FINAL PROGRAMME

www.eao.org

October
12-15, 2011

Chairmen:
Friedrich W. NEUKAM, Germany
Asterios DOUKOUDAKIS, Greece

20th Annual
Scientific
Meeting

Treatment Planning
in Implant Dentistry

In collaboration with the
Hellenic Society of Prosthodontists
Greek Society of Oral and Maxillofacial Radiology
Greek Society for Osseointegration
Hellenic Society of Periodontology
Dear colleagues,

It is our great pleasure to welcome you to the 20th Annual Meeting of the EAO in Athens.

This year’s theme is ‘Treatment planning in implant dentistry’. Good planning is essential before any treatment takes place, and the meeting will explore two core issues: what is the goal of treatment and how can we achieve this?

Implant dentistry is a rapidly developing field, and practising successfully involves understanding patients’ expectations and using the right materials and techniques to meet these. Good treatment planning can help avoid potential problems before they arise. It also enables us to measure the quality of what we do by comparing the clinical outcome with the projected goal.

Avoiding and managing complications; risk indicators; loading and treatment protocols; and outcome predictability are just some important aspects of treatment planning which will be highlighted by the invited speaker faculty, all of whom are highly respected scientists and clinicians. A wide choice of parallel sessions, master classes and oral presentations will ensure that there are topics to interest everyone. In addition, the meeting will include the results of the EAO’s basic and clinical research competitions, as well as poster presentations and pre-congress step-by-step courses. The main sponsors will be running ‘industry satellite symposia’ and a large trade exhibition will be presented by the world’s leading companies.

Athens is not only the capital of Greece, but also its cultural and commercial centre. Rooted in a history of more than 7,000 years, Athens offers unrivalled cultural treasures of which the Acropolis, a UNESCO world cultural heritage site, is the most famous. Voted as the first European Capital of Culture in 1985, the city provides a perfect combination of contemporary culture and ancient history, accompanied by cordial Greek hospitality. It is the ideal place to meet colleagues and friends.

The 2011 EAO Scientific Committee has put together a comprehensive programme featuring some of the most influential speakers in the world. On behalf of the EAO, we would like to extend a warm welcome to everyone who has joined us in Athens this year. Your experience and enthusiasm will ensure that the EAO 2011 congress is an unforgettable occasion.

Friedrich W. NEUKAM
Asterios DOUKOUDAKIS
Scientific Chairmen
**Programme at a glance**

### EAO Board Members (2010-2011)
- **Interim President**
  - Søren SCHOU, Denmark
- **Past President**
  - Christoph HÄMMERLE, Switzerland
- **Secretary General**
  - Pascal VALENTINI, France
- **Treasurer**
  - Marc QUIRYNEN, Belgium
- **Board Members**
  - Luca CORDARO, Italy
  - Björn KLINGE, Sweden
  - Henning SCHLIEPHAKE, Germany
  - Alberto SICILIA FELECHOSA, Spain

### EAO Council (2010-2011)
- **Chairman**
  - Massimo SIMION, Italy
- **Members**
  - David HARRIS, Ireland
  - Franck RENOUARD, France
  - Georg WATZEK, Austria

### Scientific Committee
- Asterios DOUKOUDAKIS, Greece
- Klaus GOTFREDSEN, Denmark
- Nikos KATSIKERIS, Greece
- Konstantinos TSIKLAKIS, Greece

### Abstract Committee
- Co-Chairmen
  - Ralf-Joachim KOHAL, Germany
  - Bjarni PÆTURSSON, Iceland
  - Søren SCHOU, Denmark
- **Members**
  - Matteo CHIAPASCO, Italy
  - Nikolaos DONOS, United Kingdom
  - Robert HAAS, Austria
  - Flemming ISIDOR, Denmark
  - Andrea MOMBELLI, Switzerland

### Session Overview
**Wed. Oct. 12**
- **Registration Opening**
- **Welcome Address**

**Thursday Oct. 13**
- **Pre-Congress Courses**
  - 1 Avoiding and managing poor implant positioning
  - 2 Avoiding and managing surgical and biological complications
  - 3 Avoiding and managing prosthodontic complications
- **Satellite Symposia**
  - Gaiaschi, Bassel, Shafran

**Friday Oct. 14**
- **Plenary Session 1**
  - Risk Indicators for Implant Therapy Clinical Guidelines
- **Parallel Session 1**
  - Loading Protocols
- **Plenary Session 2**
  - EAO Guidelines for Diagnostic Imaging in Implant Dentistry 2011: Overview
- **Parallel Session 2**
  - Predictability of Aesthetic Outcomes
- **Congress Ceremony**
  - Prevention of Problems
- **Short Oral Communications**
  - Greek Session
  - Prospective Treatment Planning in Implant Dentistry Clinical Guidelines

**Saturday Oct. 15**
- **Plenary Session 5**
  - Maintaining Long-Term Implant Outcomes
- **Closing Ceremony**

**Exhibition Opening**
- **Welcome cocktail at congress centre**

**The catering areas are on all three exhibition levels.**
Pre-Congress Courses

15.00 - 17.30
SKALKOTAS HALL

AVOIDING AND MANAGING POOR IMPLANT POSITIONING
Chairperson: Isabella ROCCHIETTA, Italy

001*
David SCHNEIDER, Switzerland

16.00 - 16.30 Coffee break

DISCUSSION
Isabella ROCCHIETTA

Speakers CV p.42

15.00 - 17.30
BANQUETING HALL

AVOIDING AND MANAGING SURGICAL AND BIOLOGICAL COMPLICATIONS
Chairperson: Carlo MAIORANA, Italy

002 Giovanni SALVI, Switzerland

16.00 - 16.30 Coffee break

DISCUSSION
Carlo MAIORANA

Speakers CV p.43

*The figures refer to the abstracts you will find in the October issue of COIR
PRE-Congress Courses

15.00 - 17.30

AVOIDING AND MANAGING PROSTHODONTIC COMPLICATIONS
Chairperson: Stephan HOLST, Germany

003* Stephan EITNER, Germany

16.00 - 16.30 Coffee break

DISCUSSION
Stephan HOLST

Speakers CV p.44

*The figures refer to the abstracts you will find in the October issue of COIR
Plenary Session 1

13.35 - 16.30

RISK INDICATORS FOR IMPLANT THERAPY: CLINICAL GUIDELINES

Chairperson: Asterios DOUKOUDAKIS, Greece
Friedrich W. NEUKAM, Germany

13.35 004*  Genetic predictability for implant loss
Nikolaos DONOS, United Kingdom

14.00 005  Hardware characteristics affecting peri-implant disease
Klaus GOTFREDSEN, Denmark

14.25 - 14.50  Coffee break

14.50 006  Long-term implant prognosis in periodontal patients
Ioannis KAROUSSIS, Greece

15.15 007  Medically compromised patients
Emeka NKENKE, Germany

15.40 008  Is peri-implantitis a risk for systemic diseases?
Panos N. PAPAPANOU, USA

16.05 - 16.30  DISCUSSION
Asterios DOUKOUDAKIS and Friedrich W. NEUKAM

*The figures refer to the abstracts you will find in the October issue of COIR
Parallel Session 1

13.35 - 16.30

LOADING PROTOCOLS
Chairpersons: Antonis KONSTANTINIDIS, Greece
Søren SCHOU, Denmark

13.35 026*
- Influence of implant surface characteristics and implant length on the immediate loading protocol
  Rüdiger JUNKER, The Netherlands

14.05 027
- Influence of the immediate loading protocol on the outcome in the aesthetic zone
  Konrad MEYENBERG, Switzerland

14.35 - 15.05
Coffee break

15.05 028
- Influence of hard and soft tissue augmentation procedures
  Isabella ROCCHIETTA, Italy

15.35 029
- Influence of the immediate loading protocol in partially edentulous and edentulous patients
  Tiziano TESTORI, Italy

16.05 - 16.30
DISCUSSION
Antonis KONSTANTINIDIS and Søren SCHOU

Speakers CV p.48-49

*The figures refer to the abstracts you will find in the October issue of COIR
Plenary Session 2

09.00 - 12.30

**COMPUTER-SUPPORTED FABRICATION OF IMPLANT RECONSTRUCTIONS**

Chairpersons: Christoph HÄMMERLE, Switzerland
Athanasios MANGOS, Greece

09.00 009*

- **Digital changes and their influence on the lab – European picture**
  Michael BERGLER, USA

09.30 010

- **Digital impression taking**
  Theodoros KAPOS, USA

10.00 - 10.30

Congress Ceremony

10.30 - 11.00

Coffee break

11.00 011

- **Digital design and fabrication of reconstructions**
  Matthias KERN, Germany

11.30 012

- **Digital registration of functional patterns**
  Sandro PALLA, Switzerland

12.00 - 12.30

DISCUSSION
Christoph HÄMMERLE and Athanasios MANGOS

*The figures refer to the abstracts you will find in the October issue of COIR

10.00 - 10.30

**Congress Ceremony**

Chaired by: Friedrich W. NEUKAM
Followed by live performance art! An outstanding sand animation performed by a world renowned artist and webcasted to all rooms!
> Parallel Session 2

09.00 - 12.30

PREVENTION OF PROBLEMS
Chairpersons: Kostas TSIKLAKIS, Greece
Georg WATZEK, Austria

09.00 030*
- Can we prevent biomechanical complications on implant dentistry?
  Rafael BLANES, Spain

09.30 031
- Implant treatment of the growing – malpractice or challenge?
  Simone HEUBERER, Austria

10.00 - 10.30
Congress Ceremony

10.30 - 11.00
Coffee break

11.00 032
- Compromised patients - limitations and goals
  Carlos MADRID, Switzerland

11.30 033
- Comparison of two bone substitutes to treat dehiscences along implants
  Nele VAN ASSCHE, Belgium

12.00 - 12.30
DISCUSSION
Kostas TSIKLAKIS and Georg WATZEK

Speakers CV p.52-53

*The figures refer to the abstracts you will find in the October issue of COIR

10.00 - 10.30

> Congress Ceremony
Chaired by: Friedrich W. NEUKAM
Followed by live performance art! An outstanding sand animation performed by a world renowned artist and webcasted to all rooms!
Friday, October 14, 2011

> Short Oral Communications 1

09.00 - 12.45

BANQUETING HALL

Chairpersons: Luca CORDARO, Italy
               Ailsa NICOL, United Kingdom

09.00 068* A randomised comparison of 6 mm long with 11 mm long implants: 1-year follow-up
         FELIX GULJÉ**, INGEMAR ABRAHAMSSON, STEPHEN CHEN, CLARK STANFORD, HOMAYOUN ZADEH, RICHARD PALMER (The Netherlands)

09.15 069 Peak insertion torque correlated to clinically and histologically evaluated bone density: a clinical study
         CHRISTIAN MAKARY**, ALBERTO REBAUDI, NADA NAAMAN (Lebanon)

09.30 070 Effect of wider implant/abutment mismatching: a histological study in dogs
         LUIGI CANULLO**, GABRIELE M. BAFFONE, DANIELE BOTTICELLI, FABIO PANTANI, MARCO BEOLCHINI, NIKLAIUS P. LANG (Italy)

09.45 071 An analysis of the decision-making process for single implant treatment in general practice
         JAN COSYN**, STEFANIE RAES, STEFANIE DE MEYER, HUGO DE BRUYN (Belgium)

10.00 - 10.30 Congress Ceremony

10.30 - 11.00 Coffee break

11.00 072 Influence of cementation margin position on amount of undetected cement. A prospective clinical study
         TOMAS LINKEVIČIUS**, EGLE VINDASIUTE, ALGIRDAS PUISYS, NATALIJA MASLOVA, LAURA LINKEVIČIENĖ (Lithuania)

11.15 073 Soft tissue response towards alumina-toughened zirconia oral implants: a 2-year follow-up
         MARKUS SPERLICH**, JASMIN BERNHART, RALF-JOACHIM KOHAL (Germany)

11.30 074 Treatment of peri-implantitis lesions by means of chemical decontamination and bovine-derived xenograft, on different implant surfaces
         MARIO ROCCUZZO**, FRANCESCA BONINO, LUCA BONINO, PAOLA DALMASO (Italy)

11.45 075 Impact of dental implants on cranial mobility: an osteopathic point of view
         VINCENT GOLETTI**, JACQUES OROFINDO, PATRICK PALACCI (France)

12.00 076 Impact of implant-retained-overdentures on OHRQoL: immediate vs delayed loading
         DOMINIC ALBRECHT**, LINDA MÅRKI, MATHIAS FABIAN, STEFAN BAYER, HELMUT STARK, REGINA MERICSKÉ-STERN, NORBERT ENKLING (Switzerland)

12.15 077 A radiographic evaluation of marginal bone levels of two different implant systems up to 7 years in function
         DORIS BURTSCHER**, KATHARINA SCHÜBERT, ULRIKE BEER, ANIKO MIKLÓS, JOHANNES GIESINGER, BURGHARD NÖRNER, INGRID GRUNERT (Austria)

12.30 087 The effect of experimental diabetes and metabolic control on de novo bone formation under SLA or SLActive domes following the GBR principle
         RYAN SB LEE**, MARIA RETZEPI, NIKOLAOS DONOS (UK)

Speakers CV p.54-55

*The figures refer to the abstracts you will find in the October issue of COIR  ** Presenters
12.30 - 13.30

EAO General Assembly
Plenary Session 3

13.35 - 16.30

TREATMENT PLANNING WITH EXPERTS

Chairpersons: Ronald JUNG, Switzerland
Georg MAILATH-POKORNY, Austria

13.35 013*
- Computer technology applications
  Lyndon COOPER, USA

14.00 014
- Microbiological testing
  Andrea MOMBELLI, Switzerland

14.25 - 14.50
  Coffee break

14.50 015
- Ideal fixed prosthodontic treatment from a biological point of view
  Sjoerd SMEEKENS, The Netherlands

15.15 016
- Indications for implant treatment from a patient’s point of view
  Gabor TEPPER, Austria

15.40 017
- Updated guidelines on imaging in implantology
  Kostas TSIKLAKIS, Greece

16.05 - 16.30
  DISCUSSION
  Ronald JUNG and Georg MAILATH-POKORNY

*The figures refer to the abstracts you will find in the October issue of COIR
Parallel Session 3

**LONG-TERM PREDICTABILITY**

Chairpersons: Nikolaos KATSIKERIS, Greece
Marc QUIRYNEN, Belgium

**13.45 - 16.30**

**TRIANTI HALL**

- **13.45** 034*
  - Immediate implant placement versus delayed
    Hugo DE BRUYN, Belgium

- **14.15** 035
  - Long-term outcomes of vertical augmentation procedures
    Matteo CHIAPASCO, Italy

- **14.45 - 15.10**
  - Coffee break

- **15.10** 036
  - Fixed versus removable implant rehabilitation
    Jocelyne FEINE, Canada

- **15.40** 037
  - Sinus augmentations versus short implants
    Daniel THOMA, Switzerland

**16.10 - 16.30**

DISCUSSION
Nikolaos KATSIKERIS and Marc QUIRYNEN

Speakers CV p.60-61

*The figures refer to the abstracts you will find in the October issue of COIR
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<th>Abstract Number</th>
<th>Title</th>
<th>Presenters</th>
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</thead>
<tbody>
<tr>
<td>13.45</td>
<td>078*</td>
<td>Various evaluation methods for dental implant stability: how are they related to each other?</td>
<td>TAEK-KA KWON** (Korea)</td>
</tr>
<tr>
<td>14.00</td>
<td>079</td>
<td>Four modalities of single implant treatment in the anterior maxilla: a clinical, radiographic and aesthetic evaluation</td>
<td>JAN COSYN**, HUGO DE BRUYN (Belgium)</td>
</tr>
<tr>
<td>14.15</td>
<td>080</td>
<td>Patient satisfaction with a single-tooth implant in the aesthetic zone</td>
<td>LAURENS DEN HARTOG***, GERRY RAGHOEBAR, ARJAN VISSINK, HENNY MÉJER (The Netherlands)</td>
</tr>
<tr>
<td>14.30</td>
<td>081</td>
<td>Staged guided bone regeneration and osseointegration. Part 1: augmentation using bone graft substitutes and autogenous bone</td>
<td>ILJA MIHATOVIC**, VLADIMIR GOLUBOVIC, JÜRGEN BECKER, FRANK SCHWARZ (Germany)</td>
</tr>
<tr>
<td>14.45</td>
<td>082</td>
<td>Dental implant loss and peri-implant diseases in diabetic patients</td>
<td>SOTIRIOS KOTSOVILIS**, IOANNIS FOURMOUSIS, IOANNIS KAROISSIS, JOHN ARISTIDES VRITSOS (Greece)</td>
</tr>
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<td>15.00</td>
<td></td>
<td>Coffee break</td>
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<tr>
<td>15.30</td>
<td>083</td>
<td>Low implant success in fibula-free flaps: a long-term retrospective study</td>
<td>GERARDO PELLEGRINO**, MARIA TERESA MACCHIA, GIUSEPPE LIZIO, GIUSEPPE CORINALDESI, ALBERTO BIANCHI, CLAUDIO MARCHETTI (Italy)</td>
</tr>
<tr>
<td>15.45</td>
<td>084</td>
<td>Block versus particulate bone grafting for ridge augmentation: a RCT</td>
<td>FRANCESCO PIERI, GIUSEPPE LIZIO, CLAUDIO MARCHETTI**, GIUSEPPE CORINALDESI (Italy)</td>
</tr>
<tr>
<td>16.00</td>
<td>085</td>
<td>Short-term teriparatide delivery and osseointegration: a clinical feasibility study</td>
<td>ULRIKE KUCHLER**, ÉLOÁ R. LUVIZUTO, GEORG WATZEK, REINHARD GRUBER (Austria)</td>
</tr>
<tr>
<td>16.15</td>
<td>086</td>
<td>Flapless and graftless transcrestal sinus floor elevation-intrasinusal bone formation</td>
<td>FAHIM ATAMNI**, VALENTIN TOPALO (Moldova)</td>
</tr>
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</table>

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Clinical Research Competition

13.30 - 16.30

Chairpersons: David HARRIS, Ireland
Alberto SICILIA FELECHOSA, Spain

13.30 060* The non-influence of platform-switching on peri-implant crestal bone level alterations
NORBERT ENKLING**, DOMINIC ALBRECHT, NINA GALLO, MARTINA DÜRSTLER, STEFAN BAYER, HELMUT STARK, REGINA MERICSKE-STERN (Switzerland)

13.50 061 Reversibility of experimental peri-implant mucositis compared with experimental gingivitis in man
MARCO AGLIETTA**, SIGRUN EICK, ANTON SCULEAN, CHRISTOPH A. RAMSEIER, NIKLAS P. LANG, GIOVANNI E. SALVI (Switzerland)

14.10 062 Biological and technical complications with implant fixed dental prostheses for edentulous patients: a systematic review
CHUNJUNGH CHEN**, PANDS PAPASPYRIDAKOS, GERMAN GALLUCCI (USA)

14.30 063 Implant surface decontamination using chlorhexidine during surgical treatment of peri-implantitis
YVONNE DE WAAL**, ARIE-JAN VAN WINKELHOFF, EDWIN WINKEL, HENNY MEIJER, GERRY RAGHOEBAR (The Netherlands)

14.50 064 Use of short implants in single tooth replacement (follow-up 4-years)
FABIO ROSSI**, EMANUELE RICCI, CLAUDIO MARCHETTI, DANIELE BOTTIGELLI, NIKLAS LANG (Italy)

15.10 - 15.30 Coffee break

14.50 065 Randomised-controlled clinical trial for prefabricated, anatomical shaped all-ceramic implant components in the posterior region
GEORGIA TRIMPOU**, ELEFTERIOS GRIZAS, PABLO HESS, GEORG-HUBERTUS NENTWIG, PAUL WEIGL (Germany)

15.15 066 Periodontal disease and long-term dental implant survival
LIRAN LEVIN RONEN OFEC, YOAV GROSSMANN, RACHEL ANNER** (Israel)

15.40 067 Osseointegration of zirconia oral implants: results from retrieved ceramic implants
MARIA BÄCHLE-HAAS***, SEBASTIAN SCHWINDLING, RALF KOHAL (Germany)

Speakers CV p.62-63

*The figures refer to the abstracts you will find in the October issue of COIR
Plenary Session 4

09.15 - 12.15

PREDICTABILITY OF AESTHETIC OUTCOMES
Chairpersons: Jaime A. GIL, Spain
Franck SCHWARZ, Germany

09.15 018*
- Papilla preservation techniques: mastering periodontal regeneration of intrabony defects
  Pierpaolo CORTELLINI, Italy

09.45 019
- Provisional prosthetic treatment: key factor of the aesthetic outcome
  Stefan HOLST, Germany

10.15 - 10.45
Coffee break

10.45 020
- Impact of buccal bone on immediate implant aesthetics
  Joseph KAN, USA

