Final Programme

THE 20 - YEAR ANNIVERSARY MEETING

20 years.
What have we learned?

Chairman: Søren Schou, Denmark

October
10-13, 2012

Copenhagen 2012

EUROPEAN ASSOCIATION FOR OSSEOFUSSION

In collaboration with

www.eao-congress.com
<table>
<thead>
<tr>
<th>SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
</tr>
<tr>
<td>02</td>
</tr>
<tr>
<td>04</td>
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<td>24</td>
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<td>28</td>
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<td>49</td>
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<td>98</td>
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</tbody>
</table>
Dear Colleagues.

It is my great pleasure to welcome you to the 20-Year Anniversary Meeting of the EAO in Copenhagen.

Being the 20-Year Anniversary Meeting of the EAO, this meeting is special and provides us with an opportunity to look both at the past as well as into the future. This is why the theme of the meeting is "20 years. What have we learned?"

The programme contains a variety of pre-congress courses and sessions all focusing on topics highly relevant for clinicians working in the field of implant dentistry. Short oral presentations, research competitions, and posters will also update us on the most recent research achievements relevant for implant therapy. Interactive sessions are also included.

A large trade exhibition as well as a range of satellite industry symposia have also been included in the programme.

We will celebrate the EAO’s 20th anniversary with an extended reception on Wednesday for all attendees. There will also be an anniversary dinner on Thursday for the EAO members.

In addition, Copenhagen has many attractions to suit all tastes and interests, many within walking distance of the down-town hotels. These include the 100-year old amusement park Tivoli, the Little Mermaid, Amalienborg Royal Palace, the free town of Christiania, guided canal tours on the harbour, Nyhavn, and the shopping street Strøget.

In addition to sightseeing, Copenhagen boasts an impressive range of museums and theatres. Particularly recommended are the Royal Danish Ballet, the Royal Danish Opera, the Ny Carlsberg Glyptotek, and the National Gallery.

On behalf of the EAO, I would like to extend a warm welcome to everyone who has joined us in Copenhagen this year.

Søren SCHOU
Scientific Chairman
Thursday Oct. 11

Overview

Wednesday Oct. 10

09:00 — 10:00
Exhibition Opening

10:00 — 10:30
Pre-Congress Course 2
Applying cone beam CT imaging in clinical implant practice: step-by-step

11:00 — 11:30
Satellite Industry Symposia

12:00 — 12:30
Pre-Congress Course 1
Microsurgical techniques for soft tissue management: hands-on course

13:00 — 13:30
Welcome Address

13:45 — 14:15
Plenary Session 1
Implant loss and biologic complications

14:30 — 15:00
Plenary Session 1
Aesthetic complications

15:00 — 15:30
Parallel Session 1
Aesthetic complications

15:30 — 16:00
Parallel Session 1
Implant loss and biologic complications

16:00 — 16:30
Workshop Certification Programme

16:45 — 17:15
Short Oral Comm. 1

17:15 — 18:00
20-Year Anniversary Reception, Carlsberg Museum

18:00 — 20:00
20-Year Anniversary Dinner for EAO Members at Ny Carlsberg Glyptotek
Pre-Congress Courses

Pre-registration to the pre-congress courses is mandatory to attend courses.

**13:00 - 17:00 | ROOM 18-19|

MICROSURGICAL TECHNIQUES FOR SOFT TISSUE MANAGEMENT: HANDS-ON COURSE
Chairpersons: Peter Lindkvist (Denmark), Michael Payer (Austria)

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity/Presenter</th>
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<tbody>
<tr>
<td>15:30 - 16:00</td>
<td>Coffee break</td>
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</table>

Abstracts and speakers cv p. 49

*The figures refer to the abstracts you will find in the COIR supplement

**10:30 - 17:15 | ROOM 20|

APPLYING CONE BEAM CT IMAGING IN CLINICAL IMPLANT PRACTICE: STEP-BY-STEP
Chairpersons: David Harris (Ireland), Keith Horner (United Kingdom), Marc Quirynen (Belgium)

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity/Presenter</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Welcome coffee break</td>
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</table>
| 11:00    | Introduction and EAO Guidelines on CBCT  
David Harris (Ireland) |
| 11:30    | How does CBCT work?  
Reinhilde Jacobs (Belgium) |
| 12:00    | Navigating your way through CBCT images  
Jackie Brown (United Kingdom) |
| 12:30 - 13:30 | Lunch                               |
| 13:30    | Dose, risk, optimisation and justification with CBCT  
Keith Horner (United Kingdom) |
| 14:30    | Interpreting normal anatomy on CBCT images  
Jackie Brown (United Kingdom) |
| 15:00    | Radiological interpretation of disease  
Reinhilde Jacobs (Belgium) |
| 15:30 - 16:00 | Coffee break                        |
| 16:00    | CBCT in implant guided surgery and prosthetic planning, including referral criteria for CBCT in implant dentistry  
Goran Benic (Switzerland) |
| 16:35    | Putting things into perspective: the role of CBCT in implant dentistry  
Hans-Göran Gröndahl (Sweden) |
| 17:05 - 17:15 | Conclusions                        
David Harris (Ireland), Keith Horner (United Kingdom), Marc Quirynen (Belgium) |

Abstracts and speakers cv p. 50 - 53

*The figures refer to the abstracts you will find in the COIR supplement
| EVENING |

20 - YEAR ANNIVERSARY RECEIPT AT THE CARLSBERG MUSEUM

The 20 - Year Anniversary Reception is open to all registered participants and will be held at the Carlsberg Museum. This was built in 1880 - 1890s by the famous Danish brewer, Carl Jacobsen (1842-1914), to house his outstanding collection of modern and classical art.

Timing: 18:00 - 22:00

Guides will be available during the entire reception to inform the attendees about the history of the venue as well as the art objects.

Departure by bus from the Bella Center and from the main city hotels at 17:30

Return by bus from the Carlsberg Museum to the Bella Center and the main city hotels, as from 20:00 every 15 minutes.
Thursday, October 11, 2012

Conference Programme

IMPLANT LOSS AND BIOLOGIC COMPLICATIONS
Chairpersons:
Björn Klinge (Sweden), Theodoros Kapos (United Kingdom)

13:45 - 16:30 | HALL A1 |

Presentation 1 - Interactive vote

13:50
Guidelines for monitoring and maintenance of implants
Lisa Heitz-Mayfield (Australia)

14:15
Presentation 1 - Interactive vote commented by Lisa Heitz-Mayfield

14:20
Presentation 2 - Interactive vote

14:25 011*
An update on the treatment of periimplantitis
Frank Schwarz (Germany)

15:00
Presentation 2 - Interactive vote commented by Frank Schwarz

15:05 - 15:35 Coffee break

15:35
Presentation 3 - Interactive vote

15:40
Renewed implant therapy following esthetic implant failures in the anterior maxilla
Daniel Buser (Switzerland)
Urs Belser (Switzerland)

16:10
Presentation 3 - Interactive vote commented by Daniel Buser & Urs Belser

16:15 - 16:30

Questions sent by the audience and panel discussion chaired by
Björn Klinge and Theodoros Kapos

Participants will be able to ask questions to the speakers
and vote on multiple choice questions using multiple devices
(smartphone, IOS devices, SMS, E-mails)

Abstracts and speakers cv p. 54 - 55

*The figures refer to the abstracts you will find in the COIR supplement
**AESTHETIC COMPLICATIONS**
Chairpersons: Alberto Sicilia (Spain), Luca Cordaro (Italy)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
</tr>
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<tbody>
<tr>
<td>13:45</td>
<td>033* Patient’s aesthetic expectation and satisfaction</td>
<td>Rudolf Fürhauser (Austria)</td>
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<tr>
<td>14:15</td>
<td>034 Surgical factors influencing the aesthetic treatment outcome, including surgical management of aesthetic complications</td>
<td>Stephen Chen (Australia)</td>
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<td>15:05 - 15:35</td>
<td>Coffee break</td>
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<tr>
<td>15:35</td>
<td>035 Prosthetic factors influencing the aesthetic treatment outcome, including prosthetic management of aesthetic complications</td>
<td>Egon Euwe (Italy)</td>
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<tr>
<td>16:15 - 16:30</td>
<td>Panel discussion chaired by:</td>
<td>Alberto Sicilia, Luca Cordaro</td>
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</table>

Abstracts and speakers cv p. 56 - 57

*The figures refer to the abstracts you will find in the COIR supplement

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**HOW TO PREPARE AN APPLICATION FOR THE EAO CERTIFICATION IN IMPLANT-BASED THERAPY**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Chairpersons and speakers: Georg Mailath-Pokorny (Austria), Chantal Malevez (Belgium), Henning Schliephake (Germany)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:05 - 15:35</td>
<td>Coffee break</td>
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</table>

Abstracts and speakers cv p. 58 - 59

*The figures refer to the abstracts you will find in the COIR supplement
**SHORT ORAL COMMUNICATIONS 1**  
Chairpersons: Georg Watzek (Austria), Janicke Liaaen Jensen (Norway)

<table>
<thead>
<tr>
<th>Time</th>
<th>Abstract</th>
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</table>
| 14:00  | Soft tissue contour changes at immediate implants: a randomized controlled clinical study  
**Daniele Cardaroli** (Italy), Lorena Gaveglio, Alessandro Raffredo, Lorenzo Tamagnone |
| 14:15  | Three-year soft and hard tissue outcomes of immediately placed implants  
**Mariano Sanz** (Spain), Denis Cecchinato, Giovanni E. Salvi, Jorge Ferrus, Christoph Ramseier, Jan Lindhe |
| 14:30  | Immediate placement and provisionalization of single-tooth implants involving a definitive individual abutment  
**Jens Hartløv** (Denmark), Peter Kohberg, Søren Ahlmann, Erik Gotfredsen, Niels Trolle Andersen, Flemming Isidor, Søren Schou |
| 14:45  | One-step versus two-steps flapless placement of two-stage dental implants  
**Andrei Mostovei** (Republic of Moldova), Valentin Topalo |
| 15:00  | Coffee break                                                             |
| 15:30  | The implant position influence upon crestal bone using one-step flapless surgery  
Valentin Topalo, Andrei Mostovei, Nicolae Chele** (Republic of Moldova), Oleg Zanoaga |
| 15:45  | Healing of buccal dehiscence defects at implants installed immediately into extraction sockets. An experimental study in dogs  
**Eriberto Bressan** (Italy), Stefano Sivolella, Edoardo Stellini, Zoraya Almagro Urrutia, Daniele Botticelli |
| 16:00  | Outcomes of flapless post-extractive implant with or without soft tissue augmentation: a 2-years randomized clinical trial  
**Leonardo Amorfini** (Italy), Stefano Storelli, Eugenio Romeo |
| 16:15  | Ridge preservation with magnesium-enriched hydroxyapatite: histological evaluation at different time-points  
**David Penarrocha** (Spain), Friedhelm Heinemann, Angelo Sisti, Luigi Canullo |

*The figures refer to the abstracts you will find in the COIR supplement  
** Presenter*
### BASIC RESEARCH

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:45</td>
<td>110*</td>
<td>Development of a bioelectrical gradational porous chitosan electret membrane for guided bone regeneration</td>
<td>Yanying Wang** (China), Ping Gong, Yi Man</td>
</tr>
<tr>
<td>13:55</td>
<td>111</td>
<td>In-vivo assay of viral colonisation on titanium and zirconia abutments: a split mouth study</td>
<td>Husain Harianawala** (India), Supriyaa Kheur</td>
</tr>
</tbody>
</table>

### IMPLANT THERAPY OUTCOMES, PROSTHETIC ASPECTS

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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</thead>
<tbody>
<tr>
<td>14:05</td>
<td>112</td>
<td>The effect of abutment design on soft tissue implant integration</td>
<td>Aleksandra Špadijer Gostović ** (Serbia), Michael Weinlander, Vojislav Leković, Zoran Aleksić, Snježana Čolić, Aleksandar Todorović</td>
</tr>
<tr>
<td>14:15</td>
<td>113</td>
<td>Five-years prospective clinical study of three retention-system for mandibular overdenture</td>
<td>Corina Marilena Cristache** (Romania), Mihai Burlibasa, Ligia Stanca Munteanu, Andrea Cristina Didilescu, Gheorghe Cristache</td>
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</tbody>
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### IMPLANT THERAPY OUTCOMES, SURGICAL ASPECTS

<table>
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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>14:25</td>
<td>114</td>
<td>Objective perioperative factors of pain following implant surgery</td>
<td>Mustafa Ramazanoglu** (Turkey), Berkem Atalay, Emine Nur Ozyuvaci, Hakan Ozyuvaci</td>
</tr>
<tr>
<td>14:35</td>
<td>115</td>
<td>Fate of buccal bone 10 years after early/delayed/late implant placement</td>
<td>Andreas Stavropoulos** (Denmark), Henrik Krarup Nielsen, Rubens Spin Neto, Ann Wenzel, Lars Schropp</td>
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### MATERIAL RESEARCH

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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:45</td>
<td>116</td>
<td>Effects of in-vitro cyclic dislodging on three implant-overdenture attachment systems</td>
<td>Maniko Kobayashi** (Switzerland), Murali Srinivasan, Patrick Ammann, Jean Perriard, Chikahiro Ohkubo, Martin Schimmel</td>
</tr>
<tr>
<td>14:55</td>
<td>117</td>
<td>Dis-/reconnection of laser microgrooved abutments and its impact on soft and hard tissue changes</td>
<td>Gerhard Iglhaut** (Germany), Frank Schwarz, Vladimir Golubovic, Kathrin Becker, Henning Schliephake, Ilja Mihatovic</td>
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### TECHNICAL AND BIOLOGICAL COMPLICATIONS

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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>15:05</td>
<td>118</td>
<td>Efficacy of a diode laser in the treatment of peri-implantitis</td>
<td>Volkan Anci, Cuneyt Karabuda** (Turkey), Volkan Arisan, Guven Kulekci, Nursen Topcu</td>
</tr>
<tr>
<td>15:45</td>
<td>119</td>
<td>Knowledge and awareness regarding bisphosphonate-related osteonecrosis of the jaws among dentists</td>
<td>On-Yu Bae** (Republic of Korea), Su-Hwan Kim</td>
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### TISSUE AUGMENTATION AND ENGINEERING

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>15:55</td>
<td>120</td>
<td>Comparative clinical study of two different osteoconductive materials in bilateral sinus augmentation.</td>
<td>Radia Hrchi** (Spain), Joan Pi-Anfruns, Joan Pi-Urgell</td>
</tr>
<tr>
<td>16:05</td>
<td>121</td>
<td>Melatonin promotes angiogenesis during repair of bone defects</td>
<td>Maria Piedad Ramirez-Fernández** (Spain), José Eduardo Maté-Sánchez de Val, José Luis Calvo-Guirado, Rafael Arcesio Delgado-Ruiz, Bruno Negri, Laura López-Mari, Cristina Calabria-Zapata, Guillermo Pardo-Zamora, Gerardo Gómez-Moreno, Javier Guardia</td>
</tr>
</tbody>
</table>

*The figures refer to the abstracts you will find in the COIR supplement*

** Presenter
09:00 - 12:30 | HALL A1 |

REVOLUTIONARY IDEAS WORTH SPREADING ACCORDING TO THE EAO JUNIOR COMMITTEE
Chairpersons: Isabella Rocchietta (Italy), Theodoros Kapos (United Kingdom)

09:00
- Peri-implantitis and infection therapy from an orthopaedic perspective
  Mathias Glehr (Austria), Andrej Trampuz (Switzerland)

09:30
- Intolerance reactions to titanium-based materials
  Peter Thomas (Germany)

10:00 - 10:30 Congress Ceremony

10:30 - 11:00 Coffee break

11:00 017*
- The virtual patient / customized implants
  Jos Van der Sloten (Belgium)

11:30
- Back to the future: where are we going with technology enhanced learning (TEL)?
  Patricia Reynolds (United Kingdom)

12:00 - 12:30
Panel discussion chaired by:
  Isabella Rocchietta, Theodoros Kapos

Abstracts and speakers cv p. 64 - 65

*The figures refer to the abstracts you will find in the COIR supplement

09:00 - 10:00 | HALL A2 |

AN UPDATE ON TREATMENT OF PATIENTS WITH CONGENITALLY MISSING TEETH
Chairpersons: Pascal Valentini (France), Daniel Wismeijer (Netherlands)

09:00 036*
- Orthodontic aspects
  Karin Becktor (Denmark)

09:30 037
- Implantological aspects
  Robert Haas (Austria)

10:00 - 10:30 Congress Ceremony

10:30 - 11:00 Coffee break

Abstracts and speakers cv p. 66 - 67

*The figures refer to the abstracts you will find in the COIR supplement
10:00 - 10:30

CONGRESS CEREMONY
Chairperson: Søren Schou (Denmark)

10:00 - 10:05
Tivoli Garden Boy Band.  
18-boy tambour band playing flutes and drums

10:05 - 10:15
European Association for Osseointegration (EAO).  
An update (Søren Schou, Denmark)

10:15 - 10:20
Global Council for Osseointegration (GCO).  
An update (Christoph Hämerle, Switzerland)

10:20 - 10:25
Tivoli Garden Boy Band.  
18-boy tambour band playing flutes and drums

10:25 - 10:30
Introduction to Denmark and closure of Congress Ceremony

11:00 - 12:30
HALL A2

3rd EAO CONSSENSUS CONFERENCE:  
MAIN CONCLUSIONS AND CLINICAL RECOMMENDATIONS
Chairpersons:  
Christoph Hämerle (Switzerland), Marc Quirynen (Belgium), Björn Klinge (Sweden)

11:00 038*
What is a consensus conference?  
Christoph Hämerle (Switzerland)

11:10 039 040
Group 1:  
Implant survival and complications  
Tomas Albrektsson (Sweden), Nikolaos Donos (United Kingdom)

11:30 041 042
Group 2:  
Peri-implant tissue destruction  
Björn Klinge (Sweden), Jürg Meyle (Germany)

11:50 043a 043b
Group 3:  
Computer-aided implant therapy and soft and hard tissue aspects  
Alberto Sicilia (Spain), Daniele Boticelli (Italy)

12:10 044
Group 4:  
Reconstructions on implants  
Klaus Gottfredsen (Denmark), Anselm Wiskott (Switzerland)

Abstracts and speakers cv p. 68 - 73

*The figures refer to the abstracts you will find in the COIR supplement
**Title**: SHORT ORAL COMMUNICATIONS 2  
**Chairpersons**: Friedrich W. Neukam (Germany), Irena Sailer (Switzerland)

<table>
<thead>
<tr>
<th>Time</th>
<th>Abstract ID</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>09:00</td>
<td>080*</td>
<td>Biomolecular and μCT evidences of remodeling grafts fixed with cyanoacrylate</td>
<td>Salata</td>
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<td></td>
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<td>Luiz A. Salata**, Viviane C. Mariguella, Gustavo Grossi-Oliveira, Antonio A. Antunes, Mario Taba Jr</td>
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<tr>
<td>09:15</td>
<td>081</td>
<td>Osteotome sinus floor elevation with or without grafting: a 3-year randomized controlled study</td>
<td>Si</td>
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<td>Misi Si**, Longfei Zhuang, Hongchang Lai</td>
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<tr>
<td>09:30</td>
<td>082</td>
<td>Maxillary sinus augmentation for implant placement: clinical, histologic and histomorphometric study in 75 patients</td>
<td>Zabaras</td>
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<td></td>
<td>Dimitrios Zabaras, Ioannis Gisakis**, Vassilios Petsinis, Spyros Bouboulis, Athanasios Spanos, Konstantinos Alexandrides</td>
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<tr>
<td>09:45</td>
<td>083</td>
<td>Impact of citric acid etching on biocompatibility and osseous organisation of a natural bovine bone mineral</td>
<td>Rothamel</td>
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<td>Daniel Rothamel**, Tim Fienitz, Kathrin Berndsen, Matthias Kreppel, Ralf Smeets, Joachim Zöller</td>
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<tr>
<td>10:00 - 10:30</td>
<td></td>
<td>Congress Ceremony</td>
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<td>10:30 - 11:00</td>
<td></td>
<td>Coffee break</td>
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<tr>
<td>11:00</td>
<td>084</td>
<td>Impact of matrix density of collagen grafts on early tissue response and biodegradation. A histomorphometrical study in rats</td>
<td>Rothamel</td>
</tr>
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<td></td>
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<td>Daniel Rothamel, Tim Fienitz**, Yasmin Barth, Arndt Happe, Matthias Kreppel, Joachim Zöller</td>
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<tr>
<td>11:15</td>
<td>085</td>
<td>Implant induced post-traumatic inferior alveolar nerve neuropathy</td>
<td>Fanaras</td>
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<td></td>
<td>Nikolaos Fanaras**, George Paolinelis, Zehra Yilmaz, Tara Renton</td>
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<tr>
<td>11:30</td>
<td>086</td>
<td>Dimensional alterations of extraction site after different socket preservation techniques - a volumetric study</td>
<td>Thalmair</td>
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<td>Tobias Thalmair**, Stefan Fickl, Marc Hinze, David Schneider, Hannes Wachtel</td>
<td></td>
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<tr>
<td>11:45</td>
<td>087</td>
<td>Sinus elevation with and without grafting: a 3-year prospective study</td>
<td>Nedir</td>
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<tr>
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<td>Rabah Nedir**, Nathalie Nurdin, Semaan Abi Najm, Jean-Pierre Bernard, Mark Bischof</td>
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<tr>
<td>12:00</td>
<td>088</td>
<td>Infection rates after sinus floor elevation with and without the use of bone collectors</td>
<td>Purcz</td>
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<td>Nicolai Purcz**, Marc Oetke, Marcus Will, Volker Gassling, Jörg Wiltfang</td>
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<tr>
<td>12:15</td>
<td>089</td>
<td>Radiographic 2-years follow-up after complex augmentation by deduced triggering of stem cells based on a bionic approach</td>
<td>Heine</td>
</tr>
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<td>Joerg Heine**, Augustinus Bader, Tina Maria Siewert, Quin Liu, Yahya Acil, Jörg Wiltfang</td>
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</tr>
</tbody>
</table>

Abstracts and speakers cv p. 74 - 75

*The figures refer to the abstracts you will find in the CDIR supplement*  
** Presenter
11:00 - 12:20 | AUDITORIUM 15 |

**BASIC RESEARCH COMPETITION**
Chairpersons: David Harris (Ireland), Robert Haas (Austria)

11:00 054*  - Bending moments of zirconia and titanium implant abutments supporting all-ceramic crowns after aging  
Sven Mühlemann ** (Switzerland), Thomas C. Truninger, Bogna Stawarczyk, Christoph H.F. Hämmerle, Irena Sailer

11:20 055  - Maxillary sinus floor augmentation with Bio-Oss and autogenous bone  
Thomas Jensen ** (Denmark), Søren Schou, Patricia A. Svendsen, Julie L. Forman, Hans Jørgen G. Gundersen, Hendrik Terheyden, Palle Holmstrup

11:40 056  - Evaluation of SLActive® implants in grafted and non grafted sheep sinuses  
Alexander Philipp ** (Switzerland), Warwick Duncan, Thomas Attin, Christoph Hämmerle *, Patrick Schmidlin

12:00 057  - Effects of immediate and delayed implant loadings on trabecular structures: a cone-beam CT evaluation  
Yan Huang ** (Belgium), Jeroen Van Dessel, Xin Liang, Maarten Depypere, Guowu Ma, Weijian Zhong, Ivo Lambrecht, Frederik Maes, Reinhilde Jacobs

Speakers cv p.76

*The figures refer to the abstracts you will find in the COIR supplement  
** * Presenter
To celebrate its anniversary the EAO is pleased to introduce a new topic and propose an innovative type of session. Join us during this unconventional Plenary Session organized as a TV Show with interviews, discussions and display of videos and reportages. Scientific and non-scientific professionals will share their experience on how human performance can be affected by many factors.

During the session you will learn on:

- Why and how human factors concepts have reduced the accident rate in aviation
  *Bo Nielsen (Denmark)*

- Time pressure and stress at work: What is the impact in the failure occurrence?
  *René Amalberti (France)*

- Management of unanticipated adverse events: applying it into everyday practice
  *Kenji W. Higuchi (USA)*

In addition throughout the workshop Dr Isabella Rocchietta will tell true stories highlighting the role of human factors in errors and complications. The entire session will be conducted by a professional journalist, Ms Mélodie Szymczak.

Abstracts and speakers cv p. 78 - 79

*The figures refer to the abstracts you will find in the COIR supplement*
14:00 - 16:30 | HALL A2 |

**IMPLANTS, MASTICATORY FUNCTION AND PARAFUNCTIONS**
Chairpersons: Flemming Isidor (Denmark), Ailsa Nicol (United Kingdom)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
</table>
| 14:00 | 045      | Masticatory function and implants  
         |          | Mats Trulsson (Sweden)            |
| 14:40 |          | Parafunctions and implants        
         |          | Daniele Manfredini (Italy)        |
| 15:00 |          | Coffee break                      |
| 15:30 |          | Mechanic complications, including treatment  
         |          | Bjarni Pjetursson (Iceland)       |
| 16:15 |          | Panel discussion chaired by:      
         |          | Flemming Isidor (Denmark), Ailsa Nicol (United Kingdom) |

Abstracts and speakers cv p. 80 - 81

*The figures refer to the abstracts you will find in the COIR supplement*
Short Oral Communications 3

Chairpersons: Pascal Valentini (France), Klaus Gotfredsen (Denmark)

14:00 090* | Clinical comparison between screwretained and removable prostheses on maxilla implants
Anders Örtorp ** (Sweden), Sanjiv Kanagaraja, Ingela Engfors, Stig Karlsson, Pablo Cepedes Carlsson, Magnus Hakeberg

14:15 091 | Factors influencing removal of the cement excess in implant-supported restorations. A prospective clinical study
Tomas Linkevicius ** (Lithuania), Egle Vindasiute, Algirdas Puisys, Natalja Maslova, Vytastе Peciuliene, Laura Linkeviciene

14:30 092 | Combined alumina-zirconia implant-supported single tooth restorations in anterior areas: 5 year clinical results
Mario Imburgia ** (United Kingdom)

14:45 094 | Submerged vs. transmucosal placement of bone level implants: 3-year results of a multicenter RCT
Carl-Johan Ivanoff ** (Sweden), Christoph Hämmerle, Ronald Jung, Mariano Sanz, Stephen Chen, William Martin, Jochen Jackowski, Luca Cordaro, Jeffrey Ganeles, Dieter Weingart, Jörg Wiltfang, Michael Gahlert

15:00 - 15:30 Coffee break

15:30 093 | Clinical evaluation of implant supported zirconia restorations with transverse fastening screws: 30 months clinical results
Mario Imburgia ** (United Kingdom)

15:45 095 | One-piece ceramic oral implants: three-year results on single tooth replacement from a prospective cohort investigation
Ralf-Joachim Kohal ** (Germany), Frank Butz, Herman Sahlin

16:00 096 | Zirconia and titanium implant abutments for single-tooth implant prostheses in posterior regions. A five-year prospective study
Diego Lops ** (Italy)

16:15 097 | Do cement remnants always lead to peri-implant disease? A retrospective case analysis
Tomas Linkevicius ** (Lithuania), Algirdas Puisys, Egle Vindasiute, Natalja Maslova, Laura Linkeviciene, Peteris Apse

Speakers cv p. 82 - 83

*The figures refer to the abstracts you will find in the COIR supplement
** Presenter
14:00 - 16:30

BASIC RESEARCH COMPETITION
Chairpersons: David Harris (Ireland), Robert Haas (Austria)

14:00 058*

**Effect of uv-treatment on the osteoconductivity of different zirconia-based materials**
Miha Brezavšček ** (Germany), Ahmed Fawzy, Ralph J. Kohal, Taskin Tuna, Maria Bächle, Jens Fischer, Wael Att

14:20 059

**Low level laser therapy induces the expressions of BMP-2, osteocalcin, and TGF-β1 in hypoxic-cultured human osteoblasts**
Yong-Deok Kim * * (Republic of Korea), Won-Wook Song, Se-Jeong Pho, Jae-Yeon Lee, Young-Chae Noh, Jung-Han Lee, Jung-Bo Huh

14:40 060

**Influence of surface modifications on osseointegration of zirconia dental implants: a histomorphometric study in miniature pigs**
Nikola Saulacic ** (Switzerland), Dieter Bosshardt, Robert Erdösi, Daniel Buser

15:00 - 15:30

Coffee break

15:30 061

**Relation of jawbone density to skeletal bone density**
Joe Merheb ** (Belgium), Andy Temmerman, Lars Rasmusson, Alexander Kübler, Andreas Thor, Marc Quirynen

15:50 062

**Effect of ultraviolet photofunctionalization on the bioactivity of different zirconia implant materials**
Taskin Tuna ** (Germany), Martin Wein, Ralf-Joachim Kohal, Brigitte Altmann, Michael Swain, Thorsten Steinberg, Jens Fischer, Wael Att

16:10 063

**Bone remodeling and implant osseointegration in fresh-frozen allografts and autografts**
Rubens Spin-Neto ** (Denmark), Andreas Stavropoulos, Felipe Leite Coletti, Rafael Silveira Faeda, Luis Antonio Violin Dias Pereira, Elcio Marcantonio Jr

Speakers cv p. 77

*The figures refer to the abstracts you will find in the COIR supplement

** *Presenter
09:00-12:15 | HALL A1 |

**FUTURE PERSPECTIVES OF IMPLANT DENTISTRY**
Chairpersons: Henning Schliephake (Germany), Ronald Jung (Switzerland)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>09:00</td>
<td>020 years with bone augmentation and implant surgery. What have we learned? Massimo Simion (Italy)</td>
</tr>
<tr>
<td>09:30</td>
<td>023* 20 years with implant-supported prosthetics. What have we learned? Daniel Wismeijer (Netherlands)</td>
</tr>
<tr>
<td>09:50</td>
<td>024 Will it be possible to grow a jaw in the future? Riitta Suuronen (Finland)</td>
</tr>
<tr>
<td>10:10</td>
<td>025 Will it be possible to grow a tooth in the future? Irma Thesleff (Finland)</td>
</tr>
<tr>
<td>10:30-11:00</td>
<td>Coffee break</td>
</tr>
<tr>
<td>11:00</td>
<td>026 Future perspectives of computer-guided implant treatment planning Goran Benic (Switzerland)</td>
</tr>
<tr>
<td>11:20</td>
<td>027 Future perspectives of bioactive implant surfaces Ann Wennerberg (Sweden)</td>
</tr>
<tr>
<td>11:40</td>
<td>028 Future perspectives of implant prosthetics Asbjørn Jokstad (Canada)</td>
</tr>
<tr>
<td>12:00-12:15</td>
<td>Panel discussion chaired by: Henning Schliephake, Ronald Jung</td>
</tr>
</tbody>
</table>

Abstracts and speakers cv p. 84-87

*The figures refer to the abstracts you will find in the COIR supplement

12:45-13:00 | HALL A1 |

**AWARDS CEREMONY**
Chairperson: Søren Schou (Denmark)
09:00 - 12:15 | HALL A2 |

MEDICAL DISEASES AND IMPLANTS
Chairpersons: Palle Holmstrup (Denmark), Sven Erik Nørholt (Denmark)

09:00
- Chronic medical diseases today and in the future
  Allan Flyvbjerg (Denmark)

09:30 049*
- Chronic medical diseases and implants
  Nikos Mardas (United Kingdom)

10:00 050
- Medication and implants
  Jörg Wiltfang (Germany)

10:30 - 11:00
- Coffee break

11:00 051
- Allergic reactions to titanium and prosthetic materials
  Gottfried Schmalz (Germany)

11:30
- Diseases of the oral mucosa and implants
  Mats Jontell (Sweden)

12:00 - 12:15
- Panel discussion chaired by:
  Palle Holmstrup, Sven Erik Nørholt

Abstracts and speakers cv p. 88 - 91

*The figures refer to the abstracts you will find in the COIR supplement

12:45 - 13:00 | HALL A1 |

AWARDS CEREMONY
Chairperson: Søren Schou (Denmark)
**CLINICAL RESEARCH COMPETITION**  
Chairpersons: Alberto Sicilia (Spain), Luca Cordaro (Italy)

<table>
<thead>
<tr>
<th>Time</th>
<th>Number</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>064*</td>
<td>Evaluation of bone grafting materials in extraction sockets: clinical, histologic, and histomorphometric study in humans</td>
<td>Ioannis Gisakis**, (Greece), Demos Kalyvas, Konstantinos Tosios, Vasilios Petsinis, Konstantinos Alexandridis</td>
</tr>
<tr>
<td>09:20</td>
<td>065</td>
<td>Immediate versus delayed implants for ridge preservation in aesthetic zone</td>
<td>Giuseppe Lizio, Francesco Pieri**, (Italy), Giuseppe Corinaldesi, Claudio Marchetti</td>
</tr>
<tr>
<td>09:40</td>
<td>066</td>
<td>Effect of systemic antibiotics on implant therapy - a multi-centre randomised clinical trial (RCT)</td>
<td>Wah Ching Tan**, (Singapore), Nikolaos Mattheos, Jie Han, Bjarne E. Pjetursson, Martina Lulic, Alex Tsai, Fabio Vignoletti, Niklaus P. Lang</td>
</tr>
<tr>
<td>10:00</td>
<td>067</td>
<td>Customized zirconium abutments in esthetic areas: 5-years prospective study</td>
<td>Leonardo Amorfini**, (Italy), Stefano Storelli, Eugenio Romeo</td>
</tr>
<tr>
<td>10:20</td>
<td>068</td>
<td>Immediate single implant treatment in the aesthetic zone: 1 year results of a randomized controlled trial</td>
<td>Kirsten Slagter**, (Netherlands), Heny Meijer, Laurens den Hartog, Arjan Vissink, Gerry Raghoebar</td>
</tr>
<tr>
<td>10:40</td>
<td></td>
<td>Coffee break</td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>069</td>
<td>Lateral ridge augmentation with different Bio-Oss®/bone compositions - radiological and histological evaluation</td>
<td>Arne Mordenfeld**, (Sweden), Canina B. Johansson, Tomas Albrektsson, Mats Hallman</td>
</tr>
<tr>
<td>11:20</td>
<td>070</td>
<td>Crestal bone stability around implants after mucosal tissue thickening</td>
<td>Algirdas Puisys**, (Lithuania), Tomas Linkevicius, Egle Vindasiute, Natalija Maslova, Markus Schlee, Simonas Grybauskas</td>
</tr>
<tr>
<td>11:40</td>
<td>071</td>
<td>Vertical bone augmentation versus 6.3-mm-long implants. A 3-year post-loading RCT</td>
<td>Pietro Felice**, (Italy), Laura Piana, Luigi Checchi, Roberto Pistilli, Marco Esposito</td>
</tr>
</tbody>
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** Presenter
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<th>Time</th>
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<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>098</td>
<td>Cell functions of human osteoblasts on uv-bioactivated roughened implant surfaces</td>
<td>Brigitte Altmann**, Ralf-Joachim Kohal, Thorsten Steinberg, Pascal Tomakidi, Maria Bächle-Haas, Ann Wennerberg, Wael Att</td>
</tr>
<tr>
<td>09:15</td>
<td>099</td>
<td>Human blood plasma protein adsorption on amine functionalized titanium surface</td>
<td>Plinio Mendes Senna**, Bruno Sales Sotto-Maior, William Custodio, Adriana Franco Paes Leme, Altair Antoninha Del Bel Cury</td>
</tr>
<tr>
<td>09:30</td>
<td>100</td>
<td>Platform switching vs platform match: interim results from a prospective randomized-controlled multicenter study</td>
<td>Salomão Rocha**, Wilfried Wagner, Jörg Wiltfang, Fernando Guerra, Maximilian Moergel, Eleonore Behrens, Pedro Nicolau</td>
</tr>
<tr>
<td>09:45</td>
<td>102</td>
<td>Radiographic evaluation of marginal bone levels and prognosis of platform-switched implants. A 5-year prospective study</td>
<td>Diego Lops** (Italy)</td>
</tr>
<tr>
<td>10:00</td>
<td>103</td>
<td>Use of ITI SLA short implants (6mm) in single-tooth replacement: a prospective, controlled, randomized multicenter clinical study</td>
<td>Fabio Rossi**, Gianfranco Casaretti, Enzo De Santis, Daniele Botticelli</td>
</tr>
<tr>
<td>10:15</td>
<td>104</td>
<td>Microbiology of 2 implant systems, placed following a split mouth randomised protocol, at 12th year of loading</td>
<td>Nele Van Assche**, Pisha Pittayapat, Reinhilde Jacobs, Martine Pauwels, Wim Teughels, Marc Quirynen</td>
</tr>
<tr>
<td>11:00</td>
<td>105</td>
<td>Clinical evaluation of an alumina-toughened oral implant: 3-year follow-up - soft and hard tissue response</td>
<td>Markus Sperlich**, Jasmin Bernhart, Ralf-Joachim Kohal</td>
</tr>
<tr>
<td>11:15</td>
<td>106</td>
<td>New method and software prototype for automatized measuring of crestal bone levels around implants</td>
<td>Ana Messias**, Pedro Cunha, Salomão Rocha, Rita Reis, Miguel López, Pedro Nicolau</td>
</tr>
<tr>
<td>11:45</td>
<td>108</td>
<td>Nanocoating with pectins - a novel surface for osseointegrated titanium implants</td>
<td>Katarzyna Gurzawska**, Niklas Jørgensen, Kai Dirschert, Rikke Svava, Susanne Nielsen, Peter Ulvskov, Kenneth Haugshøj, Yihua Yu, Bodil Jørgensen, Klaus Gottfredsen</td>
</tr>
<tr>
<td>12:00</td>
<td>109</td>
<td>How to establish a suitable surface roughness for zirconia implant abutments under laboratory conditions?</td>
<td>Arndt Happe**, Nicolas Röling, Iordan Beuer, Andreas Schäfer, Hans-Joachim Nickening, Daniel Rothamel</td>
</tr>
</tbody>
</table>

*The figures refer to the abstracts you will find in the COIR supplement

** Presenter
SATURDAY AFTERNOON

Saturday, October 13, 2012

Conference Programme

13:00 - 15:30  |  HALL A1 |

PERIODONTITIS AND IMPLANTS
Chairpersons:
Nikolaos Donos (United Kingdom), David Nisand (France)

13:00  Presentation 1 - Interactive vote
13:05  029* 20 years with treatment of periodontitis-susceptible individuals. What have we learned? Björn Klinge (Sweden)
13:25  Presentation 1 - Interactive vote commented by Björn Klinge
13:30  Presentation 2 - Interactive vote
13:35  030 Periodontitis-susceptible individuals: General principles of treatment planning Thomas Flemmig (USA)
14:00  Presentation 2 - Interactive vote commented by Thomas Flemmig
14:05  Presentation 3 - Interactive vote
14:10  031 Tooth-supported prosthesis in periodontitis-susceptible individuals Lars Laurell (Sweden)
14:35  Presentation 3 - Interactive vote commented by Lars Laurell
14:40  Presentation 4 - Interactive vote
14:45  Implant-supported prosthesis in periodontitis-susceptible individuals Niklaus Lang (China)
15:10  Presentation 4 - Interactive vote commented by Niklaus Lang
15:15 - 15:30 Questions sent by the audience and panel discussion chaired by Nikolaos Donos and David Nisand

Participants will be able to ask questions to the speakers and vote on multiple choice questions using multiple devices (smartphone, iOS devices, SMS, E-mails)

Abstracts and speakers cv p. 96 - 97

*The figures refer to the abstracts you will find in the COIR supplement

15:30 - 15:45  |  HALL A1 |

CLOSING CEREMONY AND PRESENTATION OF EAO 2013 IN DUBLIN
Chairperson: Søren Schou (Denmark)
Plastic-Esthetic Periodontal and Implant Surgery
Otto Zuhr and Marc Hürzeler

In this book, the authors provide the first comprehensive overview of the basic principles, indications and clinical techniques of plastic-esthetic periodontal and implant microsurgery.
It is an exemplary blend of scientific knowledge and practical experience. All salient issues are analysed on the basis of the available scientific literature and the current clinical evidence. The microsurgical procedures presented in the book are explained step-by-step in meticulously illustrated case examples. Checklists for the necessary materials, instruments and work steps are added to facilitate practical implementation of the microsurgical procedures. Last but not least, the authors provide instructions on how to manage all major complications of each procedure.
This book is without doubt one of the foremost oral surgery publications in recent years and is a must for every implantologist and periodontist.

