Munich 2005

In collaboration with the German Association of Oral Implantology

EAO
European Association for Osseointegration

www.eao.org

14th Annual Scientific Meeting

22nd September to 24th September 2005

chairman
Friedrich W. NEUKAM

In collaboration with the German Association of Oral Implantology
Summary

On behalf of the German Association of Oral Implantology (DGI) I would like to extend cordial greetings and a warm welcome to you. As national association we are happy to support the 14th Annual Congress of the European Association for Osseointegration that takes place in Munich in September this year.

The topics of this meeting reflect the large variety of areas into which oral implantology has developed today. An international panel of renowned speakers will identify challenges in treatment planning, surgical performance and restorative measures that are essential for a long term treatment success. Scientific and clinical papers will highlight areas of ongoing development and frontiers of research in oral implantology. The typical spirit of Munich with its cultural tradition and Bavarian hospitality forms a unique background and will make this congress a both instructive and enjoyable experience.

We hope that you will be able to join us in Munich and look forward to seeing you there.

Henning SCHLIEPHAKE
President of the German Association of Oral Implantology (DGI)
> Synopsis

**EAO Board Members (2004-2005)**

Carlos APARICIO, Spain  
Christoph HÄMMERLE, Switzerland  
Sascha JOVANOVIC, USA  
Paulo MALO, Portugal  
Friedrich W. NEUKAM, Germany  
Marc QUIRYNEN, Belgium  
Franck RENOUARD, France  
Daniel van STEENBERGHE, Belgium  
Georg WATZEK, Austria

**Scientific Programme Committee**

Karl-Ludwig ACKERMANN, Germany  
Carlos APARICIO, Spain  
Christoph HÄMMERLE, Switzerland  
Friedrich W. NEUKAM, Germany  
Franck RENOUARD, France  
Henning SCHLIEPHAKE, Germany  
Massimo SIMION, Italy  
Georg WATZEK, Austria

**Research Award Committee**

Carlos APARICIO, Spain  
Daniel BUSER, Switzerland  
Klaus GOTTFREDSEN, Denmark  
Christoph HÄMMERLE, Switzerland  
Georg MAILATH-POKORNY, Austria  
Paulo MALO, Portugal  
Marc QUIRYNEN, Belgium  
Henning SCHLIEPHAKE, Germany  
Massimo SIMION, Italy  
Daniel van STEENBERGHE, Belgium

**Local Organisation Committee**

Friedrich W. NEUKAM, Erlangen, Germany  
Emeka NKENKE, Erlangen, Germany  
Katrin FOERSTER, Erlangen, Germany

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**WEDNESDAY**  
21 September

**THURSDAY**  
22 September

**FRIDAY**  
23 September

**SATURDAY**  
24 September

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<td>8h</td>
<td>PRE-Congress Course</td>
<td>Opening Ceremony</td>
<td>Pre-Congress Course</td>
<td>EAO General Assembly</td>
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<td>9h</td>
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<td>PLENARY SESSION 1</td>
<td>BEST ORAL &amp; POSTER AWARDS</td>
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<td>10h</td>
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<td>MASTER CLINICS 1</td>
<td>PLENARY SESSION 3</td>
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<td>RESEARCH COMPETITION</td>
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<tr>
<td>18h</td>
<td>OPTIONAL OKTOBERFEST</td>
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</tbody>
</table>
Conference Centre

Address
Arabella Sheraton Grand Hotel & Bogenhausen
Arabellastrasse
D-81925 Munich

1 = level 1
0 = level 0
-1 = level -1
Pre-Congress Courses

Wednesday 21 September 09:00 - 16:30

DISSECTION CADAVER COURSE:
IMPLANTOLOGICAL ANATOMY - COURSES FOR BEGINNERS AND ADVANCED IMPLANTOLOGISTS - MORPHOLOGICAL PITFALLS
Bone harvesting techniques
Ex-vivo-handling of bone chips
Different sinus floor elevation techniques

Moderators: Stephan RUPPRECHT, Claudio CACACI, Germany
Speaker: Klaus BENNER, Germany

IMPORTANT - LOCATION: This course is not being held in the Convention Centre but in the Anatomische Anstalt der Ludwig-Maximilians-Universität, Pettenkoferstrasse 11, D-80336 Munich.

Thursday 22 September 09:00 - 11:30

DEFECT SPECIFIC CONCEPT FOR AUGMENTATIVE SURGERY IN ESTHETIC REGION

Speaker: Hendrik TERHEYDEN, Germany

Venues:
- PRE-COURSE 1: ANATOMISCHE ANSTALT
- PRE-COURSE 3: CUVILLIÉS Bogenhausen
- PRE-COURSE 4: GARMISCH Grand Hotel

ESTHETIC IMPLANT THERAPY
Patient desire - Clinical demands - Scientific Shortfalls

Speakers: Wolfgang BOLZ, Hannes WACHTEL, Markus HÜRZELER, Otto ZUHR, Germany
OPENING CEREMONY

- Franck RENOUARD, President of the EAO
- Henning SCHLIEPHAKE, President of the DGI
- Friedrich W. NEUKAM, President EAO 2005 Meeting

Plenary Session 1

13:00 - 16:00

TEETH AT RISK: TO TREAT OR TO EXTRACT

Chairman: Niklaus P. LANG, Switzerland

13:00 Introduction by Niklaus P. LANG, Switzerland

13:05
- Decision making in periodontally compromised teeth
  Andrea MOMBELLI, Switzerland

13:30
- Implants in periodontitis patients
  Bruno G. LOOS, The Netherlands

13:55
- Implants next to periodontally compromised teeth
  Marc QUIRYNEN, Belgium

14:20 - 14:35 Coffee-break

14:35
- Revisiting extraction/implantation: a biological approach
  Bernard TOUATI, France

15:00
- Esthetics in periodontally compromised cases: maintaining teeth or placing implants
  Gianfranco CARNEVALE, Italy

15:25 - 16:00 CASE PRESENTATIONS

Moderator: Andrea MOMBELLI, Switzerland
Master Clinics 1

13:00 - 16:00

IMPLANT FAILURE: PREVENTION & MANAGEMENT

Chairman: Daniel BUSER, Switzerland

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<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>13:00</td>
<td>Introduction by Daniel BUSER, Switzerland</td>
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</table>
| 13:05 | Pathogenesis of implant failure  
Stefan RENVERT, Sweden |
| 13:25 | General and genetic aspects of implant failure  
Maurizio TONETTI, Italy |
| 13:45 | The use of virtual reality derived from CT scan images for preoperative planning of implant surgery  
Daniel van STEENBERGHE, Belgium |
| 14:05 - 14:30 | Coffee-break |
| 14:30 | Surgical complications  
Georg WATZEK, Austria |
| 14:50 | Technical complications: long-term results  
Urs BRÄGGER, Switzerland |
| 15:10 | Therapy of peri-implant disease  
Søren SCHOU, Denmark |
| 15:30 - 16:00 | CASE PRESENTATIONS  
Moderator: Georg WATZEK, Austria |
Plenary Session 2

09:00 - 12:30

ROOM 6

Friday, September 23, 2005

AUGMENTATION PROCEDURES
Chairman: Massimo SIMION, Italy

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<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>09:00</td>
<td>Introduction by Massimo SIMION, Italy</td>
<td>Massimo SIMION, Italy</td>
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<tr>
<td>09:05</td>
<td>The posterior atrophic maxillae; technique for avoiding augmentation procedures</td>
<td>Carlos APARICIO, Spain</td>
</tr>
<tr>
<td>09:30</td>
<td>The 3D reconstruction of vertical bone defects with mandibular bone block grafts: clinical aspects and long term results</td>
<td>Fouad KHOURY, Germany</td>
</tr>
<tr>
<td>09:55</td>
<td>Presentation of EUROPERIO 5 Madrid 2006 Congress</td>
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<td>10:05 - 11:00</td>
<td>Coffee-break</td>
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<td>11:00</td>
<td>GBR/augmentation versus distraction osteogenesis</td>
<td>Matteo CHIAPASCO, Italy</td>
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<tr>
<td>11:25</td>
<td>Necessity of bone augmentation to obtain optimal results depending on defect site and size (localized defects)</td>
<td>Daniel BUSER, Switzerland</td>
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11:50 - 12:30

CASE PRESENTATIONS
Moderator: Henning SCHLIEPHAKE, Germany
> Clinical Advances

08:30 - 12:30

CLINICAL ADVANCES 1
IMPROVING ESTHETICS AND FUNCTION
Chairman: Franck RENOUARD, France

08:30  Introduction by Franck RENOUARD, France
08:35  Site development in the esthetic zone: immediate implant placement
       Hannes WACHTEL, Germany
09:00  Contemporary implant concepts in esthetic dentistry
       Tidu MANKOO, UK
09:25  Terminology and guidelines for immediate occlusal loading of implants:
       an innovative approach for the management of mid facial esthetics
       Alan Mark MELTZER, USA

09:50 - 10:30  CASE PRESENTATIONS
               Hannes WACHTEL, Germany

10:30 - 11:00  Coffee-break

CLINICAL ADVANCES 2
FACILITATING ORTHODONTICS BY IMPLANTS
Chairman: Adriano CRISMANI, Austria

11:00  Introduction by Adriano CRISMANI, Austria
11:05  Impact of implants on the orthodontic possibilities
       Birte MELSEN, Denmark
11:30  Impact of implants on orthodontics
       Hugo DE CLERCK, Belgium

11:55 - 12:30  CASE PRESENTATIONS
               Adriano CRISMANI, Austria
14:00 - 18:00

> Founding Gold Sponsors Courses

**ROOM:**
GARMISCH
Grand Hotel

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**BEAUTY and SPEED**
Contradiction or Synergy?

