EAO
EUROPEAN ASSOCIATION FOR OSSEOIINTEGRATION
22ND ANNUAL SCIENTIFIC MEETING
October
17-19, 2013
Chairmen: David HARRIS & Brian O’CONNELL
Preparing for the Future of Implant Dentistry
In collaboration with
<table>
<thead>
<tr>
<th>SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Committees</td>
</tr>
<tr>
<td>02 Overview</td>
</tr>
<tr>
<td>04 EAO presentation</td>
</tr>
<tr>
<td>06 Scientific Programme</td>
</tr>
<tr>
<td>24 Satellite Industry Symposia &amp; Breakfast Symposia</td>
</tr>
<tr>
<td>28 Posters</td>
</tr>
<tr>
<td>45 Invited Speakers &amp; Chairpersons, Overview</td>
</tr>
<tr>
<td>46 Chairpersons &amp; Invited Speakers, Cvs</td>
</tr>
<tr>
<td>85 Congress General Information</td>
</tr>
<tr>
<td>88 Discover Dublin</td>
</tr>
<tr>
<td>90 Exhibition Plan</td>
</tr>
<tr>
<td>92 Founding Gold Sponsors</td>
</tr>
<tr>
<td>93 Gold Sponsors</td>
</tr>
<tr>
<td>95 Silver Sponsors</td>
</tr>
<tr>
<td>98 Bronze Sponsors</td>
</tr>
</tbody>
</table>
Dear Colleagues,

On behalf of the EAO we are very pleased and honoured to welcome you to the 22nd Annual Scientific Congress of the EAO in Dublin.

The Scientific Committee has prepared a programme that contains many practical and highly relevant issues of concern to both clinicians and patients. These include the management of aesthetic challenges and strategies to enhance treatment predictability and the long-term maintenance of dental implants. The conference will also highlight the real and emerging issues that arise in a population that is ageing and which has increasingly complex needs.

As you might expect, we have invited outstanding speakers from many countries, chosen on the basis of their expertise. They will present the most compelling scientific and clinical basis for the treatment of patients, as well as addressing the latest innovations and research. We are also delighted to collaborate with industry who will provide their own satellite symposia.

Dublin is a very special historic and exciting capital city, renowned for its warm and welcoming people. The medieval, Georgian and modern architecture provides an intriguing backdrop to this cosmopolitan city, famous for its musical, theatrical and literary traditions.

The Congress is taking place at the newly opened and internationally acclaimed Convention Centre Dublin situated on the river Liffey in the heart of the city with spectacular views across Dublin and its surroundings.

You will have an opportunity to experience the many cultural activities and historic landmarks of the city, such as the Abbey Theatre, the Book of Kells and the Guinness Storehouse amongst others, and enjoy the extensive and varied opportunities for entertainment, good food and shopping.

The EAO Annual Congress provides a unique forum for you to meet and exchange views with colleagues from many parts of the world. It also offers an opportunity for you to present original research and clinical developments at the Congress in the form of posters, oral presentations and research competitions.

On behalf of the EAO, we would like to extend a warm welcome to everyone who has joined us in Dublin for what we feel sure will prove to be an attractive, stimulating and interesting programme.

On behalf of the EAO, we would like to extend a special traditional Irish Cead Mile Failte (100,000 welcomes) to EAO.

David HARRIS & Brian O’CONNELL
Scientific Chairmen
The EAO

**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 research workers. It was formed as an international, interdisciplinary and independent science based forum for all professionals interested in the field of osseointegration.

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

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

**Membership**
Join the EAO now and benefit from a substantially reduced registration fee to the Annual Congress! In addition you will enjoy other membership benefits such as 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.

Please visit www.eao.org for further details.

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

Ms. Gloria Guevara
Welcome Cocktail

**Wednesday, October 16, 2013**

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**WELCOME COCKTAIL AT THE CONVENTION CENTRE**

A cocktail evening will be organized to welcome all participants and mark the opening of the 22nd annual meeting of the EAO. While taking the opportunity to enjoy a conference location like no other, right in the heart of Dublin, you may get together with colleagues and friends and meet new people in a world-class venue.

**Admittance:** open to all registered congress participants

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18:00 - 20:00

Exhibition will not be open.
You will be able to pick up your badge from the registration desk.
One of the aims of the EAO JC is the creation of a network between young researchers in the field of Implant Dentistry. The EAO JC has already successfully organized two Summer Camps during which 80 young dental professionals from all over Europe were brought together to discuss future developments. During this session we want to re-unite and acknowledge all those individuals who offered their expertise. We wish to extend the invitation to all EAO participants who feel «young at heart». Please feel free to join us during this informal session, interact with colleagues and make new friends! You could be the next Summer Camp participant so this is your opportunity!

### PLANNING FOR SUCCESS - HOW TO MAKE IT ALL GO RIGHT

Chairpersons: Franck Renouard (France), Alberto Sicilia Felechosa (Spain)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Number</th>
<th>Title</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:50</td>
<td>01*</td>
<td>Minimising errors in implantology: prevention vs intervention</td>
<td>Mark Pinsky (USA)</td>
</tr>
<tr>
<td>14:15</td>
<td>02</td>
<td>Simple methodology for successful planning in implant dentistry</td>
<td>David Sarment (USA)</td>
</tr>
<tr>
<td>15:10</td>
<td></td>
<td>Coffee break</td>
<td></td>
</tr>
<tr>
<td>15:30</td>
<td>03</td>
<td>Can we depend on generally held beliefs in implant dentistry?</td>
<td>Anselm Wiskott (Switzerland)</td>
</tr>
<tr>
<td>15:55</td>
<td></td>
<td>Panel discussion chaired by:</td>
<td>Franck Renouard, Alberto Sicilia Felechosa</td>
</tr>
</tbody>
</table>

Abstracts and speakers cv p. 46-47

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

13:45 - 16:30

|LIFFEY B|

EMERGING TECHNOLOGIES IN TISSUE REGENERATION THAT CAN ENHANCE PATIENT CARE
Chairpersons: Nikolaos Donos (United Kingdom), Carlo Maiorana (Italy)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>13:45</td>
<td>23*</td>
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<tr>
<td>14:10</td>
<td>24</td>
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<tr>
<td>14:35</td>
<td>25</td>
</tr>
<tr>
<td>15:00</td>
<td>Coffee break</td>
</tr>
<tr>
<td>15:30</td>
<td>26</td>
</tr>
<tr>
<td>15:55</td>
<td>27</td>
</tr>
<tr>
<td>16:20</td>
<td></td>
</tr>
</tbody>
</table>

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

13:45 - 16:30

|LIFFEY HALL 2|

WORKSHOP CERTIFICATION PROGRAMME
HOW TO PREPARE AN APPLICATION FOR THE EAO CERTIFICATION IN IMPLANT-BASED THERAPY?
Chairpersons and speakers: Georg Mailath-Pokorny (Austria), Chantal Malevez (Belgium)

Speakers cv p. 50-51
## SHORT ORAL COMMUNICATIONS 1

**Chairpersons:** Nikolaos Donos (United Kingdom), Raffaele Cavalcanti (Italy)

<table>
<thead>
<tr>
<th>Time</th>
<th>Abstract</th>
</tr>
</thead>
</table>
| 14:00  | 68* Protein and blood adsorption on titanium and titanium zirconium implants as a model for osseointegration  
Simon Berner, Brigitte Kopf, Stefanie Lischer, Sylvie Ruch, Katharina Maniura-Weber* * (Switzerland)  |
| 14:15  | 69 Bioactive PEEK implants enhance osseointegration: a biomechanical investigation  
Pär Johansson* * (Sweden)  |
| 14:30  | 70 Computer-assisted flapless implant placement reduces the incidence of surgery-related bacteremia  
Volkan Arisan** (Turkey), Nilufer Bolukbasi, Lutfiye Oksuz  |
|        | 71 Withdrawn  |
| 14:45 - 15:30 | Coffee break  |
| 15:30  | 72 The effect of a biodegradable polyethylene glycol gel on the delivery and osteogenic behavior of homologous tooth germ derived stem cells in a pig model  
Mustafa Ramazanoglu** (Turkey), Tobias Moest, Pinar Siraneci, Gorke Gurel, Aart Molenberg, Rainer Lutz, Gamze Torun Kose, Friedrich Wilhelm Neukam, Friedrich Wilhelm Neukam, Karl Andreas Schlegel  |
| 15:45  | 73 Physically adsorbed magnesium ions on mesoporous titanium surfaces enhance osseointegration  
Silvia Galli** * (Sweden), Francesca Cecchinato, Yoshihito Naito, Johan Karlsson, Wenxiao He, Martin Andersson, Ryo Jimbo, Ann Wennerberg  |
| 16:00  | 74 Osseointegration of biochemically modified implants in an osteoporosis rodent model  
Bernd Stadlinger** * (Switzerland), Paula Korn, Ninette Tödtmann, Uwe Eckelt, Stephen Ferguson, Matthias Schnabelrauch, Michaela Kneissel, Falko Schloettig  |
| 16:15  | 75 Enhanced osseointegration of titanium implants in ovariectomized rats by magnetron-sputtered strontium containing coatings  
Vincent Offermanns** * (Austria), Ole Zoffmann Andersen, Gregor Riedel, Michael Rasse, Inge Hald Andersen, Søren Sørensen, Michael Sillassen, Christian Sloth Jeppesen, Morten Foss, Frank Kloss  |

Speakers cv p.52-53

*The figures refer to the abstracts you will find in the COIR supplement / ** Presenter
<table>
<thead>
<tr>
<th>Time</th>
<th>Poster Number</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00</td>
<td>106*</td>
<td>Enhanced implant osseointegration by mesenchymal stem cell sheet technique in OVX rats</td>
<td>Yan Duan** (China)</td>
</tr>
<tr>
<td>14:10</td>
<td>107</td>
<td>A randomized clinical controlled study to compare efficiency and accuracy of digital vs. conventional impressions in implant rehabilitation</td>
<td>Thao Le** (USA), Sang Lee, German Gallucci, Andreas Radics</td>
</tr>
<tr>
<td>14:20</td>
<td>108</td>
<td>Improving elderly's patients quality of life with implant overdenture</td>
<td>Corina Marilena Cristache** (Romania), Mihai Burlibasa, Andrea Cristina Didilescu, Gheorghe Cristache, Romanita Mihaela Gligor</td>
</tr>
<tr>
<td>14:30</td>
<td>109</td>
<td>Monolithic lithium disilicate single crowns bonded on CAD/CAM zirconia cross-arch implant-bridge: a proof-of-concept prospective study</td>
<td>Alessandro Pozzi** (Italy), Marco Tallanico, Alberto Barlattani</td>
</tr>
<tr>
<td>14:40</td>
<td>110</td>
<td>A case-controlled cohort study to evaluate the performance of Straumann bone level implants in single tooth gaps in the anterior maxilla</td>
<td>Soo Hwan Byun** (Korea), Jong-Ho Lee, Jong-Sik Kim, Seung-Soo Kim, Sang-Yoon Lee, Kang-Mi Pang</td>
</tr>
<tr>
<td>14:50</td>
<td>111</td>
<td>High torque, its effect on implants clinical results</td>
<td>Juan Carlos Ibanez** (Argentina), Maria Agustina Juaneda, Martin Ignacio Ibanez, Maria Constanza Ibanez</td>
</tr>
<tr>
<td>15:00</td>
<td></td>
<td>Coffee break</td>
<td></td>
</tr>
<tr>
<td>15:30</td>
<td>112</td>
<td>Multi-centre, randomized controlled trial on the efficacy and safety of rhBMP-2 coated demineralized bone matrix in human extraction sockets</td>
<td>Hyun-Ki Shin** (South Korea), Yu-Jin Kim, Jeong-Yol Lee, Jong-Eun Kim, Ha-Young Kim, Kwang-II Lee, Ju-Woong Jang, Jung-Seok Lee, Sang-Wan Shin, Kyoo-Sung Cho</td>
</tr>
<tr>
<td>15:40</td>
<td>113</td>
<td>Biologic response of osteoblastic cells on titanium surface treated with Er:YAG laser</td>
<td>Hwa-Sun Lee** (South Korea), Hyun-Ju Chung, Young-Joon Kim</td>
</tr>
<tr>
<td>15:50</td>
<td>114</td>
<td>The influence of removal of implants on the resolution of inferior alveolar nerve injuries caused by implant placement in the mandible</td>
<td>Maria Devine** (UK), Zehra Yılmaz, Tara Renton</td>
</tr>
<tr>
<td>16:00</td>
<td>115</td>
<td>Meta-analysis of single crowns supported by short implants in the posterior region</td>
<td>Luis Andre Mezzomo** (Brazil), Rodrigo Miller, Fernando Alonso, Diego Triches, Rosemary Shinkai</td>
</tr>
<tr>
<td>16:10</td>
<td>116</td>
<td>Multi-center randomized controlled trial on sinus graft using Escherichia coli-produced rhBMP-2 with biphasic calcium phosphate carrier</td>
<td>Min-Soo Kim, Hyun-Ki Shin, Yu-Jin Kim, Jae-Shin Kim, Jung-Seok Lee, Jeong-Ho Yun, Chang-Sung Kim, Kyoo-Sung Cho, Jin Young Park** (South Korea)</td>
</tr>
<tr>
<td>16:20</td>
<td>117</td>
<td>Influence of fresh-frozen allogeneic bone grafts architecture on its incorporation: radiographic and histomorphometric comparison to the gold-standard</td>
<td>Rubens Spin-Neto** (Denmark), Felipe Coletti, Luis Pereira, Elcio Marcantonzio Jr, Andreas Stavropoulos, Ann Wenzel</td>
</tr>
</tbody>
</table>

* The figures refer to the abstracts you will find in the COIR supplement / ** Presenter
09:00 - 12:30  |AUDITORIUM|  

**PERI-IMPLANTITIS - A GROWING PROBLEM OR A MANAGEABLE COMPLICATION?**  
Chairpersons: Niklaus Lang (Switzerland), Frank Schwarz (Germany)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>09:00</td>
<td>04*</td>
<td>Rethinking implants as foreign bodies</td>
<td>Torsten Jemt (Sweden)</td>
</tr>
<tr>
<td>09:25</td>
<td>05</td>
<td>Physiological bone remodelling - systemic and local risk factors</td>
<td>Reinhard Gruber (Switzerland)</td>
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<tr>
<td>10:00</td>
<td></td>
<td>Congress Ceremony</td>
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<tr>
<td>10:30</td>
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<td>Coffee break</td>
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<tr>
<td>11:00</td>
<td>06</td>
<td>Peri-implant diseases-systemic and local risk factors</td>
<td>Stefan Renvert (Sweden)</td>
</tr>
<tr>
<td>11:25</td>
<td>07</td>
<td>Peri-implant bone loss related to cement-and screw- retained prostheses</td>
<td>Paolo Vigolo (Italy)</td>
</tr>
<tr>
<td>11:50</td>
<td>08</td>
<td>Can soft tissue augmentation minimize the risk of peri-implantitis?</td>
<td>Gerhard Iglhaut (Germany)</td>
</tr>
<tr>
<td>12:15</td>
<td></td>
<td>Panel discussion chaired by: Niklaus Lang, Frank Schwarz</td>
<td></td>
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</tbody>
</table>

Abstracts and speakers cv p. 56-57  
* The figures refer to the abstracts you will find in the COIR supplement

08:30 - 10:00  |LIFFEY B|  

**LEARNING AND SHARING CLINICAL DENTISTRY IN A VIRTUAL WORLD**  
Chairpersons: Theodoros Kapos (United Kingdom) accompanied by  
the Junior Committee: Victor Palarie (Moldova), Frank Schwarz (Germany),  
Michael Payer (Austria), Nele Van Assche (Belgium), Daniel Thoma (Switzerland),  
Helena Francisco (Portugal), Jose Manuel Navarro (Spain)

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<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>08:30</td>
<td>28*</td>
<td>Application of today’s technology towards e-learning</td>
<td>Brian Millar (United Kingdom)</td>
</tr>
<tr>
<td>08:50</td>
<td>29</td>
<td>Future trends in dental education</td>
<td>Nikos Mattheos (China)</td>
</tr>
<tr>
<td>09:10</td>
<td>30</td>
<td>Digital platforms from a developers point of view</td>
<td>Florian Schober (Switzerland)</td>
</tr>
<tr>
<td>09:30</td>
<td>31</td>
<td>Health and E-health - legal aspects</td>
<td>Yvo Vermylen (Belgium)</td>
</tr>
<tr>
<td>09:50</td>
<td></td>
<td>Panel discussion chaired by the Junior Committee</td>
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</tbody>
</table>

Abstracts and speakers cv p. 58-59  
* The figures refer to the abstracts you will find in the COIR supplement
### 10:00 - 10:30

**WEBCASTED TO ALL ROOMS**

#### CONGRESS CEREMONY

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>10:00</td>
<td>European Association for Osseointegration</td>
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<td></td>
<td>An update</td>
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<td><em>Pascal Valentini, EAO President</em></td>
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<tr>
<td>10:10</td>
<td>Welcome to Dublin</td>
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<td></td>
<td><em>David Harris &amp; Brian O’Connell, Congress Chairmen</em></td>
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<tr>
<td>10:15</td>
<td>Irish Music and Dance Show; a celebration of traditional Irish music, song and dance</td>
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### 11:00 - 12:30

#### RISK FACTORS IN IMPLANT DENTISTRY

Chairpersons: Theodoros Kapos (United Kingdom), Leo Stassen (Ireland)

<table>
<thead>
<tr>
<th>Time</th>
<th>Abstract</th>
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<tbody>
<tr>
<td>11:00</td>
<td>32* Surgical causes of neuropathic pain</td>
</tr>
<tr>
<td></td>
<td><em>Keith Smith (United Kingdom)</em></td>
</tr>
<tr>
<td>11:20</td>
<td>33 Does mechanical loading affects implant prognosis?</td>
</tr>
<tr>
<td></td>
<td><em>Joke Duyck (Belgium)</em></td>
</tr>
<tr>
<td>11:40</td>
<td>34 Update on bisphosphonate therapy and implant surgery</td>
</tr>
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<td><em>Carlos Madrid (Switzerland)</em></td>
</tr>
<tr>
<td>12:00</td>
<td>35 Is smoking still a risk factor?</td>
</tr>
<tr>
<td></td>
<td><em>Raffaele Cavalcanti (Italy)</em></td>
</tr>
<tr>
<td>12:20</td>
<td>Panel discussion chaired by:</td>
</tr>
<tr>
<td></td>
<td>Theodoros Kapos, Leo Stassen</td>
</tr>
</tbody>
</table>

Abstracts and speakers cv p. 60-61

* The figures refer to the abstracts you will find in the COIR supplement
## SHORT ORAL COMMUNICATIONS 2

**Chairpersons:** Friedrich W. Neukam (Germany), Simon Storgard Jensen (Denmark)

<table>
<thead>
<tr>
<th>Time</th>
<th>Number</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>76</td>
<td>Immediate loading of interforaminal implants using a chairside fabricated bar: 3 years results</td>
<td>Norbert Enkling* (Switzerland), Dominic Albrecht, Stefan Bayer, Regina Mericske-Stern, Helmut Stark, Joannis Katsoulis, Urs Kremer</td>
</tr>
<tr>
<td>09:15</td>
<td>77</td>
<td>Hard tissue response to plasma of argon cleaning treatment on titanium abutments: 2-year follow-up RCT</td>
<td>Luigi Canullo* (Italy), David Penarrocha, Ugo Covani, Costanza Micarelli, Massidda Orietta Massidda</td>
</tr>
<tr>
<td>09:30</td>
<td>78</td>
<td>Accuracy of impression techniques: an in vitro and in vivo pragmatic RCT on CAD/CAM implant bridges</td>
<td>Marco Tallarico* (Italy), Alessandro Pozzi, Alberto Barlattani</td>
</tr>
<tr>
<td>09:45</td>
<td>79</td>
<td>Can cement remnants be completely removed from implants after cementation in clinical practice?</td>
<td>Tomas Linkevicius* (Lithuania), Egle Vindasiute, Algirdas Puisys, Natalja Maslova</td>
</tr>
<tr>
<td>10:00</td>
<td>80</td>
<td>Ceramic versus composite veneering in complex restorations</td>
<td>Joerg Neugebauer* (Germany), Frank Kistler, Steffen Kistler, Stephan Adler, Fabian Sigmund</td>
</tr>
<tr>
<td>10:30</td>
<td>81</td>
<td>Accuracy of intra-oral scanning versus lab scanning</td>
<td>Stefan Vandeweghe* (Belgium), Melissa Dierens, Christian Vanhove, Hugo De Bruyn</td>
</tr>
<tr>
<td>11:00</td>
<td>82</td>
<td>Influence of Abutment Material on gingival Color: a multicentric prospective spectrophotometric Evaluation on 23 Implants</td>
<td>Diego Lops* (Italy), Gianluca Pisoni, Eriberto Bressan, Eugenio Romeo</td>
</tr>
<tr>
<td>11:45</td>
<td>83</td>
<td>Immediate loading of implants in edentulous mandibles with Locator® or Dolder®-bar: first results from a prospective randomized clinical study</td>
<td>Stefanie Schwarz* (Germany), Lydia Eberhard, Nikolaos Nikitas Giannakopoulos, Peter Rammelsberg, Constantin Effler</td>
</tr>
<tr>
<td>12:00</td>
<td>84</td>
<td>The influence of stability and retention on mandibular implant overdenture with different abutment height and attachment design</td>
<td>Richard Leesungbok* (South Korea), Jungjo Choi, Suk-Won Lee, Su-Jin Ahn</td>
</tr>
<tr>
<td>12:15</td>
<td>85</td>
<td>One-year results of maxillary overdentures supported by two implants - patient-reported and radiographic outcomes</td>
<td>Anja Zembic* (Netherlands), Daniel Wismeijer</td>
</tr>
</tbody>
</table>

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

** Presenter
11:00 - 12:20

BASIC RESEARCH COMPETITION
Chairpersons: Ioannis Polyzois (Ireland), Gil Alcoforado (Portugal)

11:00 48* Soft tissue adhesion/integration patterns following the use of different PEG hydrogel membranes
Asmaa El-Kaddar** (UK), Nikos Mardas, Ricardo Zambon, Aart Molenberg, Michel Dard, Nikos Donos

11:20 49 Accelerated bone ingrowth of titanium dental implants by magnetron-sputtered strontium containing coatings
Ole Zoffmann Andersen** (Denmark), Vincent Offermanns, Michael Sillassen, Klaus Pagh Almtoft, Inge Hald Andersen, Søren Sørensen, Christian Sloth Jeppesen, Frank Kloss, Morten Foss, David Christian Evar Kraft

11:40 50 Roles of αCGRP on attachment, proliferation and differentiation of mice BMSCs cultured on titanium surfaces
Li Ma** (China), Lin Xiang, Na Wei, Yingying Wu, Ping Gong

12:00 51 Development of in vitro prevascularised synthetic block graft for dental implant reconstructions
Borvornwut Buranawat** (Thailand), Richard Palmer, Lucy Di Silvio, Lertrit Sarinnaphakorn

Speakers cv p. 64

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

13:00 – 14:00

EAO GENERAL ASSEMBLY
**TREATING THE PARTIALLY EDENTATE RESORBED POSTERIOR MAXILLA**
Chairpersons: Chantal Malevez (Belgium), Henning Schliephake (Germany)

<table>
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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>14:00</td>
<td>09</td>
<td>Restorative options for the posterior maxilla: possibilities and limitations</td>
<td>Henny J. Meijer (The Netherlands)</td>
</tr>
<tr>
<td>14:20</td>
<td>10</td>
<td>The lateral osteotomy approach in sinus augmentation: possibilities and limitations</td>
<td>Friedrich W. Neukam (Germany)</td>
</tr>
<tr>
<td>14:40</td>
<td>11</td>
<td>The transalveolar approach in sinus augmentation: possibilities and limitations</td>
<td>Marc Quirynen (Belgium)</td>
</tr>
<tr>
<td>15:00 - 15:30</td>
<td>Coffee break</td>
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<tr>
<td>15:30</td>
<td>12</td>
<td>Are short implants a reliable option? Possibilities and limitations</td>
<td>David Nisand (France)</td>
</tr>
<tr>
<td>15:50</td>
<td>13</td>
<td>The role of zygomatic implants: possibilities and limitations</td>
<td>Rubén Davó (Spain)</td>
</tr>
</tbody>
</table>