ISBN: 978-1-85097-226-6 £ 268 / € 320

Zygomatic Implants; The Anatomy-Guided Approach
Carlos Aparicio

This book reviews the state of the art of zygomatic implants and outlines several new surgical techniques and adjunctive procedures. The authors cover the fundamentals of using zygomatic implants, including the rationale behind the approach, anatomical and biomechanical considerations, imaging of the zygoma, possible sinus reactions, contraindications, prosthodontic considerations, and management of complications. This book will arm clinicians with clear guidelines for using zygomatic implants in the rehabilitation of edentulous patients.


Implant Therapy: Integrated Treatment Planning
Mauro Merli

The current emphasis on patient-centred medicine necessitates revision of the diagnostic and therapeutic process toward an integrated treatment plan that promotes collaboration among the specialties as well as the patient’s active participation. This text describes how to implement such a treatment plan for patients requiring implant treatment in an area of esthetic and/or functional interest. It begins by assessing the potential risk factors, then delves into the process of constructing a diagnosis, and then describes stepwise many of the surgical procedures currently in use.

ISBN: 978-1-85097-216-7 £ 268 / € 320

Please do visit us at stand G17 during the EAO congress, for an opportunity to view these titles and our ever-increasing range of dental publications.
**ASTRA TECH**

**A Good Morning with Astra Tech Dental**

The theme for A Good Morning with Astra Tech Dental is “Creating the future by going back to the roots”, which also was the theme for our very successful third world congress, held in Gothenburg in May this year. Without history there is no future and sometimes it is important to look back, understand and learn from the past, in order to embrace the future.

Over the years the Astra Tech Implant System™ innovations have been many, the groundbreaking ones are comprised in the well-known BioManagement Complex™. With Atlantic™ patient-specific CAD/CAM abutments we have continued to follow our own path, providing advanced solutions with human biology and the patient’s well-being in mind. This is illustrated in the Atlantis BioDesign Matrix™. These two concepts show our holistic approach to implant dentistry – function, beauty and biology in perfect harmony. The respect for biology and patient safety has always been the driving force behind our strong focus on science, documentation and long-term clinical follow-up.

The speakers this morning will cover different aspects of the theme moderated by Dr. Michael Norton, UK: Professor Jan Lindhe, Sweden

Marginal bone loss and peri-implantitis among dental implant patients

Dr. Ingeborg De Kok, USA

Customized abutments for highly esthetic demands

Professor Clark Stanford, USA

In a drive to perfection, the ongoing evolution of the Astra Tech Implant System™

You are very welcome to meet the future in our Inspirational Center where you will find old and new friends from Astra Tech Dental and DENTSPLY Friadent joined in the new powerhouse of implant dentistry – DENTSPLY Implants.

**DENTSPLY FRIADENT**

**Update on Tissue Care: sharing learnings and new findings from science and practice**

Check in to an exciting journey spanning the world of microorganisms to real clinical evidence. Update your knowledge on the successful maintenance of stable peri-implant hard and soft tissues over time and discuss your questions with our board of independent researchers and experienced clinicians.

- Annette Møller: Tissue Care in microbiology: Biofilms in the oral cavity and on implant surfaces. Fascinating insights on the microbiological processes of biofilms in the oral cavity and on different implant surfaces, documented with unique picture material. Get inspired by exploring this microcosm which has such a vital influence on tissue health.

- Karl Andreas Schlegel: Tissue Care in basic research: Implant surfaces and new bone formation. From the oral cavity to the bone, Andreas Schlegel will share and discuss new study results on the impact of implant surfaces on osseointegration and thus for the long-term success of dental implants.

- Theo Koutouzis: Tissue Care in pre-clinical and clinical trials: The implant-abutment interface. On the way from science to practice, we will take a look at the relevance of a conical interface for avoiding micromovement or bacterial contamination. Evidence will be presented for the effectiveness of this connection in terms of long-term tissue preservation.

- Nigel Sayer: Tissue Care in daily practice: Compelling esthetics on the long term. Let’s get clinical. Nigel Sayer, renowned Tissue Care specialist with over ten years of experience, will present superior esthetic results and discuss clinical aspects and evidence for enduring tissue stability.

**IMPLANT DIRECT**

**Dr. Gerald Niznick**

**Simply Smarter Implantology**

Technological advances and recent economic factors have shifted the implant industry toward affordable care. This lecture will explore the evolution of implant designs, separating fact from fiction, and will mark the launch of a new InterActive™ generation of implants with All-in-1 Packaging that provides the accuracy of an open tray transfer with the simplicity of a closed tray transfer. Other treatment options to be discussed using slides, 3D graphics and surgical videos include immediate replacement of a single lower molar to a variety of affordable treatment options for edentulous patients with application-specific, 1-piece implants.

**Learning Objectives:**

- Utilizing the latest innovations to meet patients’ financial needs without compromising clinical success

- Minimizing bone grafting in compromised implant sites

- Mastering treatment of the fully edentulous arch

**Dr. Pedro Peña**

**Graftless treatment of the edentulous maxilla with guided surgery and immediate loading protocols»**

Treating the edentulous maxilla is a challenge in implant dentistry. After multiple extractions an average of three years of denture wearing the amount of bone loss varies greatly. Bone grafting in compromised implant sites is a disaster and really jeopardizes implant treatment. 3D imaging and planning software can help us in the achievement of the better treatment for our patients. Immediate loading protocols and clinical cases will be showed during this lecture as well as long term results using Replant implants together with a virtual planning software.

**Dr. Gary O’Brien**

**Stock Abutment Use from Single Tooth to Full Mouth Reconstruction»**

Implant Prosthetics has become a significant part of conventional dentistry because of simplified surgical procedures and versatile prosthetic applications. This started 30 years ago with the introduction by Dr. Gerald Niznick of the Core-Vent System and advanced with his development of the InterActive™ generation of implants with All-in-1 Packaging that provides the accuracy of an open tray transfer with the simplicity of a closed tray transfer. Other treatment options to be discussed using slides, 3D graphics and surgical videos include immediate replacement of a single lower molar to a variety of affordable treatment options for edentulous patients with application-specific, 1-piece implants.

**Learning Objectives:**

- Mastering treatment of the fully edentulous arch

- Minimizing bone grafting in compromised implant sites

- Mastering treatment of the fully edentulous arch

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BIOHORIZONS
Evolving trends, technologies and techniques in Esthetic and Implant Dentistry

Maurice A. Salama, DMD

This program will present an update on preservation and augmentation techniques and materials to effectively establish an optimal foundation for the functional and esthetic implant restoration.

- Risk factors in anterior implant therapy
- Important diagnostic components for successful treatment design of an esthetic implant restoration
- How and when to successfully incorporate minimally invasive protocols
- How new macro and micro-geometry (Laser-Lok) of implant designs affect treatment planning and outcomes
- New Digital and CAD/CAM technology to optimize minimally invasive anterior implant therapy
- Integration of abutment selection and new ceramic components with soft tissue augmentation procedures to create the most esthetic zone of emergence for implant restorations
- The complexities of determining when to extract or to save a tooth

NOBEL BIOCARE
Celebrate with us!
60 years since the discovery of Osseointegration.
30 years since the landmark Toronto conference

Professor P-I Brånemark discovered osseointegration 60 years ago. Since then, millions of patients around the world have successfully received implants. By applying Professor Brånemark’s protocol these patients have received function, health and esthetics with an improving quality of life. This year’s forum title is “Designing for life – long-term and patient-oriented treatment approaches remain the key to success”. As we are reviewing the experience of more than 5 decades of implant treatments, the focus of the forum is on what we have learned, how to treat patients predictably and how to improve patients’ lives with the perspective of lifelong service. A group of world-renowned leading experts will present, discuss and share their professional lifetime experience in this interactive forum. As part of the audience you have the opportunity to interact with these experts in order to gain maximum learning experience, to shorten your own learning curve and to best serve your patients.

It will be an exciting experience for all of us – so please join us at the Nobel Biocare Industry Forum under the lead of moderator Dr Roland Glauser.

Speakers: Dr Bertil Friberg, Dr Ruben Davé, Dr Egon Euwe, Dr. Peter Moy, Mr Patrick Rutten and Dr Werner Zechner

Welcome.

www.nobelbiocare.com/eao2012

STRAUMANN
Implants for Life – Key success factors for implant treatment

Evidence-based success has resulted in increasing utilization of dental implants in the treatment of all forms of edentulism. This success has led to higher patient expectations in having durable, natural looking and longer lasting implant restorations. With this, we are also faced with continual advances in techniques, materials and technology that promise to provide improved long-term clinical outcomes. The following three presentations will highlight these factors through sharing evidence-based support and clinical examples with the audience.

Moderator
Ronald Jung, Switzerland

Key success factors in the surgical phase
Ronald Jung, Switzerland

Key success factors in the restorative phase
Will Martin, USA

Key success factors to ensure long-term success and satisfaction in implant therapy
Giovanni Salvi, Switzerland

Please check our website for the speakers’ abstracts, CVs and program updates:
www.straumann.com/eao2012
Please join our expert panel to discuss current clinical issues and to gain insights into the 3i T3™ Implant expected to be launched at the BIOMET 3i European Symposium on January 11-12, 2013 in Madrid, Spain. This contemporary hybrid implant has a rougher surface for optimizing osseointegration along the length of the implant body while still having the proven dual acid-etched OSSEOTITE® surface at the coronal part of the implant for mitigating the risk of peri-implantitis. With integrated platform switching, this implant is designed for sustaining aesthetics.

- During the session, Prof. Tiziano Testori will display surgeries in 3D revealing clinical applications and advantages of the new 3i T3 Implant.
- The lecture will be followed by Prof. Alberto Sicilia who will illustrate the advantages and limitations of immediate implant placement.
- The session will be closed by Prof. Paolo Pera and Dr. Tiziano Testori who will share their evidence regarding Full Arch Immediate Loading following the DIEM™2 Protocol.

Prof. Hugo De Bruyn will lead the session as the moderator.

For more information about the speakers, please check our website at www.biomet3i/eao2012

We are looking forward to seeing you in Copenhagen!

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GEISTLICH BIOMATERIALS

Ridge Preservation or Ridge Augmentation?

**Decision Tree for Ridge Preservation**

Prof. Dr. Mariano Sanz, Spain

It is well established that tooth extraction will result in an apico-coronal as well as bucco-lingual reduction of the alveolar ridge, mostly in the buccal aspects of the extraction site. In order to avoid this physiological bone loss clinicians have advocated different therapeutic concepts. This presentation will review both the experimental and scientific evidence, as well as the results from recent systematic reviews evaluating the clinical evidence on the efficacy of these treatment protocols. Finally some clinical recommendations on the use of these therapeutic concepts will be provided supported by clinical documentation on the use of biomaterials with the different surgical approaches.

**New Perspectives on Ridge Augmentation**

Dr. Istvan Urban, Hungary

A newly developed, scientifically documented approach of horizontal GBR will be presented. This technique, also called “sausage technique” utilizes a native, resorbable collagen membrane to completely immobilize a particulated bone graft and thus protect the augmentation site for the initial weeks of maturation. This procedure lessens the need of autogenous bone and leads to decreased patient morbidity. An implementation of this technique into an exciting, new treatment modality for edentulous atrophic maxillary ridges will follow, including some long-time (7 years) follow-up results.

For more information please visit www.geistlich-pharma.com/eao2012

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**BIOMET 3i Presents An Exciting Implantology Experience in 3D**

**GEISTLICH BIOMATERIALS**

**Membran – free techniques for periimplant augmentation and socket preservation**

Two Lectures

- **a) Periimplant hard tissue microstructures after in situ hardening bone substitute grafting**
  - **- 3D – Evaluation by Open-source µCT scan**
  - **Lecturer:** Prof. Dr. Else Maria Pinholt, Copenhagen
  - Professor at the university of Copenhagen and head of the department for oral and maxillofacial surgery at the University of Copenhagen.
  - **Description:** A novel goa1 experimental model simulating the extremely atrophic alveolar ridge served for reconstruction purposes.
  - Dental implants (Astra Tech Osseospeed) were inserted into critical size defects which were reconstructed using in situ hardening biphasic bone substitutes (Easygraft, Easy-Graft Crystal). Healing of the critical size defects were compared to autogenous bone and empty defects, histologically and by synchrotron micro CT-scanning. Methods for evaluation using synchrotron-radiation micro CT-scanning will be discussed.

- **b) Techniques for minimal-invasive augmentation in cases of periodontitis or peri-implantitis in the front**
  - **Lecturer:** Prof. Dr. Walter Lückerath, Bonn
  - Professor at the clinic for prosthodontics, Department of aesthetic and reconstructive dentistry, University hospital Bonn.
  - **Description:** Augmentation concepts for vertical and horizontal bone – and soft tissue defects may be achieved. For both, periodontal defects as well as for bone loss around implants due to inflammatory processes, which may lead up to the loss of the implant, a further progress of the defect may be prevented. Furthermore, a significant volume gain of the hand – and soft-tissue-level in the defect may be achieved. With the help of membrane-free techniques, further minimal-invasive prosthetic reconstruction therapies may be created, which will allow for a more targeted treatment of highly demanding rehabilitation cases.
**NANO BRIDGING MOLECULES**

NBMolecules® welcomes you with a cup of Swiss hot chocolate to discuss

**Fundamental Implant Surface Properties for Optimization of Osseointegration**

SurfLink® Dental surface treatment allows faster and better integration of implants with vital bone, mainly due to its bio-mimicking surface properties. Applicable to most metal and ceramic surfaces (e.g. Titanium and Zirconia) SurfLink® Dental has been proven to significantly speed up osseointegration and improve newly-formed bone quality on machined and roughened implant surfaces. This will potentially improve clinical performance and reduce risk of peri-implantitis.

An introduction will be given by prof. Sven Lindskog, Sweden, on biological implications of implant surface properties.

The first results from a pilot quadruple blinded randomised controlled trial of split-mouth design evaluating safety and efficacy of SurfLink® Dental treated implants will be revealed and commented on by prof. Marco Esposito, Italy.

Prospective case series with SurfLink® Dental treated implants will be presented by Dr. Markus Schlee, Germany, and Dr. Joannis Katsoulis, Switzerland.

The symposium will be followed by an open discussion.

www.NBMolecules.com

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**OSSTELL**

**20 Years with Osstell**

**From the first human trial to a global standard**

20 years ago two scientists shared the frustration of not being able to monitor osseointegration in an accurate, objective and consistent way – beyond their own dexterity and tactile skills. The concept of Resonance Frequency Analysis was developed.

The technique has since then been documented in 500 scientific publications and adopted by > 8 000 clinicians worldwide – becoming a global standard in implant treatment.

All Osstell employees are personally committed to the worldwide adoption of our unique diagnostics technique and to the success of our company. To succeed, we make sure our customers get the unrelenting support and service they deserve.

MODERATOR: Prof. Klaus Gotfredsen, Denmark

SPEAKERS:

Prof. Lars Sennerby, Sweden

The Story So Far – From the First Experimental Equipment to the Most Recent Technique and Findings

Dr. Leonardo Vanden Bogaerde, Italy

Resonance Frequency Analysis as a Diagnostic and Prognostic Aid in Immediate Function: 12 Years of Clinical Experience

Prof. Peter Moy, USA

Establishing Predictable Surgical and Restorative Protocols through Long-term (8 years) Tracking of ISQ Data

The main advantages of Osstell

Manage implants at risk

Monitoring osseointegration is especially valuable when treating patients with risk factors. Osstell gives you an early warning if the biological process is not progressing as expected. It helps you avoid costs due to premature loading and allows you to treat more patients with risk factors in a more predictable manner.

Reduce treatment time

If the initial mechanical stability is high enough, a one-stage approach is often used together with immediate or early loading. By measuring stability with Osstell before final restoration, and comparing the value to the baseline value taken during placement, you gain a better basis for deciding whether to proceed.

Come celebrate 20 years with us!

Kick-start your morning with the latest in science, a glass of pink champagne, and the local specialty – Danish pastry.

Read more about Osstell at www.osstell.com
Posters Area

- Basic research
- Implant therapy outcomes, prosthetic aspects
- Implant therapy outcomes, surgical aspects
- Material research
- Technical and biological complications
- Tissue augmentation and engineering
- Poster Presentation

Exhibition
Poster authors will be presenting their work **on Friday, 12th from 12:30 to 13:30 and on Saturday, 13th from 12:00 to 12:45.**

Each poster refers to a specific topic. Each topic has been assigned with the following colors:
- Basic research
- Implant therapy outcomes, prosthetic aspects
- Implant therapy outcomes, surgical aspects
- Material research
- Technical and biological complications
- Tissue augmentation and engineering
- Poster Presentation (Please see page 9 for details on abstracts 110 to 121)

### Basic research

1. **Soluble factors released by oral squamous cell carcinoma stimulate osteoclastogenesis**
   - MOHAMMED AL KINDEI (SAUDI ARABIA), OSAHA HUSSAIN, SVETLANA KOMAROVA
   - **Abstract:** Week 122

2. **In vitro comparative study of self-tapping and non self-tapping tapered dental implants in medium density bone**
   - YEON-WHA BAEK (REPUBLIC OF KOREA), JAI-BONG LEE, SEO-JAE HED, JUNG-SUK HAN, JAYEONG KIAK, YOUNG-JUN LIM, SUNG-HUN KIM, SEO-NH-YUN KIM, MYUNG-JOO KIM, IN-SUNG YEO
   - **Abstract:** Week 123

3. **A knock-out model for periimplantitis**
   - BENEDICTA ELISABETH BECK-BROICHSITTER (GERMANY), MARC FÖGE, OLGA GAVRILJOVA, JÖRG WILTRANG, STEPHAN THOMAS BECKER
   - **Abstract:** Week 124

4. **Impact of implant diameter on implant micromotion and insertion torque**
   - MARCO BERARDINI (ITALY), PAOLO TRISI
   - **Abstract:** Week 125

5. **Osteoblast differentiation on surface modified zirconia - an in vitro study**
   - SRILATHA BHARGAVA (JAPAN), SHINJI KURODA, HIDEKI AOKI, KEIICHI OHYA, SHOHEI KASUGAI
   - **Abstract:** Week 126

6. **The effect of irrigation temperature on bone healing**
   - S. CEMLI, ISLAM BALEB, CANIS * (TURKEY), CEM TANYEL, MEHMET BURAK CAN İVA, M. ALİ EREN
   - **Abstract:** Week 127

7. **Cleaning procedures on customized abutments: microscopical, microbiological and chemical analysis**
   - LUIGI CANULLO (ITALY), COSTANZA MICARELLI, MARCO CLEMENTINI, GIULIANO IANNELLO RANCESCO CARINCI
   - **Abstract:** Week 128

8. **Tilted versus non-tilted implant-supported full-arch rehabilitations: biomechanical comparison**
   - NICOLÒ CAVALLI (ITALY), STEFANO CORBELLA, ALBERTO CIATTI, FRANCESCO AZZOLA, BRUNO BARBARO, DAVIDE SPASARI, ANDREA LEZINE, FEDERICO MAZZA, MASSIMO DEL FABBRO, LUCA FRANZETTI
   - **Abstract:** Week 129

9. **A survey of undergraduate education in dental implantology in Asian dental schools**
   - NEERAJ KUMAR CHANDRAK * (INDIA), RAMESH KUMAR CHOUDHARY
   - **Abstract:** Week 130

10. **Study of safe membrane elevation via the crestal approach based on a new drill design concept such as CAS-Drill**
    - YONG-SEOK CH * (REPUBLIC OF KOREA), JONG-HOON YOON
    - **Abstract:** Week 131

11. **Study of las-kit dome and core drills for safe membrane elevation and cutting efficiency in vitro**
    - YONG-SEOK CH * (REPUBLIC OF KOREA), JONG-HOON YOON
    - **Abstract:** Week 132

12. **The Streptococci of the peri-implant region in health and disease**
    - SARA AYREMLOU SEDIGHIEH DANESHVAR * (REPUBLIC OF IRAN), SHIMA GOLMOHAMMADI, SEPIDEH ARABI, P AMIR SAEED YAWAR
    - **Abstract:** Week 133

13. **Changes in oral microflora after full-mouth tooth extraction**
    - YVONNE DE WAAL (NETHERLANDS), EDWIN WINKEL, HEINZ MÜLLER, GERRY RAGHOESBAR, ERWIN RAANS, ARIE JAN VAN WINKELHOF
    - **Abstract:** Week 134

14. **Proteome profile of human blood plasma adsorbed on titanium surface**
    - ALTAIR DEL BEL CURY * (BRAZIL), PLINIO MENDES GOMES, WILLIAM CUSTODIO, ADRIANA FRANCO PAES LEME
    - **Abstract:** Week 135

15. **Accuracy of intraoral scanning compared to conventional impression techniques**
    - TABEA FLUEGGE * (GERMANY), MARC METZGER, KATJA NELSON, RAINER SCHMELZEISEN
    - **Abstract:** Week 136

16. **Chemical and crystallographical analysis of bone tissue after laser and drill osteotomies**
    - DRAGANA GABRIĆ PANDURIĆ * (CROATIA), SVETOZAR MIŠIĆ, KREMIＲ MIĐČANOV, DAVOR KATANEĆ, IVONA BAGO, IVEA ANIĆ
138 RHOA controls activation of WNT canonical signaling on titanium surfaces
CARLO GALLI* (ITALY), SIMONE LUVETTI, MARILINA PIEMONTESE, GIOVANNI PASSERI, GUIDO MACALUSO

139 WNT-activator bio improves osteoblast differentiation on rough titanium surfaces
CARLO GALLI* (ITALY), EDOARDO MANFREDI, MARILINA PIEMONTESE, GIULIA GHIACCI, GUIDO MACALUSO, GIOVANNI PASSERI

140 One step closer: understanding osseointegration at microscopic level
KUANG HAN* (SWEDEN), ANNU THOMAS, DANIEL GRÜNER REDRIK OSLA, KJELL JANSSON, JENNY FÄLDT, CHEUK-WAI TAI, ZHIJIAN SHEN

141 Does photo-activated hydrophilicity have genetic and morphologic impact on long-term osseointegration?
MARKO HAYASHI* (SWEDEN), YANG XUE, JOHAN KARLSSON, KAMAL MUSTAFA, MARTIN ANDERSSON, KYOJI JÔJI, ANN WENNERBERG

142 The effect of thread design on stress distribution in solid screw tapering implant: 3-D finite element analysis
MANISHA HEREKAR* (INDIA), VIRAJ PATIL, MEGHA SEETHI

143 A study to evaluate changes in microbial flora around dental implants during various stages of implant restoration
MANISHA HEREKAR* (INDIA), KSHORE BHATT, NEERAJ BAGHESHWAR

144 A study of platelet-rich fibrin (PRF) on the effect of proliferation and differentiation of rat osteoblasts in vitro
SUNGHIL PARK KI-SEOK HONG* (REPUBLIC OF KOREA), YONG-KI YIM, HYUNSEONG SHIN, EUN-JOO SONG, KEUMHAI HAN, SUNGHOO LEE, KWANGSEUNG KIM, YOUNG-JIN KIM, YOUNG-WOOK LEE, SHIN-A HWANG, SEOK-WEON LEE

145 The anatomical study of the mandibular lingual foramen with computerized tomography in Taiwanese
KUO-CHING HUANG* (TAIWAN), CHING-PING LIN

146 Effects of surface wettability on bone-implant integration in the early osseointegration stage at submerged titanium implants
JUN-CHEOL HWANG SU-KYOUNG KIM* (REPUBLIC OF KOREA), HONG-YOUNG CHOI, JAE-HYUNG KIM, WOONCHUL SHIN, KI-SEOK HONG

147 Preliminary study on microbial biofilms development on inert substrates in oral implantology
ILEANA KINESCU* (ROMANIA), LIGA MUNTANU, MIHAI BURLIBASA, TRAIAN BODNAR, GABRIELA TANASE, SIMION GHEORGHE DUMITRU, ELENA MANOLOIU

148 Involvement of focal adhesion linker proteins on implant abutment surface
HANGJUN JOO* (REPUBLIC OF KOREA), MIKHYUNG YUN, MONGSOOK YANG, HONGSO YANG, SANGWON PARK, HYUNPAL LIM, KI-SEOK KIM, JAEHYUNG KIM, WOONCHUL SHIN

149 Three-dimensional analysis of implant thread slope and angulation
HANGJUN JOO* (REPUBLIC OF KOREA), YOUNG-HUN SEO, MONGSOOK YANG, HONGSO YANG, SANGWON PARK, HYUNPAL LIM, KI-SEOK KIM, WOONCHUL SHIN

150 Does systemic administration of avocado/soybean unsaponifiables enhance oral implant osseointegration?
GUILLERME JOSE PIMENTEL LOPES OLIVEIRA* (BRAZIL), LUIZ GUILLERME FREITAS DE PAULA, RUBENS SPIN NETO, ANDREAS STAVROPOLOS, ELIO MARCANTONIO JR, ROSEMARY ADRIANA CHIÉRICO MARCANTONIO

151 Effect of intraoral scanning on the passivity of fit of implant supported fixed dental prostheses
MATTHIAS KARL* (GERMANY), PETER SCHUBINSKI, THOMAS TAYLOR

152 The effect of IL-15 on inflammatory bone metabolism
TAKESHI KIKUCHI* (JAPAN), HIROSHI TAKEDA, KYOKO SOKUBO, SACHIYO FLUTIA, DAISUKE KATO, YUICHI ISHIHARA, HIROMI MURAKAMI, TOSHIHIKO NODA

153 Molecular mechanism underlying low motility of osteoblasts grown on a rough surface
LIU ZHEN HYUN-MAN KIM* (REPUBLIC OF KOREA)

154 Photoelastic biting force detection on seeking implant screw directions
KEIJI KUBO* (JAPAN), SATOMI CHIGITA, MUNEHISA AGACHI, KOIJI I. YAMAMOTO

155 The influence of immunosuppressant, in ex vivo bone morphogenetic protein.
JUNGSEONG LEE* (REPUBLIC OF KOREA), YONGMI KIM, KI-TAE KOO, TAE-JL KIM, YANG-JO SEO, YONG-WOO LEE, IN-CHUL RHYU, YOUNG KU

156 Disruption of NFIC causes dissociation of odontoblasts by interfering with aberrant odontoblast differentiation
TAE-YON LEE* (REPUBLIC OF KOREA)

157 Blood protein adsorption on titanium – effects of surface treatment on competitively adsorbed film composition
LIGGETT LINN* (SWEDEN), JAVIER SOTRES, THOMAS ABERBRANT

158 The bone code: a new fractal tool for medical device development
SALVATORE LONGONI* (ITALY), MATTEO SARTORI

159 The evaluation of a new method to measure the accuracy of surgical guides
DAVID MARTENALOM* (FRANCE), JEAN BAPTISTE VERDINO, THIERRY LOUVET, JEAN PIERRE BLANCHARD, CYRILLE SÉDRAT, ANDRÉ ROJAS, BRUNO ELLA

160 Decontamination of dental implant surface by means of photodynamic therapy
JULIANA MAROTTI* (GERMANY), PEDRO TORTAMANO-NEITO, SILVANA CAI, MARTHA S. RIERO, STEFAN WOLFART, TOMÉ T. CAMPOS
Three-dimensional transfer accuracy of different implant impression techniques
RAGAI E. MATTA* (GERMANY), MANFRED WICHHMANN, STEFAN HOLST

Abutment screw removal torque values before and after plasma cleaning
COSTANZA Micarelli* (ITALY), LUIGI CANULLO* (ITALY), ALOD BALDISSARA, MARCO CLEMENTINI

Novel dry type of cholesterol-bearing pullulan nanogel cross-linking membrane for guided bone regeneration (GBR)
TAKAYUKI MIYAHARA* (SWEDEN), SHIMA PARSAFAR, CHRISTER DAHLIN, MARCO CLEMENTINI, KAZUHIKO HAYASHI, AYUMU MATSUI, KATSUNORI KORETAKE, TAKAYASU KUBO, YASUMASA AKAGAWA

Influence of formalin fixation on implant stability quotient and bone mechanical characteristics
KOJI MORITA* (JAPAN), KAZUYA DOI, HIROSHI GUE, SHIHO KAJIHARA, KAZUHIKO HAYASHI, YUJI MU

The impact bone mineral density and age on residual ridge resorption detected by CBCT
EVLIA NIKITINA* (LATVIA), ANDA SLAIDINA, BAIBA SPRINGS, UNA SOBOLEVA, ILZE DAUKSTE, AIVARS LEJNIEKS

Strain gauge analysis: evaluation of axial loads in external hexagon implants in linear and offset placement
RENAITO NISHIOKA* (BRAZIL), GABRIELA NISHIOKA RANCISLEY SOUZA, GUSTAVO VAASCONCELOS, KOJIMA ALBERTO

Withdrawn

Regenerative effects of PRGF-endoret on human primary oral cells
EDUARDO ANITUA, MARIA TROYA, MARIVAR ZALDUndO, RICARDO TEJERO, GORKA ORIVE* (SPAIN)

Immediate single-tooth implants in the aesthetic zone: 2-year results of a case series on hard and soft tissue response.
GUILLERMO PARDO ZAMORA* (SPAIN), MARIA PIEDAD RAMIREZ FERNANDEZ, CRISTINA CALABRIA ZAPATA, BRUNO NEGR, ANTONIO JOSE ORTIZ RUIZ, JOSE LUIS CALVO GURADO, JOSE EDUARDO SANCHEZ-MATE DEL VAL, RAFAEL ARCOSIO DELGADO RUIZ

Dimensional changes of the periosteum in different gingival biotypes at particular places of the mandible
MINDAUGAS PRANSKUNAS* (LITHUANIA), GINTARAS JANUZEI* (LITHUANIA), EVILAS DALGELE

Bone healing pattern at the surface of titanium implants: an experimental study in the dog
FABIO ROSS** (ITALY), NIKLAUS LANG, GIOVANNI FAVERO, FABIO PANTANI, MATILDE TSCHON, DANIELE BOTTICELLI

Correlation between the residual ridge height and the perforation limit of sinus membrane in crestal sinus elevation
SURUKAN RASIT BAYAR SELDA YILDIRIZ, AYDIN GULSES, METIN SENGUMEN, AYHAN COVERT, SERMET SAHIN* (TURKEY)

Influence of nicotine concentration on bone augmentation
YUKA SATO* (JAPAN)

Influence of buccal bony crest width on marginal dimensions of peri-implant tissues after implant installation in dogs
MICHAEL SCHWEIKERT* (ITALY), GABRIELE BAFONE, DANIELE BOTTICELLI, GIACOMO FAVERO, LAURA PRIBOLLA PEREIRA, NIKLAS P LANG

Effect of humectants coating onto titanium implant surface on early osseointegration in the tibia of minipig
SUHYOUNG KIM* (REPUBLIC OF KOREA), IL-SEOK JANG, KITAE PARK, EUN-JUNG KANG, KYO-DOK CHOI, TAE-GWAN EDM, JU-DONG SONG

Evaluation of biomechanical effect on chemically modified Ca-SA surface in vivo
HEE JIN GU JAE KIM* (REPUBLIC OF KOREA), HONG YOUNG CHOI, MYUNG DUJUK KIM, YONG SEDK CHO, TAE-GWAN EDM

Effectiveness of implants treated with SA surface on titanium alloy
HEE JIN GU JAE KIM* (REPUBLIC OF KOREA), HONG YOUNG CHOI, SU KYOUNG KIM* (REPUBLIC OF KOREA), TAE-GWAN EDM

Histometric analysis of cp Ti implants with surfaces modified by laser with and without silica deposition
FRANCESCO AVILA SOUZA* (BRAZIL), RENATO SUGISJU NISHIOKA, ANTONIO CARLOS GUASTALDI, THALLUTA PEREIRA GUERROS, ELAD RODRIGUES, LUIZIZOTO, ALBANIR BORRASCA GABRIEL, ALESSANDRA MARCONDES ARANIZA, HELISEA HENIE NINHA, DIOALDO MAGROFILHO, IDILMIO RANGEL, GARCIA-JUNISH

Essentials of English phonetics for prostho dotticnics combined with MRI-diagnostics
ALEXANDRA SPANO* (GERMANY), XIULIAN HU, SUSANNE NAHLES, JAN HÖVEN, UTE LUDWEBR, KATJA NELSON

Histological and biomechanical characterization for additive manufactured porous screws
STEFAN STUBINGER* (SWITZERLAND), ISABEL MOSCH, IERRANFRANCO ROBITI, MIELEH SIDLER, STEPHEN FERGUSSON, BRIGITTE VONRENHEIN

Effect of 10 cleaning instruments on 4 different titanium implant surfaces
JULIA THELEMAANN* (GERMANY), IBRAHIM NERGIZ, PETRA SCHMAGE

Retrospective clinical evaluation of peri-implantitis therapy through the use of high frequency alternating current
TRICARICO GERARDO* (ITALY), RUSTICHELLI FRANCO
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>183</td>
<td>SEM observations of angiogenesis in bone regeneration</td>
<td>ASAMI UDAGAWA* (JAPAN)</td>
</tr>
<tr>
<td>184</td>
<td>Osteoblastic phenotype expression of cells derived from allografts and autografts</td>
<td>SAMUEL POPFRIED XAVER* (BRAZIL), EMANUELA PRAO ROFIR RODRIGUES LIA, ADALBERTO LUI ROSA</td>
</tr>
<tr>
<td>185</td>
<td>The α-tubulin and RUNX2 expression of periodontal ligament cells under cyclic tensile stresses</td>
<td>HABIN XA* (CHINA), MIN WANG, HUAFANG SUN, JINBO XIU, MAN ZHANG</td>
</tr>
<tr>
<td>186</td>
<td>A systematic review of the survival rates and QOL of implant-supported fixed prostheses and implant-supported removable prostheses</td>
<td>SOO-YEON YOO* (REPUBLIC OF KOREA), SEONG-KYUN KIM, YOO-HYE KIM, YOO-HYE KIM, JIN MIN KIM, SUNG-HEE OH, YAE-JI JUNG, JIN MIN KIM, SEONG-KYUN KIM</td>
</tr>
<tr>
<td>187</td>
<td>Economic evaluation of single tooth replacement: dental implant vs. bridge</td>
<td>SOO-YEON YOO* (REPUBLIC OF KOREA), YOO-HYE KIM, JIN MIN KIM, SUNG-HEE OH, YAE-JI JUNG, JIN MIN KIM, SEONG-KYUN KIM</td>
</tr>
<tr>
<td>188</td>
<td>Prosthetic treatment status in Korea</td>
<td>SOO-YEON YOO* (REPUBLIC OF KOREA), SEONG-KYUN KIM, YOO-HYE KIM, YOO-HYE KIM, JIN MIN KIM, SEONG-KYUN KIM</td>
</tr>
<tr>
<td>189</td>
<td>A systematic review of the 5-10 year survival rates with implant and bridge (3-unit FPD) in patients with single tooth loss</td>
<td>SOO-YEON YOO* (REPUBLIC OF KOREA), SEONG-KYUN KIM, YOO-HYE KIM, YAE-JI JUNG, JIN MIN KIM</td>
</tr>
<tr>
<td>190</td>
<td>The cell kinetic with porous poly-dl-lactic acid – anatomical insight</td>
<td>KEN YUKAWA* (JAPAN), NORKO TACHIKAWA, NORKO AKING, KAZUHIRO KON, KASU TAKAHATA, YUHI KUSUMOTO, SHOEI KASUGA</td>
</tr>
<tr>
<td>191</td>
<td>Accuracy of surgical guides based on CBCT fiducial marker localisation</td>
<td>MARCUS ABBoud* (USA)</td>
</tr>
<tr>
<td>192</td>
<td>Clinical performance of implant supported all ceramic restorations using ceramic abutments: 1-3 years follow up study</td>
<td>KHALDOON ABU AFEH* (JORDAN), AHED AL-WAHADNI, YANAL NUSAIR</td>
</tr>
<tr>
<td>193</td>
<td>Modified zirconia custom abutments for anterior implant restorations: case series</td>
<td>AKIN ALADAĞ* (TURKEY), ERHAN ÇOMLEKOĞLU, BURCU KANAT, Mine Dundar ÇOMLEKOĞLU</td>
</tr>
<tr>
<td>194</td>
<td>Oral rehabilitation of a case of Papillon-Lefevre syndrome with dental implants</td>
<td>ABDULLAH ALFARRAJ* (SAUDI ARABIA)</td>
</tr>
<tr>
<td>195</td>
<td>Alternative treatment method with hybrid prosthesis for edentulous patients</td>
<td>GAMZE ALNACK* (TURKEY), OZGUR INAN, DOGAN DOLANMAZ</td>
</tr>
<tr>
<td>196</td>
<td>The rehabilitation of an edentulous patient with implant-supported, telescopic-crown retained overdentures: a case report</td>
<td>GERT AMBROSITSCHE† (AUSTRIA), ALEXANDER HESCHL, WALTHER WEGSCHIEBER, MARTIN LORENZONI</td>
</tr>
<tr>
<td>197</td>
<td>In-Kone Tekka implant rehabilitation in periodontally susceptible patients: a comparative study</td>
<td>SIMONE DOMENICO ASPRETI† (ITALY), ANDREA BALERIA, ALESSANDRO BORON, TULLIO BONI, NAZZARENO TANFANI, PETRO TRAGNELLI, ANTONIO ZAZZI</td>
</tr>
<tr>
<td>198</td>
<td>Vertical misfit of implant-supported frameworks fabricated using different techniques</td>
<td>MALINA BERJUK* (BRAZIL), ADRIANO TOSI, IVETE SARTORI, LAZ VALGER, ROBERTO SHIMIZU</td>
</tr>
<tr>
<td>199</td>
<td>Clinical outcome of inter-proximal papilla between a tooth and a single implant treated with CAD-CAM abutments: 2-year prospective study</td>
<td>TADEO BORES† (PORTUGAL), TADEO LIMA, ÁGATA CARVALHO, JOANA XAVIER, VICSCI CARVALHO</td>
</tr>
<tr>
<td>200</td>
<td>Simplified definitive implant-supported prosthesis for the edentulous mandible</td>
<td>LUCA BRIODDU* (ITALY), CARLO CLAUSER</td>
</tr>
<tr>
<td>201</td>
<td>Improving soft tissue profile around postextractive implants. A case report</td>
<td>LUCA BRIODDU* (ITALY)</td>
</tr>
<tr>
<td>202</td>
<td>Increased implant success in periodontally compromised subjects</td>
<td>FRANK BRÖSCHER* (GERMANY), ERIK WÜLLING, CHRISTINA TETTING, SIDEN JEPSEN</td>
</tr>
<tr>
<td>203</td>
<td>Periimplant tissue reactions in implants with different abutment manipulations</td>
<td>JOSE LUIS CALVO BURGADÓ* (SPAIN), CRISTINA CALABRIA ZAPATA, BRUNO NEGRIT, GUILLERMO PARDO, ZAMORA, MARIA PIEDAD RAMIREZ FERNANDEZ, JOSE MATE SANCHEZ, RAFAEL DELGADO</td>
</tr>
<tr>
<td>204</td>
<td>Platform switching in extraoral implants: peri-abutment tissue response</td>
<td>DAVID CASEY* (USA), MAUREEN SULLIVAN TERENCE MCLEAN</td>
</tr>
<tr>
<td>205</td>
<td>8.5Yrs study of accelerated single implant placement and loading</td>
<td>AMIR CATIC* (CROATIA), ADNAN CATOVIĆ, ALMA CATIC</td>
</tr>
</tbody>
</table>
206 Zirkonia substructure survival rate in two designs of implant full-mouth rehabilitation
ANDRE CHEN* (PORTUGAL), ELENA CERVINO, HELENA FRANCISCO*, EDÒ CRESPIM, MARIA CARLOS QUARESMA, JOÃO AZEVEDO, NUNO QUMARAÍES, JOÃO CARAVES

207 Functional andesthetic implant restorations with customized abutments using a CAD-CAM technology: a clinical report
HOSIK KOH** (REPUBLIC OF KOREA), SUNG-HUN KIM, JAI-BONG LEE, JUNG-SUK HAN, IN-SUNG YEO

208 Influence of implant diameters on stress distribution of adjacent bone
EZATOLLAH JALALIAN FARID MOHAMMADI, SARA AYREMLOU* (ISLAMIC REPUBLIC OF IRAN), SHIMA GOLMOHAMMADI, SEDIGHEH DANESHVAR