11.15 021
- Does biology influence the aesthetic outcome?
  Henny J. MEIJER, The Netherlands

11.45 - 12.15
DISCUSSION
Jaime A. GIL and Franck SCHWARZ

*The figures refer to the abstracts you will find in the October issue of COIR

13.45 - 14.00
Research Awards Ceremony
Parallel Session 4

09.00 - 12.15

CONTROVERSIAL ISSUES
Chairpersons: Björn KLINGE, Sweden
              David NISAND, France

09.00  038*
- The biological width - a myth revised
  Ingemar ABRAHAMSSON, Sweden

09.30  039
- The effectiveness of short implants versus longer implants placed in augmented bone
  Marco ESPOSITO, United Kingdom

10.00 - 10.45
Coffee break

10.45  040
- Augmentation versus angulation
  Urs BRÄGGER, Switzerland

11.15  041
- Endodontic treatment versus implant placement
  Thomas KVIST, Sweden

11.45 - 12.15
DISCUSSION
Björn KLINGE and David NISAND

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13.45 - 14.00

Research Awards Ceremony
> EAO Statement

09.00 - 09.15  CHRISTOS LAMBRAKIS HALL

049  Guidelines for diagnostic imaging in implant dentistry 2011: overview  
Speaker: David HARRIS, Ireland

Speakers CV p.68

> Greek session

09.00 - 12.00  SKALKOTAS HALL

PROSTHETIC TREATMENT PLANNING IN IMPLANT DENTISTRY: CLINICAL GUIDELINES

Chairpersons: Klaus GOTFREDSEN, Denmark  
Pascal VALENTINI, France

09.00  042*  Pre-prosthetic surgical planning  
Demos KALYVAS (Greece)

09.20  043  Predicting and achieving the final result with implant restorations for partially and completely edentulous patients  
Stefanos KOURTIS (Greece)

09.40  044  Stepped approach for restoring functionally and aesthetically the lost prosthetic space  
Vasilios CHRONOPoulos (Greece)

10.00 - 10.40  Coffee break

10.40  045  Advanced problem solving: going back to the basics  
George PAPAVASILIOU (Greece)

11.00  046  Solving the equation: aesthetics vs function  
Phoifi KAMPOSIDRA (Greece)

11.20  047  Implant supported overdentures: combining function and aesthetics  
Nikitas SYKARAS (Greece)

11.40  048  Bruxism and implant rehabilitation  
Ilia ROUSSOU (Greece)

Speakers CV p.69-71

*The figures refer to the abstracts you will find in the October issue of COIR

13.45 - 14.00  CHRISTOS LAMBRAKIS HALL

> Research Awards Ceremony
**Short Oral Communication 3**

09.00 - 12.00

**Chairpersons:** Theodoros KAPOS, USA
Franck RENOUARD, France

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<th>Time</th>
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<tr>
<td>09.00</td>
<td>088*</td>
<td>Surgical techniques for alveolar socket preservation: a systematic review</td>
<td>MARCO CLEMENTINI**, GIANLUCA VITTORINI ORGEAS, VALERIA DE RISI, ALICE MANNICCIO, GIORGIO DELI (Italy)</td>
</tr>
<tr>
<td>09.15</td>
<td>089</td>
<td>Two unsplinted immediately-loaded nanotite implants supporting mandibular overdentures; a four-year follow-up</td>
<td>MICHEL DOFF**, RONNIE GOENÉ, STEVEN LINGBEK (The Netherlands)</td>
</tr>
<tr>
<td>09.30</td>
<td>090</td>
<td>Implant primary stability (RFA): correlation with insertion torque, bone volume and osseointegration at 6 weeks</td>
<td>CHRISTIAN MAKARY**, ALBERTO REBAUDI, NADA NAAMAN (Lebanon)</td>
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<td>09.45</td>
<td>091</td>
<td>The implant-supported maxillary overdenture; a prospective study on 4 versus 6 implants</td>
<td>WIM SLOT**, GERRY RACHUEBAR, HENNY MEIJER (The Netherlands)</td>
</tr>
<tr>
<td>10.00</td>
<td>092</td>
<td>Impact of the outcome of guided bone regeneration in dehiscence-type defects on the long-term stability of peri-implant health</td>
<td>FRANK SCHWARZ**, NARJA SAHM, JÜRGEN BECKER (Germany)</td>
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<tr>
<td>10.15</td>
<td>093</td>
<td>Osteoblast behaviour on β-TCP with calcium phosphate and magnesium coatings</td>
<td>KI-DEOG PARK**, YOUNG-JOON KIM, HYUN-JU CHUNG, KYUNG-KU LEE, OK-SU KIM, KEE-SUN SOHN, HA-RA JEON (Korea)</td>
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<td>10.30</td>
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<td>Coffee break</td>
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<tr>
<td>11.00</td>
<td>094</td>
<td>Systematic review of the association between genetic predisposition and dental implant biological complications</td>
<td>XANTHIPPI DEREKA**, NIKOLAOS MARDAS, SARAH CHIN, NIKOLAOS DONOS (Greece)</td>
</tr>
<tr>
<td>11.15</td>
<td>095</td>
<td>Are implants a risk factor for osteonecrosis in intravenous bisphosphonate?</td>
<td>AKIRA MATSUD**, HAYATO HAMADA, ERIKO TSULI, AYAKO OKAMOTO, DAICHI CHIKAZU, HIROSHI KAISE, NORIO KONDO (Japan)</td>
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<tr>
<td>11.30</td>
<td>096</td>
<td>Histological and radiographic studies after intraoperative stem cell settlement in complex augmentation of the jaws</td>
<td>JÖRG HEINE**, TINA SEWERT, QUIN LIU, ELEONORE BEHRENS, MATTHIAS GIERLOFF, YAHYA ACIL, AUGUSTINUS BADER, JÖRG WILTFANG (Germany)</td>
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<tr>
<td>11.45</td>
<td>097</td>
<td>Lithium chloride effects on osteoblast differentiation are enhanced by hydrophilic titanium surfaces</td>
<td>CARLO GALLI**, MARILUNA PIEMONTESE, GIOVANNI PASSERI, GUIDO MACALUSO (Italy)</td>
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13.45 - 14.00

**Research Awards Ceremony**

CHRISTOS LAMBRAKIS HALL
08.30 050*  ■ Influence of peri-implant bone tissue composition on progression of peri-implantitis
ANDREAS STAVROPOULOS**, SERAFIM PAPADIMITRIOU, JENS NYENGARD, THORKILD KARRING (Denmark)

08.50 051  ■ Bone healing dynamics and crestal bone level at buccal peri-implant sites: a multivariable analysis in the dog
CRISTIANO SUSIN**, INAKI GAMBOREBA, TIAGO FIORINI, BRENT WENTZEL, JAEBUM LEE, PETER SCHÜPBACH, ULF WIKESJÖ (USA)

09.10 052  ■ Layer-by-layer assembled, BMP-2-incorporated biomimetic calcium-phosphate granules induce bone formation
GANG WU**, YUANNA ZHENG, TIE LIU, DANIEL WISMEINER, YUELIAN LIU (The Netherlands)

09.30 053  ■ An in vitro model of bacterial shifts associated with peri-implantitis
ELHAM HAZEIM**, NICKY MORDAN, JONATHAN PRATTEN, DAVID SPRATT (UK)

09.50 054  ■ Effect of neodymium magnet placed into SLA-surface implant in early stage of bone healing
RICHARD LEESUNGBOK**, SEHUN CHANG, SUKWON LEE, SOOJEONG PARK (Korea)

10.10 055  ■ Osteogenic differentiation of primary human osteoblasts in 3D microcavity arrays
BRIGITTE ALTMANN**, STEFAN GISELBRECHT, THORSTEN STEINBERG, ERIC GOTTWALD, PASCAL TOMAKIDI, MARIA BÄCHLE-HAAS, RALF-JOACHIM KOHAL (Germany)

10.30 - 11.00 Coffee break

11.00 056  ■ Impact of vitamin D on osseointegration in the ovariectomised rat
GABRIELLA DVORAK**, ALEXANDER FÜGL, ALEXANDRA MEINL, GEORG VATZEK, STEFAN TANGL, REINHARD GRUBER (Austria)

11.20 057  ■ Novel exploitation of polysaccharide nanogel cross-linking membrane for GBR
TAKAYUKI MIYAHARA**, WARUNEE PLUEMSAKUNTHAI, MYAT NYAN, ASAKO SHIMIZU, HIROSHI KOBAYASHI, YUKI SHIMIZU, TATSUYA FUJIMORI, MAKOTO SHIOTA, KAZUNARI AMYOSHII, SHOEI KASUGAI (Japan)

11.40 058  ■ A novel purmorphamine/ß-TCP filled degradable polymer membrane for GBR.
NIKOS MARDAS**, FRANK SCHWARZ, AHMAD-REZA HAKIMI, AVIVA PETRIE, KRIS GELLYNCK, ENSANYA ABOU NEEL, ANN YOUNG, PAUL BUXTON, NIKOLAOS DONOS (UK)

12.00 059  ■ Maxillary sinus floor elevation with injectable porous calcium phosphate cements in sheep
JAN WILLEM M HOEKSTRA**, REINOLD J KLIUN, JEROEN JJP VAN DEN BEUCKEN, GERT J MEIJER, JOHN A JANSSEN (The Netherlands)

*The figures refer to the abstracts you will find in the October issue of COIR
MAINTAINING LONG-TERM IMPLANT OUTCOMES

Chairpersons: Bjarni PJETURSSON, Iceland
Irena SAILER, Switzerland

14.00 022*
- Application of periodontal soft tissue surgery techniques to peri-implant defects – peri-implant recession defect management
  Jürgen BECKER, Germany

14.30 023
- Management of peri-implantitis
  Ioannis FOURMOUSIS, Greece

15.00 024
- Prevalence, extent and severity of peri-implantitis
  Odd Carsten KOLDSLAND, Norway

15.30 025
- Risk factors of peri-implantitis
  Phoebus N. MADIANOS, Greece

16.00 - 16.15 DISCUSSION
Bjarni PJETURSSON and Irena SAILER

*The figures refer to the abstracts you will find in the October issue of COIR
**Satellite Industry Symposia**

**GEISTLICH**
**Biomaterials**

**GEISTLICH**

**Treatment concepts for improved outcomes**

Prevention and treatments for optimal maintenance of hard and soft tissues.

Prof. Dr. Christoph HÄMMERLE, Switzerland

Today, different clinical strategies are available regarding maintenance of the intact and reconstruction of the deficient ridge. Various techniques to deal with extraction sockets have recently been published showing controversial data. Among the methods presently employed guided bone regeneration (GBR) is the best documented for the augmentation of the bony alveolar ridge. In recent years, possibilities for augmenting soft tissues have been further developed and refined. Transplanting autogenic tissue or applying novel collagen matrices for soft tissue augmentation have shown positive and reliable clinical outcomes.

Management of complications in sinus elevation

Prof. Dr. Carlo MAIORANA, Italy

Sinus elevation is currently a reliable procedure for bone augmentation in the posterior maxilla. Nevertheless, complications can arise from an incorrect surgical procedure or from anatomical anomalies. Most of the time, such complications can be avoided by carefully evaluating the preoperative CT scan, listening to the medical history of the patient, and performing the surgical procedure in the proper way. All the most common complications and their management will be highlighted together with key aspects from the most recent literature.

For more information please visit [www.geistlich-pharma.com/athens](http://www.geistlich-pharma.com/athens)

**OSTECELL**

**Implant stability diagnostics with ISQ – optimal loading decisions**

Use this opportunity to learn more about the latest developments and practice in objective stability diagnostics.

Three of the most renowned clinicians in the field will present research and rationale for using Osstell ISQ in compelling presentations:

- **Speakers:**
  - Prof. Peter Moy, USA
  - DR. Jan Gottlow, Sweden
  - Dr. Paolo Trisi, Italy

- **Moderator:** Dr. Marco Degidi, Italy

Using Osstell and ISQ is rapidly becoming a new standard as this is the only method to objectively diagnose implants and measure implant stability. With Osstell and ISQ you can easily test an implant without risking any damage to bone-implant connection.

There can always be difficulties in determining the osseointegration status when an implant is to be loaded with the final prosthesis. Nevertheless, it is vital to know whether the implant is stable. Compare your initial ISQ values from the implant placement, and you can easily ascertain whether stability has developed as you had expected.

Research today demonstrates that implants can be subject to immediate or early loading – as long as there is sufficient stability (all other relevant parameters considered). You can read in recent publications how the initial ISQ-value can help you decide whether to go ahead with early or immediate loading.

In some cases there may be biological conditions demanding additional treatment such as sinus-lifts, bone grafts, membranes etc. With higher risk cases your prime target may not be loading the implant as early as possible. It may be more important to ensure that the implants are healing as expected. As long as there is access to the ISQ-reading, you will know the stability development and help you in your clinical evaluation.

Read more about implant stability diagnostics and ISQ on [www.isqforum.com](http://www.isqforum.com)

**STRAUMANN**

**Advancing Solutions Through Continuity and Innovation**

Moderator

Prof. Dr. Nikos Donos, United Kingdom

Synthetic Biomaterials for GBR Today and Tomorrow – Improving Convenience for your Daily Practice

Dr. Christer Dahlin, Sweden

Vital bone is the decisive matrix for successful patient treatment in order to achieve reliable implant osseointegration and improve the aesthetic outcome. Straumann’s regenerative portfolio, including the newly developed PEG-Membrane MembraGel and the well documented graft material BoneCeramic, offers a synthetic alternative to improve convenience for your daily practice.

Advancing Implant Dentistry with New and Old Technologies

Dr. Mario Roccuzzo, Italy

New technologies are developed in order to simplify procedures and enhance predictability. However, long-term data are needed to assess the predictability of an implant. Therefore, it is beneficial when new technologies are based on existing and well-documented solutions.

Benefits of Using Original Prosthetic Components for Implant-Supported Reconstructions

Prof. Dr. Urs Braegger, Switzerland

Increased availability of 3rd party prosthetic components raises concerns over the reliability and efficacy of implant-abutment connections. It is important to emphasise and demonstrate the advantages of using original prosthetic components for implant-supported restorations.

Please check our website for the speakers’ abstracts, CVs and programme updates: [www.straumann.com/eao2011](http://www.straumann.com/eao2011)
Implant dentistry is all about recreating what nature once created. Under the right conditions, nature itself does the major part of the job. Our responsibility is to provide the right conditions. The latest example of this is the OsseoSpeed™ TX Profile implant.

Prof. Wilfried Wagner and Dr. Robert Nölken will present outstanding clinical results by using this new implant, specially designed for sloped ridge situations – proving that adapting with nature is truly rewarding.

Dr. Irena Sailer will present her way of providing the right conditions for each individual patient by using customised implant prosthetics. The continuous evolution of Astra Tech Implant System™ is proof of our commitment to development and innovations based on clinical evidence – before, during and after treatment; Prof. Lyndon Cooper’s presentation will cover five years of clinical experience with OsseoSpeed™. What if we can create the future by going back to the roots - Prof. Tomas Albrektsson takes us back 50 years to the time when the journey of osseointegration began.

Moderator:
Prof. Lyndon Cooper, USA

Speakers:
Implant aesthetics with customised solutions
Dr. Irena Sailer, Switzerland

Tissue maintenance in sloped ridges with new implant design
Prof. Wilfried Wagner and Dr. Robert Nölken, Germany

Five years clinical experience with OsseoSpeed™
Prof. Lyndon Cooper, USA

50 years of osseointegration – back to the roots
Prof. Tomas Albrektsson, Sweden

For more information visit our website: www.astratechdental.com
**BTI: Biotechnology institute**

**A biological approach to implantology: Atrophic maxilla treatment with minimum invasive clinical techniques using plasma rich in growth factors (P.R.G.F-ENDORET™)**

**Speakers:**

Dr. Eduardo Anitua, Spain  
Dr. Konstantinos Mantalenakis, Greece  
Dr. Gorka Orive, Spain  
Dr. Aris Tripodakis, Greece  
Dr. Eric Van Dooren, Belgium  
Dr. Mauro Freioli, Italy  
Dr. Christian Coachman, Spain  
Dr. Giovanni Polizi, Italy  
Dr. Luc Vrelink, the Netherlands  
Dr. Tommaso Cantoni, Italy  
Dr. Alessandro Pozzi, Italy

**NOBEL BIOCARE**

**Preferred Treatment Concepts for Today's Patient needs**

Treatment planning of any implant case requires proper diagnosis based on conventional and/or digital technologies. The clinician's goal is to serve the patient by reducing the number of treatment steps and by selecting the least invasive treatment options as supported by the most relevant science. Well-executed treatment planning will offer the patient an effective, durable and reliable result, improving his/her quality of life.

This interactive treatment planning session will be conducted by nine experienced clinicians, researchers, presenters:

Dr. Aris Tripodakis, Dr. Eric Van Dooren, Dr. Mauro Freioli, Dr. Christian Coachman, Dr. Giovanni Polizi, Dr. Luc Vrelink, Dr. Tommaso Cantoni and Dr. Alessandro Pozzi under the lead of the moderator Dr. Bernard Touati.

Recorded treatment performed by Dr. Eric Romen is part of forum.

Session topics to be addressed and discussed by the experts:

- Treatment planning for anterior partial edentulism with special emphasis on peri-implant soft tissue management considerations as well as final restorative options to provide long-lasting aesthetic results.
- The aim of this treatment planning session is to identify and optimally control those factors that contribute to overall soft tissue health and long-term stability in dental implant treatment. These factors include implant design, abutment type and shape, restoration contour and a meticulously and scrupulously executed sequence of clinical procedures.
- A knowledge of and appreciation for aesthetic, biocompatible and functional parameters needs to be combined with precision of fit objectives and CAD-CAM technology to ensure optimal and routine treatment outcomes. The aim of this part of the treatment planning session is to identify those factors that contribute to long-lasting and aesthetic results.

- Treatment planning that focuses on surgical considerations and procedures for advanced residual ridge reduction in edentulous patients. Treatment strategies and related protocols in implant dentistry for edentulous patients have changed dramatically and are being continually refined and developed. The aim of this treatment planning session is to focus on the specific needs of the edentulous patient and the selected management rationale for each specific case.

- Digital diagnostics, treatment planning and collaboration: Could new digital solutions in dentistry improve communication within the dental team and influence even more reliable treatment outcomes in restorative driven treatments?

- **ZIMMER DENTAL**

Osseointegration with Trabecular Metal™ Implants. The best thing next to bone.™

Implant technology has significantly evolved during the last year, addressing most of the challenges for a better osseointegration and increasing the predictability of the treatments. But still some limitations remain and new challenges need a response. Have we reached the limit of the current technologies? Which is the next step for the future? Conventional textured or coated implant surfaces achieve bone-to-implant contact, or ongrowth.

What if in addition to osseointegration, we could achieve Osseointegration? Trabecular Metal Technology is an innovative material designed for both ongrowth and ingrowth, or osseointegration.

Prof. Dr. Markus Hürzeler, Germany  
Implant developments over the last 20 years – successes and shortfalls.

Prof. Dr. Markus Hürzeler will review the major developments in the technology of dental implants over the last 20 years. He will reflect on the most critical milestones and assess their effects on enhanced treatment options and patient outcome.

Dr. Michael Collins, Vice President of Research, Development, and Education, Zimmer Dental, USA  
Trabecular Metal™ Implant: Research and development.

Dr. Michael Collins will give an overview of the research and development concept behind the new Trabecular Metal Dental Implant. An overview will be given on material properties, design rationale and the status and future plans of mechanical, animal and human trial programmes will be presented.

Dr. Markus Schliee, Germany  
Clinical Experience with Trabecular Metal Implants.

Dr. Markus Schliee was the first dentist using the Trabecular Metal Dental Implant clinically in Europe. He conducted two studies on Trabecular Metal implants (early loading study and a noninterventional study). Moreover current concepts of better soft and hard tissue integration of dental implants will be discussed. Based on the material properties combined with optimised clinical procedures he will give an overview of his clinical experience and further possibilities with Trabecular Metal implants.
Genesis, The new Biomimetic Implant System™

Genesis the Biomimetic Implant System™ represents a major advance in implant dentistry through its biomimetic design – a design inspired by nature. The unique benefits of the Genesis system include the potential to achieve immediate function with a natural looking smile, allowing the patient to leave the dentist’s office with a replacement tooth on the day of surgery.

First used over 30 years ago, dental implants have primarily focused on restoring the function of natural teeth. Today, the Genesis system goes beyond simply restoring function. Through its patented BioSpark™ surface, a nano-surface that mimics the structure of bone, the Genesis system creates a healing environment to optimise bone integration. In addition, the conical seal minimises area for bacterial colonization, and the medialized abutment connection shifts bacteria away from bone. Finally, the unique AnaTite™ process results in the first-ever marketed pink implant collar and a complete line of pink prosthetics. The aesthetic breakthrough of the AnaTite™ process allows the Genesis system to project a more natural hue through the patient’s gum tissue for a more natural looking smile.