Moderation:
Eduard EISENMANN,
Mannheim, Germany

- Introduction
  Dr. Werner GROLL,
  Mannheim, Germany

- Immediate loading – where is the relation to esthetics?
  Georg ROMANOS, USA

- Enhanced treatment protocols – can they accelerate and reach perfect esthetics?
  Sylvain ALTGLAS, France

- Minimalist protocol 4 optimized esthetics
  Nigel SAYNOR, UK

Discussion/Coffee-break

- “Understanding patients” - successful communication for predictable treatment acceptance and outcomes
  Samy MOLCHO, Austria

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**Integrated esthetics**
A biological and biomechanical approach

Moderator:
Björn DELIN, Sweden

- Creative esthetics with long term perspective
  Anders HOLMÉN, Sweden

- The Cresco solution to esthetics, function and perfect fit
  Stefan ELLNER, Sweden

- Abutment level control of dental implant esthetics
  Lyndon F. COOPER, USA

Coffee break

- What determines the biological width at implants?
  Tord BERGLUNDH, Sweden

- Stability of crestal bone level as a precondition for stable esthetics
  Wilfried WAGNER, Germany

- Surgical protocols and their effects on dental implant esthetics
  Denis CECCINATO, Italy
Beautiful Teeth Now™
Live transmissions, audience interaction and expert panel

Moderator: Jörg Strub, Germany

Live Transmission: Immediate implant placement in an extraction site using Platform Shift Pedro PENA, Spain

Scientific results with Immediate Function™ in Extraction Sites David A GELB, USA

Concept and Clinical experience with Platform Shift Iñaki GAMBORENA, Spain

NobelGuide™ – the unique Guided Surgery Solution Liene MOLLY, Belgium

Live Transmission: Restoring a partial edentulous patient using NobelGuide™ and NobelDirect® Torsten SIEPENKOTHEM, Germany

Science and clinical experience with Grooves, TiUnite™ and Soft Tissue Integration™ Roland GLAUSSER, Switzerland

Live Transmission: Immediate Function™ in the edentulous maxillae using a graftless procedure Paulo MALO, Portugal

The graftless alternatives with tilted implants, Bränemark System® Zygoma and short implants

Tomorrow’s Inventions are here Today

Ceramic Implant – A new way of implant treatment? Ralph KOHAL, Germany

Procera® Implant Bridge in Zirconia Ernst HEGENBARTH, Germany

Optimal Soft Tissue contour with modified Esthetic Abutment Eric Van DOOREN and Eric ROMPEN, Belgium

rhBMP-2 for improved bone remodeling Ulf WIKESJÖ, USA

SLActive
Activating Biology - Implant Innovation with Clinical Impact

Location: Munich Residence (City Center), Residenzstrasse 1, 80333 Munich

Transport: Continuous coach shuttle service will be provided from the Arabella Sheraton Grand Hotel from 12:00 noon

Simultaneous translation in German will be provided

Introduction Sandro MATTER, Switzerland

The hydrophilicity of SLActive Jürgen GEIS-GERSTORFER, Germany

New treatment options with SLActive Hideaki KATSUYAMA, Japan

Reduced healing times with SLActive – clinical results in private practice Guido A. PETRIN, Germany

Coffee Break

Immediate and early loading clinical case reports with SLActive from the USA Jay R. BEAGLE, USA

First clinical results from the SLActive multicenter study Axel ZÖLLNER, Germany

Clinical implications of the 3rd ITI Consensus Conference Christoph HÄMMERLE, Switzerland
IMMEDIATE IMPLANT PLACEMENT AND IMMEDIATE LOADING

Chairman: Klaus GOTFREDSEN, Denmark

09:15 - 12:30

09:15  Introduction by Klaus GOTFREDSEN, Denmark

09:20  Decision making in endodontics
       Gilberto J. DEBELIAN, Norway

09:45  Guidelines of implant placement in extraction sockets
       Georg MAILATH-POKORNY, Austria

10:10  Presentation of EAO ZURICH 2006 Congress
       Christoph HÄMMERLE, Switzerland

10:25 - 11:00 Coffee-break

11:00  Handling of the extraction socket for optimal esthetic outcomes
       Christoph HÄMMERLE, Switzerland

11:25  Marginal tissue remodeling around immediately loaded implants
       Roland GLAUSER, Switzerland

11:50 - 12:30 CASE PRESENTATIONS
         Christoph HÄMMERLE, Switzerland

12:30 - 14:00 EAO GENERAL ASSEMBLY
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<th>Time</th>
<th>Number</th>
<th>Title</th>
<th>Authors and Institutions</th>
</tr>
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<tbody>
<tr>
<td>09:00</td>
<td>35</td>
<td>Histomorphometry of peri-implant tissues in implant-tooth-supported</td>
<td>CH. Siar, CG. Toh, ST. Ong, D.Seiz, TB. Taiyeb Ali (Kuala Lumpur, Malaysia)</td>
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<td>bridges with different abutments</td>
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<td>09:15</td>
<td>36</td>
<td>Occlusal overload as primary risk factor of prosthetic implant failures</td>
<td>U. Garagiola, G. Szabó, F. Santoro (Budapest, Hungary)</td>
</tr>
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<td>09:30</td>
<td>37</td>
<td>Occurrence of tissue formation defects following alveolar distraction</td>
<td>N. Saulacic, M. Somosa Martin, JP. Bernard, A. Garcia Garcia (Santiago de Compostela, Spain)</td>
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<td></td>
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<td>osteogenesis</td>
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<tr>
<td>09:45</td>
<td>38</td>
<td>Guided bone regeneration for residual ridge augmentation: clinical,</td>
<td>I. Gisakis, K. Tosios, D. Zabarlas, S. Bouboulis, A. Spanos, V. Petsinis, D. Kalyvas (Athens, Greece)</td>
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<tr>
<td></td>
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<td>histologic and histomorphometric study in 20 patient</td>
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<td>10:00</td>
<td>39</td>
<td>Treatment of critical size defects - a baboon study</td>
<td>G. Tepper, D. Busenlechner, G. Watzak, W. Zechner, T. Bernhart, G. Watzek (Vienna, Austria)</td>
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<td>10:15</td>
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<td>Coffee-break / Visit of the Jury to the poster area</td>
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<td>10:15</td>
<td>40</td>
<td>Nanotechnology and osseointegration: influence of coating nanothickness</td>
<td>P. Coelho, J. Lemons, N. Freire, A. Coelho, M. Suzuki (Birmingham, USA)</td>
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<td>in biomechanical performance</td>
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<td>11:30</td>
<td>41</td>
<td>Osteogenic potential of human bone cells cultured from the human</td>
<td>C. Clausen, N. Hermund, O. Donatsky, H. Nielsen (Glostrup, Denmark)</td>
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<tr>
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<td>maxillary alveolar ridge</td>
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<tr>
<td>11:45</td>
<td>42</td>
<td>Randomized study of early-loading in the maxilla: first results, RFA-values</td>
<td>B. Al-Nawas, A. Büchter, J. Kleinheinz, FW. Neukam, G. Petrin, A. Schlegel, D. Weingart, W. Wagner (Mainz, Germany)</td>
</tr>
<tr>
<td>12:00</td>
<td>43</td>
<td>Alveolar ridge augmentation with a prototype trilayer membrane and</td>
<td>D. Busenlechner, S. Tangl, G. Watzak, G. Monov, R. Haas, G. Watzek (Vienna, Austria)</td>
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<td>various bone grafts. A histomorphometric study in baboons</td>
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<td>12:15</td>
<td>44</td>
<td>ALP enzymatic activity related to different implant surface microtopographies</td>
<td>E. Conserva, G. Volpara, A. Acquaviva, P. Pera (Genova, Italy)</td>
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Plenary Session 4
14:15 - 17:30

INNOVATIONS IN IMPLANT PROSTHODONTICS
Chairman: Urs BELSER, Switzerland

14:15
Introduction by Urs BELSER, Switzerland

14:20
• The future of immediate restorations in implants
  Hubertus SPIEKERMANN, Germany

14:45
• Implantology as an inevitable therapy in prosthodontics - when, where and how?
  Heiner WEBER, Germany

15:10
• The changing face in implant prosthodontics - esthetics and functional rationals
  Manfred WICHMANN, Germany

15:35 - 16:00
Coffee-break

16:00
• Prosthetic management of implants in the esthetic zone
  Urs BELSER, Switzerland

16:25
• Immediate implant placement in the posterior maxilla - indications and treatment concepts
  Karl-Ludwig ACKERMANN, Germany

16:50 - 17:30
CASE PRESENTATIONS
Hubertus SPIEKERMANN, Germany
INNOVATIONS IN SURGICAL TECHNIQUES

Chairman: Hendrik TERHEYDEN, Germany

14:15  | Introduction by Hendrik TERHEYDEN, Germany

14:20  | Experimental background of immediate loading
       Emeka Nkenke, Germany

14:45  | BMPs and related bone regeneration substrates in clinical implant dentistry -a 10-year review
       Sascha Jovanovic, USA

15:10  | BMPs and other growth factors in oral bone augmentation
       Ronald E. Jung, Switzerland

15:35 - 16:00  | Coffee-break

16:00  | Limits of bone substitutes to obtain optimal results
       Anton Friedmann, Germany

16:25  | Update on biotechnological bone augmentation
       Hendrik Terheyden, Germany

16:50 - 17:30  | CASE PRESENTATIONS
               Friedrich W. NEUKAM, Germany
### Posters

(*n* 45 to 175 - the numbers listed below refer to the COIR issue)

**Visit of the Jury to the poster area: Saturday 24, from 10:15 to 11:15**

**Jury for the best Poster Award:**
- Carlos APARICIO, Spain
- Daniel BUSER, Switzerland
- Klaus GOTFREDSEN, Denmark
- Christoph HÄMMERLE, Switzerland
- Georg MAILATH-POKORNY, Austria
- Paulo MALO, Portugal
- Marc QUIRYNEN, Belgium
- Henning SCHLIEPHAKE, Germany
- Massimo SIMION, Italy
- Daniel van STEENBERGHE, Belgium

#### Topic Implant Esthetics

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<th>Location</th>
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</thead>
<tbody>
<tr>
<td>45</td>
<td>Implants for maximum orthodontic anchorage</td>
<td>Bolognini G, Tonoli F, Galluccio G, Sfasciotti G</td>
<td>Roma, Italy</td>
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<tr>
<td>46</td>
<td>Effect of interimplant distances on papilla formation and crestal resorption</td>
<td>Novaes JR A, Papalexiou V, Muglia V, Oliveira R, Tabu JR M, Paliozo D, Souza S, Grisi M</td>
<td>Sao Paulo, Brazil</td>
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<tr>
<td>47</td>
<td>Dimension of interimplant papilla in Astra and Branemark implants</td>
<td>Moon IS, Lee DW, Moon SE, Kwon HJ</td>
<td>Seoul, Republic of Korea</td>
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<td>48</td>
<td>Changes in soft tissue dimension following three different techniques of second-stage surgery</td>
<td>De Stavola L, Tunkel J, Khoury F</td>
<td>Olsberg, Germany</td>
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<tr>
<td>49</td>
<td>Flapless vis delayed implant placement: aesthetic and radiographic outcome</td>
<td>Nader N, Younes R, Makari C, Khalaf F</td>
<td>Beirut, Lebanon</td>
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#### Topic Implant Surgery