209 One year of experience with «crown abutments» for single tooth restorations
JOSE DE SAN JOSE GONZÁLEZ* (GERMANY), CHRISTIAN MERTENS, HELMUT G. STEVELING

210 Non-removal of immediate abutments in cases involving subcortically placed post-extractive tapered single implants: the chamber concept
MARCO DEGIDI* (ITALY), DIEGO NARDI, ADRIANO PIATTELLI

211 Abutment customization with high density ceramic in the esthetic zone
NEY RACHEOD* (BRAZIL)

212 CAD-CAM prosthodontic treatment of orthodontic adolescent patients with missing permanent teeth
TATJANA DOSTALOVA* (CZECH REPUBLIC), PAVEL KRIZ, MICHAELA SEYDOLOVA

213 Investigations into stress distributions and marginal bone loss for tooth and implant supported overdenture
ABDALSAMET FATALA** (CHINA), NIANJING RAO, KE SONG, YINGGUANG CAO

214 Functional and aesthetic outcomes of poor planning of implantation
LIDA FOUNDOUKA* (GREECE), STAVNOS FOUNDOUKAS

215 Aesthetic results of customized CAD-CAM screw retained zirconia single anterior implant crowns
DAVID FURZE* (UNITED KINGDOM), ASHLEY BYRNE, CAROL JOHNSTON

216 Aesthetic results of implant supported overdentures
DAVID FURZE* (UNITED KINGDOM), ASHLEY BYRNE, MATTHEW WILDE

217 Rehabilitation of edentulous maxilla with severe atrophy using CAD-CAM technology. Case report
PANAGIOTIS GAKIS* (GREECE), KONSTANTINA ANGELARA, ELENI VOLTIDI, NIKOLAOS KATSKERIS, ILJA ROUSOU

218 Marginal bone remodelling of Sweden&Martina Premium® implants: 2-years clinical results
MASSIMILIANO NEGR* (ITALY), SIMONE LUIMETTI, EDÍARDO MANFREDI, CARLO GALLI, GIULIA GHIACO, GIUDE MARIA MACALUSO

219 Evaluation of the stress distribution in angled and straight distal implant in prosthesis with cantilevers - photoelastic study
SERGIO ALEXANDRE GOMES† (BRAZIL), HENRIQUE DE ARAUJO PEREIRA, NILTON DE BORTOLI JR., LUIZ CARLOS ZANATTA

220 Screw-retained implant prosthesis: treatment sequence for optimal fit
IRDIA GOUTOPOLU* (GREECE), NIKOS PANTAZIS ILIA ROUSOU, DIONYSSOS SPIROPOULOS

221 A hybrid prosthesis restoration in a severe prognathic inferior patient
ESMA BAGSAK GUL* (TURKEY), LIMIT YOLOU, BEKR ESEER

222 Radiographic evaluation of bone-loss at one-piece and two-piece dental implants
AUROLELI GUIMENIUC* (REPUBLIC OF MOLDOVA), VALENTIN TOPALO, ANDREI MOSTOVI

223 Evaluation of implant therapy in the congenitally absent maxillary incisor space
EDWARD HEMS* (UNITED KINGDOM), STEVE BASSI, BALRAJ SIDHU

224 Stress distribution in bone around implants with cantilever hybrid prostheses
MANISHA HEREPAR* (INDIA), VIRAJ PATIL, OMKAR PADHYE

225 A retrospective study of 26 patients rehabilitated with full arch zirconia frameworks - up to 54-month follow-up
ALESSANDRO POZZI* (ITALY), STEFAN HOLST, GIACOMO FABBRI

226 A 3-year clinical evaluation of posterior implant retained all ceramic FPD restorations – a retrospective study
STEFAN HOLST* (GERMANY), GIACOMO FABBRI, STEFAN SCHERER, ALESSANDRO POZZI

227 A three-year prospective study of implant-supported, single-tooth restorations of all-ceramic and metal-ceramic materials
MANDANA HOSSEINI* (DENMARK), NILS WORSAAE, MORTEN SCHØDT, KLAUS GOTTFREDSEN

228 Treatment with implant supported titanium-milled superstructures: a new technical approach
SANDRA HUBER* (AUSTRIA), WALTER WEGSCHIEBER

229 Immediate functional loading of dental implant and milling CAD-CAM titanium abutment for implant prosthesis, clinical result
HYUN-KI CHO JUNE-CHEOL HWANG* (REPUBLIC OF KOREA)
Impact of the shape and surface condition of implant on the treatment period - focus on the treatment period from placement to loading

TAKATOMO ARAI JUNE-CHEOL HWANG* (REPUBLIC OF KOREA)

Immediate implant placement and immediate loading with Ossstem TS III implants in mandibular anterior partial edentulism

CHOGIWON YANG JUNE-CHEOL HWANG* (REPUBLIC OF KOREA)

Utilization of CAD-CAM-oriented surgical templat (OSSTEMGuide™) in implant placement and immediate loading or conventional loading

CHOGIWON YANG JUNE-CHEOL HWANG* (REPUBLIC OF KOREA)

Immediate functional loading in mandibular single molar; prospective clinical study

ATEF ISMAIL* (EGYPT)

A prospective clinical study of an innovative' teeth in a day’ protocol of immediate loading in the edentulous mandible

SHANTANU JAMBHEKAR* (INDIA), MOHIT KHEUR

Prosthetic outcomes from immediate restoration of anterior implants

PHOHI KAMPOSIDORA* (Greece), GEORGE PAPAVASILIOU

A custom abutment design combined with a CAD-CAM veneer

BURCU KANAT* (TURKEY), ERHAN ÇOMLEKOĞLU, AKIN ALADAG, MINE DÜNDAR ÇOMLEKOĞLU, AHMET BÜLENT KATİBÖLU

Use of OSSTEMGuide™ on the mandibular unilateral free end area through the CT image analysis program (OSSTEMGuide™ program)

JEONG-HO YOON IN-HO KIM* (REPUBLIC OF KOREA)

Maximizing esthetic and functional outcomes through the evolution in implant abutment design: CAD-CAM «CustomFit™» abutment

KI-SEONG KIM JAE-HO RYU, IN-HO KIM* (REPUBLIC OF KOREA), JAE-IL KIM, HYUN KIM

Does the type of implant prosthesis affect outcomes of the implant survival?

IREM KIRLI TOPCU* (TURKEY), SIRMAHAN CAKARER, IRAT SELVI, TAYLAN CAN, ALEH PALANDICOĞLU, MEHMET YALTIRIK, CENGIZHAN KESKIN

Alteration of occlusal force in unilateral free-end and intermediate missing cases by implant prosthesis

KAZUHIRO KON* (JAPAN), MAKOTO SHIOTA, MAHO GZEI, SHOHEI KASUGAI

Effect of various abutment systems on the removal torque and the abutment settling in the conical connection implant systems

JIN SEON LEE* (REPUBLIC OF KOREA), Joon Seok Lee, Young Gyun Song, Kwang Hyun Song, Se Ah Lee, Soo Yeop Kim

Effect of dimples on the retentive strength of cemented implant-supported prostheses

JAE KOOK PARK* (REPUBLIC OF KOREA), IN HO CHO, Joon Seok Lee, Young Gyun Song, Kwang Hyun Song, Se Ah Lee, Soo Yeop Kim

Flasking technique to improve hybrid ceramic properties: in vitro evaluation

SALVATORE LONGONI MATTED SARTORI* (ITALY), MARCO DUVINA, CAMILLO D’ARGANZEO

Composite prosthetic components on dental implants: elements arrangement and biomechanics

JULIUS MAMINSKAS* (LITHUANIA), POVLAS DAUGELA GINTARAS JUODZBALYS, GEDVINAS ZEKONIS, SAULIUS DILUINAS

Selective laser sintering (SLS) implants: results from a 2-year prospective multicenter study

FRANCESCO MANGANO* (ITALY), GIUSEPPE LUONGO, FABRIZIA LUONGO, MICHELE DE FRANCO, MICHELE FIGLIUZZI, PIAGLIO MASTRANDELO, CARLO MANGANO

Accuracy of a new impression tray for dental implants

JULIANA MAROTTI* (GERMANY), PEDRO TORTAMANO-NETO, TATIANA R. R. N. CASTILHO, KLAUS HASSELKUNN, STEFAN WOLFART

An impression technique using a duplicate denture for implant-retained overdentures

KAZUNAGA MIYAKE* (JAPAN), DAISUKE UENO, CHIKAHIRO OHKUBO, JUNICHI SATO

Long-term results of peri-implant bone resorption around implants after iliac onlay grafts in patients with extreme alveolar atrophy

ANDRES STRICKER* (GermANY), CLAUDIA NACK, MOHAMED ALGHRAIRI, KATJA NELSON, SUSANNE NAHLES

A six-year follow-up of full-arch immediate restorations manufactured with the intra-oral welding technique

MARCO DEGI DEGIO NARDI* (ITALY), ADRIANO PIATTELLI

An alternative prosthetic solution by using individual abutments instead of autogenous bone grafting procedure

NEVIN BUYUKAKYUZ CEM TANYEL, MURAT OZTURK* (TURKEY), ALI YABUL, EZGI GULUM
Molar restorations supported by 2 implants: an 8 years prospective study
MARIO GUERRA LEONARDO PALAZZO* (ITALY), SALVATORE BELCASTRO ULVIO FLOORDI, MARID HUSSANMINO RANGSOO MARIA LOLLU

Case series study of full arch restorations with dual retention
GEORGE PAPAVASILIU* (GREECE), PHOIPHI KAMPOSIDA

Immediate loaded complete rehabilitations in post-extraction periodontal cases
BELTRAN ANDREU MIGUEL* (SPAIN), PASCUAL IVARS ANTONIA

Reduced diameter and high resistance implants as an alternative in extreme cases
PASCUAL IVARS ANTONIA* (SPAIN), BELTRAN ANDREU MIGUEL

Indirect resin composites for implant restorations
AIKATERINI PETROPOULOU ARETI VROCHARI* (GREECE), VASILIOS CHRONOPoulos, NIKOS MATTHEOS

Immediate loading with overdenture in edentulous jaw
MICHELE PIOMBINO, SERGIO PIOMBINO* (ITALY), TAMMARO ECCELLENTE, ADRIANO PIATTELLI, GENEROSO DEL PIANO

Immediate implant-supported overdenture in edentulous maxilla
MICHELE PIOMBINO SERGIO PIOMBINO, MARIO GULDINO* (ITALY), P DOMENICO CARBONE, SALVATORE BENOVINS, ADRIANO PIATTELLI

Single implants in the anterior maxilla: preliminary outcomes after an observation period of maximal 18.2 years
SUSANNE PLATZER* (AUSTRIA), MARLENE STOPPER, WALTHER WEGSCHERER, GERNOT WIMMER, MARTIN LORENZONI

Clinical implication and survival rate of RBM implant
SE-WOOK PYO* (REPUBLIC OF KOREA), KEUN-WOO LEE

Utilization of customized pressed ceramic implant abutments for esthetically challenging restorations
PAPASKEVAS RAVANIS* (GREECE), VASILIOS CHRONOPoulos, WILLIAM NAGY

A new method for measuring in vivo dental implants micro-movements
TÁNIA RODRIGUES* (PORTUGAL), FILIPE MOREIRA, AUGUSTA NETO, FERNANDO GUERRA*, EDRO NICOLAU

Retreatment of fractured dental implants in patient have implant-supported overdenture
METIN SENCIMEN MUSTAFA DAG, GURKAN BAYAR, H.AYBERK ALTUG, SERMET SAHIN* (TURKEY)

Prefabricated tapered crown; the Syncone abutment of the Ankylös implants
TERESA SHIM HYEVDON* (REPUBLIC OF KOREA), JIN HEE AHN, AH YOUNG YOON, BYOUNG ELUN YANG

Case study on CAD-CAM customized abutment
MINKEE SON* (REPUBLIC OF KOREA), DONGHAN LEE, MIDDUN SHIN, DONGKILJUN CHUNG

Flapless computer aided surgery for full mouth immediate implant and prosthetic rehabilitation: a case report
MARIO BERETTA ENRICO STOFFELLA* (ITALY), FABRIZIO BASSI, CARLO MAIDRANA

Accuracy of fixed full-arch CAD-CAM restorations following two implant impression procedures
MARCO TALLARICO* (ITALY)

Consideration of temporary restoration of immediately loaded implants
HITOSHI TAMAKI* (JAPAN)

Occlusal risk management by original SAC classification for implant therapy
DAICHI YONEZAWA* (JAPAN)

Occlusal control of implant supported prosthesis with T-Scan – III system
JASENKA ZIVKO-BABIĆ* (CROATIA), LUKA LUBINA, ZELJKA UVRING

Immediate posterior partial rehabilitations with axial and intrasinus tilted implants
ENRICO AGUARDI* (ITALY), DAVIDE ROMED, ENRICO SHERLONE

The effect of LED photobiomodulation treatment on dental implant stabilities
OZUM ALTINKAYA* (TURKEY), HANIFE ATAOGLU

Immediate-loading of post-extractive computer-guided implants: 1-year prospective study
STEFANO STORELLI* (ITALY), LEONARDO AMORFINI, EUGENIO ROMED

Implant therapy outcomes, surgical aspects
Extra-short implants in the treatment of severely resorbed posterior mandible
EDUARDO ANITUA* (SPAIN), MOHAMMAQ HAMDAN ALKHARABAT, LEIPE BEGÓÑA, GORKA DURÍN

Optimal implant planning in the esthetical zone
PIETER AVONTROODT* (NETHERLANDS), AART KRAMENENKO

Risk factors associated with implant survival in the atrophic maxilla: clinical implications
MARK BISCHOF* (SWITZERLAND), PAUL KHOURY, NATHALEE NURDIN, JEANPIERRE BERNARDO, RABAH NEZIR

Narrow implants as an alternative to pre-implant bone grafts
YASSIN BOUZELMAT* (BELGIUM), EDDY AYACHI, LAURENCE EVRARD

Zygoma implants, a technique to restore function in maxillary atrophy
ALVISE CAPPELLO* (ITALY), ANTONIO OLIVO

Dental implant outcome after primary implantation into double-barreled fibula bone flap—reconstructed mandible
YANG-MING CHANG* (TAIWAN)

Bone augmentation for severely narrow ridges before tooth extraction and implant placement
BOR-JIAN CHEN* (TAIWAN)

Correction of early implanted upper anterior teeth by distraction osteogenesis and orthodontic treatment
YA-YI CHEN* (TAIWAN)

The effect of drill design on drilling characteristics when drilling bone
JEE-HOON YOON, YONG-SEOK CHO* (REPUBLIC OF KOREA), KWANG-HOON KIM, DAE-HA LIM, HYUN-JAE CHO

Clinical study on the efficacy of drilling procedure using the HIOSSEN 123KIT, which is designed to minimize the number of drilling steps
YONG-SEOK CHO* (REPUBLIC OF KOREA), WON-YONG LEE

«Fanwise» gingival graft in immediate implantation in the case of loss of buccal plate
HOI WUNG CHUNG* (REPUBLIC OF KOREA), SAMUEL LEE, DEAN PECK, JENSONG SON, SANG-HOON OH, NADEEM KARIMBUX, THOMAS HAN

Treatment of partial edentulism with a new ceramic implant system
NORBERT CIONCA* (SWITZERLAND), NADA MÜLLER, ANDREA MOMBELLI

The influence of systemic risk factors on peri-implant bone loss: a systematic review
MARCO CLEMENTINI* (ITALY), PAOLO H.D. ROSSETTI, WELINGTON CARDOSO BONACHELA, COSTANZA MICAELLI, LUIGI CANUULLO

Implant placement after removal of a failed blade implant: a clinical case report
BELIR ATALAY ULKEM CURAL* (TURKEY), OZGE OETIN, AHMET CAN TUSKAN

Innovative surgical and prosthetic workflow for immediately loaded rehabilitations of edentulous mandible
RICARDO CURCIO* (BRAZIL), GUILLAUME PERIN, WEIGL PAUL

Migration of a dental implant into the inferior nasal meatus
ALEXANDER VESI* (GREECE), IOANNIS AIDONIS, NIKOLAOS DABARAKIS, GEORGE ROMANOS

Case of implant displacement into the mandible during surgical procedure
DIMITRA KATZIOUARA, NIKOLAOS DABARAKIS* (GREECE), ALEXANDER VESI, CHRYSI PAPADELI

Four-year clinical follow-up of ZIR-ROC (Paris-implant zirconia implants system)
JÉRÔME DAD* (FRANCE), FRANÇOIS BAILLY, PAUL TRAMINI, ALBAN DESOUTTER, FRÉDÉRIC CUISINIER

Primary stability determination of implants inserted in sinus augmented sites: one step versus two step procedure
MARCO DEGIDI GIUSEPPE DAPRILE* (ITALY), ADRIANO PIATTELLI

Nobelguide concept in immediately loaded rehabilitations for 72 reconstructed patients
DANIELE DE SANTIS* (ITALY), UMBERTO LUCIANO, ALBERTO ROSSETTO, ROBERTO CASTELLANI, GIUGLIELMO ZANOTTI*, PIER FRANCESCO NOCINI

What really affects the primary stability of dental implants?
BURAK DEMIRALP* (TURKEY), EKRAN SUKUROGLU, CEREN DEMIRALP, ABDULLAH OZERET AKMAN, MEHMET MUTTAŞOĞULLARI

Peri-implantitis therapy with rotating titanium-made debridement brushes - clinical results
DIRK U. DUDECK* (GERMANY), VIKTOR E. KARAPETIAN, JOACHIM E. ZOECKLER

Risk factors for the outcome of dental implants used as orthodontic anchorage in periodontal patients
SHING-ZENG DIUNG* (TAIWAN), YU-KANG TU

Immediate short implant to avoid extraction of impacted maxillary canine: a case report
LUIGI BARBATI* (ITALY), MARCO CECARELLI, OHARA PAOLI, GIUSEPPE CASELLA, GIOVANNA DELLE ROSE, MATTEO SARTORI, SALVATORE LONGONI, MARCO DUVINA RANOC AMUNNI, PAOLO TONELLI

Toronto on 6 maxillary implants after bilateral sinus lift and Toronto on 5 interforaminal immediate load implants: case of severe atrophy
MARCO DUVINA* (ITALY), LUIGI BARBATI, GIOVANNA DELLE ROSE, SALVATORE LONGONI, MATTEO SARTORI, NICCÔLO NUTI, VANNA BALESTRI, ALBERTO BORSOLI RANOC AMUNNI, PAOLO TONELLI
<table>
<thead>
<tr>
<th>Poster Number</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>303</td>
<td>Cone-beam CT+free-hand flapless implant placement: a low-cost and fast method</td>
<td>CANDAN EFEOGLU (TURKEY), ÖVÜL GOKTURK KÜMBÜÇÖLÜ, ÜZÜR TEKİN, HüSEYN KOCA</td>
</tr>
<tr>
<td>304</td>
<td>Influence of implant surface on bone stability during the healing process</td>
<td>FERNANDA FAOTT (BRAZIL), LUIZ CARLOS DO CARMO FILHO, EDUARDO DIOCE DE CASTILHOS, ALTAR ANTONINHA DEL BIL CURY</td>
</tr>
<tr>
<td>305</td>
<td>Non-interventional study on success and survival of TiZr implants</td>
<td>PHILIP FREIBERGER* (UNITED KINGDOM), BILAL AL-NAWAS</td>
</tr>
<tr>
<td>306</td>
<td>Implant surgery scheduling behaviour in a specialty practice setting</td>
<td>JORDANNA CARDINALE, ASSUNTA PICCINI, CANDICE ROBBINS, RUTH THORPE, WENDY WARD, PETER FRITZ* (CANADA)</td>
</tr>
<tr>
<td>307</td>
<td>Immediate single implant treatment in the anterior maxilla</td>
<td>YI GE* (CHINA)</td>
</tr>
<tr>
<td>308</td>
<td>Eleven-year results of implants with an oxidized surface placed predominantly in soft bone and subjected to immediate occlusal loading</td>
<td>ROLAND GLAUSER* (SWITZERLAND)</td>
</tr>
<tr>
<td>309</td>
<td>Use of 2 different implant prototypes in the atrophied maxilla</td>
<td>NÉS GRAVATO* (PORTUGAL), BRUNO QUERIONHA, MARIANA NUNES, TOMAS AKOHIM, ARMANDO VEGA LOPES, ANA SANTOS FERRO, PEDRO ESTEVAO, AÍLIO MALD, MIGUEL ARAUJO NOBRE</td>
</tr>
<tr>
<td>310</td>
<td>Survival rate of imPlasa dental implant system: a retrospective study</td>
<td>KAREN GRIGORYAN* (ARMENIA)</td>
</tr>
<tr>
<td>311</td>
<td>Horizontal ridge augmentation after reconstruction of the anterior maxilla with autogenous block graft</td>
<td>JÉSSICA GULINELLI, EDISON FERREIRA* (BRAZIL), MARCOS KUBABA, BRUNO VIEIRA, RICARDO OLIVEIRA, RENATO QOMES</td>
</tr>
<tr>
<td>312</td>
<td>Is Osteogenesis Imperfecta absolute or relative contraindication for placement of dental implants?</td>
<td>NESE KAHRAMAN* (TURKEY), BANU GURKAN KOSEOGLU, HULYA KOCAC BERBEROGLU, ILKNUR OZCAN</td>
</tr>
<tr>
<td>313</td>
<td>The importance of CBCT in implant planning with overlooked nasopalatine duct cyst with implant: a rare case report</td>
<td>BANU GURKAN KOSEOGLU* (TURKEY), NESE KAHRAMAN, HULYA KOCAC BERBEROGLU, QENZHAN KEBIN</td>
</tr>
<tr>
<td>314</td>
<td>Dental implant placement without grafting in a young patient with a large cyst defect</td>
<td>BANU GURKAN KOSEOGLU* (TURKEY), NESE KAHRAMAN, HULYA KOCAC BERBEROGLU, OETIN KASAPOGLU</td>
</tr>
<tr>
<td>315</td>
<td>Evaluation of peri-implant bone stability around sloped implants in sloped ridges</td>
<td>HADICHI WAHIB* (FRANCE), FEGHALI MAY, MORA FRANCOIS, BOUCHARD PHILIPPE</td>
</tr>
<tr>
<td>316</td>
<td>Immediate implant placement in areas of esthetic priority. A 10-year follow-up study</td>
<td>MALENE HALLUND* (DENMARK), ERIK HJØRITNG-HANSEN, SIBREN SCHULI</td>
</tr>
<tr>
<td>317</td>
<td>The rehabilitation of perforated soft tissue using buccal fat pad</td>
<td>HUH SEONG-RYONG* (REPUBLIC OF KOREA), YU SANG-JOON, KIM BYUNG-OKX</td>
</tr>
<tr>
<td>318</td>
<td>The influence of crestal bone loss and bone graft replacement on the stress distribution around dental implants: a finite element analysis</td>
<td>DAMİLA İBRAHİMİSLOLU* (TURKEY), CEM TANYEL, ÖZDEM ÜNLÜ, MUSTAFA RAMAZANÖLÜ, AHMET BÜLENT KATİRCİLOLÜ</td>
</tr>
<tr>
<td>319</td>
<td>Immediate placement of conical connection implant and immediate provisionalization in anterior area: a prospective clinical study</td>
<td>MARIA IMBURGIA* (UNITED KINGDOM)</td>
</tr>
<tr>
<td>320</td>
<td>A retrospective study on local factors affecting the survival rate of dental implants</td>
<td>HEE-WON JANG* (REPUBLIC OF KOREA), JIN-UK CHOI, DONG-WOON LEE, PIL-KYOO PARK</td>
</tr>
<tr>
<td>321</td>
<td>The analysis of osseointegrated implant survival in regenerated bone</td>
<td>DONG-HEE KIM* (REPUBLIC OF KOREA), EUN-YOUNG SHIN, YEOK HERR, JONG-HYUK CHUNG, SEUNG-HIL SHIN, JUNG-SOO PARK, YOUNG-HYUK KWOON</td>
</tr>
<tr>
<td>322</td>
<td>An analysis of bony window repositioning without using a barrier membrane in a lateral approach for maxillary sinus bone grafts</td>
<td>CHANG-JOO PARK KYUNG-GYUN HWANG, BYUNG-HA LEE, IN-HO KIM* (REPUBLIC OF KOREA)</td>
</tr>
<tr>
<td>323</td>
<td>Success rate and usefulness of a variety of OSSSTEM implant systems for immediate loading</td>
<td>JAE-SUNG PARK SANG-JUN HAN, IN-HO KIM* (REPUBLIC OF KOREA)</td>
</tr>
<tr>
<td>324</td>
<td>Internal fixation and stabilization of a resorbable barrier membrane to repair a large perforation of the sinus membrane</td>
<td>CHANG-JOO PARK KYUNG-GYUN HWANG, SEUNG-HWAN JEOH, IN-HO KIM* (REPUBLIC OF KOREA)</td>
</tr>
<tr>
<td>325</td>
<td>Insertion torque sensitivity of TSIV SA fixture in artificial bone model</td>
<td>IN-HO KIM* (REPUBLIC OF KOREA)</td>
</tr>
<tr>
<td>326</td>
<td>Influence of implant length and insertion depth on stress analysis: a finite element study</td>
<td>TAE-GWAN KIM MYUNG-DUK KIM, DAE-HA LIM, IN-HO KIM* (REPUBLIC OF KOREA), YOUNG-KYUN KIM, SEOK-GYU KIM</td>
</tr>
</tbody>
</table>
327 Accuracy of computer-guided implant surgery using fixed radiographic markers
YONG KIM* (AUSTRALIA), TAE-KYOUNG LEE, JE-KYO LEE

328 Short-term survival of dental implants in a student clinic setting
MATTIAS MICHELIN* (SWEDEN), MARGARETA HULTIN, JOTTA SEFERLI, MADELEINE JANSSON PAVENIUS, BJÖRN KLINGE

329 Can inflamed extractions socket jeopardize osseointegration of immediate placed implant?
KOČAR MAHA* (SLOVENIA)

330 Outcomes of osseointegration in fibula free flap after reconstruction of bone defect
MIHA KOČAR* (SLOVENIA), ANDREJKA EBERLINC, ANDREJ KANSKY, NATAŠA I. HAN HREN, DIME SAPUNĐIĆ-HLJEV, DAVID DOVŠAK, VOJSLAV DIDANOV

331 Clinical outcome of sinus bone augmentation without graft; radiological analysis
YUKI KUSUMOTO* (JAPAN), KAZUHIRO KON, MOTOHIRO MUNAKATA, TAKAHIRO NAKAMURA, NOORIKO TACHIKAWA

332 A retrospective case series evaluating BioHelix™ dental implants - 5-year results
MATS THOMSSON, CECILIA LARSSON WEXELL* (SWEDEN)

333 Reosseointegration after mechanical breaking of immature osseointegration
JUNG-SEOK LEE* (REPUBLIC OF KOREA), JIN-WOO LEE, JUNG-CHUL PARK, CHANG-SUNG KIM, SEONG-HO CHOI, KYOG-SUNG CHOI, JUNG-KIU CHAI, UI-WON JUNG

334 The implant therapy of crossing the mandibular canal by the guiding of cone beam computed tomography
GANG LI, DAYI WU* (CHINA), QING ZHANG

335 Modification for Nobelguide in the mandible with flap approach
ARMANDO LORES* (PORTUGAL), RICARDO ALMEIDA, NUNO BANGOLA, MARIA INES ESPINHA, MIGUEL ARAUJO NOBRE

336 Insertion of zygomatic fixtures under local anesthesia
SAVID LOURENÇO* (INDIA), CHERYL LOURENÇO

337 Immediate dental implants in infected sockets compared to implants placed in healthy sockets
CESAR LUCAHETTI* (ARGENTINA), ALIOJA KITRILAKIS

338 3 year follow-up from a prospective multicentre study replacing single anterior teeth with narrow, 3.0 mm diameter, implants
CARLO MAIORANA* (ITALY), KATARINA SONDELL, PAUL KING, NILS WORSAAE, SEBASTIAN GUJAS, PABLO GALINDO-MORENO

339 Zygomatic: an achievable surgical option for the rehabilitation of edentulous maxillae?
DAVID MARDENALOM* (FRANCE), JEAN PIERRE BLANCHARD, JEAN BAPTISTE VERDINO, THIERRY LOUVET, CYRILLE SÉDARAT, ANDRÉ ROJAS, BRUNO ELLA

340 Accuracy, surgical & prosthetic benefits of a new zygomatic implants drilling guide: an ex-vivo study
DAVID MARDENALOM* (FRANCE), JEAN PIERRE BLANCHARD, CYRILLE SÉDARAT, ANDRÉ ROJAS, JEAN BAPTISTE VERDINO, THIERRY LOUVET, BRUNO ELLA

341 Bone thermal changes during mini dental implant placement. An in vitro study
ALEKS MARKOVIC* (SERBIA), ALEKSANDAR Todorovic, BOJAN JANJIC, MIOCRAG SopoJANOVIC, LJUPKA MIGIC

342 A surgical guide for sinus elevation utilizing the Caldwell-Luc osteotomy
YEHA MAHROUD* (USA)

343 Bone response to implants with different root form and surface
BRUNO NEGRI* (SPAIN), MARÍA PIEDAD RAMÍREZ-FERNÁNDEZ, JOSE LUIS CALVO-GUIRADO, JOSÉ EDUARDO MATE-SÁNCHEZ DE VAL, RAFAEL ARCESIO DELGADO-RUIZ, LAURA LÓPEZ-MARI, CRISTINA CALABRIA-ZAPATA, GUILLERMO PARDO-ZAMORA, JAVIER GUARDIA, GERARDO GÓMEZ-MORENO

344 Marginal periimplant bone loss at implant-supported single-tooth replacement: a 10-year prospective clinical study
BORIS SIMONČIĆ URBAN MATCH* (SLOVENIA), MAJA MULEV-VEDUN

345 Edentulous jaws restoration with guided surgery and immediate loading
OLIVIO MARIO MELONI* (ITALY), GIACOMO DE RIU, MILENA PISANO, ANTONIO TULLIO

346 A modified osteotome sinus floor elevation technique for placing short implants with minimal crestal bone
MING-HUA TIN, F JING NE, AN CHUN MO* (CHINA), JUN YE

347 Treatment of mandibular ameloblastoma using intra-oral graft and implants: a case report
LUIS EDUARDO MORAES* (BRAZIL), EDUARDO MORAES, NATALIA MORAES

348 The influence of postoperative amoxicillin on success of dental implants: a placebo-controlled randomized clinical trial
NEDA MOSELEVI, F YADOLLAH SOLEIMANI SHAYESTEH, MOJGAN RAONEJAD, ZAHRA KARAMI* (ISLAMIC REPUBLIC OF IRAN), SAFIA JABBARI

349 Effectiveness of Dextroketoprofen trometamol administrated before surgical implant
MARIA-JOSÉ MOYA-VILLAESCUSA* (SPAIN), ARTURO SÁNCHEZ-PÉREZ, ALFONSO JORNET-GARCÍA
350 Immediate implant replacement therapy for peri-implantitis patients
MUTSUMI NAGATA* (JAPAN)

351 One-year survival of 6 mm short dental implants related to implant site
CAMILLA ABDERK.IELDMANN* (DENMARK), THOMAS ALEXANDER GEORDS, ELSE MARIE PINHOLT

352 Hard and soft tissue maintenance at immediately provisionalized Osseospeed implants placed into extraction sites: 2-year results
ROBERT NOELKEN* (GERMANY), MARTIN KUNKEL, WILFRIED WAGNER

353 Maintenance of marginal hard and soft tissue support at immediately provisionalized Osseospeed profile implants - 2-year results
ROBERT NOELKEN, FABIANNE OBERHANSL* (GERMANY), F. MARTIN KUNKEL, WILFRIED WAGNER

354 Office-based 2-stage posterior maxillary segmental osteotomy for mandibular implants placement: clinical study
JOOYOUNG OHE* (REPUBLIC OF KOREA), BAEKSOO LEE, YONGDAE KWON, BYUNGJUN CHOI, KYUNG SUN RYU

355 Evaluation of a protocol for a two stage bone expansion procedure in the mandible
DANIEL OSTROWSKI* (SPAIN), CESAR LUCHETTI

356 Immediate implants following tooth extraction: report of case series
MELTEM KORAY IZCOZAN* (TURKEY), HAKKI TANYERI

357 Crestal approach sinus lifting and simultaneous implant placement with a novel trephine design: a case report
HAKKI TANYERI MELTEM KORAY ULYA UCEM, ILKUNUR OZCAN* (TURKEY)

358 Florid cemento-ossous dysplasia: a case report
ILKUNUR OZCAN* (TURKEY), HÜLYA ÇAKIR KARABAS, TAHAN EMRE KOŞE, TAMER L. ERDEM, BANU GÜRKAN KOSEOGLU

359 Oral-clinical findings and management of a patient with Epidermolysis Bullosa NELHIAN SENEL ILKUNUR OZCAN* (TURKEY), TAMER LUTFI ERDEM, BANU GÜRKAN KOSEOGLU, TAYFUN BILGIN

360 Clinical outcomes of computer guided implant surgery using mucosa supported surgical guide
DEGER OZYAZGAN* (TURKEY), FAYSAL UGURLU, ATILLA SERTSOZ

361 Use of intraosseous anaesthesia in dentistry and oral implantology
ALER PALANCIOGLU* (TURKEY), IREM KIRIL TAYLAN CAN, SEVİM ÖZER, SIRMAHAN CAKIRER IRAT SELVI, MEHMET YALTIRIK, ÇENGİZ HAYTURAL

362 Immediate loading of dental implants: a retrospective study
SELM RAMILK* (TURKEY), ASLAN GOKBUGET, ÇIZDEN HAYTURAL

363 Comparison of cumulative survival and success rates of various implant systems with SLA surface
BYUNG KWOL PARK* (REPUBLIC OF KOREA), KYUNG SHIL LEE, YOUNG HYUK Kwon, JONG HYUK CHUNG, SELGUN SHIN, JUNG JOO PARK, YEUK HERR

364 Narrow flapless immediate loaded implant for over-dentures: a 2 years follow-up study
GERARDO PELLEGRINO* (ITALY), ZORAN ZACHERONI, PIETRO FELICE RANCIERO PELLEGRINO, CLAUDIO MARCHETTI

365 The early change of soft tissue around single maxillary anterior implant after immediate placement and immediate restoration
LINGYAN PENG* (CHINA)

366 A stepped approach to esthetically restore a failing central incisor
VASILIOS CHRONOPoulos* (GREECE), YOTA STATHIPOULOU, ARIE VROCHARI, SASI WANDOSKI

367 A new technique for chin bone graft harvesting
GONZALO PIMENTEL* (BRAZIL), ALEXANDRE MONTENEGRO, RAFAEL CAIARDO, KAMILA TEMPOSI, TEREZA COELHO, MARISA AKEMI, CARLOS FRANCISCO, SILVIA PIZZINI

368 Ridge augmentation with Ti-mesh and autogenous bone grafts. A 88 months retrospective study on 13 patients
PIER PAOLO POLI* (ITALY), MARO BERETTA, ANDREA PANGALLO, CARLO MAIORANA

369 Reconstruction of an edentulous maxilla with zircon bridge supported on 8 implants-3 stage approach
JACEK POPINSKI* (POLAND)

370 Reconstruction of an edentulous mandible with a fixed bridge on four implants with the use of profile implants-case report
JACEK POPINSKI* (POLAND)

371 Outcomes of two implants with different interfaces and neck configurations: randomized, controlled, split-mouth trial
ALESSANDRO POZZO* (ITALY), ALBERTO BARALLATI, ENRICO AGIARDO, MARCO TALLARICO

372 Mandibular and implant reconstruction of severe atrophic mandible in an oromandibular dystonia patient
PRISAVAN RAPPINANDONI* (THAILAND), VEERACHAI THUMMANICH, CHIJANIT SANPETH, HENK TIDEMAN

373 Peri-implant diseases: prevalence and risk factors
AUSRA RAMANAUSKAITE* (LITHUANIA), NOMEDA BASEVIENIE

374 A literature review on study protocols in implant dentistry
ALEXANDRA S. RIEBEN* (SWITZERLAND), ANN S. JANNU
375 Comparison between virtual and real position, using cone morse implants in bimaxillary guided surgery
AMILKAR ROCHA AGUILA* (BRAZIL), GENINHO THÔME, ALEXANDRE MOLINARI

376 Prospective clinical study of immediate loaded implants with different designs
SERGIO ROCHA BERNARDES* (BRAZIL), VETE APARECIDA MATIAS SARTORI, HYUNG JOO LEE, ELDONA THÔME, ROSA CRISTINA MENDES DE SOUZA, LÂVIA NOEMY GASPARINI, KATIAE FONTÃO, ANA CLAUDIA MOREIRA MELLO

377 Tomographic analysis of implants with immediate loading post extraction area aesthetics - clinical report of 10 cases
BRUNO ROCHA BERNARDES* (BRAZIL), JESSICA GUILNELLI, MARCOS KUABARA, EDILSON FERREIRA, RENATO ANDRADE, RICARDO OLIVEIRA, NATALIA NEIVA

378 1 Stage or 2 stage implant placement. Which one has less bone loss?
HAKIMEH SADAT, AMIR REZA ROKN* (ISLAMIC REPUBLIC OF IRAN), MARZEH ALKHASI, MEHRDAD PANJNOOSH, MASOOD ALIHOSEINI, SEYED HOSEIN BASSIR

379 Long-term follow-up of 227 ITI-implants after 16-22 years
CHRISTIAN ROSSMANN* (GERMANY), STEPHAN THOMAS BECKER, ELEONORE BEHRENS, JÖRG WILTFANG

380 Reconstruction of the partially edentulous posterior maxilla in periodontally compromised patients
SEONG HOUN RYU* (REPUBLIC OF KOREA), WON JIN LEE, SEUNG-JAE LEE, MOON TAEK CHANG, HYUNG SEOP KIM

381 Immediate implant placement into fresh first maxillary molar extraction sockets
CONGALDO SEGURIO DIAS* (PORTUGAL), MARISANCA CALADO RIBEIRO, MARIA TERESA CASACA, ANA LUIZA SILVA, VANESSA VAZ OSório

382 Effect of three surgical approaches for implant placement on the crestal bone height
SAWEE SEIF* (SAUDI ARABIA)

383 Multiple implant treatment with guided bone implant for complete edentulous arch: a case report
YOUNGDEOK CHEE* (REPUBLIC OF KOREA), SEUL-JI PARK, HWA-OYEDONG SEON

384 Replacement of severely traumatized teeth with immediate implants loaded immediately
LIEPING SHENG* (CHINA), LIQUN WU, QIRONG ZHAO, ZHIFENG LOU, QINGFANG MA

385 The development of implants stability in sinus augmentation
ANTONIN SMUJEK* (CZECH REPUBLIC), RAKESH V. SOMANATHAN, JAKUB STRNAD, DANA KOPROKA, TOMAS BRAZDA

386 A modified method for sinus floor augmentation without grafting: a case series
OSMAN ERCAL PINAR SIRANECI* (TURKEY), MUSTAFA RAMAZANOGLU, OSMAN GUMRU

387 Usefulness of ridge expansion and xenograft in atrophic maxilla: case report
WON-MOOK SONG* (REPUBLIC OF KOREA), YOUNGDEOK KIM

388 Implant placement adjacent to ankylosic area in anterior maxilla
ALBANOR BORRASCA GABRIEL* (BRAZIL), FRANDSLEY ÁVILA SOUZA, ALESSANDRA MARCONDES ARANEGA, ELÓA RODRIGUES LIZIVÜTO, ANA PAULA FARÑEIZI BASSI, DANIELA FONZÓN, HELODIA HELENA NÍVIA, ÚSIO KERCHER VASCONCELLOS, IDELMIO RANZIEL, GARCIA JÚNIOR, OSVALDO MAGRO-FILHO

389 Immediate implant placement combined with titanium granules
HANNAJ G. STEVELING* (GERMANY), CHRISTIAN MERTENS

390 Reduced diameter titanium-zirconium implants: a human pilot study – 3 year results
PAUL STONE* (UNITED KINGDOM), STEPHEN BARTER, URS BRÄGGER