Speaker: Dr Monish Bhola, USA

For more information about Genesis, The Biomimetic Implant System™, please visit www.genesisdentalimplant.com

MATERIALISSE DENTAL

From 3D prosthetic planning to next generation guided surgery and CAD-CAM restorations for immediate loading.

With the ever growing range of digital dental solutions, integrating aesthetic planning and delivery of outstanding results is possible today. Three dimensional planning and implant therapy exemplified by SimPlant® and SurgiGuide® offers clinicians detailed tools for all clinical implant scenarios.

This presentation will focus on comprehensive integration of aesthetic smile design, implant placement and CAD-CAM restorations for immediate loading.

Speaker: Lyndon F. Cooper, D.D.S., Ph.D.

Dr Cooper is the Stallings Distinguished Professor at the University of North Carolina. Together with the UNC Prosthodontics programme, Dr. Cooper explores cutting edge technologies related to Prosthodontics and will present his experience with digital planning, guided surgery and immediate provisionalisation.

www.materialisedental.com

SOUTHERN IMPLANTS

The Brightest Ideas in Dental Implants.

Southern Implants has been providing leading edge implant solutions to surgeons and restorative dentists since 1987. The company has evolved to the forefront of Dental Implant Innovations and offers truly unique and award winning products, backed by extensive scientific data.

This is an opportunity to gain valuable insight from some of the world’s leading specialists, researchers and clinicians on these innovative products.

MAX - Implant for Molar Tooth Replacement: The award winning MAX implant, which permits immediate placement in molar sockets will be discussed. Focus will be on clinical research results and site preparation options.

Co-Axis - Implants that Reduces the Need for Bone Grafts: The Co-axis implant optimises use of available bone without compromising restorative protocols. These implants significantly reduce the complexity of immediate loading.

Moderator: Dr Stefan Vanderweghe

Speakers:
Dr Andrew Ackermann
Dr Costa Nicolopoulos
Prof Dale Howes
> Posters Area

Poster area A (Level -1)

Poster area B (Level -2)

> Plan of the MAICC
Poster authors will be presenting their work on Friday, 14th from 12:30 to 13:30 and on Saturday, 15th from 12:15 to 13:45. Each poster refers to a specific topic. Each topic has been assigned with a different colour. Please refer to page 24 to find the location of the posters you would like to read.

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Bone regeneration by bioactive hybrid membrane within rat calvarium

Effects of periosteum and membrane on the resorption of grafted iliac bone in calvarium of rabbit

Biocompatibility: evaluation of titanium alloys in oral implantology

Nanostructured titanium-bioceramic composite scaffolds for biomedical applications

Marginal adaptation of 3 different casting waxes on stone, titanium and zirconia dies

Different volumes of implant-abutment connections

permanent loading behaviour of a novel implant attachment system

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Gang WU, The Netherlands
Avoiding and managing poor implant positioning

Dental implants are usually used for retention of fixed or removable prostheses in partially or completely edentulous patients. The position of the implants is mainly determined by prosthetic and biological parameters and has to be thoroughly planned prior to their installation. Since the prosthetic rehabilitation of the patient is the final treatment goal the prosthetically optimal position is one of the most important parameters to be evaluated during treatment planning. Biological parameters to be considered include the presence of bone for implant stability and osseointegration, topographic relation of vital anatomic structures and soft tissue condition.

Implant malposition can have negative biological, functional and aesthetic consequences. It can compromise the final treatment outcome and also lead to irreversible tissue destruction. Depending on its nature and severity, compensation of the malposition by prosthetic or surgical means may sometimes be possible. However, in some cases implant removal is the ultimate ratio leading to significant iatrogenic tissue destruction and a complex consecutive therapy.

If proper clinical, radiographic and prosthetic preoperative diagnostics are applied, the surgical and prosthetic treatment are well planned and performed thereafter, malposition can be avoided. In this regard, communication between the surgeon, the prosthodontist and the dental technician are of great importance. Moreover, recent developments in radiology and digital dentistry have led the development of new tools and procedures for implant treatment planning and implant placement.
**Pre-Congress Course 2**

**AVOIDING AND MANAGING SURGICAL AND BIOLOGICAL COMPlications**

> **Carlo MAIORANA**  
MD, DDS  
Professor and Chairman Oral Surgery and Implantology University of Milan School of Dentistry  
Director, Postgraduate School in Oral Surgery University of Milan School of Medicine  
Vice President and President Elect, Italian Society of Specialists in Oral Surgery  
Vice President, European Society for Oral Laser Applications  
Author of more than 200 papers and six textbooks on oral surgery and advanced osseointegration  
Editorial manager European Journal of Oral Surgery  
Lecturer in international congresses  
Reviewer of international journals

> **Giovanni SALVI**  
Giovanni E. Salvi received his license in dental medicine in 1988 from the medical faculty of the University of Bern, Switzerland. In 1990 he received his Dr. med. dent degree. Between 1992 and 1994 he was a graduate student in the Department of Periodontology and Fixed Prosthodontics at the University of Bern. From 1994 to 1997 he was a postdoctoral research associate at the University of North Carolina at Chapel Hill, NC, USA. In 1998 he became a board certified periodontist. Since 1999 he has been a fellow of the International Team of Implantology (ITI). In 2005 he was appointed teacher of the year in the School of Dental Medicine. Since 2003 he has been a member of the editorial board of the Journal of Clinical Periodontology and Clinical Oral Implants Research. In 2006 he was appointed associate editor of Clinical Oral Implants Research. Currently he is an associate professor in the Department of Periodontology and director of the graduate programme in periodontology at the University of Bern, Switzerland.

Avoiding and managing surgical and biological complications  
Medical interventions involving surgical procedures for the insertion of dental implants are associated with risks. Before undergoing such interventions, the risks of complications and failure as well as treatment alternatives need to be carefully evaluated between the patient and the dentist.  
Surgical complications such as injury of the inferior alveolar nerve, perforation of the floor of the mouth and the sinus cavity and damage of adjacent teeth may occur at time of implant placement. On the other hand, biological complications represent late inflammatory processes in the soft and hard tissues surrounding osseointegrated dental implants. Findings from longitudinal clinical studies revealed that subjects treated for periodontitis may experience more implant failures and biological complications compared with non-periodontitis subjects.  
Proper understanding of local anatomy, the correct use of diagnostic tools and careful surgical protocols are essential in reducing the rate of surgical complications. Moreover, the control of medical conditions and of bacterial infections, smoking cessation or reduction as well as the implementation of a strict maintenance care programme are pivotal for the survival and success of dental implants and their reconstructions.  
The aim of this lecture is to present an overview of the most frequent surgical complications related to implant placement as well as of biological complications and to provide recommendations in order to avoid and manage such complications.
Pre-Congress Course 3
AVOIDING AND MANAGING PROSTHODONTIC COMPLICATIONS

> Stefan HOLST
PD DR. STEFAN HOLST, DMD, PhD
Dr. Stefan Holst holds a position as Clinical Associate Professor at the Friedrich-Alexander-University, Dental Clinic 2 - Prosthodontics, where he heads the CAD-CAM research laboratories. He has authored multiple published papers on digital dentistry, material sciences and biomechanics in implant prosthodontics. His research expertise focuses primarily on CAD-CAM technology / digital dentistry and related material sciences, as well as aesthetics and all ceramic restorations.
In 2006 Dr. Holst was appointed senior lecturer at the Dental Clinic 2. From 2009-2011 he held the position of Associate Editor of the Quintessence International journal and in 2011 he became a member of the editorial review board of the International Journal of Prosthodontics.

Provisional prosthetic treatment: key factor of the aesthetic outcome
Implant-retained restorations have become a routine treatment option with high reliability and excellent clinical success rates. Restoring anterior teeth with implant supported crowns is still considered a technique sensitive task for the surgical-restorative team.
When restoring anterior implants, clinical success is not only defined by osseointegration of the implant and rehabilitation of proper function, but by a harmonious and natural blending of the restoration with the surrounding tissues and dentition.
The maintenance of an existing or recreated gingival architecture around dental implants can be demanding. Provisional restorations may help to shape, prepare, and stabilize the peri-implant soft tissues during the healing phase in immediate or delayed loading cases or after second-stage surgery. In addition, provisional restorations allow evaluation of aesthetic parameters prior to finalising treatment.
The key objective of the presentation is to discuss advantages and disadvantages of various treatment protocols when provisional restorations are applied. While the majority of scientific evidence is limited to technique articles and case series, currently applied and future assessment methodologies for long-term quantitative follow-up studies are discussed with a special emphasis on measurement of 3-dimensional tissue alterations.

> Stephan EITNER
Prof. Dr. S. Eitner
Associate Professor
Department of Prosthodontics
University Hospital Erlangen
1983 High school graduation
1986-1991 Dental school Julius-Maximilians-Universität Würzburg
1991 State examination, approbation, doctor degree:
Dr. med. dent. (DMD) Ruhruniversität Bochum
1991-2000 Dentist in the German Army
01.01.2001 Additional business in a maxillofacial surgery office
01.04.2002 Scientific assistant of the Department of Prosthodontics, University Hospital Erlangen
16.12.2005 PhD-graduation
15.11.2008 President of the German Hypnosis Association (DGH)
07.02.2011 Call for-Prof. Dr. med. dent.

Scientific focus
• Psychological impact in dental problems
• Medical hypnosis and acupuncture in dentistry (identical anxiety, gagging, CMD)

Clinical focus
• CT / DVT-based „Navigation“ in implantology
• Implant based prosthodontic rehabilitation of cancer and accident patients with failures in the oral and dento-alveolar region

Avoiding and managing prosthodontic complications
… stands for a successful therapy.
According to the actual data base in the scientific literature prosthodontic complications are known as the most frequent complications in the treatment with dental implants.
Therefore it is necessary to know possible complications, to handle occurring complications and to avoid pitfalls from the therapeutic as well as the forensic point of view:
The risk analysis – The best way of risk-, complications- and failure-minimization!
The fixed denture on implants – Always the best solution?
The combination of implants and natural teeth – Does it work or not?
The fracture of screws and the “chipping” of ceramics – An avoidable defeat?
The answers to these questions should lead to a patient-oriented individual treatment strategy, based on the scientific knowledge as well as the daily treatment experience.
Plenary Session 1

RISK INDICATORS FOR IMPLANT THERAPY: CLINICAL GUIDELINES

> Asterios DOUKOUDAKIS

Dr. Asterios Doukoudakis received his D.D.S. degree from The National and Kapodistrian University of Athens in 1976. The following year went for graduate studies at the University of Iowa and he was awarded the degrees of Master and Certificate in Prosthodontics in 1979.

From 1979 until 1988 he taught at the Dental School of Case Western Reserve University in Cleveland Ohio. At Case Western Reserve University he served as Director of Fixed Prosthodontics and Occlusion and as Director of the Graduate Prosthodontic Programme.

In 1986 he was promoted to Full Professor at C.W.R.U. and he completed his doctorate degree at the National and Kapodistrian University of Athens.

In 1988 he was elected Chairman of the Prosthodontic Department at Temple University in Philadelphia where he also directed the Graduate Prosthodontic Programme.

In 1993 he was elected Professor and Chairman of the Prosthodontic Department in Athens.

Presently he is Professor and Chairman of the Prosthodontic department and Dean of the School of Dentistry.

In June 2010, he was elected Vice Rector of the University. He has presented a large number of seminars and continuing education courses in various countries and his publications and interests are in the area of Occlusion Prosthodontics and Dental Materials.

> Friedrich W. NEUKAM

1970 to 1976 dental studies at Mainz University.

1979 to 1984 medical studies at Hannover University.

Trainee in oral and maxillofacial surgery and senior staff at the Department of Oral & Cranio-Maxillofacial Surgery at Hannover University Medical School.

1990 PhD, 1994 Associate Professor.

Since 1995 Chairman and Head at the the Department of Oral & Cranio-Maxillofacial Surgery at Erlangen-Nuremberg, University Dental School.

Since September 2000 member of the EAO Board. Acting EAO President (2006-2008).


Since October 2003 Editorial Board Member of the Journal Oral Science International.

Professional work is focused on cleft lip and palate, orthodontic surgery, tumour surgery, implantology, bone grafts in combination with implants.
The outcome of implant treatment in periodontally compromised partially edentulous patients has been an issue of controversies. The aim of this presentation is to focus, applying a systematic approach, on the currently available knowledge, regarding the short-term (≤ 5 years) and especially the long-term (≥ 5 years) prognosis of osseointegrated implants placed in periodontally compromised partially edentulous patients. A systematic search in the English literature reveals no significant differences in both short-term and long-term implant survival between patients with a history of chronic periodontitis and periodontally healthy individuals. However, biological complications and especially implant surfaces? A number of experimental studies have elucidated the influence of implant surfaces on the severity of peri-implantitis. How can we interpret these studies, and do we have clinical studies supporting the experimental data? Furthermore, do the clinical studies reflect the experience from private practitioners working within implant dentistry, and what will be the future developments in implant surfaces? The lecture will try to analyse these questions using evidence from the literature and also discuss the subject areas based on own studies and experiences.
Medically compromised patients

As the average age of people steadily increases in industrial countries, a higher rate of medically compromised patients requires treatment with dental implants. Today, a large variety of diseases and related therapies have to be taken into account that may negatively affect the outcome of implant treatment.

Diabetes is a widespread disease amongst the elderly that has to be treated adequately by the general practitioner in order not to reduce the long-term survival of dental implants. Another major problem can be anticoagulation of patients scheduled for implant placement. It has been shown that stopping anticoagulation in these patients will not reduce the rate of postoperative complications. However, transmucosal implant placement will help to minimise postoperative problems.

Patients receiving bisphosphonates are another group that may be affected by major complication as a consequence of implant placement. If bisphosphonates have been administered intravenously these persons are at risk for developing bisphosphonate related necrosis of the jaws. Therefore, the decision for placing implants in these patients has to be made carefully.

All in all, implant therapy in the medically compromised patient is an interdisciplinary challenge that requires full attention to all the different aspects of the state of health in order to receive a success rate of dental implants that is comparable to that of patients without general diseases.
Immediate loading of an implant is today a clinically predictable procedure provided the case selection is properly performed. In terms of functional and biological outcome the success rates can be comparable to conventional surgical and loading protocols.

In terms of the aesthetic outcome however some limitations and risk factors must be considered. The greatest limitation certainly is that due to the immediate provisionalisation only restricted surgical hard and soft augmentation techniques can be used. Whereas for the interdental papillary region an immediate support of the soft tissue structures can even be an advantage, this can be a handicap in the buccocervical region. Therefore beside the optimal 2D-placement of the fixture into the alveolar base the proper shape and contour and the material both of the abutment and the provisional fixture into the alveolar bone the proper shape and contour and the material both of the abutment and the provisional are important.

Furthermore cement excesses may account for unfavourable tissue remodelling and chronic inflammation both of the soft tissue and bone and account for the development of peri-implantitis. Therefore a concept should be preferred which allows to avoid cemented provisions in favour of screw retained reconstructions. By means of a number of clinical cases some useful concepts are discussed which help to control the aesthetic risks.

Shortening treatment time and reducing patient discomfort and/or inconvenience is a trend in implant dentistry. Consequently, immediate loading protocols have gained some popularity among clinicians. In fact, immediate loading of dental implants has shown promising and predictable results. Nonetheless, it is important to note that beside meticulous case selection, implant-related factors have to be considered prior to initiation of treatment. Until now, the influence of implant surface characteristics and implant length on immediate loading protocols is not fully understood. A critical look at this subject matter will be taken by reviewing the relevant literature. As an interim result of the reviewing process, it might be concluded (1) that machined (turned) implant surfaces should not be considered within immediate loading protocols, and (2) that only limited evidence exists that shorter implants (≤ 8 mm) with modified (“modern”) surfaces might perform less successfully than longer implants.

Infl uence of implant surface characteristics and implant length on the immediate loading protocol

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One of the major endeavours in implant dentistry is the aesthetic result of the final prosthetic restoration. Implant positioning is now driven by the prosthetic demands and requirements rather than the quantity, quality and morphology of the available bone. A correct diagnosis based on a multidisciplinary approach, including periodontal, prosthetic and surgical parameters is crucial. The patient's periodontal evaluation must be based upon the following parameters: width of keratinised gingiva, clinical attachment level, probing depth and height and width of the existing bone. It is crucial that sufficient bone is maintained buccal, mesial and distal to the implant. In the past decade, many predictable techniques have been proposed in the literature to augment deficient alveolar ridges both horizontally and vertically and/or to enhance bone de novo or in conjunction to sinus bone augmentation. Bone regeneration has been further improved through the introduction of more effective barrier membranes and osteoconductive biomaterials (such as demineralised bone matrix) and the development of new surgical procedures.

Advances in tissue engineering may offer solutions that resolve bone volume deficits and soft tissue defects while at the same time eliminating some of the concerns posed by current techniques. The recombiant platelet derived growth factor (r-hPDGF-BB) has been extensively used as a potent regenerating factor in orthopaedics and periodontics with success. The principal aim in hard tissue regeneration would be to eliminate the need for autogenous bone harvesting and possibly eliminate the non resorbable membrane. Regarding soft tissues, the ideal technique would comprise of an "off the shelf" product, eliminating the need for autogenous soft tissue harvesting. Numerous different alternative materials have been investigated to overcome the use of autogenous soft tissue. A porcine collagen matrix has been recently investigated in patients with fixed periodontal widening. Advances in tissue engineering, soft and hard tissue neo-formation with autogenous living cells, osseointegration and implant surface modifications.

Influence of hard and soft tissue augmentation procedures

The lecture will address a variety of topics related to immediate loading protocols as a viable therapeutic procedure under certain circumstances. The ultimate goal of an immediate loading protocol is to reduce the number of surgical interventions and shorten the time frame between surgery and prosthetic delivery, all without sacrificing implant success rates. These new protocols will ultimately lessen orthopaedics reservations and result in increased acceptance of implant therapy. Before embracing the procedure as a routine treatment, the immediate loading needs to be validated with prospective studies, extended follow-ups and clear definition of limitations. Immediate loading procedures although predictable in many clinical scenarios are technique-sensitive and should be applied cautiously. A gradual progressive approach to immediate loading is therefore recommended.

Influence of the immediate loading protocol in partially edentulous and edentulous patients

The widespread therapeutic use of implants over the last 20 years has led to the revision of several aspects of the original two-stage Brånemark protocol. After using the single-stage approach as a valid treatment procedure for many years, one of the most dramatic changes in implant dentistry has been the increased acceptance of immediate loading protocols as a viable therapeutic procedure under certain circumstances. The ultimate goal of an immediate loading protocol is to reduce the number of surgical interventions and shorten the time frame between surgery and prosthetic delivery, all without sacrificing implant success rates. These new protocols will ultimately lessen orthopaedics reservations and result in increased acceptance of implant therapy. Before embracing the procedure as a routine treatment, the immediate loading needs to be validated with prospective studies, extended follow-ups and clear definition of limitations. Immediate loading procedures although predictable in many clinical scenarios are technique-sensitive and should be applied cautiously. A gradual progressive approach to immediate loading is therefore recommended.

The lecture will address a variety of topics related to immediate loading in different clinical situations: edentulous mandible and maxilla, partially edentulous patients from single tooth to multiple units. A review of the available literature along with the biologic rationale for immediate loading will be presented.
Digital changes and their influence on the lab – European picture

The availability and sharply increasing use of numerous CAM-systems seems to drastically alter traditional dental restoration fabrication processes. These changes are not limited to the significantly more reliable and precise fabrication process, but also offer a whole range of new materials that cannot be used with traditional fabrication techniques. The excellent aesthetic features (i.e., translucency) paired with favorable physical and biological properties have made high-strength ceramic materials such as zirconium oxide and aluminum oxide ceramics true alternatives to conventional dental alloys in a variety of clinical indications. For long-term clinical success, however, and to take full advantage of the unique material properties, it is crucial for the laboratory technician and the dentist to understand clinical indications, advantages and limitations, and required clinical protocol changes for these technologies and materials. This lecture will present the possibilities and limits of various CAM-Systems and will detail the capabilities of modern scanners and software and their influence on the daily lab business. Differences in scanning technology and the various possibilities for the design of tooth- and implant-supported restorations ranging from single-crowns to complex full-mouth-reconstruction frameworks will be outlined and explained. Furthermore, details about the properties and handling requirements of ceramic frame materials will be described and exemplified with a variety of clinical cases.