16:10 Panel discussion chaired by: Chantal Malevez, Henning Schliephake

Abstracts and speakers cv p. 66-67

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

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**REPLACING A MISSING INCISOR**
Chairpersons: Klaus Gotfredsen (Denmark), Ailsa Nicol (United Kingdom)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00</td>
<td>36</td>
<td>Clinical techniques for predictable results</td>
<td>Franck Bonnet (France)</td>
</tr>
<tr>
<td>14:20</td>
<td>40</td>
<td>Management of gingival recession on adjacent teeth</td>
<td>Markus Hurzeler (Germany)</td>
</tr>
<tr>
<td>14:40</td>
<td>38</td>
<td>Is immediate implant placement worth the risk?</td>
<td>Mariano Sanz (Spain)</td>
</tr>
<tr>
<td>15:00 - 15:30</td>
<td>Coffee break</td>
<td></td>
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<tr>
<td>15:30</td>
<td>39</td>
<td>The role of socket preservation</td>
<td>Mauricio Araujo (Brazil)</td>
</tr>
<tr>
<td>15:50</td>
<td>37</td>
<td>Restorative options for aesthetic defects</td>
<td>Irena Sailer (Switzerland)</td>
</tr>
</tbody>
</table>

16:10 Panel discussion chaired by: Klaus Gotfredsen, Ailsa Nicol

Abstracts and speakers cv p. 68-69

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

SHORT ORAL COMMUNICATIONS 3
Chairpersons: Carlo Maiorana (Italy), Paolo Vigolo (Italy)

14:00 86* Treatment of peri-implantitis. An experimental study in dogs
Olivier Carcuac** (Sweden), Tord Berglundh, Ingemar Abrahamsson

14:15 87 Biological complications after early/delayed/late implant placement: 10-year results from a RCT
Andreas Stavropoulos** (Sweden), Ann Wenzel, Lars Schropp

14:30 88 Immediate provisional restorations on bone level implants
Nikos Mardas** (UK), Attila Horvath, Dina Dedi, Luis Mezzomo, Nikolaos Donos

14:45 89 Immediate loaded implants in subjects with type I osteoporosis: 1-year prospective controlled study
Jamil Shibli** (Brazil), Kelly Aguiar, Tatiana Onuma, Renata Mainink, Alessandra Cassoni, Jose Rodrigues, Poliana Duarte, Marta Bastos, Magda Feres

15:00 - 15:30 Coffee break

15:30 90 Peri-implant bone levels around short implants: a 3D analysis of the impact of crown-implant ratio
Gerdien Telleman** (Netherlands), Henny Meijer, Arjan Vissink, Gerry Raghoebar

15:45 91 3D investigation of the alveolar process morphology in relation to the vertical facial dimension
Anna Klinge** (Sweden), Karin Becktor, Jonas Becktor, Christina Lindh

16:00 92 On the relationship between gingival biotypes and gingival thickness - a case-control study
Kai Fischer** (Germany), Timo Richter, Ulrich Schlagenhauf, Stefan Fickl

16:15 93 Soft tissue contour changes at immediate restoration following immediate single-tooth post-extraction implants: a 1-year clinical study
Daniele Cardaropoli** (Italy), Lorena Gaveglio, Giuseppe Cardaropoli

Speakers cv p. 70-71

* The figures refer to the abstracts you will find in the COIR supplement
** Presenter
14:00 - 16:20  | LIFFEY HALL 2 |

**BASIC RESEARCH COMPETITION**  
Chairpersons: Ioannis Polyzois (Ireland), Gil Alcoforado (Portugal)

14:00  52*  ▪ Innervation in peri-implant hard and soft tissue following immediate and delayed implant loading  
Yan Huang** (Belgium), Jeroen Van Dessel, Jeroen Van Dessel, Ivo Lambrits, Xin Liang, Alexandru Andrei Iliescu, Weijian Zhong, Guowu Ma, Emanuela Dos Santos, Reinhilde Jacobs

14:20  53  ▪ Plant-derived molecules, pectins as a novel nanocoating for improvement of osseointegration  
Katarzyna Gurzawska** (Denmark), Niklas Jørgensen, Kai Dirschler, Rikke Svava, Susanne Nielsen, Bodil Jørgensen, Kenneth Haugshej, Yihua Yu, Klaus Gottfredsen

14:40  54  ▪ Evaluation of bone substitutes in the treatment of bone defects around implants in rabbits  
Jéssica Gulinelli** (Brazil), Pâmela Santos, Thallita Queiroz, Eloá Luvizuto, Roberta Okamoto, Marcos Kuabara, Edison Ferreira, Bruno Vieira, Ricardo Oliveira, Idelmo Garcia-Júnior

15:00 - 15:30  | Coffee break |

15:30  55  ▪ Exploring the role of photocatalytic hydrophilicity on osseointegration using the PCR array technique  
Ryo Jimbo** (Sweden), Maniko Hayashi, Ying Xue, Torbjörn Pedersen, Kamal Mustafa, Takashi Sawase, Ann Wennerberg

15:50  56  ▪ Effect of αCGRP overexpression on osteogenic differentiation of human periodontal ligament cells in periodontal tissue engineering  
Lin Xiang** (China), Li Ma, Na Wei, Ping Gong

16:10  57  ▪ Excessive Degradation of collagen membranes in diabetic rats is associated with increased infiltration of macrophages and capillaries  
Ofer Moses** (Israel), Meizi Eliezer, Haim Tal, Miron Weinreb, Carlos Nemcovsky

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

Speakers cv p. 65
## Conference Programme

### Saturday, October 19, 2013

#### 09:00 - 12:20 | AUDITORIUM

### PLANNED SESSION 4

**IMPLANTS IN AN AGEING POPULATION**  
Chairpersons: Finbarr Allen (Ireland), Pascal Valentini (France)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>14</td>
<td>Twenty First Century Science and the Impact of Global Ageing</td>
<td>Rose Anne Kenny (Ireland)</td>
</tr>
<tr>
<td>09:30</td>
<td>15</td>
<td>Is old age compatible with oral health?</td>
<td>Angus Walls (United Kingdom)</td>
</tr>
<tr>
<td>10:00</td>
<td>16</td>
<td>Surgical challenges in the treatment of the elderly</td>
<td>Tara Renton (United Kingdom)</td>
</tr>
<tr>
<td>10:30</td>
<td></td>
<td>Coffee break</td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>17</td>
<td>Simplification of surgical procedures: the immediately loaded single implant-retained mandibular overdenture: a 9-10 year review of a prospective study</td>
<td>Glen Liddelow (Australia)</td>
</tr>
<tr>
<td>11:30</td>
<td>18</td>
<td>Simplification of prosthetic treatment: options and complications</td>
<td>Frauke Muller (Switzerland)</td>
</tr>
<tr>
<td>12:00</td>
<td></td>
<td>Panel discussion chaired by: Finbarr Allen, Pascal Valentini</td>
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</tbody>
</table>

Abstracts and speakers cv p. 72-73

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

#### 12:45 - 13:00 | AUDITORIUM

**RESEARCH AWARD CEREMONY**  
Chairperson: Pascal Valentini (France)
09:00 - 12:20 | LIFFEY B|

**EMERGING TECHNOLOGIES IN COMPUTER ASSISTED IMPLANT REHABILITATION**
Chairpersons: Ioannis Polyzois (Ireland), Soren Schou (Denmark)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>41*</td>
<td>Digital planning and CAD CAM materials in Implant Prosthodontics</td>
<td>Petra Guess (Germany)</td>
</tr>
<tr>
<td>09:25</td>
<td>42</td>
<td>Developments in digital implant impressions</td>
<td>German Gallucci (USA)</td>
</tr>
<tr>
<td>09:50</td>
<td>43</td>
<td>Advances in CAD/CAM technologies</td>
<td>Vincent Fehmer (Switzerland)</td>
</tr>
<tr>
<td>10:15</td>
<td>44</td>
<td>Extending the boundaries of computer assisted rehabilitation</td>
<td>Lawrence Brecht (USA)</td>
</tr>
<tr>
<td>10:40</td>
<td>Coffee break</td>
<td></td>
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<tr>
<td>11:10</td>
<td>45</td>
<td>Emerging developments in 3D imaging and 3D printing technologies</td>
<td>Andrew Dawood (United Kingdom)</td>
</tr>
<tr>
<td>11:35</td>
<td>46</td>
<td>A view of the future: closing remarks</td>
<td>Matts Anderson (Sweden)</td>
</tr>
</tbody>
</table>

12:00

Panel discussion chaired by: Ioannis Polyzois, Soren Schou

Abstracts and speakers cv p. 74-75-76

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

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**12:45 - 13:00 | AUDITORIUM**

**RESEARCH AWARD CEREMONY**
Chairperson: Pascal Valentini (France)
**Clinical Research Competition**

Chairpersons: Ronald Jung (Switzerland), Mariano Sanz (Spain)

<table>
<thead>
<tr>
<th>Time</th>
<th>Abstract</th>
<th>Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:40</td>
<td>A comparison of 6-mm implants with 11-mm implants in combination with a sinus floor elevation in the resorbed posterior maxilla: 1-year follow-up</td>
<td>Felix Gulje** (Netherlands), Gerry Raghoebare, Arjan Vissink, Henry Meijer</td>
</tr>
<tr>
<td>09:00</td>
<td>Crestal bone stability around implants with horizontally matching connection after mucosal tissue thickening. A randomized controlled clinical trial</td>
<td>Algirdas Puisys** (Lithuania), Tomas Linkevicius, Egle Vindasiute, Natalja Maslova</td>
</tr>
<tr>
<td>09:20</td>
<td>Esthetic outcome of implant restorations replacing two adjacent missing teeth in the esthetic zone and its relationship to labial bone thickness</td>
<td>Georgios Ioannidis** (UK), Richard Ibbetson, Eugene Gamble, Shakeel Shahdad</td>
</tr>
<tr>
<td>09:40</td>
<td>Microbiological assessment of the implant/abutment interface in different connections: Cross-sectional study after 5 years of functional loading</td>
<td>David Penarrocha** (Spain), Luigi Canullo, Costanza Micarelli, Ugo Covani</td>
</tr>
<tr>
<td>10:00</td>
<td>Different times for loading dental implants, Systematic Review</td>
<td>Hassan Maghaireh** (UK), Marco Esposito</td>
</tr>
<tr>
<td>10:20</td>
<td>A double blind, randomized multi-center clinical trial using repeated local application of Chlorhexidine chips in Periimplantitis site</td>
<td>Eli Machtei** (Israel)</td>
</tr>
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<td>10:40</td>
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<tr>
<td>11:00</td>
<td>Zirconia Oral Implants: Three-year Results from a Prospective Cohort Study</td>
<td>Ralf Kohal** (Germany), Sebastian Patzelt, Frank Butz, Herman Sahlin</td>
</tr>
<tr>
<td>11:20</td>
<td>The extremely resorbed mandible; 10-year results of a randomised controlled trial on 3 treatment strategies</td>
<td>Kees Stellingsma** (Netherlands), Gerry Raghoebare, Anita Visser, Arjan Vissink, Henry Meijer</td>
</tr>
<tr>
<td>11:40</td>
<td>Evaluation of Efficacy and Safety of rhBMP-2 for Maxillary Sinus Floor Augmentation: Multi-center Prospective Study</td>
<td>Soon Jung Hwang** (South Korea), Hoon Joo Yang, Hyung-Jun Kim, Jong-Hyuck Chung, Seung Beom Kei, Hee-Kyun Oh, Dae-Keun Kwon</td>
</tr>
<tr>
<td>12:00</td>
<td>Influence of vertical tissue thickness on crestal bone changes around implants with platform switching. A prospective controlled clinical study</td>
<td>Tomas Linkevicius** (Lithuania), Algirdas Puisys, Egle Vindasiute, Natalja Maslova</td>
</tr>
</tbody>
</table>

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

** Presenter
## SHORT ORAL COMMUNICATIONS 4

Chairpersons: Franck Bonnet (France), Irena Sailer (Switzerland)

<table>
<thead>
<tr>
<th>Time</th>
<th>Abstract</th>
</tr>
</thead>
</table>
| 09:00 | Ultrasonic implant site preparation vs. drills: A 4 weeks clinical study comparing insertion torque, reverse torque and resonance frequency analysis  
Christian Makary**, (Lebanon), Alberto Rebaudi, Arzu Demercioğlu, Tomasó Vercellotti, Pierre Lahoud, Nada Naaman |
| 09:15 | Influence of the bucco-palatal position of a single-tooth implant on the vertical position of the mid-buccal mucosa  
Elise Zuiderveld**, (Netherlands), Gerry Raghoebar, Laurens Den Hartog, Arjan Vissink, Henny Meijer |
| 09:30 | Influence of a collagen membrane and recombinant PDGF on early bone formation after vertical augmentation with bovine bone in rabbits  
Victor Palarie**, (Moldova), Eik Schiegnitz, Valentin Topalo, Olga Tagadiuc, Bilal Al Nawas, Peer W Kammerer |
| 09:45 | Implant success in microvascular bone grafts  
Christian Mertens**, (Germany), Jürgen Hoffmann |
| 10:00 | Sonic oscillating handpiece versus conventional turbine handpiece for maxillary sinus augmentation procedures  
Dimitrios Papadimitriou**, (USA), Daniel Weitz, Carlo Ercoli, Changyong Feng, Jack Caton, Alessandro Geminiari |
| 10:15 | Clinical, histologic and histomorphometric evaluation of biphasic calcium sulfate in extraction sockets' augmentation: a human study  
Ioannis Gisakis**, (Greece), Demos Kalyvas, Konstantinos Tosios, Vasilios Petsinis, Constantinios Alexandridis |
| 10:30 | Coffee break                                                                   |
| 10:45 | Reconstructed three-dimensional alveolar ridge defects: effectiveness of the titanium mesh technique  
Giuseppe Lizio**, (Italy), Noemi Mazzone, Giuseppe Corinaldesi, Claudio Marchetti |
| 11:00 | Clinical outcome of dental implants placed through the skin flap  
Soo Hwan Byun, Seung-Soo Kim, Sang-Yoon Lee, Jong-Ho Lee**, (Korea), Jong-Sik Kim |
| 11:15 | Histological and dimensional alteration of alveolar crest after bundle bone removal at tooth extraction  
Shichong Qiao**, (China), Jiaji Mo, Hongchang Lai |
| 11:30 | Withdrawn                                                                      |
| 11:45 | Potential adverse events of endosseous dental implants penetrating the maxillary sinus: long term clinical evaluation  
Semaan Abi Najm**, (Switzerland), Didier Malis, Marc El Hage, Sonia Rahban, Jean-Pierre Carrel, Jean-Pierre Bernard |
| 12:00 | Osteotome sinus floor elevation with and without grafting: an animal study in labrador dogs  
Misi Si**, (China), Jiaji Mo, Hongchang Lai |

Speakers cv p. 78-79

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

** Presenter
Plenary Session 5  

EXTENDED DEFECTS IN THE AESTHETIC ZONE—DREAMS, NIGHTMARES, REALITY  
Chairpersons: David Harris (Ireland), Brian O’Connell (Ireland)

13:00 - 15:30  | AUDITORIUM |

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>13:00</td>
<td>19*</td>
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<td>21</td>
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<td>14:45</td>
<td>22</td>
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</tbody>
</table>

13:00 19* Is hard and soft tissue grafting the key to success?  
Ronald Jung (Switzerland)

13:35 20 Clinical procedures to achieve predictable aesthetics  
Stefano Gracis (Italy)

14:10 21 Designing restorations to improve aesthetic outcomes  
Mauro Fradeani (Italy)

14:45 22 How to deal with aesthetic complications  
Ueli Grunder (Switzerland)

15:20  
Panel discussion chaired by:  
David Harris, Brian O’Connell

Abstracts and speakers cv p. 82-83

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

15:30 - 15:45  | AUDITORIUM |

CLOSING CEREMONY  
AND PRESENTATION OF EAO 2014 IN ROME  
Chairperson: David Harris (Ireland)
Please do visit us at stand G18 during the EAO congress, for an opportunity to view these titles and our ever-increasing range of dental publications.

Giovanni Zucchelli
MUCOGINGIVAL ESTHETIC SURGERY
830 pp; 2,000 colour illus
€300 | £240
This beautifully illustrated book explains the art and science of esthetic surgical techniques on the mucogingiva around natural teeth and implants. The author draws upon his extensive experience to show readers how to diagnose and treat mucogingival defects, with detailed coverage of the diagnosis of and the surgical options for covering varying degrees of gingival recession. The text features protocols for the treatment and preparation of root caries and noncarious lesions as well as the surgical procedures to cover exposed root surfaces and increase the volume of the affected gingiva. Throughout, the author places special emphasis on minimizing patient recovery time and postoperative discomfort while achieving the patient’s esthetic goals to the best extent possible. This comprehensive volume is a must-read for those seeking to learn or refine mucogingival surgery techniques.

Federico Hernández Alfaro
CONTROVERSIAL ISSUES IN IMPLANT DENTISTRY
264 pp; 575 Illus (mostly colour)
€128 | £108
Dental implantology has seen a dramatic shift in the last decade for a variety of reasons including the incorporation of 3D tools for diagnosis and treatment planning, new implant surfaces and designs, bioactive materials, tissue engineering techniques, and minimally invasive surgical procedures. The combined effect of these innovations is a new paradigm of implant dentistry that is already changing the way clinicians treat edentulous patients and improving treatment options. Despite these advances within implantology, questions remain about many new techniques and developing technologies. This book focuses on the dynamic parts of this new paradigm that are still evolving—the controversial topics that are still subject to debate. The author asks pressing questions and provides sound assessments.

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Satellite Industry Symposia

**GEISTLICH**

**How to predictably manage hard-and soft-tissue augmentations**

- **Hard-and soft-tissue concepts for alveolar ridge preservation**
  - **Speaker:** PD Dr. Ronald E. Jung, Switzerland
  - Every dentist is confronted on a daily base with the question: what to do with extraction sockets? Millions of extractions are going to be performed worldwide and no clear strategies and indications regarding ridge preservation are available. Strategies for handling of extraction sockets can either try to preserve hard and soft tissue or try to optimise hard and soft tissue by grafting procedures. Based on new techniques to evaluate volume changes over the time different therapies will be evaluated and qualified. The advantages and the limitations of different techniques will be discussed.
  - Today’s possibilities to regenerate hard-and soft-tissues by means of soft-tissue alternative will be presented. Based on an overall comparison of the different techniques for hard-and soft-tissue preservation clinical concepts for various situations will be defined.

**The management of soft tissues in post-extractive site and periodontal plastic surgery**

- **Speaker:** Dr. Daniele Cardaropoli, Italy
  - Treatment of gingival recessions is usually performed surgically according to the principles of GTR for mucogingival therapy. The use of coronally advanced flap (CAF) together with connective tissue graft (CTG) can produce predictable outcomes in terms of recession correction, gain of keratinised tissue and improvement of gingival tissue. However, the graft harvest may have high morbidity resulting from the second surgical site, patient discomfort, post-surgical bleeding and limited supply of donor tissue. In the last years, alternative procedures to CTG have been evaluated to limit invasiveness and pain. After tooth extraction, bone resorption of varying amounts always occurs since the edentulous site of the alveolar process undergoes both qualitative and quantitative changes. The preservation of the ridge by grafting the post-extraction socket is able to compensate for physiological bone remodelling. Best techniques and choice of biomaterials used to achieve optimal ridge preservation will be discussed.

**CAMLOG**

**Treatment of choice!? Experts discuss cases interactively with you!**

- **Join us in a lively and inspiring session**
  - **We invite you to start your participation in this year’s EAO in an interactive format, challenging our internationally recognized speakers.**
  - The experts will present their cases under the critical eyes of their fellow speakers. The cases will be discussed interactively with the experts on the podium. We look forward to an exciting and controversial discussion.
  - **Additionally, the audience will be actively involved:** thus you will have the opportunity to interact with the experts on the given topics in order to get a maximum benefit out of this session.
  - The cases are especially selected for this purpose and will address the state of the art implant therapy with a clear focus on the future of digital implant dentistry.

**Introduction:** Mariano Sanz

- “State of the art in implant dentistry”
  - Where are we today and where are we heading?
  - **Moderation of case discussions:** Daniel Wisnemeier & Mariano Sanz

**Case I:** Frank Schwarz

- “Platform switching or not?”
  - The presentation will be challenging and will offer the starting point for discussions in facts or fiction.

**Case II:** Mario Beretta

- “3D planning and guided implant placement”
  - When is it necessary, when is it not necessary?
  - This case will demonstrate that in certain indications it may be essential to use guided procedures, and it will also invite to discussions about the accuracy and security of the particular procedure.

**Case III:** Florian Baer

- “Are full digital and CAD/CAM procedures possible?”
  - How far can we go?
  - Where are the technical and clinical limitations?
  - This topic will initiate a discussion regarding the full spectrum of digital procedures.

**Conclusion**

- Sneak preview of the future: Daniel Wisnemeier
  - “How far will digital dentistry advance in the near future?”

**USHIO**

**Photofunctionalization: The upcoming new generation implant therapy**

- **Speaker:** Takahiro Ogawa, DDS, PhD, Professor at UCLA, USA
  - **Supporting speaker:** Wael Att, DDS, Dr Med Dent Habil, Associate Professor at the University Hospital of Freiburg

The lecture will present a novel, rapid, chair-side activation for dental implants, or “photofunctionalization”. Photofunctionalization enhances osseointegration 3 times and enables a 98.2% bone-implant contact in animal models, and is proven effective on any surface types tested. Clinically, the implant stability increases per month of photofunctionalized implants is remarkably (3-30 times) greater than that of as-received implants. Success rate can be maintained very high even with a 50% reduced healing time before loading and the use of shorter implants. Peri-implant marginal bone level is increased coronally after 1 year against our common understanding of unavoidable bone loss. Some other new biological and clinical benefits of photofunctionalization, including the paradigm shifts in implant therapy and other fields of medicine, will be introduced.

The audience will

1. Understand biological aging of titanium and how photofunctionalization solve the problem
2. Understand the principles, theory, and clinical application of photofunctionalization
3. Picture the upcoming new photofunctionalization-mediated implant therapy

For more information please visit:
www.geistlich-pharma.com/dublin2013
DENTSPLY IMPLANTS
Welcome to the Powerhouse presenting “Science and research in clinical practice”

Innovation and evolution are driven by two factors: science and clinical experience. Science is the natural backbone of implant dentistry, whereas clinical experience is the day-to-day challenge for all dental professionals. By learning from science, you draw your own conclusions and then professionally apply them in your daily work. By doing so, we all become part of the innovation and evolutionary processes. Join us for an inspirational and interactive afternoon where the latest trends, the freedom of using digital solutions and implant dentistry innovations will be discussed in a dynamic environment.

Moderator:
Hugo De Bruyn, Ghent, Belgium

Trends and research findings supporting clinical decision-making
Tord Lundgren, Jeddah, Saudi Arabia
Learn how results from pre-clinical and clinical research can be translated to support clinical decision making. You will hear about important implant design features, substantiated with clinical data reporting on soft and hard tissue maintenance.

Merging the clinical process and the use of hardware through digital solutions
Goran Benic, Zurich, Switzerland
Discover how the integration of new technologies in implant dentistry can enhance the possibilities for choosing the best treatment, improve predictability and increase time and cost effectiveness.

Innovations in implant dentistry
Clark Stanford, Iowa City, Iowa, USA
Experience important factors for clinical success with focus on the ongoing evolution of the ASTRA TECH Implant System, substantiated with clinical data from an ongoing multicenter study.

For more information, please visit our website www.dentsplyimplants.com

STRAUSSMANN
Treatment flexibility supported by technology

Reducing case complexity, increasing treatment predictability, and optimizing workflows are key topics for technology advancements. As an example, the development of intelligent synthetic materials and the opportunity for an improved control of the bone remodeling process and the subsequent substitution by newly formed bone may increase overall flexibility in everyday patient treatment. Bone substitutes evolve from being a purely incorporated filling and space maintaining material towards scaffolds effectively facilitating pristine bone regeneration. Early findings on a new bone substitute targeted to guide natural bone regrowth by using an innovative hydrophilic surface clearly document the higher treatment predictability, increasing confidence in using small-diameter implants. Recent data further underline the benefits, particularly the potential for reducing treatment steps and greater treatment flexibility in limited bone volume. This allows for interesting considerations regarding reduced implant diameter and length, preserving more vital structures around the implant and reducing the need for invasive grafting procedures. There may be new ways of implant treatment, which may help to increase patient acceptance with enhanced prosthetic solutions.

What is the role of technology advancements to support new ways of implant treatment? What are the possibilities for increased treatment flexibility and patient acceptance, especially to increase the quality of life for elderly patients, arising from the availability of technology innovations? Where are the considerations and boundaries in every day practice? These questions will be addressed in the following topics from a bone regeneration, implantation and prosthetic point of view.