391 Evaluation of sinus floor augmentation using autologous fibrin clot in concentrated growth factors (CGF) as sole grafting material
NOBITAKA TAJIMA* (JAPAN), SEIGO ODA, TOKUTARO MINAMIZATO, TAKASHI SAIVASE, IZUMI ASAHINA

392 One-year results of immediate implant placement and socket preservation procedures
MARCO TALLARICO* (ITALY), FEDERICO MARIA BALZARELLI, ANNA VACCARELLA

393 Anterior teeth immediate implant survival of periodontal disease and risk factors
LI JIANG* (CHINA), SHIFENG LIU, JIANG JI, HUIHUI ZHANG, DAYI WU

394 Evaluation of an air-abrasive device during surgical treatment of peri-implantitis

395 Application of platelet-rich fibrin with deproteinized bovine bone mineral in sinus augmentation: case report
TAKESHI TOYOSHIMA* (JAPAN), MASANDRI SASAKI, KIYOSHI KOYAND, YASUYUKI MATSUHITA, YOSHINARI MATÔNÖ, KATSUHIRO SEKI, RYUJI KITAMURA, HIDEKI TANAKA, SEI I MAKURA

396 Precision of implant placement in edentulous mandibles using different surgical-templates
VASILKI TISTA* (GERMANY), CHRISTIN ARNOLD, JÜRGEN M. SETZ, ANNE F. BOECKER

397 Resonance frequency analysis as predictor for early failure in immediate implant placement in molar regions
THOMAS URBAN* (DENMARK), ANN WENZEL

398 Guided implant surgery using a 2-stage protocol: a prospective clinical outcome study
BENONI VAN BUTSELE* (BELGIUM)
A within implant comparison to evaluate the concept of platform switching. A randomized controlled trial
STEFAN VANDEWEGHE* (SWEDEN), HUGO DE BRUYN

One piece zirconia or titanium implants placed in posterior mandible: 6 months follow-up
RICARDO VEZZOTTI* (BRAZIL), FABIANO ZANARDO, JOSÉ RODRIGUES, ALESSANDRA CAISSONI, ALEXANDRE DOTTORE, ANDRE CAMPOS, JAMIL SHIBLI

Precision of guided surgery. Determination of influencing factors via a RCT
MARJOLEIN VERCRUYSSEN** (BELGIUM), CATHERINE CDX, WIM ODUCKE, REINHOLDE JACOBS, IGNACE NAERT, MARC QUIRYN

Two alternative rehabilitation approaches to avoid bone graft: case report
CAROLINA VIDAL* (PORTUGAL), CARLOS ALMEIDA, INÉS FESTAS, JOÃO NUNES, MIGUEL DE ARAÚJO NIBRE

The using of Morse taper implants to maintain periimplant bone in the aesthetic area
GIOVANNI WIEL MARIN* (ITALY), SERGIO ALEXANDRE GEHRKE

Evaluation of the gain in bone expansion using conical tapered expanders
GIOVANNI WIEL MARIN* (ITALY), SERGIO ALEXANDRE GEHRKE, BRUNO KONG JR

Flapless placement of zygomatic implant by using real-time surgical navigation
YIQUN WU** (CHINA), XIAOJUN CHEN, LINFA PENG, ZHIYONG ZHANG, WEI HUANG

Clinical evaluation of dental implants with an integrated platform switch protocol: a pilot study
DUYGU YAMAN* (TURKEY), KORKUD DEMIREL

Improvement of esthetic problems originated after installation of implant using semilunar technique on the maxillary incisor area
YANG KEON-L** (REPUBLIC OF KOREA), JI CHOONG SEOP, YU SANG-JOUN, KIM BYUNG-OCK

Facial alveolar bone wall width in asians: a CBCT study
A-HYED ZEBRY* (HONG KONG), REN WANG, ANSON CHAI, NIKLAUS F. LANG

Use of 6 mm long-implants in fixed partial dentures in posterior sites (follow-up 3-year)
FABIO ROSSI* (ITALY), EMANUELE RICCI, CLAUDIO MARCETTI, DANIELE BOTTICELLI

Designing a novel dental root analogue implant using cone beam computed tomography and CAD-CAM technology
DAVID ANISSARI MOIN** (NETHERLANDS)

A novel internal irrigation system is capable to decrease temperature rise caused by trephine osteotomies
CHRISTOPH ARTHAERT* (AUSTRIA), Evaldo Unger, GEORGE WATZEK

Efficacy and safety of multi-phosphonate treated dental implants (randomised trial)
MARCO ESPOSITO, IOAN DODONOVIC, LAURENCE GEMMON, RICHARD CUPINO, SABRINA BUCCIINI, PETER PECZY, OVEN LINDSKOG, BJORN-JOHANNE ARNERSJO** (SWEDEN)

Sisters chromatide exchange could be induced by synthetic bone grafts?
BAKU GÜRKAN KOŞERÇİLU* (TURKEY), AMILA BRKIĆ, MEHMET ALİ ERDEM, ŞÜKRÜ ÖZTÜRK, ŞÜKRÜ PALANDUZ, KIVANÇ CELEBE

Biofunctionalization of orthodontic miniscrews: torque and resonance frequency analyses
ADRIANO CRISMANI** (AUSTRIA), MICHAEL BERTL, KLOSS FRANK, RASSE MICHAEL

Development of implant/interconnected porous calcium hydroxyapatite complex as all-in-one implant
KAZUYA DOO* (JAPAN), TAKAY ASU KUBO, HIROSHI OUE, KOJI MORITA, SHI-HO KAJHARA, VITTORIA PERROTTI, GIOVANNA IZZO, ADRIANO PIATTELLI, YASUHISA AKAGAWA

Three finite element analysis and fatigue load test between different internal conical type implant connections
JUWON EOM** (REPUBLIC OF KOREA), HO-JEDOM KWON, YOUNG-JUN LIM, MYUNG-JOOG KIM, SEO-JOOG HEG, JAI-YOUNG KOAK, SEO-JEY HAN, JAI-BONG LEE, SUNSUNG HAN, IN-SUNG YEO

Photodynamic therapy on osseointegration. A histometric study in dogs
PAULO FARIA* (BRAZIL), DANIELA FELIPUCCI, ANDREZA SIMIONI, ANDREA SIMIONI, ANTONIO TEBEDO, LIUZ SALATA

Control of calcium deposition and bone organization around the rough surface
SERGIO ALEXANDRE GEHRKE* (BRAZIL)

Real influence of the roughness surface in the bone stimulation - an experimental study in vivo
SERGIO ALEXANDRE GEHRKE* (BRAZIL), BERENICE ANINA DEDAVID, MIRIAM SOUZA DOS SANTOS VIANNA, GIOVANNI WIEL MARIN

Analysis of metallic properties and microstructure of titanium dental implants
AIKATERINI GKOUZIOTI* (GERMANY), TIM HOESEL, SIMON ZABLER, THORSTEN STEINBERG, MICHAEL SWAIN, RAINER SCHMELZEISEN, KATJA NELSON

A novel synthetic bone graft material
CLARE GLEESON** (UNITED KINGDOM), GIUSEPPE CAMA, TARA RENTON, MARK MC GURK, SANJUKTA DEB

Quantitative and qualitative characterization of various dental implant surfaces
PRABHU GUBBI* (USA), ROSS TOWSE
422 Low bacterial re-growth on rough titanium surfaces when combining chemical and mechanical debridement techniques in vitro
EVA GUSTINHAUGEN* (NORWAY), JESSICA LØNN-STENGRIUD, ANNE SAMDAHL, SCHIRLE, KARL EKSTRAND, S.PETER LYNGSTADAS, ANGERS EKELDT, SEBASTIAN TEXT-LAMOLLE

423 A nano-thickness coating of single hydroxyapatite crystals on titanium implant fixture improves osseointegration
KYUNG-WON HA* (REPUBLIC OF KOREA), HYUN-MAN KIM

424 Influence of surface treatment on strength of hot isostatic pressing (HIP) yttria-stabilized tetragonal zirconia polycrystal (Y-TZP)
TOSHIHIKO IUMA* (JAPAN), SHINYA HOMMA, MASAO YOSHINARI, YASUTOMI YAJIMA

425 Application of a novel GBR membrane made from dna-polycation complexes
AKIHITO IRIE* (JAPAN)

426 Removal torque analysis of injection molded zirconia implants
WOONCHUL SHIN* (REPUBLIC OF KOREA), YONG-HAK KIM, MONGSOOK VANG, HONGSO YANG, SANGWON PARK, HYUNIL LIM, KIWOUGH YUN, KWANGMIN LEE, SEONGGSO KANG, GYEJEONG OH, HANSUNG JOO

427 Influence of implant abutment screw coating materials on joint stability
WOONCHUL SHIN* (REPUBLIC OF KOREA), YONG-HAK KIM, MONGSOOK VANG, HONGSO YANG, SANGWON PARK, HYUNIL LIM, KIWOUGH YUN, HANSUNG JOO

428 Bone healing response to the various surfaces of the implant
WOONCHUL SHIN* (REPUBLIC OF KOREA), YONG-HAK KIM, MONGSOOK VANG, HONGSO YANG, SANGWON PARK, HYUNIL LIM, KIWOUGH YUN, HANSUNG JOO

429 Biocompatibility and corrosion performance of nanostructured titanium-bioceramic composite scaffolds
KAROLINA JURCZYK* (POLAND), MIECZYSLAWA U. JURCZYK

430 Effect of excimer ultraviolet to titanium modified by wire-type EDM
YU KATAOKA* (JAPAN), YUICHI TAKIGUCHI, SHIGERU IKEDA, YUICHI TAKIGUCHI, SHIGERU IKEDA, KAZUTAKA SUGIYAMA, TAKASHI MIYAZAKI

431 Accelerated osteogenesis in extraction sockets using a novel calcium Sulfate-PRF combination: a clinico-histological study
SUHRYA KHEUR, MDHIT KHEUR* (INDIA)

432 Effect of nitric oxide and n-methyl-d-aspartic acid receptor antagonist on human periodontal ligament fibroblast cell apoptosis
DAE-HYUN KIM* (REPUBLIC OF KOREA), TAE-LI KIM

433 Biologic response of MG63 osteoblast-like cells in fluoride-modified titanium surfaces
MYUNG-JOO KIM* (REPUBLIC OF KOREA), SEONG-JOO HEO, JUNG-SUK HAN, JAI-YOUNG KSAK, YOUNG-JUN LIM, SEONG-KYUN KIM, SEONG-HUN KIM, IN-SEONG YEO

434 Mechanical study on bar-type substructure made from CAD-CAM system
TORU KIWARA* (JAPAN), MASASHIRO WADA, TOMIOYA GONDA, YOSHINBU BAEDA

435 The quest for optimal implant drill design: what is the optimal number of flutes?
KI-TAE KOO* (REPUBLIC OF KOREA), HYUN-JUN OH, ULF WIKSJO, JIHYOON YOON

436 Influence of microthread configuration on peri-implant tissue dimension after functional loading in dogs
JOO HYUN KWOON* (REPUBLIC OF KOREA), SUNJAI KIM, CHENG HYUN HAN

437 Enhanced wettability and cellular response on hydrothermally treated hydroxyapatite coated-titanium surface
MIHYUNG KWON* (REPUBLIC OF KOREA), HYE-RI SHIN, JU-SUK KIM, YUUKO CHO, DONG BONG SIM

438 Mechanical properties and biocompatibility of implant material titanium-zirconium alloy
TSUKITARO MINAMIZATO* (JAPAN), TAKASHI LI, MAYUMI UMBAVASHI, YOSHINORI SUMITA, SEIKO KESSA, MASAPI MURATA, IZUMI ASAIHNA

439 Comparative measurement of fracture resistance of various kind internal connection systems
OGZUOLU TANIEL MUSTUFAR AMZANADOLU, MEHMET OZGUL*, TAYI BENIL KATIBOGLU

440 Osseointegration of nonthermal atmospheric pressure plasma-treated zirconia implants with different surface roughness in rabbit tibiae
YOUNG-SEOK PARK* (REPUBLIC OF KOREA)

441 Appreciation of stability in implants with two different surfaces
GULSUM SAYIN* (TURKEY), GAMZE ALNADJ, ASLI SECILMIS ACAR, OZGUR INAN, DOGAN DALINAZ, GULSUM YILDIRIM

442 Impact of abutment material and dis-/reconnection on soft and hard tissue changes at platform switched implants
KATHRIN BECKER, ILJA MIHATOVIC, VLADIMIR GOLLIDYOVIC, FRANK SCHWARZ* (GERMANY)

443 Development of standardized high and low density porcine bone models: an in vitro pilot study
SERGIO SOMBATTI DE SOUZA* (BRAZIL), CAROLINA SANTOS, DANIELA PIZZO, JESSICA CARVALHO, DANIEL REIND, ANGELA REIS, ARTHUR NOVAES JR., VALDIR MUGLIA
Resorbable GBR membrane of hydrogel type based on polyethylene glycol (PEG)  
DA-MI CHOI YOUNG-IL CHUNG, MIN-KYOUNG KIM, SEUNG-HWA SHIN, SU-KYOUNG KIM* (REPUBLIC OF KOREA), TAIY-GWAN EOM, KYU-DONG CHOI, JU-DONG SONG

Alterations of gene expression by beta-tricalcium phosphate in osteoblast-like MG63 cells  
CHANG-JOO PARK KYUNG-GYUN HWANG, TAE-YUN IM, SU-KYOUNG KIM* (REPUBLIC OF KOREA)

The use of autologous blood derived from frontal sinus membrane elevation using the B.L.T Method: an experimental study  
YUGIKAZU YAMAZAKI SU-KYOUNG KIM* (REPUBLIC OF KOREA)

Design and development of osteogenic coatings for titanium dental implants  
JULIO SUAY* (SPAIN), MARIA JESUS JUAN-DIAZ, MARIA MARTINEZ-BANEZ, MIRIAM HERNANDEZ-ESCOLANO, VICENTE FERRER, JAIME FRANCO, ANTONIO COBO, IRENE LARA-SAEZ, MARIA SUAY-GIRUJACHA, ISABEL GONZALEZ

Effect of abutment screw design on implant system seal performance  
ZACHARY SUTTIN* (USA), ROSS TOWSE

Initial biocompatibility of titanium nanostructure surface modified by new method  
YOSHIRO TAGUCHI* (JAPAN), SATOSHI KOMASA, HISA TAKEDA, KAZUYO YAMAMOTO, MASAHIRO TANAKA, JUDI OKAZAKI, AKO TANAKA, MAKOTO UMEDA

Bone regeneration by bone grafting material in rat calvarial defect model  
YUICHI TAKIGUCHI* (JAPAN), YU KATAOKA, YO SHIBATA, TAKASHI MIYAZAKI

Unconventional treatment of the aged single tooth implant in the molar region  
LUTZ TISCHENDORF* (GERMANY)

Microbial contamination of impression materials in implants-prosthetic rehabilitation  
MATEI TRAIJNARU* (ROMANIA), RUZANDRA SFEATCU, SIMON GHEDRICH DRAVATIU, LILIANA BURLIBASA, CORINA MARILENA CRISTACHE, MIHAI BURLIBASA, TEOADOI TRAIJNARU

Early bone apposition to hydrophilic titanium implant surfaces: a histologic and histomorphometric study in minipig  
CHRISTOPH VASAK* (AUSTRIA), UVEE YACINE SCHWARZE, STEFAN TANGIL, REINANDO MUIZON ILIZON, GEORG WATZEK, THOMAS HEFTI, DIETER BUSENLECHNER, FALKO SCHRITTWETZ, REINHARD GRUBER

In vitro behavior of osteoblasts on zirconia after ER,CR:YSGG-laser irradiation  
RICARDO VECCHIATTI RENAN SOARES ABIANO ZANARDO* (BRAZIL), ODAR BORGHI, JOSE RODRIGUES, JAMIL SHIBLI

Availability of secondary fixation of implants – pilot model study  
MASAHIRO WAIDA* (JAPAN), TORU KIMURA, TOMOYA KONDO, YOSHIHIBU MAEDA

Study of a new collagen membrane with extended resorption time  
BASTIAN WESSING* (GERMANY), MARTIN EMMERICH, BERND SELLHAUSEN, AHMET BOZKURT

Effect of reinforcement for immediately loaded implants provisional prostheses  
KIKIUE YAMAGUCHI* (JAPAN), YUICHI ISHURA, DAIKUI SATO, MASAHICO DZEKI, KAZUYOSHI YABA

Bone regenerative effects of CHO cell expressed rhBMP-2 in rabbits  
YU-JIN KIM*, YU-JIN KIM* (REPUBLIC OF KOREA)

Influence of abutment material on peri-implant clinical parameter  
FABIANO ZANARDO* (BRAZIL), RICARDO VECCHIATTI, JOSE RODRIGUES, JAMIL SHIBLI, JOSE NETO, ALESSANDRA CASSONI

Management of mandibular fracture associated with endosteal dental implants  
LAURA ADELMANN* (ROMANIA), TIBERIU ADELMANN, ALINA IACOB

Virulence and pathogenicity biochemical testing of bacterial biofilms in periimplantitis  
MIHAI BURLIBASA* (ROMANIA), DANA CREISTA, ODORIANA, LUISA MUTIANI, GABRIELE TANASE, ION ALEXANDRU POPOVICI, LILIANA BURLIBASA

Innovative technique for the treatment of peri-implant infection: case report  
FRANCESCA DE Siena, F STEFANO CORBELLA* (ITALY), P MASSIMO DEL FABBRO, LUCA FRANCETTI, SILVIO TASCHERI

Gender differences in peri-implant disease  
GABRIELLA D’VORAK* (AUSTRIA), RUDOLF SEEMANN, CORINNA BRUCKMANN, CHRISTOPH ARNHART, GEORG WATZEK

Bone level changes around dental implants  
TAMARAIRO OSSIO ECELLENTEO CAPASSO* (ITALY), GIOVANNI PANE, VINCENTO MORMILE, VINCENTO URCIOLO

Stress distribution of abutment screw in external and internal implant  
TOKOYA GONDA* (JAPAN), YOKO MIZUNO, YOSHINDBLU MAEDA, YATAPI MAITIKAYA

Inferior alveolar nerve injury - a serious complication in implant dentistry: two cases report  
HULYA KOCAK BERBEROGLU* (TURKEY), AMILA BRKIC, BANU GURKAN KOSEOGLU, ENDER IKLER, CETIN KASAPOGLU

Implant placement after the removal of overfilling in soft tissue  
HULYA KOCAK BERBEROGLU* (TURKEY), AMILA BRKIC, BANU GURKAN KOSEOGLU, IKMUR DIZGAN

Technical and biological complications
<table>
<thead>
<tr>
<th>Abstract Number</th>
<th>Title</th>
<th>Authors</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>470</td>
<td>Multiple dental implant migration into maxillary sinus</td>
<td>CETIN KASAPOGULLU* (TURKEY), CENGIZHAN KESKIN, MEHMET ALI ERDEM, ABDULLAH BURAK CANKAYA</td>
<td>TURKEY</td>
</tr>
<tr>
<td>471</td>
<td>Survival of implants versus natural teeth case report</td>
<td>HAYK HARUTYUNYAN* (ARMENIA)</td>
<td>ARMENIA</td>
</tr>
<tr>
<td>472</td>
<td>Surgical complication associated with implant migration into the mandible: report of three cases</td>
<td>HYUN A HEO* (REPUBLIC OF KOREA), SUNG WOON PYO, WON LEE</td>
<td>REPUBLIC OF KOREA</td>
</tr>
<tr>
<td>473</td>
<td>In vitro and in vivo bone response evaluation on HA coated submerged type titanium implants</td>
<td>JUNE-CHEOL HWANG* (REPUBLIC OF KOREA), SUNG YOUNG CHOI, TAE-SWAN EDM</td>
<td>REPUBLIC OF KOREA</td>
</tr>
<tr>
<td>474</td>
<td>Dissolution properties of high crystalline HA coated submerged type titanium implants</td>
<td>JUNE-CHEOL HWANG* (REPUBLIC OF KOREA), SUNG YOUNG CHOI, TAE-SWAN EDM</td>
<td>REPUBLIC OF KOREA</td>
</tr>
<tr>
<td>475</td>
<td>A novel cryo-mechanical approach for the removal of non-retrievable implant components</td>
<td>TIM JODA* (SWITZERLAND), JULIA-GABRIELA WITTENGE, URS BRÄGGER</td>
<td>SWITZERLAND</td>
</tr>
<tr>
<td>476</td>
<td>Bone loss and fractures of implant neck portion due to overload-related factors</td>
<td>HULYA KOCAK BERBEROGLU* (TURKEY), ENDER ILKER, NISE KAHRAWAN</td>
<td>TURKEY</td>
</tr>
<tr>
<td>477</td>
<td>Zygomatic implants: a systematic approach to manage the risk of maxillary sinusitis</td>
<td>DAVID MARIGNALOM* (FRANCE), THIERRY LOUJET, JEAN BAPTISTE VERDINO, JEAN PIERRE BLANCHARD, CYRILLE SÉDARAT, ANDRÉ ROJAS, BRUNO ELLA</td>
<td>FRANCE</td>
</tr>
<tr>
<td>478</td>
<td>Oral squamous cell carcinoma in the vicinity of dental implants</td>
<td>MAXIMILIAN MOERGEL* (GERMANY), JULIA KARBACH, MARTIN KUNKEL, WILFRED WAGNER</td>
<td>GERMANY</td>
</tr>
<tr>
<td>479</td>
<td>Can PFM metal support design on implant prevent technical complications with bruxism patients? Clinical case report</td>
<td>YUKI OMORI* (JAPAN)</td>
<td>JAPAN</td>
</tr>
<tr>
<td>480</td>
<td>Dental implant neck fractures: a series of four cases</td>
<td>HAUK ØYRI* (NORWAY), JANICKA LIAEN JENSEN</td>
<td>NORWAY</td>
</tr>
<tr>
<td>481</td>
<td>Implant periapical lesion: a clinical and histological case report</td>
<td>FRANCESCO PAOLO PISTACOCO* (ITALY), NICOLO CARLESI, PANTALEONE STELLA, PAOLO TRISI, GIANPIER GIAN MASEI</td>
<td>ITALY</td>
</tr>
<tr>
<td>482</td>
<td>Primary implant stability in the atrophic maxillary sinus floor</td>
<td>BERNHARD POMMER * (AUSTRIA), MARKUS HOF, ANDREA FÄDLER, ANDRE GAHLEITNER, GEORGE WATZEK</td>
<td>AUSTRIA</td>
</tr>
<tr>
<td>483</td>
<td>Theoretical and experimental position stability in conical implant-abutment connections</td>
<td>WIEBKE SEMPER HOGG* (GERMANY), SILVAN KRAFT, SEBASTIAN STOLLER, JÜRGEN MOHR, RAINER SCHMELSS, KATJA NELSON</td>
<td>GERMANY</td>
</tr>
<tr>
<td>484</td>
<td>Management of an implant failure associated with incomplete mandible fracture: a case report</td>
<td>ALTAN ERIC* (TURKEY), PINAR BIRANCI, OSILAN SVMURU</td>
<td>TURKEY</td>
</tr>
<tr>
<td>485</td>
<td>Four-mm implants supporting fixed partial dentures in the posterior mandible: 5-year results from a multicenter study</td>
<td>CHRISTIAN SOTTO (SWEDEN), ANNE SEIGER, ANNE MARIE HALMOY, LARS MAJAN JOHANSSON, STEN BAKKAD, SUNG-OLOF OHHEN, ANNE MARIE FREIDENFELD</td>
<td>SWEDEN</td>
</tr>
<tr>
<td>486</td>
<td>Surgical treatment of peri-implantitis</td>
<td>SOD-JOO BRYUN* (REPUBLIC OF KOREA), MOONTAEK CHANG, HYUNG SUI KIM</td>
<td>REPUBLIC OF KOREA</td>
</tr>
<tr>
<td>487</td>
<td>The prevalence of root resorption of maxillary incisors caused by impacted maxillary canines</td>
<td>GEORGE D. STRIBAC* (AUSTRIA), ANDREA FOLTIN, ANDRE GAHLEITNER, HANS-PETER BANTLEON, CHRISTOPH VASKA, GEORGE WATZEK, WERNER ZEHNDE, THOMAS BERNHARD</td>
<td>AUSTRIA</td>
</tr>
<tr>
<td>488</td>
<td>Collagen membranes for guided bone regeneration – updated evaluation of risk factors</td>
<td>FRANK PETER STRIETZEL* (GERMANY), SIMON MEISSNER, BETTINA BRUNSBERG, MORITZ HERTEL</td>
<td>GERMANY</td>
</tr>
<tr>
<td>489</td>
<td>Ecological alternative treatments for periimplantitis</td>
<td>GABRIELA TANASE* (ROMANIA), MIHAI BURLBASA, LIGIA MUNTANU, RUXANDRA SFATCU, LIGEA IONESCU, SIMION GEORGE DUMITRUL, ELENA MANOLOU</td>
<td>ROMANIA</td>
</tr>
<tr>
<td>490</td>
<td>Dental implant migration into the maxillary sinus: clinical examination of six cases</td>
<td>YUSUIKE TANIGUCHI* (JAPAN), YOSHIKATA FUNASAKI, SATOSHI YODERUE, YULKA OKINO, TAKUYA SAKAI, MARKO HARADA, KATSUHI YAMAMOTO, MASASUO MATSUURA, HIROKU SATO, HIROFUMI KIDO</td>
<td>JAPAN</td>
</tr>
<tr>
<td>491</td>
<td>Implant collar and implant body appearance coverage: a case report</td>
<td>RICCARDO TIZZONI, MARTA TIZZONI* (ITALY)</td>
<td>ITALY</td>
</tr>
<tr>
<td>492</td>
<td>Using symbiotic complex of acidophilic bacteria to prevent infection during open sinus floor elevation procedure</td>
<td>VINOGRADOV SERGEY* (RUSSIAN FEDERATION), YAREMENKO ANDREY</td>
<td>RUSSIA</td>
</tr>
<tr>
<td>493</td>
<td>A new classification of peri-implant bone defect: a radiographical study of patients with lower implant-supported overdentures</td>
<td>LEI ZHANG* (CHINA), WIL GERAETS, HANS VAN BARNEVELD, DANIEL WISMEIJER</td>
<td>FLANDERS</td>
</tr>
<tr>
<td>494</td>
<td>Using symbiotic complex of acidophilic bacteria to prevent infection during open sinus floor elevation procedure</td>
<td>VINOGRADOV SERGEY* (RUSSIAN FEDERATION), YAREMENKO ANDREY</td>
<td>RUSSIA</td>
</tr>
</tbody>
</table>
494 | The use of platelets rich fibrin (PRF) in reconstructive dental implant treatment
AHMED AYOUB* (EGYPT)

495 | Implants in a patient with bilateral cleft lip and palate
DAVOR BRAJDCIĆ* (CROATIA), DARKO MACAN, DONASGU ZABAROVIC, JOSIP BODIC

496 | Mineralized human allograft for the preservation of post-extraction socket
MARCIO CLEMENTINI, GIULIANA FURLANI* (ITALY), GIULIA DOBRENI, CORRADO AGRESTINI, DAVIDE ZAFFE, ALBERTO BARALTANI

497 | Titanium micromesh
GIULIO CONTI* (ITALY)

498 | A novel cellulose - hydroxyapatite scaffold for bone tissue regeneration
POVALAS DAUGELIS* (LITHUANIA), GINTARAS PAVELIS, PETRAS KASAI, PEDRO GOMES, ELISABETH COSTA

499 | Homogeneous bone block for the reconstruction of severely resorbed maxilla
BRUNO FUSARO* (BRAZIL)

500 | Adsorbed Periostin protein on titanium surfaces affects osteoblastic cell behavior
CARLO GALLI* (ITALY), SIMONE LUIMETTI, MARILINA PIEMONTESE, GIOVANNI PASSERI, GUIDO MACALUSO

501 | Initial density affects the resorption of bone block allografts
SIMONE LUIMETTI* (ITALY), CLAUDIO MARCHETTI, UGO CONSOLO, LUIGI PIERSANTI, ALESSANDRA MULTINU, GIULIA GHIZZI, CARLO GALLI, GUIDO MARIA MACALUSO

502 | Platelet rich fibrin (PRF) as a matrix for human osteoblast cell cultivation
VOLKER GASSLING* (GERMANY), NICOLAI PURCZ, JÜRGEN HEDDERICH, TIMOTHY DOUGLAS, YAHYA ACIL, JÖRG WILTFANG

503 | Keratinized tissue augmentation by means of a new matrix
CARLO MAJORANA, ALESSANDRA GATTO* (ITALY), LUCA PIVETTI, MARIO BERETTA

504 | Effect of low level laser irradiation on bone marrow mesenchymal stromal cells for bone tissue regeneration
MARCIO GIANNELLI, ALESSANDRO PINI* (ITALY), CHIARA SASSOLI, FLAMINIA CHELLINI, ROBERTA SQUECCO, BENEDETTA MAZZANTI, DANIELE BANI, LUCA FORMIGLI

505 | Thickening of peri-implant mucosa using punched gingival graft
DUŠAN GRÖŠELJ, ASTRID RAŽEM* (SLOVENIA), MATEJA ŽVOKELJ-HLIGČAR, HELENA GRÖŠELJ

506 | Clinical and tomographic analysis of the increase in height and implant success after sinus lift: a 2-year follow-up
JESSICA GULINELLI* (BRAZIL), EDISON FERREIRA, MARCOS KUABARA, BRUNO VIEIRA, RENATO ANDRADE, NATALIA NIEVA, RICARDO OLIVEIRA

507 | Computed tomography-based evaluation of volumetric changes after sinus floor augmentation
MARCUS HOF* (AUSTRIA), BERNHARD POMMER, MICHAEL GIRAUD*, ATRIEK HEMEL, GEORGE WATZEK, WERNER ZOEHN

508 | Semilunar miniblock technique for facial socket wall preservation
ANDRÁS HUK* (UKRAINE)

509 | Bio-Oss and stem cells from bone marrow obtained from the distal femur for sinus grafting
JUAN CARLOS IBÀÑEZ* (ARGENTINA), JUANEDA MARÍA AGUSTINA, MARIA CONSTANZA IBÀÑEZ, MARTIN IGNACIO IBÀÑEZ

510 | Evaluation of augmented bone over exposed implants threads, three years follow-up
ATEF ISMAIL* (EGYPT)

511 | Usefulness of alveolar distraction osteogenesis for dental implant of mandible
MASAHIRO IWATA* (JAPAN), MINORU MURAYAMA, TOYOSHI NISHIOKA, YOSHITOSHI TAMIMOTO, HIROMI KASAI, YOKO ASAI, AKIHIKO MATSUYOU, YUKI-HISA KOKUE

512 | Osseointegration of the implants placed in the reconstructed bone
SHIHO KAJIHARA* (JAPAN), KAZUYA DOI, TAKAYASU KUBO, KOJI MORITA, KAZUHIKO HAYASHI, HIDSHI DEUE, KASUMISA AGAWAYA

513 | Suitability of PEG-membrane combined with BCP in extensive SFEs
PHILIP L. KEVE* (GERMANY), ADRIAN LUCACIU, ANTON FRIEDMANN

514 | Clinical application of platelet-rich fibrin by the double J technique in alveolar bone defect areas
SU-GWAN KIM, F. P. JIN-SON KIM, MOON-HWAN JEDING, J. S. OH (REPUBLIC OF KOREA)

515 | BMP2-delivering heparinized-titanium implant with enhanced antibacterial activity and osteointegration
DEOK-WON LEE* (REPUBLIC OF KOREA), TAE-HEE KIM

516 | Morphologic analysis using cone-beam CT and 3D program in atrophic mandible for mandibular body bone graft
JAE-YEOL LEE* (REPUBLIC OF KOREA), JUNG-HAN LEE, YOUNG-CHAE NDH, YONG-DEOK KIM, JUNG-BO HUH

517 | Maxillary sinus floor augmentation procedure: Summers' versus a piezoelectric technique
ROBERT KIRMEIER* (AUSTRIA), MICHAEL RAYER, SUSANNE PLATZER, NICOLA BIANCO, SEBASTIAN KÜHL, ANDREAS WEGLEIN, NORBERT JAKSE

518 | Autologous and fresh-frozen allogeneic block bone grafts. A CBCT analysis
TINE KJÆRGAARD* (DENMARK), CÆCILIE BASSE ERIKSEN, RUBENS SPIN-NETO, ELCIO MARCANTONIO JR., ANDREAS STAVROPOULOS, ANN WENZEL

519 | Transposition of tongue pedicle flap before implantation at resected mandible due to tumour
KOČAR MIHA* (SLOVENIA)
520 Bone substitute plus enamel matrix derivative vs autogenous bone in deep-wide intrabony defects: a pilot study
STÉPHANE KORNGOLD* (FRANCE), STÉPHANE KERNER, DAVID NISAND, PHILIPPE BOUCHARD

521 Osteocyte lacunar density and area in newly formed bone of the augmented sinus
LILKIE KUCHLER* (SWITZERLAND), GERD PFINGSTNER, DIETER BUSSENLECHNER, TONI DOBSAK, KAROLINE REICH, PATRICK HEMMEL, REINHARD GRUBER

522 Autogenous tooth-derived material results in successful minipig sinus augmentation
JESUNG KIM, JUNGHAN KIM, YOUNG KIM, KIYON KIM, IN WONG LIM

523 Sinus augmentation with BMP-2 coated synthetic bone substitute in rabbits
KYUAN LEE* (REPUBLIC OF KOREA), YOUNJA CHOI, JUHONG LEE, CHANGSU KIM, HYEJIN KIM, UIJONG JUNG

524 Biomaterials with various biodegradation patterns in extraction socket: a histometric in vivo study
JUNGHONG LEE, JUHONG LEE, YOUNG JUN, KIYON KIM, WIJONG LIM

525 Socket grafting using β-tricalcium phosphate in a hydroxyl sulphate matrix
MINAS LEVENTIS* (GREECE), ORESTIS VASILIADIS, NADIA THEOLOGIE-LYGIDAKIS, ETER FAIRBAIRN, IOANNIS IATROU

526 Ridge preservation and augmentation using bone graft substitutes: case series
MINAS LEVENTIS ORESTIS VASILIADIS* (GREECE), ETER FAIRBAIRN, IOANNIS IATROU

527 Effects of adipose-derived stem cells on bone healing and mineralization in calvarial defects in type 2 diabetic rats
LIUHA LIANG, YINGLIANG SONG* (CHINA)

528 Custom-made porous hydroxyapatite scaffolds for alveolar ridge augmentation
FRANCESCO MANGANO* (ITALY), PIERO ZECCHI, SAMUELE POZZI, ALDO MACCHI, MICHELE FIGLIUZZI, JAMIL SHIBLI, CARLO MANGANO

529 Block graft of α-tcp with silicone in rabbits’ critical defects
JOSE EDUARDO MATE-SANCHEZ DE VAL* (SPAIN), MARIA PIEDAD RAMIREZ-FERNANDEZ, RAFAEL ARCEO DELGADO, BRUNO NEGRINI, LAURA LOPEZ-MARI, GUILLERMO PARDO-ZAMORA, CRISTINA CALABRIA-ZAPATA, JAVIER GUARDIA, GERARDO GOMEZ-MORENO

530 Comparison of bone substitute biomaterials in sinus lift surgery
MARIA PIEDAD RAMIREZ-FERNANDEZ* (SPAIN), RAFAEL ARCEO DELGADO, BRUNO NEGRINI, LAURA LOPEZ-MARI, CRISTINA CALABRIA-ZAPATA, GUILLERMO PARDO-ZAMORA, GERARDO GOMEZ-MORENO, JAVIER GUARDIA

531 Biomodel for calculating bone volumes to planning bone regeneration surgery
JOSE LUIS CALVGUARDO (SPAIN), JOSE EDUARDO MATE-SANCHEZ DE VAL, MARIA PIEDAD RAMIREZ-FERNANDEZ, RAFAEL ARCEO DELGADO, BRUNO NEGRIN, LAURA LOPEZ-MARI, GUILLERMO PARDO-ZAMORA, CRISTINA CALABRIA-ZAPATA, JAVIER GUARDIA, GERARDO GOMEZ-MORENO

532 Histomorphometric, EDX and element mapping analysis of a b-tricalcium phosphate
RAFAEL ARCEO DELGADO, BRUNO NEGRIN, JOSE LUIS CALVGUARDO, JOSE EDUARDO MATE-SANCHEZ DE VAL, LAURA LOPEZ-MARI, BRUNO NEGRIN, CRISTINA CALABRIA-ZAPATA, GUILLERMO PARDO-ZAMORA, JAVIER GUARDIA, GERARDO GOMEZ-MORENO

533 Comparison of two materials for the conservation of the bone
LAURA LOPEZ-MARI* (SPAIN), MARIA PIEDAD RAMIREZ-FERNANDEZ, JOSE LUIS CALVGUARDO, JOSE EDUARDO MATE-SANCHEZ DE VAL, RAFAEL ARCEO DELGADO, BRUNO NEGRIN, CRISTINA CALABRIA-ZAPATA, GUILLERMO PARDO-ZAMORA, JAVIER GUARDIA, GERARDO GOMEZ-MORENO

534 Microvascular bone reconstruction and dental implants after resective tumour surgery
CHRISTIAN MERTENS* (GERMANY), ROBIN SEEGER, MICHAEL ENGEL, JÜRGEN HOFFMANN, KOLJA FISCHER

535 Usefulness of a computer navigation system in maxillary sinus augmentation
KYOICHIRO MURANISHI* (JAPAN), TOMO O TAKEDA

536 Mandibular reconstruction with fibula grafts and implant-supported, prosthetic rehabilitation
NIDAL MURRA* (DENMARK), NIKOLINE PARBO, JYTTE BUHL, KRISTIAN ANDERSEN, SVEN ERIK NØRHOLT

537 Osteogenic and vascular potential of augmented and non-augmented extraction sockets
SUSANNE NAHLES* (GERMANY), CLAUDIA NACK, KERRIN GRATECAP, HERMANN LAGE, JOHN J NELSON, ANDRES STRICHER, KATJA NELSON

538 Clinical and histomorphometric assessment of frozen human bone in maxillary sinus augmentation
TATIANA REGINA RICOS NANTES DE CASTILHO* (BRAZIL), PEDRO TORTO-MANDA, JOSÉ CARLOS SILVA ANDRADE JUNIOR, ISRAEL CHILVARQUIER, MICHEL ELI LEPIED XIMENEZ, MARIA TERESA SEKAS ALVES

539 A pilot study of preservation of extraction site with an simplified method
JE LI* (CHINA), JIANG HAI NING

540 Treatment of sinus bone wall discontinuity associated with alveolar vertical defect: a surgical approach
LUCA DE SAVOLA Davide CORRADO OBERHOLTZER* (ITALY), ANDREA GELIO, ERIBERTO BRENNAN

541 Guided bone regeneration using a polyethylene glycol hydrogel membrane
LAURENT DHAYON* (FRANCE)
542 Vertical bone augmentation using collagen membrane, RHPDGF-BB and implant-fixed deproteinized bovine bone blocks
VICTOR PALARIE* (REPUBLIC OF MOLDOVA), EIK SCHIEGNITZ, VIOREL NACU LORAN, GRAZIERT, VALENTIN TOPALO, BILAL AL NAWAS, REER KAMMERER

543 Clinical evaluation of fresh-frozen bone in horizontal augmentation - maxilla
EUGENIO MIGUEL PEREIRA* (PORTUGAL), CÉSAR AUGUSTO THÔME, THOMAZ WASSIGL, ALEXANDRE D’ALÍA SALVONI, FERNANDO ALBERTO GUERRA

544 In vivo evaluation of synthetic porous calcium phosphates
MARZIO PICCININI* (ITALY), ELEONORA PREVE, ALBERTO REBAUDI

545 A comparison of spontaneous healing vs. ridge preservation with secondary soft tissue healing
ANTONIO BARONE MASSIMILIANO RICCI* (ITALY), UGO COVANI

546 Mandibular symphysis and ramus as cells source for bone tissue engineering
EMANUELA FERRAZ SAMUEL XAVIER, MARCIO BELOTI, ADALBERTO ROSA* (BRAZIL)

547 Sinus floor elevation using the osteotome technique without grafting material
GERMET SAHIN* (TURKEY), M. BULENT KURTIS, MESUT AYKOL, MEHMET BOZYEL