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<tbody>
<tr>
<td>50</td>
<td>Effects of anodized oxidation implants after using the trabecular compaction techniques</td>
<td>Kim SK, Lee HN, Choi YC, Heo SJ, Lee CW, Choi MK</td>
<td>Seoul, Republic of Korea</td>
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<td>51</td>
<td>A new systematic implant planning concept</td>
<td>Jeong SM, Choi BH, Jeong JH</td>
<td>Wonju, Republic of Korea</td>
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<td>52</td>
<td>Pre-operative bone quality estimation and primary implant stability</td>
<td>Boschmans G, van Steenberghe D, Quirynen M</td>
<td>Leuven, Belgium</td>
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<tr>
<td>53</td>
<td>RANKL - OPG ratio is increased in crevicular fluid from implants periimplantitis</td>
<td>Monov MG, Strbac ST, Kandler KB, Tepper TG, Watzak WG, Watzek GW, Gruber GR</td>
<td>Vienna, Austria</td>
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<tr>
<td>54</td>
<td>Prospective study on single tooth immediate function: results at 18 months follow-up</td>
<td>Garlini G, Redemagni M, Calderini A, Sigurtà D</td>
<td>Milano, Italy</td>
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<tr>
<td>55</td>
<td>Immediate socket preparation after tooth extraction allows flapless implant surgery</td>
<td>Tamaki H</td>
<td>Tokyo, Japan</td>
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<tr>
<td>57</td>
<td>Alveolar ridge preservation using DFDB and collagen membrane</td>
<td>Jankovic S, Dimitrijevic B, Djordjevic M</td>
<td>Belgrade, Yugoslavia</td>
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<tr>
<td>58</td>
<td>Bone response to implants placed in gap with varying depths</td>
<td>Yoon HC, Bae Hek, Shim JS, Choi SH, Kim CK, Lee HY</td>
<td>Seoul, Republic of Korea</td>
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<tr>
<td>59</td>
<td>Early functional loading of Branemark implants in edentulous maxilla</td>
<td>Blanchet E, Lucchini JP, Jenny R, Lucchini M</td>
<td>Lyon, France</td>
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<tr>
<td>60</td>
<td>Bacterial adhesion on TiN-coated and uncoated transmucosal healing screw: an in-vivo human study</td>
<td>Luigi S, Antonio S, Erika J, Giuseppe V</td>
<td>Chieti, Italy</td>
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<td>61</td>
<td>Radiographic Changes of Immediately Restored Implants In Periodontally Susceptible Patients</td>
<td>Zuabi O, Horwitz J, Peled M, Machtet EE</td>
<td>Haifa, Israel</td>
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<td>62</td>
<td>Implants Placed Immediately Into Fresh Extraction Sites Of Molar Teeth</td>
<td>Grassi FR, Pollice G, Carlino P</td>
<td>Bari, Italy</td>
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<td>63</td>
<td>Periimplant Bone Reactions To Different Microgap Designs In Two-Stage Implants</td>
<td>Weng D, Nagata MJ, Bell M, Melo LG, Leite CM, Bosco AF, Richter EJ</td>
<td>Würzburg, Germany</td>
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<td>64</td>
<td>Implant-Patients After</td>
<td>Jakobs W, Jakobs E, Esser S, Kreusser B</td>
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Immediate implant placement in the posterior maxilla—indications and treatment concepts

Immediate implant placement seems to be the most proper therapeutic concept to keep up hard and soft tissue structures after tooth loss. Many investigations have been done following this concept in the anterior maxilla and mandible. Sufficient bone volume, primary stability of the endosseous implant and an unloaded healing phase are the prerequisites for a successful outcome of this particular protocol. Especially for the posterior maxilla it is much more critical to fulfill the above mentioned prerequisites. Bone quality, bone quantity, anatomical structures, such as the sinus cavity, are limiting the therapeutic ideas. Yet, there is not much report given in the literature because of this particular challenging situation.

The lecture will focus reasonable in detail the difference between anterior and posterior maxilla and it will emphasize on the possibilities to overcome the limitation of immediate implant placement in this region.

Curriculum Vitae

The posterior atrophic maxillae; techniques for avoiding augmentation procedures

This lecture will introduce the use of different techniques adequate in biomechanically compromised situations frequents in oral implantology: namely the extremely reabsorbed maxilla. The maximum utilization of residual bone volume, the use of a surgical protocol for implant placement similar to the classic one, the absence of any alveolar reconstruction previous or combined with the implant placement and a reassuring independence of the complications inherent to techniques that require multiple interventions and donor sites, is the basic rationale for the implementation of these procedures.

Curriculum Vitae
Medical degree U. of Navarra, Stomatologist U. of Barcelona, Dental Laboratory Technicien, Master of Materials and Science U. of Barcelona, Diploma in Clinical Periodontology U. Goteburg. Author of numerous articles in refereed international journals. Twice received the Fonseca Award from the Spanish Society of Periodontics. Awarded the Simo Virgile Prize by the Catalanian Society of Odontoestomatology. Researcher at the Handicap Research Group at the Department of Biomaterials at the University of Göthenburg. President-Elect of The Osseointegration Foundation, American Academy of Osseointegration. His private practice is limited to Periodontics and Implant Dentistry.
Prosthetic management of implants in the esthetic zone

Within the esthetic zone, one of the primary therapeutic objectives consists in trying to optimally integrate any type of implant supported restorations in the surrounding dentition, so that it can not be readily identified by the untrained eye at normal communication distance. In this specific context, a meticulous and comprehensive preoperative analysis, involving both dental technician and clinician is fundamental in order to establish the most appropriate treatment plan. This presentation will namely focus on the continuous interaction between the two partners when it comes to single tooth replacement in either intact or compromised sites or when it comes to the various therapeutic modalities related to the prosthetic rehabilitation of extended edentulous segments located in areas where esthetics is of major concern. Finally, latest data on long-term stability of esthetic zone implant restorations will be presented.

Technical complications: long-term results

In order to base treatment planning on economic aspects, studies need to be designed that report in detail on the type and frequency of clearly defined complications and failures. Pure survival data in that respect are of limited value. Based on a series of recent and ongoing systematic reviews, this presentation will focus on the incidents of various technical complications observed with fixtures, prosthetic components and suprastructures.
Necessity of bone augmentation to obtain optimal results depending on defect site and size (localized defects)

Today, the augmentation of localized bone defects is a frequent surgical procedure in implant patients. These surgical techniques are carried out either to improve the longterm prognosis of dental implants or to enhance the esthetic treatment outcome in the anterior maxilla. This lecture will review the current status of local bone augmentation procedures using barrier membranes in combination with autogenous bone grafts and bone substitutes. The GBR techniques can be applied simultaneously with implant placement and in a staged approach. The decision criteria, when to use what surgical approach will be discussed. The various procedures using bioabsorbable membranes will be documented with typical case reports.

Esthetics in periodontally compromised cases: maintaining teeth or placing implants

The first question which arises when a periodontist is confronted with the treatment of a frontal area is how much his therapy is going to effect the patient’s phonetics and aesthetics. The smile line and not the “slide line” have to influence the therapist decisions concerning aesthetics while phonetics might be influenced, anyhow, if tissue or tooth forms are changed. The selection of the correct surgical procedure for each anatomical situation of each given patient is essential for a good final result. It is also of utmost importance the understanding and the ability to predict how tissues will heal and react to various stimuli like orthodontic forces, changes in sub/supragingival spacing, modifications of tooth and tissue form. An expert mixture between art and science is the final answer to the dilemma of the optimal aesthetic result.
Severe atrophy of edentulous ridges may represent a relevant limit for the use of dental implants and implant-supported prostheses. Many surgical techniques have been proposed over the years, but much controversy still exists as far as the reliability over the time of these techniques is concerned.

The purpose of this lecture is to compare the clinical outcome of GBR, bone grafting techniques and distraction osteogenesis to correct deficient alveolar ridges in order to place dental implants in a correct position from an esthetic and functional point of view. Success rates of these techniques as well as success and survival rates of implants placed in the reconstructed areas will be presented.
Impact of implants on orthodontics

A new bone anchor was developed to increase orthodontic anchorage in the anterior or posterior region of the upper and/or lower jaw. A 3 or 2 holes titanium mini plate is fixed by monocortical mini screws. A round bar is penetrating the soft tissues at the muco-gingival border. A cylindrical fixation unit with a locking screw makes it possible to fix an auxiliary wire that connects the bone anchor with the fixed orthodontic appliance. Since 5 years more than 275 bone anchors were placed in upper and lower jaw and used as anchorage in different orthodontic applications. During the first part of the presentation the different steps of the surgery will be explained in detail. Which are the possible complications and how can we avoid them? Which instructions should be given to the patient? What is the best timing for surgery and orthodontics? How and when should the implants be loaded? In the second part of the lecture an overview will be given of the different clinical applications illustrated by several clinical cases.

Limits of bone substitutes to obtain optimal results

Recent data indicate that osteoconductive properties and biocompatibility characteristics support the use of various bone substitutes as a scaffold for cells in bone augmentation procedures. However, literature search revealed no studies comparing degradable and non-degradable materials clinically. Animal tests and histological observations in humans showed recruitment of inflammatory multi-nuclear cells within the graft site of rapidly-degrading substitutes, e.g.: TCP. Nevertheless, a gain of newly-formed bone may reach 30%. Similar trials using xenographs – considered as non-degradable – showed a mean gain of 45% for newly-formed bone. Since deficient edentulous areas are usually characterized by lack of bone in all 3 dimensions, the question remains, to what extent can we achieve reconstruction of the alveolar ridge using current bone substitutes.
Marginal tissue remodeling around immediately loaded implants

Treatment strategies and related protocols in implant dentistry seem to have dramatically changed over the last years. Traditional, staged protocols are more and more replaced by faster, one-step surgical protocols (i.e. immediate implants or even immediately restored/loaded implants). With regard to the event of osseointegration, a number of studies have documented for immediately loaded implants in properly selected indications a comparable high success rate as established using late loading concepts. However, when focusing on the overall treatment outcome, success is not only defined by established osseointegration. Stable peri-implant tissues (i.e. marginal bone levels and soft tissue contours) over time are decisive for long-term esthetic success. Therefore, this presentation will discuss and summarize on marginal tissue remodeling related to immediate implant loading protocols.