Moderator:
Prof. Dr. Markus Huerzeler

A new bone grafting material bridging existing gaps in clinical bone regeneration
Dr. Isabella Rocciazi, London, UK

Evolution of dental implants due to technology innovations
Prof. David Cochran, San Antonio, USA

Prosthetically driven aspects to smaller diameter and shorter implants
Prof. Frauke Müller, Geneva, Switzerland

BIOMET 3i
Differentiating your practice through Implant Treatment

Over the years, implant dentistry’s role has become increasingly important to a clinical practice’s success. In today’s world, clinicians strive to offer the best treatment alternatives to their patients who seek long-term health and satisfaction.

Based on their own clinical experiences, the following speakers will examine different approaches for treating two of the most challenging implant treatments.

Anterior Zone Protocols
Prof. Dr. Markus Huerzeler

Columbus Bridge Protocol: 10 Years of Scientific Evidence on Immediate Functional Loading Full Arch Restoration
Prof. Paolo Pera & Dr. Tiziano Tealdo

Clinical Implementation of Immediate Loading Protocols in the Maxilla
Dr. Liam McGrath

Dr. Spencer Woolfe will moderate the session during which the use of the 3i T3® implant with integrated platform switching to support long term aesthetic treatments and with high primary stability will be portrayed, as well as the use of other technologies.

Please check our website for the speakers’ abstracts, CVs and program updates: www.straumann.com/eao2013
OSSTELL
Your guide to predictable surgical and restorative Protocols

Ostell ISQ is a proven technique validated in more than 500 publications - especially valuable when treating patients at risk and when reducing treatment time. It provides you as the treating dentist with the accurate, consistent and reliable measurements needed to make the decisions about which surgical and prosthetic protocols to use. It is the only technique that can measure, not only the initial mechanical implant stability, but also the degree of osseointegration over time in a non-invasive and objective way. The technique has a strong correlation to micro motion and measures completely non-invasive.

Dr. Michael Norton's portfolio of research has been groundbreaking and he has become one of the most sought after lecturer's in his field. He will teach us more about how Osstell works and its correlation to Micromotion, torque and BIC (bone to implant contact).

Sinus elevation is one example of a challenging indication, especially in combination with one stage surgery and early loading. Dr. Ulrike Kuchler, from the University of Bern, will present preliminary results from an ongoing study where Osstell has been used to reduce treatment time in a controlled way.

Moderator:
Prof. Wilfried Wagner, Germany

Micro motion, torque and BIC - how do you want to diagnose your implants?
Dr. Michael Norton, United Kingdom

Sinus elevation in combination with eight weeks of healing time.
Dr. Ulrike Kuchler, Switzerland

SUNSTAR
Alveolar Ridge Preservation using Endoscopically assisted Root Enucleation in Anterior Maxillary Extraction Sites

Speaker: Wilfried Engelke, Germany

Background:
The trauma of surrounding bone structures during exodontia of ankylosed teeth represents a major clinical shortcoming of conventional oral surgery. An alternative minimally invasive technique is presented to support aesthetic rehabilitation by conservation of alveolar buccal bone walls.

Surgical method:
Endoscopically assisted root enucleation comprises mesiodistal vertical root sectioning with inward fragmentation of the oral aspect, isolation of the apical root via horizontal odontosection with removal of the tip, followed by internal reduction of the buccal root lamella. The buccal root lamella, along with the associated periodontium is maintained in the socket.

Results:
In 24 patients (11 m, 13 f), aged 18-66 years, 8 central incisors, 6 lateral incisors, 5 canines and 5 bicuspids were removed in the maxilla. Endoscopic observation revealed complete maintenance of the buccal wall at its preoperative level. Control radiographs confirmed the absence of apical root remnants. All sockets were filled using an in situ hardening beta-TCP bone graft substitute to provide adequate ridge preservation. Ridge volume maintenance was evaluated at implantation after 6 months. Endoscopic and histological data on hard tissue formation will be presented.

Conclusions:
Endoscopically assisted root enucleation has revealed to be a valuable tool to avoid alveolar crest trauma during exodontia.

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Satellite Industry Symposia

<table>
<thead>
<tr>
<th>LIFFEY B</th>
<th>WICKLOW</th>
<th>LIFFEY HALL 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday, October 18</td>
<td>Friday, October 18</td>
<td>Friday, October 18</td>
</tr>
<tr>
<td>16:45 - 18:45</td>
<td>16:45 - 18:45</td>
<td>16:45 - 18:45</td>
</tr>
</tbody>
</table>

**NOBEL BIOCARE**

Experience the future of implant dentistry now

Don’t miss this great opportunity to gain insights into the latest technologies and protocols from world-renowned clinicians, researchers and presenters.

Moderators: Dr. Paul O’Reilly and Dr. Pål-Olov Östman together with Dr. Peter Wöhrle Dr. Dennis Rohner and Dr. Paulo Malo will conduct the session.

Topics include:

- Anterior implant esthetics in the digital age - From planning to treatment completion
  - What is the best timing and which are the best methods for achieving long-lasting aesthetic results?
  - How can new technologies in the CAD/CAM workflow be utilized, combining surgical and prosthetic input for optimal aesthetic outcomes?
- Master the challenges in reconstructive surgery and implant-supported prosthetics
  - How to reduce invasive procedures, secure patient safety and improve the predictability of outcomes for severe cases.
  - Demonstrate the need for oral rehabilitation-driven patient care.
  - Does imaging and computer-guided implant surgery improve the treatment outcome?
- The evolution of the All-on-4® treatment concept - Why did it take so long?
  - Evolution in protocols for the failing dentition and their transition to implant-supported restorations.
  - Why is there a need for the titling of implants?
  - Total Rehabilitation, surgical and prosthetic protocols and using the All-on-4® treatment concept.

For more information, please go to our website www.nobelbiocare.com/eao2013

**BTI**

Atrophic maxilla treatment with minimum invasive clinical techniques using plasma rich in growth factors (P.R.G.F®- ENDORET®)

Lectured by: Dr. Eduardo Anitua (Spain)

Patient wellness has always been the goal of every doctor doing implants. Quicker soft tissue healing, lower pain and inflammation levels, BIC increase on implants, shorter osseointegration times, etc. are the drivers and expectations. Dr. Eduardo Anitua has spent the last 25 years doing implantology, doing research and giving lectures about how to develop the less invasive surgical protocols focussed on patients. During his professional life he has been developing the use of growth factor as a key tool to establish safe, repeatable and predictable surgical protocols when facing the most delicate clinical indications: narrow crest, lack of vertical bone, sinus lift techniques, etc. Dr. Eduardo Anitua during his lecture will have a review of his surgical protocols and will show long term follow up results to confirm the predictability of those protocols and the low invasive level of them. In summary he will describe his biologically guided implantology.

Dento-facial aesthetics using plasma rich in growth factors (P.R.G.F®- ENDORET®)

Lectured by: Professor Bob Khanna (United Kingdom)

If eyes are the “windows to the soul” then the “mouth is the voice of the soul” and ‘the face is the home of Beauty’

In the current climate patients are increasingly seeking non-surgical rejuvenation methods to help off set the inevitable signs of the aging process. As is well established, Prof Bob Khanna has led the way as the world’s first dental surgeon to embrace the use of Botulinum toxin and dermal fillers. His main goals at MIS are to analyze potential technologies to enhance osseointegration, to develop novel surgical techniques and protocols, and to find practical and innovative prosthetic solutions that will make things simple for both dentists and patients. This is done through collaborations with major universities and research institutions world-wide, and by promoting research projects in more than 30 countries.

**MIS**

Drilling protocols - is there one that fits them all?

Speaker: Nachum Samet, DMD V.P R&D, MIS Implants Technologies Ltd

Dr. Nachum Samet holds a DMD degree (1987), as well as a Certificate in Prosthodontics (1992) from the Hebrew University and Hadassah School of Dental Medicine, Jerusalem, Israel. He served as Director of Pre-Doctoral Prosthodontics from 2003 to 2008 at the Harvard School of Dental Medicine, where he also held the degree of Assistant Professor of Restorative Dentistry.

In recognition of his significant contribution, Dr. Samet received numerous awards, including an award as one of Harvard University's best teachers, and the «Distinguished Junior Faculty Award» from the Harvard School of Dental Medicine.

Dr. Samet is a member of several professional organizations, including the Academy of Osseointegration, American Academy of Periodontology, and the American Dental Education Association, in which he served as Chair Elect in the Section on Prosthodontics. His main goals at MIS are to analyze potential technologies to enhance osseointegration, to develop novel surgical techniques and protocols, and to find practical and innovative prosthetic solutions that will make things simple for both dentists and patients. This is done through collaborations with major universities and research institutions world-wide, and by promoting research projects in more than 30 countries.

**Speaker:** Nachum Samet, DMD V.P R&D, MIS Implants Technologies Ltd

**Background:**

Different drilling protocols have been introduced in the past, and are still in practice today. These protocols were developed in times when implants were only placed into fully healed bone. However, today immediate placement into fresh extraction sockets, implant placement into bone which does not cover the whole implant or placement of implants simultaneous with bone augmentations are very common. It is clear that each clinical scenario requires a different drilling approach, that should result in high primary stability, which is accepted as one of the most important factors related to implant’s success.

**Ramifications:**

The aim of this presentation is to discuss different drilling protocols, and to suggest logical alterations to ensure high primary stability in common clinical scenarios.
Posters Area

Level 2

Level 3

- Poster Presentation: 106 - 117
- Basic research: 118 - 164
- Implant therapy outcomes, prosthetic aspects: 165 - 209
- Implant therapy outcomes, surgical aspects: 210 - 315
- Material research: 316 - 363
- Technical and biological complications: 364 - 388
- Tissue augmentation and engineering: 389 - 444
Posters

Poster authors will be presenting their work on Friday, 18th from 12:30 to 14:00 and on Saturday, 19th from 12:00 to 12:45.

Each poster refers to a specific topic. Each topic has been assigned with the following colors. Please refer to page 26 to find the location of the posters you would like to read.

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

### Poster Presentation

<table>
<thead>
<tr>
<th>Poster</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>106</td>
<td>Enhanced implant osseointegration by mesenchymal stem cell sheet technique in OVX rats</td>
<td>YAN DUAN* (CHINA)</td>
</tr>
<tr>
<td>107</td>
<td>A randomized clinical controlled study to compare efficiency and accuracy of digital vs. conventional impressions in implant rehabilitation</td>
<td>THAO LE* (USA), SANG LEE, GERMAN GALLUCCI, ANDREAS RADICS</td>
</tr>
<tr>
<td>108</td>
<td>Improving elderly's patients quality of life with implant overdenture</td>
<td>CORINA MARILENA CRISTACHE* (ROMANIA), MIHAI BURLIBASA, ANDREA CRISTINA DIDILESCU, GHEORGHE CRISTACHE, ROMANITA MIHAELE GLIGOR</td>
</tr>
<tr>
<td>109</td>
<td>Monolithic lithium disilicate single crowns bonded on CAD/CAM zirconia cross-arch implant-bridge: a proof-of-concept prospective study</td>
<td>ALESSANDRO POZZI* (ITALY), MARCO TALLARICO, ALBERTO BARLAITANI</td>
</tr>
<tr>
<td>110</td>
<td>A case-controlled cohort study to evaluate the performance of Straumann bone level implants in single tooth gaps in the anterior maxilla</td>
<td>SOO HWAN BYUN* (KOREA), JONG-HO LEE, JONG-SIK KIM, SEUNG-SOO KIM, SANG-YOON LEE, KANG-MI PANG</td>
</tr>
<tr>
<td>111</td>
<td>High torque, its effect on implants clinical results</td>
<td>JUAN CARLOS IBAÑEZ* (ARGENTINA), MARIA AGUSTINA JUANEDA, MARTIN IGNACIO IBAÑEZ, MARIA CONSTANZA IBAÑEZ</td>
</tr>
<tr>
<td>112</td>
<td>Multi-centre, randomized controlled trial on the efficacy and safety of rhBMP-2 coated deproteinized bone matrix in human extraction sockets</td>
<td>HYUNJIN SHIN* (SOUTH KOREA), YU-JIN KIM, JEONG-YOL LEE, JONG-EUN KIM, HA-YOUNG KIM, KWANG-HEE LEE, JU-WOOK JANG, JUNG-GOOK LEE, SANG-WAN SHIN, KYOO-SUNG CHO</td>
</tr>
<tr>
<td>113</td>
<td>Biologic response of osteoblastic cells on titanium surface treated with Er:YAG laser</td>
<td>HAW SUN LEE* (SOUTH KOREA), HYUN-JU CHUNG, YOUNG-JOON KIM</td>
</tr>
<tr>
<td>114</td>
<td>The influence of removal of implants on the resolution of inferior alveolar nerve injuries caused by implant placement in the mandible</td>
<td>MARIA DEVINE* (UK), ZEHRA YILMAZ, TARA RENTON</td>
</tr>
<tr>
<td>115</td>
<td>Meta-analysis of single crowns supported by short implants in the posterior region</td>
<td>LUIS ANGEL MEZZOMO* (BRAZIL), RODRIGO MILLER, FERNANDO ALONSO, DIEGO TROCHES, ROSEMARY SHINKAI</td>
</tr>
<tr>
<td>117</td>
<td>Influence of fresh-frozen allogeneic bone grafts architecture on its incorporation: radiographic and histomorphometric comparison to the gold-standard</td>
<td>RUBENS SPIN-NETO** (DENMARK), FELIPE COLETTI, LUIS PEREIRA, ELCID MARCANTONIO JR, ANDREAS STAVROPULOS, ANN WENZEL</td>
</tr>
<tr>
<td>118</td>
<td>The use of narrow diameter implants in complete edentulism. A three dimensional radiographic study</td>
<td>EVANGELOS AKLI* (GREECE), DIMITROS PAPADOIMITROU, BERNARD FRIEDLAND, CAMILLE GANNAM, SAMRA SALARI, GERMAN GALLUCCI</td>
</tr>
<tr>
<td>119</td>
<td>Undergraduate implant dentistry education among saudi universities</td>
<td>MOHAMMED ALKINDI* (SAUDI ARABIA)</td>
</tr>
</tbody>
</table>
120 The photodynamic therapy for the treatment of oral premalignant lesions: a randomized controlled clinical trial
FLORIAN BECK* (AUSTRIA), GABRIELLA DVORAK, SIMONE HUEBERER

121 Temperature rise during implant site osteotomy. An in vitro/in vivo study
MARCIO BERARDINII* (ITALY), PAULO TRIBI, ANTONELLO FALCO, GIORGIO PERFETTI

122 A histomorphometric analysis on cortical and trabecular adaptations in the atrophying edentulous mandible
KRISTINA BERTL* (AUSTRIA), MIROSŁAW SUBOTIC, PATRICK HEUEL, UVE YACINE SCHWARZER, STEFAN TANGL, CHRISTIAN ULM

123 The influence of immunosuppressant, in ex vivo bone morphogenetic protein
DONGSOON CHOI* (KOREA), SUNG-TAE KIM, KI-TAE KOO, YANG-JO SEOL, YOUNG-MOO LEE, YOUNG KU, IN-CHUL RHYU

124 The effect of three different crown/implant ratio and two different bone types on implants placed in posterior maxilla: three-dimensional finite element analyses
DUYGU CINAR* (TURKEY)

125 Inter- and intraobserver variability in resonance frequency analysis of palatal implants
ADRIANO CRISMANI* (AUSTRIA), RÜDIGER EMSHOFF, ALES CELAR, MICHAEL BERTL

126 Prognosis of implant longevity in terms of annual bone loss: 3D FE Analysis
VLADISLAV DEMENKO* (UKRAINE), KIAT LINETSKY, VITALY NEVIT, LARYSA LINETSKA, ANDRII SHEVCHENKO, OLEG YEFREMOV

127 Decreased phosphorylation of platelet vasodilator-stimulated phosphoprotein in periodontitis
AZADEH ESFADEYARI* (AUSTRIA), KRISTINA BERTL, HADI GHOLAMI* (SWITZERLAND), NORBERT ENKLIN, JOHANNA ENKLIN-SCHOLL, STEFAN BAYER, MICHAEL BORNSSTEIN, REGINA MERICSKE-TERN

128 The effect of alveolar bone on the support of zygomatic implants
MICHAEL FREDMAN* (IRELAND), MICHAEL RING, LEO STASSEN

129 Implant site preparation at low-speed drilling without irrigation versus high-speed drilling with irrigation: an experimental study in the rabbit
JOSÉ GASPAR* (PORTUGAL), GONÇALO BORRECHO, PEDRO OLIVEIRA, FRANCISCO SALVADO, JOSÉ MARTINS DOS SANTOS

130 Nerve repair stimulated by antioxidant compound: an experimental study in rats
SERGIO GEHKE* (BRAZIL), MARCOS SALLES, SAMUEL KOO, SERGIO ALLEGRIINI JR, MARCELO YOSHIMOTO

131 The OVD of edentulous patients in the Lateral Cephalogram
HAD GHEILAM* (SWITZERLAND), NORBERT EKING, JOHANNA ENKLIN, STEFAN BAYER, MICHAEL BORNSSTEIN, REGINA MERICSKE-TERN

132 Resistance to dislodgement of zirconia copings cemented onto zirconia and titanium abutments
LÜMÜT GULER* (TURKEY), YASEMIN BUDAK, MUTLU OZCAN

133 Comparison of in vitro biofilm formation on four different titanium implant surfaces
AHMED HAWAS* (UK), RICHARD PALMER, RON WILSON, DAVID BEIGHTON

134 Biomechanical investigation into effect of using multiple implants or a wide diameter implant for a single missing tooth of a bruxism patient.
YUICHI ESHURA* (JAPAN), KIKUE YAMAGUCHI, KAZUYOSHI BABA, MASAHICO OZERI

135 Cellular membrane lipid changes in MG63 osteoblast-like cells grown on Ti surfaces of different roughness
MYUNG-JOO KIM* (SOUTH KOREA), SEONG-JOO HEO, JAI-YOUNG KOAK, SEONG-KYUN KIM

136 An elemental quantitative analysis of peri-implant tissue collected from failing titanium plasma-sprayed oral implants: a pilot study
DAVID KOHAVI* (ISRAEL), AVIGOR KUNGER

137 The effect of low-magnitude, high-frequency vibration stimuli on gene expression of rat osteoblast-like cells
TAKASHI KONO* (JAPAN), YASUNORI AYUKAWA, YASUKO MORIYAMA, KATSUO KOBAYASHI, HIROSHI KOYAND

138 Repetitive loading enhances bone quantity and quality around implant in rabbits
SHINICHIRO KUROSHIMA* (JAPAN), MUNENORI YASUTAKE, TAKUYA SHIMOTO, TAKAYOSHI NAKANO, TAKASHI SAWAIDE

139 Influence of weak electric currents on chlorhexidine efficacy against ex-vivo dental biofilms grown on titanium surfaces
JÉRÔME LASSERRE* (BELGIUM), THOMAS BOURJEOOS, SELENA TOMA, MICHEL BRECK

140 The accuracy of panoramic radiograph in the identification of maxillary sinus septa
WON-PYO LEE* (SOUTH KOREA), KYOUNG-WAN KIM, BYUNG-OCK YU, BYUNG-OCK KIM

141 The influence of weak electric currents on chlorhexidine efficacy against ex-vivo dental biofilms grown on titanium surfaces
JÉRÔME LASSERRE* (BELGIUM), THOMAS BOURJEOOS, SELENA TOMA, MICHEL BRECK

142 The accuracy of panoramic radiograph in the identification of maxillary sinus septa
WON-PYO LEE* (SOUTH KOREA), KYOUNG-WAN KIM, BYUNG-OCK YU, BYUNG-OCK KIM

143 Influence of the bone loss on load-carrying ability of dental implants
IGOR LINETSKY* (CZECH REPUBLIC), VLADISLAV DEMENKO, VITALY NEVIT, LARYSA LINETSKA, ANDRII SHEVCHENKO, OLEG YEFREMOV

144 Pre-surgical simulation of implant angulation effect on mandibular masticatory stresses – a finite element study
SAVIO LOURENÇO* (INDIA), CHERYL LOURENÇO, INMAN THIRUVELAN, DHANANJAY KULKARNI
144 Analysis of bone tissue healing around titanium implant surface treated with TiO sandblasted after three and six weeks
GIOVANNI MARIN* (ITALY), SERGO GEHRKE, PAULO DO NASCIMENTO

145 Newly fabricated osteoconductive carbonate apatite bone graft material. An in vivo study
TOMOKIHI NAKAZAKI* (JAPAN), YASUNORI AYUKAWA, KIFUJI ATUTA, YOHEI JINNO, TAIKISHI KOGO, KIYOSHI KIYANO

146 Transfer accuracy of implant impressions – impact of applied protocol
RAGAI EDWARD MATTIA* (GERMANY), ANDREA KERSTIN KELLER, MANFRED WICHMANN, STEFAN HOLST

147 Evaluation of prevalence and location of maxillary sinus septa and the postero-superior alveolar artery using cone beam computer tomography
IBRAHIM NASSER* (LEBANON), WAHIB HADCHITI, ELIE HAYEK

148 The bone mineral density influence on the edentulous residual ridge resorption
EUVIA NIKITINA* (LATVIA), ANDA SLADINA, BAIBA SPRINGE, ILZE DAUKSTE, AVARDS LEJNIEKS

149 Comparative strain gauge analysis of morse taper, internal hexagon, external hexagon and influence of straight and offset implant placement
RENATO NISHIOKA* (BRAZIL), GABRIELA NISHIOKA, GABRIELA NISHIOKA, LEA NISGIERA NISHIOKA, LUIS GUERRA VASCOZONELLOS, FRANCISLEY SOUZA, FRANCISLEY SOUZA

150 Comparison of the evaluation of the bone-implant-contact by histomorphometric analysis and by micro-CT
NICOLOI PURCZ* (GERMANY), ANNE WITT, GRAEME CAMPBELL, FALK BIRKENFELD, YOHAN PARK, CHRISTIAN GLÜER, JÖRGEN WITTFANG, BJÖRN MÖLLER

151 Correlation between mineral density of jaws and skeletal bones in an iranian population using dual X-ray energy absorptiometry
AMINPOUR POKN* (IRAN), NASRIN ESFAHIANIZADEH, HAMIDPOUR DENGHI-PARVAR, HAMIDPOUR DENGHI-PARVAR, NOUSHIN BAYAT, HAMIDPOUR AKHOUNDI, SARA AAJAVADI, REBECA MENASHEOF, HAMIDPOUR BARKANI, SOTOOJIDH DAVAE

152 Capability of new bone formation in mixture of hydroxyapatite and beta-TCP granules
MINDRI SANDA* (JAPAN)

153 New in vivo experimental model for investigation implant stability, new peri-implant tissue formation and osseointegration
FARKASDI SÁNDOR* (HUNGARY), JÓZSEF BLAZSEK, GERGELY HRCZKÖPERDÁK, TAMÁS HARANGOSZÓ, MÁRTA FULÉP PAP, KATALIN FERENCZCOVÁJ, BENCE SZABÓ, CSABA DOBO NAGY, BEÁTA KERÉMI, GÁBOR VÁRDA

154 Patients’ satisfaction with implant-supported fixed complete prostheses versus single crowns
ALP SAPLIHANÇOĞLU* (TURKEY), NAZLI ALTIN, SERTAN ERGÜN, HANKI TANYERI

155 Cone-beam computed tomographic evaluation of temporomandibular joint morphology in patients receiving posterior implant-supported prostheses
SIDDHARTH SHANBHAG* (INDIA), VIVEK SHANBHAG

156 Cone-beam computed tomographic evaluation of maxillary sinus wall anatomy in relation to lateral sinus-floor elevation
SIDDHARTH SHANBHAG* (INDIA), LOADITA KHER, VIVEK SHANBHAG

157 Effect of nitric oxide and N-methyl-D-aspartic acid receptor antagonist on human periodontal ligament fibroblast cell apoptosis
BONG JIN SOHN* (SOUTH KOREA), IN CHUL RHYU, YOUNGI KU, YONG-MOOD LEE, YANG-JO SOEL, KI-TAE KOO, SUNG-TAE KIM

158 Application of copolymer PLA/PGA added to calcium phosphate around osseointegrated implants without primary stability in rabbit tibia
FRANCISLEY ÁVILA SOUZA* (BRAZIL), HELOISA HELENA NISHIOKA, THALLITI PEREIRA QUEIROZ, ELDA LIVIUZOTO, ROBERTA OKAMOTO, ALESSANDRA MARCINDES ARANIGEA, ANA PAULA FARNEZI BASSI, DANIELA PONZONI, RENATO SUSSUMU NISHIOKA, IDELMO RANGE, GARCIA-JÚNIOR

159 A radiographic evaluation of the peri-implant tissues in a patient previously treated for severe chronic periodontitis: a 2-year observation period
RICCARDO TIZZONI* (ITALY), MARTA TIZZONI