Digital impression taking

In modern dentistry, intraoral digital impression systems are becoming more prevalent. The use of such systems presents a paradigm shift in the way dental impressions are made. Will this dental technology replace conventional impression techniques? And, if so, how fast will this happen? Oral scanners were originally implemented for use on the natural dentition. This technology is capable of capturing three-dimensional (3D) mesiodistal and occlusal images of tooth preparations from which restorations can be fabricated directly (chairside) or indirectly (laboratory). Recently, oral digital impression systems have been introduced, particularly in the field of implant dentistry, primarily for patient comfort, and also, in order to simplify the impression process. This lecture will concentrate on the application of digital impression systems and techniques, on implant dentistry. The leading digital impression systems and their functions will be presented. Clinical cases will be examined, and advantages and disadvantages of this relatively young, innovative technology will be put forward. A comparison between conventional impression techniques and the digital technique will be emphasized throughout the entire lecture. Furthermore, current evidence for these techniques will be reviewed.

Digital impressions in conjunction with CAD/CAM technology are introducing a new era in the field of Implant Dentistry. Are we ready?
In implant dentistry, it is needed to explore the full potential of CAD-CAM technology, as studies reporting on implant-supported CAD-CAM fabricated restorations are increasing, but the number of clinical studies comparing them with those of conventionally fabricated implant-supported CAD-CAM-fabricated restorations and comparing the survival and complication rates of these restorations need still to be shown. The benefits for the patients regarding survival und complication rates of these restorations need still to be shown. The advantages regarding technical procedures and the use of specific materials, the clinical benefits for the patients regarding survival and complication rates of these restorations need still to be shown. The lecture therefore summarises the scientific evidence regarding survival and complication rates of implant-supported CAD-CAM-fabricated restorations and compares them with those of conventionally fabricated implant-supported restorations. However, the number of clinical studies reporting on implant-supported CAD-CAM fabricated restorations is still limited. Yet long-term studies are needed to explore the full potential of CAD-CAM technology in implant dentistry.

SPEAKER


He has been serving as General Secretary of the Mediterranean Dental Implant Society for the last three years.

SPEAKER

Matthias Kern is an academic professor and head of the Department of Prosthodontics and Operative Dentistry at the Christian-Albrechts University of Kiel in Germany. He is currently serving as Adjunct Professor at the Department of Prosthodontics at the University of Maryland in Baltimore, USA. Prof. Kern received his M.D. in 1991 from the University of Munich and then completed his dental degree in 1995 from the University of Freiberg. He then worked as a research assistant at the University of Freiberg before moving on to the University of Maryland, where he completed his PhD in 2005. Prof. Kern has also served as an editorial board member for several dental journals since 1998.

SPEAKER

Sandro Palla is a professor of Prosthodontics and Restorative Dentistry at the University of Zurich, Switzerland. He completed his dental degree in 1987 from the University of Freiberg, Germany and received his PhD in 1991 from the University of Munich, Germany. He then worked as a research assistant at the University of Freiberg before moving on to the University of Maryland, where he completed his PhD in 2005. Prof. Palla has also served as an editorial board member for several dental journals since 1998.

Digital registration of functional patterns

Condylar and mandibular movements have been studied extensively in the past. These investigations provided a good understanding for the motion of the mandible in space during non-functional and functional jaw movements. Recording of non-functional borders movements have been used to understand the mandibular envelope of motion and how this relates to functional jaw movements, but also to transfer these data into articulators in order to programme them for designing dental reconstructions. Of course, this procedure allows adjusting the occlusion only to border movements, well knowing that these differ from the functional ones. Furthermore, these recordings provided initially only the representation of the trajectory of single points, i.e., without correlation to anatomical structures. It is only since the combination of 3-D reconstructions of the skull anatomy with jaw motion recordings that it is possible to visualise the movement of the whole mandible and in particular to study the relationship of the condyle within the fossa and/or of the lower teeth in relation to the upper ones in function and parafunction. This approach already permitted the construction of articulators reproducing the movement of a real anatomical structure and controlling the occlusal surface during all jaw movements. Unfortunately, this development arrives when the number of complex reconstructions is decreasing in developed countries because of carries reduction. It is therefore questionable if there is a need to pursue developing such recording systems, and whether they will ever gain access to clinical practice.
PARALLEL SESSION 2
PREVENTION OF PROBLEMS

> Kostas TSIKLAKIS
Kostas Tsiklakis, DDS, MSc, PhD
Kostas Tsiklakis is Vice Dean and Professor and Chairman of the Department of Oral Diagnosis and Radiology, School of Dentistry, University of Athens, Greece.
He has received his DDS and PhD degrees from the University of Athens. He has obtained his MSc degree from the Loyola University of Chicago and he has attended a two year Postgraduate Programme in Oral Diagnosis and Radiology in the same University.
He has served as President of the Hellenic Society of Dentomaxillofacial Radiology and as a member of the European Union Committee for the Study of Radiation Protection in Dentistry and for the development of the “European Guidelines” for Radiation Protection in Dental Radiology. Currently he is participating in the SEDENTEXCT European Project for developing Evidenced Based guidelines on Dental Cone Beam CT.
He was elected Vice-President of the European Academy of Dentomaxillofacial Radiology for the years 2004-2006 and President for the years 2006-2008.
He has published more than 100 papers in Greek and international scientific magazines, he is co-author in two scientific books and has participated as a speaker in numerous Greek and International Congresses.

> Rafael BLANES
Dr. Rafael J. Blanes, DDS, Doc Med Dent.
Dr. R. J. Blanes graduated with Honours from Barcelona Dental School in 1994. He continued his studies at Baylor College of Dentistry (Dallas, U.S.A), where he completed a Master in Science and a Certificate in Periodontics in 1998. In 1998, he was accepted as an ITI Fellow at the Department of Fixed Prosthodontics of Geneva Dental School; where he completed a Doctorate in Dentistry in 2003. Dr. Blanes is a Diplomate of the American Board of Periodontology and has been an ITI Fellow since 2004. He is also a visiting Professor at the Department of Periodontics of the International University of Catalonia. His practice is limited to Microsurgical Periodontics and Dental Implants at Clinica Pronova, Palma de Mallorca, Spain.

Can we prevent biomechanical complications on implant dentistry?
Treatment planning with implant-supported prostheses is probably one of the most challenging disciplines in dentistry. Decisions on the design, type and number of implant-supported prosthetic restorations may affect the long-term outcome of the prosthetic complex. Despite high success and survival rates on implant therapy, technical and mechanical complications occur. Since the advent of implant rehabilitation, several biomechanical risk factors have been associated with implant complications. Nevertheless, a large part of the current knowledge about biomechanical risk factors on implant treatment is still based on clinical experience, treatment protocols extrapolated from conventional fixed dental prosthesis, mathematical models, in vitro investigations and low-scale clinical studies. More recently, controlled clinical prospective studies are giving more reliable guidance. The aim of this presentation is to review the scientific evidence associated with these risk factors, trying to guide the clinician on the best clinical decision, in order to avoid or reduce biomechanical complications on implant-supported prostheses in the fully and partially edentulous patient.

> Simone HEUBERER
Simone Heuberer graduated at the Bernhard-Gottlieb University Clinic of Dentistry of Vienna, Austria, in 2007. During her University studies she spent a year as an exchange student at the Medical University of Oviedo, Asturias, Spain. Since 2007 she has worked as Senior Staff at the Division of Oral Surgery of the University of Vienna. In addition she started her PhD studies in 2010.
Her clinical work includes the education of the students and her specialisation is oral surgery, including implant dentistry. Dr. Heuberer has focused her research on tooth agenesis, especially on the treatment of oligodontia in the growing jaw. Her recent publication presents a stable interim solution for children with severe oligodontia until their cessation of growth. Recently, the Vienna University Clinic of Dentistry has registered more than 500 patients with tooth agenesis. Dr. Heuberer has been involved in various studies on this topic with the focus on dental implant treatment. She serves on the review board for the International Journal of Stomatology and Occlusion Medicine.

Implant treatment of the growing – malpractice or challenge?
A number of additional factors have to be considered for the implant treatment in adolescents versus that in adult patients. Ongoing craniofacial growth, number of missing teeth and underdeveloped alveolar process are critical factors for establishing the treatment plan. Implant treatment of the growing patients at the Vienna Clinic of Dentistry is based on the experience of up to 25 years. Several aspects should be considered in selecting the appropriate therapy ensuring satisfying outcome. When is the cessation of growth? Does the general standard remain the state-of-the art? What are the consequences of a non-treated „hypodontal” jaw, advertsing the stomatognathic system and the postponed oral rehabilitation with dental implants? What are the pros and cons of early implant placement? Which alternative therapies are available? Is the treatment of single tooth gaps (e.g. caused by trauma) different to the treatment of hypodontia? Which parameters affect and limit treatment? This lecture will concentrate on these questions accompanied by examples of treatment failure and success.
these patients may outweigh any risks. However, proper informed assessment, including the medical condition, quality of life and important that the nature of the disorder itself, and individualised disorders. The degree of disease-control may be far more there are few if any randomised controlled trials (RCTs) in healthy patients, their appropriateness in medically compromised treatment, but the justification for these statements is often delivery provided by dental practitioners must take into account, always and foremost, the patient health. Careful patient evaluation is critical. Patients’ physicians may not fully appreciate the physiologic ramifications of the complex and sometimes lengthy appointments required in performing implant procedures. The final decisions regarding the prescription of therapy rest with the dentists. Through increased knowledge of the pathophysiology of diabetes mellitus, disorders of bone metabolism, radiotherapy, and chemotherapy, improved patient selection and perioperative management can benefit the dental implant team. The literature contains numerous observations on the significance of systemic disorders as contraindications to dental endosseous implant treatment, but the justification for these statements is often apparently allegorical. Although implants are increasingly used in healthy patients, their appropriateness in medically compromised patients is less equivocal. Perhaps surprisingly, the evidence of their efficacy in these groups of patients is quite sparse. Indeed, there are few if any randomised controlled trials (RCTs) in this field. Furthermore, any health risks from the placement of implants are unclear. We review the current evidence for the risks associated with endosseous implants in a range of systemic disorders. The degree of disease-control may be far more important than the nature of the disorder itself, and individualised assessment, including the medical condition, quality of life and life expectancy is indicated. The benefits of implants to many of these patients may outweigh any risks. However, proper informed consent is mandatory.

Comparison of two bone substitutes to treat dehiscences along implants The unavoidable resorption of the alveolar crest after tooth extraction implies the augmentation of the crest before implant installation (2 stage) or the use of a bone substitute to cover bone dehiscences after implant insertion (1 stage). Previous studies demonstrated that bouncy bone derived filling material is able to cover dehiscences along implants. A new fully synthetic bone substitute has been developed composed of hydroxyapatite and beta-tricalcium phosphate. The results of a split-mouth randomised prospective study, comparing the capacity of both bone substitutes to treat dehiscences, will be presented. Fourteen patients received four to six implants to support an overdenture. Both augmented sites and no implant failure was observed. Significant differences. The clinical parameters after one year of loading. Both bone substitutes showed a comparable capacity to cover the dehiscence, with no significant differences. The clinical parameters after one year of loading showed a healthy peri-implant condition at both augmented sites and no implant failure was observed. SBC can be used successfully to cover dehiscences along implants. Besides a comparison with previous results, some important clinical steps in guided tissue regeneration will be highlighted, and the rationale behind guided tissue regeneration will be summarised.
Short Oral communication 1

> Luca CORDARO

Dr. Luca Cordaro MD, DDS, Ph.D. Nominated Head of the Department of Periodontology and Implant Dentistry at the Eastman Dental Hospital in Rome in 2002 he is currently Head of the Department of Periodontology and Prosthodontics in the same institution.

Dr. Cordaro is author or co-author of more than 70 papers published in Italian or international journals and several contributions in text books in implant dentistry. He has lectured extensively in national and international congresses in Europe, Asia, North and South America. He sits on the editorial bord of COIR and is reviewer for J.Perio, J. Clin. Periodontal, Eur. J. Aesthetic Dentistry.

In 2007 he won the H. Goldman prize of the Italian Society of Periodontology. Currently he sits on the board of the EAO, is Chairman of the Italian Section of the ITI and is chairman of the ITI Study Club Task Force.

His professional interests are Periodontology, Implantology and Oral surgery with a special interest regarding the reconstructive treatment of alveolar atrophies.

> Felix GULJÉ

A randomised comparison of 6 mm long with 11 mm long implants: 1-year follow-up

> Christian MAKARY

Peak insertion torque correlated to clinically and histologically evaluated bone density: a clinical study

> Luigi CANULLO

Effect of wider implant/abutment mismatching: a histological study in dogs

> Jan COSYN

An analysis of the decision-making process for single implant treatment in general practice

> Tomas LINKEVICIUS

Influence of cementation margin position on amount of undetected cement. A prospective clinical study.

> Markus SPERLICH

Soft tissue response towards alumina-toughened zirconia oral implants: a 2-year follow-up
> **Ailsa NICOL**

Ailsa is a Specialist in Restorative Dentistry, Prosthodontics and Periodontics. She divides her time between her Specialist Referral Practice and National Health Service Hospital Consultant position in the North East of England, UK. Ailsa completed her Specialist training at Glasgow Dental Hospital and School in conjunction with her role as Clinical Lecturer in Restorative Dentistry at the University of Glasgow; a position she held for ten years. She obtained her PhD during this time and continues to teach on the Masters programme at the University of Glasgow, Scotland. She has been a founder member of the Junior Committee of the EAO, a position she relinquishes during this congress.

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> **Mario ROCUZZO**

Treatment of peri-implantitis lesions by means of chemical decontamination and bovine-derived xenograft on different implant surfaces.

> **Vincent GOLETTI**

Impact of dental implants on cranial mobility: an osteopathic point of view.

> **Dominic ALBRECHT**

Impact of implant-retained overdentures on DHRQoL: immediate vs delayed loading.

> **Doris BURTSCHER**

A radiographic evaluation of marginal bone levels of two different implant systems up to 7 years in function.

> **Ryan SB LEE**

The effect of experimental diabetes and metabolic control on de novo bone formation under SLA or SLActive domes following the GBR principle.
Plenary Session 3
TREATMENT PLANNING WITH EXPERTS

> Ronald JUNG
PO Dr. Ronald Jung, Ph
Associate Professor & Vice
1995  Dental Degree (DMD) from the University of Zurich, Switzerland, Centre 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. 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, Centre 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, Centre for Dental and Oral Medicine (Director: Prof. Dr. Ch. Hämmerle)
since 2005  Vice Chairman of the Department of Fixed and Removable Prosthodontics and Dental Material Sciences, University of Zurich, Centre for Dental and Oral Medicine (Director: Prof. Dr. Ch. Hämmerle)
2006  Visiting associate professor at the Department of Periodontics University of Texas Health Science Centre at San Antonio, USA (Director: Prof. Dr. D. Cochran)
2008  „Privatdozent“ (Associate Professor) of the University of Zurich after finalising the „Habilitation“ (venia legendi) in dental medicine
2011  PhD degree of the University of Amsterdam, ACTA dental school, The Netherlands

> Georg MAILATH-POKORNY
1979  MD degree, Medical School, University of Vienna. Specialty board examination in dentistry (DDS)
1979-1981  Residency at the KA Rudolfsspital hospital, Vienna
1981-1985  Fellowship, AKH (General Hospital) Vienna, Maxillofacial unit (Head: Dr. S. Wunderer)
1985-1987  Training at the Medical University of Vienna, Dental Clinic, Head: Dr. K. Keresztesi
1987  Graduation Special Dentistry and Oral and Maxillofacial Surgery
1987  Fellowship at the University Clinic, Vienna (Head: Univ.-Prof. Dr. Georg Watzek), Department of Oral surgery
1988  Opening of own private office, Vienna.
1991  PhD degree oral and maxillofacial medicine, in particular oral surgery.
1992  Deputy Head of the Department of Oral Surgery at the Dental School of the Medical University of Vienna (Head Univ. Prof. Dr. Georg Watzek)
1998  Professorship of the University Vienna, specialising in oral surgery
2003  President of the Austrian society for oral surgery and Implantology
2004  Opening of the “Academy of oral Implantology” in Vienna
2005  Representing Prof. Watzek as head of the postgraduate training for oral Implantology at the medical university of Vienna
2006  Board member of the EAO
Author and co-author of 5 Textbooks and over 100 national and international Publications on oral surgery.
Based on the prosthetic rehabilitation of patients, contemporary treatment planning aspects are presented, including: handling of periodontal disease, tissue stability over time, and clinical evaluation of dental implant therapies. The laboratory receives funding through NIH and by industry collaboration. Their research findings have been presented in over 90 publications and in more than 250 national and international presentations. These efforts integrate basic and clinical research to improve patient care.

Computer technology applications

Treatment planning for dental implant therapy involves the accumulation of information (data), analysis of the information to identify problems and opportunities and creation of unique solutions for patients. The human element of clinical therapy requires that conversations occur parallel with whatever algorithm is employed to solve the anticipated problem. The digital compilation of clinical information permits logical discussion of treatment for patients. Placement of the proposed prosthesis as the central aspect of the digital dataset offers three main advantages: 1) tissue limitations can be recognised in relationship to ideal prosthetic goals, 2) implants may be ideally located to meet aesthetic and functional needs, and most importantly, 3) the concurrent visualisation of the proposed prosthesis, the underlying tissues and planned implant locations permits rational and iterative discussions to occur between the prosthodontist, surgeon, technician and the patient. This presentation will illustrate a Prosthodontic perspective of comprehensive dental implant therapy in the digital environment.

Ideal fixed prosthodontic treatment from a biological point of view

Although treatment focus is more and more based on aesthetic demands of the patient and of dental society, prosthodontics should be more than just placing good looking (in)direct restorations on natural teeth or implants. Despite enormous efforts to fulfill these important aesthetic requirements, biology and function should not be ignored. Dental restorations should not be seen as finished products, but should be seen as treatment outcomes that are expected to last for a lifetime. The key element for success of therapy of either periodontitis or peri-implantitis, or moderate and severe peri-implantitis, may signify that in most cases the disease evolves gradually from mucositis to peri-implantitis.

Microbiological testing

Peri-implant disease may be viewed as a mixed anaerobic infection. In most cases the composition of the flora is similar to the subgingival flora of chronic periodontitis that is dominated by Gram-negative bacteria. Occasionally, however, peri-implant infections may be associated with a microbiota that is characterised by high numbers of peptostreptococci or staphylococci. The lack of consistent microbiological differences between mucositis and peri-implantitis, or moderate and severe peri-implantitis, may signify that in most cases the disease evolves gradually from mucositis to peri-implantitis.

It has been recommended that antibiotics should be prescribed based on a microbiological diagnosis. However, it has not been proven that the selective suppression of specific members of the subgingival microbial complex is the key element for success of therapy of either periodontitis or peri-implantitis. Given the large diversity of the microbiota and multiple synergistic and antagonistic interactions among the members of the flora, the concept of specifically targeting particular pathogens may be illustrative. Data from recent trials illustrate beneficial effects of adjunctive amoxicillin plus metronidazole independent of microbiological status and clinical diagnosis for both conditions.
Plenary Session 3

TREATMENT PLANNING WITH EXPERTS

Gabor TEPPER
MD DMD PhD
Born 1957, Doctor of Medicine and Dental Medicine
University Professor, specialised in Implant Surgery, Implant Prosthodontics, and Oral Surgery
Responsible for postgraduate education at the Department of Oral Surgery of the Vienna Dental School Postgraduate Programmes at UCLA / California Harvard Postgraduate Certificate Board member of the OSG (Austrian Society of Oral Surgery and Implantology)
Active at the University Dental School of the Medical University of Vienna and in private practice in Vienna / Austria
Large number of national and international presentations about implantology, many scientific articles and book chapters published, over 12 national and international prizes and awards.

Indications for implant treatment from a patient’s point of view
Little is known about the level of information on implant dentistry in the public. A representative opinion poll on dental implants in the Austrian population was published in 2003 (Clinical Oral Implants Research 14:621-642). Seven years later in 2010 the poll was rerun to assess the up-to-date information level and evaluate recent progress and trends in patients’ mindset on dental implants.

One thousand representatively selected adults were presented with a total of 35 questionnaire items regarding the level and the sources of information about dental implants, the subjective and objective need for patient information, acceptance and subjectively perceived costs of dental implant treatment as well as patient satisfaction with implant-supported rehabilitation.

This representative survey reveals that dentists are still the main source of patient information, but throws doubt on the quality of their public relations work. Dentists must improve communication strategies to provide their patients with comprehensible, legally tenable information on dental implants to bridge information gaps in the future and to increase patient acceptance of dental implants as a treatment modality.

These 2 studies have been published 2011:
1. Level of information, sources of information and need for patient information.
2. Progress and trends in patients’ mindset on dental implants.