Roland Glauser is a graduate of the University of Zürich. Since 1997 Dr. Glauser is assistant professor and senior lecturer at the Department for Fixed Prosthodontics and Dental Materials, University of Zürich. Dr. Glauser is president of the scientific board of the Swiss Society of Oral Implantology SSOI and an active member of the European Association for Osseointegration EAO. He has published numerous articles and text book chapters on the subject of restorative dentistry and osseointegrated implants. He lectured extensively throughout Europe and received in 1999 at the annual AO meeting in Los Angeles an Academy Award for his presentation.

Handling of the extraction socket for optimal esthetic outcomes

Based upon the clinical protocols leading to long-term functional rehabilitations using dental implants, further developments aiming at expanding the established indications have been pursued. One of the treatment approaches resulting from these endeavors has been to not only functionally but also esthetically reconstruct the patient’s lost tissues. One particular challenge is given in the handling of extraction sockets. In such situations soft and hard tissues need to be reconstructed in a manner, which allows adequate manipulation of mucosa and bone to account for the increased challenges resulting from the lack of congruency between the available hard and soft tissues and the dental implant. For the augmentation of lacking bone volume, guided bone regeneration (GBR) has been proven to be most effective and has widely been used. Regarding the management of the soft tissues the clinical procedures leading to predictable esthetic results are still in a development phase. Several factors such as location of the implant, presence or absence of adjacent teeth, height and width of the bone crest, mucosal thickness and scalloping have been identified as critical for obtaining pleasing final outcomes.

Christoph Hämmerle

Curriculum Vitae

1977-1982 Undergraduate studies in dental medicine
1982-1986 Associate in two private practices in Switzerland
1986-1988 Specialist education in periodontology, University of Bern, Switzerland
1988-1989 Assistant Professor, Department of Stomatology, University of California at San Francisco, USA
1989-1991 Adjunct Assistant Professor, Department of Stomatology, University of California at San Francisco, USA
1989-1998 Assistant Professor, Clinic for Periodontology & Fixed Prosthodontics, University of Bern, Switzerland
1990 Specialist Certificate in Periodontics
1997-2000 Associate Professor, Clinic for Periodontology & Fixed Prosthodontics, University of Bern, Switzerland
1998-1999 Visiting Scholar, Department of Physiology, University of Sydney, Australia
2000 Specialist Certificate in Prosthodontics
2000 Professor and Chairman, Clinic for Fixed and Removable Prosthodontics and Dental Materials Science, University of Zurich, Switzerland
Since 2002 Councillor of the IADR, representing the Continental European Division
Since 2004 President of the Osteology Foundation
Since 2004 Secretary General of the European Association for Osseointegration

Prof. Christoph Hämmerle’s main scientific interest lies on the biological and prosthetic aspects of the treatment with dental implants. His clinical focus is on the comprehensive treatment of complex, partially edentulous patients applying all options available in reconstructive dentistry. As chairman of the department for fixed and removable prosthodontics and dental materials science he supervises several lines of research. One of these lines deals with biological aspects of bone and soft tissue formation applying membranes, membrane supporting materials as well as matrices and bone growth factors. A second line explores the biomechanical aspects of early and immediate implant loading. Regarding the fabrication of fixed prosthesis on teeth and implants modern ceramic materials are being investigated in preclinical and clinical studies. Prof. Hämmerle serves on the editorial board of several scientific journals including Clinical Oral Implants Research, the International Journal of Oral & Maxillofacial Implants and the Journal of Clinical Periodontology.
**Invited Speakers**

> **Sascha JOVANOVIC**

**Curriculum Vitae**

Sascha A. Jovanovic was formally trained in periodontics at UCLA School of Dentistry, in Implant Dentistry at Loma Linda University and in Prosthodontics at University of Aachen, Germany and holds a Master of Sciences degree in Oral Biology from UCLA.

He specializes in and teaches dental implant therapy and bone & soft tissue reconstruction at UCLA Continuing Dental Education and is director and founder of the web based Global Institute for Dental Education at www.globalinstituteonline.com. He is the past-president of the European Association for Osseointegration (EAO) and a past-Board member of the Osseointegration Foundation (OF). He was the program chair of the EAO 2000 annual scientific congress, recipient of the young investigator fellowship of the American Academy of Periodontology, of the Implantology award of the California Society of Periodontists and of the German Implant Society Research award. He is an honorary member of the South African Society of Periodontology.

Dr. Jovanovic’s clinical research emphasizes bone reconstruction techniques and aesthetic management in dental implant therapy. His applied research focuses on bone regeneration with different bone graft materials, rhBMP-2 and barrier membranes as well as the biology of soft tissues around teeth and implants. He has lectured extensively worldwide and has published over 60 articles and book chapters, and one textbook titled Color Atlas of Implantology (Thieme Publ.). He is also on several editorial boards for scientific journals and has published a DVD-education series on advanced implant therapy.

**BMPs and related bone regeneration substrates in clinical implant dentistry - a 10-year review**

The field of implant dentistry has changed dramatically since controlled bone regeneration procedures like GBR, bone grafts, distraction and growth factors have been introduced during the last decade. This presentation will cover the clinical indications, results and drawbacks of different treatment options to enhance implant placement.

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> **Ronald JUNG**

**Curriculum Vitae**

1995: Dental Degree (DMD) from the University of Zurich, Switzerland, Center for Dental and Oral Medicine

1995-1997: Postgraduate Student at the Clinic for Oral Surgery, Department of Oral and Maxillo-Facial Surgery, University of Zurich (Director: Prof. Dr. Dr. h.c. H.F. Sailer)

1997-1999: Associate in an implant oriented private practice in Zurich (Dres. Andreoni and Meier)

1999-2000: Postgraduate Student at the Department of Fixed and Removable Prosthodontics and Dental Material Sciences, University of Zurich, Center for Dental and Oral Medicine (Director: Prof. Dr. P. Schärer, M.S.)

Since 2000: Assistant professor and lecturer at the Department of Fixed and Removable Prosthodontics and Dental Material Sciences, University of Zurich, Center for Dental and Oral Medicine (Director: Prof. Dr. Ch. Hämerle)

**BMPs and other growth factors in oral bone augmentation**

Further developments in bone augmentation procedures can either be related to simplification of the clinical handling or influencing biological processes. Biological tissue stimulation with to use of growth factors or bioactive proteins and peptides in combination with adequate carrier systems are nowadays able to stimulate the natural regeneration process, to accelerate bone regeneration and to increase predictability in bone regeneration therapy. The use of a newly developed synthetic carrier system together with a biologic active factor has demonstrated similar amounts of newly formed bone in experimental defects as the use of autogenous bone. It can be concluded that biologic tissue stimulation with the use new matrix systems has the potential to overcome some of the present difficulties in GBR procedures.
The 3D reconstruction of vertical bone defects with mandibular bone block grafts: clinical aspects and long term results.

Vertical alveolar defect reconstructed with mandibular graft in form of one cortical block presents sometime a poor site for osseointegration of titanium implants due to a low revascularisation potential of the cortical bone. Particuled bone graft seems to get better revascularisation giving a good quality of regeneration of the augmented area. The presented study described the 3 D reconstruction of vertical defects based on the combination of 2 thin mandibular cortical blocks with particuled bone grafts. 209 patients were treated with this technique between 1995 and 2002. The average of vertical bone augmentation was 6,8mm. The 389 implants were inserted 4 months post operatively. The long term results are discussed.

Implants in periodontitis patients

In this presentation the question will be addressed whether implant treatment in patients with (a history of) periodontitis may affect the long term success rate. Peri-implantitis may be a more frequently encountered phenomenon in subjects who are susceptible to periodontitis. The literature will be reviewed on common and unique risk factors for both peri-implantitis and periodontitis. Among others, microbial factors, smoking and genetic factors will be discussed.

Curriculum Vitae

1978: DMD, St. Joseph University, Beirut, Lebanon.
1978-1979: Department of Oral & Maxillofacial Surgery of the University of Freiburg, Germany.
1979-1988: Assistant Professor at the Department of Oral & Maxillofacial Surgery of the University of Münster, Germany.
1988: Habilitation (german PhD).
1988-1994: Associated Professor at the Department of Oral & Maxillofacial Surgery of the University of Münster, Germany.
Since 1994: Full Professor at the Department of Oral & Maxillofacial Surgery of the University of Münster, Germany. and Chairman of the Privatklinik Schloss Schellenstein, Implantology Center, Olsberg, Germany. More than 100 publications and 600 lectures / courses on Oral Surgery, Bone Transplantation, Implantology...
Aesthetic failures especially in the front tooth area can be caused by inadequate implant positioning. This will allow optimal support and stability of peri-implant hard and soft tissues. There are existing recommendations that in the vertical dimension the implant shoulder should be positioned about 1-1.5mm apical to the cemental/enamel junction (CEJ) of the contra-lateral tooth.

In the mesial-distal dimension the implant should not be closer than 1.5mm to the adjacent root surface to avoid resorption of the osseous crest and thus of interproximal papillary support. In the oral facial direction clear recommendations how to place the implants in extraction sockets do not exist.

To get the optimal position of the implant in the buccal/palatinal dimension we compared the aesthetic outcome by means of a pink aesthetic score with the position of the implant on sagittal cuts of master casts.