160 Effect of implant angulation on ball attachment for implant over dentures
YUICHI WAKO* (JAPAN)

161 Ten cases of a non-grafted one-stage sinus floor elevation in the severely atrophic maxilla
TAKAO WATANABE* (JAPAN)

162 Comparative analysis of gingival wetness at natural teeth and dental implant sites
DOGUCAK YILMAZ* (TURKEY), GÜLÜZ N. GUNCU, DÖRNUK A. TOPOZ, SEZEN B. ASKIN, NERMIN YAMALIK

163 Combination of TGF-β and other cytokines synergistically enhances osteogenic differentiation of mesenchymal stem cells
SUJIN YOKOTA* (JAPAN), HODEMICH KOHARA, KYOKO TAKAFUJII, HISATOMO KONDO, ISHISAKI AKIRA, KOYAYASHI TAKUYA

164 Microvibration promotes bone formation by increasing β-catenin and BMP2 expression
HAI YANG YU* (CHINA), WEI WEI HOU, CHAO PENG WANG, ZHUO LI ZHU, YANG LIU, HUI LONG
Implant therapy outcomes, prosthetic aspects

165 Evaluation of a new tilted implant design used for the «All-on-4» concept
MARCUS ABBoud* (USA), RAFAEL DELGADO-ruIz, ALEX WOn

166 The use of an alternative custom made abutment in the esthetic zone: a case report
PROKOPIS ANtiNELLIs* (GREECE), VASILIoS CH-RIoPOULoUs, AKEtiNerI PETRIoPOULoUs, AFEti VrIOHArI, WAIR MASSEy

167 The use of water soluble wax in fixed prosthodontics and dentai implants
AIU BOLoUIR* (USA)

168 Clinical outcome of single-tooth implant reconstructions supported by customized abutments and custom metal abutments: a 3-year prospective study
TIAGo BORGES* (PORTUGAL), JoAna xAVIER, AÁ TA CarvAlHo, VASCIo CaRVAHAl-o

169 Discrepancy between the position of single implants with a high Pes/Wes score in the aesthetic area and the position desired by a dental technician
vInCEnzO BRuno* (ITALY), MAURO BADIoN, SANTo CATAPAnO, DOMInIC O’SULLIVAn

170 Rehabilitation of post-extractive implants with immediate loading on the superior maxillary: follow up to six years
ERnIsto CAzEllI* (ITALY)

171 Implant-supported maxillary and mandibular overdentures retained with Locator Abutment: 1 year follow-up
ERnIsto CAzEllI* (ITALY), TOmMAso MONTAnArI

172 Replacement of a maxillary central and lateral incisor with a single implant supported restoration
MAra CHATzINoKLoUs* (GREECE), AKEtiNerI PETRIoPOULoUs, SPIRDoN SILvESTRoS, VASILIoS CH-RIoPOULoUs, SAGo VAnoVSKIo

173 Provisionalization of Implant Restorations with PEEK Temporary Abutments
HoNG yOUNG ChOE* (SOUTH KOREA), ChoIN MO YANG, YOUNG-a JUNG

174 Centralizing platform vs standard implants using the dental tech implant system: 3-year clinical and radiological results from a prospective study
StEFAno CoRBElla** (ITALy), MASSIMo Del FABBRO, CARlo BIANCHetti, RICCArDO DEl LUPO, SILvIO TAStuEhi, LuCA LANDI

175 Evaluation of the prevalence of prosthodontic complications in bimaxillary full-arch fixed implant-supported rehabilitations with 1-year follow-up
PeDrO CaSpRIM (POTugAL), ANDrÉ CHeN, HElenA FRAncoSoD**, JOâO ASSEnzo, ARTuR Simôes, SARa CAso, MARIA CArLoS REAl DIAz, ANDrÉ MOrEIRA, HeNIqUE MARqUEs, JOâO CaRAMêS

176 A six-year follow-up of full-arch immediate restorations fabricated with an intraoral welding technique
MArIo DeGIDo* (ITALy)

177 Complete lower denture on two implants: failures and how to correct them - a case report
NligA DULoC* (CROAtIA), SAAM OMrIC, ToMISlAv BADel, ROBERT CElIC, SoNJA KRALjVeC SIMUnKoVIC, IYCA ReLIVAn

178 Full Digital approach in the complete edentulous arch: from surgical planning to fixed rehabilitation
GARY FINELle* (FRAnCE), DMITRI PAPADIvToIU, GERMAN GALLvUCCh

179 Prosthetic approach in peri-implant soft tissue management in visible areas
AURelIu GuMiNeCU* (MOLDoVA), VALEntIIn TOPALo, NICIbLE CHELe, ANDrEI M OSTOVbI, OLEG SOLODNoN

180 Using digital devices to improve communication between clinicians and patients during implant-prosthetic treatment: a clinical study
MArIo AMbURGIA* (ITALy)

181 Functional and clinical aspects of implant-supported, free-ending, removable partial dentures
CHArlotte JEmEn* (NETHErLAnDS), GERRy RAGHObAR, HEnNy MEIJER, MArCo CLine

182 Influence of cyclic loading and preparation depth on the fracture strength of customized zirconia abutment with titanium: a pilot study
HAnSung JoO* (KOREA), MoNg-SOk YANG, HoNg-SO YANG, SANG-WON PArk, KWI-DuG YUn, HYun-PIL LIM

183 Rehabilitation of palatal defect patient with dental implant supported prosthesis
GOKHaN KASNaK, GOKCEn ATEs* (TURKEY), ALTuG CILINGIR, MuSTaFA YLMaZ, MuSTaFA YLMaZ, ERHaN FrATI

184 Stress analysis and fatigue failure of prefabricated and customized abutments of dental implants
HEE-EuN KiM* (SOUTH KOREA)

185 Comparison of two immediate implants placed simultaneously and their different aesthetic outcomes- a case report of a four-year follow-up
SHuChEn KuO* (TAIWAn)

186 Removable partial dentures assisted by implant-supported fixed dental prostheses: a clinical case report
TRAE-RIM LEE* (KOREA), SEoNG-JoO HeO, JAI-BoNG LEE, JInG-SuK HAN, JAI-YOUNG KoAk, YOUNG-JuN LiM, SuNG-HuN KiM, SEoNG-KyuN KiM, MYuNG-JoO KiM, IN-SuNG YeD

187 Universal design in implant dentistry for disabled and elderly patients
RICHARD LEESUNBICK** (SOUTH KOREA), Su-JIn AhN, SUK-WoN LEE, OD-YUn LEE
<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>188</td>
<td>Retrospective analysis on clinical application of incoris ZI Zirconia and CEREC InLab CAD/CAM system for straumann implant</td>
<td>YU LIU (CHINA), HE ZHANG, SONGSHAN LIN, SHISEN LIU</td>
</tr>
<tr>
<td>189</td>
<td>Osteoinduction of adult stem cells on polyethylene glycol hydrogel material</td>
<td>DIEGO LOPS* (ITALY), BARBARA ZAVAN</td>
</tr>
<tr>
<td>190</td>
<td>peri-implant soft tissues reproducibility and stability: a 2-years prospective study on patients with thin gingival biotype</td>
<td>DIEGO LOPS* (ITALY), NICCOLÒ GEA</td>
</tr>
<tr>
<td>191</td>
<td>Zirconia and titanium implant abutments for single-tooth implant prostheses after 5 years of function in posterior regions</td>
<td>DIEGO LOPS* (ITALY)</td>
</tr>
<tr>
<td>192</td>
<td>Combining intra-oral scanners with implant impressions - The BellaTek® ENCODE® impression system</td>
<td>JOÃO MALTA BARBOSA* (PORTUGAL), JOÃO ASCENSO, BÁRA CASADO, HELENA FRANCISCO, JOÃO CARAVES</td>
</tr>
<tr>
<td>193</td>
<td>Utilising High-Performance-Polymers for the fabrication of aesthetic custom implant restorations</td>
<td>ALEXANDROS MANOLAKIS* (GREECE), KLEANTHS MANOLAKIS, THEODORA BOURJOTZOU</td>
</tr>
<tr>
<td>194</td>
<td>Application of two different veneer materials to recreate white and pink esthetics in a full arch implant restoration</td>
<td>MARIA MEINDANI* (GREECE), VASILIOS CHRONOPOLIOUS, PARASKEVAS RAVANIS, ARETI VROCHARI, SPYRIDON SILVESTROS</td>
</tr>
<tr>
<td>195</td>
<td>Cell adhesion to titanium abutments after different cleaning procedures</td>
<td>COSTANZA MICARELLI* (ITALY), LUIGI CANULLO, MARIA GABRIELLA GRUSOVIN, DAVID PENARRRIO ULLA</td>
</tr>
<tr>
<td>196</td>
<td>The use of implants to improve removable partial dentures function and esthetics: 15 year follow-up</td>
<td>ETAN MUIRTSKY* (ISRAEL)</td>
</tr>
<tr>
<td>197</td>
<td>Non-removal of immediate abutments in cases involving subcrestally placed post-extractive tapered single implants</td>
<td>DIEGO NARDI* (ITALY), MARCO DEGIDI, ADRIANO PIATTELLI</td>
</tr>
<tr>
<td>198</td>
<td>Individual abutment fabrication with high tech polymer by press technique</td>
<td>JOERG NEUGEBAUER* (GERMANY), STEFFEN KISTLER, FABIAN SIGMUND, STEPHAN ADLER</td>
</tr>
<tr>
<td>199</td>
<td>Clinical and radiographic evaluation of short implants</td>
<td>VELİ ÖZGEN OZTÜRK* (TURKEY)</td>
</tr>
<tr>
<td>200</td>
<td>Management of the prosthetic space with staged approach technique in full arch implant restorations</td>
<td>PARASKEVAS RAVANIS* (GREECE), VASILIOS CHRONOPOLIOUS, MARIA MEINDANI, ARETI VROCHARI, SPYRIDON SILVESTROS</td>
</tr>
<tr>
<td>201</td>
<td>Biomechanical behavior of fixed implant supported prosthetics by electric extensometry</td>
<td>LUIVA RIBERO* (BRAZIL), CAMILA ANDRADE, CARLOS JOSE SCARES, ALTAR CURY</td>
</tr>
<tr>
<td>202</td>
<td>Platform switching versus platform matching: two-years results from a prospective randomized-controlled multicenter study</td>
<td>SALOMÃO ROCHA* (PORTUGAL), WILFRED WAGNER, JÓSE HILITIANO, FERNANDO GUERRA, MAXIMILIAN MOERGEL, ELEONORE BEHRENS, PEDRO NICOLOAU</td>
</tr>
<tr>
<td>203</td>
<td>Implant - tooth connection is rationale? Clinical report</td>
<td>NUNO SAMPÃO* (PORTUGAL), PEDRO NICOLOAU, FERNANDO GUERRA</td>
</tr>
<tr>
<td>204</td>
<td>Morse taper connection implants placed in augmented maxillary sinuses: 4 year follow-up</td>
<td>JAIRI SHIBLI, FRANCESCO MANGANO, CARLO MANGANO, LUIZ BRAGA* (BRAZIL), RONALDO IMIRVINCHI</td>
</tr>
<tr>
<td>205</td>
<td>Zirconia based reconstructions on implants followed for up to 5 years: a case series</td>
<td>ANDREAS WORNI* (SWITZERLAND), ANDREA RENTSCH-KOLLAR, REGINA MERCKSE-SCHREIBER</td>
</tr>
<tr>
<td>206</td>
<td>Full mouth rehabilitation of a patient with multiple missing teeth using implant supported prostheses: a clinical case report</td>
<td>JAE-WOONG YEON* (SOUTH KOREA), SEONG-JOO HEO, JAI-JONG LEE, JUNG-SUK HAN, JAY-YOUNG KOAK, SUNG-HUN KIM, SEONG-KYUN KIM, YOUNG-JUN LIM, MYUNG-JOO KIM, IN-SUNG YEO</td>
</tr>
<tr>
<td>207</td>
<td>Evaluation of dental implant’s success and survival rate in private dental practice: a retrospective case series</td>
<td>ASLI YETGIN YAZAR* (TURKEY), GONCAGUL AKKUS OZGEN</td>
</tr>
<tr>
<td>208</td>
<td>Dental implant-supported TC for the restoration of oral function in patients with severe bone defects: a retrospective 5-year follow-up study</td>
<td>DUOHONG ZOU* (CHINA), YOUNG WU, WES HJANG, ZHYONG ZHANG, ZHongyang ZHANG, ZHYUAN ZHANG</td>
</tr>
<tr>
<td>209</td>
<td>Implant therapy outcomes, surgical aspects</td>
<td>ENRIQUE RIOS* (SPAIN)</td>
</tr>
<tr>
<td>210</td>
<td>A 2 year retrospective clinical study of immediate implants</td>
<td>ENRIQUE RIOS* (SPAIN)</td>
</tr>
<tr>
<td>211</td>
<td>Effectiveness of the newly developed autogenous tooth bone graft technique</td>
<td>KY-JUN AHN* (KOREA), YOUNGKYUN KIM, JIHYUN BAE</td>
</tr>
</tbody>
</table>
212 Prospective clinical study of 7-mm in length short implant: randomized clinical trial
KYU-JIN AHN* (KOREA), YOUNG-KYUN KIM, JI-HYUN BAE

213 Vertical augmentation with bone rings: report of three cases
RAF ALAN* (TURKEY), ŞADIYE ÇOKÇUNER, CEM MANGIROĞLU, ÖZGÜZ ERASLAN, EMIN MARAKOĞLU

214 Allograft for maxillary sinus floor augmentation: a retrospective study of 90 cases
BADR ALJANDAN* (SAUDI ARABIA), JAIME GUERRERO

215 Transalveolar sinus elevation and short implants for the treatment of severely atrophied edentulous maxilla
MOHAMMED ALKHRAISAT* (SPAIN), EDUARDO ANITUA, LEIRE BEÑAÍGIBA, LAURA PIÑAS, GORKA ORIVE

216 Prospective clinical study on survival and complications of narrow-diameter implants
PABLO ALTUNA* (SPAIN), OSCAR FIGUERAS, JOSÉ NART

217 Gender–based prevalence of peri-implant disease
CHRISTOPH ARNHART* (AUSTRIA), GABRIELLA DVORAK, ALEXANDRA KAUTZKY-WILLER, CHRISTIAN LÜM, CORINNA BRUCKMANN, RUDOLF SEEMANN

218 Flapless and graftless transcrestal sinus floor elevation – one step placement of two stage dental implants
FAHIM ATAMI* (MOLDOVA), VALENTIN TOPALO, ANDREI MOSTOVEI, NICOLAE CHELE, AURELIU GUMENIUC

219 One stage sinus floor elevation: systematic review of the relationship between less than 5mm residual bone height and implants placement success
NICOLA BALDINI* (ITALY)

220 Soft and hard tissue management for immediate implantation: a case report
HAYTHAM BEN AMARA* (TUNISIA), SOFÉINE BEN ABDELAH, ROHFA MBBAREK

221 One-piece zirconia implants: -5 year clinical outcomes
ADRIEN BOLETTE* (BELGIUM), FRANCE LAMBERT, ERIC ROMPE

222 Clinical evaluation of post-extraction implants with a sloped configuration: 1 year prospective preliminary results
TIAGO BORGES, JOANA XAVIER* (PORTUGAL), AGATA CARVALHO, VASCO CARVALHO

223 Long term treatment outcome of reconstruction of the extremely atrophied mandible with onlay bone grafts followed by insertion of endosteal implants
CARINA BOVEN* (NETHERLANDS), GERRY RAGDOEBAR, AYAN VESINK, HENRY MILLER

224 HIV and dental implants. Review and case report
ULISES CALDERON* (PERU)

225 Precision in computer guided rapid dental implant surgery using rapid prototyping drilling guides. A literature review
ULISES CALDERON* (PERU)

226 Osseointegrated craniofacial implants in rehabilitation of facial defects: a retrospective study of 23 years experience
DAVID CASEY* (USA), MAUREEN SULLIVAN, VUIJAY JAYAPRAKASH

227 Vascularized fibula flap graft in the height insufficient jaw bone combine with dental implants for oral functional rehabilitation retrospective study
YANG-MING CHANG* (TAIWAN)

228 Early versus delayed flapless placement of two-stage dental implants
NICOLAE CHELE* (MOLDOVA), VALENTIN TOPALO, ANDREI MOSTOVEI, OLEG DOBROVOLSCHI, AURELIU GUMENIUC

229 A retrospective study on sinus bone grafting with simultaneous implant placement in case of residual bone height less than 4mm
DA MI CHOI* (SOUTH KOREA), YONG-JIN KIM, KYUNG-TAE PARK, YOUNG-MIN OH, YOUNG-A JUNG

230 Maxillary anterior bone augmentation using natural osteoconductive porous bone mineral (B-Oss™): a clinical and histological evaluation
HONG YOUNG CHO* (SOUTH KOREA), YONG-JIN KIM, KYUNG-TAE PARK, YOUNG-JIN PARK, JUNG-MIN OH, YOUNG-A JUNG, WOOK JIN KIM

231 Immediate loading in periodontal patients- retrospective study
FRANCISCO CORREIA* (PORTUGAL), RICARDO FARIA ALMEIDA, ANTONIO CAMPOS FEIJNO, SONIA GOUVEIA, TIAGO PINTO RIBEIRO

232 Immediate placement and loading of single NobelActive™ implants in the esthetic zone: one-year clinical and radiographic results
MARIA PAOLA CRISTALLI* (ITALY), GERARDO LA MONACA, ROBERTA MARIN, SUSANNA ANIBALI, CLAUDIO SEPE

233 Mini invasive approach for maxillary sinus floor elevation: a randomized split mouth clinical trial
CHIARA DELLA* (ITALY)

234 Immediate provisionalization of implants placed in fresh extraction sockets using a definitive abutment: the chamber concept
GIUSEPPE DAPRI* (ITALY), MARCO DEGIDI, DIEGO NARDI, ADRIANO PAIETTI

235 Zigomaty implant rehabilitation outcomes: case series and survival rate
DANIELE DE SANTIS* (ITALY), ANTONIO D’AGOSTINO, GIACOMO CASTIGLIONI, GUIGLIELMO ZANOTTI, LORENZO TREVISIOL, PASQUALE PROCACCI, DARIO BERTOSSI, PIETRO FRANCO CONOBALI

236 Osseointegrated craniofacial implants in rehabilitation of facial defects: a retrospective study of 23 years experience
DAVID CASEY* (USA), MAUREEN SULLIVAN, VUIJAY JAYAPRAKASH

237 Vascularized fibula flap graft in the height insufficient jaw bone combine with dental implants for oral functional rehabilitation retrospective study
YANG-MING CHANG* (TAIWAN)

238 Early versus delayed flapless placement of two-stage dental implants
NICOLAE CHELE* (MOLDOVA), VALENTIN TOPALO, ANDREI MOSTOVEI, OLEG DOBROVOLSCHI, AURELIU GUMENIUC

239 A retrospective study on sinus bone grafting with simultaneous implant placement in case of residual bone height less than 4mm
DA MI CHOI* (SOUTH KOREA), YONG-JIN KIM, KYUNG-TAE PARK, YOUNG-MIN OH, YOUNG-A JUNG

240 Maxillary anterior bone augmentation using natural osteoconductive porous bone mineral (B-Oss™): a clinical and histological evaluation
HONG YOUNG CHO* (SOUTH KOREA), YONG-JIN KIM, KYUNG-TAE PARK, YOUNG-JIN PARK, JUNG-MIN OH, YOUNG-A JUNG, WOOK JIN KIM

241 Immediate loading in periodontal patients- retrospective study
FRANCISCO CORREIA* (PORTUGAL), RICARDO FARIA ALMEIDA, ANTONIO CAMPOS FEIJNO, SONIA GOUVEIA, TIAGO PINTO RIBEIRO

242 Immediate placement and loading of single NobelActive™ implants in the esthetic zone: one-year clinical and radiographic results
MARIA PAOLA CRISTALLI* (ITALY), GERARDO LA MONACA, ROBERTA MARIN, SUSANNA ANIBALI, CLAUDIO SEPE

243 Mini invasive approach for maxillary sinus floor elevation: a randomized split mouth clinical trial
CHIARA DELLA* (ITALY)

244 Immediate provisionalization of implants placed in fresh extraction sockets using a definitive abutment: the chamber concept
GIUSEPPE DAPRI* (ITALY), MARCO DEGIDI, DIEGO NARDI, ADRIANO PAIETTI

245 Zigomaty implant rehabilitation outcomes: case series and survival rate
DANIELE DE SANTIS* (ITALY), ANTONIO D’AGOSTINO, GIACOMO CASTIGLIONI, GUIGLIELMO ZANOTTI, LORENZO TREVISIOL, PASQUALE PROCACCI, DARIO BERTOSSI, PIETRO FRANCO CONOBALI
236 Evaluation of implant stability at different sites of jaws
BURAK DEMIRALP, MEHMET MUHTAROGLU* (TURKEY), HATICE ALPAY, BERKCAN TUNÇER

237 Use of antimicrobial photodynamic therapy and guided bone regeneration for the treatment of Periimplantitis: a case report
UMBERTO DEMONER RAMOS* (BRAZIL), ARTHUR BELEDA NOVAIS JR, TULIO PIGNATON, VALDIR MUGUA, GERALDO SCOMBATTI DE SOUZA

238 Implantation and simultaneous grafting with local harvested bone: evaluation of a minimal invasive approach
ROMAIN DOLVEUX* (GERMANY), FOUAD KHOURY

239 Clinical decision support system in dental implantology
TATJANA DOSTALOVA* (CZECH REPUBLIC), JITKA FEBERNOVA, ALEXANDRA POLAŠKOVÁ, RAVEL KRFZ, MICHAELA SEYDLOVÁ

240 Performance and risk assessments of short implants in partial restorations
SHING-ZEING DUNG* (TAIWAN)

241 A survey of antibiotic prescribing for dental implant placement and the development of an antibiotic prophylaxis guideline
KATHRYN DUREY* (UK), JONATHON SANDOE, MARTIN CHAN

242 Alveolar ridge preservation using a combination of allograft, platelet concentrates and platform switching concept in esthetic area
ALI NASRAT EL MASRI* (BELGIUM), YASSIN BOULZELMAT, EDDY AYACHI, ANASS AZMAWI, HASSAN MIRGHANI, LAURENCE EVRARO

243 Rehabilitation of a patient with orbital mutilation resulting from necrotizing fasciitis using extraoral fixtures and epiphsis
LAURENCE EVRARO* (BELGIUM), CYRIL VOISIN, RÉGINE GINEUR

244 Four extramaxillary zygomatic fixtures and bilateral sinus lift allow rehabilitation of the edentulous maxilla
LAURENCE EVRARO* (BELGIUM), YASSIN BOULZELMAT, RÉGINE GINEUR

245 Comparative evaluation of 55 narrow diameter implants followed for up to 7 years: a clinical and radiographic retrospective Study
LAURENCE EVRARO, EDDY AYACHI* (BELGIUM), ANASS AZMAWI, ALI EL MASRI

246 Implant resection in the management of neurosensory disturbance of the inferior alveolar nerve
AHOUARI FATIMA* (SWITZERLAND), MADRID CARLOS, ABAACA MARCELO, BOUFERRACHE KAHINA, POP SABINA

247 Transitionnal mini-implants to assist computer guided surgery and immediate provisionalisation in the fully edentulous arch: a clinical case series
GARY FINEELLE* (USA), SANG LEE, DIMITRIOS PAPADIMITRIU, GERARD GALLUCO

248 Mineral grafting versus xenografting in small and medium lost of substance
NIDRINA CONSUELA FORNÁ* (ROMANIA)

249 Comparison of primary stability between titanium and zirconium implants
SZYMON FRANK* (POLAND), MONIKA JOKKO, MICHAL SZADOWSKI, ANDRZEJ WOTOWICZ

250 Use of pain medication following implant surgery
PETER FRITZ* (CANADA), PATTI FRITH, RUTH THORPE, DONNA LAVIDE, WENDY WARD

251 Diode laser vs conventional technique for second stage surgery – a pilot study
DRAGANA GABRIĆ PANDUŠ* (CROATIA), NADO SUŠIĆ, JURAJ BRŽIČOVIĆ, MAJA ŽAGARI, DAVOR KATANEC, IVONA BAGO JURIĆ, IRINA FILIPČIĆ ZORE

252 Ceramic oral implants: one-year results from a prospective multicenter study
MÁRIÁS GAHLERT* (GERMANY), HENZ KNHA, DIETER WEINSART, SABINE SCHILD, PETER EICKHOLZ, KATRIN NICKLES, KAI-HENRIK BORMANN

253 Bone and soft tissue augmentation for the rehabilitation of the anterior maxilla: 1-10 years follow-up study
IOANNIS GISSAKIS* (GREECE), ATHANASIOS STANOS, SPIROS BOULIOULIS, VASSILIOS PETSINS, DIMITRIOS ZABARAS