Kostas TSIKLAKIS
Kostas. Tsiklakis, DDS, MSc, PhD
Kostas Tsiklakis is Vice Dean and Professor and Chairman of the Department of Oral Diagnosis and Radiology, School of Dentistry, University of Athens, Greece.
He has received his DDS and PhD degrees from the University of Athens.
He has obtained his MSc degree from the Loyola University of Chicago and he has attended a two year Postgraduate Programme in Oral Diagnosis and Radiology in the same University.
He has served as President of the Hellenic Society of Dentomaxillofacial Radiology and as a member of the European Union Committee for the Study of Radiation Protection in Dentistry and for the development of the “European Guidelines” for Radiation Protection in Dental Radiology. Currently he is participating in the SEDENTEXCT European Project for developing Evidenced Based guidelines on Dental Cone Beam CT.
He was elected Vice-President of the European Academy of Dentomaxillofacial Radiology for the years 2004-2006 and President for the years 2006-2008.
He has published more than 100 papers in Greek and international scientific magazines, he is co-author in two scientific books and has participated as a speaker in numerous Greek and International Congresses.

Updated guidelines on imaging in implantology
Cone Beam CT (CBCT) is the most recent development in the field of Dentomaxillofacial Radiology and it has been introduced as an alternative imaging technology for acquiring three dimensional information. The rapid expansions of CBCT technology led the European Union to approve a collaborative project under the acronym SEDENTEXCT (2008-2011). One of the objectives of the SEDENTEXCT project was to develop evidence-based guidelines dealing with justification, optimisation and referral criteria for users of CBCT.

In investigating an implant site the surgeon requires information of bone volume and quality, topography and the relationship to important anatomical structures. The consensus guidelines on imaging for implant dentistry developed in 2002 by the EAO, did not include any comment on CBCT, but they described criteria for the use of cross sectional imaging with the use of conventional CT.

Since then there has been a substantial literature related to the use of CBCT in dental implantology. Several studies suggest that CBCT has sufficient geometric accuracy for linear measurements in implant dentistry and other studies focused on the ability of CBCT to image neurovascular structures on the jaws. Finally there is evidence that CBCT is an effective means of providing data for the manufacture of surgical guides in implant dentistry.

The Guideline Panel of the SEDENTEXCT project made the following recommendations: a) CBCT is indicated for cross-sectional imaging prior to implant placement as an alternative to existing techniques where the radiation dose is shown to be lower; b) For cross-sectional imaging the advantage of CBCT with adjustable fields of view, compared with conventional CT, becomes greater where the region of interest is a localised part of the jaws, as a similar field of view can be used.
FRIDAY AFTERNOON

Friday, October 14, 2011

13:45-16:30

Short Oral communication 2

> Robert HAAS
MD, DDS
1983 Graduation MD.
1992 Graduation DDS with distinction
1992 Fellowship at the Department of Oral Surgery Dental School University of Vienna (Head Univ. Prof. Dr. Georg Watzek).
1998 PhD. in Dentistry at the University Clinic, Vienna.
1999 Graduation Doctor med. Dent.
2000 Associated Professor at the Department of Oral Surgery Dental School University of Vienna
2004 Opening of the Implant academy, Vienna.
2005 President of the Austrian Society for Oral Surgery and Implantology.
2010 Award of University Professor
Presentations at several national and international Congresses.
Secretary at national and international Congresses.
Several awards for scientific research.
Participant on several training courses.
More than 60 scientific papers, contributions to medical books and publications.

> Georg MAILATH-POKORNY
1979 MD degree, Medical School, University of Vienna.
1979-1981 Residency at the KA Rudolfsspital hospital, Vienna.
1981-1985 Fellowship, AKH (General Hospital) Vienna, Maxillofacial unit (Head: Dr. S. Wunderer)
1985-1987 Training at the Medical University of Vienna, Dental Clinic, Head: Dr. K. Keresztesi
1987 Graduation Special Dentistry and Oral and Maxillofacial Surgery
1987 Fellowship at the University Clinic, Vienna (Head: Univ. Prof. Dr. Georg Watzek), Department of Oral surgery
1988 Opening of own private office, Vienna.
1991 PhD degree oral and maxillofacial medicine, in particular oral surgery.
1992 Deputy Head of the Department of Oral Surgery at the Dental School of the Medical University of Vienna.
1998 Professorship of the University Vienna, specialising in oral surgery
2003 President of the Austrian society for oral surgery and Implantology
2004 Opening of the “Academy of oral Implantology” in Vienna
2005 Representing Prof. Watzek as head of the postgraduate training for oral Implantology at the medical university of Vienna
2006 Board member of the EAO
Author and co-author of 5 Textbooks and over 100 national and international Publications on oral surgery.

> Taek-Ka KWON
Various evaluation methods for dental implant stability: how are they related to each other?

> Jan COSYN
Four modalities of single implant treatment in the anterior maxilla: a clinical, radiographic and aesthetic evaluation

> Giuseppe LIZIO
Block versus particulate bone grafting for ridge augmentation: a RCT

> Frank SCHWARZ
Staged guided bone regeneration and osseointegration: Part 1: augmentation using bone graft substitutes and autogenous bone

> Sotirios KOTSOVILIS
Dental implant loss and peri-implant diseases in diabetic patients

> Ulrike KUCH
Short-term teriparatide delivery and osseointegration: a clinical feasibility study

> Gerardo PELLEGRINO
Low implant success in fibula-free flaps: a long-term retrospective study

> Laurens DEN HARTOG
Patient satisfaction with a single-tooth implant in the aesthetic zone

> Giuseppe LIZIO
Block versus particulate bone grafting for ridge augmentation: a RCT

> Fahim ATAMNI
Flapless and graftless transcrestal sinus floor elevation-intrasinusal bone formation

PRESENTERS
Parallel Session 3
LONG-TERM PREDICTABILITY

> Nikolaos KATSIKERIS
Dr. Nick Katsikeris received his Dental Degree from the Dental School of the University of Athens in 1976. In 1984 he received his Doctor of Dentistry degree (PhD equivalent) from the same University. He was trained in Oral and Maxillofacial Surgery at the Faculty of Dentistry, University of Toronto receiving in 1986 the Diploma in Oral and Maxillofacial Surgery. Immediately after his certification he was appointed Assistant Professor in the Department of Oral and Maxillofacial of the same Faculty where he taught until 1993. In 1991 he received the "Master Teacher Award" for this Faculty. Today he is Head of the Department of Oral and Maxillofacial Surgery at the "G.Gennimatas" General Hospital of Athens. He has served as President of the Hellenic Society for Osseointegration in the past.

His main interests are Orthognathic Surgery, Reconstructive Surgery, Implant Surgery as well as the use of the "new technologies" in clinical practice.

> Hugo DE BRUYN
Hugo De Bruyn graduated as dentist in 1983 at the University of Leuven Belgium. He got a PhD at the State University Groningen in the Netherlands and a Master Degree in periodontology at the Lund University Sweden in 1983. Since 1987 Docent at the Malmo University Sweden. He worked in his own referral centre for periodontology and implantology in Brussels for more than 15 years before returning to academia in 2004. Currently professor and chairman of the department of periodontology & oral implantology at the University of Ghent Belgium responsible for undergraduate and postgraduate dental education in periodontology and oral implantology. Course director of the postgraduate oral implant programme and the postgraduate specialist programme periodontology Visiting professor at department of prosthodontics at Malmo University Sweden. Clinical research of his group focuses on factors related to implant success, effect of smoking, early and immediate implant loading in completely and partially edentulous patients in straight-forward as well as in compromised bone conditions, biofilm formation and simplified periodontal treatment protocols. He has research projects using various implant systems. He has given more than 500 national and international lectures/courses in the field of implantology/periodontology and has published several national and international articles.

Immediate implant placement versus delayed implant placement is defined as the implant placement in conjunction with tooth extraction and offers several benefits for the patient and the clinician. It reduces the treatment time by several months since implant osseointegration coincides with soft tissue healing after extraction. Today immediate implantation combined with immediate provisionalisation further enhances socket and soft tissue preservation, cost-benefits and patient comfort. The first generation dental implants resulted in unacceptably high failure rates. The introduction of rougher surfaces, however, has improved survival in such a way that comparable results to implants placed in a delayed manner have been obtained. A brief overview of evidence-based literature will be given pointing to the prerequisites needed for an optimal clinical implant survival. On the other hand, implant placement in the aesthetic zone is more critical and more demanding. It is imperative that after implant placement the hard and soft tissues are in perfect harmony with the neighbouring natural teeth. The process of healing and tissue preservation seems to benefit from immediate provisionalisation but is affected by the patient’s biotype. The clinical results of a prospective clinical trial will be presented whereby single implants were placed in the anterior maxilla in either healed bone or in extraction sockets. The discussion will focus on bone and soft tissue healing and patient-centred aesthetic outcome. Clinical guidelines for this treatment option will be given regarding the surgical as well as prosthetic approach in order to obtain predictability.

> Matteo CHIAPASCO
Graduated in Medicine and specialised in maxillofacial surgery at the University of Milan, Italy.

Head Unit of Oral Surgery - Department of Medicine, Surgery and Dentistry - University of Milan – Italy

Professor of Oral Surgery.
Director of the Master in Oral Surgery and Implant Dentistry of Unit of Oral Surgery, Department of Medicine, Surgery and Dentistry - University of Milano - Italy

Faculty Member Dental School – University of Milan, Italy.

Faculty Member of Specialty in Oral Surgery - University of Milan - Italy.

Faculty member of Specialty in Maxillofacial Surgery - University of Milano – Italy.

Visiting Professor, Loma Linda University, Los Angeles, California (USA)

Visiting Professor University of Vienna (Austria) (Head: Prof. Hannes Sailer, MD)

Visiting Professor University of Paris V (France) (Head: Prof. JF Gaudy)

MEMBERSHIPS
Member of the European Board of Oral and Maxillo-Facial Surgeons
Active Member EACD (Former Past president Italian Section)
Former Past President Italian Society of Oral Surgery.
Active member of the Italian Society of Osseointegration

MEMBERSHIPS OF EDITORIAL BOARDS 2007-2009
Referee for Clinical Oral Implants Research

Referee for International Journal of Oral and Maxillofacial Surgery

Referee for the "Cochrane Collaboration"

Referee of the European Journal of Oral Implantology

He is the author or co-author of approximately 40 papers published in peer-reviewed international journals and approximately 100 papers published in Italian journals. He is the author or co-author of 10 textbooks related to oral and maxillofacial surgery, some of them published in English and/ or translated in several other languages (Italian, Spanish, Portuguese).

Long-term outcomes of vertical augmentation procedures

Vertical defects of the partially or totally edentulous ridges may render implant placement impossible or inadequate from a functional and aesthetic point of view, due to the lack of bone, the proximity of important anatomical structures not to be violated, and the unfavorable intermaxillary relationships. Several bone augmentation procedures, aimed to recreate adequate bone volume to harbour implants of adequate dimensions placed in the proper, prosthodontically driven position, have been proposed over the years. The aim of this lecture is to present updated data on the outcome of different augmentation procedures including autogenous bone grafts, allografts, SBR, and distraction ostegenesis based on the personal experience of the author and on the international literature. Advantages and disadvantages of the different procedures, including postoperative morbidity, as well as survival and success rates of implants placed in the reconstructed areas will be presented.
> Marc QUIRYINEN

Professor M. Quirynen graduated in 1980 as dentist at the Catholic University of Leuven and finished in 1984 his training in periodontology at the department of Periodontology (Catholic University Leuven). In 1988 he presented his Ph.D. entitled: “Anatomical and inflammatory factors influence bacterial plaque growth and retention in man”. In 1990 he was appointed professor at the Faculty of medicine of the Catholic University of Leuven to teach periodontology and anatomy. His research deals mainly with oral microbiology, with special attention to the influence of surface characteristics on bacterial adhesion and the effect of antiseptics. He has published over 200 full papers in international peer-reviewed journals. He is a member of the editorial board of the Journal of Clinical Periodontology (associate editor), Clinical Oral Implants Research, Periodontal Practice Today and Parodontologie.

> Jocelyne FEINE

Jocelyne Feine is Professor in the Oral Health and Society Research Unit at the Faculty of Dentistry and Associate Member in the Departments of Epidemiology & Biostatistics and Oncology in the Faculty of Medicine, McGill University, Montreal, Quebec, Canada. She is a recognised world leader in the assessment of therapies for chronic orofacial conditions, particularly pain and tooth loss. Her national and international studies emphasise the quality of life and patient-based outcomes most relevant for palliative therapeutic goals. From randomised clinical trials to technology assessment, knowledge transfer and healthcare management, her work covers the continuum of discovery to action. Professor Feine has published widely in high quality research and clinical journals and has presented her work at university and professional conferences worldwide.

Fixed versus removable implant rehabilitation

The choice of a particular prosthesis for an edentulous patient is dependent on many factors. When the clinical condition is deemed acceptable for a broad choice, which type of implant prosthesis will most satisfy the patient?

In this presentation, Dr. Feine will discuss the results of studies in which edentulous patients rated their satisfaction and preference for fixed and removable mandibular prostheses. This information will clarify what aspects of intraoral prostheses patients consider to be important and the reasons that they may choose or reject implant therapy.

> Daniel THOMA

Dr. med. dent.

Daniel Thoma is an Assistant Professor at the Clinic for Fixed and Removable Prosthodontics and Dental Material Sciences, University of Zurich, Switzerland. He graduated in 2000 at the University of Basel, Switzerland and was trained in implant dentistry and prosthodontics at the Clinic for Fixed and Removable Prosthodontics and Dental Material Sciences, University of Zurich, Switzerland. Dr. Thoma was the recipient of an ITI scholarship and spent 1 year at the Department of Periodontics, University of Texas, Health Science Centre, San Antonio, USA. His focus is on the comprehensive treatment of complex, partially edentulous patients applying all available options of reconstructive dentistry including dental implants. His main scientific interest is related to hard and soft tissue regeneration with and without the addition of biologic mediators. He has published in numerous scientific and clinical articles in these fields. Dr. Thoma is a Fellow of the International Team of Implantology (ITI).

Sinus augmentations versus short implants

Dental implants represent a predictable treatment option for replacing missing teeth at single and multiple tooth gaps. However, in daily practice, the clinician is often confronted with bony situations that do not allow placing implants in a prosthetically ideal position without the need for a concomitant bone augmentation procedure. This may be due to a lack of horizontal or vertical bone height. For the latter, in the case of the maxilla, a sinus elevation procedure is the treatment of choice. Even though this kind of treatment shows a high predictability and high implant survival rates, sinus elevation procedures are still associated with an increased risk for implant failures and an increased patient morbidity. In order to overcome these shortcomings, the use of short implants has been proposed. Historically, clinical studies reported on lower survival rates for short implants. However, based on recent scientific evidence, short implants with a rough surface appear to have similar survival rates as standard length implants. The use of short implants in the maxilla may therefore be a valid treatment option to avoid major surgeries. In addition, this treatment may save time, reduce costs and eliminate possible complications associated with grafting procedures.
Clinical research competition

> David HARRIS
Professor David Harris is a specialist Oral Surgeon in practice at the Blackrock Clinic Dublin, Ireland. He undertakes his teaching, research and academic activities at School of Dental Science, Trinity College Dublin where he holds an appointment as a Senior Lecturer. He holds an attachment as a visiting Professor to the Medical University of Warsaw. A founder member and past president of the EAO he is currently a member of Council and an examiner for the EAO certification programme in Implant Dentistry. He is co-chair for the updated EAO Radiological Guidelines on Diagnostic Imaging. He was chairman of the group that produced the original guidelines that were published in 2002. He has collaborated closely with Prof. P.I. Brånemark on the introduction of osseointegrated implants into dental practice. He has lectured and provided courses worldwide and published on various implant topics as well as contributing chapters to three international textbooks. He was a board member of Dental Protection Limited for seven years. This is the largest dental indemnity organisation worldwide and he continues with them as an advisor. His current main areas of interest are in the restoration of grossly resorbed maxilla and mandible with bone grafts and Zygomatic implants and in measurement of quality of life improvements from implant therapy.

> Norbert ENKLING
060
The non-influence of platform-switching on peri-implant crestal bone level alterations

> Marco AGLIETTA
061
Reversibility of experimental peri-implant mucositis compared with experimental gingivitis in man

> Chun Jung CHEN
062
Biological and technical complications with implant fixed dental prostheses for edentulous patients: a systematic review

> Yvonne DE WAAL
063
Implant surface decontamination using chlorhexidine during surgical treatment of peri-implantitis
> Alberto SICILIA FELECHOSA
Born in El Entrego (Asturias) in 1959, graduated like Lawyer in Medicine and Surgery by the University of Oviedo in 1982.
Professional association membership number 4915 in the Official School of Doctors of Asturias.
Professional association membership number: 455 in the Official School of Estomatology and Odontology of Asturias.
Medicine doctor and Surgery with Extraordinary Prize in 1986. Specialist in Estomatology by the University of Oviedo and Postgrado in Periodonty by the Complutensian University of Madrid.
Graduated in Social Periodonty by the University of Illinois (Chicago the USA), and Graduated in Statistic applied to the biomedical investigation by the Independent University of Barcelona.
Professor of Periodonty, University of Oviedo. Co-Director of the Masters in Surgery Periodontal and Implantology, University of Oviedo.

> Fabio ROSSI
Use of short implants in single tooth replacement (follow-up 4-years)

> Georgia TRIMPOU
Randomised-controlled clinical trial for prefabricated, anatomical shaped all-ceramic implant components in the posterior region

> Liran LEVIN
Periodontal disease and long-term dental implant survival

> Maria BÄCHLE-HAAS
Osseointegration of zirconia oral implants: results from retrieved ceramic implants
Papilla preservation techniques: mastering periodontal regeneration of intrabony defects

This lecture will focus on the "state of the art" of periodontal regeneration of intrabony defects with papilla preservation techniques. It is a clinically-oriented, scientifically sound presentation with the objective of perfecting clinical outcomes of periodontal regenerative therapy. Regeneration is aimed at reducing pockets and limiting gingival recession through the reconstruction of the lost periodontal support.

Three key issues greatly impact the clinical success of periodontal regenerative therapy. Regeneration of intrabony defects is aimed at reducing pockets and limiting gingival recession outcomes of periodontal regenerative therapy. Regeneration of intrabony defects with papilla preservation is not only defined by osseointegration of the implant and supported crowns is still considered a technique sensitive task for the surgical-restorative team.

Implant-retained restorations have become a routine treatment option with high reliability and excellent clinical success rates. Restoring anterior teeth with implant supported crowns is still considered a technique sensitive task for the surgical-restorative team.

When restoring anterior implants, clinical success is not only defined by osseointegration of the implant and rehabilitation of proper function, but by a harmonious and natural blending of the restoration with the surrounding tissues and dentition. The maintenance of an existing or recreated gingival architecture around dental implants can be demanding. Provisional restorations may help to shape, prepare, and stabilize the peri-implant soft tissues during the healing phase in immediate or delayed loading cases or after second-stage surgery. In addition, provisional restorations allow evaluation of aesthetic parameters prior to finalising treatment.

The key objective of the presentation is to discuss advantages and disadvantages of various treatment protocols when provisional restorations are applied. While the majority of scientific evidence is limited to technique articles and case series, currently applied and future assessment methodologies for long-term quantitative follow-up studies are discussed with a special emphasis on measurement of 3-dimensional tissue alterations.
> Franck SCHWARZ

Date of birth: July 20, 1972
Nationality: German
1993 - 1998: Dental School, University of Saarland, Homburg, Germany;
February 2001 - November 2003: Dr. med. dent., Postgraduate Degree Oral Surgery;
January 1999 - October 2000: Department of Periodontology and Operative Dentistry (Prof. Dr. E. Reich) University of Saarland, Homburg, Germany;
November 2000 - March 2002: Research Associate Department of Oral and Maxillofacial Surgery (Prof. Dr. M. Ehrenfeld) Ludwig Maximilians University, München, Germany;
April 2002 - 2006: Assistant Professor Department of Oral Surgery Heinrich Heine University, Düsseldorf, Germany (Prof. Dr. J. Becker), since 2010: Clinical Professor - apl.
Main research activities: Guided Bone Regeneration, Growth Factors, Implant Surfaces, Treatment of Peri-implant Diseases

Editorial Board Member:
Journal of Clinical Periodontology
Clinical Oral Implants Research
André Schroeder Research Prize 2007

> Joseph KAN

Joseph Kan, DDS, MS
Dr. Kan completed Prosthodontics and Implant Surgery from Loma Linda University, California. He is a Professor and maintains a private practice.

Impact of buccal bone on immediate implant aesthetics
Achieving anterior implant aesthetics is a challenging and demanding procedure. To create implant restorations with harmonious gingival contour that emulate nature is a fusion of science and art. Understanding the biologic and physiologic limitations of the soft and hard tissue will facilitate predictability in simple to complex aesthetic situations.

This lecture will focus on current implant treatment philosophies and methodologies for immediate tooth replacement in the aesthetic zone. Emphasis will be placed on the impact of buccal bone for optimal anterior implant aesthetics.