548 Treatment of severely resorbed alveolar ridges with calvarial bone grafts
DINE SAPUNZIEV* (SLOVENIA), NATASA IHAN HREN, VOJISELAV DIONOVIĆ, ANDREJ KANDYEK, MIHA KOCAR

549 Ridge preservation using acellular dermal matrix and bone substitute with P-15: histomorphometric results in humans
PATRICIA FERNANDES* (BRAZIL), SERGIO SCOMBATTI DE SOUZA, ARTHUR NOVAES JR., MARCO TABA JR., DANIELA PALIOTO, MARCIO GRISI, VALDIR MUGLIA

550 A modified open barrier technique for guided bone regeneration
KYOTAKA SHIBAHARA* (JAPAN), RYD JIMBO, YOSHINORI TATEYAMA, ZUM ASAISHA

551 Sinus bone formation after Schneiderian membrane elevation and implant placement
NICOLAS STRUBE* (FRANCE)

552 PRF vs xenograft in sinus procedures - densitometric analysis
MATO SLUŠČIĆ* (CROATIA), MATIJA GIKIĆ, MARKO GRANIC, IRINA FILIPOVIC ZDRE, Dрагана ГАБРИЋ РАНЏИЋ

553 Treatment of oroantral fistula defect with autogenous bone cylinder and implant rehabilitation; a case report
HAKEK YUSUF TUNGER* (TURKEY), NILAY ER, ÖSDEM KARACA

554 Clinical and histological results of socket preservation using Fortoss vital
DEMAL UCER* (UNITED KINGDOM), DAVID CHARLES MANGHAM, LES COULTON

555 Survival rate of microvascular transplants for further implantation
SASCHA VIRN** (AUSTRIA), ALEXANDER GAGGL, DANIEL JAMING M CHARI

556 Computer-aided reconstruction with distraction osteogenesis for post-traumatic alveolar ridge defects
XUQIONG WANG* (CHINA), LING LI, YIQIN WU, HONGCHANG LAI

557 Impact of a concentrate of autogenous mononuclear stem cells on bone regeneration – a pilot-study
WILDIBURGER ANGELKA* (AUSTRIA), PAYER MICHAEL, KIRMEEIR ROBERT, STRUNK DIRK, ETCHART, LICHTENSTEIN NATALE, SAULBIEIER SEBASTIAN

558 Fourier analysis of human histology of augmented bone after transplantation of stem cells CD43+ incubated on allogenic scaffold
ANDRZEJ Wojtowicz PATR BAR* (POLAND), SLAŠKOMIR CHABEREK, ARTUR KAMINSKI, EWIA GŁĘDNER, ELŻBIETA URBANOWSKA, JAN PERP, WIESŁAW WIKTOR-JĘDRZEJCZAK, KARolina Szańawska

559 Comparison of isoforms of BMPs 2, 4, 6 genes expression in bone micro-biopsy-core after mandible bone augmentation
ANDRZEJ Wojtowicz* (POLAND), ARTUR KAMINSKI, EWIA GŁĘDNER, KARolina SZANIAWSKA

560 Effects of soft-tissue augmentation as implant pretreatment
YUTAKA YAMADA* (JAPAN), TETSUYA NISHIDA, SHUCHI SATO, KOCHI ITO

561 The healing effect of platelet-rich fibrin on rabbit calvarium wounds
HYUN-JOONG YOON* (REPUBLIC OF KOREA)

562 A novel guided bone regeneration technique
OSAMA ZAKAHA* (JAPAN), MARWA MADI, SHOHEI KASUGA
Pre-Congress Courses: Invited speakers and chairpersons

Goran Benic, Switzerland
Jackie Brown, United Kingdom
Hans-Göran Gröndahl, Sweden
David Harris, Ireland
Keith Horner, United Kingdom
Reinhilde Jacobs, Belgium
Peter Lindkvist, Denmark
Adriana McGregor, USA
Michael Payer, Austria
Marc Quirynen, Belgium

Invited speakers

Tomas Albrektsson, Sweden
René Arnalberti, France
Karín Becktor, Denmark
Urs Belser, Switzerland
Goran Benic, Switzerland
Daniele Boticelli, Italy
Daniel Buser, Switzerland
Stephen Chen, Australia
Nikolaos Donos, United Kingdom
Egon Euewe, Italy
Thomas Flemming, USA
Allan Flyvbjerg, Denmark
Rudolf Fürhauser, Austria
Mathias Glehr, Austria
Klaus Gottfredsen, Denmark
Robert Haas, Austria
Christoph Hämmerle, Switzerland
Lisa Heitz-Mayfield, Australia
Kenji W. Higuchi, USA
Asbjørn Jokstad, Canada
Mats Jontell, Sweden
Björn Kline, Sweden
Niklaus Lang, China
Lars Laurell, Sweden
Georg Mailath-Pokorny, Austria
Chantal Malevez, Belgium
Daniele Manfredini, Italy
Nikos Mardas, United Kingdom
Jürg Meyle, Germany
Bo Nielsen, Denmark
Bjarni Pjetursson, Iceland
Patricia Reynolds, United Kingdom
Henning Schliephake, Germany
Gottfried Schmalz, Germany
Frank Schwarz, Germany
Alberto Sicilia, Spain
Massimo Simion, Italy
Joes Van der Sloten, Belgium
Rätta Suurannen, Finland
Irina Thesleff, Finland
Peter Thomas, Germany
Andrey Trampuz, Switzerland
Mats Trulsson, Sweden
Ann Wennerberg, Sweden
Jörg Wiltfang, Germany
Anselm Wiskott, Switzerland
Daniel Wismeijer, Netherlands

Chairpersons

Brigitte Altmann, Germany
Leonardo Amorfini, Italy
On-Yu Bae, Republic of Korea
Emberto Bressan, Italy
Miha Brežnavšček, Germany
Daniele Cardaropoli, Italy
Nicolae Chele, Republic of Moldova
Wah Ching Tan, Singapore
Nikolaos Fanaras, United Kingdom
Pietro Felice, Italy
Tim Fienitz, Germany
Ioannis Gisakis, Greece
Katarzyna Gurzawska, Denmark
Arndt Happe, Germany
Husein Marianawala, India
Jens Hardiev, Denmark
Joerg Heine, Germany
Radia Hrchi, USA
Yan Huang, Belgium
Gerhard Ighaut, Germany
Mario Imburgia, United Kingdom
Carl-Johan Ivanoff, Sweden
Thomas Jensen, Denmark
Cunejet Karabuda, Turkey
Yong-Dae Kim, Republic of Korea
Maniko Kobayashi, Switzerland
Ralf-Joachim Kohal, Germany
Tomas Linkevicius, Lithuania
Diego Lops, Italy
Corina Marilena Cristache, Romania
Plinio Mendes Senna, Brazil
Joe Merheb, Belgium
Ana Messias, Portugal
Arne Mordenfeld, Sweden
Andrei Mostovei, Republic of Moldova
Sven Müllermann, Switzerland
Rabab Nedir, Switzerland
Anders Örtorp, Sweden
David Penarrocha, Spain
Alexander Philipp, New Zealand
Maria Piedad Ramirez-Fernández, Spain
Francesco Pieri, Italy
Aligidas Puisys, Lithuania
Nicolai Purcz, Germany
Tatjana Rack, Germany
Mustafa Ramazanoglu, Turkey
Salomão Rocha, Portugal
Fabio Rossi, Italy
Daniel Rothamel, Germany
Luiz A. Salata, Brazil
Mariano Sanz, Spain
Nikola Sautalciuc, Switzerland
Misi Si, China
Kirsten Slogt, Netherlands
Aleksandra Špadier Gostović, Serbia
Markus Sperlich, Germany
Rubens Spin-Neto, Denmark
Andreas Stavropoulos, Denmark
Tobias Thalmair, Germany
Taskin Tun, Germany
Nele Van Assche, Belgium
Yanying Wang, China
Pre-congress Course 1
MICROSURGICAL TECHNIQUES FOR SOFT TISSUE MANAGEMENT:
HANDS-ON COURSE

> Peter LINDKVIST
DDS Peter LINDKVIST graduated from the Royal Danish Dentist College in Copenhagen in 1984. He is now working as a senior partner of Colosseumklinikken in the centre of Copenhagen, specialising in Esthetic Periodontal Microsurgery and Implantology.

Peter LINDKVIST has been and is participating in a wide range of international lectures and symposiums. He has followed postgraduate education in Esthetic Soft Tissue Management, Implantology and Surgery.

Peter LINDKVIST gives lectures nationally on Implantology and Esthetic Periodontal Microsurgery, both theoretical and with hands-on sessions.

Peter LINDKVIST is President of the Danish Society for Implantology.

> Michael PAYER
Education & Postgraduate Training
Since 01/2011: Ass. Professorship at Dept. of Oral Surgery Dental School MedUni Graz/Austria
2010: PhD in Oral Surgery (Topics: tissue regeneration + experimental implantology)
2009: DGI-APW Curriculum in Implantology (Germany)
2005 - 2008: Clinical assistant and specialization at Dept. of Oral Surgery Dental School MedUni Graz
2004 - 2005: Postdoctoral research fellow & Scientific Training at Department of Cell Biology, Histology and Embryology, Center of Molecular Medicine, MedUni Graz ("Cell cultivation on different implant materials and surfaces")

Since 2004: Private Practice in Graz
1998 - 2004: Study of Dentistry at Dental School MedUni Graz
2000: Externship & research fellow at Dept. of Maxillofacial Surgery, University of Pittsburgh (UPMC), USA
1994 - 2000: Study of Medicine at Karl-Franzens University, Graz

Research interests
Clinical and experimental implant dentistry, augmentative & oral surgery, stem cell biology, scaffold materials & tissue healing, material research

Membership in scientific societies
Since 2011: Vice-president and board member of the Austrian Society of Oral Implantology (DGI)
Since 2008 Member of the European Association for Osseointegration (EAO) and Member of the "Junior committee" of the EAO
Since 2007: Member of the German Society of Implantology (DGI)

> Adriana MCGREGOR
Dr. Adriana McGregor holds dual degrees in Periodontology, the most recent one from the University of Southern California where she served on the faculty as a Clinical Instructor from 1990 to 1994. She is Past-President of AMED, the Academy of Microscope Enhanced Dentistry. She is a member of the International Editorial Board of MICRO, The International Journal of Microdentistry as well as review editor advisor for the International Journal of Periodontics and Restorative Dentistry. She is a coauthor of the two microsurgery chapters in Carranza’s Clinical Periodontology book. She lectures internationally on esthetic periodontal and implant microsurgery, and maintains a private practice in Westlake Village, California devoted exclusively to esthetic periodontal and implant microsurgery.

Basic Microsuturing - The Foundation of Soft Tissue Esthetics around teeth and implants
Delicate and precise soft tissue management is one of the fundamental components of unsurpassed implant esthetics and overall implant health. This hands-on workshop reviews the fundamental principles of teeth and implant microsurgery with brief descriptions of instrumentation, posture and tailoring principles, and main emphasis focusing on the principles and practice of microsuturing.

Course Goals:
1. Introduce participants to basic concepts of microsuturing.
2. Familiarizing participants with basic microsuturing instrumentation.
3. Understanding the simple interrupted micro suture with correct placement knot shape and its applications.
4. To develop proficiency in placement of the interrupted English Surgeon’s micro suture and familiarization with ideal continuous sutures and their respective applications.
Pre-congress Course 2
APPLYING CONE BEAM CT IMAGING IN CLINICAL IMPLANT PRACTICE: STEP-BY-STEP

> 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.

> Keith HORNER
Keith Horner is Professor of Oral and Maxillofacial Imaging at The University of Manchester, UK, Hon. Consultant in Dental and Maxillofacial Radiology at Central Manchester University Hospitals NHS Foundation Trust and a registered specialist in Dental Radiology. He combines academic research and teaching with clinical work. His clinical work includes running a Cone Beam CT service. Prof. Horner’s research includes bone density and osteoporosis and aspects of radiation protection in dental imaging. He has over a hundred peer-reviewed scientific publications and substantial grant income. Recently, he was co-ordinator of the European Commission-funded SEDENTEXCT project, dealing with safety and efficacy of dental Cone Beam CT, which culminated in the publication of European evidence-based guidelines in 2012. He was also a member of the EAO consensus workshop on guidelines on imaging for implant dentistry earlier this year.

> Goran BENIC
Goran Benic is Assistant Professor at the Clinic of Fixed and Removable Prosthodontics and Dental Material Science at the University of Zurich, Switzerland. He graduated in 2002 as DMD at the Center of Dental Medicine, University of Zurich, Switzerland and received the «doctor medicinae dentium» (Dr. med. dent.) from the same University. After a 2-year period as full-time associate in a private practice, he completed a 3-year post-graduate training in Restorative Dentistry at the Clinic of Fixed and Removable Prosthodontics and Dental Material Science at the University of Zurich in 2005. From 2008 to 2010, he was the recipient of an ITI scholarship at the Harvard School of Dental Medicine, Boston, USA. In 2009, Dr. Benic received the title of Specialist of Restorative Dentistry from the Swiss Society of Restorative Dentistry. Since 2010, he is a full-time Assistant Professor at the Clinic of Fixed and Removable Prosthodontics and Dental Material Science at the University of Zurich, Switzerland. His clinical focus is on the treatment of complex and esthetic cases using all aspects of reconstructive dentistry. His major scientific interests include bone augmentation procedures and clinical applications of 3D imaging in implant dentistry.

ABSTRACT:
CBCT IN IMPLANT GUIDED SURGERY AND PROSTHETIC PLANNING, INCLUDING REFERRAL CRITERIA FOR CBCT IN IMPLANT DENTISTRY
The recent introduction of cone beam computed tomography, optical surface scanners and computer-assisted implant planning represent major innovations in the field of implant dentistry. The application of these new technologies within the digital workflow broadens the diagnostic and therapeutic possibilities, while presenting new challenges and several open questions for the clinician. This lecture will present a step-by-step procedure of the application of 3D imaging for computer-assisted treatment planning and implant placement. The advantages and limitations of such techniques will be discussed. The clinical indications for the use of computed tomography will be emphasized and, furthermore, current evidence for these techniques will be reviewed.
**Marc QUIRYINEN**

Professor Marc 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 1986 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 Perodontologie.

**Jackie BROWN**

BDS MSc FDSRCS DORRRC

Jackie Brown is a specialist in Dental & Maxillofacial Radiology. She is Consultant in Dental & Maxillofacial Radiology at Guy’s & St Thomas’ Hospitals Foundation Trust and at the London Bridge Hospital, and is Senior Lecturer at King’s College London Dental Institute of Guy’s, King’s College & St Thomas’ Hospitals and at the Eastman Dental Institute in London. She is a past president of BSDMFR, chair of the Education Committee of EADMFR and was on the HPA panel for CBCT.

Interests have centred around radiological and ultrasound investigation and treatment of salivary gland disease, and the use of minimally invasive endoscopic and radiologically-guided techniques for the relief of salivary gland obstruction, and in dental imaging and the developing use of 3D cone beam CT imaging in dentistry.

**ABSTRACT:**

**NAVIGATING YOUR WAY THROUGH CBCT IMAGING**

These lectures set out to introduce the principles behind the different types of image display used in CBCT and illustrate their value to the clinician. It will review techniques for optimizing CBCT images as viewed following acquisition, and demonstrate the common image-manipulation tools available in most manufacturer-specific CBCT software. It will highlight potential pitfalls when manipulating sectional imaging.

The interpretation of dental CBCT imaging begins with recognition of normal anatomy. This lecture attempts to develop a good basis to understanding of how normal structures appear in a 3 dimensional image and how they relate to each other in all dimensions. The important anatomical structures within and immediately surrounding the dento-alveolar region will be explored and illustrated in CBCT imaging.
Pre-congress Course 2
APPLYING CONE BEAM CT IMAGING IN CLINICAL IMPLANT PRACTICE: STEP-BY-STEP

> Hans-Göran GRÖNDAHL
Graduated from Malmö Dental School, University of Lund, Sweden, in 1964 receiving Queen Louise’s reward for best study results in 1964. Worked part-time in private practice, part-time at the Department of Dental Radiology at the Malmö Dental School 1965-1968. Became assistant professor at the new dental school at the University of Gothenburg in 1969, received the Odont Dr (PhD) degree in 1979 and became specialist in oral radiology in 1982, the first year of its formal recognition. Was visiting scientist at the National Institutes of Health, Bethesda, Md, USA, during close to two years and received the Elander Prize for dental research in 1984. Was appointed full professor in oral diagnostic radiology at the University in Gothenburg in 1990 and served there until retiring in 2007 when becoming responsible for the postgraduate training in oral and maxillofacial radiology at the Institute for Postgraduate Dental Education, Jönköping, Sweden. Served as vice dean at the Faculty of Dentistry, University of Gothenburg 1987-1990 and was a Scientific Advisor to the Swedish Board of Health and Welfare in questions related to oral and maxillofacial radiology 1985-2009. Author of 15 textbook chapters and textbooks and around 200 scientifi c articles. Lectured in more than 35 countries on all continents.

ABSTRACT:
PUTTING THINGS INTO PERSPECTIVE: THE ROLE OF CBCT IN IMPLANT DENTISTRY
CBCT is the best that has happened to dentistry in general since the introduction of the intraoral radiographic technique more than 100 years ago and the best that has happened to implant dentistry since the development of multimodality techniques in the late 1980s. The latter techniques revolutionized the way implant planning could be performed. Today CBCT has surpassed both motion tomography and computed tomography in its ability to provide high quality images for dental implant planning at reasonably low doses. It must, however, be borne in mind that CBCT is a generic term for a vast variety of machines with different properties. When justified, any radiographic technique must be optimized relative to the task it is used for. When using CBCT for implant planning, limitation of the volume being exposed and the use of low tube currents are some examples of dose limiting factors. Due to the possibilities of evaluating bony structures situated on buccal or palatal sides of implants CBCT can occasionally play a role post-surgically should complications occur. Future developments in detector technology likely will make radiation doses from CBCT examinations to become lower.

> Keith HORNER
Keith Horner is Professor of Oral and Maxillofacial Imaging at The University of Manchester (UK), Hon. Consultant in Dental and Maxillofacial Radiology at Central Manchester University Hospitals NHS Foundation Trust and a registered specialist in Dental Radiology. He combines academic research and teaching with clinical work. His clinical work includes running a Cone Beam CT service. Prof. Horner’s research includes bone density and osteoporosis and aspects of radiation protection in dental imaging. He has over a hundred peer-reviewed scientifi c publications and substantial grant income. Recently, he was co-ordinator of the European Commission-funded SEDENTEXCT project, dealing with safety and efficacy of dental Cone Beam CT, which culminated in the publication of European evidence-based guidelines in 2012. He was also a member of the EAO consensus workshop on guidelines on imaging for implant dentistry in 2011.

ABSTRACT:
DOSE, RISK, OPTIMISATION AND JUSTIFICATION WITH CBCT
CBCT is a major advance in imaging for dentists. It is important, however, to remember that x-ray exposure carries a risk and that CBCT typically has higher radiation doses and risks than traditional dental radiography. Two fundamental aspects of radiation protection are optimisation (keeping the dose as low as reasonably achievable) and justification (that exposures should be shown to produce a net benefit). The need to pay attention to these is enshrined in international, European and national law. In this lecture, the nature and scale of the doses and risks will be presented. Radiation doses associated with CBCT are highly variable, varying from machine to machine and according to the mode of operation. Key aspects of reducing the dose to the patient will be considered, including individualised adjustment of exposure factors (tube current and exposure time) and the field of view, along with quality assurance procedures. A strategy for optimisation will be presented. Reducing dose to staff will also be briefly discussed. In terms of justification, the concept of referral (selection) criteria will be explained. Referral criteria for use of CBCT in implant dentistry will be presented, in particular the 2012 EAO guidelines.
> Reinhilde JACOBS

Reinhilde Jacobs is dentist, Doctor in Dental Sciences (PhD University of Leuven), periodontologist (KU Leuven) and Master in Dental Radiology (University of London). She is full professor at the University of Leuven and visiting professor at the Dalian Medical University in China. R. Jacobs is heading the Oral Imaging Center of the KU Leuven, being responsible for research, education and clinical activities in this field. She is European Director of the International Association of DentoMaxilloFacial Radiology and immediate past president of the European Academy of DentoMaxilloFacial Radiology. She is associate editor of Clinical Oral Investigations, Journal of Oral Rehabilitation and Oral Radiology, meanwhile being editorial board member of Clinical Oral Implant Research, European Journal of Oral Implantology and Oral Surgery Oral Medicine Oral Pathology Oral Radiology and Endodontics. She has received the D Collen Research Travel Award (1994), the IADR Young Investigators Award (1998) and the Belgian Joachim Award in the Odontostomatology (1999). She is involved in many multidisciplinary and interuniversity research collaborations, with a specific focus on oral implant physiology and imaging research. She has been actively participating in European projects (ref. Minosquare, Osteodent, SedentexCT on Cone Beam CT, see www.sedentexCT.eu). She is (co) author of 5 books and more than 180 publications in peer-reviewed journals besides multiple invited lectures and publications in other journals or books.

ABSTRACT:

HOW DOES CBCT WORK?

During the last decade, there has been an upward trend in using 3D information as an aid in dentomaxillofacial diagnostics and presurgical planning. While this was initially realized by spiral computed tomography, associated with relatively high radiation dose levels and costs, dental cone beam computed tomography is rapidly taking over as it enables volumetric jaw bone imaging at reasonable costs and doses. This offers numerous challenges in presurgical diagnostics, implant planning and any derived CAD-CAM application. However, CBCT requires a proper a priori knowledge on its indications, applications and optimized use. The present lecture will help to explain details on how various CBCT machines may function, how a particular equipment may properly work and how one can strive towards further CBCT optimization strategies for use in presurgical implant planning.

RADIOLOGICAL INTERPRETATION OF DISEASE

Whenever deciding to go for presurgical implant planning using CBCT, the initial step in CBCT image interpretation should be to differentiate the normal from the pathological or aberrant features. Recognizing the latter is essential when viewing CBCT images prior to implant placement. One can label this step as the preimplant diagnostic phase, during which one has to maximize the interpretation of the available image data, by spotting bone structural quality, aberrant bone sites, remnant bone lesions, active periodontal and endodontic lesions, nasopalatine canal and other cystic lesions, existing maxillary sinus pathology and other aberrant features appearing in the jaw bone and neighboring structures. It will be attempted to go for a number of clinical cases, to be interpreted in interaction with the audience.
Plenary Session 1

IMPLANT LOSS AND BIOLOGIC COMPLICATIONS

> Björn KLINGE

Björn Klinge is Dean at the Faculty of Odontology and Professor in Periodontology, Malmö University and Professor in Periodontology at the Department of Dental Medicine, Division of Periodontology and Implant Dentistry, Karolinska Institutet, Stockholm, Sweden. He is also Director of the National Research School in Clinical Dental Medicine at Karolinska Institutet. He obtained his D.D.S. and his Ph.D. from Lund University, Faculty of Dentistry in Malmö, Sweden. He has been a Licensed Dental Surgeon since 1977 and a Licensed Specialist in Periodontology since 1981. Professor Klinge worked first as an Assistant Professor and then as Senior Lecturer at the Department of Fixed Prosthodontics and Dental Materials of the University of Zurich (Chairman: Prof. Dr. Peter Schaerfer: M.S.), from 1978 to 1980. Visiting Assistant Professor (1980-1982) at the Department of Oral Biology (Chairman: Prof. Dr. A.G. Hannem and Clinical Dental Sciences (Chairman: Prof. Dr. W. A. Richter), Faculty of Dentistry, University of British Columbia, Vancouver, Canada. Since 1st October 1983: Professor and Chairman of the Department of Fixed Prosthodontics and Occlusion at the University of Geneva School of Dental Medicine. President of the Swiss Association of Prosthetic Dentistry from 1984 to 1988. 2002: Recipient of the Scientific Research Award of the Greater New York Academy of Prosthodontists. President of the European Association of Prosthodontists (EAP) from 2002 to 2003. 2008 Visiting Professor, Harvard University, School of Dental Medicine (Boston, USA), Department of Restorative Dentistry and Biomaterials Sciences (Prof. Dr. H. P. Weber). 2005-2009. President of the School of Dental Medicine, University of Geneva. Research activities in the fields of implant dentistry, with special emphasis on esthetics and latest developments in the field of CAD/CAM technology and high performance dental ceramics, as well as on adhesive reconstructive dental medicine.

> Daniel BUSER & Urs BELSER

Urs C. BELSER, University of Geneva
Graduated at the Dental Institute, Faculty of Medicine, University of Zurich, Switzerland. Postgraduate specialty training in Reconstructive Dental Medicine (board certified specialist) at the University of Zurich and 2 sabbaticals at Karolinska Institutet in Stockholm, Sweden and the University of British Columbia in Vancouver, Canada. 1993-2003: Assistant Professor at the Department of Fixed Prosthodontics and Dental Materials of the University of Zurich (Chairman: Prof. Dr. Peter Schaerfer: M.S.), 1999-2005: Professor and Chairman of the Department of Fixed Prosthodontics and Occlusion at the University of Geneva School of Dental Medicine. President of the Swiss Association of Prosthetic Dentistry from 1984 to 1988. 2002: Recipient of the Scientific Research Award of the Greater New York Academy of Prosthodontists. President of the European Association of Prosthodontists (EAP) from 2002 to 2003. 2008 Visiting Professor, Harvard University, School of Dental Medicine (Boston, USA), Department of Restorative Dentistry and Biomaterials Sciences (Prof. Dr. H. P. Weber). 2005-2009. President of the School of Dental Medicine, University of Geneva. Research activities in the fields of implant dentistry, with special emphasis on esthetics and latest developments in the field of CAD/CAM technology and high performance dental ceramics, as well as on adhesive reconstructive dental medicine.

Prof. Dr. Daniel BUSER, University of Bern
Dr. Daniel Buser is Professor and Chairman at the Department of Oral Surgery at the University of Bern in Switzerland. He spent 3-times sabbaticals at Harvard University in Boston, at Baylor College of Dentistry in Dallas, and at the University of Melbourne. He served as President of various academic associations including the European Association for Osseointegration (EAO) in 1999/2007, the Swiss Society of Oral Implantology (SSIO) in 1999-2002, the Swiss Society of Oral Surgery and Stomatolgy (SOSD) in 2002-2007. Currently, he is ITI President (2009-13). He received several scientific awards by professional organizations such as the ITI, the AO, the AADSM. In 2011, he received an Honorary Professorship by the University of Buenos Aires. His main research areas are in tissue regeneration around dental implants, surface technology and Guided Bone Regeneration. He has authored and co-authored more than 250 publications.

ABSTRACT:
RENEWED IMPLANT THERAPY FOLLOWING ESTHETIC IMPLANT FAILURES IN THE ANTERIOR MAXILLA

The handling of esthetic failures following implant therapy in the anterior maxilla presents a major challenge for involved clinicians and dental technicians. The origin of such failures is most often a malposition of the implants, a lack of a sufficient bone volume on the facial aspect, or a peri-implant infection. That means that many of these failures are clearly clinician-caused, mainly related to inadequate clinical performance. According to the SAC Classification of the ITI, the described situations correspond most often to the „complex“ category (Cat. C), requiring retreatment by experienced clinicians.

This presentation will discuss all relevant aspects of retreatment, which include:
- Comprehensive failure analysis, including a 3D radiographic analysis with CBCT
- All aspects of structured treatment planning, including the appropriate timing of necessary surgical and prosthetic procedures
- Careful removal of failed implants, minimizing additional bone loss
- Implant placement and bone augmentation procedures with SBR, either with a simultaneous or a staged approach
- The eventual indication for soft tissue grafting
- The duration of wound healing, followed by the reopening procedure
- The diagnostic value of the provisional restoration in developing and determining the design of the final restoration
- The definitive restoration, sometimes including an integrated soft tissue epithesis

In this context, several case reports will be presented in detail to illustrate the main problems associated with renewed implant therapy following esthetic implant failures. They clearly document that the treatment outcomes following retreatment are often somewhat compromised due to scar tissue formation or due to vertical tissue deficiencies at adjacent teeth or at implant sites. Hence, the importance of careful treatment planning and subsequent meticulous clinical execution of the first intervention in this highly sensitive segment of the maxilla is underlined. It definitely should be performed by adequately qualified clinicians.
THURSDAY AFTERNOON

> Theodoros KAPOS
DMD, MMSc

Dr. 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.

> Lisa JA HEITZ-MAYFIELD
BDS (Adel), MDSc (Lund), Odont Dr (Lund)

Professor Heitz-Mayfield, an Adelaide graduate, obtained a Masters in Periodontology (1996) and Odont Dr (1998) from Lund University, Sweden. Her Doctorate focused on periodontal and peri-implant regeneration. She received a scholarship at the Brånemark Osseointegration Centre, Sweden, and an ITI scholarship at the University of Berne, Switzerland where she became Head of the Oral Microbiology Research Laboratory, 1999-2003. She received the André Schroeder Research Prize in Implant Dentistry. Her positions include Professor at the DARRH, The University of Western Australia, The University of Sydney, and The University of Hong Kong. She is Chairman of the ITI Australasian section and maintains a specialist periodontal practice in Perth, Western Australia.

ABSTRACT:
GUIDELINES FOR MONITORING AND MAINTENANCE OF IMPLANTS

In order to maintain an aesthetic and functional implant restoration regular monitoring of the peri-implant tissues and maintenance care is essential. This presentation will provide practical clinical guidelines for maintenance care protocols.

Topics to be covered include:
- When and how to probe around implants?
- When to take a radiograph?
- How to clean around an implant?
- How frequently to monitor the implant patient?

> Frank SCHWARZ

1993 – 1998: Dental School, University of Saarland, Homburg, Germany;
February 2001: Dr. med. dent.;
November 2003: 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. Dr. M. Ehrenfeld Ludwig Maximilians University, München, Germany;
April 2002: Assistant Professor Department of Oral Surgery Heinrich Heine University, Düsseldorf, Germany. (Prof. Dr. J. Becker),
2005: Associate Professor,
Since 2010: Clinical Professor - apl

Main research activities: Guided Bone Regeneration, Growth Factors, Implant Surfaces, Treatment of Peri-implant Diseases
Associate Editor
Journal of Clinical Periodontology
Editorial Board Member
Clinical Oral Implants Research
André Schroeder Research Prize 2007

Citation Report – Thomson Reuters Web of Knowledge (Status: 05.12.2011)
Results found: 108 / Sum of Times Cited: 1704 / h-index 26

ABSTRACT:
AN UPDATE ON THE TREATMENT OF PERI-IMPLANTITIS

Since nonsurgical treatment approaches failed to promote the re-osseointegration at exposed implant sites, additional surgical interventions may be required in order to minimize the risk for a re-infection of the peri-implant pocket. This might be achieved either with resective surgery (i.e. elimination of pathological peri-implant pockets in combination with implantoplasty) or with bone augmentation procedures.

The lecture will provide an evidence-based review on the currently available procedures for the treatment of peri-implantitis lesions. Particular emphasis will be laid on the clinical application of surgical regenerative procedures.
AESTHETIC COMPLICATIONS

ABSTRACT:
SURGICAL FACTORS INFLUENCING THE AESTHETIC TREATMENT OUTCOME, INCLUDING SURGICAL MANAGEMENT OF AESTHETIC COMPLICATIONS

Many factors can influence the aesthetic outcome of implant restorations. This includes patient/site-related factors, and clinician-related factors both restorative and surgical. In this lecture, the clinical factors under the control of the surgeon that can influence these outcomes will be discussed. This includes implant positions, distribution of implants when multiple teeth are missing, timing of placement after extraction and ridge augmentation procedures. When aesthetic complications do occur, strategies for diagnosing and managing these factors will be presented.

ABSTRACT:
PROSTHETIC FACTORS INFLUENCING THE AESTHETIC TREATMENT OUTCOME, INCLUDING PROSTHETIC MANAGEMENT OF AESTHETIC COMPLICATIONS

In this lecture will be discussed how clinicians and technicians can «fine tune» their aesthetic implant cases working with bone, soft tissue, using various prosthetic solutions. Diagnostics, Treatment Strategy, workflow with the Surgical as well as the Prosthetic part will be treated. In clinical cases will be shown when to Preserve, Reconstruct, Regain, Replace the existing architecture of both bone and soft tissue. To compensate the ridge deficiency we can apply several augmentation techniques of both hard and soft tissue to regain the missing volume. If we can do the implant placement and the extraction in the same surgical session we normally need less invasive techniques to preserve the ridge volume. This statement underbuilds various immediate post-extraction protocols. Regaining, after maturation, the volume means that clinically speaking we might have the “bulk” of the tissues but not necessarily the right shape! Here is where actively working with provisions will help us to obtain and stabilize the ideal 3D shape and harmony which is subsequently transferred to the final restorations.

Clear guidelines for the choosing the metal free prosthetic components like the Crown-Abutment combination, Zirconium screw retained bridges, and developing the correct emergence profiles and pontic sites will be given. Clinical Tools used to address aesthetic pitfalls will be shown. Also the importance of communication with the lab technician, and the properties of Alumina Zirconia and Lithium disilicate with the covering ceramics will be treated. The lecturer will cover single tooth replacement, partial edentulous patients, as well as fixed full arch reconstructions. Developing a keen eye for details combined with Team work is the key to success.

> Luca CORDARO
MD, DDS, Ph.D.
Chairperson 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 board of COR and is reviewer for J. Perio, J. Clin. Periodontol, 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 EAD, 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.

> Stephen CHEN
Dr Chen is a specialist periodontist in private practice in Melbourne, Australia. He graduated BDS (Malaysia) in 1983, MDSc (Melbourne) in 1987, FRACDS in 1988 and PhD in 2008. He is a Senior Fellow at the School of Dentistry, University of Melbourne. Dr Chen’s scientific interests are in the field of tissue regeneration and post-extraction implants.
Dr Chen is past-president of the Australian and New Zealand Academy of Periodontists and Australasian Osseointegration Society, and past-chairman of the ITI Australasian Section. Dr Chen is a Fellow of the International Team for Implantology (ITI) and serves as Chairman of the ITI Education Care Committee and member of the ITI Board of Directors.

> Egon EUWE
Dr. Egon Euwe obtained his degree in 1982 at the University of Utrecht (Holland). Since 1986 his main interests in the dental field have been periodontics and oral implantology. He followed post-graduate courses under Dr. Sascha Jovanovic at UCLA.
He became a member of the UCLA European Study Club, and in January of 1997, this group presented him an award for the «Best Clinical-Scientific Presentation».
He and his prosthodontist and lab technician won first and second prize in two categories in the international competition of the «Parallelometro d’oro 1999» (Dental Labor Journal).
He is a frequent international lecturer and co-author of several scientific publications.
He was involved in the Department of Periodontics of the University of Milan at the San Paolo Hospital where he did clinical research on resorption of newly formed bone.
He worked at the Department of Periodontology with Prof. Massimo Simon at Milan University.
Active member of European Association for Osseointegration (EAO)
Active member of European Academy of Esthetic Dentistry (EAEID)
Active member of Italian Academy of Esthetic Dentistry (IAED)
Global Faculty member of Global Institute for Dental Education (gIDE)

> Luca CORDARO
MD, DDS, Ph.D.
Chairperson 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 board of COR and is reviewer for J. Perio, J. Clin. Periodontol, 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 EAD, 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.

> Stephen CHEN
Dr Chen is a specialist periodontist in private practice in Melbourne, Australia. He graduated BDS (Malaysia) in 1983, MDSc (Melbourne) in 1987, FRACDS in 1988 and PhD in 2008. He is a Senior Fellow at the School of Dentistry, University of Melbourne. Dr Chen’s scientific interests are in the field of tissue regeneration and post-extraction implants.
Dr Chen is past-president of the Australian and New Zealand Academy of Periodontists and Australasian Osseointegration Society, and past-chairman of the ITI Australasian Section. Dr Chen is a Fellow of the International Team for Implantology (ITI) and serves as Chairman of the ITI Education Care Committee and member of the ITI Board of Directors.

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His professional interests are Periodontology, Implantology and Oral surgery with a special interest regarding the reconstructive treatment of alveolar atrophies.
> Alberto SICILIA
Past-President of the Spanish Association of Periodontology and Osseointegration (SEPA). Founding Editor of the Journals Periodoncia & Osseointegracion (Official Publication of SEPA) and RCOJE (Official Publication of the Spanish Dental Association). Present Positions:
Professor of Periodontology and Co-Director of the Master’s Degree on Periodontology, University Clinic of Dentistry, Faculty of Medicine and Health Sciences, University of Oviedo, Spain.
Medical Director, Clinica Sicilia. Oviedo, Spain.
Board Director and Treasurer of the European Association for Osseointegration (EAO)

> Rudolf FÜRHAUSER, MD, DMD
1977 - 1983 Study of Medicine, Medical Faculty, University of Vienna, MD.
1987 - 1989 Study of Dentistry at the Dental School of Vienna, DMD.
1990 - 2010 Assistant Professor - Prosthodontic Department of Dental School of Vienna.
Since 2004 Member of the Academy of Oral Implantology.
Since 2011 Medical Director of the Academy of Oral Implantology.
Main topics: implant prosthetics, aesthetics, biomechanics.

ABSTRACT:
PATIENT’S AESTHETIC EXPECTATION AND SATISFACTION

Dental implant therapy has been demonstrated to be a successful and predictable treatment for replacement of missing teeth. The aesthetic appearance can be evaluated by different rating scores and many studies demonstrated that the aesthetic outcome was rated higher by the patients than by the dentists. It seems that factors considered by professionals to be of significance for the aesthetic result of the restorative treatment may not be the same for the patient’s satisfaction. However, patient’s aesthetic expectation level is not commonly assessed prior to treatment. Anamnesis of patient’s preoperative individual esthetic demands and the opinion about the treatment may influence the postoperative satisfaction. Natural appearance of the restoration is the primary request of patients with single-tooth implant reconstructions. Patients with full-arch fixed restorations show similar expectations but functional issues are more important.
Workshop EAO Certification Programme

HOW TO PREPARE AN APPLICATION FOR THE EAO CERTIFICATION IN IMPLANT-BASED THERAPY

GEORGE MAILATH-POKORNY

1979 MD degree, Medical School, University of Vienna. Specialty board examination in dentistry (DDS)
1979-1981 Residency at the KA Rudolf 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 of 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.

CHANTAL MALEVEZ

MD, DDS.
Specialist in Maxillo-facial Surgery, Honorary Professor at the Faculty of Medicine (Free University of Brussels: ULB) having been teaching the management of the edentulous patient and implant technologies including bone grafting and zygoma implants protocols.
Clinical chief consultant at the Department of Maxillo-facial Surgery and Dentistry at the Children’s Hospital of Brussels treating congenital maxillo-facial deformities.
Consultant in implant-based therapy at the Hospital St Jean in Brussels
Member of the team of the cleft palate center at the children’s Hospital of Brussels
Member of scientific societies: E.A.O, Royal Belgian Society of Maxillo-facial Surgery
Lectures internationally and publishes in the fields of implant surgery especially concerning edentulous patients as well as in the field of maxillo-facial congenital deformities.
Henning Schliephake received his training in Oral Maxillofacial Surgery and Facial Plastic Surgery from 1989 to 1996 at the Medical University Hannover, where he also did his PhD degree on in-vivo cultivation of bone in 1995.


He has chaired several scientific associations. Currently he is president of the German Society of Dental Oral and Craniomandibular Sciences and is chairing the Straßburg Osteosynthesis Research Group (S.O.R.G.).

He is member of the editorial board of a couple of scientific journals such as the International Journal of Oral and Maxillofacial Surgery and Oral Oncology.

His research foci are reconstructive microsurgery and Quality of Life in head and neck oncology as well as tissue engineering, growth factors and biomaterials.

ABSTRACT:
BENEFITS, OBJECTIVES AND REASONS FOR APPLYING TO CERTIFICATION

The EAO's Certificate in Implant-based Therapy has been developed to raise standards of oral implant-based therapy across Europe. Obtaining the certificate is a prestigious achievement that demonstrates the holder is competent to perform basic and advanced implant treatments.

The certificate is the only Europe-wide standardised assessment of skills and expertise within the field of implant-based therapy. It supports the EAO's core aim of improving standards of education in implant-based therapy. Certification provides a way of recognising the skills and expertise of dentists practising in this field.

Certification is open to any dentist or maxillofacial surgeon worldwide – not just members of the EAO. Completing the certification programme is an achievable goal for anyone who is suitably qualified.