254 Osseointegration and survival rates after immediate implant placement: 1-3 years clinical study
IOANNIS GISSAKIS, IOANNA KYRIAKAKI* (GREECE), ERINI SKIADA, IOANNA KIOUBOURA

255 Evaluation of a one-piece ceramic implant used for single tooth replacement and three-unit bridge restoration. A prospective cohort clinical trial
PHILIPP GROßMANN* (SWITZERLAND), RONALD JUNG, HANNA-WLAS STEINHART, JÖRG STRUB, CHRISTOPH HAMMERLE, RALF KOHAL

256 Gingival papillae after single-implant computer guided flapless surgery
DUSAN GROSELJ* (SLOVENIA), HELENA GROSELJ

257 Evaluation of the effect of surface properties on the stability of the different implants
BURCU GÜRSİDÖRTRAK, HANIFE ATAGÜLLÜ* (TURKEY)

258 Immediate implant placement in areas of aesthetic priority. A 10-year follow-up study
MALENE HALLUND* (DENMARK), ERIK HJØRSTING-HANSEN, SIREN SCHOU
Guided bone regeneration in dehiscence-type defects using a 3D customized pre-formed design titanium mesh (SMARTBuilder™)

Jae Chanh Heo* (South Korea), Yong-Jin Kim, Kyung-Tae Park, Yong-Jin Park, Jung-Min Oh, Yong A Jung

A comparative clinical study evaluating the primary and secondary stability of implants in varying bone densities using resonance frequency analysis

Manisha Herikar* (India), Tushif Sangolli, Megha Seth, Aaquavia Fernandes

Antibiotic prescription patterns among Swedish dental implant surgeons

Dalia Khalil* (Sweden), Margareta Hultin, Bodil Lund

Clinical evaluation of extraction socket graft using autogenous tooth bone: prospective case series study

Youngkyun Kim, Kyoo-Jin Ahn* (Korea)

Long-term results of immediately loaded enossal implants with prefabricated cone abutments - final results

Pablo Hess* (Germany), Dagmar Mueller, Christoph Mueller, Georg Hübers Jürgens

Patients’ perspectives on dental implant and bone graft surgery: questionnaire-based interview survey

Markus Hof* (Austria), Gabi Tepper, Besnik Semo, Christoph Arnhart, Georg Watzek, Bernhard Pommer

Immediate function concept at different types of cases

Necla Asli Kocak* (Turkey), Orhan Abisev, Gamze Sily, Aslan Yasar Gökbuget

Long term follow-up of patients treated with Osseospeed™ implants in a private practice setting

Sara Hurulmann, Marcus Eberhardt* (Switzerland), Fatime Icozlu, Johannes Reimann, Jung-Min Yoo

Influence of hyperbaric oxygen therapy on survival rate of dental implants inserted in irradiated bone-2 years follow up

Miha Kocar* (Slovenia), Vojislav Didanovic, Andrej Kansky, Nataša Ivan Hren, Dime Sapunzićev

Retrospective 6-10 years clinical and radiographic follow-up of 205 Ti-Unite surface implants

Mario Imburgia* (Italy), Giovanni Crocchio

Patterns of bone graft remodeling after placement implants using hatch reamer technique in sinus floor elevation

Sung-Young Ku* (South Korea)

Micromorphometrical analyses of bone and Schneiderian membrane with crestal approach surgical instruments in human cadavers

Cheol Won Lee* (South Korea), Hyojeong Koo, Hee Joon Lee, Bo-him Choi, Ho Sik Shin

Early Placement, Early Loading of Single Mandibular Molar; Prospective Clinical Study

Atef Ismail* (Egypt)

3-10 years treatment outcomes and survival rate with single implants in the most posterior area: a retrospective study

Wonyo Lee* (South Korea), Seong-ryong Huh, Sang-Joon Yu, Byung-Gook Kim

Alveolar ridge augmentation with titanium mesh and autogenous bone

Hai-Won Jung* (South Korea), Baek-Soo Lee, Yong-Dae Kwon, Byung-Joon Choi, Jung-Woo Lee, Jyong Kim, Sun Young Yun

The soft and hard tissues around trans-gingival implants: long term clinical evaluation on 93 immediate loaded implants in edentulous jaw

Claudia Carolina Lenz* (Italy)

Hard tissue augmentation and implant therapy in the esthetic zone without bone substitutes

Gökhan Kasnak* (Turkey), Altug Cüngür, Mustafa Yılmaz, Gökceu Atas, Erhan Firatlı

Single tooth immediate implant placement with buccal bone build in aesthetic zone: a 1-3 years consecutive clinical research

Shuai Li* (China), Bo Chen, Ye Lin

Immediate implant at anterior region: noblerespect versus nobleactieve, six-month post immediate loading result of a randomized controlled trial

Gang Li* (China), Qing Zhang, Dayi Wu

6-7 Weeks healing time of SLA surface soft tissue level straumann implants: 1-3 years results of randomized controlled clinical trial in China

Yu Liu* (China), Songsan Lin, He Zhang, Shigen Liu

Computerised assessment of volumetric alveolar reconstruction with the titanium mesh technique and relevant factors conditioning its effectiveness

Giuseppe Lugo* (Italy), Gerardo Pellegrino, Giuseppe Cornalidesi, Claudio Marchetti

Immediate implant placement in maxillary molars using septa dilatation with threaded expanders or osteotomes. A clinical comparative study

Cesar Luchetti* (Argentina), Alida Ktrakakis, Gregori Kuritzman, Daniel Ostrowicz

Implant placement in the aesthetic area following endodontic periodontal infection

George Manev* (Bulgaria)

Edentulous jaws restoration with 3D software planning, guided surgery and immediate loading

Silvio Mario Meloni* (Italy), Giacomo De Riu, Francesco Maria Lollì, Milena Pisanò, Alessandro Deledda, Antonio Tullio
308 Densitometric analysis of PRF vs xenograft for sinus augmentation procedures – 2 years follow-up  
MATO SUSIC* (CROATIA), MARKO BLASKOVIC, JURAJ BROZOVIC, MATTIA GIKIC, IRINA FILIPPOVIC ZONE, DAVID KATANEK, MARKO GRANIC, DRAGANA GABRIC PANDURIC

309 Autogenic bone block transplantation for jaw bone augmentation and implant treatment in anorexia: 5 years old follow up  
KAROLINA SZANIAWSKA* (POLAND), ANDRZEJ WOJTOWICZ, JAn PEREK

310 Oral rehabilitation after failure with biomaterials  
STEFANO TRASARTI* (GERMANY), FOUAD KHOURY

311 The influence of suture remnants on peri-implant bone healing - A pilot animal experimental study  
OSCAR VILLA* (NORWAY), STRALE PETTER LYNGSTADAS, MARTA MONUD, HANS JACOB RÖNOLD, PETZOLD CHRISTIANE, JOHAN CASPAR WOHHLAHR, JOHAN CASPAR WOHHLAHR

312 Performance of the CONELOG® SCREW-LINE implant in the posterior mandible - preliminary one year results of a prospective two-center pilot study  
WILFRED WAGNER* (GERMANY), MAXIMILIEN MOERGEL, PEDRO MIGUEL NICOLAU, SALOMAO ROCHA, FERNANDO GUERRA

313 GBR with a mechanically stable resorbable membrane as a potential alternative to the use of autogenous bone block grafts  
BASTIAN WESSING* (GERMANY), AHMET BOZKURT, BERND SELLHAUS, MARTIN EMMERICH

314 Immediate implants placement in esthetic zone: case series of 4-10 years follow up with PES  
YING-TE WU* (TAIWAN)

315 Volumetric dimensional change of different types of bone grafts in humans maxillary sinus augmentation  
ELTON ZENÓBIO* (BRAZIL), MAURÍCIO CôSSO, DANNY LIMA, OIJALMA MÈNCÈZ JR., ADRIANA DUARTE, ROBERTA BUSTAMANTE, MARTINHO HORTA, JAMIL SHIBLI

316 Influence of angled implant position on bone strains and stress  
MARCUS ABBOUD* (USA), RAFAEL DELGADO RUIZ, ALEX WON

317 Influence of different drills on the primary implant stability  
MARCUS ABBOUD* (USA), RAFAEL DELGADO RUIZ, ALEX WON

318 Tailored strontium-containing coatings for improved bone ingrowth deposited by means of industrial magnetron sputtering equipment  
INGE HАLD ANDERSEN* (DENMARK), KLAUS PAGH ALMTOFT, SIHRIN SØRENSEN, CHRISTIAN SLOTH JÆPSESEN, OLLE ZOFFMANN ANDERSEN, MICHAEL BRAMMER BILLESSEN, MORTEN FOSS, JØRGEN BØTTIGER, VINCENT OFFERMANS, FRANK KLOSS

319 A novel multi-phosphonated implant surface treatment for accelerated and improved bone healing: a study in sheep  
BJÖRN-OWE ARNÖNSSLON* (SWITZERLAND), MARCELLA VON SALIS, BRIGITTE VON RECHENBERG, STEPHEN FERGUSON, SABRINA BUCHINI, RICHARD CURNO, PETER PECHY

320 Loading properties of implant-abutment assemblies: an interferometric analysis - a pilot study  
JURAJ BROZOVIC* (CROATIA), NAZIF DEMOLI, DRAGANA GABRIC PANDURIC, MATO SUSIC, NINA FARKAŞ, ŽELIKO ALAR

321 Zirconia, fiber and metal bar attachments: retention and strength  
YASEMIN BUDAK* (TURKEY), NISRIN ANIL, UMIT GULER

322 Corrosion resistance and surface characteristics of anodized biodegradable magnesium  
LIM DAEHO* (KOREA)

323 Feasibility testing of a new abutment design  
MATTIAS DAHLSTRÖM* (SWEDEN), JOHN HELLOVIST

324 Digital radiographic bone density evaluation of two different implants placed in standardized porcine bone cylinders of high and low density  
CAROLINA DANTAS, SERGIO SCOMBIATI DE SOUZA* (BRAZIL), DANIELO REIND, ARTHUR NOVAES JR., MARCUS GREI, MARCO TABA JR., DANIELA PAULTO, MICHEL MESSIDRA

325 Safety and efficacy of multi-phosphonate treated dental implants (randomised trial): 1 year post-loading report  
MARCO ESPOSTO* (SWEDEN), IVAN DJOLOVIC, LAURENCE GERMON, NICOLE LEVY, RICHARD CURNO, SABRINA BUCHINI, PETER PECHY, BJÖRN-OWE ARNÖNSSON

326 Cell adhesion on titanium surface coated with human type I collagen  
FERNANDA FAIT* (BRAZIL), CINDY GOES DODO, PUNIO MENDES SENNA, ALTAIR ANTONINNA DEL BEL GURY

327 The risk of Schneiderian membrane perforation during sinus floor elevation procedure due to the diameter of biomaterials  
SZYNGR FRANK* (POLAND), KAROL DOMNIAK, PIOTR WESŁOWSKI, ADAM JAWNIK, ANDRZEJ WOJTOWICZ

328 Effect of copper ions on the growth of BMSC on porous HA/TCP scaffolds for vascularization of bone tissue engineering  
JING FU* (CHINA)

Material research

318 Tailored strontium-containing coatings for improved bone ingrowth deposited by means of industrial magnetron sputtering equipment

319 A novel multi-phosphonated implant surface treatment for accelerated and improved bone healing: a study in sheep

320 Loading properties of implant-abutment assemblies: an interferometric analysis - a pilot study

321 Zirconia, fiber and metal bar attachments: retention and strength

322 Corrosion resistance and surface characteristics of anodized biodegradable magnesium

323 Feasibility testing of a new abutment design

324 Digital radiographic bone density evaluation of two different implants placed in standardized porcine bone cylinders of high and low density

325 Safety and efficacy of multi-phosphonate treated dental implants (randomised trial): 1 year post-loading report

326 Cell adhesion on titanium surface coated with human type I collagen

327 The risk of Schneiderian membrane perforation during sinus floor elevation procedure due to the diameter of biomaterials

328 Effect of copper ions on the growth of BMSC on porous HA/TCP scaffolds for vascularization of bone tissue engineering
329 Thermal effects during implant site drilling comparing the movement and irrigation system
SERGIO GEHRKE* (BRAZIL), HENRIQUE LOFFREDO NETO, FABIO MARDEGAN, SILVIO TASCHERI, STEFANO CORBELLA

330 Aspects of the microbial biofilms formation and development on inert substrates in implant-prosthetic rehabilitation
ROMANITA GLIGOR* (ROMANIA), MIHAI BURILBASA, LUISA ADRIANA STANCA MUNTIANU, CORINA MARILENA CRISTACHE, DANA CRISTINA BOONAR, GABRIELA TANASE, PETRU ARMEAN

331 How to rationally improve a dental implants system: an example from Brazil
RODRIGO GRANATO* (BRAZIL), CHARLES MARIN, ESTEVAM BONFANTE, PAULO COELHO, MARCELO SUZUKI

332 Optimization of preload and torsion by using a unique abutment screw design for each implant platform size
ANDERS HALLDIEN* (SWEEDEN), MATTIAS DAHLSTRÖM

333 Bone regeneration of rat critical size calvarial defect with large-size fully inter-connected porous apatite/collagen composite
WATARU HATAKEYAMA* (JAPAN), HIDEYOSHI KIHARA, KYOKO TAKAFUJI, HISATOMO KONDO

334 Shear-bond strength to resin cement after the application of nanostructured alumina coating on the surface of Y-TZP
SEQ JAE MIN* (KOREA)

335 Surface modification of pure titanium by a double treatment of nanotube formation and dopamine coating
SEQ JAE MIN* (KOREA)

336 The effect of SRGDS peptide coating onto titanium dioxide nanotube of chemical immobilized method
MIN KYUNG JI (SOUTH KOREA), SANG-WON PARK, KWANGMIN LEE, KWI-DUG YUN, JEONG-TAE KDH, GYE-JEONG OH, MIN KYUNG JI, KYUNG-JIN JANG, JI HYUN KIM, HYUN PIL LIM*

337 The evaluation of antibacterial activity and osteoblast viability of Titanium nitride/Zirconium nitride coated on titanium
MIN KYUNG JI (SOUTH KOREA), SANG-WON PARK, KWI-DUG YUN, KYUNGHUI LEE, GYE-JEONG OH, KYUNG-JIN JANG, JI HYUN KIM, GA HYUN KIM, HYUN PIL LIM*

338 Development of novel osteogenic bone substitute material using static-loaded biodegradable polymer-calcium phosphate nanoparticle composite
YOHE JINNO* (JAPAN), YASUNORI AKAWA, HIDEO SHIMIZU, KIRI ATSUTA, TOMOHIRO MASUZAKI, KYOSHII KOYANO

339 Functionality of a further developed implant system. Mechanical integrity
HENRIK JOHANSSON* (SWEDEN), JOHN HELLOVST

340 Credibility of an up-dated implant system. Implant-abutment leakage testing
HENRIK JOHANSSON* (SWEDEN), JOHN HELLOVST, STEFAN JOHNSON

341 Effects of epigallocatechin-3-gallate on healing of the extraction socket with periapical lesion
UI WON JUNG* (KOREA), JI YOUN HONG, JUNG SEOK LEE, IN KYOUNG LEE, CHEOL YANG

342 Effects of Mgin and Ca-ion Implantations on Porphyromonas gingivalis and fusobacterium nucleatum attachment
SUN NYO KANG* (SOUTH KOREA)

343 Hardness of new bone by bone grafting materials
YU KATOKA, YUICHI TAKIGUCHI* (JAPAN), YOSHIHIRO YAMADA, SHIGERU KIDA, TAKASHI MIYAZAKI

344 Effect of excimer ultraviolet to titanium modified by Wire-type EDM and SLA
YU KATOKA* (JAPAN), YUICHI TAKIGUCHI, TAKASHI MIYAZAKI, MASAO KUROSAKA, SHIGERU KIDA

345 In vitro precision of fit of screw-retained CAD/CAM frameworks made from zirconium dioxide and titanium
JOANNIS KATSOLIS* (SWITZERLAND), REGINA MERCK-SCHMIDT, NORDER ENGLUND, MARIANNA VIBAMPOLO, MARKUS BLATZ

346 Micromobility of the implant/abutment interface for original and third-party abutments - a combined experimental and numerical study
LUDGER KEILIG* (GERMANY), JAN BERS, PATRICIA SPÖHNER, ELENA KOCHEROVSKAYA, CHRISTOPH BOURAUEL

347 Experimental study of the wear behaviour of retentive attachment systems for removable partial dentures on endosseous dental implants
LUDGER KEILIG, CHRISTINA ESSE* (GERMANY), MATTHIAS BRUNE, MANFRED GRÜNER, ROBERT HÜLTENSCHMIDT, CHRISTOPH BOURAUEL, STEFAN BAYER, ERNST-HEINRICH HELFGEN, HELMUT STARK

348 The effect of mechanical and laser treatments on the titanium implant-adherent biofilms
OK-SU KIM* (KOREA)

349 In-office, immediate, and rapid preparation of autotooth biomaterial for alveolar bone reconstruction
EUN YOUNG LEE* (SOUTH KOREA), EUN-SUJ KIM, KYUNG-WON KIM

350 Histomorphometric analysis of implant-bone interface between SLA® and Joy 1 implant® in dogs
WON PYO LEE* (SOUTH KOREA), MING-JIN JUNG, SANG-JUN YU, BYUNG-OOK KIM, MINS-JHEN ZHENG

351 Comparison of biofilm on titanium and zirconia surfaces: in vivo study
BLSU LIM* (KOREA), OK-SU KIM
Laboratory analysis of the removal torque and the interface implant/abutment in taper Morse implants after mechanical cycling
GIOVANNI MARIN* (ITALY), SERGIO GIERKE, ROBERTO SERRA

Development and «in vitro» biological assessment of gelatin-silica coatings
MARIA MARTINEZ-BAÑEZ* (SPAIN), MARIA JESUS JUAN-ADIAZ, BEATRIZ PALLA-RUBIO, SARA BARRIOS, IRENE LARA-GAYE, JULIO SUAY, ISABEL GOÑI, MARIA GRIJALBA-GRAJADA, JAVIME FRANCO, ANTONIO CISDE

Report on characteristics of abutments made with cobalt-chromium alloy
GO MASHIO* (JAPAN), MASAYUKI TAKAYAMA, TOMOHIO KUMAGAI

Comparison of color gradation of natural central incisors and corresponding CAD/CAM restorative materials
CHIKAYUKI ODAIRA* (JAPAN), YUMIKO SAITO, DAITETSU YOSHIDA, HISATOMO KOHDO

Nanoporous surface of titanium enhances implant osseointegration
LAETITIA SALOU* (FRANCE)

Primary stability of different implants placed in standardized porcine bone cylinders: insertion torque and resonance frequency analyses
SERGIO SCOMBATTI DE SOUZA* (BRAZIL), CAROLINA DANTAS, DANIEL REINO, ARTHUR NºVAES JR., MARCIO GRIS, MARIO TABA JR., DANIELA PALIOTO, MICHEL MESSORA

Osteoblast cell adhesion and spreading on nitrided titanium surface
PLIND SERRNA* (BRAZIL), CINDY DODD, ALTALR BEL CURY

Influence of Ti-coating on the osseointegrative properties of polyetheretherketone (PEEK) implants: Preliminary results of a pilot study in sheep
STEPHAN STUBINGER* (SWITZERLAND), PREVE ELENGORA, ANKA DRECHSLER, GIANLUCA ZAPPINI, ALEXANDER BURKI, BRIGITTE VON RECHENBERG

Effect of abutment screw design on the seal performance of an external hex implant system
ZACHARY SUTTON* (USA), ROSS TOWSE, ANTE TAJDEN

Initial adhesion on nanoscale features of the titanium surface: effects of deposition time in NaOH solution
YDICHIO TAJOUCHI* (JAPAN)

Evaluation of three different validation procedures regarding the accuracy of template-guided implant placement: An in vitro study
CHRISTOPH VASAK* (AUSTRIA), GEORGI D. STRIBAC, CHRISTIAN D. HUBER, STEFAN LETTNER, MARTIN VOHLER, ANDRE GAHLEITNER, WERNER ZECHNER

Comparison of IL-1β & TNF-α in peri-implant crevicular fluid around zirconium healing abutments with or without peri-implant mucositis
HAIBIN XIA* (CHINA), MIN WANG, HAXIAO ZOU, YINING WANG

The fate of dental implants in a patient receiving IV zoledronic acid treatment
ABDULLAH AKMAN (TURKEY), ALI ORKUN TOPCU*, OZLEM OZER YUCEL, AYDA UKUR, BURAK DEMIRALP

Vegetal extracts used as alternative for periimplantitis treatment
MIHAI BURLIBASA* (ROMANIA), MADALINA MALITA, ILEANA KINESCU, ALIN ANDREI (IONELE SPEATU), IOI ALEXANDRU POPOVICI, ROMANITA MIHAELA GUGOR, PETRU ARMEAN

Complications in accelerated single implant placement and loading – biological reintegration
AMIR CATIC* (CROATIA)

Biocatnic and prosthetic complications in full-arch fixed prosthesis supported by four implants: a 9-years follow-up retrospective study
NICOLO CAVALLI* (ITALY), STEFANO CORBIELLA, FEDERICO MAZZA, BRUNO BARBARI, DAVIDE SPASARI, FRANCESCO AZZOLA, SILVIO TASCHEI, MASSIMO DEL PABLO, LUCIA FRANZETTI

Comparative study of survival and complication rates between external and internal type implant systems
SUNG-WOOK CHAE* (SOUTH KOREA), YOUNG-SUNG KIM, YOUNG-MOO LEE, WON-KYUNG KIM, YOUNG-KYOO LEE, SU-HWAN KIM

An impression technique for implants placed in high proximity and angulation
VASILIOS CHRONOPoulos* (AUSTRIA), AKA RIKONPOULOU, ARETI VROCHARI, WARD MASSEY

Frequency of complications in unsplinted implant restorations in the terminal gap situations – a retrospective study
FERENC FABIAN* (AUSTRIA), SABINE WADSAUCK, NORBERT JAKSE

Dramatic osteonecrosis of the jaw associated with oral bisphosphonates treatment after implant removal: a case report
ALBERTO FERNÁNDEZ AYORA* (BELGIUM), FRANCINE HERION, ERIC ROMPEN, FRANCE LAMBERT

Microbiological study using PCR and culture methods in peri-implantitis
CARLOS FERNÁNDEZ CHEREGUIN* (SPAIN), MANUEL GONZÁLEZ OSILUJAN, MATTED ALBERTINI, LORENA LÓPEZ CERERO, SOHA BALLESTA, ESTEFANÍA ORTIZ, JOSE VICENTE RÓIS, MARIANO HERRERO CUMIENT, PEDRO BULLÓN

Epithelialized gingival grafting to increase the width of keratinized mucosa around dental implants: a case report
MUHAMMAD ÖZELİS* (TURKEY), Saffet Ekinci
374 Management of inferior alveolar nerve injury due to implant placement: a case report
WEI-CHEN HWANG* (TAIWAN)
375 Zirconia based reconstructions on implants followed for up to 5 years: a case series
LUMINI KOLGEOD* (SWITZERLAND)
376 New concepts or best practice - Experience from 12700 implants of the Frankfurt 20-years study
MISCHA KREBS* (GERMANY)
377 Peri-Implantitis related to different surfaces at non-submerged titanium implants: 5-year clinical results from a retrospective study
ANGEL MANCHÓN* (SPAIN); JUAN CARLOS PRADOS-FRUTOS; ARANTZA RODRIGUEZ; SEBASTIAN ORTOLANI
378 Scanning electron microscopic observation of two cases of fractured implants, and their clinical implications
MUTSUMI NAGATA* (JAPAN); HIROTOSHI NAKANO, TAKAHITO KANIE
379 a systematic review of biological and technical complications of immediate loaded fixed implant rehabilitations for partially edentulous patients
BREAnDAn O nIADH* (USA); KATSUICHIRO MARUO, MARTInE RIGGI-HEInIGER, ALExAnDER SCHROTT, GERMAn GALLUCCI
380 Influence of lateral static overload on immediately restore implants in a canine model
JAMIL SHIBLI, DAnIEL FERRARI* (BRAZIL); ADRIAnO PIATTELLI, GIOVAnnA IEzzI, ELTOn zEnOBIO, MAGDA FERES
381 The effect of treated periodontitis on implant outcomes in partially dentate individuals
VAnESSA SOUSA* (UK); BRUNA FARIAS, nIKOS MARDAS, IAn nEEDLEMAn, AVIVA PETRIE, DAVID SPRATT, nIKOLAOS DOnOS
382 Implant failures: retrospective longitudinal study during 15 years of clinical experience
ENRICO STOFFELLA* (ITALY); MARCO DE LUCA, PAOLO CARLO MARIDATI, GIOVAnnI BATTISTA GROSSI, CARLO MAIORAnA
383 A novel standardized bone model for thermal evaluation of bone osteotomies with various irrigation methods
GEDR D. STRBAC* (AUSTRIA); KATHARINA GIAnnIS, EWALD UnGER, CHRISTOPH VASAK, REnE DONNER, MARTINA MITTLBÖCK, GEORG WATZEK, WERnER zECHnER
384 Success rates of fixed partial reconstructions worn by teeth, implants and their combination
zVONIMIR SVALInA* (CROATIA); MICA PELIVAN, ROBERT Gelic
385 Management of food impaction after implant prosthesis
TIONG HIAn TAn* (TAIWAN)
386 Presence, location and course of mandibular incisive canal and inter-examiner variation: a spiral CT scan study
nIHAL AVCU, SERDAR UYSAL, NERWIN YANALUk
387 Restorative solutions for compromised esthetic implant sites - a case series
SUSSANNE Vogl* (AUSTRIA); MARTIN LORENZONI, MARLINE STOPPER, MICHAEL PAYEN, WALTHER A. WEGSCHEDER, GERNOT WIMMER, RUDOLF HRIDNA
388 Treatment of peri-implant mucositis using a resorbable chitosan brush - a pilot clinical study
JOHAn CASPAR WICHFAHRT* (NORWAY); ANNE MIFETE AASS, ODD CARSTEn KOLDSLAnD