> Henny J. MEIJER

Henny Meijer became a dentist in 1988 after graduating at the Dental School from the University Medical Centre Groningen, the Netherlands. He finished his thesis, titled “A biomechanical study on bone around dental implants in an edentulous mandible” at the University of Utrecht in 1992. From 1992-2000 he was full-time as a prosthodontist at the Department of Oral-Maxillofacial Surgery and Oral-Maxillofacial Prosthetics at the University Medical Centre Groningen. From 2001-2006 he worked part-time as an associate professor at the Dental School in Groningen. Since 2006 he has been professor in Implant Prosthodontics. Henny Meijer works full-time in the field of dental implants regarding treatment of patients, research and education. From 1999 to 2009 he was a member of the board of the Dutch Society of Oral Implantology and since 2010 he is has been an honorary member of this society.

Does biology influence the aesthetic outcome?
Dental implants are more and more applied in the aesthetic zone, therefore, it is essential to be able to establish a predictable aesthetic result. According to the professionals’ opinion, dental implant crowns in the aesthetic zone are successful if a harmonious anatomical outcome has been established with the right dimensions of white and pink structures. On the other hand, regeneration of a soft tissue contour with intact interproximal papillae and a gingival outline that is harmonious with the gingival silhouette of the adjacent teeth appears to be one of the major challenges. A number of biological factors is said to be of importance to reach a satisfactory result. Enough original bone in the implant region, non-compromised bone height at neighbouring teeth and a thick biotype are considered as favourable. Extra bone augmentations in the aesthetic region, reduced bone height at neighbouring teeth and a thin biotype are considered as negative in trying to create a satisfactory result. Large prospective studies on implant outcome in the aesthetic region have become available recently at the University Medical Centre in Groningen, the Netherlands. By combining results from these studies one could get a better insight in the impact of each of the mentioned biologic factors on aesthetic outcome. Perhaps one of them dominates, but possibly other factors, not that obvious, are more important.
Parallel Session 4
CONTROVERSIAL ISSUES

> Björn KLINGE

Björn Klinge, DDS, Odont Dr., Professor and Chairman Division of Periodontology, Former Dean of Faculty of Odontology and Head of Department Dental Medicine, Karolinska Institutet. He is Guest Professor of Periodontology at Malmö University. Björn Klinge received his DDS from Lund University, Sweden, in 1977 and earned his doctorate in Odontology in 1984, also from Lund University. In 1988 he became recognised specialist in Periodontology by the Swedish National board of health and welfare. In 1994 Björn Klinge was appointed Professor and Chair of Periodontology at the Karolinska Institute in Stockholm. Soon after his arrival he was appointed Dean and he was responsible for extensive development of the Dental faculty, including education, research and clinical activities. The major focus in his research is related to periodontal regeneration, tissue-integrated implants and the relation between oral infections and systemic health. He is scientific editor for the Journal of the Swedish Dental Association and he is editorial board member for several scientific journals. Dr. Klinge is a board member of the EAO and President of the Swedish Society of Periodontology and Dental Implants.

> Ingemar ABRAHAMSSON

Dr. Ingemar Abrahamsson graduated (DDS) 1977 in Göteborg. He received his certificate as specialist in Periodontics in 1998, the degree of Odont. Dr. (PhD) in 1999 and the “Docent” degree in 2003 from the Department of Periodontology, University of Göteborg, where he has served since 1992. Presently, Dr. Abrahamsson serves as Associate Professor at the Department of Periodontology, The Sahlgrenska Academy at University of Göteborg. He also serves as Clinical Instructor in postgraduate training at the Clinic of Periodontics, Göteborg, and as vice director of the Laboratory for Experimental Biomedicine in Göteborg. Dr. Abrahamsson is member of the Editorial Board for Clinical Oral Implants Research and serves as referee for other international scientific journals. He has produced about 30 scientific publications within the field of dental implants in different peer-reviewed journals. He is today actively involved in research on hard and soft tissue integration to dental implants as well as in tissue reactions at sites with peri-implantitis.

The biological width – a myth revised

The dimension of the epithelial and connective tissue components of the peri-implant mucosa is established during the wound healing subsequent to implant surgery. Healing of peri-implant soft tissues has been examined in man and in animal experiments. It was observed that the barrier epithelium terminated about 2 mm apical of the soft tissue margin and that the subjacent connective compartment was about 1.5 mm high. It was suggested that a certain width of the peri-implant mucosa is required to enable a proper epithelial-connective tissue attachment, and, if this soft tissue dimension is not sufficient, bone resorption will occur to ensure the establishment of an attachment with an appropriate biological width.

Recent observations suggest that the implant design (e.g., “platform switching”) or the surgical technique may influence initial marginal bone loss and soft tissue dimensions. In the presentation, scientific evidence will be presented supporting the biological width concept and factors that may modify the soft tissue dimensions will also be discussed.

> Marco ESPOSITO

Dr Marco Esposito Associate Professor in Biomaterials with the Sahlgrenska Academy at Göteborg University, Sweden, Editor in Chief of the European Journal of Oral Implantology (EJOI) and of the Rivista Italiana di Stomatologia (RIS), and Associate Editor of the Cochrane Oral Health Group. Marco graduated with honours in dentistry at the University of Pavia, Italy, in 1990 and was awarded a PhD in Biomaterials from the Göteborg University in 1999 and is a specialist in Periodontics (UK). He has authored more than 160 scientific publications in international peer-reviewed journals and is currently working as freelance researcher in clinical implant dentistry and periodontology.

The effectiveness of short implants versus longer implants placed in augmented bone

After a brief methodological introduction on evidence-based practice and on the role of randomised controlled trials (RCTs) in order to properly evaluate effectiveness of medical interventions, the most updated evidence originating from several RCTs comparing the use of short implants (up to 8 mm long) with longer implants placed in augmented bone will be summarised. The main objective is to help clinicians to develop critical skills when interpreting the scientific literature on controversial topics so that it might be easier to take sound clinical decisions for the patient benefit. The preliminary available evidence-based data with a prosthetic follow-up of about one year after loading, suggest the following: 1) in atrophic mandibles (5-8 mm of residual bone height) short implants seems to have significantly better clinical outcomes than longer implants placed in vertically augmented bone. In atrophic maxillas (5-6 mm of residual bone height) there are similar clinical outcomes, though short implants achieved the same goal causing less patient morbidity and in shorter treatment periods. It should also be stressed that the medium -15 years) and long-term prognosis (> 10 years) of short implants is largely anecdotal and that reliable information from long-term trials is extremely important in order to guide clinical decisions to rehabilitate patients with atrophic edentulous jaws.

Saturday, October 15, 2011
09:00-12:15
SATURDAY MORNING

> Ingemar ABRAHAMSSON

Dr. Ingemar Abrahamsson graduated (DDS) 1977 in Göteborg. He received his certificate as specialist in Periodontics in 1998, the degree of Odont. Dr. (PhD) in 1999 and the “Docent” degree in 2003 from the Department of Periodontology, University of Göteborg, where he has served since 1992. Presently, Dr. Abrahamsson serves as Associate Professor at the Department of Periodontology, The Sahlgrenska Academy at University of Göteborg. He also serves as Clinical Instructor in postgraduate training at the Clinic of Periodontics, Göteborg, and as vice director of the Laboratory for Experimental Biomedicine in Göteborg. Dr. Abrahamsson is member of the Editorial Board for Clinical Oral Implants Research and serves as referee for other international scientific journals. He has produced about 30 scientific publications within the field of dental implants in different peer-reviewed journals. He is today actively involved in research on hard and soft tissue integration to dental implants as well as in tissue reactions at sites with peri-implantitis.

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This report will focus on the risks to be taken with treatment augmentation. We will take available information from increased rates of mechanical and technical failure rates of the crestal bone resorption. Excessive forces may also lead to increased morbidity and costs and may also increase the risk for implant failure. Biomechanically unfavorable non-axially increased discrepancies in implant axes can be corrected with structures interfering with a regular implant axis and when the upper front area, in case of lingual undercuts, in situations where implants i.e. in situations with anatomical conditions resulting in implant positions with divergent axes compared to adjacent teeth.

Historically great concern has been expressed related to unfavorable so called non-axial loading forces exerted on implants i.e. in situations with anatomical conditions resulting in implant positions with divergent axes compared to adjacent teeth or within multiple implants. In edentulous maxillae, after traumatic teeth and bone loss in edentulous maxillae, after traumatic tooth and bone loss in the upper front area, in case of lingual undercuts, in situations with structures interfering with a regular implant axis and when the implants are not placed in a somewhat planned and guided concept considerable discrepancies in implant axes can be created. In order to correct for discrepancies there exist several approaches to improve the situation. First of all, augmentative surgical procedures including EBR and grafting may change the anatomical basis at the recipient site that will allow to place the implants in a more regular axis. In addition, refined surgical methods may create an envelope of hard and soft tissue to endosseous integration of implants, Economics in dental medicine

Augmentation versus angulation
Historically great concern has been expressed related to unfavorable so called non-axial loading forces exerted on implants i.e. in situations with anatomical conditions resulting in implant positions with divergent axes compared to adjacent teeth or within multiple implants. In edentulous maxillae, after traumatic teeth and bone loss in the upper front area, in case of lingual undercuts, in situations with structures interfering with a regular implant axis and when the implants are not placed in a somewhat planned and guided concept considerable discrepancies in implant axes can be created. In order to correct for discrepancies there exist several approaches to improve the situation. First of all, augmentative surgical procedures including EBR and grafting may change the anatomical basis at the recipient site that will allow to place the implants in a more regular axis. In addition, refined surgical methods may create an envelope of hard and soft tissue to end with the platform at a position for the achievement of optimal function and aesthetics with the superstructure.

Still remaining discrepancies between implants can be corrected using implants with an angled neck design or more often by using prefabricated or individually shaped angled abutments/mesostructures. CAM/CAD based individual abutments offer the best flexibility for an individual situation.

Additional augmentative/grafting procedures will result in an increase in morbidity and costs and may also increase the risk for implant failure. Biomechanically unfavorable non-axially loaded implants may suffer from increased failure rates and/or crestal bone resorption. Excessive forces may also lead to increased rates of mechanical and technical failure rates of the superstructures and the components.

This report will focus on the risks to be taken with treatment plans outweighing angulation/no angulation and augmentation/no augmentation. We will take available information from the literature and use clinical examples to try to solve the controversial aspects.
EAO Guidelines for Diagnostic Imaging in Implant Dentistry 2011: Overview

> David HARRIS

Professor David Harris is a specialist Oral Surgeon in practice at the Blackrock Clinic Dublin, Ireland. He undertakes his teaching, research and academic activities at School of Dental Science, Trinity College Dublin where he holds an appointment as a Senior Lecturer. He holds an attachment as a visiting Professor to the Medical University of Warsaw. A founder member and past president of the EAO he is currently a member of Council and an examiner for the EAO certification programme in Implant Dentistry. He is co-chair for the updated EAO Radiological Guidelines on Diagnostic Imaging. He was chairman of the group that produced the original guidelines that were published in 2002.

He has collaborated closely with Prof. P.I. Brånemark on the introduction of osseointegrated implants into dental practice. He has lectured and provided courses worldwide and published on various implant topics as well as contributing chapters to three international textbooks. He was a board member of Dental Protection Limited for seven years. This is the largest dental indemnity organisation worldwide and he continues with them as an advisor. His current main areas of interest are in the restoration of grossly resorbed maxilla and mandible with bone grafts and Zygomatic implants and in measurement of quality of life improvements from implant therapy.

EAO Guidelines for Diagnostic Imaging in Implant Dentistry 2011: Overview
The EAO’s Guidelines for the use of diagnostic imaging in implant dentistry were published in Clinical Oral Implants Research in 2002. These arose from the proceedings of a consensus workshop held at Trinity College Dublin under the auspices of the EAO. In the recent publication “Guidelines on Radiation Protection: Cone Beam CT for Dental and Maxillofacial Radiology. Provisional Guidelines May 2009 produced by the SEDENTEXCT Project (2008–2011), and supported by the Seventh Framework Programme of the European Atomic Energy Community (Euratom) it was requested that the EAO might update these guidelines and expand them to include the use of Cone Beam CT. The Board of the EAO approved this and an international group of expert clinicians, radiologists and scientists took part in a workshop at the Medical University of Warsaw on May 6/7 2011 under the chairmanship of Profs. David Harris (Ireland) and Marc Quirynen (Belgium). These guidelines will be presented, as well as the rationale behind them, prior to full publication in the journal of Clinical Oral Implants Research.
GREEK SESSION

PROSTHETIC TREATMENT PLANNING IN IMPLANT DENTISTRY: CLINICAL GUIDELINES

> Klaus GOTFREDSEN

Klaus Gøtfredsen is Professor and Head of the Department of Oral Rehabilitation, Faculty of Health Sciences, University of Copenhagen, Denmark. He graduated in 1984 from the School of Dentistry, University of Aarhus. He has also graduated in Medical Sociology and Medical Psychology from Aarhus University. He started as Ph.D. student in Copenhagen in 1986 and received a Danish Ph.D. degree in 1990. In 2001 he received a Swedish Ph.D. degree from Department of Periodontology, Faculty of Odontology, Göteborg University. Dr. Gøtfredsen has published more than 80 scientific papers in the fields of Implant and Prosthetic Dentistry. He serves as reviewer for a number of clinical and scientific journals and has lectured extensively in the field of Implant Dentistry. President of education committee under Scandinavian Society of Prosthetic Dentistry; Member of different committees and former president of European Association for Osseointegration.

> Pascal VALENTINI

Dr Pascal Valentini received his DDS at the University of Paris VII in 1982. He is the Programme Director of the Postgraduate in Oral Implantology at the University of Corsica and Associate Professor at the Department of Restorative Dentistry at the University of Loma Linda (USA). Invited Professor at the University of Liege (Belgium)

He is a Board member of the European Association for Osseointegration, international speaker and author of several papers in the field of bone regeneration and maxillary sinus grafting.

Dr Valentini has a private implant dentistry practice in Paris.

> Demos KALYVAS

1974-1979 University of Athens, Dental School
1982-1985 Postgraduate studies in Oral Pathology, University of Athens (UoA) Dental School
1985 PHD degree
1985-1988 Associate in the Dept of Oral Pathology, UoA Dental School
1989-1998 Associate in the Dept of Oral Surgery, UoA Dental School
1998-2004 Lecturer in Oral Surgery, Dept of Oral and Maxillofacial Surgery, UoA Dental School
2004- Assistant Professor in Oral Surgery, Dept of Oral and Maxillofacial Surgery, UoA Dental School

Main Topics: Surgical Implantology, Bone Grafting, Branemark.

Pre-prosthetic surgical planning
The role of the oral surgeon in treatment planning is essential. It is his responsibility to get a detailed and well documented medical history, to perform the clinical examination and to judge if the prosthetic treatment plan is realistic and if not, how it could become realistic.

The clinical examination must include:
A. Extroral examination
1. Nutritional and general health
2. The facial symmetry
3. The lip support

B. Intraoral examination
1. Mouth opening
2. TMJ function
3. Full mouth examination to exclude pathologic changes (leukoplakia, lichen planus, oral candidosis etc.)
4. The evaluation of the keratinised oral mucosa
5. The profile of the alveolar crest
6. The type of occlusion

The treatment plan should include the following consecutive steps:
1. Determination of relative or absolute, local or general contraindications
2. Determination of functional and aesthetic problems of the patient
3. Evaluation of the prosthetic feasibility
4. Evaluation of both quantitative and qualitative alveolar bone deficiencies which may affect the final treatment result.

The tools to realise these steps are:
1. Laboratory tests (blood tests) if needed
2. Wax-up on study casts
3. Radiographic analysis of the case
4. Extraoral and intraoral photos

In case a problem concerning an alveolar bone deficiency is diagnosed, the oral surgeon must use the appropriate method to solve it.

Augmentation techniques such as bone splitting, GBR, bone grafting, distraction osteogenesis and in some cases free vascularised bone grafting may be used to restore bone volume for an ideal implant placement.
PROSTHETIC TREATMENT PLANNING IN IMPLANT DENTISTRY: CLINICAL GUIDELINES

> Stefanos Kourtis
Assistant Professor, DDS, Dr.Colon
Dept. of Prosthodontics
University of Athens, Greece
1989-1996: Undergraduate programme of Dentistry, University of Athens, Greece
1988-1993: Postgraduate study in the University of Tübingen, Germany (Director: Prof. Dr. H. Weber)
1993-1997: Clinical Instructor, Department of Prosthodontics, University of Athens
2000-2005: Lecturer, Dept. of Prosthodontics, University of Athens
2005-2011: Assistant Professor, Dept. of Prosthodontics, University of Athens (Director: Prof. Dr. A. Douliaideou)
1997-2011: Clinical Instructor, Impiant Centre of the Dental School, University of Athens
1993-2011: Private office in Athens, focused in Implantology and Prostodontics
- Author and co-author of numerous publications in Greek, German and international journals.
- Numerous lectures and participation as Invited Speaker in Greek and European Dental Congresses.

Predicting and achieving the final result with implant restorations for partially and completely edentulous patients. An individualized treatment plan for each specific clinical case must aim for a functional and aesthetic final result. The final restoration must also fulfill the patient’s demands and expectations. Patients often feel insecure about the functional ability and the aesthetics of the planned restoration. Although the same questions arise at conventional prosthodontic procedures, implant restorations require surgical procedures, additional treatment time and increased cost compared with conventional restorations. The possibilities of the clinician to predict the final result before the insertion of implants, have been improved since the introduction of CAD-CAM technology. In many cases however, the conventional techniques still offer precious guidance in simple and complicated cases. These techniques include the diagnostic wax-up before implant placement, a detailed radiographic examination by the use of a radiographic guide and implant placement to the selected and predetermined areas by means of a surgical guide. After the osseointegration period, a detailed wax-up based on the inserted implants should be the guide for fabrication of the definitive prosthetic restorations. Implant-supported interim prostheses allow both the clinician and the patient to evaluate the aimed result for a period of time. During these treatment steps, the functional ability and the aesthetic performance can be checked repeatedly and any needed corrections should be accomplished prior to fabrication of the definitive prosthetic restoration. The aim of this presentation is to present the possibilities for predicy and achieving the final result in partially and completely edentulous patients with clinical examples.

> Vasilios Chronopoulos
Dr. Vasilios Chronopoulos received his Dental degree from the National and Kapodistrian University of Athens, Greece and his certificate in Prosthodontics from Marquette University in Milwaukee, USA. He has an MS and a PhD in Dental Biomaterials from the School of Dentistry, National and Kapodistrian University of Athens, Greece. He is an Assistant Professor in the Department of Prosthodontics, School of Dentistry, National and Kapodistrian University of Athens, Greece; a Clinical Assistant Professor in the Department of Restorative Sciences and Graduate Prosthodontics at Baylor College of Dentistry in Dallas, Texas, USA; an Adjunct Instructor in the Department of Periodontics, Endodontics, and Dental Hygiene of University of Louisville, Louisville, Kentucky, USA; and an Adjunct Associate Professor in the School of Dentistry and Oral Health, Griffith University, Gold Coast, Australia.

Stepped approach for restoring functionally and aesthetically the lost prosthetic space. The prosthetic space is a 3D area occupied by a restoration in order to achieve an aesthetic and functional result. In implant restorations this space is usually increased and very often soft and hard tissue is missing. This deficiency can be localised or generalised and result in an aesthetic problem, a functional problem or a combination. The procedure to “reduce” this increased prosthetic space may include soft and hard tissue augmentation, utilisation of pink aesthetic materials, alteration of the existing vertical dimension etc. A philosophy of stepped approach for restoring localised and generalised problems of prosthetic space will be presented. Key factors in this procedure are the presurgical diagnosis, the utilisation of fixed interim prostheses representing the final result both functionally and aesthetically, the use of contemporary surgical procedures to restore missing soft and hard tissues, the prosthetically driven implant placement and the utilisation of implant supported interim restorations and finally the design of the final restoration according to the classic principles of aesthetics, occlusion and function.

> George Papavasiliou
Prosthodontist
Assistant Professor, University of Athens, Greece
George Papavasiliou is a Prosthodontist, currently holding the position of Assistant Professor in Prosthodontics and Coordinator in Graduate Prosthodontics at the School of Dentistry, University of Athens Greece. He received his Dental Degree from the University of Athens in 1983. In 1992 he received a Certificate in Prosthodontics and a Master of Science from the University of North Carolina at Chapel Hill. He assumed the position of Assistant Professor in Prosthodontics at the same University in 1992. In 1997, he received his PhD from the University of Athens, Greece and in 2000 he became a Lecturer in Prosthodontics at the same University. He moved to his current position in 2007. Over the last 15 years he has conducted research in biomaterials, prosthodontics and implants. He has published over 50 scientific papers, which have been cited numerous times and has received prestigious awards (Granger-Pruden). He has given lectures and scientific presentations in over 15 countries worldwide and he is a Reviewer for the Journal of Prosthodontics. George Papavasiliou holds a Private Practice since 1995. From 2000 he has been part of “Odontiki Anaplasi”, a practice limited to Prosthodontics and Implants situated near the centre of Athens.