Certification from the EAO demonstrates to your patients and colleagues that you are committed to providing high-quality implant treatments. Successful applicants are presented with their certificate by the EAO’s President during the Awards Ceremony at the annual scientific meeting.
Short Oral Communications 1

> Janicke Liaaen JENSEN
Professor Dept Oral Surgery Oral Medicine, Faculty of Dentistry, University of Oslo, Norway
Cand. Odont. 1984 (DDS), University of Oslo
Dr. odont. 1994 (PhD), University of Oslo (work partly performed at Boston University)
Specialist in oral and maxillofacial surgery 2004, University of Oslo

List of most important affiliation in academic and professional committees, awards:
Recipient of the Norwegian Dental Association research award, 1994
Recipient of the Zendium research award, 1995
Projects on saliva, salivary secretion and oral health, rare syndromes, implants in rare syndromes and implants in general, see publication list
Project leader for “Cherubism in Norway” and the international study Norwegian US Initiative on Sjögren’s syndrome
Supervisor for 1 previous and 2 current PhD students and multiple students in Master and Specialist projects
Multiple roles in comittees within the Dental Faculty 1982-today
Long experience in lecturing and transmission of topics on saliva, salivary secretion and oral health, rare syndromes, Sjögren’s syndrome, implants in rare syndromes and implants in general
President of the Scandinavian Association of Oromaxillofacial Surgeons (SFOMK) since 2008
Scientific advisor to University Health Network (an initiative by the University of Oslo to collect large amounts of anonymous patient data from Universities world wide)
Number of total career publications: 94 including 52 abstracts

> Daniele CARDAROPOLI
072
Soft tissue contour changes at immediate implants: a randomized controlled clinical study

> Mariano SANZ
073
Three-year soft and hard tissue outcomes of immediately placed implants

> Jens HARTLEV
074
Immediate placement and provisionalization of single-tooth implants involving a definitive individual abutment

> Andrei MOSTOVEI
075
One-step versus two-steps flapless placement of two-stage dental implants

THURSDAY AFTERNOON
Thursday, October 11, 2012 | 14:00 - 16:30 |

PRESENTER
PRESENTER
PRESENTER
PRESENTER
> Georg WATZEK
MD, DDS, PhD
1976 Fellowship at Columbia University, New York
1978 Residencies at Neurosurgery and ENT Department, University of Vienna
1979 Speciality board examination in Oral and Maxillofacial Surgery. Appointed senior resident
Since 1982 Head of Department of Oral Surgery, University Clinic of Dentistry, Medical University of Vienna
1983-2003 President of the Austrian Society of Oral Surgery and Implantology
1987-1989 Chairman of the School of Dentistry of the University of Vienna
1989-1993 President of the Austrian Society of Dentists and Stomatologists
1991 Honorary member of the Hungarian Society of Dentists and Stomatologists
1994-1997 Visiting Professor at the University of Pennsylvania
since 1998 Chairman of the School of Dentistry of the Medical University of Vienna
2003-2004 President of the European Association for Osseointegration (EAO)
2003 Honorary member of the German and Czech Society of Implantology
2006 Associated Editor of the International Journal of Oral & Maxillofacial Implants (IOMI)
2007-2009 Chairman of the Council of the European Association for Osseointegration (EAO)
2009-2011 Chairman of the Certification Committee of the European Association for Osseointegration (EAO)
2011-2012 Visiting Professor at the King Saud University, Riyadh, Kingdom of Saudi Arabia
Author of 9 textbooks and more than 300 publications.

> Nicolae CHELE
076
The implant position influence upon crestal bone using one-step flapless surgery

> Eriberto BRESSAN
077
Healing of buccal dehiscence defects at implants installed immediately into extraction sockets. An experimental study in dogs

> Leonardo AMORFINI
078
Outcomes of flapless post-extractive implant with or without soft tissue augmentation: a 2-years randomized clinical trial.

> David PENARROCHA
079
Ridge preservation with magnesium-enriched hydroxyapatite: histological evaluation at different time-points
Poster Presentation

> **Flemming ISIDOR**

Professor, D.D.S., Ph.D., Dr.Odont.
Section for Prosthetic Dentistry, Department of Dentistry, Aarhus University, Denmark

**Curriculum vitae**
- 1976: D.D.S. (Aarhus University)
- 1981: Ph.D. (Aarhus University)
- 1988: Dr.Odont. (Aarhus University)

**Employments (academic)**
- 1977 - 1984: Research Associate in periodontology (Aarhus University)
- 1984 - 2001: Associate professor in prosthetic dentistry (Aarhus University)
- 1999 - 2004: Head of Dentistry (elected) (Aarhus University)
- 2001: Professor and chairman at Section for Prosthetic Dentistry (Aarhus University)

**Research**
The main research interests are prosthetic dentistry, oral implantology and periodontology

> **Yanying WANG**

**Development of a bioelectrical gradational porous chitosan electret membrane for guided bone regeneration**

> **Husain HARIANAWALA**

**In-vivo assay of viral colonisation on titanium and zirconia abutments: a split mouth study**

> **Aleksandra ŠPADIJER GOSTOVIĆ**

**The effect of abutment design on soft tissue implant integration**

> **Corina Marilena CRISTACHE**

**Five-years prospective clinical study of three retention-system for mandibular overdenture**

> **Mustafa RAMAZANOGLU**

**Objective perioperative factors of pain following implant surgery**

> **Andreas STAVROPOULOS**

**Fate of buccal bone 10 years after early/delayed/late implant placement**
Dr. Ralf-J. Kohal, born 1961, is Associate Professor at the Department of Prosthodontics (Chair: J.R. Strub), University Hospital Freiburg, Germany. He got his doctoral degree (Dr. Med. Dent.) in 1991. From 1993 – 1995 he was a Visiting Assistant Professor at the Division of Periodontology (Chair: R.G. Caffesse), University of Texas, Houston, Texas. Dr. Kohal is Board Certified in Prosthodontics (IDGPro) and has received a certification for Oral Implantology (DGI, Germany). In 2002, he was awarded docentship (Dr. Med. Dent. Habil.) in Oral Health Sciences through the University of Freiburg. His main interests are located in the field of implantology (ceramic implant materials, guided bone regeneration, sinus augmentation, guided implant surgery) and prosthodontics (new prosthetic materials).

Dr. Kohal is a member of some national and international societies. He is married and has three kids.

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**Mariko KOBAYASHI**

Effects of in-vitro cyclic dislodging on three implant-overdenture attachment systems

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**Gerhard IGLHAUT**

Dis-/reconnection of laser microgrooved abutments and its impact on soft and hard tissue changes

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**Cuneyt KARABUDA**

Efficacy of a diode laser in the treatment of peri-implantitis

---

**On-Yu BAE**

Knowledge and awareness regarding bisphosphonate-related osteonecrosis of the jaws among dentists

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**Radia HRICHI**

Comparative clinical study of two different osteoconductive materials in bilateral sinus augmentation.

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**María Piedad RAMÍREZ-FERNÁNDEZ**

Melatonin promotes angiogenesis during repair of bone defects
ORTHOPAEDIC SURGERY
TREATMENT OF PERIPROSTHETIC INFECTION IN THE FIELD OF ORTHOPAEDIC SURGERY

Theodoros KAPOS
DMD, MMSc:
Dr. 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.

Mathias GLEHR & Andrej TRAMPUZ

> Patricia REYNOLDS

BDS MBBS MAODE (Open) PhD FDSRCS(Eng)
Trained in oral surgery and is currently a specialist Oral Surgeon and was appointed to a Chair in Dental Education in 2007 at King’s College London for her work in technology enhanced learning (TEL). She has a Masters with distinction from the Open University in Open and Distance Learning and a PhD in lasers. Her current position is Director of the Centre of Flexible Learning in Dentistry at King’s College London which includes a range of research and development activities in TEL (such as UDENTE – Universal Dental E-Learning and HippTEL – Haptics in Technology Enhanced Learning) together with a portfolio of Distance Learning Masters courses. She was recognised by the Association of Dental Educators in Europe (ADEE) for excellence in dental education in 2005 and was a finalist in the Times Higher Education Awards for Innovation in Distance Learning in the same year. She was awarded a commendation by Medical Futures, UK, 2008 for the innovative project: IVENT (International Virtual Dental School) and was the winning entry of HanTEL in 2011. She is author of 150 publications including an e-learning series in dentistry in the British Dental Journal, and an award winning anatomy test book and 3D DVD. Her external affiliations include a ten year Anglo-Italian Collaboration in Innovations in Education, the appointment as an examiner and advisor to the Open University UK and an Adjunct Professor at Curtin University in Perth, Western Australia.

ABSTRACT:
TREATMENT OF PERIPROSTHETIC INFECTION IN THE FIELD OF ORTHOPAEDIC SURGERY

It seems, that in the field of orthopaedic implant surgery and dental implant surgery implanted materials, procedure of implantation and required implantation standards are similar. But there are many differences in the algorithm of treating infections of implants in those fields.

In periprosthetic infections of orthopaedic implants the gold standard of treatment is a one step or a two step procedures. In the one step procedure, after explantation of the infected prosthesis, antibiotic loaded spacers are implanted for six weeks before the second procedure, after explantation of the infected prosthesis. In the two step procedure, after the explantation of the infected prosthesis, a new endoprothetic system is implanted and required implantation standards are similar.

In periprosthetic infections of implants in these fields the one step procedure, a new endoprothetic system is implanted and required implantation standards are similar.

Dr. Kapos joined the two year Advanced Graduate Implantology Programme at Harvard from which
implant patients. In the presentation, patient examples and loosening and – eventually – to periimplantitis in Ti dental induce IL-1ß secretion, there might be a link to arthroplasty cases of loosening of arthroplasty. Granulomatous foreign body eczema or inflammatory reactions to Ti-based pace makers, hypersensitivity to Ti. Such reactions encompass: Local osseointegration. However, only few reports describe potential surgery and dental implantology, as they offer a fast Titanium (Ti) based materials are widely used in orthopaedic.

**ABSTRACT:**

**INTOLERANCE REACTIONS TO TITANIUM IMPLANTS**

Titanium (Ti) based materials are widely used in orthopedic surgery and dental implantology, as they offer a fast osseointegration. However, only few reports describe potential hypersensitivity to Ti. Such reactions encompass: Local eczema or inflammatory reactions to Ti-based pace makers, impaired fracture / wound healing upon osteosynthesis or cases of loosening of arthroplasty. Granulomatous foreign body reactions to Ti wear particles have been described. There is still controversial discussion about the spectrum of Ti related immune reactions. As it has been shown, that Ti particles may induce IL-1β secretion, there might be a link to arthroplasty loosening and – eventually – to periimplantitis in Ti dental implant patients. In the presentation, patient examples and research data will be discussed.

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**SPEAKER**

**Isabella ROCCHIETTA**

Graduate in dentistry at the University of Milan, Italy in 2002. Awarded one year scholarship from the Department of Medicine, University of Milan. Research Fellow, Department Periodontology, Harvard School of Dental Medicine, Boston, MA. Fellow and instructor at the department of Periodontology, University of Milan, Italy. Research consultant for the Institute for Dental Research and Education (IDRE) until 2011. Chairman of the EAO Junior Committee from 2007 to 2011. Member of the Experts Council of the Ostologie Foundation, Member of the Academy of Osseointegration, European Association for Osseointegration (EAO), Italian Society of Periodontology. Currently affiliated with Department of Biomaterials, Institute for Clinical Sciences, The Sahlgrenska Academy at the University of Gothenburg, Sweden and performs clinical work limited to periodontics and implant dentistry in London, U.K. Author of several national and international peer reviewed publications and book chapters.

**Contact Allergy and Periimplant inflammation (Activation, Cytokine Production and Relation between Orthopaedic Society, Research Projects on T-lymphocyte Register, Working Group “Metal Implant Allergy” of the Pediatric Dermatology, Organisation of Student Teaching 9.11.2006 Professor, 24.2.2000 Associate Professor, Medicine 20.12.1996 Habilitation: 12.1.2000 (Influence of Environmental Pollutants on Allergic Inflammation). 34.2.2000 Associate Professor, 9.11.2006 Professor) Clinical Topics: Day Clinic, Metal Implant Special Ambulatory, Pediatric Dermatology, Organisation of Student Teaching Scientific Topics: Metal Implant Allergy (Special Ambulatory, Register, Working Group ‘Metal Implant Allergy’ of the Orthopaedic Society, Research Projects on T-lymphocyte Activation, Cytokine Production and Relation between Contact. Allergy and Perimplant inflammation) **ABSTRACT:**

**INTOLERANCE REACTIONS TO TITANIUM IMPLANTS**

Titanium (Ti) based materials are widely used in orthopedic surgery and dental implantology, as they offer a fast osseointegration. However, only few reports describe potential hypersensitivity to Ti. Such reactions encompass: Local eczema or inflammatory reactions to Ti-based pace makers, impaired fracture / wound healing upon osteosynthesis or cases of loosening of arthroplasty. Granulomatous foreign body reactions to Ti wear particles have been described. There is still controversial discussion about the spectrum of Ti related immune reactions. As it has been shown, that Ti particles may induce IL-1β secretion, there might be a link to arthroplasty loosening and – eventually – to periimplantitis in Ti dental implant patients. In the presentation, patient examples and research data will be discussed.

---

**SPEAKER**

**Jos VAN DER SLOTEN**

Jos Vander Sloten (*1962) obtained his MSc and PhD in mechanical engineering from the Katholieke Universiteit Leuven (KU Leuven) in 1985 and 1990 respectively. Currently he is full professor and chair, Division of Biomechanics and Engineering Design at KU Leuven. He also chairs the Leuven Medical Technology Centre (IL-MTC). His teaching assignments are engineering mechanics, problem solving and engineering design, computer integrated surgery systems. From 2006 to 2012 he served as programme director of the Master in Biomedical Engineering at KU Leuven. His research interests are computer applications in musculoskeletal biomechanics and computer integrated surgery. He is member of the council of the Belgian Society for Medical and Biological Engineering and Computing, and a former council member of the European Society of Biomechanics. In the European Alliance for Medical and Biological Engineering and Science (EAMBES) he served as secretary-general (2003-2004), president-elect (2005) and president (2006). He was recently elected Founding Fellow of EAMBES.

**ABSTRACT:**

**THE VIRTUAL PATIENT / CUSTOMIZED IMPLANTS**

Medical images allow for the design of accurate, three-dimensional computer models of patients. A geometric accuracy of 0.2 mm is possible using imaging techniques such as computed tomography (CT), magnetic resonance imaging (MRI) or cone beam CT (CBCT). Tissue properties can be obtained from the medical image data as well. In the area of cranio-maxillo-facial surgery and/or stomatology, these models can be obtained from the medical image data as well. In the area of cranio-maxillo-facial surgery and/or stomatology, these models can be obtained for the entire head and neck region.

The computer models are used for various purposes, relevant to patient treatment:

- to design geometric models without further mechanical evaluation, to create patient-specific implants;
- to design multi-body models that allow for the simulation of kinematics or dynamics, e.g. to design virtual articulators;
- to design lumped parameter models (e.g. mass spring damper models) that allow to simulate the behavior of soft tissues and to simulate e.g. the facial appearance after orthognathic surgery or orthodontic treatment;
- to design full three dimensional finite element models that predict bone loading and loading in prosthetic devices or in implants after patient treatment.

Although the advantages of using virtual patient models relate to their feasibility to evaluate treatment alternatives and come up with an optimal solution for each individual patient, key requirements in the development of these models are their ease of use, also to non-technically educated medical specialists, and their degree of bio-fidelity and validity.

One step further is the use of these computer models to allow the surgeon to try out the planned intervention, using virtual reality environments. These environments require the stimulation of all senses of the surgeon, i.e. visual, auditory, but also haptic and tactile.
Parallel Session 2

AN UPDATE ON TREATMENT OF PATIENTS WITH CONGENITALLY MISSING TEETH

> Pascal VALENTINI

Dr Pascal Valentini received his DDS at the University of Paris VII in 1982. He is the Programme Director of the Postgraduate Programme 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.

> Karin BECKTOR

Karin Binner Becktor graduated in Dentistry from the University of Copenhagen, Denmark (1985-1990), and from the same University as an Orthodontist (1995-1998). In 2004, also at the University of Copenhagen, she defended her PhD thesis with the title: Etiologic aspects on human tooth eruption. She is a provisional member of the Angle Society of Europe. In 2002 she received the Beni Solow award from the European Orthodontic Society for the best published paper. Together with her husband she has been running a private practice exclusively for orthodontics and oral surgery since 2001. Since 2004 she is also working part time as a consulting orthodontist at the University Hospital, Rigshospitalet, in Copenhagen.

ABSTRACT:
AN UPDATE ON TREATMENT OF PATIENTS WITH CONGENITAL MISSING TEETH. ORTHODONTIC ASPECTS

In connection with treatment of individuals with congenital missing permanent teeth knowledge concerning the morphology and growth of the alveolar process is very important, both when the plan is to orthodontically close the space with natural teeth, and also when the plan includes dental implants to replace missing teeth.

In cases where the treatment plan comprise dental implants, not only width and height of the alveolar process at the receipt site will influence the final result, but also the inclination and vertical position of the adjacent teeth will play a role for the long-term prognosis.

In order to be as successful as possible optimal 3D orthodontic preparation of the receipt site is essential. An important part of the treatment plan is to place the upper incisors in an optimal position of the face taking the sagittal, vertical and transverse plan into consideration. In order to do so analysis of the craniofacial morphology, prediction of the growth pattern and space analysis are important factors for the final treatment plan.

In the lecture, focus will be on both, biology of the development of the alveolar process, and the orthodontic preparation of the receipt site. The link between tooth eruption, growth of the alveolar process and the morphology of the alveolar process in relation to craniofacial morphology will be discussed in the sagittal, vertical and transverse aspects. In addition cases exemplifying theses 3D considerations will be presented.
Daniel WISMEIJER

Studied dentistry at the University of Nijmegen Dental School from 1979-1984.
After graduating he joined the Department of Oral Function and worked in the section of special dental care and maxillofacial prosthetics. He received his PhD in 1996 on the subject of overdentures on dental implants, “The Breda Implant Overdenture Study”. In that year he left Academia. From 1985 till 2006 he worked at the Amphia teaching Hospital in Breda in the Department of Oral Surgery and Maxillofacial Prosthodontics.
In 1985 he started a general dental practice which since 1990 is a referral practice for Oral Implantology. He has been an ITI fellow since 1993. In 2006 he accepted the position of Professor of Oral Implantology and Prosthetic Dentistry at ACTA Amsterdam which he combines with his referral practice. The main research areas in his department are focused on “CAD/CAM treatment optimization”, “implant surface and bone substitute optimization” and “the evaluation of different implant based treatment modalities”.

Robert HAAS

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 Implantacademy, Vienna.
2005 President of the Austrian Society for Oral Surgery and Implantology.
2010 Award of University Professor.

ABSTRACT:
AN UPDATE ON TREATMENT OF PATIENTS WITH CONGENITALLY MISSING TEETH. IMPLANTOLOGICAL ASPECTS

Congenitally missing teeth may vary between just one missing tooth up to sub-totally and total aplasia. Oligodontia is associated with 5 and more missing teeth and can be observed in Europe 0%-8% and North America 3.5%, resulting in a disturbance of the development of the alveolar crest up to facial and skeletal development disorders.

From the surgical point of view there are two major aspects to be considered:

1. How do we handle or restore the alveolar crest in order to place dental implants?
2. How is the surgical time record for the patient to get optimal aesthetic results?

The presentation will give a detailed overview of currently recommended pre-implantological procedures for reconstruction based on clinical cases. Special focus will be laid to most recent procedures including the use of BMP-2.

Furthermore, time tables will highlight the optimal time point for treatment, giving the practitioner all the information to handle patients with oligodontia in his own office.
Christoph HÄMMERLE

1977 - 1982  Undergraduate studies in dental medicine (graduation as DMD)
1986 - 1988  Specialist education in periodontology, University of Bern, Switzerland
1988 - 1989  Assistant Professor, Department of Stomatology, University of California at San Francisco, USA
1989 - 1991  Adjunct Assistant Professor, Department of Stomatology, University of California at San Francisco, USA
1989 - 1998  Assistant Professor; Clinic for Periodontology & Fixed Prosthodontics, University of Bern, Switzerland
1990  Specialist Certificate in Periodontics
1997 - 2000  Associate Professor; Clinic for Periodontology & Fixed Prosthodontics, University of Bern, Switzerland
1998 - 1999  Visiting Scholar, Department of Physiology, University of Sydney, Australia
2000  Specialist Certificate in Prosthodontics
2000  Professor and Chairman, Clinic for Fixed and Removable Prosthodontics and Dental Materials Science, University of Zurich, Switzerland
2000  Director of the Graduate Programme in Reconstructive Dentistry, Clinic for Fixed and Removable Prosthodontics
2001  Director of the ITI Scholarship Programme, Clinic for Fixed and Removable Prosthodontics
2006 - 2007  Visiting Professor, Department of Reconstructive Dentistry, University of Queensland, Brisbane, Australia
2009  Vice Dean of the Medical Faculty for the Centre of Dental Medicine, University of Zurich

Christoph Hammerle is certified in prosthodontics as well as in periodontics. His clinical focus is on the comprehensive treatment of complex, partially edentulous patients applying all available options of reconstructive dentistry including dental implants. Prof. Hammerle’s main scientific interests encompass biological and prosthetic aspects of fixed reconstructions on teeth and implants as part of the overall restorative treatment concept.

Prof. Hammerle is a member of various scientific organisations. Presently, he is Past-President of the European Association for Osseointegration (EAO), Board Member of the Swiss Society for Reconstructive Dentistry, Chairman of the Committee for Specialisation in Reconstructive Dentistry in Switzerland, Board Member of the Swiss Society of Implantology, President of the Osteology Foundation.

He has served on the organising committees of several national and international conferences including: Swiss Society of Periodontology, European Association for Osseointegration (including chairmanship of the 15th Annual Congress of the EAO 2006 in Zurich, co-chairmanship of the 1st and 2nd Consensus Conferences of the EAO in 2006 and 2009), Implantologie Aktuell, ITI World Symposium.

He has published numerous scientific and clinical articles and served on the review boards of several scientific journals in the field.

ABSTRACT:

WHAT IS A CONSENSUS CONFERENCE?

Proper decision making in clinical practice is governed by the desires of the patient, the experience and abilities of the care provider and the respective evidence base in the field. Consensus conferences aim at elucidating the progress in the scientific and clinical evidence in a given medical field like implant dentistry and aim at passing this information on to the people involved in this specific medical discipline. In order to do so clinically important questions are identified by an organizing committee. Subsequently, experts are chosen and asked to thoroughly screen the scientific literature and to summarize the evidence in review papers. In addition, these experts assess the quality of the data on which this evidence is based. During the consensus conference the review papers are discussed in expert groups, amended if found necessary and consensus statements are formulated. These consensus statements encompass recommendations for clinical practice and provide directions for future research. Finally, all this information is published in scientific journals and thus made available to clinicians and scientists. As a result of such a consensus conference better information is made available to help improve treatment with oral implants care and thus to improve the quality of life of our patients.
> **Marc QUIRYNEN**

Professor Marc 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 1986 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.

> **Björn KLINGE**

Björn Klinge is Dean at the Faculty of Odontology and Professor in Periodontology, Malmo University and Professor in Periodontology at the Department of Dental Medicine, Division of Periodontology and Implant Dentistry, Karolinska Institutet, Stockholm, Sweden. He is also Director of the National Research School in Clinical Dental Medicine at Karolinska Institutet. He obtained his D.D.S. and his Ph.D/Odont. Dr from Lund University, Faculty of Dentistry in Malmö, Sweden. He has been a Licensed Dental Surgeon since 1977 and a Licensed Specialist in Periodontology since 1988. Professor Klinge worked first as general dentist in public and private office. He was then lecturer in Periodontology at Loma Linda University, California, USA and Assoc Chief Dental Officer in Oral & Maxillofacial Surgery at the County Hospital of Halmstad, Sweden. He held the position of Associate Dean for Undergraduate Curriculum at the Center for Oral Health Sciences, Lund University and headed the Department of Lab Animal Resources and was an associate Professor in the Periodontology department in Malmö, before being appointed Professor by the Swedish Government at Karolinska Institutet. Björn Klinge is Honorary Fellow, Singapore Dental Hospital and Honorary Professor, Ji-Lin University, China. He is President of the Swedish Periodontal Society, board member Scandinavian Society of Periodontology and Secretary General in the European Association for Osseointegration (EAO).
> Tomas ALBREKTSSON & Nikolaos DONOS

Tomas Albrektsson, MD PhD, DDS, RCPDS. Professor & Head of Dept of Biomaterials, University of Gothenburg Sweden 1986-2012. Close co-worker of Per Bränemark in developing oral & craniofacial implants for clinical usage, senior member of team that has developed osseointegrated orthopaedic implants. He has presented more than 1000 invited lectures to professional audiences, the author of some 650 scientific papers. The recipient of numerous awards and honours, most recent ones being the gold medallion Award of American Prosthodontic Society (2012) and Honorary membership of British Society for specialist Prosthodontic Disciplines; BSSPD (2011)

Professor Nikolaos Donos DDS, MS, FHEA, FRCSIEng, 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.

ABSTRACT:
IMPLANT SURVIVAL AND COMPLICATIONS

The aim of this presentation is to report the EAO consensus statements of the group on implant survival and complications. The main task of this working group was to analyze the biological, technical and aesthetic complications of single crowns on implants and fixed dental prostheses with or without cantilevers on implants over 5 years or more. In addition, the group analyzed economic aspects on such implant treatment. A systematic search of the relevant literature was conducted and critically reviewed and four manuscripts were presented to cover the topics. The consensus statements of each review as prepared by the group and later accepted at the plenary session as well as clinical recommendations and implications for future research are reported in this presentation.
Björn Klinge is Dean at the Faculty of Odontology and Professor in Periodontology, Malmo University and Professor in Periodontology at the Department of Dental Medicine, Division of Periodontology and Implant Dentistry, Karolinska Institutet, Stockholm, Sweden. He is also Director of the National Research School in Clinical Dental Medicine at Karolinska Institutet. He obtained his M.D.S. and his Ph.D.(dent), Dr. from Lund University, Faculty of Dentistry in Malmo, Sweden. He has been a Licensed Dental Surgeon since 1977 and a Licensed Specialist in Periodontology since 1988. Professor Klinge worked first as general dentist in public and private office. He was then lecturer in Periodontology at Loma Linda University, California, USA and Assoc Chief Dental Officer in Oral & Maxillofacial Surgery at the County Hospital of Halmstad, Sweden. He held the position of Associate Dean for Undergraduate Curriculum at the Center for Oral Health Sciences, Lund University and headed the Department of Lab Animal Resources and was an associate Professor in Periodontology department in Malmo, before being appointed Professor by the Swedish Government at Karolinska Institutet. Björn Klinge is Honorary Fellow, Singapore Dental Hospital and Honorary Professor, Jilin University, China. He is President of the Swedish Periodontal Society, board member Scandinavian Society of Periodontology and Secretary General in the European Association for Osseointegration (EAOD).

Joerg MEYLE
Prof. Dr. med. dent. habil.
1975 - 1980 Eberhard-Karls-University of Tuebingen Study of Dentistry
12/1983 Appointment as Dentist
1981 - 1984 Postgraduate Training in Oral Surgery and Periodontology Graduation as Dr. med. dent. (D.M.D.) and as Specialist in Oral Surgery and Periodonotics (D.O.S.)
1994 - 2009 Thesis: «Komparsimentales experimentelles studium der Schneidezahnsensibilität von natürlichen und dem notwendigen Implantat typischem Falschzahn» in (German)
06/1992 Postdoctoral Lecture Qualification (State Doctorate) in Dentistry (Ph.D.)
1981 - 1984 Postgraduate Training in Oral Surgery and Periodontology at Eberhard-Karls-University of Tuebingen Children’s Hospital
1994 Appointed Professor (life-long) and Director of Department of Periodontology
1997 Specialist in Periodontology by German Society of Periodontology (Deutsche Gesellschaft fuer Parodontologie (DGP))
Publications and continuing education
More than 160 papers in national and international peer-reviewed journals.
Author of 14 book chapters and monographs. 57 published abstracts, 77 poster presentations; >130 oral presentations and invited lectures, lecturer and organizer of 168 training courses seminars and hands-on courses.
Several patents in Germany and Europe.
Head and Scientific director of the curricular continuing education in Periodontics in Hessen.

Prizes and distinctions
1987 Research Prize of the Federal Dental Chamber Baden-Württemberg
1992 Poster Prize of the DGZMK
1997 Poster Prize of the Deutsche Gesellschaft fuer Parodontologie (German Society of Periodontology)
2000 Finalist U. Michel René-Jaccard Research Prize of the European Federation of Periodontology (EFP)
1994 Sigurd-Remmert Visiting Professor, Department of Periodontology, and Geriatrics, University of Ann Arbor, Michigan
2002 Poster Award of the International Journal of Dentistry and Oral Medicine
2003 Honorary Membership Deutsche Gesellschaft fuer Parodontologie (German Society of Periodontology)
2011 GGP-Mendel-Prize for clinical studies (together with J. Granates)
2012 GGP-Mendel-Prize for basic studies (together with several other authors of a multi-center-study)
2012 GGP-Mendel-Prize for basic research in periodontology (together with S. Groeger)

Membership in scientific organizations/societies
Deutsche Gesellschaft fuer Zahn-, Mund- und Kieferheilkunde (DGZMK) since 1976
1980 - 1999 Member
2000 - 2002 Member of the Advisory Board
2003 - 2009 President of the ARPA Foundation for Research European Federation of Periodontology (EFP)
1995 - 2002 German Delegate on the Board
1998 - 2010 Chairman of the Executive Committee (reelected in 2003)
2000 - 2003 Chairman and Head of the Organizing Team of Europerio 4 (Berlin)
2007 - 2008 President of the European Federation of Periodontology
2008 - 2010 Head of the Undergrad Committee
2009 - 2013 Member of the Organizing Team of the Europerio 7 conference.
2006 - 2012 Board Member
International Academy of Periodontology (IAP)
2006 - 2012 Vice President
International Association for Dental Research (IADR)
Since 1984 Member of the Continental European Division
Membership in other Scientific Organizations: Arbeitsgemeinschaft fuer Grundlagenforschung (AGD) der Deutschen Gesellschaft fuer Zahn-, Mund- und Kieferheilkunde (DGZMK), Deutsche Gesellschaft fuer Implantologie (DGI), European Society for Biomaterials, American Academy of Periodontology (AAP), European Academy of Osseointegration (EAO), American Association of Oral Biologists.
Member of the Editorial Board, Journal of Periodontal Research, Journal of Clinical Periodontology, Oralprophylaxe, Deutsche Zahnärztliche Zeitschrift, Parodontologie (Co-Editor-in-Chief)

ABSTRACT:
PERI-IMPLANT TISSUE DESTRUCTION

Implant therapy is a well-established method of replacing missing teeth. Excellent long-term results can be achieved, nevertheless, biologic complications may occur. Still the reported magnitude of the incidence of these complications is a matter of academic dispute. Occlusal overload has been related to the loss of marginal bone and implants as well.

The prevalence of peri-implantitis over a 5 to 10 year period following implant placement has been reported to be in the order of 10% of implants and 20% of patients.

Differences in the definition of peri-implantitis have resulted in a wide range of reported prevalence values. Factors that have been shown to affect peri-implantitis prevalence include smoking, poor oral hygiene and a history of periodontal disease.

Once mucosal inflammation and loss of supporting peri-implant tissues have occurred, non-surgical and surgical interventions are often indicated. All treatment modalities should disrupt the submucosal biofilm and include a thorough cleaning of the contaminated implant surface.

Adjunctive measures (submucosal air-pulsing, ER:YAG laser treatment, locally delivered antimicrobials) may result in greater reduction in bleeding on probing and probing depth. However, the outcomes are variable and influenced by factors not yet fully understood. Resection of the bony wall, filling of the defect or surface modifications of the implant can be considered in adjunct to mechanical instrumentation. Surgical therapy is considered to be superior to non-surgical therapy in resolving peri-implantitis.

A regular maintenance program is needed for the long-term management of peri-implantitis lesions.
COMPUTER-AIDED IMPLANT THERAPY AND SOFT AND HARD TISSUE ASPECTS

ABSTRACT:

Introduction: The objective of this working group was to update the existing knowledge base in computer guided implant treatment (accuracy and clinical advantages).

Material and methods: The literature was systematically searched and critically reviewed. Two systematic reviews were prepared that allowed the group to develop evidence-based conclusions, as well as clinical implications and recommendations for future research:

- Van Assche N., Vercruyssen M., Coucke W., Teughels W., Jacobs R. & Quirynen M. Accuracy of computer guided implant placement. COIR 2012

Results & Clinical Implications: Guided implant protocols may help the clinician to perform successful implant therapy avoiding flap elevation, causing less pain and discomfort to the patient. However, when using this technique one should consider in a horizontal direction a mean system error of 1.2 mm, and in a vertical direction an error of 0.5 mm, and the clinician should be aware that deviations of up to 6 mm have been reported. Moreover, clinicians have to consider that computer-driven flapless surgery often overlooks the ideal location of important soft tissue anatomy, such as the thickness, width and position of keratinized tissue.

Hence, the belief that “less training is needed” is far from accurate.

During this presentation, the main conclusions, group’s consensus and clinical implications will be reported for two review papers.

Van Assche N., Vercruyssen M., Coucke W., Teughels W., Jacobs R. & Quirynen M. Accuracy of computer guided implant placement. COIR 2012
Hultin M., Svensson K. & Trulsson M. Clinical advantages of computer guided implant placement. COIR 2012

Clinical implications will be discussed. Hence, the belief that “less training is needed” is far from accurate.

Hultin M., Svensson K. & Trulsson M. Clinical advantages of computer guided implant placement. COIR 2012

The second review presented will be “Is there a need for keratinized mucosa around implants to maintain health and tissue stability?” By Jan L. Wennström & Jan Berks”. The aim of this review was to analyze the literature with regard to the need for keratinized mucosa around implants to maintain health and tissue stability. Main conclusions and group’s consensus will be reported on the association between the presence of an adequate keratinized tissue around implants and plaque control, bleeding score, soft tissue recession, interproximal bone level changes and risk for implant loss. Clinical implications will be discussed about the need of preserving the existing keratinized mucosa during the treatment procedures and about the necessity of performing grafting procedures, aiming at increasing the amount of keratinized mucosa to improve outcomes of the implant therapy.

RESULTS & CLINICAL IMPLICATIONS: Guided implant protocols may help the clinician to perform successful implant therapy avoiding flap elevation, causing less pain and discomfort to the patient. However, when using this technique one should consider in a horizontal direction a mean system error of 1.2 mm, and in a vertical direction an error of 0.5 mm, and the clinician should be aware that deviations of up to 6 mm have been reported. Moreover, clinicians have to consider that computer-driven flapless surgery often overlooks the ideal location of important soft tissue anatomy, such as the thickness, width and position of keratinized tissue.

ABSTRACT:

COMPUTER-AIDED IMPLANT THERAPY AND SOFT AND HARD TISSUE ASPECTS

Introduction: The objective of this working group was to update the existing knowledge base in computer guided implant treatment (accuracy and clinical advantages).

Material and methods: The literature was systematically searched and critically reviewed. Two systematic reviews were prepared that allowed the group to develop evidence-based conclusions, as well as clinical implications and recommendations for future research:

- Van Assche N., Vercruyssen M., Coucke W., Teughels W., Jacobs R. & Quirynen M. Accuracy of computer guided implant placement. COIR 2012

Results & Clinical Implications: Guided implant protocols may help the clinician to perform successful implant therapy avoiding flap elevation, causing less pain and discomfort to the patient. However, when using this technique one should consider in a horizontal direction a mean system error of 1.2 mm, and in a vertical direction an error of 0.5 mm, and the clinician should be aware that deviations of up to 6 mm have been reported. Moreover, clinicians have to consider that computer-driven flapless surgery often overlooks the ideal location of important soft tissue anatomy, such as the thickness, width and position of keratinized tissue.

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Van Assche N., Vercruyssen M., Coucke W., Teughels W., Jacobs R. & Quirynen M. Accuracy of computer guided implant placement. COIR 2012
Hultin M., Svensson K. & Trulsson M. Clinical advantages of computer guided implant placement. COIR 2012

Clinical implications will be discussed. Hence, the belief that “less training is needed” is far from accurate.

Hultin M., Svensson K. & Trulsson M. Clinical advantages of computer guided implant placement. COIR 2012

The second review presented will be “Is there a need for keratinized mucosa around implants to maintain health and tissue stability?” By Jan L. Wennström & Jan Berks”. The aim of this review was to analyze the literature with regard to the need for keratinized mucosa around implants to maintain health and tissue stability. Main conclusions and group’s consensus will be reported on the association between the presence of an adequate keratinized tissue around implants and plaque control, bleeding score, soft tissue recession, interproximal bone level changes and risk for implant loss. Clinical implications will be discussed about the need of preserving the existing keratinized mucosa during the treatment procedures and about the necessity of performing grafting procedures, aiming at increasing the amount of keratinized mucosa to improve outcomes of the implant therapy.
> Klaus GUTFREDSEN & Anselm WISKOTT

Klaus Gotfredsen 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 the Department of Periodontology, Faculty of Odontology, Göteborg University. Dr. Gotfredsen has published more than 90 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, former president of European Association for Osseointegration, chairman of the EAO meeting in 1999 in Copenhagen.

Anselm Wiskott  DMD, MS, MSD, PhD
Dr. Wiskott graduated in dental medicine in 1977. After three years of private practice and internship he earned a doctorate in dental medicine in 1980. He then transferred to the USA and in 1982 he received a Master of Science degree in periodontics from the University of Michigan. In 1989 he was awarded a Master of Science in Dentistry degree from the University of Washington, specializing in fixed prosthodontics, and in 1998 a PhD degree in biomaterials from the University of Geneva. Dr. Wiskott is the author of about 100 scholarly articles and of the textbook ‘Fixed Prosthodontics: Principles and clinics’. He currently holds the position of director of the laboratory of biomaterials at the School of Dentistry, University of Geneva. His main research interests are the numerical modeling of the physiology of biological tissues as well as the bone’s response to implanted materials. He teaches and practices dentistry in Geneva, Switzerland.

ABSTRACT:
RECONSTRUCTIONS ON IMPLANTS

Introduction: This presentation will review the current knowledge in the areas of implant connections to abutments/reconstructions, fixation methods (cement- versus screw retained) for implant-supported reconstructions, as well as the optimal number of implants for fixed dental prosthesis and implant-supported overdentures bases on the EAO workshop 2012.

Material and methods: The literature was systematically searched and critically reviewed. Four manuscripts were produced in the four subject areas based on systematically search strategy and consensus statements, clinical recommendations and implication for future research were formulated.

Results: The following 4 position papers were the basis for the consensus statements, the clinical recommendations and directions for future research:

- Internal versus external connections for abutments/reconstructions: A systematic review.
- Cemented and screw retained implant reconstructions: A systematic review of the survival and complication rates.
- What is the optimal number of implants for fixed reconstructions? A systematic review.
- What is the optimal number of implants for removable reconstructions? A systematic review on implant-supported overdentures.

These papers are the basis for the presentation.
> 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 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.

> Luiz A. SALATA
080
Biomolecular and µCT evidences of remodeling grafts fixed with cyanoacrylate

> Misi SI
081
Osteotome sinus floor elevation with or without grafting: a 3-year randomized controlled study

> Ioannis GISAKIS
082
Maxillary sinus augmentation for implant placement: clinical, histologic and histomorphometric study in 75 patients

> Daniel ROTHAMEL
083
Impact of citric acid etching on biocompatibility and osseous organisation of a natural bovine bone mineral

> Tim FIENITZ
084
Impact of matrix density of collagen grafts on early tissue response and biodegradation. A histomorphometrical study in rats
Irena SAILER
Dr. med. dent., Assistant Professor
Clinic for Fixed and Removable Prosthodontics and Dental Material Science, Centre for Dental and Oral Medicine and Cranio-Maxillofacial Surgery, University of Zurich, Switzerland

Irena Sailer is an Assistant Professor at the Department of Fixed and Removable Prosthodontics and Dental Material Science at the University of Zurich, Switzerland. She is a Faculty member of the clinic. Additionally, since 2009 she has held an Adjunct Associate Professorship at the Department of Preventive and Restorative Sciences, Robert Schattner Centre, School of Dental Medicine, University of Pennsylvania, Philadelphia, USA.