Tissue augmentation and engineering

389 Hard and soft tissue augmentation for implant placement in the aesthetic zone
DANIEL ALVES* (PORTUGAL); ANA PAIS, FERNANDO ALMEIDA
390 Horizontal ridge augmentation using a new particulate synthetic graft. Human case report with microtomographic and histological analyses
LEAnDRO ALVES DA COSTA* (BRAZIL); RAFAEL MANTOVANI, JOSÉ GABARRA JR., TUULIO PIRNATON, VALDIR MUDILIA, SERGIO SCOMBATTI DE SOUZA
391 A randomized clinical trial evaluating plasma rich in growth factors (endoret) in the treatment of post-extraction mandibular molars
EDUARDO AnITUA* (SPAIN); MOHAMMAD ALKHRAIST, GORKA ORIVE, ALIA MURIAS
392 Evaluation of alveolar ridge preservation 3 months after tooth extraction with a mix of particulate DFDBA and platelet concentrates
BEHRAnG BAnIASADI* (BELGIUM); EDDY AYACHI, ANASS AzMAnI, LAUREnCE EVRARD
393 Histological evaluation of PRGF as adjunct to DDB in maxillary sinus floor augmentation. Preliminary results of a split-mouth study
LEOnIDAS BATAS* (GREECE)
394 Histological evaluation of PRGF as adjunct to DDB in maxillary sinus floor augmentation. Preliminary results of a split-mouth study
LEOnIDAS BATAS* (GREECE); ANDREAS STAVROPOLLOS, SOKRATES KOUMPIAS, ANTONIOS KOSTANTINODIS
395 Maxillary sinus augmentation with PRF+graft versus collagen membrane+graft: a clinical, radiological and histological study
nIILUFER BOLUKBASI* (TURKEY)
396 Mg-doped brushite cement for bone regeneration
JATSHUE CABREJOS-AZAMA* (SPAIN), MOHAMMAD ALKHRAISAT, JULIA LUCAS-APARICIO, CARMEN RUIEDA, JESUS TORRES, LUIS BLANCO, ENRIQUE LÓPEZ-CABARCOS

397 Aesthetic outcomes in a case of GBR of fresh socket site with rehabilitation implant prosthodontic using Zirconia Abutments: 1 year of follow-up
ERNESTO CASELLI* (ITALY)

398 Immediate loading of single-tooth restorations after re generation bone in aesthetic area: one-year of follow-up (case report)
ERNESTO CASELLI* (ITALY)

399 Two-stage maxillary sinus augmentation using autogenous bone and β-tricalcium phosphate: Clinical and histomorphometric evaluation in humans
MIGUEL DAVID DEVALLDES LEGARDI* (CZECH REPUBLIC), JAKUB STRNAD, RADEX MOLNÁR

400 A comparative study of the regenerative effect of sinus bone grafting with platelet-rich fibrin-mixed Bio-Oss and commercial fibrin-mixed Bio-Oss
EYUHNG-HO CHO* (SOUTH KOREA), SEUNG JAE JEEONG, JEEONG-SEOQ SON, JAE-SIK KIM, SAE-HA KANG

401 Alveolar Ridge Preservation techniques: a systematic review and metaanalysis of histological and histomorphometrical data
MARCO CLEMENTINI* (ITALY), VALERIA DE RISI, Gianluca VITTORINI, ALICE MANNOCCI, MASSIMO DE SANTIS

402 Withdrawn

403 Graft shrinkage and survival rate of implants after sinus floor elevation using NanoBone®: 1-year prospective study
MARCEL HAGE* (SWITZERLAND), SEMAAN ABJ NAJM, MARK BISCHOFF, RABAH NEDIR, JEAN-PIERRE CARREL, JEAN-PIERRE BERNARD

404 Comparative investigation of the effects of titanium prepared platelet-rich fibrin (T-PRF) and platelet-rich fibrin (PRF) on new bone formation
ERHAN FRATLI* (TURKEY), MUSTAFA TUNALI, HAKAN ÖZDEMIR, ZAFER KUCUKODACI, SEREF EZIRGI, EMRE BARIS, SERHAN AKMÁN

405 Bone formation 6 and 12-months after sinus elevation surgeries with a bovine derived biomaterial. Microtomographic and histological analyses
JOSE GABAEPRA JR.* (BRAZIL), SERGIO SCOMBATTI DE SOUZA, RAFAEL MANTEZIANI, LEANDRO ALVES DA COSTA, TULIO PIGNATON, VALDIR MUGLIA, ARTHUR NOVAS JR.

406 Comparison of Aligpore and Bio-oss in maxillary sinus floor augmentation: histological and histomorphometric evaluation
GIULIANO GARLIN* (ITALY), MARCO REDEMAGNI, CLAUDIO DELLAVIA

Er, Cr: YSGG-laser assisted sinus floor augmentation - an experimental pilot study
MARKUS HOF* (AUSTRIA), ADNAN REDZIC, EWALD UNGER, CHRISTIAN ULM, ANDREAS MONTITZ, BERHARD FÖMMER

The effect of adipose-derived stem cells on bone formation and osseointegration in diabetic rabbits
WANG KONGQIANG, SONG YINGJIANG* (CHINA)

Spontaneous sinus bone formation at the sinus floor after sinus elevation without bone grafts or implants: placement–cases report
KUO-CHING HUANG* (TAIWAN), CHIH-YANG WANG

Correction of buccal bony defects in posterior mandible; prospective clinical study
ATEF ISMAIL* (EGYPT), MARIUM ISMAIL

Relapse and Overcorrection in alveolar distraction osteogenesis for dental implant of mandible
MASASHIRO IWATA* (JAPAN), ATSUSHI MURAYAMA, TOSHIHIRO NISHIYAMA, YOKO ASAI, HIDROM KASA

Alveolar ridge augmentation using vascularized interpositional periosteal-connective tissue (VIP-CT) flap: two case reports
SEONG-YONG JEEONG* (KOREA), KEUN-HO KWON, SEO-MD HEO

Minimally invasive lateral ridge augmentation using a subperiostal tunnel technique
ASHISH KAKAR* (INDIA), MICHAEL KOELLI, KANJIPRIYA KAKAR, STEFAN STUBINGER, HARSH MAHAJAN

Effects of FGF-2 guided bone augmentation beyond the skeletal envelope within a plastic cap in the rat calvarium
RISA KIWAMI* (JAPAN), SHIUCHI SATO, NIKKO TSUCHIYA, TOMIHIRO YOSHIMAKI, YOSHINORI ARAI, KOHIBI TO

Vertical reconstruction of alveolar ridge with sandwich osteotomy using interpositional heterologous cancellous collagenated block
MIHA KOČAR* (SLOVENIA)

Ridge preservation using in situ hardening bone graft substitutes: comparison between a β-TCP and a biphasic calcium phosphate material
MINAS LEVENTIS, PETER FAUBEIN* (LUXA), ORESTIS VASILIADIS, ANNETTE LINDNER, HEINER NAGURSKY

Socket preservation in molar sites without primary wound closure. A clinical study
MINAS LEVENTIS* (GREECE), ORESTIS VASILIADIS, PETER FAUBEIN, VASILEIOS MARSAPITIS, DEMOS KALVAG
428 Five year follow-up on usage of porous titanium granules (PTG) in implant dentistry

IVICA PELivan* (CROATIA), NIKSA DULIC

429 Stem cells and alveolar bone regeneration

ALESSANDRO PERIN* (ITALY), GIULIA BRUNELLO, NICOla DERTON, DANIELE BOTTICELli, MARIO BERENGUE, EDARDO STELLINI

430 How much bone loss can be prevented by alveolar ridge preservation?

BERNHARD POMMER* (AUSTRIA), SIMONE HEUBERER, LUCAS NAHLER, GABRIELLA DVORAK, GEORg WATZK

431 Functional and esthetic rehabilitation of the patient with unilateral Cleft Lip and Palate. Clinical case report

EGOR PORSIDENCO* (MOLDOVA), IDN LUPAN

432 Does the use of grafting material influence the implant stability during trans-alveolar maxillary sinus floor elevation

DIME SAPUNDZIEV* (SLOVENIA), NATASA IJAN HREN, ANDREJ KANSKY, MIHA KOČAR

433 Vestibuloplasty: Porcine Collagen Matrix Versus Free gingival graft. A Clinical and Histological Study

CHRISTIAN SCHMITT* (GERMANY), KARL ANDREAS SCHLEGEL, CHRISTIAN TUDOR, ABBAS AGAIMY, STEFAN EITNER

434 Vertical ridge augmentation of an atrophic posterior mandible with immediate implant placement: a case report

GAMZE ŞENOL GÜVEN* (TURKEY), GÖKHAN GÜVEN, GÜLSUMLÜ AK

435 Minimally invasive transalveolar sinus-floor elevation and implant placement using calcium phosphosilicate putty via a novel cartridge delivery system

SIDHARTH SHANBHAG* (INDIA), UDatta KHER

436 Reconstruction of alveolar bone through autogenous ulna bone graft

FRANCISLEY AVILA SOUZA, TÂNIA A BÁRBARA* (BRAZIL), PAULO PERRI DE CARVALHO, IDELMO RANGEL GARCIA-JUNIOR, ESSALDO MAGRO-FILHO, FRANCINE BENETTI, BRUNA BARBIERI MARTINS, HELOISA HELENA NIMA

437 Minimal invasive sinus membrane elevation using the balloon technique

MAHMoud SUlEIMAN* (UK)

438 The effect of platelet derived growth factor on guided bone augmentation in the rat

NORIKO TSUCHIYA* (JAPAN), SHuICHI SATO, RISA KIGAMI, TOMOHiro YOSHIMAKI, YOSHINORI ARAI, KOICHI ITO

439 Effects of titanium prepared platelet-rich fibrin (T-PRF): a novel platelet concentrate on new bone formation in rabbits

MUStafa TUNALI* (TURKEY), HAKAN ÖZDEMIR, ZaFER KİÇİKCIADO, SEREF EZIRGANLI, EMRE BAŞ, SERHAN AKMAN, ERHAN FIRATlı
Bone volume changes after sinus floor augmentation with heterogenous graft
BRUNO VIEIRA RODRIGUES DA SILVA* (BRAZIL), JESSICA LEMOS, RICARDO OLIVEIRA DE MORAES, RENATO DE ANDRADE GOMES, EDISON JOSÉ FERREIRA, MARCOS RIKK KUBARA, GUSTAVO GROLLI KLEIN, HUGO NARY FILHO

Computer aided planning of facial reconstructions with microvascular transplants
SASCHA VIRNÖ* (AUSTRIA), DANIEL JAMNIG, ALEXANDER GAGGL, CHRISTIAN KOTRATSCHKE, FRIEDRICH CHIARI

Pre-osteoblasts cultured in vitro on allograft and applied in bone post-cystectomie defect
ANDRZEJ WOJTOWICZ* (POLAND), MONICA JODKO, JAN PEREK, EWA OLENDER, ARTUR KAMINSKI, ELZBIETA URBANOWSKA

Implant treatment outcomes following mandibular reconstruction with double barrel fibula bone grafting or vertical distraction osteogenesis fibula
YIQUN WU* (CHINA), FENG WANG, WSI HUANG, CHENPING ZHANG, JIAN SUN, JIAN SUN, DARNELL KAIGLER

The influence of platelet-rich fibrin on angiogenesis in guided bone regeneration using xenogenic bone substitutes
HYUN JOONG YOON* (KOREA)
Invited speakers & chairpersons, overview

Invited speakers

Mats Andersson, Sweden
Mauricio Araujo, Brazil
Franck Bonnet, France
Lawrence Brecht, USA
Raffaele Cavalicanti, Italy
Ruben Davó, Spain
Andrew Dawood, United Kingdom
Joke Duycq, Belgium
Vincent Fehmer, Switzerland
Mauro Fradeani, Italy
Germain Gallucci, Italy
Philippe Gault, France
Stefano Gracis, Italy
Reinhard Gruber, Switzerland
Ueli Grunder, Switzerland
Klaus Gotfredsen, Denmark
Simon Storgard Jensen, Denmark
Ronald Jung, Switzerland
Dario Kozak, Slovenia
Dominic Le, UK
Franck Bonnet, France
Jose Manuel Navarro, Spain
Josefa Pimenta, Portugal
Karl Andreas Schlegel, Germany
Henning Schliephake, Germany
Soren Schou, Denmark
Karl Andreas Schlegel, Germany
Mark Pinsky, USA
Marc Quirynen, Belgium
Fadi Hamwi, USA
Andrew Dawood, United Kingdom
Sara Rentsch, Switzerland
Stefan Renvert, Sweden
Isabella Rocchieta, Italy
Irena Sailer, Switzerland
Mariano Sanz, Spain
David Sarment, USA
Florian Schober Switzerland
Keith Smith, United Kingdom
Peter Thomsen, Sweden
Yvo Vermylen, Belgium
Paolo Vigolo, Italy
Angus Walls, United Kingdom
Anselm Wiskott, Switzerland
Mariano Sanz, Spain
Irena Sailer, Switzerland
Victor Palarie, France
Henny.J. Meijer, The Netherlands
Brian Millar, United Kingdom
Frauke Muller, Switzerland
Inena Sailer, Switzerland
Mariano Sanz, Spain

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Finbarr Allen, Ireland
Franck Bonnet, France
Nikolas Donos, United Kingdom
Helena Francisco, Portugal
Klaus Gotfredsen, Denmark
David Harris, Ireland
Simon Storgard Jensen, Denmark
Ronald Jung, Switzerland
Theodoros Kapos, United Kingdom
Niklaus Lang, Switzerland
Georg Mallath Pokorný, Austria
Carlo Maiorana, Italy
Chantal Malevez, Belgium
Jose Manuel Navarro, Spain
Alisa Nicol, United Kingdom
Brian O’Connell, Ireland
Victor Palanie, Moldova
Michael Payer, Austria
Ioannis Polyzois, Ireland
Franck Renouard, France
Inena Sailer, Switzerland
Mariano Sanz, Spain

Poster Presentation, Research Competition and Short Oral Communication Presenters

Semaan Abi Najm, Switzerland
Fahem Abbas, Pakistan
Ole Zoffmann Andersen, Denmark
Volkan Arisan, Turkey
Borvorwut Buranawat, Thailand
Soo Hwan Byun, Korea
Luigi Canullo, Italy
Olivier Carcuac, Sweden
Daniele Cardaropoli, Italy
Conina Marilen Cristache, Romania
Maria Devine, United Kingdom
Yan Duan, South Korea
Anja Zembic, The Netherlands
Asmaa El-Kaddar, United Kingdom
Ofer Moses, Israel
Norbert Enkling, Switzerland
Kai Fischer, Germany
Silvia Galli, Sweden
Ioannis Gisakis, Greece
Jessica Guinelli, Brazil
Felix Guljé, The Netherlands
Katarzyna Gurawska, Denmark
Yan Huang, Belgium
Soon Jung Hwang, South Korea
Juan Carlos Ibanez, Argentina
Georgios Ioannidis, United Kingdom
Ryo Jimbo, Sweden
Par Johansson, Sweden
Anna Klinge, Sweden
Ralf Kohal, Germany
Thao Le, USA
Hwa-Sun Lee, South Korea
Jong-Ho Lee, Korea
Richard Leesungbok, South Korea
Tomas Linkevičius, Lithuania
Giuseppe Lizio, Italy
Diego Lops, Italy
Li Ma, China
Eli Machtet, Israel
Hassan Maghaireh, United Kingdom
Christian Makary, Lebanon
Katharina Maniura-Weber, Switzerland
Nikos Mardas, United Kingdom
Christian Mertens, Germany
Luis Andre Mezzomo, Brazil
Joerg Neugebauer, Germany
Vincent Offermanns, Austria
Victor Palarie, Moldova
Dimitrios Papadimitriou, USA
Jin Young Park, South Korea
David Penarrocha, Spain
Alessandro Pozzi, Italy
Algirdas Puisys, Lithuania
Shichong Qiao, China
Mustafa Ramazanoglu, Turkey
Stefanie Schwarz, Germany
Jamil Shibli, Brazil
Hyun-Ki Shin, South Korea
Misi Si, China
Rubens Spin-Neto, Denmark
Bernd Stadlinger, Switzerland
Andreas Stavropoulos, Sweden
Kees Stellingsma, The Netherlands
Marco Tallarico, Italy
Gerdien Tellemann, The Netherlands
Stefan Vandelneghe, Belgium
Lin Xiang, China
Anja Zembic, The Netherlands
Elise Zuiderveld, The Netherlands
Plenary Session 1

PLANNING FOR SUCCESS – HOW TO MAKE IT ALL GO RIGHT

> Franck RENOUARD

Franck Renouard is graduated of the Dental University of Paris V in 1982. He was assistant of Jean-François Tulane in the Cranio-Maxillo-Facial Team of Paul Tessier from 1983 to 1988 in Paris. He has published several national and international articles and is author of a Text Book with Bo Rangert. The first one « Risk Factors in Implant Dentistry: Simplified Clinical Analysis for predictable Treatment» was published in 10 languages. He lectures intensively on Implants, Immediate loading, Biomechanics and Bone Grafting procedure. Dr. Renouard was elected to the European Association for Dissemination executive board in Amsterdam in 2000, and is Past President for the organization (2006-2008). He is in Private Practice in Paris limited of Oral and Implant Surgery. He is visiting Professor at the Medicine Faculty of Lieges, Belgium.

> Mark PINSKY

Mark Pinsky DDS is a general practice dentist in Ann Arbor, Michigan. He has practiced dentistry for over 30 years. In addition, he is an airline pilot with Delta Airlines. Presently he is an Airbus A-330 Captain, having flown routes around the world, including North and South America, Europe, Africa, and Asia. When not flying or practicing Dentistry, Dr. Pinsky is actively working with Dental Students at the University of Michigan School of Dentistry. He is a member of the Executive Committee with the Scholars Program in Dental Leadership and the Leadership Pathway. Dr. Pinsky is the lead author on the first paper in Dentistry that relates his experiences with the principles of Crew Resource Management (CRM) gained over his career as an airline pilot and as a dentist. Dr. Pinsky has authored several papers on a variety of dental topics in peer reviewed journals, and has lectured on the topic. Dr. Pinsky holds a BS and a DDS from The Ohio State University. He has completed a General Practice Residency at Albert Einstein Hospital in Philadelphia, Pennsylvania, as well as a 1 year Post Graduate Scholars Program at the University of Michigan. He is a certified Flight Instructor in Airplanes, Seaplanes, Helicopters, Hot Air Balloons, Gliders, Gyroplanes and Blimps.

MINIMISING ERRORS IN IMPLANTOLOGY: PREVENTION VS INTERVENTION

While not necessarily obvious, there are a large number of similarities between the skills required to operate a large commercial aircraft on a daily basis and the skills required to practice dentistry. Each occupation requires an extensive mastery of knowledge and skills. While the specific knowledge and skills for pilots and dentists are definitively different, it is in the application of those skills where one can find common ground. The basis for this common ground is that we are all humans. As humans, the following observation is irrefutable - “Human Error is Inevitable”. The purpose of this presentation will be to view the world of the dentist from the eyes of the pilot, noting the commonalities between the two seemingly different professions. It is by examination of the human aspects of the practice of dentistry that we can decrease error for our patients and increase efficiency for ourselves. This in turn will lead to more predictably successful outcomes.

> David SARMENT

Dr. David Sarment practices Periodontics and Implantology in Alexandria, Virginia. He is the author of two textbooks, the “Manual of Implant Dentistry” and “Cone Beam Computed Tomography for Maxillofacial Applications”, as well as several book chapters and scientific papers discussing implants and Computed Tomography scanning. He is a Diplomate of the American Board of Periodontology and a scientific reviewer for the Journal of Periodontology. Dr. Sarment received his certificates in Periodontics and Periodontal Prosthesis, and a Master of Science in Oral Biology from the University of Pennsylvania.

SIMPLE METHODOLOGY FOR SUCCESSFUL PLANNING IN DAY-TO-DAY IMPLANTOLOGY

Implantology is reaching high predictability and surgical techniques are becoming more established. Yet, most difficulties can usually be traced to treatment planning. Advanced diagnostic methods have yet to accommodate for comprehensive prosthetic planning. Consequently, long-term success relies on well thought out plans. Yet, risks are rarely mitigated and decisions are often depend upon personal experience. This clinical lecture will suggest an organized practical approach to implant cases most commonly seen by the proficient implantologist. Upon completion of the lecture, the attendees should:

- Be knowledgeable with a systematic approach to treatment planning
- Recognize the simplicity and practicality of an organized method in daily practice
- Recognize how human factors can impair treatment planning
- Understand how a well applied method can improve success
CHAIRPERSON

> Alberto SICILIA FELECHOSA
Doctor in Medicine, and Specialist on Stomatology (UO). 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&Osteointegración (Official Publication of SEPA) and RCOE (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)

> Anselm WISKOTT
Dr Wiskott graduated in 1977. After three years of private practice and internship he earned a doctorate in dental medicine. He then transferred to the United States 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. Dr Wiskott’s research interests include bone reactions to mechanical stress, failure mechanisms in prosthodontics and the design of bone substitute materials. Dr Wiskott is professor of biomaterials at the University of Geneva. He is the author of about 100 scholarly articles and the textbook “Fixed Prosthodontics – Principles and Clinics”.

CAREER AFTERNOON

CAN WE DEPEND ON GENERALLY HELD BELIEFS IN IMPLANT DENTISTRY?

On historical grounds, there are a number of assumptions that permeate the practice of implant dentistry. These pertain both to the biology of bone support and to engineering issues that affect the mechanical resistance of the implant-restoration complex. While none of these assumptions is actually damaging per se, they cloud the issue as to those criteria that will truly affect the success or failure of implant-assisted therapy. It is the object of this presentation to sort out those criteria that are essential versus those whose importance is secondary or nil.

- Long(er) vs. short(er) implants. This issue boils down to the relationship between the applied stress and the reaction of the supporting bone. Although highly complex in its details, the broad lines of this relationship are established and support the routine use of short(er) implants.

- The attachment of the bone to the implant surface. Contrary to generally held beliefs, bone “adheres” poorly to implant surfaces (in the order of a few MPa). Attachment only becomes significant when the surface is roughened. Problematically surface roughness is one of the worst enemies of ceramic materials which do not resist stress concentrations well, hence raising questions about their routine use in the future.

- The diameter of the implant cylinder. While it is disconsidered by some, this is by no means a trivial parameter as the relationship between the implants’ diameter and mechanical strength is a function of the third power of the radius.

- The redirection of forces along the long axes of the implant via specific designs of the occlusal surfaces. A number of authors bring up this issue while it is plain impossible to alter the force patterns that affect the implant-bone complex.

- The design of the implant connector. Commercial implant suppliers often praise their own connector design as possessing every desirable quality. Not so - the design of connectors is extremely basic. The two elementary principles involved will be presented.