Advanced problem solving: going back to the basics
When osseointegrated implants were first introduced they offered a solution to serious clinical problems such as edentulous with absorbed alveolar ridge. Since then implant treatment has become very popular and a solution that many clinicians can provide to their patients. Advanced surgical techniques, new biomaterials, improved implant surfaces as well as technologically advanced restoration production techniques, allow the rehabilitation of most dental patients. These include simple cases as well as complicated cases. It shows how each one of them can be accomplished by following the basic principles of prosthodontics, well known to most clinicians but overlooked very often.
Phophi Kamposiora is a Prosthodontist, currently holding the position of Assistant Professor at the School of Dentistry, National and Kapodistrian University of Athens. She received her Dental Degree from the University of Athens in 1989. In 1994 she received a Certificate in Prosthodontics and a Master of Science from the University of North Carolina at Chapel Hill. In 1997 she received her PhD from the University of Athens, Greece and in 2004 she became a Lecturer in Prosthodontics at the same University. She moved to her current position in 2007. Over the last 15 years she has conducted research in the field of prosthodontics and implants. She has published over 50 scientific papers, which were cited numerous times and has received prestigious awards (Illyrian, Granger-Prudent). She has given lectures and scientific presentations in over 15 countries worldwide. She is a Reviewer for the Journal of Prosthodontics and the Journal of Oral Rehabilitation.

Phophi Kamposiora holds a Private Practice since 1995. From 2000 she has been part of “Odentis Anapaisi”, a practice limited to Prosthodontics and Implants situated near the centre of Athens.

Solving the equation: aesthetics vs. function
Aesthetics play a major role in many people’s lives. An aesthetic appearance can help professional as well as personal interrelationships. A major asset for a beautiful face is an appealing smile. Many dental materials and techniques developed over the last few years are marketed as able to produce the ultimate aesthetic restoration. The aim of this presentation is to address the question whether the hunt for ultimate aesthetics in what regards osseointegrated implants can compromise the restoration’s function.

Deep-seated implants were initially introduced for the restoration of fully edentulous jaws, mainly the mandible, of the elderly population. This was done mainly with fixed “hybrid” restorations. The improvement in the patient’s function was usually impressive but aesthetically the restoration was acceptable only behind a low smile line. Today the mean patient population is younger, is missing fewer teeth and has lost less of its function. A lot was done on surgical techniques, allowing implants to be placed in aesthetically acceptable positions. New and improved materials and components (glass ceramics, zirconium, ceramic abutments, ceramic implants, CAD-CAM restorations) were developed in a quest to extend the restoration’s aesthetic region deep into the tissues.

These developments have the potential to improve the patient’s function and the restoration’s hygiene as well. Unfortunately they can also lead to restorations with more maintenance problems such as chipping of porcelain over zirconium frameworks, fracture of ceramic abutments as well as peri-implantitis. Education, experience and clinical thinking will help clinicians to solve the equation: function versus aesthetics.

Nikitas Sykaras received his DDS degree from the Dental School of Athens University and he continued his postgraduate studies at Baylor College of Dentistry, in Dallas, Texas where he successfully completed a five year programme leading to a Certificate in Prosthodontics and PhD in Biomedical Sciences. Following this, he also completed a Fellowship programme in Implantology at the same University. He is currently Assistant Professor in the department of Prosthodontics at the Dental School of Athens University.

Dr. Sykaras is a member of many national and international scientific organisations related to implantology, prosthodontics and clinical dentistry. He is the chairman of the Hellenic ITI Section and coordinator of the annual ITI implantology course in Athens.

Sykaras lectures nationally and internationally on topics related to implant prosthodontics. He is author to 25 articles and has translated 3 books on aesthetics and implantology. His research interests are the clinical evaluation of implant treatment, bone biology and dental material science.

Implant supported overdentures: combining function and aesthetics
Implant supported restorations present a wide spectrum of clinical applications in modern dentistry. Removable prostheses which are planned to be implant supported or retained offer many advantages to the patient stemming from their improved stability. The successful clinical outcome of an implant overdenture begins with proper diagnostic evaluation and precise execution of the treatment plan. This presentation will analyse the clinical parameters affecting the decision for removable prosthesis restoration. Once the treatment is confirmed, implant position and distribution must be evaluated. This evaluation takes into consideration the anatomy of bone, the functional load, the opposing dentition and the patient’s needs regarding support, stability and retention. Splinted or free-standing implants is an important factor for their long-term success and prosthesis design. The retentive mechanism plays a crucial role in patient satisfaction and ease of maintenance and repair. The retentive force, its stability over time, the option of increasing it and the clinical consequences are of fundamental importance for patient acceptance during function. The aforementioned parameters will be covered in detail and supported by evidence-based clinical and experimental data. The presentation of the clinical procedures and laboratory techniques will help the clinician to apply this information in daily practice in a successful and predictable way.
Theodoros Kapos was born in Athens, Greece. He completed his undergraduate degree at the State University of New York in Stony Brook, where he majored in biochemistry. He then moved to Boston where he received his DMD from Harvard School of Dental Medicine. Following this, he completed a three-year specialty programme once again, at Harvard School of Dental Medicine, where he earned an MMSc degree in oral biology and a certificate in prosthodontics. In order to further his skill and knowledge, Dr. Kapos joined the two year Advanced Graduate Implantology Programme at Harvard from which he received a certificate in Implant Dentistry.

Following completion of his Advanced Graduate training, Dr. Kapos was appointed to the faculty at Harvard and is currently an instructor in the Department of Restorative Dentistry and Biomaterials Sciences. He is active in both clinical and didactic teaching, for undergraduates and postgraduates alike. Additionally, Dr Kapos maintains his specialist clinical skills in the Harvard private clinic.

Dr. Kapos’ research interests include variations of head and neck anatomy, applications of CAD-CAM technology in implant dentistry and clinical research related to implant aesthetics.

Surgical techniques for alveolar socket preservation: a systematic review

Two unsplinted immediately-loaded nanotite implants supporting mandibular overdentures; a four-year follow-up

Implant primary stability (rfa): correlation with insertion torque, bone volume and osseointegration at 6 weeks

The implant-supported maxillary overdenture: a prospective study on 4 versus 6 implants

Impact of the outcome of guided bone regeneration in dehiscence-type defects on the long-term stability of peri-implant health
Franck Renouard graduated from 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 has published several national and international articles and is author of 2 text books with Bo Rangert. The first one «Risk Factors in Implant Dentistry: Simplified Clinical Analysis for predictable Treatment» was published in 10 languages. He lectures intensively on Implants, Immediate loading, Biomechanics and Bone Grafting procedure. Dr. Renouard was elected to the European Association for Osseointegration executive board in Amsterdam in 2000, and is Past President of the organisation (2006-2008). He is in Private Practice in Paris limited to Oral and Implant Surgery. He is visiting Professor at the Medicine Faculty of Lieges, Belgium.

Ki-Deog PARK 093
Osteoblast behaviour on β-TCP with calcium phosphate and magnesium coatings

Xanthippi DEREKA 094
Systematic review of the association between genetic predisposition and dental implant biological complications

Akira MATSUO 095
Are implants a risk factor for osteonecrosis in intravenous bisphosphonate?

Jörg HEINE 096
Histological and radiographic studies after intraoperative stem cell settlement in complex augmentation of the jaws

Carlo GALLI 097
Lithium chloride effects on osteoblast differentiation are enhanced by hydrophilic titanium surfaces
Basic research competition

> Nikolaos DONOS
Professor Nikolaos Donos DDS, MS, FHEA, FRCSEng, PhD is the Head & Chair of Periodontology and the Director of Clinical Research at the UCL-Eastman Dental Institute, London and the Lead of the Oral Health Theme at the UCLH/UCL Comprehensive Biomedical Centre. Professor Donos leads the Clinical Investigation Centre at the Eastman which specialises in the provision of RCT and clinically applicable translational research studies.

His research track record is mainly on GTR, GBR, implant dentistry as well as in the correlation of periodontal disease with other chronic diseases. He has published extensively and he is a member of the editorial board of the leading peer-reviewed journals.

> Andreas STAVROPOULOS 050
Influence of peri-implant bone tissue composition on progression of peri-implantitis

> Cristiano SUSIN 051
Bone healing dynamics and crestal bone level at buccal peri-implant sites: a multivariable analysis in the dog

> Gang WU 052
Layer-by-layer assembled, BMP-2-incorporated biomimetic calcium-phosphate granules induce bone formation

> Elham HAZEIM 053
An in vitro model of bacterial shifts associated with peri-implantitis

> Richard LEESUNGBOK 054
Effect of neodymium magnet placed into SLA-surface implant in early stage of bone healing
> Henning SCHLIEPHAKE

Education
1979 – 1989: University education in dentistry and medicine
Medical University of Hannover, Germany
1985: Dental degree
1988: Doctoral thesis in dentistry
1989: Medical degree
1990: Doctoral thesis in medicine
1995: PhD degree (Habilitation) in Oral & Maxillofacial Surgery

Professional experience
Since 1995: Associate Professor at the Dept. of Oral & Maxillofacial Surgery, Medical University of Hannover, Germany
Since 2001: Full Professorship in Oral & Maxillofacial Surgery at the Georg-August-Universität, Göttingen, Germany

Activities in Scientific Organisations
2004 – 2006: President of the German Association for Oral Implantology (DGII)
2004 – 2006: Spokesman of the Surgical Section of the VHZMK (Verein der Hochschullehrer der Zahn-, Mund- und Kieferheilkunde)
Since 2005: Member of the Executive Committee of the IAOMS
Since 2007: President elect of the German Society of Dental Oral and Craniomandibular Sciences (DGZMK)
Since 2008: Chairman of the Straßburg Osteosynthesis Research Group (S.O.R.G.)
Since 2009: Chairman of the Oral Surgery Group of the German Society of Dental Oral and Craniomandibular Sciences (AGKi)
Since 2010: Board member of the European Association for Osseointegration (EAO)

> Brigitte ALTMANN

Osteogenic differentiation of primary human osteoblasts in 3D microcavity arrays

> Gabriella DVORAK

Impact of vitamin D on osseointegration in the ovariectomized rat

> Takayuki MIYAHARA

Novel exploitation of polysaccharide nanogel cross-linking membrane for GBR

> Nikos MARDAS

Novel purmorphamine/ß-TCP filled degradable polymer membrane for GBR

> Jan Willem M HOEKSTRA

Maxillary sinus floor elevation with injectable porous calcium phosphate cements in sheep
Application of periodontal soft tissue surgery techniques to peri-implant defects - peri-implant recession defect management

Peri-implant mucosal recessions can be associated with peri-implant intrabony (class I) and suprabony (class II) bone defects. Numerous etiological factors have been identified, i.e. insufficient inter-implant space, malpositioning of implants, insufficient augmentations with residual defects or peri-implant infections. Some of these complications can only be treated by implant removal. Treatment of peri-implant defects and mucosal recessions requires the removal of biologic contaminations from machined and structured implant surfaces to improve the biocompatibility of the titanium surface that it might serve as a sufficient base to reestablish bone-to-implant contact. Defect configurations might have an impact on the clinical outcome following surgical regenerative therapy of peri-implant defects. While class I transalveolar defects seem to be promising in conjunction with natural bone minerals and collagen membrane, other defects (especially vertical class II defects) may be considered as unfavorable. Most of the intrabony peri-implant augmentation procedures are often associated with further mucosal recessions which must be treated in a second approach while class II defects usually can only be controlled by implantoplasty.

After successful biofilm removal and augmentation of intrabony defects mucosal recessions can be reduced in a second approach using coronally advanced flaps (CAF), alone, CAF and free or vascularized connective tissue graft, CAF and a collagen matrix and the envelope technique with a free subepithelial connective tissue graft. After removal of the prosthetic superstructure, a modified roll technique can be adapted around submerged and non-submerged implants in the maxilla. A submersed procedure improves bone regeneration in peri-implant bone defects more compared to a non-submersed procedure.

Management of peri-implantitis

Peri-implantitis may be defined as an inflammatory process affecting both soft and hard peri-implant tissues, resulting in loss of supporting bone around a functioning implant. The aim of this presentation is to review the literature on the diagnosis and therapy of peri-implantitis and present the newest views on this subject. Diagnosis of peri-implantitis in clinical practice is mainly based on clinical and radiographic examination. Therapy of peri-implantitis in cases of shallow (<4 mm) peri-implant pockets comprises oral hygiene instructions and patient motivation in oral hygiene and the exclusive use of mechanical cleansing means (plastic curettes or instruments manufactured of soft carbon fibers, rubber cups and polishing pastes) for the removal of microbial accumulations from implant surfaces and their polishing, whereas in cases of peri-implant pockets of a moderate (4-5 mm) or advanced (>5 mm) probing depth, mechanical therapy should always be combined with adjunctive therapeutic modalities. Such modalities could be the use of chlorhexidine (as an antiseptic agent (as a mouthrinse or topically applied gel) or the use of antibiotics (systemically administered or topically applied). The use of laser devices is a modern means of treatment of peri-implantitis, yielding positive results, but its efficacy certainly has to be documented by additional studies. Surgical procedures, similar to those employed for surgical treatment of periodontalitis, can be used for the therapy of peri-implantitis, as a rule in cases of advanced (>3 mm) peri-implant probing pocket depth with concomitant bleeding and/or suppuration on probing and radiographical peri-implant bone loss. The principal objective of the clinician should be to focus on maintenance of peri-implant bone health in order to ensure long-term implant outcome.

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Peri-implant disease is an inflammatory condition that affects alveolar bone and soft tissues around implants that results in the loss of marginal soft and hard peri-implant tissues. Peri-implantitis is an infectious disease in which periodontopathogens have the lead role in their initiation and progression. The presence of different risk variables, however, may modify susceptibility to peri-implant disease. Identifying risk factors for peri-implantitis and understanding their role in the aetiopathogenesis of the disease is essential for the long-term success of implant therapy. Data derived mainly from cross-sectional studies and few longitudinal studies provide strong evidence that major risk indicators for peri-implantitis are poor oral hygiene, history of periodontitis in the natural dentition and smoking. Lesser evidence exists for other patient-related factors including diabetes, genetic traits, alcohol consumption, as well as site-related factors, such as presence of keratinised mucosa, and finally implant-related factors such as specific implant surface design. Large population prospective studies are needed in order to confirm which of these factors are true risk factors for peri-implantitis.
LATEST IMPLANT TITLES
FROM QUINTESSENCE PUBLISHING

ITI TREATMENT GUIDE VOLUME 5:
Sinus Floor Elevation Procedures
Stephen Chen, Daniel Buser, and Daniel Wismeijer

The fifth volume of the ITI Treatment Guide series presents the materials and techniques associated with sinus augmentation procedures. The volume opens with a review of the current literature and the relevant ITI Consensus Statements derived from the ITI Consensus Conference held in Stuttgart, Germany, in 2008. This is then followed by a discussion of the preoperative assessment of the posterior maxilla, including a detailed description of the anatomy and radiological examination. Different treatment options are then presented, along with guidelines for choosing the appropriate technique based on thorough risk evaluation and the relative complexity of each option. The text is completed with a section on intraoperative and postoperative complications to avert the most common pitfalls in clinical practice. A DVD showing the surgical techniques and management of complications accompanies this volume.


SURGICAL COMPLICATIONS IN ORAL IMPLANTOLOGY:
Etiology, Prevention, and Management
Louie Al-Faraje

This exceptional new book is designed as a self-instruction guide to the diagnosis, management, and prevention of surgery-related complications in implant dentistry. It functions in two ways: First, it is a valuable resource for the implant surgeon seeking practical and succinct information about how to manage a complication in an emergency setting; and second, it can be read from cover to cover as a primer on implant surgery, from the initial consultation and treatment planning through the restorative phase of treatment. This book also includes a comprehensive treatment-planning protocol that allows for the early detection of potential surgical complications and how to avoid them. Invaluable for the novice and experienced implant surgeon alike.

248 pp; 711 illus; ISBN 978-0-86715-506-8; £126/€189

DENTAL IMPLANT RESTORATION:
Principles and Procedures
Stuart Jacobs and Brian O’Connell

This concise and easy-to-follow guide provides a basic understanding of the fundamental principles of implant dentistry and prepares a clinician to lead the treatment team through the stages of restoration to produce an esthetic and functional result. The first part provides an overview of implants and their components, the theory of osseointegration, and a guide to patient diagnosis and treatment planning. The second part consists of effective clinical protocols for simple implant restoration using techniques that are currently available and commonly used. This book is an ideal starting point for students and practitioners new to implant dentistry.

280 pp; 698 illus (mostly colour); ISBN 978-1-85097-101-6; £98/€118

Please do visit us at stand G25 during the congress for a chance to see these titles and our ever-increasing range of Dental Books, Multimedia and Journals.
History
The European Association for Osseointegration (EAO) is a non-profit organisation which was founded in Munich in 1991 following 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.

Vision
Bridging the gap between science and clinical practice, the EAO improves the quality of patient care as the leading voice and resource centre in the field of implant dentistry in Europe.

Mission
The objectives of the EAO are the following:
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
Join the EAO now and benefit from a substantially reduced registration fee to the Annual Congress! In addition you will enjoy other membership benefits such as free online subscription to the monthly Blackwell Clinical Oral Implants Research journal (12 issues per year), 74% reduction to the hard copy subscription of COIR, 35% reduction for online and hard copy subscription to a selection of five other journals (Clinical Implant Dentistry and Related Research, Journal of Clinical Periodontology, Journal of Aesthetic and Restorative Dentistry, Journal of Oral Rehabilitation, and Oral Surgery), the EAO newsletter twice a year, a membership directory containing the names and addresses of all members, a personal EAO pin, and a wide network of colleagues and leading innovators from around the world.

For more information on membership, please contact:
EAO Office
Ms Irina Mansurova
EAO – 287 Avenue Louise, 4th floor
1050 Brussels – Belgium
Tel +32 (0)2 643 20 49
Fax +32 (0)2 645 26 71
eao@congrex.com
www.eao.org
Date
From Wednesday 12th October to Saturday 15th October 2011

Venue
The EAO congress 2011 will be held at the Megaron Athens International Conference Centre (M.A.I.C.C).

Official language
The official language of the EAO Congress is English. There will be simultaneous translation into English and Greek during plenary sessions.

Headphones
Simultaneous translation in English and Greek will be available for plenary sessions. In the delegate pack, you will find a voucher which will allow you to borrow conference headphones from the desk located at the registration area, level 0.

Welcome desk opening hours
Wednesday 12th 11:00-20:00
Thursday 13th 09:00-19:00
Friday 14th 07:00-19:00
Saturday 15th 07:00-16:00

The welcome desk is situated in the exhibition hall, level 0. You will be able to register on site and collect your access badges.

Exhibition opening hours
Wednesday 12th 18:00-20:00
Thursday 13th 09:00-18:00
Friday 14th 09:00-18:00
Saturday 15th 09:00-14:00

Registration fees for delegates include:
> Admission to all congress sessions, poster areas and technical exhibition
> The opening ceremony
> Congress documents (final programme, abstracts books, congress bag)
> Lunches and coffee breaks

Terms of payment:
> By credit card: Visa, Euro Cards or Master Cards
> By cheque in €
> By cash in €

ON SITE registration fees
All the prices below include Greek VAT (23%) up to date with membership fees

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<tr>
<td>EAO members and national association members*</td>
<td>590 €</td>
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<tr>
<td>Non members</td>
<td>760 €</td>
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<tr>
<td>Undergraduate student**</td>
<td>330 €</td>
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*Members of the following Greek societies:
- Hellenic Society of Prosthodontists
- Greek Society of Oral and Maxillofacial Radiology
- Greek Society for Osseointegration
- Hellenic Society of Periodontology

** Upon presentation of a valid student identification confirming their undergraduate student status

Certificate of attendance
A certificate of attendance for preregistered participants will be issued along with the Congress documentation upon arrival. Participants who register on-site will be issued with their certificate at the registration desk.
**Cloakroom**

Wednesday 12th  11:00-20:00  
Thursday 13th  09:00-19:00  
Friday 14th  07:00-19:00  
Saturday 15th  07:00-16:30

Please be advised that the organisation is not responsible for any loss or damage to items left in the cloakroom.

**Refreshments**

Lunches and coffee will be served to registered delegates in the exhibition area and in the poster area.

**Staff**

Staff members can be easily recognised by their blue T-shirts. They will be happy to assist you with any queries you may have.

**Useful links**

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www.megaron.gr

**Tourism:**  
www.greece-athens.com,  
www.athensguide.org

**Athens Airport:**

www.aia.gr

**Athens urban public transport:**

www.oasa.gr

**Car rentals at the airport:**

www.budget-athens.gr,  
www.europcar.com

**Restaurants:**

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**Contacts**

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Athens is the capital and largest city of Greece, and its economic, financial, industrial, political and cultural centre.