In her clinical work she focuses on the comprehensive treatment of complex, partially edentulous patients applying all available options of reconstructive dentistry including dental implants. Scientifically Dr. Sailer’s activities concentrate on different prosthetic aspects of fixed reconstructions on teeth and implants. More specifically the application of all-ceramic materials and new fabrication technologies like the computer-aided manufacturing procedures (CAD-CAM) for fixed prosthodontics are being tested. Under her guidance numerous clinical trials of all-ceramic tooth- and implant-borne reconstructions have been performed or are ongoing. She collaborates intensely with the material sciences unit of the clinic. As part of this collaboration new materials and fabrication procedures are being tested in vitro prior to the clinical application. Following the pre-clinical and clinical tests, Dr. Sailer’s group is aiming for a constant development and improvement of the clinic’s prosthodontic concepts.

Dr. Sailer is a member of various scientific organisations. Presently, she is Fellow of the International Team for Implantology (ITI). She has published numerous scientific and clinical articles and serves on the review boards of several scientific journals in the field.

Nikolaos FANARAS
Implant induced post-traumatic inferior alveolar nerve neuropathy

Tobias THALMAIR
Dimensional alterations of extraction site after different socket preservation techniques - a volumetric study

Rabah NEDIR
Sinus elevation with and without grafting: a 3-year prospective study

Nicolai PURCZ
Infection rates after sinus floor elevation with and without the use of bone collectors

Joerg HEINE
Radiographic 2-years follow up after complex augmentation by deduced triggering of stem cells based on a bionic approach
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 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.

Sven MÜHLEMANN
054
Bending moments of zirconia and titanium implant abutments supporting all-ceramic crowns after aging

Thomas JENSEN
055
Maxillary sinus floor augmentation with Bio-Oss and autogenous bone

Alexander PHILIPP
056
Evaluation of SLActive® implants in grafted and non grafted sheep sinuses

Yan HUANG
057
Effects of immediate and delayed implant loadings on trabecular structures: a cone-beam CT evaluation
> Robert HAAS
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).
1996  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 Implantacademy, 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.
Participate on several training courses.
More than 60 scientific papers, contributions to medical books and publications.

> Miha BREVAVŠČEK
058  Effect of uv-treatment on the osteoconductivity of different zirconia-based materials

> Yong-Deok KIM
059  Low level laser therapy induces the expressions of BMP-2, osteocalcin, and TGF-β1 in hypoxic-cultured human osteoblasts

> Nikola SAULACIC
060  Influence of surface modifications on osseointegration of zirconia dental implants: a histomorphometric study in miniature pigs

> Joe MERHEB
061  Relation of jawbone density to skeletal bone density

> Taskin TUNA
062  Effect of ultraviolet photofunctionalization on the bioactivity of different zirconia implant materials

> Rubens SPIN-NETO
063  Bone remodeling and implant osseointegration in fresh-frozen allografts and autografts
HUMAN FACTORS AND ERRORS IN IMPLANT DENTISTRY

ABSTRACT:

ABSTRACT: TIME PRESSURE AND STRESS AT WORK: WHAT IS THE IMPACT IN THE FAILURE OCCURRENCE

Time management is at the cornerstone of medical activities and risk management. In general medicine, the poor control of time by doctors is causing directly or indirectly over 40% of adverse events. Doctors are late or tired— is not taught at University, like it is for most areas belonging to Human Factors and “Non technical Skills”. Each of these times/tempos generates Adverse Events, and unplanned delays, rescheduling, or emergencies, and even cognitive tempo when you are tired or preoccupied. The burden is even greater since a good and safe job continuously requires many times/tempos, time to day agenda and interruptions, the patient’s tempo (time to be informed and to be reassured), the office’s tempo (time to manage of these harmful occurrences. Harmful errors and complications are unfortunate but inescapable in healthcare delivery. In the healing arts, it is acknowledged that “to error is human” and mistakes do occur and are anticipated in many systems. Following a medical error or an adverse event, provider behavior is known to have a profound effect on the patient and family response and the subsequent doctor-patient relationship. Over the past decade, there has been broad consensus that provider disclosure of adverse unanticipated events to the patient and family is desirable and appropriate. Unfortunately, traditional healthcare education has failed to provide adequate training in the critical skills to handle iatrogenic incidents while institutional endorsement and support have remained limited or absent. It is not surprising that most healthcare providers are unclear of what to disclose, when to do it and how to proceed despite the patient’s overwhelming desire to be informed and to be reassured. This presentation intends to review reactions of both doctors and patients following adverse events specific to implant dentistry and the implementation of protocols into daily practice which may help in the effective management of these harmful occurrences. References in the preparation for this lecture will be provided.

ABSTRACT: MANAGEMENT OF UNANTICIPATED ADVERSE EVENTS: APPLYING IT INTO EVERYDAY PRACTICE
Isabella ROCCHIETTA

Graduate in dentistry at the University of Milan, Italy in 2002. Awarded one year scholarship from the Department of Medicine, University of Milan. Research Fellow, Department Periodontology, Harvard School of Dental Medicine, Boston, MA. Fellow and instructor at the department of Periodontology, University of Milan, Italy. Research consultant for the Institute for Dental Research and Education (IDRE) until 2011. Chairman of the EAO Junior Committee from 2007 to 2011. Member of the Experts Council of the Osteology Foundation, Member of the Academy of Osseointegration, European Association for Osseointegration (EAO), Italian Society of Periodontology. Currently affiliated with Department of Biomaterials, Institute for Clinical Sciences, The Sahlgrenska Academy at the University of Gothenburg, Sweden and performs clinical work limited to periodontics and implant dentistry in London, U.K. Author of several national and international peer reviewed publications and book chapters. International speaker on; bone regeneration by means of growth factors and scaffolds, tissue engineering, soft and hard tissue neo-formation with autogenous living cells, osseointegration and implant surface modifications.

Bo NIELSEN

10 years in the Royal Danish Air Force (RDAF) as fighter pilot/commander/leader including 3 years at the RDAF officer academy (officer training) - specialized in organizational management and communication. Graduated from the Danish Defense Staff College. 22 years in Scandinavian Airlines Systems - SAS (3 years of long haul flying and 17 years of short haul flying) and with a lot of management experience. I have been a flight instructor in the Air Force as well as in SAS. 12 years as CRM instructor/facilitator in SAS. Basic pilot training was conducted in the US with United States Air Force. International airline management education & SAS Leadership Program. Director and founder of Project International in 1989 - a company working with consulting - primarily within the "high risk environment" - such as hospitals, the medical industry and the off shore industry.

Work experience
Held several management positions in the Air Force (Chief of operations, Squadron Leader/Commander and staff position within the Air Force Development Branch). I was appointed as Danish representative in NATO within the area of aircraft self-protection systems, tactics and operations. Numerous training and international courses received during my 10 years in the Air Force. During the first 10 years in SAS I worked with training development. Worked as a consultant for Thai Airways regarding update of the basic training program. Worked in SAS Airline Management for the last 12 years - presently as a Training Manager.

Founder of Project International - an international consulting company. Worked with many different companies - but primarily working area has been within the hospital industry. One major focus area has been the introduction of simulation within the medical industry!

Educations:
2010 Airline Leadership program
1996 International Management education
1992 Instructor and Supervisor education in SAS
1992 Leadership education at the Danish Defense Staff College
1989 Founded Project International
1988 NATO Supervisor course
1982 - 1985 Royal Danish Air Force Academy
1979 - 1981 Fighter pilot education in the Air Force (Denmark / USAF)
1979 Graduation from College (Århus - Denmark)
CHAIRPERSON

Professor, D.D.S., Ph.D., Dr.Odont.
Section for Prosthetic Dentistry, Department of Dentistry, Aarhus University, Denmark

Curriculum vitae
1976 D.D.S. (Aarhus University)
1981 Ph.D. (Aarhus University)
1988 Dr.Odont. (Aarhus University)

Employments (academic)
1977-1994 Research Associate in periodontology (Aarhus University)
1994-2001 Associate professor in prosthodontic dentistry (Aarhus University)
1999-2004 Head of Dentistry (elected) (Aarhus University)
2001 Professor and chairman at Section for Prosthetic Dentistry (Aarhus University)

Research
The main research interests are prosthodontic dentistry, oral implantology and periodontology.

ABSTRACT

Current status on the role of bruxism in implant dentistry will be presented. Bruxism is known to be associated with various complications in implant dentistry. These complications can be technical, biological or prosthetic. The possible etiology of such complications will be discussed in the context of the literature. The main finding of this systematic review of the literature is that there is a need for further research and large randomized controlled trials investigating the effect of bruxism on dental implants.

IMPACT

The main finding of this systematic review of the literature is that there is a need for further research and large randomized controlled trials investigating the effect of bruxism on dental implants.
Ailsa J. NICOL
BDS, PhD, FDS RCS(Edin), FDS (Rest Dent) RCS (Eng)
Consultant in Restorative Dentistry

Ailsa graduated from the University of Glasgow in 1994. Following some time in General Dental Practice, she began a number of hospital training positions in Oral Surgery and Orthodontics in Dumfries and Glasgow, Scotland. In 1998, she was appointed as a Clinical Lecturer in Restorative Dentistry at the University of Glasgow. In 2004, she began her Specialist Training in Restorative Dentistry, which she completed in 2009. Ailsa is on the Specialist Lists for Restorative Dentistry, Prosthodontics and Periodontology. During her specialist training she was awarded a PhD in Cariology and an ITI Scholarship, which gave her the opportunity to spend a year at the Centre for Implant Dentistry at the University of Florida, Gainesville, USA. Currently, Ailsa is a Consultant in Restorative Dentistry at James Cook University Hospital, Middlesbrough and in Specialist Referral Practice in Newcastle-upon-Tyne, UK. Her interests include the management of Hypodontia and the Oral Rehabilitation of patients with Head and Neck Cancer.

Mats TRULSSON

Mats Trulsson is professor and head, Division of Prosthetic Dentistry, Department of Dental Medicine, Karolinska Institutet, Stockholm, Sweden. He received his basic training in dentistry (DDS, 1986) and neurophysiology (PhD, 1993) at Umea University, Sweden, and completed postdoctoral training (1995) at the Dental Research Centre in Chapel Hill, University of North Carolina, USA. After his relocation to Karolinska Institutet (2000) he held a position as a Senior Research Fellow at the Swedish Medical Research Council and also continued to practise part-time as a prosthodontist. In 2005 he became recognised specialist in Prosthetic dentistry by the Swedish national board of health and welfare and was appointed Chair of the division of Prosthetic Dentistry at Karolinska Institutet. Professor Trulsson is currently involved in both clinical and laboratory research and is particularly renowned for his work in characterising the sensorimotor regulation of mastication and how prosthetic treatments affect oral motor function.

ABSTRACT:
Masticatory Function and Implants

Masticatory function is indeed an important aspect of oral health, and rehabilitation with dental implants should aim to maintain or restore adequate function. During the last decades the knowledge about how the brain controls masticatory function has increased tremendously. To perform the well-balanced regulation of jaw movements and bite forces during mastication the brain needs detailed information from a variety of sense organs in and around the mouth. The periodontal mechanoreceptors, located in the ligaments anchoring the tooth to the alveolar bone, play a central role in encoding patterns of forces acting on the dentition and contribute significantly to the regulation of masticatory forces. When a natural tooth is replaced by a dental implant, the periodontal ligament disappears and the periodontal mechanoreceptors can no longer signal information to the brain about mechanical events. To be able to understand how implant treatment affects oral sensory and motor functions, we must first learn about the role of the natural tooth as a sensor in the nervous system. This presentation will provide a summary for the clinician of recent studies on the sensorimotor regulation of masticatory function with natural teeth and dental implants. Focus will be on the regulatory changes that occur when a natural tooth is replaced by an implant and its clinical implications.
Klaus Gotfredsen 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 the department of Periodontology, Faculty of Odontology, Göteborg University. Dr. Gotfredsen has published more than 90 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, former president of European Association for Osseointegration, chairman of the EAD meeting in 1999 in Copenhagen.

Anders Örtorp

Clinical comparison between screwretained and removable prostheses on maxilla implants

Tomas Linkevicius

Factors influencing removal of the cement excess in implant-supported restorations. A prospective clinical study

Mario Imburgia

Combined alumina-zirconia implant-supported single tooth restorations in anterior areas: 5 year clinical results

Clinical evaluation of implant supported zirconia restorations with transverse fastening screws: 30 months clinical results
Dr Pascal Valentini received his DDS at the University of Paris VII in 1982. He is the Programme Director of the Postgraduate Programme 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.

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**Carl-Johan IVANOFF**

094

Submerged vs. transmucosal placement of bone level implants: 3-year results of a multicenter RCT

**Ralf-Joachim KOHAL**

095

One-piece ceramic oral implants: three-year results on single tooth replacement from a prospective cohort investigation

**Diego LOPS**

096

Zirconia and titanium implant abutments for single-tooth implant prostheses in posterior regions. A five-year prospective study

**Tomas LINKEVICIUS**

097

Do cement remnants always lead to peri-implant disease? A retrospective case analysis
The introduction of digital technologies in dentistry has opened a wide range of new avenues, resulting in a profound change in the way implant dentistry is performed. Systems for digital acquisition of patients’ three-dimensional data, including optical surface scanners and cone-beam computed tomography, have been exponentially broadening the diagnostic possibilities. Open source software allows for a simplified exchange of the data related to the virtual patient process and, therefore, facilitate the communication between the involved parties. Furthermore, new tools for the analysis and processing of digitalized patient’s data enable to simulate the desired end result with respect to prosthetic reconstruction, to the peri-implant bone and to soft tissue. Based on the principle of backward planning, such information is used to identify the ideal implant position and to plan the augmentation procedures. Finally, the application of rapid prototyping allows to accurately transfer the virtual treatment plan to the clinical situation. The use of 3D printers goes beyond the manufacturing of surgical guides, by creating new opportunities for both diagnostics and communication. The integration of these new technologies within the digital workflows in implant dentistry will greatly enhance the possibilities for choosing the best treatment, improve the treatment predictability, and increase time and cost effectiveness. This lecture will focus on the application of the new workflows for the computer-assisted treatment planning.
Henning Schliephake received his training in Oral Maxillofacial Surgery and Facial Plastic Surgery from 1989 to 1996 at the Medical University Hannover, where he also did his PhD degree on in-vivo cultivation of bone in 1995. In 2001, he became full professor and chair of the Department of Oral Maxillofacial Surgery at the Georg August University in Göttingen in 2001. He has chaired several scientific associations. Currently he is president of the German Society of Dental Oral and Craniofacial Sciences and is chairing the Straffburg Osteosynthesis Research Group (S.O.R.G.). He is member of the editorial board of a couple of scientific journals such as the International Journal of Oral and Maxillofacial Surgery and Oral Oncology. His research foci are reconstructive microsurgery and Quality of Life in head and neck oncology as well as tissue engineering, growth factors and biomaterials.

Massimo Simion

ABSTRACT:
20 YEARS WITH BONE AUGMENTATION AND IMPLANT SURGERY. WHAT WE HAVE LEARNED?

The history of Guide Bone Regeneration can be divided in 3 main periods: the Developing Period, the Consolidation Period and the Simplification Period. The Development Period began in 1989 with famous study in rabbits from Dr. Dahlin and continued until 1996 when the final surgical technique has been well defined. During the Consolidation Period the results were confirmed with retrospective and prospective clinical studies. From 2005, with the beginning of the Simplification Period, Tissue Engineering techniques are used in order to reduce the complexity of the regenerative surgery and the morbidity for the patient. The use of growth factors could in a near future eliminate the need of the barrier membrane and of the autogenous bone harvesting from the patient, resulting in easier and less invasive surgical techniques.

Riitta Suuronen
Professor Riitta Seppänen (Suuronen) received her DDS in 1986 and MD, PhD in 1990 from University of Helsinki, Finland. She completed her CMFS residency in 1999 and her European Board of Oral and Maxillofacial Surgery in 2002. She received Special Competence in Medical and Dental Education in 2010. She is currently working as Professor of Tissue Engineering and Director of Reges Tissue Bank and Cell Center in the Institute of Biomedical Technology (BioMedTech) in University of Tampere, Finland. She also holds a chief surgeon’s post in Tampere University Hospital and is a member of several scientific and editorial boards. She has received several honors, including the Apollonia Price and Anje Scherini medal. In 2012 she was awarded Dr. Tech (h.c.) from Tampere University of Technology and Honorary Professorship from University of Hong Kong.

ABSTRACT:
WILL IT BE POSSIBLE TO GROW A JAW IN THE FUTURE?

Tissue Engineering is considered to be the third treatment modality, complimenting current medical and surgical treatments. Biomaterials, growth factors, as well as stem cells (SC), both embryonic and adult tissue derived, play a critical role in this field of research and therefore a multidisciplinary approach is extremely beneficial for successful outcome and many research groups are extensively studying this interesting treatment possibility.

In bone reconstruction, among other cell sources, human adipose stem cells (hASCs) are a very viable alternative. In this presentation, current use of custom designed tissue engineered “spare parts” as well as future perspectives of tissue engineering are being elaborated. The help of rapid prototyping in scaffold preparation is also shown. The results of our nearly 30 patients’ clinical treatments, with maximum of 5 years of follow-up, with adipose derived stem cells in bone regeneration in craniofacial area will be presented.

Yes, it is already now possible to grow a new jaw and reconstruct the esthetic and functional properties with osseointegrated implants.
**FUTURE PERSPECTIVES OF IMPLANT DENTISTRY**

**ABSTRACT:**

Scientific breakthroughs during recent years in the fields of genetics and developmental biology have rapidly increased our understanding of tooth development. A great deal is known about how individual genes regulate tooth development, and how gene mutations cause syndromes such as abnormal teeth and tooth shapes. The new knowledge is already used in diagnosis and even in the prevention of some dental defects. The remarkable recent progress in stem cell biology is now feeding hopes to grow new teeth by combining the various new biological technologies with old tissue culture methods. Although stem cells have been discovered in teeth, and research on their characteristics and differentiation is currently active, there are several problems that must be solved before bone engineering of teeth will be feasible. These are related to the programming of the stem and progenitor cells to tooth-specific cells, and to the regulation in time and space of the complicated process of tooth morphogenesis depending on intricate interplay of several different cell types such as those forming the dental hard tissues, dentin, enamel and cementum. However, the biggest challenge may be the creation of functional roots.
> Daniel WISMEIJER

Studied dentistry at the University of Nijmegen Dental School from 1979-1984. After graduating he joined the Department of Oral Function and worked in the section of special dental care and maxillofacial prosthodontics. He received his PhD in 1996 on the subject of overdentures on dental implants, “The Breda Implant Overdenture Study”. In that year he left Academia. From 1985 till 2006 he worked at the Amphia teaching Hospital in Breda in the Department of Oral Surgery and Maxillofacial Prosthodontics.

In 1985 he started a general dental practice which since 1990 is a referral practice for Oral Implantology. He has been an ITI fellow since 1993. In 2006 he accepted the position of Professor of Oral Implantology and Prosthetic Dentistry at ACTA Amsterdam which he combines with his referral practice. The main research areas in his department are focused on “CAD/CAM treatment optimization”, “implant surface and bone substitute optimization” and “the evaluation of different implant based treatment modalities”.

ABSTRACT:
20 YEARS WITH IMPLANT-SUPPORTED PROSTHETICS. WHAT HAVE WE LEARNED?

In the Netherlands an implant borne over-denture has become a treatment option for edentulous patients that can be reimbursed via medical insurance. This reimbursement program has its roots in evidence-based research which was started about 25 years ago. During this period treatment indication, the number of implants and loading protocols have changed. In this presentation the evolution of this type of treatment will be discussed.
Parallel Session 5

MEDICAL DISEASES AND IMPLANTS

> Palle HOLMSTRUP

Palle Holmstrup graduated from Royal Dental College in Copenhagen 1971 and received his PhD in 1976, Board certification in Oral Surgery 1983, Dr.Odont. 1985, Honorary Doctor, University of Gothenburg 2003. Since 1988 Professor and Chairman, Section of Periodontology, University of Copenhagen and from 2008 guest professor at University of Aarhus, Denmark. More than 230 publications and more than 400 invited guest lectures and postgraduate courses in oral pathology, oral medicine and periodontology in Europe, America and Asia.

> Allan FLYVBJERG

Professor Allan Flyvbjerg graduated from Aarhus University, Denmark in 1986, he defended his thesis (DMSc) in 1993, became specialist in Internal Medicine and Endocrinology in 1999. Chief Physician in 2001, Professor in Experimental Medical Research in 2005, Professor in Endocrinology (Chair) in 2009 at the Department of Endocrinology and Internal Medicine Aarhus University Hospital and the Medical Research Laboratories, Department of Clinical Medicine, Aarhus University. Aarhus C., Denmark. Since 2010 he has been Dean at the Faculty of Health at Aarhus University, Denmark.

Allan Flyvbjerg and his research team perform preclinical and clinical research focused on the pathogenesis leading to diabetic micro- and macroangiopathy. The aim of the research is to combat the increased incidence and prevalence of cardiovascular disease, blindness and end-stage renal failure in patients with diabetes. He is author of more than 500 scientific publications and well-cited. Allan Flyvbjerg has been President of the Danish Diabetes Association (app. 75,000 members) from 2000-2011 and is member of several national and international boards and councils. He has been Associate Editor of Diabetologia since 2007 and co-editor on a Textbook of Diabetes from Wiley-Blackwell.

He has received several awards for his scientific contribution, including the EASD Castelli Pedrol Prize / 16th Camillo Golgi Lecture in 2001, the ESCI Award for Excellence in Clinical Science in 2004, the Christian Hagedorn Award in 2006, the SSSD Knud Lundbæk Award in 2007, the Diabetes-UK Dorothy Hodgkin Prize in 2009, the EDNSG Ruth Østerby Prize in 2010, the Novo Nordisk Foundation Prize and the Erhoff Prize both in 2011. Finally he was Knighted by the Queen of Denmark in 2011.

ABSTRACT:

SYSTEMIC DISEASES TODAY AND IN THE FUTURE

The global epidemic of non-communicable diseases (NCDs) is of major concern to the society, because it represents a significant threat to human health and development. NCDs, e.g. cardiovascular disease, cancers, chronic respiratory diseases, diabetes and oral diseases, account for 60% of global deaths. Eighty per cent of these deaths occur in low and middle income countries. Oral diseases, including dental caries, periodontal disease and oral cancer, are neglected but important NCDs with a significant burden on overall health. Unless addressed specifically, the burden of these diseases will continue to increase. WHO projects that globally NCD deaths will increase by 17% over the next 10 years.

To make an efficient reduction in NCDs it is necessary to take action on factors which influence people’s health behavior, i.e. the conditions in which they are born, grow, live, work and their age. While health care services attempt to repair the damage caused by premature ill health, these social, cultural, environmental and economic factors are the major influences on life quality and thereby the length of disability-free life expectancy. Thus, addressing the social determinants of health that are contributing to the increase in NCD burden is beyond the health sector alone.

Accordingly, strategies to prevent NCDs require the collaborative engagement of multiple sectors such as the health care system, agriculture, economy, trade, transport, urban planning, education and recreation.
oral mucosal lesions and dental implants will be discussed. Mucous membrane pemphigoid other categories of patients with implants are preferable. In addition to oral lichen planus and the alternative to implants is full or partial dentures then dental evidence for mucous membrane pemphigoid is very limited, but if out without any significant impact on the prognosis. The scientific issue is not only the patients who develop oral mucosal lesions after implant treatment, but also patients who already have an oral mucosal lesion at the installation of the implant. There are two gingival oral mucosal lesions, oral lichen planus and mucous membrane pemphigoid, which have prevalence figures that make them interesting in relation to treatment with dental implants. In the case of oral lichen planus, there is some scientific evidence that provides support for that implant treatment can be carried out without any significant impact on the prognosis. The scientific evidence for mucous membrane pemphigoid is very limited, but if the alternative to implants is full or partial dentures then dental implants are preferable. In addition to oral lichen planus and mucous membrane pemphigoid other categories of patients with oral mucosal lesions and dental implants will be discussed.

The widespread use of dental implants raises the question of oral mucosal lesions affecting the prognosis of this treatment. The increase in life expectancy has resulted in an increasing number of elderly patients submitted to implant & bone regeneration procedures. Since the prevalence of chronic metabolic diseases like diabetes and osteoporosis is especially high in this population, implant & bone regeneration treatment protocols adjusted to this category of patients have to be formulated. Although there is some evidence that diabetes & osteoporosis as well as their medication might influence osseointegration and bone healing little is known about the biologic mechanisms responsible for these findings and the effect of these two chronic diseases on clinical outcomes of dental implants remains under dispute. A greater understanding of how the pathogenesis of diabetes and osteoporosis may interact with bone healing will identify fundamental pathways that can be directly correlated with clinical performance in cases where bone defects have to be treated in osteoporotic or diabetic patients. The specific presentation will review the available literature in the field and it will present the results of several preclinical studies on the effect of osteoporosis and diabetes on the physiological and structural properties of bone in the cranio-maxillo-facial area, on the mechanisms of bone healing and osseointegration, and the underlying genetic mechanisms that control them. These preliminary results could be used as suggestions for future treatment protocols for diabetic and osteoporotic patients.

ABSTRACT: DISEASES OF THE ORAL MUCOSA AND IMPLANTS

The widespread use of dental implants raises the question of oral mucosal lesions affecting the prognosis of this treatment. The increase in life expectancy has resulted in an increasing number of elderly patients submitted to implant & bone regeneration procedures. Since the prevalence of chronic metabolic diseases like diabetes and osteoporosis is especially high in this population, implant & bone regeneration treatment protocols adjusted to this category of patients have to be formulated. Although there is some evidence that diabetes & osteoporosis as well as their medication might influence osseointegration and bone healing little is known about the biologic mechanisms responsible for these findings and the effect of these two chronic diseases on clinical outcomes of dental implants remains under dispute. A greater understanding of how the pathogenesis of diabetes and osteoporosis may interact with bone healing will identify fundamental pathways that can be directly correlated with clinical performance in cases where bone defects have to be treated in osteoporotic or diabetic patients. The specific presentation will review the available literature in the field and it will present the results of several preclinical studies on the effect of osteoporosis and diabetes on the physiological and structural properties of bone in the cranio-maxillo-facial area, on the mechanisms of bone healing and osseointegration, and the underlying genetic mechanisms that control them. These preliminary results could be used as suggestions for future treatment protocols for diabetic and osteoporotic patients.

ABSTRACT: CHRONIC MEDICAL DISEASES AND IMPLANTS

The increase in life expectancy has resulted in an increasing number of elderly patients submitted to implant & bone regeneration procedures. Since the prevalence of chronic metabolic diseases like diabetes and osteoporosis is especially high in this population, implant & bone regeneration treatment protocols adjusted to this category of patients have to be formulated. Although there is some evidence that diabetes & osteoporosis as well as their medication might influence osseointegration and bone healing little is known about the biologic mechanisms responsible for these findings and the effect of these two chronic diseases on clinical outcomes of dental implants remains under dispute. A greater understanding of how the pathogenesis of diabetes and osteoporosis may interact with bone healing will identify fundamental pathways that can be directly correlated with clinical performance in cases where bone defects have to be treated in osteoporotic or diabetic patients. The specific presentation will review the available literature in the field and it will present the results of several preclinical studies on the effect of osteoporosis and diabetes on the physiological and structural properties of bone in the cranio-maxillo-facial area, on the mechanisms of bone healing and osseointegration, and the underlying genetic mechanisms that control them. These preliminary results could be used as suggestions for future treatment protocols for diabetic and osteoporotic patients.
> Gottfried SCHMALZ

1971/1972  State Board (DDS), Doctor Med Dent Degree (DMD), University of Bonn
1980  Habilitation (PhD), University of Tübingen
Subject: «The Biocompatibility of Dental Materials»
Since 1983  Professor and Chairman, Department of Operative Dentistry and Periodontology, University of Regensburg
Since 1988  Dean of the Dental School, University of Regensburg
1987 – 1989  President of the Continental European Division of IADR
Since 1989/1990  Secretary (Treasurer until 2008) of the Continental European Division
1984 – 1988  President of the German Association for Operative Dentistry
1990 – 1992  President of the German Association of Professors for Dentistry
1993 - 1997  President of the German Scientific Dental Association
Since 1996  Editor-in-Chief of “Clinical Oral Investigations”
2003/2004  President of the Pan European Federation of IADR
Since 2003  Chairman of the ISO/TC 105/WG 10: Biological Evaluation of Dental Materials
Since 2003  Member of the German National Academy of Sciences (Leopoldina)
2007  Distinguished Scientist Award of the International Association for Dental Research
2009  Order of Merit of the Federal Republic of Germany
Since 2010  Senator of the German National Academy of Sciences (Leopoldina)
2011  Award of Excellence of the European Federation of Conservative Dentistry (EFCD)
Editor of the book: ‘Biocompatibility of Dental Materials’ together with D. Arenholt-Bindslev

ABSTRACT:
ALLERGIC REACTIONS TO TITANIUM AND PROSTHETIC MATERIALS

Titanium is generally considered to be a highly biocompatible material due to the immediate formation of a bioinert TiO2 surface layer. Often titanium is e.g. used in patients with allergies against common metal sensitizers, like Ni, Pd, Cr and Co. Dental implants based on titanium have a high success rate, but failures gain increasing interest. Reasons for failure (periimplantitis) are mainly infection and/or mechanical overload. However, allergic reactions (type IV, i.e. T-cell-mediated) towards titanium have also been suggested often based on case reports. In the vicinity of (dental) implants titanium wear particles, but also titanium and other elements released from titanium implants have been found, fine particles also in the local lymphnodes. Biological reactions may, therefore, be caused by the titanium (element) reaction with body proteins or due to a cellular reaction towards titanium particles. The situation is further complicated as titanium often is combined (alloyed) with other metals like Vanadium, which are allergenic and even commercially pure (cp) titanium contains impurities like Co, Cr, Ni, Pd. Verification of the allergic nature of an adverse reaction is also difficult, because the generally recognized patch test reveals very seldom a positive result in contrast to blood cell based tests (LTT or the MELISA). However, the latter are not considered clinically helpful due to the high number of false positive responses. Therefore, one should be very cautious with the diagnosis of a titanium allergy as a cause for periimplantitis. Improvement after titanium implant replacement is no proof for a titanium allergy.
Prof. Jörg Wiltfang, MD, DMD, born 1963, university studies of medicine at the Georg-August Goettingen University, Germany, at Mount Sinai Hospital, Minneapolis (as a stipendiate of Dr. Carl-Cuisberg Foundation) and at University of Chicago, USA (1982-1988), dental medicine at Georg-August Goettingen University (1983-1987), Scientific staff at the Department of Oral and Cranio-Maxillofacial Surgery at Goettingen University Hospital (Head: Prof. H. G. Luhr, MD, DMD, 1988-1988).

Habilitation (PhD Degree) at Goettingen University, Medical Faculty and award of venia legendi in oral and cranio-maxillofacial surgery and plastic surgery (1997/1998).

Appointed Associate Professor at Erlangen-Nuremberg University (C3) since 10/1998.

Since April 2004 Head of the Department of Oral and Maxillofacial Surgery of the University of Schleswig-Holstein, Campus Kiel

Since January 2007 Editor-in-Chief of the Journal of Cranio-Maxillofacial Surgery

Main areas of activities:

The focus in my experimental activities is on the use of osteoinductive and osteoconductive bone replacement materials and on studies for controlled bone regeneration, callos distraction and tissue engineering.

The focus in my clinical research activities is on the use of various microvascular reconstruction techniques within the scope of functional rehabilitation following surgical treatment and on surgical treatment of obstructive sleeping apnea.

ABSTRACT:

MEDICATION AND IMPLANTS

The assessment of patients related risks is a prerequisite in the treatment planning for dental implants. Surgical risks are weighed versus the potential benefits offered by dental implants.

Acute counter-indications for dental implant rehabilitation include recent myocardial infarction, cerebro-vascular accident and active treatment of malignancy.

Besides absolute counter-indications, conditions which compromise the success of the implant treatment like radiation therapy of the jaws, long-term smoking, periodontal disease or insufficient bone quality and quantity have to be considered. Consistent evidence exists showing a reduced implant survival associated with these conditions.

Concerning the effect medical conditions have on the live expectancy of the implants, little is known.

Autoimmune rheumatic disorders, hypothyroidism, hormone replacement therapy, immunosupression due to organ transplantation, diabetes, osteoporosis and several other medical conditions or medications may have a negative influence on the chance that an implant will survive.

An electronic search and hand search was performed and cross-referenced with articles cited in papers selective. The primary study parameter was implant failure due to medication.

The results will be presented.
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 board of COIR and is reviewer for J. Perio, J. Clin. Periodontol, 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.
CHAIRPERSON

> Alberto SICILIA

Doctor of Medicine and Specialist in Stomatology (UOC). Postgraduate on Periodontology (UCM). Diplomate in Computer Assisted Statistics Applied to Biomedical Research (UAB). Past-President of the Spanish Association of Periodontology and Osseointegration (SEPA). Founding Editor of the Journals Periodoncia & Osteointegracion (Official Publication of SEPA) and RCDE (Official Publication of the Spanish Dental Association). Present Positions: Professor of Periodontology and Co-Director of the Master’s Degree on Periodontology, University Clinic of Dentistry, Faculty of Medicine and Health Sciences, University of Oviedo, Spain. Medical Director, Clinica Sicilia, Oviedo, Spain. Board Director and Treasurer of the European Association for Osseointegration (EAO)

PRESENTER

> Kirsten SLAGTER

Immediate single implant treatment in the aesthetic zone: 1 year results of a randomized controlled trial

> Arne MORDENFELD

Lateral ridge augmentation with different Bio-Oss®/bone compositions - radiological and histological evaluation

> Algirdas PUISYS

Crestal bone stability around implants after mucosal tissue thickening

> Pietro FELICE

Vertical bone augmentation versus 6.3-mm-long implants. A 3-year post-loading RCT
> 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)
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.

> Brigitte ALTMANN

098  Cell functions of human osteoblasts on uv-bioactivated roughened implant surfaces

> Plinio MENDES SENNA

099  Human blood plasma protein adsorption on amine functionalized titanium surface

> Salomão ROCHA

100  Platform switching vs platform match: interim results from a prospective randomized-controlled multicenter study

> Diego LOPS

102  Radiographic evaluation of marginal bone levels and prognosis of platform-switched implants. A 5-year prospective study

> Fabio ROSSI

103  Use of ITI SLA short implants (6mm) in single-tooth replacement: a prospective, controlled, randomized multicenter clinical study

> Nele VAN ASSCHE

104  Microbiology of 2 implant systems, placed following a split mouth randomised protocol, at 12th year of loading
Prof. Dr. med. dent. Bjarni E. Pjetursson, DDS, MAS

- Dr. Pjetursson, received his DDS from University of Iceland in 1990. From 1990 to 2000 he worked as a general dentist in his private clinic in Iceland.
- In 2000 he started his postgraduate training in Periodontology and Implant Dentistry at the University of Berne, Switzerland. He received his specialist certificate (EFP & SSP) and Masters of Advanced Studies in Periodontology and Doctorate in Dentistry (Dr. med. dent.) from the Faculty of Medicine, University of Berne, Switzerland.
- From 2003 to 2005 he did his postgraduate training in Prosthodontics at the University of Berne, Switzerland.
- From 2005 he was an Assistant Professor and Senior lecturer at the Department of Periodontology and Fixed Prosthodontics, University of Berne.
- Presently he is a Professor and Chairman of the Department of Reconstructive Dentistry and Vice Dean, Faculty of Odontology, University of Iceland.
- Dr. Pjetursson is an ITI Fellow and member of the editorial board of Clinical Oral Implants Research, European Journal for Oral Implantology and Schweizer Monatsschrift für Zahnmedizin.
- Dr. Pjetursson has published extensively in recent years. He also given over 250 lectures in 30 countries around the world.
- His research interests are clinical studies in Implant Dentistry and evidence based evaluation of different treatment modalities in Implant and Prosthetic Dentistry.

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**Clinical evaluation of an alumina-toughened oral implant: 3-year follow-up - soft and hard tissue response**

**New method and software prototype for automatized measuring of crestal bone levels around implants**

**A quantitative in vitro study of the abutment micromovement in conical dental implants using synchrotron-based radiography**

**How to establish a suitable surface roughness for zirconia implant abutments under laboratory conditions?**
Saturday, October 13, 2012 | 13:00 - 15:30 |

Plenary Session 5

PERIODONTITIS AND IMPLANTS

> 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 Head of the Oral Health Theme at the UCL-HUGO 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.

> Thomas FLEMMIG

Prof. Flemmig earned his dental degree at the University of Freiburg and received training in Oral Surgery at the University of Hamburg and in Periodontics at the University of California Los Angeles (UCLA). He holds a Dr. med. dent. degree from the University of Freiburg, a Dr. med. dent. habil. degree (German PhD equivalent) from the University of Würzburg, and an M.B.A. as well as a certificate in Health Sector Management from Duke University, he is board certified in Periodontics in Germany and has maintained an intramural practice limited to Periodontics and Implant Dentistry since 1990. He held positions as Chairman at the Departments of Periodontics at the Universities of Würzburg, Münster, and Washington and currently, is Professor at the Department of Periodontics, University of Washington, Seattle, WA. Prof. Flemmig has served as an Associate Editor of the Journal of Clinical Periodontology and Guest-Editor of Periodontology 2000 and has been on the Editorial Board of several scientific journals, including the Journal of Periodontal Research. Journal of Clinical Periodontology, European Journal of Oral Sciences, and Clinical Oral Investigation. In addition, he was a Member of the Medical Committee of the German Council for Science and Humanities (Wissenschaftsrat) advising the federal and state governments in matters related to medical and dental research and education. Prof. Flemmig’s research focuses on translational aspects of biofilm related periodontal infections.

ABSTRACT:

PERIODONTITIS-SUSCEPTIBLE INDIVIDUALS: GENERAL PRINCIPLES OF TREATMENT PLANNING

Patients with periodontitis often present with a complex set of clinical conditions, making treatment planning a rather challenging task. Uncertainty about the long-term prognosis of periodontally involved teeth obscures which treatment among several alternatives provides the greatest benefit to the patient. This lack of unambiguous information explains why providers often fail to agree on the optimal treatment for an individual patient. One, however, would expect that in a given clinical situation there is either just one optimal therapy or if there are several alternative therapies with similarly optimal outcomes, one treatment is preferable over the others based on properties that may be procedural or monetary in nature. Utilizing a prognostic model that provides quantitative estimates of the survival rates of periodontally involved teeth allows direct comparisons between the outcomes of periodontal therapy and outcomes of dental prostheses. Combining long-term survival rates with information about the involved treatment processes and expenditures enable patients to participate in the decision making about their dental care. This comprehensive and quantitative approach towards treatment planning in patients with periodontitis will be demonstrated in clinical cases.

> Björn KLINGE

Björn Klinge is Dean at the Faculty of Dentistry and Professor in Periodontology, Malmö University and Professor in Periodontology at the Department of Dental Medicine, Division of Periodontology and Implant Dentistry, Karolinska Institutet, Stockholm, Sweden. He is also Director of the National Research School in Clinical Dental Medicine at Karolinska Institutet. He obtained his D.D.S. and his Ph.D. Odont. Dr. from Lund University, Faculty of Dentistry in Malmö, Sweden. He has been a Licensed Dental Surgeon since 1977 and a Licensed Specialist in Periodontology since 1988. Professor Klinge worked first as general dentist in public and private office. He was then lecturer in Periodontology at Loma Linda University, California, USA and Assoc Chief Dental Officer in Oral & Maxillofacial Surgery at the County Hospital of Halmstad, Sweden. He hold the position of Associate Dean for Undergraduate Curriculum at the Center for Oral Health Research, Lund University and headed the Department of Lab Animal Resources and was an associate Professor in the Periodontology department in Malmö, before being appointed Professor by the Swedish Government at Karolinska Institutet. Björn Klinge is Honorary Fellow, Singapore Dental Hospital and Honorary Professor, Ji-Lin University, China. He is President of the Swedish Periodontal Society, board member Scandinavian Society of Periodontology and Secretary General in the European Association for Osseointegration (EAO).