- Secure and preserve vital bone for healing and support. In this author’s opinion, this is one of the greatest contributions of early authors, that is, establishing atraumatic procedures for bone surgery. The cardinal principles will be reviewed.
**Parallel Session 1**

**Emerging Technologies in Tissue Regeneration that Can Enhance Patient Care**

**Chairperson**

> **Nikolaos DONOS**

 DDS, MS, MHEA, FRACSEng, PhD  

Professor Nikolaos Donos is the Head & Chair of Periodontology, Director of Research and Programme Director for the MClinDent training programme (EFP approved) in Periodontology at the UCL Eastman Dental Institute, London. Furthermore, Professor Donos is the Director of Clinical Investigation Center at the Eastman which specializes in the provision of randomized controlled clinical trials and at clinically applicable translational research studies. In 2009, Professor Donos was awarded the EFP Young Researcher Award. In 2010, he was appointed as a Professor at the Department of Periodontology at the University of Hong Kong. Professor Donos is involved as editorial board member in a number of international and national peer-reviewed journals in the field of Periodontology and Implant Dentistry especially in relation to regenerative procedures and has also published extensively in both fields. In 2011, Professor Donos was awarded the prestigious annual IADR-Periodontology Group Award in Periodontal Regenerative Medicine during the annual IADR meeting in San Diego, California. Furthermore, in June 2011, Professor Donos together with his research team received a commendation certificate during the prestigious Medical Futures event for their UCLBI patented technology which is based on their research work on synthetic peptide drugs for bone, blood vessels and nerve regeneration. The clinical expertise of Professor Donos is in the field of Periodontics and Implant Dentistry. He has significant experience and expertise in periodontal and bone tissue regeneration, implant related surgical procedures as well as treatment of peri-implantitis, topics which he regularly lectures on a national and international level.

**Speakers**

> **Ivo LAMBRICHTS**

Ivo Lambrechtis, DDS,PhD is a full professor in microscopic anatomy at the Faculty of Medicine, University of Hasselt, Belgium. He received his dental degree from the Catholic University of Leuven (Belgium) in 1985 and obtained a PhD on the Innervation of the Human Periodontal Ligament. He received the Unilever Award in Bern (1990) and the E.H.Hatton Award in Kolding (1993) from the IADR/CED and is member of several professional organizations and member of the board of directors of the Belgian Society of Cell Biology. At present he is Vice-Dean of the Faculty of Medicine and serves in the external quality control of the Flanders dental schools. He contributes to stem cell research, oral biology, oral imaging and is involved in tissue banking, tissue reconstruction and regeneration. He was part of the team that designed and implanted the World’s first 3D titanium printed and custom made jaw. He was expert from the European Commission in the COST action B8 on osseointegration and member of the management committee of the COST action B23 on pro-facial development. Since 2012 he is appointed as chairman of the medical ethical committee of the Hasselt University.

**The Future of Stem Cells and Tissue Engineering**

The domain of tissue engineering and regenerative medicine has made significant progression in the past decade. This presentation aims to provide an overview of the biological principles that have been applied in designing and fabricating biocompatible scaffolds for tissue regeneration. Crucial advances will be summarized as they relate to different methods used to generate biomimetic scaffolds for bone and other tissue regeneration. In addition the use of these materials to generate endogenous tissue will be discussed along with potential to translate to regeneration of craniofacial tissue. Stem cells, with the capacity to differentiate into different cell types and finally tissues, raise the hope of cell-based regenerative medicine. As determining the fate of stem cells or their lineage progeny transplanted in vivo will be of utmost importance, stem cell labeling and non-invasive imaging will play a crucial role in determining the possible therapeutic potential of the cells. Regeneration and reconstruction of small maxillary and large craniofacial defects can be done by the use of stem cells, scaffolds, implant material. In order to produce custom-made scaffolds and implants, high standard imaging techniques should be used. The talk will conclude with a forecast of future strategies that can arise from the use of these matrices as well as a projection of their use in vivo. Several examples will be addressed: stem cell tracking, maxillary bone augmentation, TMJ replacement, full 3D printed titanium jaw and engineered neural tissue constructs.

> **Peter THOMSEN**

Professor Peter Thomsen received his training in experimental cell biology with Professor P.J. Brönnmark and Professor Lars E Ericson at the Department of Anatomy, University of Gothenburg, Sweden. Following a 4-year fellowship with the Swedish Medical Research Council, he became Professor of Biomaterials at the Sahlgrenska Academy, University of Gothenburg, in 1994. He was Visiting Professor at the Interdisciplinary Research Center in Biomedical Materials, University College London, 1999-2000. He was awarded International Fellow of Biomaterials Science and Engineering in 2000. In 2003, Dr. Thomsen received the George Winter Award by the European Society for Biomaterials for excellence in biomaterials research. In 2007, he was appointed Director of the BIDMATCELL VINN Excellence Center of Biomaterials and Cell Therapy, a 10-year governmental research program on implant material properties, stem cells and regeneration of the musculoskeletal system. Dr. Thomsen’s research is devoted to the relations between material surface properties, inflammation and tissue regeneration. The group has a track record in the development and application of novel techniques to resolve the fine structure and cell behaviour of such interfaces. Current research projects include the mechanisms of osseointegration and the role of microvesicles for communication between cells during inflammation and tissue regeneration.

Oral rehabilitation with implants is a prime example of a treatment which has revolutionized modern health care. The implant surface meets the biology of hard and soft tissues at different length and time scales. Major attention has been devoted to the role of different surface properties for osseointegration. In particular, interest has been focussed on the chemical and topographical landscapes and their effects on cellular, matrix and functional responses. Under experimental conditions, systematic studies of both chemical modification and surface textures have demonstrated the alteration of cell behaviour; bonding between implant surface and apatite and biomechanical properties of the implant-bone unit. Further, inflammation, bone formation and bone resorption in vivo are strongly influenced by implant surface modifications during the early stage of regeneration. On the other hand, the experimental in vivo conditions are quite different from human, clinical situations with systemic and/or local disease processes. Regrettably, much less scientific evidence is available from human, clinical studies on the role of specific material surface properties for a biological response and clinical performance. It is likely that strategies to target long-term performance, the elderly population and patients with compromised tissue conditions, would require such knowledge.
Recent Developments in Bone Substitute Materials and Membranes

Bone substitute materials and barrier membranes have been applied in bone regeneration procedures for more than 25 years. Myriads of different products have been introduced over this period of time and few well documented are still in clinical use.

Based on what we have learned over these years, bone grafting materials will be classified according to their origin and material characteristics. The current biologic potential and limitations of alloplastic, xenogenic, and alloplastic bone substitute materials will be presented and the clinical implications discussed. Some bone defects may today predictably be augmented with bone substitute materials alone whereas others still constitute significant clinical challenges. To meet these challenges, recent and future trends in biomaterial research will be addressed.

Barrier membranes are basically available as resorbable or non-resorbable. The rationale behind their use and differences in biologic properties, handling characteristics and morbidity will be emphasized. Finally, the evidence behind the clinical use of barrier membranes in GBR procedures will be discussed.
Workshop EAO Certification Programme

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

> Georg MAILATH-POKORNY

1979       MD degree, Medical School, University of Vienna
Speciality board examination in dentistry (DDS)

1987       Graduation Special Dentistry and Oral and Maxillofacial Surgery

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. DDr. 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 - 2009 Board member of the EAO

2010       Award of the Ministry of Science for University Professor

2011       Managing Partner of the Academy of oral Implantology

Author and co-author of 5 Textbooks and over 100 national and international Publications on oral surgery.
> Chantal Malevez

M.D., D.D.S., 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
Professor Nikolaos Donos is the Head & Chair of Periodontology, Director of Research and Programme Director for the MClinDent training programme (EFP approved) in Periodontology at the UCL Eastman Dental Institute, London. Furthermore, Professor Donos is the Director of Clinical Investigation Center at the Eastman which specializes in the provision of randomized controlled clinical trials and clinically applicable translational research studies. In 2009, Professor Donos was awarded the title of Honorary Professor at the Faculty of Dentistry in Hong Kong.

Professor Donos is involved as editorial board member in a number of international and national peer-reviewed journals in the field of Periodontology and Implant Dentistry especially in relation to regenerative procedures and has also published extensively in both fields. In 2011, Professor Donos was awarded the prestigious annual IADR-Periodontology Group Award in Periodontal Regenerative Medicine during the annual IADR meeting in San Diego, California. Furthermore, in June 2011, Professor Donos together with his research team received a commendation certificate during the prestigious Medical Futures event for their UCLB patented technology which is based on their research work on synthetic peptide drugs for bone, blood vessels and nerve regeneration.

The clinical expertise of Professor Donos is in the field of Periodontics and Implant Dentistry. He has significant experience and expertise in periodontal and bone tissue regeneration, implant related surgical procedures as well as treatment of peri-implantitis, topics which he regularly lectures on a national and international level.

> Nikolaos DONOS

CHAIRPERSON

> Katharina MANIURA-WEBER

68

Protein and blood adsorption on titanium and titanium zirconium implants as a model for osseointegration

> Pär JOHANSSON

69

Bioactive PEEK implants enhance osseointegration: A biomechanical investigation

> Volkan ARISAN

70

Computer-assisted flapless implant placement reduces the incidence of surgery-related bacteremia

> Withdrawn

71
Raffaele CAVALCANTI
Graduation cum laude in dentistry. PhD in Biotechnologies Applied to the Dental Sciences. Active Member of the Italian Society of Periodontology (SdPPI). ITI Fellow. Active Member of the Italian Society of Osseointegration (SIO). International Member of the American Academy of Periodontology (AAP). Member of the European Association for Osseointegration (EAO).
Speaker in many Italian and International congresses and courses on periodontology and implant therapy topics.
Author of papers on implantology published in international journals.
Private practice limited to periodontology and implantology at «Cavalcanti & Venezia Dental Clinic».

Mustafa RAMAZANOGLU
The Effect of a Biodegradable Polyethylenglycol Gel on the Delivery and Osteogenic Behavior of Homologous Tooth Germ Derived Stem Cells in a Pig Model

Silvia GALLI
Physically adsorbed magnesium ions on mesoporous titanium surfaces enhance osseointegration

Bernd STADLINGER
Osseointegration of biochemically modified implants in an osteoporosis rodent model

Vincent OFFERMAINS
Enhanced Osseointegration of Titanium Implants in Ovariectomized Rats by Magnetron-Sputtered Strontium Containing Coatings
> Karl Andreas SCHLEGEL

1984 - 1989 Dental Student at Medizinische Hochschule Hannover, Lower Saxony
1990, Jan. - 1991, March Junior assistant at the Department of prosthetics University of Bale / Switzerland
1990, May Dr.med.dent. thesis at the Ludwig Maximilians University, Munich, Bavaria
1991 - 09.1998 Staff member of the Department for maxillofacial surgery, LM University, Munich, Bavaria
1993 - 1998 Medical student at the I. Semmelweis University Budapest, Hungary
1994 Board examination as oral surgeon
1998, July Dr.med. thesis at the I. Semmelweis University, Budapest, Hungary
1999 Board examination as implantologist
1999 - 2005 Staff member maxillofacial surgery Department of Erlangen-Nuernberg, Head: Prof. Dr. Dr. F.W. Neukam
2002, April Dr.med.thesis at the Ludwig Maximillians University, Munich, Bavaria
2004 Board examination as maxillofacial surgeon
2005 PhD, Friedrich Alexander University Erlangen-Nürnberg, Titel: Experimental studies on the influence of mitogenic and morphogenic growth factors on de novo bone formation
2005 - 2006 Senior Staff member maxillofacial surgery Department of University of Jena, Head: Prof. Dr. Dr. S. Schultze-Mosgau
2006 - 2012 Senior Staff member maxillofacial surgery Department of Erlangen-Nuernberg, Head: Prof. Dr. Dr. F.W. Neukam
Since 12.2010 Elected president of the Bavarian society for the promotion of science in dentistry.
Since 2011 Member oft the continuous education board of the Bavarian dental board
Since 2010 Member of the section leadership committee of the ITI, study club coordinator Germany, member of the international study club core group
Since 2012 Research fellow at the maxillofacial surgery Department of Erlangen-Nuernberg, Head: Prof. Dr. Dr. F.W. Neukam
Since 2012 Own private clinic in Munich

Over 200 original papers, 31 overview papers, 36 book contributions. More than 300 lectures at national and international conventions.

Twice price for the best oral presentation at the annual meeting of the AG Kieferchirurgie of the German Society for Dentistry (2002 and 2008).
Price for the best oral presentation at the annual meeting of European Association of Osseointegration (2005).
Third place German Society for Dentistry / Colgate research price (2004).
Best presentation annual meeting of the German implant society (2007/1).
Winner of the annual Dentsply research price by the German Society for Dentistry (2008).
Best presentation annual meeting of the German Society for Osseology (2008).
Best poster presentation 14th Dentsply Friadent World Symposium in Barcelona, Spain (2010).
Price for the best poster at the International Osseology Meeting in Cannes, France (2011).

> Yan DUAN

Enhanced implant osseointegration by mesenchymal stem cell sheet technique in D VX rats

> Thao LE

A Randomized Clinical Controlled Study to Compare Efficiency and Accuracy of Digital vs. Conventional Impressions in Implant Rehabilitation
Improving elderly's patients quality of life with implant overdenture

Monolithic lithium disilicate single crowns bonded on CAD/CAM zirconia cross-arch implant-bridge: a proof-of-concept prospective study

A case-controlled cohort study to evaluate the performance of Straumann bone level implants in single tooth gaps in the anterior maxilla

High torque, its effect on implants clinical results.

Multi-centre, randomized controlled trial on the efficacy and safety of rhBMP-2 coated demineralized bone matrix in human extraction sockets.

Biologic response of osteoblastic cells on titanium surface treated with Er:YAG laser

The influence of removal of implants on the resolution of inferior alveolar nerve injuries caused by implant placement in the mandible.

Meta-analysis of single crowns supported by short implants in the posterior region

Influence of fresh-frozen allogeneic bone grafts architecture on its incorporation: radiographic and histomorphometric comparison to the gold-standard
Plenary Session 2

PERI-IMPLANTITIS - A GROWING PROBLEM OR A MANAGEABLE COMPLICATION?

> Niklaus LANG
Professor of Implant Dentistry, The University of Hong Kong 2008-2012; Professor Emeritus, University of Berne, Switzerland, Chairman 1983-2008; Dr. odont. h.c., Aristotle University of Thessaloniki, Greece, 2011; Honorary Professor University of Aarhus, Denmark 2006-2011; Odont. Dr. h.c., University of Gothenburg, Sweden, 1997; Honorary Fellow RCPS Glasgow, 1995; Dr. odont. h.c., University of Buenos Aires, Argentina, 1994; Dr. odont. h.c., University of Athens, Greece, 1989; PhD, University of Berne, 1978; Master of Science in Periodontics, University of Michigan, Ann Arbor, 1975; Dr. med. dent., University of Berne, 1970; Honorary Professor: The University of Hong Kong 2013-2015, University College London 2012-, University of Zurich 2013- Guest Professor University of Osaka, Dunedin, New Zealand, 2008, National University of Singapore, 2002, 2004, 2007, 2009, 2013; University of Michigan, USA, 2005, University of Gothenburg, Sweden, 2000, University of Queensland, Brisbane, Australia, 1999-2000, University of Aarhus, Denmark, 1994, The University of Hong Kong, 1994, University of Texas, Health Science Center at San Antonio, Texas, USA, 1986; Professor Extraordinario, Universidad Autonoma de Nuevo Leon, Monterrey, Mexico, 1980.


Honorary member of: the American Academy of Periodontology, the Danish, German, Hellenic, Italian, Lithuanian, Slovenian, South African and Swiss Societies of Periodontology, Danish Society for the Study of Periodontology, Italian Society of Osseointegration, International Team of Implantologists (ITI), Australian-New Zealand Academy of Periodontology (ANZAP).

> Torsten JEMT
Dr Torsten Jemt graduated (DDS) 1975 in Gothenburg, Sweden, received his board certificate as specialist in Prosthodontics in 1978, and the degree of Odont. Dr (PhD) in 1984. He became Associate professor in 1986 and then Professor in 2003 at the Department of Prosthetic dentistry and dental materials. The Sahlgrenska Academy at Gothenburg University. Dr Jemt was a co-worker of P-I Brånemark during the late 1970s and 1980s. He was during this period responsible for development of the first single implant abutments and extensively involved in the development of the first CAD/CAM implant. Titanium frameworks. Dr Jemt was in 1986 co-founder of the Brånemark Clinic, the implant specialist clinic within the general health dental service in Gothenburg, where he has served since then, as chairman between 2000 and 2003. He is a member of the editorial board of several international journals, and he has published over 140 scientific publications. Dr Jemt has lectured over the world for more than 30 years on dental implants.

RETHINKING IMPLANTS AS FOREIGN BODIES
It is more than 45 years ago since the first patient was treated with osseointegrated implants. From a histological level, placement of implants induces a foreign body response which is characterized by a chronic inflammation and encapsulation of the dental implant. When clinically successful, the body responds with bone encapsulation of the implant, coined by Brånemark as osseointegration, while a fibrous encapsulation is a clinical failure. Once osseointegrated, the biological balance may be lost, and clinical signs of mucosal inflammation and progressive bone loss can be observed. This situation is referred to as “peri-implantitis” and is extensively debated in dentistry today. This presentation will cover long-term results at implants and the presentation will focus on the biological response in terms of a foreign body reaction that may interact with both local impact factors as well as systemic host response factors.

> Reinhard GRUBER
Reinhard Gruber received his PhD for his work on steroid hormones and bone remodeling. After a post-doctoral appointment at the Department of Rheumatology, he joined the Department of Oral Surgery at the Medical University of Vienna. He was Deputy Director of the Curriculum for Dental Medicine, and coordinated a lecture series for undergraduates, as well as a doctoral program entitled “Bone and joint regeneration”. He was a visiting scientist at the Bone Tissue Engineering Center at Carnegie Mellon University in Pittsburgh and at the University of Michigan’s Dental School. He published 82 original articles (h-index 20) and contributed to 11 book chapters. He can refer to 15 peer-reviewed third-party funded research projects. He is Editor-in-Chief of the “International Journal of Stomatocell and Occlusal Medicine” and in two editorial boards of implantology journals. Recently, he became a trustee of the Osteology Foundation and was elected into the board of the German Society of Osteology. Since 2012, Reinhard Gruber is the head of the Laboratory of Oral Cell Biology at the School of Dental Medicine, University of Bern.

PHYSIOLOGY OF BONE REMODELING – SYSTEMIC AND LOCAL RISK FACTORS
Bone regeneration and remodeling are integral parts of osseointegration. While bone regeneration creates the intimate contact of bone with the implant surface, bone modeling defines the structural adaptation of bone to functional loading. Finally, bone remodeling is necessary to maintain the integrity of the peri-implant bone over time. Bone remodeling is accomplished by the coordinated action of bone-resorbing osteoclasts and bone-forming osteoblasts. Physiologic local and systemic factors including growth factors and hormones orchestrate each cellular action including birth and death of the cells. Thus, bone remodeling is the fundament of long-term osseointegration. Risk factors are considered those that cause a negative shift in bone remodeling, leading to peri-implant bone loss. Aim of this presentation will be to summarize the fundamentals of bone remodeling and how local and systemic factors control the delicate balance of bone formation and resorption.
Accordingly to reduce the risk for the reduced or no accessibility/capability difficulties in obtaining an adequate oral and presence of infections elsewhere like implant placement, prosthetic design. Furthermore it appears that local factors should be considered as risk patient for probing values and more inflammatory installation. Smokers have been found to that he/she has an increased risk of periodontitis patients, it is important to properly informed on diagnosis and treatment of peri-implant. risk assessments and the association of periodontal disease to general diseases. 

PERI-IMPLANT DISEASES - SYSTEMIC AND LOCAL RISK FACTORS. Peri-implantitis, like periodontitis, is considered to have a multifactorial etiology and from the existing research it appears that same individuals are more prone to its development than others. Local or general factors that are considered to be risk indicators. At present, data have shown that increasing number of peri-implantitis. When implants are placed in previous periodontitis patients, it is important to properly informed that he/she has an increased risk of disease development following implant installation. Smokers have been found to have increased probing pocket depths, plaque indices, higher bleeding on probing values and more inflammatory soft tissue complications around implants compared to non smokers and should be considered as risk patient for implant therapy. Furthermore it appears that local factors like implant placement, prosthetic design and presence of infections elsewhere in the oral cavity may influence the bacterial load at a specific site due to difficulties in obtaining an adequate oral hygiene measures for appropriate oral hygiene measures. Accordingly to reduce the risk for the development of peri-implantitis the supra structure should be designed in such a way that it is possible for the patient to maintain good oral hygiene.

**PERI-IMPLANT BONE LOSS RELATED TO CEMENT- AND SCREW-RETIANTED PROSTHESSES.** Prosthetic reconstruction involving endosseous implants can include screw-retained or cement-retained restorations or both. The choice of cementation versus screw retention seems to be based on mainly the clinic’s preference. Some authors advocated that the screw-retained prosthesis offers retrievability and more stability and security at the implant-abutment interface. Others have emphasised the advantages of the cement-retained prosthetic interface. However, the lack of connective tissue attachment the bone level arounding oral implants is reduced approximately 1.5-2.0 mm below the implant abutment connection (microgap) is influenced by the location of the bone remodelling) causing frequently soft tissue recession. The soft tissue dimension correlates to the dimension around natural teeth (biological width), except the poor quality of soft tissue and the lack of connective tissue attachment to titanium surfaces. CAN SOFT TISSUE AUGMENTATION MINIMIZE THE RISK OF PERI-IMPLANTITIS? Previous studies demonstrated that bone level around oral implants are influenced by the location of the implant abutment junction (microgap) in relation to the crestal bone. After abutment connection the bone level is reduced approximately 1.5-2.0 mm below the implant abutment junction (bone remodeling) causing frequently soft tissue recession. The soft tissue dimension correlates to the dimension around natural teeth (biological width), except the poor quality of soft tissue and the lack of connective tissue attachment to titanium surfaces.
Theodoros Kapos

Dr. Kapos received his dental degree (DMD) from Harvard School of Dental Medicine. He then completed a three-year specialty program once again, at Harvard School of Dental Medicine, where he earned an MSc degree in Oral Biology and a Certificate in Prosthodontics. In order to further his skill and knowledge, Dr. Kapos joined a two year Advanced Graduate Implantology Program at Harvard from which he received a certificate in Implant Dentistry. Following completion of his Advanced Graduate training, he was then appointed as faculty at Harvard as a clinical instructor at the Department of Restorative Dentistry and Biomaterials Sciences. Currently he works as a private practitioner in Mayfair London. Under his leadership he is a Lecturer at the Department of Restorative Dentistry and Biomaterials Sciences at Harvard School of Dental Medicine.

Dr. Kapos is a Fellow of the International Team for Implantology (ITI), the Chairman of the Junior Committee of the European Academy for Osseointegration (EAO), and an active member of the American College of Prosthodontics (ACP). He has been invited to lecture at local, national and international meetings, and his research has been published in international peer-reviewed journals.

Brian Millar

Professor of Blended Learning in Dentistry at King’s College London and Consultant in Restorative Dentistry at the King’s College London Dental Institute at Guy’s, King’s and St Thomas’ Hospitals. Specialist in Prosthodontics and in Restorative Dentistry. First teaching by distance learning in 1983 and since then developed systems to teach clinical subjects by blended learning at King’s College London Dental Institute, a Russell Group University in the heart of London. As Director of Distance Learning in Dentistry and Programme Director for MClinDent (Prosthodontics) I took over after 325 postgraduate dentists. Recently set up the highly successful MSc programmes in Aesthetic Dentistry, Endodontics and Advanced General Dental Practice by blended learning. As Director of Distance Learning for King’s College London I lead a team setting up a range of distance learning programmes from short courses to Masters degree and now online PhDs, both fee generating as well as MOOCs and MiniMOOCs. Experienced teacher to undergraduates and postgraduates and well-known provider of postgraduate education nationally and internationally at conferences through lectures, seminars, webinars and hands-on courses.

PIONEERING FLEXIBLE LEARNING IN DENTISTRY

This presentation will summarise what I have learnt over 30 years of teaching by DL including the successes and failures, providing tips for success and suggestions for the future. Distance learning in dentistry requires F2F components to provide the more effective blended learning and the challenges of this are significant. Our attempts with Flexible learning will be summarised as we now adopt Online learning. The KCL use of MDCs (Massive Open Online Courses) to deliver free education to large numbers of viewers as a global project with the potential to radically change higher education will be discussed. The College’s online PhD programme is about to launch and will be introduced.
> Junior Committee:
Helena FRANCISCO (Portugal),
Jose Manuel NAVARRO (Spain)
Victor PALARIE (Moldova),
Michael PAYER (Austria),
Daniel THOMA (Switzerland),
Frank SCHWARZ (Germany),
Nele VAN ASSCHE (Belgium)

> Florian SCHOBER
Assistant Professor at Clinic of Fixed and Removable Prosthodontics and Dental Material Science at University of Zurich. Successful developments for planning systems for guided implant placement. Concept development and implementation of learning solutions in dentistry. Consultant and trainer in the field of process optimization and digital solutions in dentistry. Degrees in engineering and economics from TU Berlin Germany and Luiss Rome Italy.