The course will present the ‘state-of-the-art’ of aesthetic implant dentistry and the current concepts for predictability and success. The biologic rationale for implant positioning, the management of soft tissue, bone and prosthetic design will be discussed. Maintenance of the natural soft tissue contours is essential for predictability and success in the aesthetic outcome of our treatment. Immediate implant placement and immediate tooth replacement will be discussed along with the advantages and limitations of the technique.
Impact of implants on the orthodontic possibilities

The limitations of orthodontic treatments have traditionally been set by the laws of Newton. The application of skeletal anchorage, the mini-implants has, however, made it possible to avoid undesirable forces generated to the reactive units. Displacement of all teeth in one direction is in theory possible. Even more interesting is that the mini-implants can be used as anchorage for displacements of teeth into edentulous areas and thereby building up an atrophic alveolar process preparing the ground for implant-based reconstructions. The application of implants in the treatment of the impossible case will be demonstrated and the tissue reaction generated adjacent to both prosthetic and orthodontic implants will be discussed.

Terminology and guidelines for immediate occlusal loading of implants: an innovative approach for the management of mid facial esthetics

Successful implant placement within the aesthetic zone requires long-term implant survival with proper restoration of form and function. Additionally, the implant must be surrounded by a soft tissue envelope that mimics that which is found around the adjacent natural teeth. While it is well understood that the interproximal papillary area generally remains unchanged or improves over time, (Jemt, 2000) the mid-facial generally recedes over time creating a mid facial soft tissue deficit. (Grunder, 2001)

A novel approach to the management of this mid-facial aesthetic issue involves platform switching. The biological rational and clinical approach will be discussed.
Decision making in periodontally compromised teeth

Clinical trials have repeatedly demonstrated that it is possible to treat teeth with advanced periodontal disease and to maintain them over prolonged periods of time. Adequate periodontal therapy reduces periodontal pockets, stabilizes attachment levels and has the potential for regenerating the periodontium, including the alveolar bone. Tobacco smoking, genetically determined hyper-reactive inflammatory response patterns, certain systemic diseases, as well as poor oral hygiene and lack of professional maintenance after therapy affect the outcome and the long-term stability. However, if a decision is made not to keep periodontally involved teeth due to the presence of such risks, the same factors will also have a negative effect on the success of implants replacing the extracted teeth. Additional, tooth specific factors play a role for the success of periodontal treatment. For the decision to extract or maintain a tooth, its strategic value in the dental arch needs to be considered. Since the risk for failure of periodontal treatment is substantially lower than the risk for a technical complication of a prosthodontic reconstruction, the maintenance of uninterrupted arches of natural teeth has high priority. Furthermore, extractions should be avoided to preserve jawbone. Although uncontrolled periodontal disease results in loss of bone, properly performed therapy of periodontal disease maintains, and even regenerates bone.

Experimental background of immediate loading

Aim: Only little experimental data is available on immediate loading of dental implants in animals with a bone formation rate comparable to that of humans. Therefore, it has been the aim to compare the performance of immediately loaded implants in the maxillae of minipigs to implants loaded on delay.

Materials and methods: 6 implants were placed on each side of the maxilla. The implants were restored with fixed provisional restorations and loaded either immediately or after healing periods of 1-3 months or 4-5 months. After a loading period of six months the animals were sacrificed and the implants were retrieved together with the adjacent bone. Histologic specimens were prepared and bone-to-implant contact (BIC) ratio, interthread bone area and peri-implant bone area were determined.

Results: Neither BIC, interthread bone area or peri-implant bone area did not differ significantly statistically for the three healing periods. Conclusion: After six months of functional loading in the maxillae of minipigs, successful immediately loaded implants performed the same as implants subjected to an unloaded healing period prior to providing a suprastructure as far as histomorphometric data were concerned. The favorable histomorphometric results of the successful immediately loaded implants encourage extending the indication for immediate loading of dental implants in humans.
Implants next to periodontally compromised teeth

The presence of gingivitis/periodontitis increases the risk for non-integration (early failures), via direct or indirect contamination of the implant surface. Moreover, periodontitis has been linked to late implant failures, and therefore periodontal health before implant surgery is a condition sine qua none. A series of recent publications supports following statements:

1. periopathogens are considered the causative organisms for peri-implantitis,
2. teeth, and especially the periodontal pocket, serves as the primary reservoir of these periopathogens,
3. two weeks after implant insertion the peri-implant pocket is colonized by a microbiota similar to that found around the neighboring teeth.

Based on these statements it seems reasonable to conclude that implants are at higher risk to develop peri-implantitis when inserted next to periodontally compromised teeth. The latter conclusion is indeed supported by several studies in which the outcome of oral implants in partially edentulous patients has been compared between subjects with a healthy periodontium and those with a history of periodontitis. Recently however, several long-term clinical trials clearly indicated that even patients with a history of severe periodontitis can be successfully treated with partial bridges on implants, at least in the presence of a proper plaque control, stringent supportive periodontal therapy and proper surface characteristics. The microbial threshold before development of peri-implantitis does not only depends on the periodontal health, but seems largely influenced by the surface characteristics of the transmucosal/endosteal part of the implant.

Pathogenesis of implant failure

Although treatments with dental implants have been proven effective, infections leading to loss of bone (peri-implantitis) do occur. In patients supplied with implants 9-14 years ago, 16 % of the patients and 7% of the implants were found to have peri-implantitis (i.e. bone loss $\geq 3$ threads compared to one year data and bleeding on probing). Factors of importance for peri-implantitis were smoking habits and previous experience of periodontitis. His collaborative research efforts over the last years have resulted in publications on periodontal microbiology, guided bone regeneration around implants, peri-implantitis and the association between periodontitis and cardiovascular diseases. Dr. Renvert has published about 100 papers in international and national journals. At present Dr. Renvert’s research focuses on peri-implantitis, risk assessments and the association of periodontal disease to the general health, especially periodontitis and its association to cardiovascular disease.
Invited Speakers

Soren SCHOU

Curriculum Vitae

Soren Schou finished postgraduate training in oral and maxillofacial surgery in 1999. The performed Ph.D.- and Dr.Odont.-theses focused upon pathogenesis, diagnosis, and treatment of peri-implantitis. Until 2002 employed full-time at Department of Oral and Maxillofacial Surgery, University of Copenhagen, Denmark. During the last 3 years, full-time consultant at Department of Oral and Maxillofacial Surgery, Aalborg Hospital, Aarhus University Hospital, Denmark.

Therapy of peri-implant disease

Peri-implant mucositis and peri-implantitis may develop around oral implants. Possible treatment options of these peri-implant diseases will be reviewed. Especially the selection of regenerative or non-regenerative treatment modalities of peri-implantitis will be discussed.

Hubertus SPIEKERMANN

Curriculum Vitae

Prof. H. Spiekermann MD. DDS. PhD.

Medical and dental education in Münster, Vienna and Düsseldorf.

Fulltime faculty member in the Department of Prosthodontics at the University of Düsseldorf from 1970 to 1980. Since 1980 chairman of the Department of Prosthodontics at the University of Aachen, Germany.

President German Society of Implantology (1996-1998)

President European Association of Osseointegration (EAO) 1998

President German Society of Prosthodontics (1999-2001)

Prof. h.c. - University of Peking (2000)

Dr. h.c. - University of Tübingen (2002)

He has published and lectured worldwide and is editor of the textbook “Partial Dentures” and “Implantology”.

The future of immediate restorations in implants
Update on biotechnological bone augmentation

Osteoinduction through biotechnological bone regeneration requires bone forming cells or their precursors to attach, and growth and differentiation factors. Current concepts use either in vitro cultivated cells (classical tissue engineering approach) or the topical application of Bone Morphogenetic Proteins (BMP) which act chemotactic and stimulative on cells resident in the tissues in the defect walls (in vivo tissue engineering). Although promising preclinical data exist, with both concepts a breakthrough has not been achieved yet in clinical augmentative bone surgery in dental implantology.

Biological and regulatory issues may be reasons for that and are discussed in this presentation.

The in vitro tissue engineering approach involves the mass transfer of cultivated bone cells into a non vascularized defect. The supply of these cells with oxygen and nutrients has not been solved yet. In large bone defects there may be a cell necrosis before capillaries have grown into the defect.

The in vivo tissue engineering involves the topical application of recombinant BMP. Two major problems have occurred so far: in human clinical application the required dose of BMP was several orders of magnitude higher than required in cells cultures or embryological experiments. Secondly, a greater effect of BMP has been observed in animal experiments than observed in humans. New carrier systems with slow and controlled release may solve this problem. However, there are other biological issues like antagonistic molecules to BMP and receptor kinetics. This has to be addressed in further research. Recombinant BMP have been applied successfully in several 10000 patients in orthopaedic surgery worldwide and a huge body of promising preclinical data suggests a strong potential for BMP’s in dental bone augmentation surgery.
Revisiting extraction/implantation: a biological approach

Extraction/implantation is now a routine procedure. Literature has shown through various long-term studies that the success rate is similar to conventional implantation. The benefit in the esthetic zone includes the reduction of crestal bone loss and the conservation of the soft tissue morphology. Yet a biological approach can optimize the clinical results through the new design and surface of the implant head, the immediate connection of the definitive biocompatible abutment, and the concave transmucosal design of the latter. A protocol will be presented where the implant abutment is prepared prior to the extraction/implantation, scanned to anticipate the coping fabrication and whenever possible never disconnected.

The use of virtual reality derived from CT scan images for preoperative planning of implant surgery

There are a number of constraints when performing surgery, especially in the oral environment: limited space, local anesthesia, limited surgical field, contaminated environment... It is not easy to transfer this planning to the operative field in precise manner because of these constraints, such as a moving patient. The surgeon also has to take quick decisions when he uncovers the jaw bone. Therefore since the mid-nineties a preoperative planning system was developed for oral implant placement at the Catholic University of Leuven. It is based on a software imaging of the CT scan data. It is fully three-dimensional which offers a unique visualization of the three planes in the same image. This should be distinguished from three individual views, even if the three can be placed side by side. Furthermore this planning can be meticulously transferred to the operative field by means of drilling templates either placed on the jaw bone or on top of the gingival. In the latter case a flapless surgery is aimed for. Ex vivo and in vivo assessments have shown the precise results obtained. This allows, if needed to prefabricate the fixed prosthesis which can then be fixed at once on top of the implants. This concept can as well be used for a delayed loading. It further develops the cooperation between the periodontologist or oral surgeon and the restorative dentist since transfer of images can be done by Internet.

Today the use of drilling templates is a pragmatic solution. With further technological breakthroughs navigation or even robotics can be envisaged.
Hannes WACHTEL

**Curriculum Vitae**

Prof. Dr. Hannes Wachtel, geboren 1952 in München.