ABSTRACT:

20 YEARS WITH TREATMENT OF PERIODONTITIS-SUSCEPTIBLE INDIVIDUALS. WHAT HAVE WE LEARNED?

Over the past two decades the number of publications dealing with dental implant treatment in periodontitis-susceptible individuals has increased steeply. The awareness of periodontitis as a risk factor for implant treatment has consequently also increased during this interval. Common risk factors has been identified for periodontitis-susceptible individuals and patients experiencing complications in relation to implant treatment. Smokers with previous or current sensitivity to periodontitis has recently been identified as a high-risk individuals. In contrast, non-smoking patients without a periodontitis history and with a record of good compliance after treatment has been shown to belong to a group of patients with excellent prognosis and long-term results following dental implant treatment. Biofilm accumulation at the implant-tissue interface has been proposed as one possible factor of relevance for the initiation and development of peri-implantitis. Effective periodontal prophylaxis and treatment of the remaining dentition has been identified as a prerequisite to prevent or stabilise inflammatory conditions around transmucosal implants. It can also be concluded, based on available evidence, that implant patients in general, and periodontitis-susceptible individuals in particular, should be kept on a strict oral hygiene maintenance program and be encouraged to quit smoking. Careful examination of the patient, involving the periodontal- and peri-implant tissues at regular follow-up visits, is strongly advocated. We have learned that also periodontitis-susceptible individuals can be successfully treated with osseointegrated implants, however the patients should be informed of the increased risk involved.
appropriate tooth or implant supported reconstructions will from systematic reviews on the longevity of reconstructions, compromised dentition. Based on the evidence available than to complicate the reconstruction of the periodontally approach where implants will be considered to simplify rather. The presentation will focus on a comprehensive treatment are installed. and hence, these have to be controlled before implant abutments oral diseases represent the sequellae of opportunistic infections number of inserted implants that guarantees a successfully now be installed after diligent treatment planning. It is not the replace strategically important missing teeth. Implants should

Tooth-Supported Prosthesis in Periodontitis-Susceptible Individuals

A generation ago, complex cases either ended up in being treated with full dentures or with elaborate prosthetic reconstructions on few abutment teeth with reduced periodontal support, but completely healthy periodontal tissues. It is evident that such treatment was successful and enjoys high success and survival rates on a long term basis, but it was expensive and required enormous skills of the practising dentist. In the latest two decades, oral implants have revolutionized reconstructive dentistry. Implants are chosen a) to improve subjective chewing comfort, b) to preserve natural tooth substance and existing satisfactory reconstructions and c) to replace strategically important missing teeth. Implants should now be installed after diligent treatment planning. It is not the number of inserted implants that guarantees a successfully completed treatment plan, but the concept that the sequelae of oral diseases represent the sequelae of opportunistic infections and hence, these have to be controlled before implant abutments are installed. The presentation will focus on a comprehensive treatment approach where implants will be considered to simplify rather than to complicate the reconstruction of the periodontally compromised dentition. Based on the evidence available from systematic reviews on the longevity of reconstructions, appropriate tooth or implant supported reconstructions will be chosen fulfilling the patients' needs for individually optimal function and esthetics.
History
The European Association for Osseointegration (EAO) is a non-profit organisation founded in Munich in 1991 following on the recommendations made by an international group of clinicians and researchers. It was formed as an international, interdisciplinary and independent science based forum for all professionals interested in the field of osseointegration.

Vision
EAO aims to improve the quality of patient care by bridging the gap between science and clinical practice as the leading association within the field of implant dentistry in Europe.

Mission
EAO achieves this through:
1. Promoting the international exchange of information through networking of clinicians and scientists within implant dentistry.
2. Initiating, publishing and promoting research within implant dentistry.

Membership
Join the EAO now and benefit from a substantially reduced registration fee to the Annual Congress in addition to the membership benefits during the Congress! In addition you will enjoy other membership benefits such as a free online subscription to Clinical Oral Implants Research (12 issues per year), a 74% reduction on hard copy subscription of Clinical Oral Implants Research, a 35% reduction on online and hard copy subscriptions 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 the opportunity to join a wide network of colleagues and leading innovators from around the world.

For more information on membership, please contact:

EAO Office
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

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David HARRIS, Ireland
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Membership enquiries:
Ms. Niamh Quinn

Association:
Ms. Gloria Guevara
Date
From Wednesday 10th, October to Saturday 13th, October 2012

Venue
The EAO congress 2012 will be held at Bella Center
Center Boulevard 5, DK-2300 Copenhagen S, Denmark.

The Bella Center is located only 10 minutes drive from the international airport and 15 minutes drive from the central train station. From any part of Copenhagen, there are a number of options; car, bus, metro or taxi, that will bring you to the front door of the congress venue.

For more information on how to get to the Bella Center please visit www.bellacenter.dk

Official language
The official language of the EAO Congress is English.

Welcome desk opening hours
Wednesday 10th 09:30 - 18:00
Thursday 11th 09:00 - 19:00
Friday 12th 07:30 - 19:00
Saturday 13th 08:00 - 16:00

The welcome desk is situated at the entrance of Bella Center. You will be able to register on site and collect your access badges.

Exhibition opening hours
Thursday 11th 09:00 - 19:00
Friday 12th 08:30 - 19:00
Saturday 13th 08:30 - 14:00

Registration fees for delegates include:
- Admission to all congress sessions, poster areas and exhibition
- The opening ceremony
- Congress documents (final programme, abstracts books, congress bag)
- Lunches and coffee breaks
- The 20-Year Anniversary Reception at the Carlsberg Museum on Wednesday, October 10th

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

ON SITE registration fees
All the prices below include Danish VAT (25%) up to date with membership fees

<table>
<thead>
<tr>
<th>Category</th>
<th>Fee</th>
</tr>
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<tr>
<td>EAO members and national societies members*</td>
<td>600 €</td>
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<tr>
<td>Non members</td>
<td>770 €</td>
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<td>Undergraduate Student**</td>
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*Members of the following Societies:
- Scandinavian Society of Periodontology
- Scandinavian Society for Prosthetic Dentistry
- Scandinavian Association of Oral and Maxillofacial Surgeons
- Danish Society for Oral Implantology

**This rate is subject to presentation of a valid student identification confirming the 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 a certificate at the registration desk.

Cloakroom
Wednesday 10th 09:30 - 17:30
Thursday 11th 09:00 - 19:00
Friday 12th 07:30 - 19:00
Saturday 13th 08:00 - 16:00

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 recognized by their red T-shirts. They will be happy to assist you with any queries you may have.
Useful links

Venue:
www.bellacenter.dk

Tourism:
www.visitcopenhagen.com

Airport Copenhagen:
www.cph.dk/CPH/UK/MAIN

Car rentals, at the airport:
www.cph.dk/CPH/UK/MAIN/Parking+and+Transport/Car+Rental.htm

Copenhagen urban public transport:
www.copenhagenet.dk/CPH-Transport.htm

Restaurants:
www.visitcopenhagen.com/eat-and-drink

Contact

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Discover
Copenhagen

Another inspiring city has been chosen as the location for the EAO meeting 2012! Copenhagen will be the perfect place to meet colleagues and friends while taking part in one of the world leading conferences in the field of implant dentistry.

Copenhagen is the capital of Denmark and the largest metropolis in Scandinavia and is considered as a centre of culture and arts with plenty of sightseeing and entertainment activities to offer visitors - together with a multitude of shopping facilities and the longest pedestrian street system in the world. Moreover it has also become an international city with a rich commercial and educational environment since Bishop Absalon planned to build his citadel to protect the city in the year 1160.

Almost everybody knows its three most famous attractions in the city: the more than 100 year old amusement park Tivoli, the statue of the Little Mermaid, and the freetown of Christiania. But Copenhagen has a lot more to offer. It is the seat of the National Parliament (Folketinget), the Royal Residence and Supreme High Court. With a history that dates back to 1043 the city is full of historic landmarks, significant buildings and interesting sights. Be sure to visit Amalienborg Palace – home to the royal family, do a guided canal tour on the harbour and walk down the shopping street Strøget.

1. The Carlsberg Museum
   20 - Year Anniversary reception
2. Ny Carlsberg Glyptotek
   20 - Year Anniversary dinner for EAO members
3. The Little Mairmad
4. The Tivoli Gardens
5. Nyhavn
6. Amalienborg Palace and the Danish Guard
7. Rosenborg Castle
8. The Round Tower
9. Frederik’s Church
10. The Botanical Gardens
11. The Royal Danish Playhouse

For more information on Copenhagen, please visit the tourist office website www.visithopenhagen.com
Exhibition plan

- Entrance
- Registration Area
- Cloakroom
- Auditorium 15
- To Conference Rooms
  - Hall A2 / Hall A1
  - To Auditorium 11-12 / 15

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<table>
<thead>
<tr>
<th>Founding Gold Sponsors</th>
<th>Stand No.</th>
</tr>
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<tbody>
<tr>
<td>BIOMET</td>
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<td>FGS E</td>
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<td>STRAUMAN</td>
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<td>WILEY BLACKWELL</td>
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<td>MECTRON</td>
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<td>G12</td>
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<td>THOMMEN</td>
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<td>ZIMMER</td>
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<td>S22</td>
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<td>S23</td>
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<tr>
<td>ANTHOGYR</td>
<td>S20</td>
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<td>S07</td>
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<td>S21</td>
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<td>S12</td>
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<td>S06</td>
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<td>S19</td>
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<td>S11</td>
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<td>SWEDEN &amp; MARTINA</td>
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<tbody>
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<td>B34</td>
</tr>
<tr>
<td>AMERICAN DENTAL SYSTEMS (ADS)</td>
<td>B37</td>
</tr>
<tr>
<td>ASEPTECO</td>
<td>B31</td>
</tr>
<tr>
<td>BIE-NAIR DENTAL SA</td>
<td>B24</td>
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<tr>
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<td>B35</td>
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<tr>
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</tr>
<tr>
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<td>B13</td>
</tr>
<tr>
<td>PLANMECA</td>
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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. The company also provides educational programs and seminars for dental professionals around the world. BIOMET 3i is based in Palm Beach Gardens, Florida, with operations throughout North America, Latin America, Europe and Asia-Pacific.

DENTSPLY IMPLANTS

DENTSPLY Implants – the new powerhouse in implant dentistry. DENTSPLY Implants is the union of two successful and innovative dental implant businesses: DENTSPLY Friadent and Astra Tech Dental. DENTSPLY Implants offers a comprehensive line of implants, including ANKYLOS®, ASTRA TECH Implant System™ and ASTRATECH™ dental technologies, such as ATLANTIS™ patient-specific abutments, 3D virtual surgical planning and surgical guides, RIDP® regeneration products, as well as professional development programs. DENTSPLY Implants is built upon the fundamental values of open-mindedness, a thorough scientific approach, a dedication to long-term clinical evidence, and a strong customer focus. In combination with the strength of DENTSPLY International, the world’s largest manufacturer of professional dental products with more than 110 years of industry experience, DENTSPLY Implants will, together with our customers, redefine implant dentistry.

NOBEL BIOCARE

Nobel Biocare is a focused and specialized global leader in implant-based dental restorations – including implant systems, high-precision individualized prosthetics, CAD/CAM systems, diagnostics, treatment planning and guided surgery. Nobel Biocare is headquartered in Zürich and listed at the SIX Swiss Exchange. Nobel Biocare is committed to improving the quality of life of every patient by providing innovative solutions with a focus on customer and patient needs. The company’s mission, “Designing for Life”, reflects its dedication to providing products and solutions that result in fully functional, natural-looking restorations with the aspiration to last a lifetime.

WILEY-BLACKWELL

Wiley-Blackwell is the world’s premier dentistry publisher, representing the very best in accredited research, student learning and clinical expertise. Wiley-Blackwell is honored 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.
MIS IMPLANTS TECHNOLOGIES LTD.

MIS Implants Technologies makes implant dentistry simple. Dedicated to constant research & development, the company delivers advanced innovative solutions for oral restoration and for a better quality of life. MIS offers a comprehensive range of dental implants as well as wide variety of bone regeneration and restoration options for successful esthetic outcomes.

C1. MIS conical connection implants, provides clinicians and patients a unique combination of both surgical and patients with a unique combination of both surgical and prosthetic components and surgical material with an intense presence in over 25 countries. A key part of its activity is the first ultrasonic device for piezoelectric bone surgery. Mectron PIEZOSURGERY® has defined a new dimension of the most important innovations in the dental field: the first ultrasonic titanium handpieces. The Bicon Design is driven by simplicity. A cornerstone of its simplicity is short implants. The Bicon System was first introduced in 1985, its 8.0mm length implants were considered quite short—at most other implants were at least 12–14mm and sometimes 19–20mm long! Since then, the natural progression of Bicon’s design philosophy has resulted in 5.0mm, 7.0mm, and 9.0mm short implants, all with proven clinical success.

ACE SURGICAL SUPPLY COMPANY

ACE Surgical Supply is committed to providing our customers with the best possible dental surgical products available. We are a truly multi-disciplinary surgical supply company. ACE Surgical continues to develop and manufacture the highest quality, state-of-the-art products, while keeping a fresh eye on customer service. Our highly qualified team is always available to answer any questions you may have on our entire product line. We offer a complete line of dental bone grafting products. We also plan to introduce a new range of compatible dental implants. Please stop by the booth to see our complete product offering.

BEGO IMPLANT SYSTEMS GMBH & CO. KG

Bremen-based BEGO Implant Systems Gmbh & Co. Kg is a growth-oriented company in the dental implant industry. The company has been developing and manufacturing dental implants and accessories for implant-based treatment of patients around the world since 1990. Dental implants ‘made by BEGO’ are top-quality German products, which incorporate leading-edge technology at a fair price and offer the perfect combination of safety, durability, aesthetics, and reliability. BEGO Implant Systems Gmbh & Co. Kg has patented many of its developments.

Gold Sponsors

ACE SURGICAL SUPPLY COMPANY

BEGO IMPLANT SYSTEMS GMBH & CO. KG

MIS IMPLANTS TECHNOLOGIES LTD.

OSTEMENT IMPLANT

OSSTEM IMPLANT

OSSTEM IMPLANT

MECTRON SPA

MECTRON, established in 1979, is responsible for some of the most important innovations in the dental field: the first ultrasonic titanium handpieces, the first LED curing lamps for composite materials, the first ultrasonic device for piezoelectric bone surgery. Fifty years ago, Dr. Tomaso Vercellotti came up with the idea of piezoelectric bone surgery. Today, a continuously working, researching, developing, and manufacturing dental implants (TS System), sinus surgical instruments (GAIMKT, LASKIT), prosthetics (SMART Abutment) for implant-based treatment of patients around the world. We have become one of the fastest growing companies in the dental industry. We have helped restore smiles in 85 markets throughout Asia, North America, South America, Africa, Australia, and Europe.

BICONE IMPLANT SYSTEMS AG

CAMLOG is a leader in the development and marketing of dental implants and bone grafting materials. Our commitment to science, innovation, and service has aided us in becoming one of the fastest-growing companies in the dental industry. BioHorizons has helped restore smiles in 85 markets throughout Asia, North America, South America, Africa, Australia, and Europe.

BioHorizons is dedicated to developing evidence-based and scientifically proven products. From the launch of the External implant system (MesaBio) in 1997, to the Laser-Lok 3.0 implant in 2010, dental professionals as well as patients have confidence in our comprehensive portfolio of dental implants and biomaterials.

Our commitment to science, innovation and service has aided us in becoming one of the fastest-growing companies in the dental industry. BioHorizons has helped restore smiles in 85 markets throughout Asia, North America, South America, Africa, Australia, and Europe.

MECTRON SPA

MECTRON, established in 1979, is responsible for some of the most important innovations in the dental field: the first ultrasonic titanium handpieces, the first LED curing lamps for composite materials, the first ultrasonic device for piezoelectric bone surgery.

ARidering from 1992, OSTEM IMPLANT (Public Limited Company OSTEM-00) has been researching, developing, and manufacturing dental implants (TS System), sinus surgical instruments (GAIMKT, LASKIT), prosthetics (SMART Abutment) for implant-based treatment of patients around the world. OSTEM products and OSTEM AIC Education services are available in more than 60 countries through our broad network of 19 subsidiaries and distribution partners.
**GOLD SPONSORS**

**G 06**

TRINON TITANIUM GmbH

Trinon Titanium is a manufacturer of high quality implants for dental implantology, maxillofacial surgery traumatology and orthopedics. In the product range there are also modular distractors for axial ridge Gain®/Tractor; dental implant systems Gain®/Implant and G2/Implant, titanium meshes, bone pins system, micro- and mini-plates and screws for osteosynthesis. In cooperation with Trinin Colleges, Practicum Trinin Titanium organizes since 2003 the dental implantology course Simplant Marathon.

**G 13**

ZIMMER DENTAL

For decades, Zimmer Dental has gained the trust of thousands of clinicians worldwide who count on our comprehensive line of products to deliver successful patient outcomes. Zimmer Dental is a global leader in the oral rehabilitation market with a mission to improve the lives of patients through continuous product development and leadership in education. Proudly offering one of the most comprehensive dental implant, restorative, and prosthetic solutions today, Zimmer Dental remains at the industry’s forefront.

**G 17**

QUINTESSENCE PUBLISHING

For over 60 years the International Quintessence Publishing Group has served the dental world through high quality publications and takes pride in maintaining its high standards to impart specialist knowledge in the dental field. We produce dental books, multimedia and journals. These can be ordered via our website, email or telephone.

Muriel Bama
Tel: +44(0)20 8549 6087
Email: info@quintpub.co.uk
Web site: www.quintpub.co.uk

**S 08**

AVINENT IMPLANT SYSTEM

AVINENT was created to provide advanced solutions for the needs of the dental sector. Our mission is to develop research and innovation; the rigour of our scientific team; and our commitment to patient health.

**S 20**

ANTHOGYR

Anthogyr, more than ever... the global solution for dental implantology. As an expert in dental implantology, Anthogyr designs, manufactures and distributes implants and dental instruments to help professionals care for millions of patients worldwide.

**S 23**

ADIN DENTAL IMPLANT SYSTEMS LTD.

ADIN Dental Impact Systems Ltd., designs, manufactures and markets state of the art, technologically advanced dental implants solutions. For more than 30 years, ADIN provides dentists and dental technicians with innovative solutions and advanced knowledge into the field of implantology. ADIN also works closely with the industry’s leading dental professionals, surgeons, technicians, in both private and public sector, along with dental schools in leading universities in order to provide customers with the most current, up-to-date industry knowledge and information. ADIN prides itself on providing excellent value and expert advice for the healthcare market. ADIN’s availability to provide conclusive excellent implantology solutions, from the simplest restorative case to the most complex surgical case.

**S 22**

3SHAPE

3Shape A/S is a Danish company that specializes in the development and marketing of innovative 3D scanners and CAD/DAM software solutions to be used for the creation, processing, analysis and management of high-quality 3D data.

**G 15**

THOMMEN MEDICAL

The Thommen implant system meets our customers’ needs in every respect. It is very easy to use, extremely precise, affords excellent aesthetic restorations and thus guarantees superb clinical results. Our products consistently meet the most stringent quality requirements and are manufactured in our own production facility in Grenchen (Switzerland).

Tel: 0041 61 965 90 46
Email: v.geneve@anthogyr.com
Web site: www.anthogyr.com

**S 09**

BIOMAIN AB

Biomain was acquired by Heraeus GmbH in March 2012. Biomain Headquarter and production facilities are located in Hangelrode, Sweden. Biomain develops, manufactures and markets customized prosthetic solutions and prosthetic components. Our strength is good value products which offer a high level of precision. Biomain has a patented solution for angulation of screw channels in implant bridges, which provides optimal esthetics. Biomain produces over 10,000 implants each year for customers all over the world.

Biomain will in the future operate under the name Heraeus AB.
MegaGen, a South Korean based company, is one of the fastest growing dental implant companies in the global market. With a focus on finding minimally invasive solutions for clinicians and patients, MegaGen is already known for its Rescue Short & Wide implant. This series of implants is designed to treat the most common dental problem of short and narrow alveolar bone, which usually limits implant treatment and often results in patient dissatisfaction. By developing the new AnyBone system and the SpeedSurface surface treatment to MegaGen’s impressive range of products, MegaGen offers a solution for every clinical case.

CONSULT-PRO

CONSULT-PRO is the world’s leading software company specializing in 3D Animated Dental Education and total practice solutions. Since 1995, Consultant PRO has provided the most comprehensive dental education presentations in the industry focusing on implants, osteointegration and the full complement of dental procedures. ConsultantPRO educates the world of dentistry in over 20 Languages and is the preferred patient education software of the EAO. ConsultantPRO combines emerging dental technology with the best of the Patient, the Dental and the Dental Institution.

SILVER SPONSORS

DENTIUM CO., LTD.

Dentium is the world’s leading dental implant company and exporter in dental implant, dental products and service that is responsive and respectful to meet every clinical challenge with breakthrough products and service that is responsive and respectful to meet every clinical challenge with breakthrough. Dentium is the world’s leading dental implant company and exporter in dental implant, dental products and service that is responsive and respectful to meet every clinical challenge with breakthrough. Dentium is the world’s leading dental implant company and exporter in dental implant, dental products and service that is responsive and respectful to meet every clinical challenge with breakthrough. Dentium is the world’s leading dental implant company and exporter in dental implant, dental products and service that is responsive and respectful to meet every clinical challenge with breakthrough.

DENTAL MAXILLARIAL SURGEONS AND INVESTORS FROM THE WORLD.

With a focus on finding minimally invasive solutions for clinicians and patients, MegaGen is already known for its Rescue Short & Wide implant. This series of implants is designed to treat the most common dental problem of short and narrow alveolar bone, which usually limits implant treatment and often results in patient dissatisfaction. By developing the new AnyBone system and the SpeedSurface surface treatment to MegaGen’s impressive range of products, MegaGen offers a solution for every clinical case.

SILVER SPONSORS

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SILVER SPONSORS

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SILVER SPONSORS

SILVER SPONSORS

SILVER SPONSORS
Southern Implants has been providing leading edge solutions to implant surgeons and dentists since 1987. The product range is characterized by numerous unique innovations in the clinical practice of implant dentistry. The Institute is formed by a professional team with extensive clinical experience and it also offers postgraduate courses and master’s degree recognized by DFO, BSCC and EPIACS. Visit our stand and get to know our range of dental implants, grafting materials and surgical instruments under the FDA & CE certifications.

SHINHUNG CO., LTD.

Shinhung co., Ltd. found in 1955, is the biggest and only dental company dealing a full range of dental equipments, precious alloy, preformed crowns and implant system in the compliance of dental equipments, precious alloy, preformed products in Korea. It manufactures a wide range of LUNA, SOLA, and STELLA. Shinhung implant system are consisted of LUNA, SOLA, and STELLA.

SIC INVENT AG

During the last years SIC invent has established its reputation as global operating manufacturer of dental implants systems. SIC invent AG headquartered in Basel, Switzerland is an innovative and dynamic company. Business activities are focused on commercialization of a range of products in the field of oral implantology. The surgical tray operation three implant system! These targets are pursued consequently by intensive research and development in close collaboration with the «Schilli Implantology Circle» (SIC). Science, medicine, and business are thus integrated by an interdisciplinary and international medical competence network, enabling immediate market release of new products. Close collaboration with the «Schilli Implantology Circle» - SIC invent AG is specialized in Bio-Degradable Implants. Its range covers several medical indications for Branded- and OEM-specialized in Bio-Degradable Implants. Its range covers several medical indications for Branded- and OEM-

SUNSTAR GUIDOR

Degradable Solutions AG is a Swiss manufacturer specialized in Bio-Degradable Implants. Our range covers several medical indications for Branded- and OEM-

SWEDEN & MARTINA SPA

In its 40th anniversary Sweden & Martina, with headquarters in Italy and branch offices in Spain, France and Germany celebrates the opening of a multidisciplinary structure for the distribution of its implant systems, entirely developed and manufactured internally, with the direct cooperation of international universities and professionals. Sweden & Martina has placed a program of investments for the consolidation and expansion of its R&D at the heart of its corporate strategy. A concrete result is a flourishing production of experimental and clinical studies, collected in the two volumes “Scandinavia”. With a yearly average growth rate of 11.64% in the last 12 years, this successful company is in complete counterront with the global economy.

SGS DENTAL IMPLANT SYSTEM HOLDING

S.G.S Swiss Implant System means reliability, accuracy and the widest spectrum of potential. The recent product range - which is a result of a long development, during the years - gives a solution for every occurrence. The quality of the commodity and the most modern surface treatment generate a perfect system. The very well organized logistic system we have grants a fast and precise service for our customers. We have a great emphasis on education and informing doctors who are using SGS implants. S.G.S Swiss Implant System has a 15-year warranty for every implants - what was insert according to the professional protocol.

Silver Sponsors
BRONZE SPONSORS

DENTAL RATIO is active in implant dentistry and oral tissue regeneration. Using well-established technologies and techniques in our field we offer high quality products at reasonable prices to dental professionals.

DENTAL RATIO

DENTAL RATIO is a global leader in providing superior dental solutions for the dentists. DENTIS is continuously improving and enhancing dental implants, surgical instruments with world best quality standards. DENTIS is supplying better solutions for the dentists and has expanded its business to LED operation lighting in 2002 and now offers 3 different types of LED lighting for dentistry with the brand LUNAR. It has premier LED lighting for dental operation and surgery to meet various expectations of the dentists. Also, DENTIS provides new dental implant of ONEQ with innovative design for successful implantation. DENTIS is a fast growing company with reliable products worldwide premium clinical education programs.

DENTIS

E.M.S ELECTRO MEDICAL SYSTEMS

The Swiss company E.M.S. Electro Medical Systems has a leading position in the field of professional prophylaxis for more than 30 years. As the inventor of the Original Paxtan® and AIR-FLOW® Methods, EMS has set milestones and continuously consolidated its position through relentless innovation.

EMS is committed to achieving “healthy natural teeth for everybody”, and offers innovative systems combining materials, Swiss-quality products, clinically proven technologies and continuous education. The Swiss EMS provides dental professionals with efficient and comfortable solutions to preserve patients’ oral health and esthetics.

E.M.S ELECTRO MEDICAL SYSTEMS

EUROTEKNIKA GROUP

TEKNIKA Dental Systems has played a leading role in the field of professional prophylaxis for more than 30 years.

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TEKNIKA Dental Systems

GENDEX DENTAL SYSTEMS

Kalzu: World market leader in innovation

Kalzu is one of the world’s leading suppliers of products for dentists and dental technicians. Since its establishment in 1958, Kalzu has been a leader in the dental market and it has made its mark on dentistry with numerous innovations and the development of innovative technology.

Kalzu supplies a complete range of products to make the varied and complex work of dentists and dental technicians more efficient and easier. The company, which is based in the economic factors for the user and continuously improved its products and processes, has developed an extensive product range.

Kalzu, which supplies its products to dentists and dental technicians in over 100 countries worldwide, offers a full range of products and services. These include the following:

- Instruments
- Special tools
- Treatment units
- Medical equipment
- Surgical instruments
- Anesthesia equipment
- Ozone therapy equipment
- Computer-aided design and manufacturing systems
- Diagnostic equipment
- Laboratory equipment
- Other products

Kalzu’s product range is designed to meet the needs of contemporary dentistry.

Kalzu's World Market Leader in Innovation

HARTZ & MEISINGER GmbH

HARTZ & MEISINGER is, after almost 125 years of company history, an independent and the fourth-generation family business. The product line Bone Management offers the user a perfectly harmonized integrated system solution which provides a controlled optimization of the bone implant lead. Besides the prothetic aspects, achieving a minimal invasive character of the surgical intervention and facilitating the implantation in complicated indications played an important role in the development process of this product line. Clearly structured and standardized procedures offer safe means to realize the implant care on patients.

HARTZ & MEISINGER GmbH

HENRY SCHEIN

Henry Schein, Inc. (NASDAQ: HSIC) is the world’s largest provider of healthcare products and services to healthcare providers. The Company also serves dental laboratories, government, and institutional health-care clinics, and other alternate care sites. Henry Schein employs nearly 15,000 Team Schein Members and has affiliations, e.g., in Austria, Belgium, Czech Republic, France, Germany, Ireland, Luxembourg, Portugal, Italy, Spain, The Netherlands, and the United Kingdom.

HENRY SCHEIN

IBS IMPLANT

IBS implant and its Dual Surgical System provides the dental practitioner with refined instrumentation and a surgical protocol that enhances the clinical and esthetic aspect of the implant procedure. It is the first and only system that is designed to preserve bone at its first priority. A systematic protocol guides the practitioner in determining hard and soft tissue type and then addresses each bone type in a particular way. Magic KIT, a set of innovative surgical equipment, was introduced in 2003 for dentists to easily apply this new-concept implant surgery system to actual clinical settings.

IBS IMPLANT

DENTAL RATIO

DENTAL RATIO is active in implant dentistry and oral tissue regeneration. Using well-established technologies and techniques in our field we offer high quality products at reasonable prices to dental professionals.

DENTAL RATIO

BRONZE SPONSORS

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DENTAL RATIO

BRONZE SPONSORS
The well-known cortical-bone collectors Safescraper®
ject to the final delivery to our customer. Along by
of the product, from the very first outline of the pro-
fort of the patient and the needs of the surgeon at
The philosophy of the company puts both the com-
osteosurgery and bone-augmentation treatments.
tems that allow a simplification of the procedures in
the hydration and the graft of biomaterials: ProCells
line of devices, among which our new systems for
promote bone formation.
innovative implant manufacturing process - Direct Laser
expert Clinicians and Universities has been testing an
Approval for its traditional Implus implants. Since 2003
and professional staff as well as on high technology
departments can nowadays rely on a highly qualified
for implantology, LEADER project and manufacturing
both the ICX-templant “Volksimplantat” and the
prosthetics domiciled in Dernau, Germany. With
company with its main focus on dental implantology,
fast-growing company with more than 20 years
of industry expertise. It has always been at the
front of offering innovative solutions in computer
of life.
procedure. iRaise dramatically improves patients’ quality
intervention into a simple, minimally invasive implantation
materials and tools that cover the entire spectrum of
elevation and implantation in a single, simple procedure.
professionals to perform a minimally invasive sinus fl oor
implantology fi eld, as well as in the orthopaedic
World’s leading manufacturer of OEM instruments
Maillefer is situated in the heart of the «Swiss
innovative Rotary Instruments for Implantology and SonoSurg
Melliker is situated in the heart of the i9 twee microconception manufacturing region: we are the
World’s leading manufacturer of SEM instruments for surgical applications since 30 years.
We are specialised in developing OEM products for our clients, including: twist drills, burs,
reamers, taps, trephines, craniotomes, high-speed instruments, screw drives, hand instruments,
various other instruments and accessories.
We are serving the major players in the dental
various other instruments and tools that cover the entire spectrum of
elevation and implantation in a single, simple procedure.
the implant stability dip, often observed in nonbioactive
flexibility
in one system organizer
Dental implants. The company’s fl agship product is
Maxillent Ltd. develops, manufactures and markets
innovative solutions that are transforming the fl eld of dental implants. The company’s flagship product is i9 twee® - the i9 twee® SL implant, which allows dental professionals to perform a minimally invasive sinus fl oor
elevation and implantation in a single, simple procedure. In addition to the i9 twee, Maxillent offers a comprehensive
range of i9 twee® dental implants, prosthetics, bone graft materials and tools that cover the entire spectrum of
dental implant procedures. The i9 twee transforms sinus fl oor surgery from a technically demanding, traumatic surgical intervention into a simple, minimally invasive implantation procedure. i9 twee dramatically improves patients’ quality of life.

ITI INTERNATIONAL TEAM FOR IMPLANTOLOGY
An independent academic organization, the International Team for Implantology (ITI) unites professionals from every
field of implant dentistry and related tissue regeneration

together. They are supported by their ITI network among its membership. More than 12,000 ITI Fellows and
Members regularly share their knowledge and expertise
with the objective of continuously improving treatment
methods and outcomes. The ITI focuses on the development of well-documented treatment guidelines based on extensive clinical testing and long-term results. It funds research as well as scholarships, organizes congresses, study clubs and
continuing education events and also publishes reference
tools such as the ITI Treatment Guide series.
ITI membership is open to all implant dentistry
professionals.

ICX MEDENTIS/MEDENTIS MEDICAL GMBH

Medenta medical is an internationally acting company
with its main focus on dental implantology, aesthetic
dentistry and CAD / CAM - digital manufacturing operating in more than 30 countries. The ICX
Medical group that incorporates the findings of advanced implantology of the last 20 years, it
facilitates the most important factor for successful realization in practice. Besides a
innovative network philosophy, the design is the awareness
that implants become also increasingly interesting for patients who cannot afford any price for a
reliable implant base solution.

IVOCLAR VIVADENT AG
The company concentrates its activities on three areas of competence: composites, all-ceramics and implant
esthetic. Effectiveb tendon agencies, high-performance
light-curing units and patient-friendly aesthetics were
worked in hand with each other, providing smooth
treatment procedures in direct restorative therapy.
Professional care and therapeutic product support
the long-term success of the restoration. Leader Vegeta
offers the allogenic systems IPS Empress and
IPS e.max. Highly aesthetic all-ceramic bridges,
crowns and veneers have become an integral part
of modern dentistry.
The company supplies products and systems that ensure sound preparation and execution of both fixed
and removable dental prosthetics.

LEADER ITALIA SRL
Founded in 1995 to manufacture prosthetic components
for implants. LEADER project and manufacturing
departments can nowadays rely on a highly qualified
and professional staff as well as on high technology
units, obtaining the FDA (Food and Drug Administration)
Approval for its traditional Implus implants. Since 2003
we have been exporting our components to the USA
and professional staff as well as on high technology
units, obtaining the FDA (Food and Drug Administration)
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we have been exporting our components to the USA
and professional staff as well as on high technology
units, obtaining the FDA (Food and Drug Administration)

MAXILLEN LTD.
Maxillent Ltd. develops, manufactures and markets
innovative solutions that are transforming the fl eld of dental implants. The company’s flagship product is i9 twee® - the i9 twee® SL implant, which allows dental professionals to perform a minimally invasive sinus fl oor
elevation and implantation in a single, simple procedure. In addition to the i9 twee, Maxillent offers a comprehensive
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dental implant procedures. The i9 twee transforms sinus fl oor surgery from a technically demanding, traumatic surgical intervention into a simple, minimally invasive implantation procedure. i9 twee dramatically improves patients’ quality of life.

META BIOMED CO., LTD.
META BIOMED CO., LTD. is the manufacturer of Dental materials and equipment. (Endodontic materials, Bone graft for dental implant surgery).
We are exporting dental items to 90 countries & 300 dealers around the world.

MATERIALISE DENTAL NV
Materia medica is the world leader in 3D Dental Implant Dentistry, offering clinicians a comprehensive 3D system for planning, and manufacturing
implants. The company’s flagship product is Simplant Pro® - an all-in-one prosthetic platform offering maximum
fl exibility
in one system organizer
the implant stability dip, often observed in nonbioactive
flexibility
in one system organizer
the implant stability dip, often observed in nonbioactive

2012 is approximately EUR 750 million with over 2,400 employees in Europe. 98% of Planmeca's production is exported to the U.S. market leader in dental imaging and one of the largest privately owned companies in the U.S., manufactures a full line of high technology dental equipment, including dental care units, panoramic and cross-panoramic radiographic units, 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 known for its unrelenting support and service they deserve.

**B 07**

**OSTEOTOMY FOUNDATION**

The Osteotomy Foundation aims to promote research, education and collaboration between universities and industries in the field of tissue regeneration with biological materials in the oral and maxillofacial area. The organization seeks to make more quickly and with greater goal orientation.

**B 08**

**SCANDINAVIAN SOCIETY OF PERIODONTOLGY**

SuSP is a Nordic society for colleagues that are specialists in Perioontology, researching in Periodontology or with special interest in Periodontics.

**B 11**

**PLANMECA OY**

d'Planmeca is a leading dental manufacturer in the U.S., has been awarded more than 200 patents worldwide. The company is known for its high-quality products and excellent customer service.

**B 12**

**SCANDINAVIAN ASSOCIATION OF ORAL AND MAXILLOFACIAL SURGEONS (SFOMK)**

The Scandinavian Association of Oral and Maxillofacial Surgery (SFOMK) was founded in December 1965. The association strives to support the development and education in the field of oral and maxillofacial surgery in Scandinavia.

**B 13**

**OSTEOTOMY FOUNDATION**

The Osteotomy Foundation aims to promote research, education and collaboration between universities and industries in the field of tissue regeneration with biological materials in the oral and maxillofacial area. The objective is to make more quickly and with greater goal orientation.

**B 14**

**NANO BRIDGING MOLECULES SA**

Nano Bridging Molecules (NB Molecules), a privately held Danish Medical Device Research and Development company, has recently announced the successful treatment of a dental implant patient with its novel treatment Surfi Line Dental. The treatment is designed to help patients who suffer from bone loss around dental implants. The treatment has been shown to help improve bone density and functionality, which allows for the successful treatment of dental implants. Preliminary results have been presented at the International Congress of Oral Implantology in Paris on Friday 12th of October 2012 at 07.45 a.m.

**B 15**

**NEOSS LTD.**

NeoSS is an innovative developer of dental implant solutions founded in 2003 by Professor Monrad and Friends. Its unique bone-grafting products, SurfLink Dental, offer the highest quality materials with a wide range of clinicians, dental teams and engineers around the world. NeoSS has a strong reputation for its focus on innovation and excellence. The company has developed a novel technique for implant treatment, SurfLink Dental. This technique is based around a single-platform concept which allows for a high degree of implant diameters with only one set of instruments and lesser prosthetic components. NeoSS head office is located in the UK and the sales office in Australia, Sweden, Norway, USA and represented by partners in Denmark, Netherlands, Poland, Croatia, Ireland, Thailand, Turkey and Switzerland.

**B 16**

**SCANDINAVIAN ASSOCIATION OF ORAL AND MAXILLOFACIAL SURGEONS (SFOMK)**

The Scandinavian Association of Oral and Maxillofacial Surgery (SFOMK) was founded in Denmark in June 1965. The association strives to support the development and education in the field of oral and maxillofacial surgery in Scandinavia.

**B 17**

**SIGMA GLOBAL SURGICAL CORP.**

Global Surgical Corporation is an U.S. manufacturer of dental and medical equipment with complete manufacturing and assembly done in St. Louis, Missouri. Long-lasting relationships that have been built over the past 30 years of operating in the dental market have made Global Surgical the leader in dental technology. Sigma Global Surgical is a global business based in Germany, and is the contact partner for Global Surgical's activities in most countries in the EU, being the importer and responsible for the technical support - except for the UK. Here, the company IG Medical, Cheshunt, Surrey, England / Mr. Douglas Pinnon is the contact partner.
SOREDEX

Since 1977 SOREDEX has been a leader in providing innovative imaging solutions for demanding professionals. Through continuous evolution and refinement we have set the highest industry standards for Quality, Reliability and Efficiency. We are committed to focus in this path today and in the future.

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TIGRAN TECHNOLOGIES

Tigran Technologies AB (publ) is a Sweden based dental medtech company. Its products, Tigran™ PTG and Tigran™ PeriBrush™, offers effective treatment methods for dental professionals and improved treatment results for patients. Tigran™ PTG is commercially pure, non-resorbable, titanium granules. With its about 80% porosity, Tigran™ PTG offers the ideal framework for optimal osseointegration, dental implant fixation and desired aesthetics. Tigran™ PeriBrush™ is a cutting-edge, unique for its kind, titanium brush for effortless debridement of dental implants. The device cleans gently, preserving the implant surface and shortening the treatment time.

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• USTOMED is showing large stock and guarantees fast and reliable deliveries.
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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 860 employees throughout the world and exports its products to more than 90 countries. The company operates two production sites in Bürmoos (Austria), one in Brescia (Italy) and 19 sales subsidiaries in Europe, Asia and North America.

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SCANDINAVIAN SOCIETY FOR PROSTHETIC DENTISTRY (SSPD)

The aims of the Scandinavian Society for Prosthetic Dentistry are to promote scientific activity and to advance knowledge of prosthetic dentistry within the Nordic (Scandinavian) countries: Denmark, Finland, Iceland, Norway and Sweden. The Society consists of clinicians as well as academics. The Society has a yearly meeting mainly with lectures and poster presentations. The venue of the meetings alternates between the Nordic countries.

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