:30 **Lunch Break / Symposium 3.A Plenary Room**  
**"Bone marrow concentrate for enhancement of bone healing"**

Chair: *P. Giannoudis*

1. Why do we need cells/where do we get them - *P. Giannoudis*
2. How do we incorporate BMC in your current practice - *T. Bégué*
3. New advances in bone marrow concentration - *T. Grossner, A. Tross*

The logo for Heraeus, featuring the word "Heraeus" in a bold, sans-serif font.

13:30 - 14:30 **Lunch Break / Symposium 3.B Kammermusiksaal**  
**"Coated biomaterials for infection prophylaxis"**

Chairs: *G. Schmidmaier, J. El-Jawhari*

Speaker: *D. Ghadamgahi*: SOTM-Science of tissue management

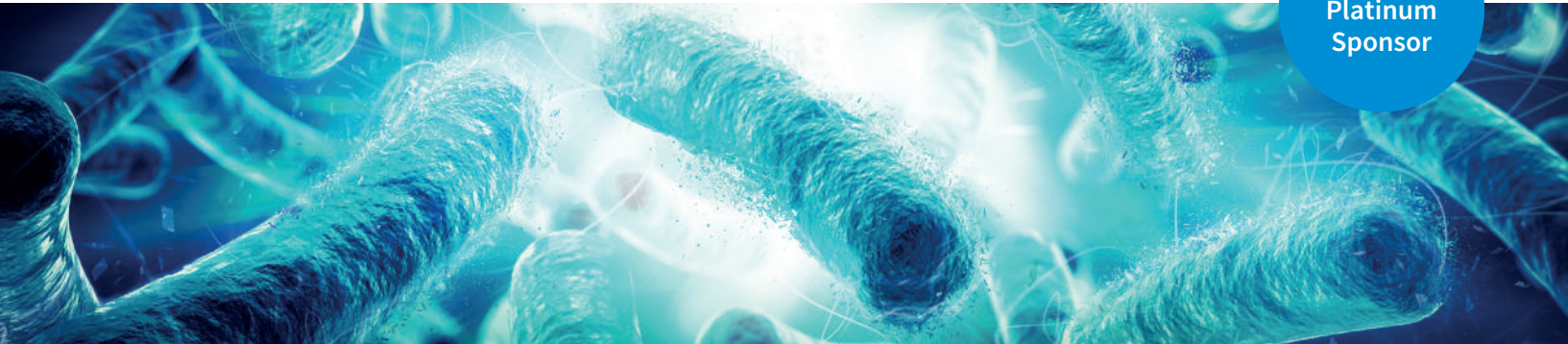
The logo for DePuy Synthes, featuring a stylized circular icon to the left of the text "DePuy Synthes". Below the main text, it reads "PART OF THE Johnson & Johnson FAMILY OF COMPANIES".

- 14:45 - 15:00 **Closing Lecture**  
ESTROT 2018 - What have we learned? - *O. Aydingoz, P. Giannoudis*
- 15:00 - 15:15 **AWARDS & VENUE CLOSING** - *G. Schmidmaier*
- 15:15 - 15:45 **ESTROT MEMBER MEETING**

# BonAlive Biomaterials Congress Program

ESTROT 2018 | Heidelberg, Germany

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## Keynote lecture | Tuesday July 17, 11:15 - 11:45

### **Antimicrobial resistance – a global health threat in orthopedics and trauma surgery**

Assoc. Prof. Chris Arts, Eindhoven University of Technology (TU/e) Maastricht UMC+, the Netherlands

## BonAlive Biomaterials Lunch Symposium | Tuesday July 17, 12:45 - 14:00

### **Recent developments in using S53P4 bioactive glass for bone regeneration**

Dr. Fredrik Ollila, BonAlive Biomaterials, Finland

### **S53P4 bioactive glass highly cost-effective in clinical treatment of chronic osteomyelitis**

Assoc. Prof. Chris Arts, Eindhoven University of Technology (TU/e) Maastricht UMC+, the Netherlands