**Site development in the esthetic zone: immediate implant placement**

Creating esthetic implant restorations in harmony with the gingival contour will demand a comprehensive understanding of the biological and physiological limitation of the soft and hard tissue of the implant site. The risk for failures and the potential to overstretch the limitations are increased when implants are placed immediately in extraction sockets in the esthetic zone. Therefore a precise analysis of the hard and soft tissue component of the implant site before removing the failing tooth is essential to predict the esthetic outcome as well as to choose the appropriate treatment strategy. The predictability of the peri-implant esthetic result is ultimately determined by the patient's particular anatomical situation, rather than the clinician's ability to manage the different site development procedures. The presentation will place emphasis on the diagnosis and treatment planning, the surgical and prosthetic management focused on immediately placed implants.

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Georg WATZEK

**Curriculum Vitae**

1970: MD degree, Medical School, University of Vienna.
1973: Speciality board examination in dentistry (DDS) Residency at Dept. of Oral and Maxillofacial Surgery, University of Vienna.
1978: Residencies at Neurosurgery and ENT Department, University of Vienna.
1979: Speciality board examination in Oral and Maxillofacial Surgery

Appointed senior resident.
1982: Head of Department of Oral Surgery, School of Dentistry, University of Vienna.
1991: Honorary member of the Hungarian Society of Dentists and Stomatologists.
1994-1997: Visiting Professor at the University of Pennsylvania.
Since 1998: Chairman of the School of Dentistry of the Medical University of Vienna.
2003: President of the European Association for Osseointegration (EAO).
2003: Honorary member of the German and Czech Society of Implantology.

Author of 8 textbooks and over 200 publications.

**Surgical complications**

As with any other field of surgery complications, can never be completely excluded for any implant-surgical procedure. The basic prerequisites for optimizing surgical success and thus minimizing the risk of complications include adequate anatomical knowledge, perfect planning and optimal skills of the surgeon. Structures especially prone to be associated with complications in oral implantology include the dentoalveolar complex with regard to function and aesthetics, the integrity of the nasal chambers and sinuses, blood vessels in the neighbouring soft tissue as well as sensitive nerves in the surgical field. The experience of a skilled implantologist will allow him/her to identify any risks of injury of the mentioned structures, to provide the patient with appropriate preoperative information and to implement the appropriate corrective actions in the case of a complication.
Curriculum Vitae

Date of Birth: 18th September 1950
1965-14 Dental education at the University of Düsseldorf (Westdeutsche Kieferklinik)
1974-80 Assistant Professor at the Dept of Prosthodontics, University of Düsseldorf (Head Prof. Dr. H. Bittiger)
1978/79 Lecturer at the National Bureau of Standards (Washington, D. C., USA)
1980 Thesis on material and clinical aspects of base metal alloys used for fixed and combined fixed/removable prostheses
1980-82 Associated Professor of the Dept of Prosthetics, University of Düsseldorf (Head Prof. Dr. H. Bittiger)
Since 1982 Professor and Chairman of the Dept of Prosthodontics II, University of Tübingen
1988 Rejection of the appointment/election by the Free University of Berlin as Professor and Chairman of the Dept of Prosthodontics
1989 Rejection of the appointment/election by the University of Freiburg Professor and Chairman of the Dept of Prosthodontics
1989/90 Dean elect of the Faculty of Medicine, University of Tübingen
1990/92 Dean of the Faculty of Medicine, University of Tübingen
Since April 1993 Professor and Chairman of the Department of Prosthodontics (united Dept of Prosthodontics I and II), University of Tübingen
May 1995-97 Dean of the Dental School of the University of Tübingen
1995/96 President of the European Prosthodontic Association (EPA)
1998 Elected Member of the Board of the German Society of Dentistry and Oral Medicine (DGZMK)
June 2001 President of the Association of Dental Technologies (Registered Society)
October 2001 President of the Board of the German Society of Dental, Oral, and Craniofacial Sciences (DGZMK) for 3 years

Other appointments:
1. Expert for Deutsche Forschungsgemeinschaft/German Research Society (DFG)
2. Elected Member of the Board of the German Society of Dental, Oral, and Craniofacial Sciences (DGZMK) for 3 years
3. Member of the following associations/societies:
   1. Academy of Osseointegration
   2. European Prosthodontic Association (EPA)
   3. Federation Dentaire Internationale (FDI)
   4. German Prosthodontic Association (DGSPW)
   5. German Society of Dental, Oral, and Craniofacial Sciences (DGZMK)
   6. International Association for Dental Research (IADR)
   7. International Congress of Prosthodontists (ICP)
   8. The American Academy of Restorative Dentistry (AARD); Active Member
   9. Invited Speakers
   10. Guest scientist at the National Bureau of Standards (Washington, D. C., USA)

Fields of main interest:
1. Fixed and combined fixed/removable prostheses (clincs and technologies)
2. Implantology (including surgical and prosthetic procedures)
3. Publications, Lectures, Patents:
   Results of research studies were presented in more than 500 oral presentations and 150 publications in Austria, Belgium, Canada, Chile, China, Denmark, England, Finland, France, Germany, Greece, India, Israel, Italy, Japan, Malaysia, Korea, Malta, Netherlands, Portugal, Sweden, Switzerland, Turkey, USA, and USSR.
   Holder of 5 patents.

Member of the following associations/societies:
1. Academy of Osseointegration
2. European Prosthodontic Association (EPA)
3. Federation Dentaire Internationale (FDI)
4. German Prosthodontic Association (DGSPW)
5. German Society of Dental, Oral, and Craniofacial Sciences (DGZMK)
6. International Association for Dental Research (IADR)
7. International Congress of Prosthodontists (ICP)
8. The American Academy of Restorative Dentistry (AARD); Active Member

The changing face in implant prosthodontics-esthetics and functional rationals

Extensive laboratory and clinical research on implant materials and design, surgical procedures, biomechanics, surrounding bone tissue, and other aspects have led to new treatment concepts and approaches. Implant-supported single- and multiple-tooth restorations have proven to be predictable and long-term successful treatment options. The success rates of implant-supported restorations are surpassing most conventional prosthetic restorations. In the early years of implant dentistry, research mainly focused on hard tissue integration. However, the goal in modern implant therapy is not limited to the successful osseointegration of implants. Especially in the anterior areas, esthetically pleasing implant-supported restorations surrounded by harmonious soft and hard tissues have become a focal point for patients, clinicians, and dental technicians. Some of the most challenging clinical situations are defined by extensive loss of hard and soft tissues. In many cases the missing tissues must be replaced with tissue-colored resin or porcelain as a non-surgical option. Depending on the patient's expectations the replacement of teeth, and hard- and soft tissues can be realized with fixed or removable implant retained superstructures. From a prosthetic perspective a removable implant supported restoration offers the best functional and esthetic options without compromising hygiene maintenance and longevity. While staging of implant therapy is a highly predictable option, extraction of remaining teeth and roots, simultaneous or delayed implant placement, and immediate provisionalisation are protocols that are increasingly performed with success.

To achieve optimal function and esthetics comprehensive treatment planning is a requirement. Detailed wax-ups and well-designed, precisely fabricated final restorations are paramount for restoration longevity and patient satisfaction.

Curriculum Vitae

1961: Born in Hannover
1986: Dentistry degree in Hannover
From 1982: German Study Foundation scholar
1987: Doctorate with grade "summa cum laude"
1993: PhD Qualification in Prosthetic Dentistry
1994-2004: Member of the Board of German Society for Prosthodontics and Dental Material Science
1996: Chief assistant medical director
2000: Chair for Prosthetic Dentist or the Friedrich-Alexander-University Erlangen Nuremberg. Head of the Department of Prosthodontics. Head of the Department of proedical Education
Since 2004: Member of the Board of the German Association of Oral Implantology
- Qualified Educated specialist for Prosthetic Dentistry (DGZMK) and Implantology (BDID DGI)
- Membership in numerous international and nationals professional societies/associations
- More than 120 scientific publications
- Member of the editorial board of numerous journals
- More than 300 scientific and educational lectures

Author, co-author and translator of numerous books

Implantology as an inevitable therapy in prosthodontics - when, where and how?

The very basic wish to replace teeth was the source and thrust for developing and establishing implantology in everyday restorative dentistry. Very soon, it became obvious that we are not only replacing teeth by use of implants, but that we contribute to preventative aspects as well. The maintenance of the alveolar bone, the reduced loading of remaining teeth, which is especially caused by removable prosthodontics, are only two examples. Furthermore, there are clinical situations as diastemas, extremely reduced dentitions, severely atrophied jaws, which can only be treated by use of modern implantology. In general, dental implantology has exceeded the dates of being a therapy of comfort and luxury by far. The lecture will show typical clinical situations, in which only dental implantology could help to achieve an at least acceptable clinical result with regard to the restorative aspect.
> **Adriano CRISMANI**

**Curriculum Vitae**

1994: Graduation, Doctor of Dental Medicine and Dental Prosthetics, University of Trieste, Italy.

Since 1995: Instructor and Senior Resident at the Department of Orthodontics.

Since 2004: Deputy Head, University Teaching Hospital Vienna, School of Dental Medicine.

Scientific Focus: Orthodontic Implants, Temporomandibular Joint and Orthodontics, Biomechanics.

> **Klaus GOTFREDSEN**

**Curriculum Vitae**

Presently, Dr. Gotfredsen is associate professor at the Department of Prosthetic Dentistry, Faculty of Health Sciences, University of Copenhagen.

Graduated in Dentistry 1984 from the University of Aarhus, Denmark. Received a Danish Ph.D. degree in 1990 from University of Copenhagen, Denmark and obtained a Swedish Ph.D. degree at Department of Periodontology in 2001 from Göteborg University.

Dr. Gotfredsen has been employed at Department of Prosthetic dentistry as well as at Department of Oral & Maxillofacial Surgery in Copenhagen. He has mainly researched in clinical and experimental implant dentistry and have published more than 50 scientific papers in the field of implant dentistry. Dr. Gotfredsen has been in the board of European Association for Osseointegration for 5-years and was president for the organization in 1999. He is presently in the board of Scandinavian Society of Prosthetic Dentistry and Danish Society of Implantology.

> **Niklaus P. LANG**

**Curriculum Vitae**

Since 1980: Professor and Chairman University of Bern, Switzerland, School of Dental Medicine.