Surrounded by seas and mountains, this safe and travel-friendly city is one of the oldest in the world, as its recorded history spans back over 3,400 years.
Classical Athens was a powerful city-state, home of Plato’s Academy, Aristotle’s Lyceum and the birthplace of democracy and philosophy. It is widely referred to as the cradle of Western civilization and the heritage of the classical era is still evident today in the city.

Athens and its periphery Attica provide overwhelming treasures and famous attractions: well-renowned archaeological sites like the Parthenon, plus Roman, Byzantine and some remaining Ottoman monuments. The city is home to two UNESCO World Heritage Sites: the Acropolis of Athens and the medieval Daphni Monastery.

A cosmopolitan metropolis, modern Athens is a major, vibrant European city and an important centre of culture, a place where history meets with comfort and fascination. It offers modern and classical art museums and galleries, stylish shops, fine restaurants and bars, street markets and bazaars, open-air cinemas, sandy beaches and 300 sun-drenched days per year.

**Population (urban area of Athens):**
3 to 4 million inhabitants (2001)
4th most populated capital of the EU.

**Famous Athenians:**
- Solon (poet and lawmaker)
- Socrates (philosopher)
- Plato (philosopher)
- Pericles (orator and statesman)
- Constantin Papachristopoulos, aka Costi (sculptor)

**Facts and Figures**
Innovation and improvements in infrastructure alongside the new, award-winning Athens International Airport – currently serving 80 international destinations – have made Athens a city that is easy to navigate, introducing a new era for its citizens and visitors alike.
Exhibition Plan Level 0

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Access to all levels

Atrium

Alexandra Trianti Hall

Upper Level

Mitropoulos Hall

C. Lambrakis Hall

Registration Area

Main Entrance

Members lounge & Preview room

Cloakroom

Access to C. Lambrakis - Plenary

EAO stand

EAO stand
ASTRA TECH AB
Astra Tech AB is a company within Dentply International, a global leader in the dental sector with about 10,000 employees. Astra Tech consists of two business areas, Dental and Healthcare. Astra Tech Dental is a number one on the global dental implant market and Astra Tech Implant System™ is one of the best documented implant systems worldwide. Astra Tech Dental also provides open solutions, such as Atlantis™, patient-specific abutment for all major implant systems. The Astra Tech headquarters are located in Mölndal, Sweden, with production facilities both in Sweden and North America. The company is represented globally by 18 subsidiaries and a total of 2,200 employees.

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DENTSPLY FRIADENT
DENTSPLY Fradent is the implant division of the US company DENTSPLY International. It is a global leader in the distribution of dental implant components and bone and tissue regeneration products, including dental implant components and bone and tissue regeneration materials. The company also provides educational programmes and seminars for dental professionals around the world.

BIOMET 3I
BIOMET 3I, a division of BIOMET, Inc., is a leading manufacturer of dental implants, abutments and related products. Since its inception in 1987, BIOMET 3I has been on the forefront in developing, manufacturing and distributing oral reconstructive products, including dental implant components and bone and tissue regeneration materials.

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Wiley-Blackwell: the world’s premier dentistry publisher, representing the very best in academic research, student learning and clinical expertise. Wiley-Blackwell is honoured to be the publisher of Clinical Oral Implants Research, the official journal of the European Association for Osseointegration, and offers to attendees at this conference a special discount of 20% on all books on display at our booth.
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BTI Biotechnology Institute (established in 1998, with headquarters in Vitoria, Spain) designs, manufactures and distributes the BTI Dental Implant System – a system of titanium dental implants for oral surgery including surgical and prosthetic elements. BTI has designed and commercialised as well the PRGF (Platelet Rich Growth Factor) system – a bone and tissue regeneration system based on the growth factors in human blood’s platelets. BTI is one of the main researchers in the world in regenerative growth factors and gene-leaders in training courses, workshops and conferences all around the world.

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E-mail: info@btibi-implant.es
Web site: www.btibi-implant.es

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Materialise Dental is the world market leader in 3D Digital Implant Dentistry, offering clinicians a comprehensive 3D system for accurate and predictable implant treatment.

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Peter RÖTHLISBERGER
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Web site: www.thommenmedical.com

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Megagen is a worldwide leader in the dental implant market. The company is based out of Korea and is currently one of the fastest growing implant companies in global market. Megagen offers five different implant systems to clinicians, including the Rescue Super Wide & Short Implant, the most effective Implant System for Molar Reconstruction and the Intermezzo Temporary and Permanent Implant One Piece Implant System with a bendable neck design.
Nowadays, Megagen introduced new AnyRidge implant which has splendid benefits for dentists.

Tobias S. RICHER
Tel: +41 32 510 1600
E-mail: info@tri-implants.com
Web Site: www.tri-implants.com

SOUTHERN IMPLANTS
Southern Implants have been providing innovative solutions to dental professionals since 1987. Striving for service excellence, expanding proven concepts and meeting customer needs leads to our product range being characterised by numerous unique, innovative and award-winning products including the Ga-Axis 12, 24 and 36 degrees angled implants, the MAX wide diameter implant for molar replacement and the Passive Abutment. Keep your practice growing and your patients smiling. Contact Southern Implants today and find out how brighter ideas lead to better results.

Sue ODENDAAL
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Dae Kyu Ryu
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TEKKA
Established in 2000, tekka designs, manufactures and sells innovative medical devices for Cranio-Maxillo-Facial Surgery, Orthodontics and Dental Implants. Thanks to its disruptive approach based on an original sales strategy, an attractive price policy and a high-quality product, tekka has taken only five years to establish itself as France’s No. 1 specialist in Cranio-Maxillo-Facial Surgery and No. 2 in Dental Implants (based on volumes) [1]. tekka is listed on the market Aumagaz of NYSE Euronext Paris since February 14th, 2011.
tekka - 2, 3 de Sacry - 118, au Marshall Mérieux - 69500 Bron - France
[1] Source: Company

SIC INVENT AG
During the last years SIC invent has established its reputation as global operating manufacturer of dental implant systems. SIC invent AG headquartered in Basel, Switzerland is an innovative and dynamic company. Business activities are focused on commercialisation of a marketable line of related-implant products in the field of oral implantology. One surgical tray operates three implant systems! These targets are pursued consequently by intensive research and development in close collaboration with the SIC® Implantology Circle - SIC. The relation with SIC, an interdisciplinary worldwide medical competence network, enables immediate reactions to technological and scientific knowledge as well as prompt realisation of marketable products.

Marion ANSTETT
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NEOBIOTECH CO., LTD.
Neobiotech is a primary dental implant and instrument manufacturer. We envision to provide the best products and services under motto of “Implant service No.1”. Neobiotech is very well known regarding the sinus lift technique. Our TCA (Sinus Crease Approach) and SLA (Sinus Lateral Approach) kits are specialised to doing sinus lift without membrane perforation. Our solution Kit is a fixture remover for failed or old implants. The solution Kit tools are compatible with all types of implant so it is very useful to all dentists. Neobiotech products will give you excellent satisfaction to dentists and patients.

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[1] Source: Company
AESCULAP AG

Quality and reliability - since 1887 the staff and servant of AESCULAP surrounded with a crown serves as the company’s trademark and has been a symbol of quality and reliability for over 140 years. With ERGOPLANT, the ergonomic instrument for dental implantology, AESCULAP is setting new standards. For the first time, it is a standard and complete product range which covers all important indications is available to implantology-oriented dentists. Today, everyday dental practice is made easier all over the world by a multitude of AESCULAP innovations.

[Contact Information]

AMERICAN DENTAL SYSTEMS GMBH

ADJ systems – based in the German town of Velstetten (near Munich) has since 1997 been a successful provider of innovative and high-quality dental products for dentists, dental clinics and laboratories. During this short period the company has become one of the leading specialty dealers in the German-speaking area.

[Contact Information]

ASEPTICO, INC.

Asepto is the leading US manufacturer of advanced electric motors for implant, endo, and restorative dentistry. Our concept is to bring high-end technology to an affordable price point, ensuring the best return on investment in the industry. Asepto motors are compatible with most implant and contra-angle brands. Handpiece calibration adapts the device to the individual contra angle at the time of treatment, resulting in highly accurate speed and torque adjustments. The Asepto 7000-series is an excellent, economical choice for clinicians who want to start their implant practice. The Asepto 7000series provides several additional features, such as dynamometer handpiece calibration, LED microtorque (100-10000-TQ), and customizable display names. Please ask us for a demonstration. Distributor/ OEM inquiries welcome!

[Contact Information]

BIEN-AIR DENTAL SA

A world leader at your service for over 50 years. Producing the best dental instruments to simplify the work of practitioners and constantly improve patient comfort. This has been Bien-Air’s mission since its creation in 1959. Ergonomics, precision and reliability are at the core of the development of every new product. Paying careful attention to professionals every day, Bien-Air has made numerous innovations, always setting the bar higher. A true culture of excellence satisfying perfectly with the tradition of Swiss Made products from the renowned Watch Valley.

[Contact Information]

BRUMABA GmbH & CO. KG

For 30 years, we have been developing operating tables, treatment beds and patient transport chairs for professional use. In a continuous dialogue with our customers, solutions are created that are convincing down to the smallest detail. We have pursued many of these until they are ready for a patent, and then distributed them worldwide, with great success. You can recognise brumaba products from their well-thought-out technology, their aesthetic design, and their unbeatable quality

[Contact Information]

DENDRIS + MÉTAXAS SA

CENDRES-MÉTAXAS roots date back to 1985 and over the years the company located at Bel/Bienne, Switzerland transformed into a dynamic corporate group. The Dental division develops and manufactures precious metal alloys for the crown and bridge technique as well as attachments for ensuring functional and aesthetic host of dentures in prosthodontic dentistry and implant supported reconstructions. Bright history, allied to high-tech technology and know-how is the key to an always promising future. Brands like the Esteticor® alloys, Dalbo®, Dolder® are trendsetters and have become the worldwide standards for overdentures on implant systems. The SFI-Bar® (Stress-Free-Implant-Bar) is the latest overdenture solution on implants.

[Contact Information]

DENTAL RATIO

DENTAL RATIO is active in implant dentistry and oral tissue regeneration, using many of the most advanced technologies and techniques in our field.

[Contact Information]

DENTIS CO., LTD.

DENTSi Co., Ltd aims to be a global leader in manufacturing world-class implant, LED light, CAD, CAM and Surgical guide. We are continuously improving and enhancing our products and take pride in world best quality. HAPTRITEMA coated implant. in room temperature and LUXAZ(Premium Dental LED Light) approved. Premier level of technology of DENTSi Co., Ltd.

[Contact Information]

DENTISURG IMPLANTS GmbH

The family-run business has made a distinguished name for itself in the world of implants for almost 50 years. The company’s worldwide sales network, including representatives in all countries, provides technical and logistic support in implantology for the last 16 years. The latest result is the Biologo® easyDean surgical tray for the machine treatment of the completely packed tray and the biologic® implant system for the planned reliable implant placement of biologo® implants.

[Contact Information]

DENTSPLY SIRONA

The company is a world leader in the development, manufacture and marketing of high-quality medical devices and consumables for dental healthcare. DENTSPLY SIRONA is a leading provider of high-quality products and services for dental healthcare worldwide. DENTSPLY SIRONA’s global presence spans North America, Europe, Asia, Latin America, and the Middle East. DENTSPLY SIRONA offers a wide range of products and services to dental professionals, including dental implants, restorative materials, and digital imaging products.

[Contact Information]
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**ELOS MEDTECH**

Elos Medtech is one of Europe’s leading development and production partners for medical technology products and components. We offer an innovative application-oriented solutions, through concept to finished product, through our Complete Performance concept.

Elos Medtech serves medical technology customers worldwide. As a result of 50 years of experience and having some 400 employees at facilities in Europe and China, we can guarantee expertise, quality and capacity.

Elos Medtech develops and manufactures a host of different products for the medical technology industry, primarily instruments, accessories and implants.

Our quality is documented through ISO 13485 and BEO/MDD 90/42 certificates.

**Erik BORGVARDT**

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**BRONZE SPONSORS**

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**ITI INTERNATIONAL TEAM FOR IMPLANTOLOGY**

An independent academic organisation, the International Team for Implantology (ITI) provides the highest level of research funding for implant dentistry among non-governmental organisations worldwide.

As a leader and innovator in the field of implant dentistry, the ITI provides an influential expert opinion paper, the ITI Treatment Planning Guidelines, for every field of implant dentistry and related tissue biomaterials.

The ITI also provides a platform for postgraduate education in the form of Scholarships for promising young scientists to train for a year with an experienced mentor in an ITI Scholarship Centre.

**ITI Centre**

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**B 83**

**ICX-TEMPLANT® - MEDENTIS MEDICAL Gmbh**

ICX-templant® is a high quality implant system with a very good fit and handling. ICX-templant® is indicated for a wide range of indications. ICX-templant® is used during the dental implant surgery.

**Mr. Alexander SCHOLZ**

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E-mail: scholz@medentis.de
Web site: www.medentis.de

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**B 84**

**IBS Implant**

IBS dental implant system which has patients for dental implant surgery and sinus lifting, and furthermore, most of process required 1 step tool for its dental implant surgery.

**Mark KWAK**

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**B 85**

**ELOS MEDTECH**

Elos Medtech is one of Europe’s leading development and production partners for medical technology products and components. We offer innova...
treatments designed to render medical implants macro-cavities and pores that promote bone formation. Tixos, which is characterised by a tridimensional geometry constituted by interconnected micro and macro-pores, was realised by Direct Laser Metal Forming (DLMF) in collaboration between the research team consisting of National and International experts in tissue engineering since 2003 has been testing an innovative implant surface for orthopaedic applications. The SurfLink® surface is made up of permanently bound phosphonate groups, which is presented to the surrounding implant environment. The SurfLink® surface is designed to give a quicker integration and more predictable bone healing. Osteogenics' engineers, and other surgical accessories meant for simple routine implantology and maxillofacial surgeries.

**LEADER ITALIA SRL**

Established in 1986 to manufacture prosthetic components for implantology, LEADER project and manufacturing departments can nowadays rely on a highly qualified and professional staff as well as on high technology units. The Implant Center comprises two separate performances: Direct Laser Metal Forming technique - creating the revolutionary implant surface. Tixos, which is characterised by a tridimensional geometry constituted by interconnected micro and macro-pores, and this makes bone formation.

**LEADER S.R.L.**

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**MORITA - J. MORITA EUROPE**

The Morita Group is one of the leading manufacturers of technical medical products. The traditional Japanese company has five sales and production bases in Europe and America and produces products. Osteogenics Biomedical is a leader in the development of innovative Guided Tissue Regeneration (GTR) products. Osteogenics Biomedical’s total focus is on developing, producing and marketing the complete line of implant site development. Osteogenics develops, manufactures, and markets the complete line of innovative and minimally invasive techniques for implantology and bone regeneration.

**OSSTELL**

Osstell AB, based in Göteborg, Sweden, specialises in instruments for analysing dental and implant stability. The company’s latest product, Osstell ESR, is an innovative technique in an objective, non-invasive manner using the ultrasound bone density (UBD) scale. Stability Index (SI) values help dentists determine the optimal time to load each implant with a predictable rate of bone loss or bone gain.

**OSTEOGENICS BIOMEDICAL**

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**MAILLEFER INSTRUMENTS**

cCustom-Designed Rotary Instruments for Implantology and Bone Surgery Maillefer is the World's leading manufacturer of ODM instruments for surgical applications since 2003. We are specialised in developing ODM products, for our clients, including twist drills, burrs, reamers, taps, trephines, osteotomes, high-speed instruments, screw drivers, hand instruments, various other instruments and accessories.

**META BY CGM SPA**

Meta was founded in 1997 aiming at simplifying oral surgery and bone regeneration in dentistry. Our goal is to develop innovative and top quality oral surgery and bone regeneration instruments. Meta manufactures SafeScrapper and Microwell-systems to improve bone harvesting as well as SinCrest and Smart Lift, the innovative and minimally invasive techniques for dental implantology and maxillofacial surgeries.

**MORITA**

The Morita Group is one of the leading manufacturers of technical medical products. The traditional Japanese company has five sales and production bases in Europe and America and produces products. As a leader in x-ray diagnostics and endodontics, the company's product portfolio offers high-performance imaging systems up to CBCT systems, treatment units, burrines, straight hand and contra-angle pieces, micro-tools, various other instruments and accessories.

**OMNIA S.P.A.**

For more than 20 years Omnias is developing and producing sterile and non-sterile disposables thanks to our experience in the dental field and to the cooperation with leading surgical laboratories. Our products are aimed at everyday use and realised to avoid infections and cross contamination.

**OSSTELL**

Osstell AB, based in Gothenburg, Sweden, specialises in instruments for analysing dental and implant stability. The company’s latest product, Osstell 3100, is an innovative technique in an objective, non-invasive manner using the ultrasound bone density (UBD) scale. Stability Index (SI) values help dentists determine the optimal time to load each implant with a predictable rate of bone loss or bone gain.
PLANMECA OY

Planmeca Oy, established in 1971, designs and manufactures a full line of high technology dental equipment, including dental care units, panoramic and intraoral X-ray units and digital imaging products. Planmeca Oy, the parent company of the Finnish Planmeca Group, is strongly committed to R&D. The company is a market leader in dental imaging and one of the leading manufacturers in dental technology.

Planmeca is the largest privately owned company in the field and the third largest dental equipment manufacturer in Europe. The Group estimated turnover for 2011 is approximately EUR 700 million with over 2,400 employees.

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Web site: www.planmeca.com

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SOREDEX

SOREDEX® designs, develops and markets dental imaging systems with an emphasis on innovative digital solutions. Operating worldwide, SOREDEX® offers quality imaging systems to help practitioners and patients achieve a strong foundation of oral health understanding of the dental practice. Applying three decades of experience in imaging excellence, we offer reliable and easy-to-use solutions, a modern corporate structure, a strong focus on research & development, vision and a sense of social responsibility mean that SOREDEX® stands for innovation and value in dental X-ray technology.

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W&H DENTALWERK BÜRMOOS GmbH

W&H, which is based in Bürmoos/Austria, is one of the leading providers of precision dental devices in the world. Innovative product and service solutions, a modern corporate structure, a strong focus on research & development, vision and a sense of social responsibility mean that W&H is a successful market player at local and international level. The company has approximately 980 employees throughout the world and exports its products to more than 90 countries. The company operates two production sites in Bürmoos (Austria), one in Brusaporto (Italy) and 19 sales subsidiaries in Europe, Asia and North America.

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E-mail: info@wh.com
Web site: www.wh.com

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TAVDental

Tav Dental is a division of Tex Medical Ltd, a company with four decades of experience in product design, mold fabrication and injection molding. Tex is committed to developing new products that are precise and offer cost-effective solutions. With the expansion of the production facility in Bürmoos, Austria, Tex now operates two production sites in Bürmoos/Austria, one in Brusaporto (Italy) and 19 sales subsidiaries in Europe, Asia and North America.

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TIGRAN TECHNOLOGIES AB

Tigran PTG (Porous Titanium Granules) is the only bone regeneration material that was designed to work together with titanium dental implants. The material is used for sinus lift, peri-implantitis and general bone augmentation applications. Histology and micro-CT show excellent re-osseointegration of implants in peri-implantitis situations. Tigran Brush No 2, the second generation brush launched here at EAO, is significantly more flexible and easy-to-use.

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TECNOSS DENTAL SRL

Tecnos is an innovative, globally active company that develops, produces and delivers premium-quality surgical biomaterials by the brand OsteoBiol®. Tecnos Dental is the Italian sales, marketing and distribution company of Tecnoss Dental Srl established in 1997 in Bologna, Italy. The company designs, develops, manufactures and markets dental imaging systems, with an emphasis on innovative digital solutions. Tecnos Dental is the brand name of Tecnoss Dental Srl.

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USTOMED INSTRUMENTE

+USTOMED is a leading German Dental Instrument manufacturer with an international experience in the field of dental and medical devices and has a long family tradition going back until 1843.

• We are producing a complete range of several thousand different dental and medical dental instruments as well as many specialises for implantology, periodontology, endodontics, microsurgery etc.

• Able to make OEM / custom specific instruments with an own well reputated development department.

• Global experience in the various markets since many decades.

• Covering large stock and guarantees fast and reliable delivery.

• Offering excellent quality instruments made in Germany to competitive prices.

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Visit Wiley-Blackwell’s booth at the European Association for Osseointegration’s 20th Annual Scientific Meeting

Wiley-Blackwell publishes the most significant research journals in dentistry with 22 currently ranked in Thomson ISI® 2010 Journal Citation Reports Dentistry, Oral Surgery & Medicine

Wiley-Blackwell is honoured to be the publisher of the official journal of the European Association for Osseointegration and offers to attendees at this conference a special discount of 20% on all books on display at our booth.