### **Maastricht experience in using S53P4 in open fracture surgery**

Taco Blokhuis, Maastricht UMC+, the Netherlands

### **Initial Heidelberg experience in using S53P4 bioactive glass for managing bone infections**

Prof. Gerhard Schmidmaier, Heidelberg University Hospital, Germany

Discussion

## Challenging cases for tissue regeneration and bone healing

We invite you to join us, and find out about the only  
CE-marked antibiotic eluting bone graft substitute  
**proven to remodel into bone in 6-12 months\***  
with **reduced**

Infection recurrence rate

Fracture rate

Wound leakage rate

compared to other bioabsorbable antibiotic carriers<sup>1</sup>

Speakers:

**Mr. Martin McNally**

**Prof Dr Gerhard Schmidmaier**

**Prof Dr Burkhard Lehner**



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Please come and visit us at the congress exhibition

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\*Abramo et al. Osteotomy of Distal Radius Fracture Malunion Using a Fast Remodeling Bone Substitute Consisting of Calcium Sulphate and Calcium Phosphate. J Biomed Mater Res Part B: Appl Biomater 92B: 281-286, 2010  
Bark et al. of a Reversed Hill-Sachs Lesion: Description of a New Technique Using Cerament. Case Reports in Orthopedics, Volume 2015, Article ID 789203, 5 pages. Kaczmarczyk et al. Complete twelve month bone remodeling with a bi-phasic injectable bone substitute in benign bone tumors: a prospective pilot study. BMC Musculoskeletal Disorders (2015) 16:369.

<sup>1</sup>McNally et al. A comparative study of three bioabsorbable antibiotic carriers in chronic osteomyelitis: 313 patients with minimum one-year follow-up. 34th European Bone and Joint Infection Society (EBJIS) Annual Meeting 2015. Free paper #135 podium presentation.



## ENHANCE YOUR FIRST LINE OF DEFENSE

The Expert Nail family offers advanced protection with the Expert Tibial Nail with PROtect Coating.

The Expert Tibial Nail with PROtect Coating releases high concentrations of antibiotics into the implant's surroundings to protect your patients from bacterial colonization of the implant.<sup>1</sup> The innovative PROtect Coating allows to be better prepared for even your most high-risk patients.

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1. DePuy Synthes Data on File (Design Dossier Chapter 5, SE-328989, AD)

## Bone marrow concentrate for the enhancement of bone healing

ESTROT 2018

Lunch Break Symposium 3.A

**18<sup>th</sup> July 2018**

### Speakers:

**Prof P Giannoudis:**

Why do we need cells? Where do we get them?

**Prof T Bégué:**

How do you incorporate BMC in your current practice?

**Dr T Grossner & Dr A Tross:**

New advances in bone marrow concentration.



## INFORMATION

**VENUE** Kongresshaus Stadthalle - Neckarstaden, 24 - 69117 Heidelberg, Germany

<b>REGISTRATION</b> (taxes included)	<b>UNTIL 31/05/2018</b>	<b>FROM 1/06/2018</b>
Medical Doctors	€ 350,00	€ 450,00
Students, Residents and Nurses*	<i>free</i>	<i>free</i>
Young Investigators*	<i>free</i>	<i>free</i>
Scientist and researchers	€ 150,00	€ 200,00
Exhibitors	€ 150,00	€ 200,00
One day registration	€ 100,00	€ 150,00
Accompanying partners/family per day	€ 50,00	€ 50,00
Social Dinner	€ 75,00	€ 75,00

\* Written and signed proof of status by employer

**Cancellation policy:** Registration fees are non refundable

**Registration fee includes:** Participation to scientific sessions, congress bag, lunch and coffee breaks, certificate of attendance

**THE MEDICAL BOARD BADEN-WÜRTTEMBERG HAS APPROVED 23 CME-POINTS FOR ATTENDING THE WHOLE ESTROT CONGRESS**

**CONTACT FOR REGISTRATION:** [info@keepinternational.net](mailto:info@keepinternational.net)

**ESTROT Secretariat and Meeting Organization: Keep International**

Via G. Vigoni, 11 - 20122 Milan (Italy) Tel. +39 02 54122579  
[estrot@keepinternational.net](mailto:estrot@keepinternational.net) - [www.keepinternational.net](http://www.keepinternational.net)

## NOTES

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