1997: Odont. Dr. h.c., University of Gothenburg, Sweden.


1994: Dr. Odont. h.c., University of Buenos Aires, Argentina.

1992: Basic Science in Periodontal Disease Award of the International Association for Dent. Res. (IADR).

Honorary member of: 2002 Swiss Society of Periodontology (DSP).

1999: German Society of Periodontology (DSP).

1999: Italian Society of Periodontology (SilP).


1989: Dr. odont. h.c., University of Athens, Greece.

1978: PhD, University of Bern, Switzerland, Medical Faculty.

1975: Master of Science in Periodontics, University of Michigan, Ann Arbor, USA.

1970: Dr. med. dent., University of Berne, Switzerland.

2002-2004: Guest Professor, National University of Singapore.

2006: Guest Professor, University of Göteborg, Sweden.

1999/2000: Guest Professor, University of Queensland, Brisbane, Australia.

1994: Guest Professor, University of Aarhus, Denmark.

1994: Guest Professor, University of Hong Kong.

1990: Guest Professor, University of Texas, Health Science Center, San Antonio, Texas, USA.

1986: Professor Extraordinario, Universidad Autonoma de Nuevo Leon, Monterrey, Mexico.

Published approximately 350 articles in peer-reviewed scientific journals. Over 1000 lectures in all continents. Editor-in-chief: Clinical Oral Implants Research, Associate Editor: Journal of Clinical Periodontology. Special research interests: oral microbiology; prevention, epidemiology, pathogenesis and therapy of periodontal diseases and periimplant infections; clinical research; diagnostic procedures and risk assessment; biology of dental implants.

> **Paulo MALO**

**Curriculum Vitae**

License by the Faculty of Dental Medicine, University of Lisbon.

Private practice on Oral Surgery and Prosthetic Rehabilitation.

Author and co-author of various scientific articles.

Guest speaker of various international conferences featuring:

- Oral rehabilitation
- Transplant and Bone reconstruction
- Oral Implantology
- Interdisciplinary treatments and aesthetics

Scientific consultant of 4 international leading dental related companies.

CEO and Clinical Director of the Maló Clinic-Lisbon, Portugal.

The Maló Clinic, has 105 collaborators and rehabilitates approximately 3150 patients per year, being 750 patients rehabilitated with implants (in a total of more than 2000); and 2500 patients rehabilitated with fixed prosthodontics (in a total of approximately 7500 crowns per year).
> **Moderators & Chairpersons**

> **Friedrich W. NEUKAM**

Curriculum Vitae

Born in 1949 in Vlotho, Germany.

> **Franck RENOUARD**

Curriculum Vitae

Franck Renouard is graduated of the Dental University of Paris V in 1982. He was assistant of Jean-François Tulasne in the Cranio-Maxillo-Facial Team of Paul Tessier from 1983 to 1988 in Paris. He was responsible for the implant treatment in the Postgraduate program of Periodontics, University of Paris V between 1992 and 1997. He has published several articles and is author of a Text Book with Bo Rangert “Risk Factors in Implant Dentistry: Simplified Clinical Analysis for predictable Treatment” published in several languages. He lectures intensively on implants, biomechanics and bone grafting procedure. He was the scientific President of the Vth Congress of the European Association for Osseointegration in Paris. Dr. Renouard was elected to the EAO executive board in Amsterdam in 2000. He is active member of the Academy of Osseointegration. He is in private practice in Paris limited of Oral and Implant Surgery. He was elected President of the EAO in 2004.

> **Henning SCHLIEPHAKE**

Curriculum Vitae

Since 1995: Associate Professor at the Dept. of Oral & Maxillofacial Surgery Medical University of Hannover, Germany.
Research Focus: Reconstructive microsurgery, Tissue engineering, Growth factors, Biomaterials, QoL in Head and Neck Oncology

> **Massimo SIMION**

Curriculum Vitae

Degree of Medicine and Surgery at the University of Milan in 1979. Specialization in Odontostomatology and Dental Prostodontics at the University of Milan in 1982. Professor and Chairman of the Department of Periodontology and Implant Restoration at the Dental School of the University of Milan. Founder of the Italian Society of Osseointegration. Active Member and Vice-President of the Italian Society of Periodontology (SidP) for the years 2003-2005. Member of the Board of the European Association for Osseointegration (EAO) since 1998. Immediate Past-President of EAO for year 2004/2005. Referee of the Journal of Clinical Periodontology. He published several papers and is international lecturer about the topic Periodontology, Osseointegration and Ridge Augmentation.
Research Competition Presenters

>B. AL-NAWAS

Nº 42
Randomized study of early-loading in the maxilla: first results, RFA-values

>D. BUSENLECHNER

Nº 43
Alveolar ridge augmentation with a prototype trilayer membrane and various bone grafts. A histomorphometric study in baboons

>C. CLAUSEN

Nº 41
Osteogenic potential of human bone cells cultured from the human maxillary alveolar ridge

>P. COELHO

Nº 40
Nanotechnology and osseointegration: influence of coating nanothickness in biomechanical performance

>E. CONSERVA

Nº 44
ALP enzymatic activity related to different implant surface microtopographies

>U. GARAGIOLA

Nº 36
Occlusal overload as primary risk factor of prosthetic implant failures
Research Competition Presenters

> I. GISAKIS

N° 38
Guided bone regeneration for residual ridge augmentation: clinical, histologic and histomorphometric study in 20 patients.

> N. SAULACIC

N° 37
Occurrence of tissue formation defects following alveolar distraction osteogenesis

> CH. SIAR

N° 35
Histomorphometry of peri-implant tissues in implant-tooth-supported bridges with different abutments

> G. TEPPER

N° 39
Treatment of critical size defects - a baboon study
Pre-Congress Courses
Chairpersons & Speakers

> Klaus BENNER

Curriculum Vitae

1939 Born in Siegen/Westfalen (Germany)
1960–1965 Medical studies at Marburg, Vienna and Heidelberg Universities
1965 Medical thesis in Surgery at the Medical Faculty of Heidelberg University
1968 Licensure as a physician
1968–1976 Resident at the Institute for Normal and Pathological Physiology at Cologne University
1978 PhD thesis and authorization of teaching in the special field of: “Physiology and Experimental Morphology”
1976 Appointed to a senior academic position at the Anatomical Institute at Munich Technical University
1978 Appointed Professor for Anatomy at Ludwig-Maximilian-University, Munich

Teaching Positions:
- Bayerische Akademie für Zahnärzte in Deutschland e.V.
- Donau Universität Krems (DUK), PUSH Bonn
- Deutsche Gesellschaft für Klinische Hämorrhologie

Founding Member:
- Society for Minimodulation
- Deutsche Gesellschaft für klinische Hämostaseologie

Memberships:
- Deutsche Physiologische Gesellschaft
- Anatomische Gesellschaft
- Vereinigung der Anatomer der Bundesrepublik Deutschland e.V.
- European Society for Microcirculation
- Deutsche Gesellschaft für Zahnärztliche Implantologie, DGI
- Bundesverband der niedergelassenen Implantologen tätigen Zahnärzte in Deutschland e.V., BDZ

Honorary Member:
- Deutsches Zentrum für Zahn-, Mund- und Kieferheilkunde

> Claudio CACACI

Curriculum Vitae

1939 Born in Siegen/Westfalen (Germany)
1960–1965 Medical studies at Marburg, Vienna and Heidelberg Universities
1965 Medical thesis in Surgery at the Medical Faculty of Heidelberg University
1968 Licensure as a physician
1968–1976 Resident at the Institute for Normal and Pathological Physiology at Cologne University
1978 PhD thesis at Munich Technical University and authorization of teaching in the special field of: “Physiology and Experimental Morphology”
1978–1979 Research Fellow at Oregon University, Health Sciences Center, Portland/ORE, USA
1980 NATO-stipendium to participate in the training programme on the basics and clinical significance of biorheology, University of Houston/Tx, USA
1981 Appointed Professor for Anatomy at Ludwig-Maximilian-University, Munich

Teaching Positions:
- F3 GROUP
  - International Interdisciplinary Dental Group of Edward P. Allen, Texas
- Chairpersons & Speakers

> Wolfgang BOLZ

Curriculum Vitae

Dr. Wolfgang Bolz studied dental medicine at the University of Munich and opened up his own practice in 1977. Several educational programs led him to Switzerland, Sweden and the USA. He was General Secretary of the German Society of Periodontology (DGPI) from 1989 to 1998, founding member of the European Association for Osseointegration and from 1991 to 2000 Secretary General of the EAO. He was founder and editorial board member of the journal „Parodontologie“. In 1999 the DGP elected him specialist for Periodontology. After organizing the international meetings of Osseointegration in Munich he founded together with Prof. Dr. Hannes Wachtel the Institute for Periodontology and Implantology (IPM) in Munich in 1994 and opened up a new practice Dres. Bolz, Wachtel, Hürzeler, Zuir in 1998. He is organizer of numerous national and international meetings and workshops.

> Markus HÜRZELER

Curriculum Vitae

Dr. Huerzeler practices periodontics, prosthodontics and implant dentistry in Munich, Germany. He is a Clinical Associate Professor at the Albert-Ludwigs University of Freiburg, Department of Operative Dentistry and Periodontology, and a Clinical Associate Professor at the University of Texas in Houston, Department of Stomatology. Dr. Huerzeler has a certificate in Periodontics and Prosthodontics. He has published numerous articles on peri-prosthodontics and implant dentistry and has lectured extensively on a national and international level.
Pre-Congress Courses
Chairpersons & Speakers

> Stephan RUPPRECHT

Curriculum Vitae
PD Dr. med. Dr. med. dent. Stephan Rupprecht

Born on 8th January 1967
1973 - 1986 education
1986 - 1992 study of human medicine
Friedrich-Alexander-University Erlangen-Nürnberg
1997 dental medical doctor (DMed)
01.01.1993 - 30.09.1993 AiP institute of radiology
Friedrich-Alexander-University Erlangen-Nürnberg
01.11.1993 – 31.03.2005 assistant dep. of cranio-maxillofacial surgery Friedrich-Alexander-University Erlangen-Nürnberg
21.01.2004 specialist „plastic operations“

> Hendrik TERHEYDEN

Curriculum Vitae
Undergraduate training
1983: 1989 Dental school, University of Kiel
1988: 1992 Medical school, University of Kiel
Training in Oral and Maxillofacial Surgery
8/89-8/91: Dept. of Oral and Maxillofac. Surgery, Kiel, Germany
Professional specialisation accreditations
1997: Oral surgeon
1997: Maxillofacial Surgeon
1999: Plastic Operations
2002: Fellow of the EACMFS
Academic degrees
1990: Doctor of Dental Medicine
1994: Doctor of Medicine
1999: Ph.D. (Habilitation)
2004: Apl. Professor
Professional occupation
1989: Dentist, Dental Service of the German Armed Forces
1999-2001: Senior lecturer in Kiel
2001: Present Vice Director of the Dept. of OMF Surgery, Kiel
2002: Present General Secretary of the German Association of Oral Implantology

> Otto ZUHR

Curriculum Vitae
Otto Zuhr, Dr. med.dent.
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Information on the Association

- **History**
  The EAO was founded in Munich in 1991 following on the recommendations made by an international group of clinicians and research workers. It was formed as an international, interdisciplinary and independent science based forum for all professionals interested in the art and science of osseointegration.

- **Mission**
  The objectives of the Association are:
  1. To promote and facilitate clinical applications of osseointegration for the benefit of patients throughout the world.
  2. To promote the advancement of methods of treatment in reconstructive surgery and prosthetic rehabilitation based on the principles of osseointegration and related disciplines.
  3. To promote and initiate research into improved clinical procedures for rehabilitation as a consequence of osseointegration.
  4. To promote international exchange of knowledge and understanding of the techniques and research in the field of osseointegration and related disciplines.
  5. To promote the publication of research findings and other materials as part of continuing education for the benefit of members and interested organisations.

- **Membership**
  As a member you will benefit from a substantially reduced registration fee to the Annual Congress and receive free subscription to the bi-monthly Blackwell-Munksgaard journal *Clinical Oral Implants Research* (6 issues per year) in addition to a membership directory containing the names and addresses of all members. You will also enjoy the benefits of networking with colleagues and leading innovators from around the world.
  Annual membership fee is 225 € with a one-time application fee of 50 €.

- **Contact for information and membership application:**
  You can visit the EAO booth (located in the Arabella Grand Hotel) in Munich during the congress for more information or contact the EAO Secretariat:
  **EAO Office c/o AGS**
  287 Avenue Louise, 2nd floor
  1050 Brussels – BELGIUM
  Ph: +32 (0) 2 643 20 49
  Fax: +32 (0) 2 645 26 71
  E-mail: eao@agshq.com
  Web: www.eao.org
General Information

Date and Venue

The 14th EAO Congress will be held at the Arabella Sheraton Grand Hotel and the Arabella Bogenhausen from Thursday 22 September to Saturday 24 September 2005. The Conference centre is located in the eastern part of Munich, very close to the city centre.

Access

- By car
  - From East: Take the Motorway Salzburg A8 to the Mittlerer Ring Ost. Follow the Innsbrucker Ring until you get to the Bogenhausen district. At the Hypovereinsbank building turn right. At the third traffic light, turn left onto Arabellastrasse.
  - From North: Take the Motorway Nuernberg A9 and take the exit for the Frankfurter Ring. Turn left onto the Foehringer Ring. Proceed until you come to the Bogenhausen district. At the Hypovereinsbank building turn right. At the third traffic light, turn left onto Arabellastrasse.
  - From West: Take the Motorway Stuttgart A8. Follow the directions for Motorway Nuernberg and then follow the Mittlerer Ring until you reach the Bogenhausen district. At the Hypovereinsbank building turn right. At the third traffic light, turn left onto Arabellastrasse.
  - From South: Take the Motorway Garmisch 95 to the Mittlerer Ring Sud. Proceed on Mittlerer Ring Sud until you reach the Bogenhausen district. At the Hypovereinsbank building turn right. At the third traffic light, turn left onto Arabellastrasse.
- By taxi, cost: 45 to 50 €.
- By metro, take the underground line U4, and stop at Arabellapark.
- The hotel also offers connections to Munich International Airport.

Contacts

Congress Office:
EAO 2005 C/o Colloquium
12 rue de la Croix-Faubin
75011 Paris, France
Ph: +33 1 44 64 15 15 - Fax: +33 1 44 64 15 16
Email: eao2005@colloquium.fr

Useful contacts
Tourist office: Fax. +49 89 23 33 02 33
www.muenchen-tourist.de

Munich Airport: The airport team answers your questions daily between 06:00 und 23:00 o'clock.
Ph.: +49 89 9 752 13 13

Official language: English

Exhibition opening hours

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
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<tbody>
<tr>
<td>Thursday 22 September</td>
<td>11:00 - 17:30</td>
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<tr>
<td>Friday 23 September</td>
<td>08:30 - 18:30</td>
</tr>
<tr>
<td>Saturday 24 September</td>
<td>08:30 - 18:00</td>
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</tbody>
</table>

The exhibition is strictly reserved to exhibitors and full registered delegates.

German CME credit information

Bei Teilnahme am gesamten wissenschaftlichen Tagungshauptprogramm am 22. und 23. September können 21 "DGI-APW-DGZMK-Fortbildungspunkte" erwoben werden

DGI Sports – free offer

Those who are interested in sports activities are invited to participate in a daily jogging programme. Professional trainers will take care of you.

If you are interested, please refer to the DGI stand, register and get more detailed information.

Meet at the entrance of the Arabella Sheraton Grand Hotel (Convention Centre) at 7. a.m. on Friday, September 23, and Saturday, September 24, 2005.
Registration

Registration fees for delegates include:

- Admission to all congress sessions, poster areas and technical exhibition
- The opening ceremony
- Congress documents (final programme, abstract book, congress bag)
- Lunches and coffee breaks

On site registration fees

<table>
<thead>
<tr>
<th>EAO Members + DGI</th>
<th>Non members</th>
<th>Medical students</th>
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<tr>
<td>Delegate registered individually*</td>
<td>490 €</td>
<td>635 €</td>
</tr>
<tr>
<td>Delegate registered by a company</td>
<td>422,41 €</td>
<td>547,41 €</td>
</tr>
</tbody>
</table>

*Prices are including German VAT (16%).

Oktoberfest in Munich

Thursday 22 September, 2005 - 16:45

When you hear the word “Oktoberfest”, it’s almost certain that one thing comes to mind… Bavarian Beer! Munich’s largest and most traditional breweries are represented and you are cordially invited to join the festivities. The truth is, there is much more behind-the-scenes information that lurks beneath the countless years of this world-renowned Bavarian tradition. Listen to live brass bands playing traditional Bavarian music as well as more up-to-date music, and enjoy yourself with hundreds of other people from all over the world, dancing and singing the hours away.

This year’s Oktoberfest takes place from the 17th of September until the 3rd of October 2005 - and we are happy to offer the opportunity to spend an unforgettable evening at the Winzerer Faehndl Paulaner Festhalle - one of the big and most traditional tents at the beer festival - on Thursday, September 22, 2005. Don’t miss it!*

Rate: 95 € per person - German VAT included (16%) - * limited number of participants
Bone Biology, Harvesting, and Grafting for Dental Implants: Rationale and Clinical Applications
Arun K. Garg

Many patients who are otherwise ideal candidates for implant therapy lack sufficient alveolar bone to support dental implants. This book presents all facets of bone augmentation in preparation for implant placement.

Contents
Part I: Bone Biology
- Bone Physiology for Dental Implantology
- Review of Bone-Flap Technique
- Bone Grafting Materials
- Factors Influencing Bone Regeneration
- Abscess in Ridge Preservation
- Part II: Bone Harvesting
- Harvesting Bone from Ramus, Mandibular Symphysis and Triradial
- Part III: Bone Grafting
- Augmentation, Grafting and Implantation
- Submental Approach
- Part IV: Future Directions
- Bone Morphogenes in Bone Regeneration

279 pp. 068 illus. (CIBA Group):
ISBN 0-86715-441-1; £90.00/$158.00

Soft Tissue and Esthetic Considerations in Implant Therapy
Anthony G. Sclaz

Advanced surgical techniques for preserving and restoring natural dental esthetics in implant therapy are presented in a clear, well-illustrated and easy-to-follow format. The author presents a systematic approach to the patient evaluation, including quantification of the positive and negative elements that enhance and detract from an individual’s smile. Specific surgical maneuvers including various flap designs, surgical and prosthodontic protocols of a technique for preserving the natural hard and soft tissue anatomy in patients undergoing tooth removal: soft tissue grafting techniques for augmenting attached tissues; and an innovative technique for reconstructing large-volume hard and soft tissue defects in the anterior maxillary area. The final chapter presents advanced cases that demonstrate the use of these procedures in various situations to guide the implant surgeon. For those who want to master new techniques for treating esthetic implant patients, with a high level of predictability, this book is a must-have.

298 pp. 1257 illus. (CIBA Group):
ISBN 0-86715-354-7; £170.00/$268

Practical Implant Dentistry
Ashok Sethi and Thomas Kaus

Practical Implant Dentistry offers a practical and pragmatic approach to implant dentistry for the dentists and practitioners involved in this expanding field. This book describes in detail the clinical procedures required to carry out a broad range of treatment available in implant dentistry. There are over 200 charts, over 1000 diagrams and 2000 clinical photographs providing a step-by-step approach. The charts are designed to assist the practitioner in making decisions at each stage. Topics addressed range from the planning of the implant to the management of the health of the soft tissues around the implant. The book has a comprehensive approach addressing the diagnostic, surgical, and restorative aspects of implant dentistry.

It is an invaluable guide for the practitioners embarking on this field. It is essential reading for the experienced implantologist designed to advance the scope of this great practice.

Practical Implant Dentistry describes techniques that are valid for the successful and predictable outcome of treatment. It is supported by a large literature but most importantly it describes treatment proven in private practice when judgement is passed by highly critical, well-informed, anaesthetised patients.

208 pp. 720 illus. ISBN 1-85097-061-0; £98.00/$135
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- OMNIA S.r.l.
  - www.omniasrl.com
- Thommen Medical AG
  - www.thommenmedical.com
See you in Zurich!
15th Annual Scientific Meeting
5 to 7 October 2006