DIGITAL DENTAL PLATFORMS
Learning in implant dentistry is experiencing substantial changes through the availability of new technologies and the change of demand. What does the young active clinician expect from training and education in dentistry? The past and the current situation will be presented and investigated. We come from classroom learning and conferences. New developments in presenting and sharing knowledge will be demonstrated. Can new digital learning solutions improve our learning? The lecture shows how the optimal solution looks like, how the practitioner can continuously grow and keep up with the relevant innovation and how we can benefit from these changes already today?

> Yvo VERMEYLEN
He graduated as a general dentist at the Katholieke Universiteit Leuven in 1972, and as a Master in Law at the same University in 1989. He has a private practice since 1972. He is a extra-ordinary Guestprofessor at the Faculty of Medicine - department of dentistry and maxillo-facial surgery, teaching dental law and Ethics in the Master after Master program on Forensic Odontology. He was the Founding and Past President of the International Dental Ethics and Law Society (2000 - 2005) and at this moment a board member. He is a dental advisor of many insurance companies, dealing with the evaluation of dental damages.

His main interests: dental Law, dental ethics, evaluation of dental damage, patient rights.

PRIVACY AND E-HEALTH - LEGAL ASPECTS
The keywords in the processing of medical data are: data protection, confidentiality and security. E-Health applications involve the processing of information relating to a identified or identifiable patient. This is subject to data protection legislation in the European legislation, that will be implemented into national and regional legislation by the Member States. The general principle of data privacy was established by the Council of Europe in 1981 and further developed in the Directive 95/46/CE of the EU.
This paper will take this Directive as starting point to describe the principles of the EU-level data protection legislation, the duties of the medical practitioner and the consequences for daily practice. That leads to duties relating to the processing, the storage and the transmission of these data. Medical data are highly sensitive and the aim of the legislation is to protect the patient in case of transferring medical data by electronic means for purposes of preventive medicine, diagnosis, treatment and research. It is obvious that sensitive data are subject to more restricted rules. Some specific examples will be discussed and analyzed.
Parallel Session 3

RISK FACTORS IN IMPLANT DENTISTRY

> Theodoros KAPOS

Dr. Kapos received his dental degree (DMD) from Harvard School of Dental Medicine. He then completed a three-year specialty program 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 a two year Advanced Graduate Implantology Program at Harvard from which he received a certificate in Implant Dentistry. Following completion of his Advanced Graduate training, he was then appointed as faculty at Harvard as a clinical instructor at the Department of Restorative Dentistry and Biomaterials Sciences. Currently he works as a private practitioner in Mayfair London, UK and he a Lecturer at the Department of Restorative Dentistry and Biomaterials Sciences at Harvard School of Dental Medicine. Dr. Kapos is a Fellow of the International Team for Implantology (ITI), the Chairman of the Junior Committee of the European Academy for Osseointegration (EAO), and an active member of the American College of Prosthodontics (ACP). He has been invited to lecture at local, national and international meetings, and his research has been published in international peer-reviewed journals.

> Keith SMITH

After graduation from the University of Newcastle upon Tyne, I undertook a number of junior hospital posts before being appointed as Lecturer in Oral and Maxillofacial Surgery at the University of Sheffield. It was there that I soon developed my interest in neurophysiology, gaining my PhD on ‘Studies on the efficacy of lingual nerve repair’. The results of those studies lead to the development of protocols for the management of patients with lingual nerve injuries, usually sustained during the removal of impacted mandibular third molars. I was appointed Senior Lecturer and Consultant in Oral and Maxillofacial Surgery at the University of Sheffield in 1994. With my colleague Peter Robinson we carried out the first microsurgical lingual nerve repair in Sheffield in 1991. I have since performed over 150 lingual nerve repairs. A dedicated lingual nerve injury clinic was also established in Sheffield which receives referrals from all over the UK and Ireland, as well other overseas countries. We also see and treat patients who have sustained injuries to their inferior alveolar nerve. Our present laboratory investigations include studies linking the presence of specific neuropeptides and sodium channels in human lingual nerve neurones with neuropathic pain, and also studies into the effects of different anti-scarring agents on nerve regeneration.

> Joke DUYIK

Joke Duyck is full professor at the department of Oral Health Sciences (Division of Prosthodontics) of the Catholic University of Leuven, Belgium. She graduated as a dentist in 1995 and immediately continued her education with a postgraduate training in prosthodontics (2000). She combined her clinical training with a PhD in Medical Sciences on ‘Biomechanical characterisation of oral implants’ in collaboration with the University of Oslo, which she defended in January 2000. Since then, Dr. Duyck continued to combine basic research on implant biomechanics and peri-implant bone biology with clinical practice in prosthodontics. She is immediate past president of the Implantology Research Group of the IADR, associate editor of the International Journal of Oral and Maxillofacial Implants, and editorial board member of Clinical Oral Implants Research and the International Journal of Prosthodontics. Since 2009, her clinical focus shifted towards gerodontology and in 2011 she initiated the undergraduate course in gerodontology in her institution.

DOES MECHANICAL LOADING AFFECT IMPLANT PROGNOSIS?

In the nineties, there was a general belief that mechanical overloading was one of the main reasons for implant failure. This generated a lot of research in order to gain insight into the role of mechanical loading on the establishment and the maintenance of oral implant osseointegration.

Animal experimental studies indeed indicated the potential detrimental effect of excessive mechanical load on peri-implant bone, although randomised and/or controlled clinical trials of treatment interventions of oral implants designed to study overload are lacking. The lack of quantification of so-called ‘overload’ at the implant level in the intra-oral setting is one of the main shortcomings in the literature. This diagnosis of ‘overload’ is as difficult as the diagnosis of primary peri-implantitis, which is nowadays considered as the main cause of peri-implant bone loss. Research is challenged by the fact that each clinical situation represents a blend of many influencing factors such as microbial and mechanical loading, surgical technique, prosthetics, patient-related factors such as bone quality and quantity, immune response, microcirculation, etc. This makes it difficult to evaluate the impact of a sole factor.

Clinical and animal experimental studies on early and immediate implant loading, however, provide us some information on the impact of mechanical loading on the process of osseointegration. Whereas loading has rather been considered a risk factor after osseointegration, there are indications for a stimulating effect of loading on osseointegration. Literature suggests that micromotion between the implant and host tissues compromises osseointegration, but that in case of an efficient force transfer between implant and surrounding tissues, mechanical loading might even stimulate peri-implant bone formation and therefore osseointegration.
Interactions between systemic bone diseases and oral health are bidirectional. The use of bisphosphonate (BP) drugs is associated with a higher risk of osteonecrosis of the jaw (BRONJ). This risk is higher in smokers than non-smokers. A recent retrospective study on 1,727 patients and 6,720 dental implants showed that smokers have double the chance of experiencing implant failures compared to non-smokers. The main finding is that smokers are at higher risk for dental implant failures than non-smokers. The risk of BRONJ in smokers is not absolute, and the risk is modulated by other factors such as smoking intensity and duration. The lecture will discuss the potential mechanisms underlying this increased risk and the strategies to mitigate the risks associated with BP use in the context of dental implant surgery.
Short Oral Communications 2

**Friedrich W. NEUKAM**


Professional work is focused on cleft lip and palate, orthodontic surgery, tumour surgery, implant dentistry, bone grafts in combination with implants.

**Norbert ENKLING**

Immediate loading of interforaminal implants using a chairside fabricated bar: 3 years results.

**Luigi CANULLO**

Hard Tissue Response to Plasma of Argon Cleaning Treatment on Titanium Abutments: 2-year Follow-up RCT.

**Marco TALLARICO**

Accuracy of impression techniques: an in vitro and in vivo pragmatic RCT on CAD/CAM implant bridges

**Tomas LINKEVICIUS**

Can cement remnants be completely removed from implants after cementation in clinical practice?

**Joerg NEUGEBAUER**

Ceramic versus composite veneering in complex restorations
Simon Storgård Jensen graduated as DDS from the School of Dentistry, University of Copenhagen, Denmark in 1996, and received his certification as specialist in Oral and Maxillofacial Surgery 2004 from the Copenhagen University Hospital. In 2001-2002 he attained a 1-year ITI scholarship at the Dept. of Oral Surgery and Stomatology, School of Dental Medicine, University of Bern, Switzerland and has since then stayed as part-time research fellow at the same department. In 2005 he was appointed consultant oral and maxillofacial surgeon at the Dept. of Oral & Maxillofacial Surgery, Copenhagen University Hospital with the responsibility of the resident training program. Additional scientific merits include serving as vice president in the Danish Association for Oral and Maxillofacial Surgery 2003-2009, education delegate of the Danish ITI Section since it was founded in 2005, and membership of ITI education core group since 2010. Main research focus areas include: Experimental evaluation and clinical performance of bone grafting materials, bone augmentation procedures, bone growth factors and surgical endodontics. The results have been presented in international lectures, books, and several publications in peer reviewed journals.

### Presenter

**Stefan VANDEWEGHE**

Accuracy of intra-oral scanning versus lab scanning

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**Diego LOPS**

Influence of Abutment Material on gingival Color: a multicentric prospective spectrophotometric Evaluation on 23 Implants.

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**Stefanie SCHWARZ**

Immediate loading of implants in edentulous mandibles with Locator® or Dolder®-bar: first results from a prospective randomized clinical study

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**Richard LEESUNGBOK**

The influence of stability and retention on mandibular implant overdenture with different abutment height and attachment design

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**Anja ZEMBIC**

One-year results of maxillary overdentures supported by two implants: patient-reported and radiographic outcomes.
Dr Ioannis Polyzois received his undergraduate degree (DMD) from Semmelweis University in 1995 and he was awarded his MMedSci in Oral Surgery by the University of Sheffield in 1996. He completed a three year specialist training in Periodontology (MDentCh) at Trinity College Dublin in 2002 and subsequently worked there for two years as a clinical supervisor. In 2005 he became a Lecturer in Periodontology at Trinity College with responsibility for research and graduate didactic and clinical teaching. He completed his PhD thesis (Dental Education) in 2010. He is currently working in the Dublin Dental University Hospital as a Consultant and director of the Postgraduate program in Periodontology. He has published numerous research articles and book chapters. He is a member of the editorial board of the Journal of the Irish Dental Association, member of the International Association for Dental Research, Irish Society of Periodontology and a reviewer for a number of dental journals.

Asmaa El-Kaddar
Soft tissue adhesion/integration patterns following the use of different PEG hydrogel membranes

Ole Zoffmann Andersen
Accelerated Bone Ingrowth of Titanium Dental Implants by Magnetron-Sputtered Strontium Containing Coatings

Li Ma
Roles of αCGRP on attachment, proliferation and differentiation of mice BMSCs cultured on titanium surfaces

Borvornwut Buranawat
Development of in vitro prevascularised synthetic block grafts for dental implant reconstructions
> **Gil ALCOFORADO**
Graduated in Dentistry in 1980 - University of Lisbon
Specialty in Periodontology - University of Bergen, Norway - 1983
Visiting Researcher at the U. of Pennsylvania with Prof. Jorgen Slots, Sture Nyman and Max Listgarten - 1986 (Full Time)
Visiting Professor at the University of Michigan in Ann Arbor - 1989/1990 (Full Time)
Visiting Professor at the U. of Southern California - 2000 - Today
Chairman and Full Professor, Depart. of Periodontology and
Director of the Master Program in Periodontology (3 years program), U. of Lisbon
Vice-Dean Lisbon Dental School, University of Lisbon - 2000 - 2004
Founder and President of the Portuguese Periodontal Society
Post-President of the European Federation of Periodontology
Fellow of the International College of Dentists (1985) and Regent for Portugal since 2009
Fellow of the International Team for Implantology, Past-Chairman of the Iberian ITI Section
Fellow of the American College of Dentists - Since 2009
Board Member of the EAO (European Association of Osseointegration) - Since 2012

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> **Yan HUANG**
52
Innervation in peri-implant hard and soft tissue following immediate and delayed implant loading

> **Katarzyna GURZAWSKA**
53
Plant-derived molecules, pectins as a novel nanocoating for improvement of osseointegration

> **Jéssica GULINELLI**
54
Evaluation of bone substitutes in the treatment of bone defects around implants in rabbits.

> **Ryo JIMBO**
55
Exploring the role of photocatalytic hydrophilicity on osseointegration using the PCR array technique

> **Lin XIANG**
56
Effect of dCGRP overexpression on osteogenic differentiation of human periodontal ligament cells in periodontal tissue engineering

> **Ofer MOSES**
57
Excessive Degradation of collagen membranes in diabetic rats is associated with increased infiltration of macrophages and capillaries
TREating the partially edentate resorbed posterior maxilla

**Possibilities and Limitations**

Short implants are increasingly used for the prosthodontic rehabilitation of the partially edentulous posterior maxilla. An alternative to the use of short implants is to augment the bone with a bone grafting technique. This modification to the patient’s anatomy makes it possible to insert a longer implant, but an extra surgical intervention also leads to greater patient’s morbidity, higher costs and a longer treatment period. Short implants were associated with lower survival rates, but modifications in design and surface characteristics of the implants have improved the performance of these short implants.

Results of two prospective studies with respectively 8.5 mm implants and 6 mm implants in the partially edentulous resorbed posterior maxilla are presented with excellent survival rates and minor radiographic bone changes. In conventional prosthodontics the crown-root ratio is commonly used as a prognostic factor for survival. A problem of the use of short implants might be the increased crown-implant ratio. However, the maximum allowable ratio as suggested from conventional prosthodontic literature might not apply to implant-based prosthodontics. Correlation of crown-implant ratios from the prospecitive studies and peri-implant marginal bone loss is presented. From the presented research it can be concluded that short implants can be placed successfully in the partially edentulous posterior maxilla.

**Restorative Options for the Posterior Maxilla: Possibilities and Limitations**

Short implants are increasingly used for the prosthodontic rehabilitation of the partially edentulous posterior maxilla. An alternative to the use of short implants is to augment the bone with a bone grafting technique. This modification to the patient’s anatomy makes it possible to insert a longer implant, but an extra surgical intervention also leads to greater patient’s morbidity, higher costs and a longer treatment period. Short implants were associated with lower survival rates, but modifications in design and surface characteristics of the implants have improved the performance of these short implants.

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transient swelling was observed (up to
maxillary bone. Moreover, this technique
followed by a blind sinus floor lifting and
restoration of adequate bone volume, allowing the
placement of dental implants. In some
clinical situations however, surgical treatment
options to overcome the bone
limitation may also involve the use of
short-length implants
Along with their simplicity, short-
length implants allow for cheaper and faster treatment option with reduced morbidity.

Rehabilitation of the severely resorbed posterior maxilla remains a surgical and prosthetic challenge for clinicians. Several advanced surgical techniques have been developed over the years to restore bone volume, allowing the placement of dental implants. In some clinical situations however, surgical treatment options to overcome the bone limitation may also involve the use of short-length implants.
Along with their simplicity, short-length implants allow for cheaper and faster treatment option with reduced morbidity.

Rehabilitation is still controversial in regard to the reliability and indications of short dental implants. In the past, short-length implants were often associated with increased failure rates. Increased failure rates were explained by reduced implant primary stability and bone-to-implant contact, as well as unfavorable crown-to-implant ratio and long term consequences of peri-
implant bone loss. As a consequence, the use of short-length implants was mainly restricted to rescue situations.
The aim of this lecture is to present the latest evidence based knowledge on short-length implants and to report its impact and limits in daily clinical practice.
Moreover, this presentation is aimed to discuss the decision making process for the posterior maxilla and the actual feasibility of more advanced surgical technique.
Parallel Session 4

REPLACING A MISSING INCISOR

> Klaus GÖTFRESEN

Klaus Goethedsen is Professor and Head of the Department of Oral Rehabilitation, Faculty of Health Sciences, 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 1988 and received a Danish Ph.D. degree in 1990. In 2001 he received a Swedish Ph.D. degree from Department of Periodontology, Faculty of Odontology, Göteborg University. Dr. Götfredsen 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 ofImplant 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 1999 in Copenhagen.

> Franck BONNET

Dr. Bonnet received his DDS degree from the University of Paris 7 in 1987. Then he completed advanced education programs. He was trained in implantology at UCLA and obtained a postgraduate degree in implantology from the University of Marseille. He also received three specialty certificates: Oral Biology; Periodontics; Fixed Prosthodontics from the University of Paris 7. He is a lecturer in several University postgraduate programs in implantology. Dr. Bonnet belongs to professional organizations including the European Academy of Osseointegration and the French society of periodontology and oral implantology. He is an active member of the European Academy of Esthetic Dentistry. He lectures nationally and internationally on the subjects of aesthetics and implantology. Dr. Bonnet founded a private learning center FIDE: Formation Implantaire et Dentaire Esthetique (fide.fr), where he conducts clinical courses in his private clinic in collaboration with Professor Paul Mariaini. Dr. Bonnet with his partners maintains private practice in Cannes-Le Cannet, France, dedicated to Aesthetics, Periodontics, and Implants.

CLINICAL TECHNIQUES FOR PREDICTABLE RESULTS

Today osseointegration is a given - a predictable biological phenomenon. Yet clinicians are challenged to routinely achieve the aesthetic integration of dental implants. The aesthetic outcome of implant restorations is influenced by bone support and quality of the soft tissue interface with the prosthetic reconstruction. There are several surgical strategies to maintain or recreate a balanced soft tissue architecture in relation to implant supported restorations. The literature and clinical experience provides us numerous controversial arguments for immediate or delayed implants. The fact is that both techniques require hard and soft tissue management to achieve acceptable aesthetic results. Immediate implant and provisionalisation give the opportunity to preserve an adequate “pink volume”. One of the disadvantages of this technique is the challenge of dealing with many parameters at the same time. The second is related to an uncontrolled bone and soft tissue resorption after treatment. The delayed approach gives the opportunity to control each step but also more occasions to fail. To correct bone resorption, guided bone regeneration can create horizontal and/or vertical bone volume to maintain soft tissue. Those reconstructions are supposed to be stable but is it the reality? Do we have other treatment options?

> Irena SAILER

PD Dr. med. dent., Associate Professor
Clinic for Fixed and Removable Prosthodontics and Dental Material Science.
Center for Dental and Oral Medicine and Cranio-Maxillofacial Surgery, University of Zurich, Switzerland (Chairman: Prof. Dr. C.H.F. Hämmerle)
Adjoint Associate Professor
Department of Preventive and Restorative Sciences, Robert Schatzner Center; School of Dental Medicine, University of Pennsylvania, Philadelphia, USA (Chairman: Prof. Dr. M.B. Blatz)

Irena Sailer received her dental education and Dr. med. dent. degree from the Faculty of Medicine, University of Tübingen, Germany in 1997/1998. In 2003 Dr. Sailer received an Assistant Professorship at the Clinic for Fixed and Removable Prosthodontics and Dental Material Sciences in Zurich. Since 2010 she is an Associate Professor at the same clinic. In 2007 Dr. Sailer was a Visiting Scholar at the Department of Biomaterials and Biomechanics, Dental College, New York University, USA. Additionally, since 2009 she holds an Adjunct Associate Professorship at the Department of Preventive and Restorative Sciences, Robert Schatzner Center; School of Dental Medicine, University of Pennsylvania, Philadelphia, USA.

RESTORATIVE OPTIONS FOR AESTHETIC DEFECTS

The loss of a maxillary incisor leaving a defect in the esthetic area is a very delicate problem due to its visibility. Most specifically, in case of demanding patients high efforts have to be made to eliminate or reduce the defect before any type of restoration can be considered. For this, a number of hard and/or soft tissue regenerative procedures are available today. However, not all types of defects can be regenerated with predictable results up to date. What, if none of those methods manage to recover the initial situation? And, what if loss of bone leads to the loss of soft tissue support? This problem predominantly causes loss of the interdental papillas, which leaves non-esthetic black triangles. Besides the surgical techniques, defects and/or aesthetic problems can be solved by means of restorative options. Removable prostheses may be the easiest and most predictable solution in patients with pronounced defects. In case of fixed reconstructions a lack of buccal and interdental soft tissues may be compensated for with pink veneering ceramic, creating a perfect illusion in many cases. Finally, restorative treatment alternatives like e.g. resin-bonded bridges can be considered instead of implant single crowns in order to reduce the risk for aesthetic defects. A thorough pre-treatment diagnostics by the restorative team, the clinician and the technician, and the appropriate information of the patient about the possibilities and the limitations of the various treatment options is crucial for a satisfying result.
Replacing a missing incisor.

On the use of this surgical approach for risks and on the advantages of this short-term and long-term outcomes, impact of this surgical protocol on both experimental and clinical evidence of the relevant for the replacement of a missing incisor due to the aesthetic demands and advocated the immediate installation bone remodeling, some clinicians have in the buccal aspects of the extraction reduction of the alveolar ridge, mostly in the lingual/palatal compartment. Studies that have evaluated the benefit of immediate implant installation and/or bone graft for the maintenance of the ridge profile will be presented. It will be demonstrated that immediate implant placement fails to prevent buccal bone loss and that socket graft with bone substitutes can compensate for such bone loss. Clinical cases that illustrate the surgical technique and outcome of ridge preservation procedures will be presented and discussed.

The role of socket preservation Ridge preservation is a clinical procedure that aims at preventing bone loss following tooth extraction. The current presentation will describe a series of studies in humans and animals regarding the preservation of the alveolar process dimensions following tooth extraction. It will be demonstrated that following tooth extraction the alveolar process undergoes a marked alteration that is more pronounced in the buccal than in the lingual/palatal compartment. Studies that have evaluated the benefit of immediate implant installation and/or bone graft for the maintenance of the ridge profile will be presented. It will be demonstrated that immediate implant placement fails to prevent buccal bone loss and that socket graft with bone substitutes can compensate for such bone loss. Clinical cases that illustrate the surgical technique and outcome of ridge preservation procedures will be presented and discussed.

The need for soft tissue augmentation procedures is increasing as the need for improved esthetic results increases in our patients. Not only the esthetic implant procedure need to be considered but also the prevention of recessions on the adjacent teeth or the treatment of occurring recessions on those teeth. The treatment wealth in plastic periodontal surgery is an indication for insecurity as to what is the right way to go. This presentation will focus on the analysis of the recessions on adjacent teeth to implants and therapeutic endpoints in different surgical indications. The treatment techniques of choice are the ones that allow to reach those endpoints predictably. Incisiorfree «tunnelling techniques» offer promising advantages compared to conventional flap procedures. Therefore this presentation will consequently underline the argument: Tunnelling techniques reduce the treatment wealth in soft tissue augmentation to a pure surgical concept for many tissue defect with predictable and scarfree results.
Short Oral Communications 3

> Carlo MAIORANA
Professor and Chairman, Oral Surgery and Implantology, University of Milan School of Dentistry
Director, Post Graduate School in Oral Surgery, University of Milan School of Medicine
Training in Prosthetic Surgery, Loma Linda University and in orthognathic surgery, New York University.
Vice President, European Society for Oral Laser Applications
President, Italian Society Of Specialists in Oral Surgery
Author of publications in international journals and author of five textbooks on advanced osseointegration and oral surgery.
Participation in textbooks on advanced osseointegration
Practice limited to oral surgery, implantology and atrophic jaws reconstruction
Reviewer of international journals

> Olivier CARCUAC
86
Treatment of peri-implantitis. An experimental study in dogs.

> Andreas STAVROPOULOS
87
Biological complications after early/delayed/late implant placement: 10-year results from a RCT

> Nikos MARDAS
88
Immediate provisional restorations on bone level implants.

> Jamil SHIBLI
89
Immediate loaded implants in subjects with type I osteoporosis: 1-year prospective controlled study
> **Paolo VIGOLO**

He gained a first class honours degree cum laude in Dentistry in 1986 from the University of Padova (Italy). In 1987 he won the “G.F.Cattazzo” scholarship, which allowed him to spend six months in the Department of Restorative Dentistry of Tufts University, Boston. From 1988 to 1991 he was once again in the United States, where he obtained a Certificate of Advanced Graduate Studies in Prosthodontics and became Master of Science in Dentistry (Prosthodontics), both from Boston University Goldman School of Dental Medicine. In the same University he occupied the post of Clinical Instructor of Prosthodontics in the Department of Dental Care Management during the academic year 1990-1991. Since 1991, on his return to Italy, he has run his own dental office in Vicenza. Currently he is part-time Assistant Professor of Periodontal-Prosthetics at the Department of Clinical Odontostomatology for the degree course in Dentistry at the University of Padova. In 1992 he was assigned second place in the Annual Research Award of the American Academy of Maxillofacial Prosthetics. In 2001 he won the Judson C. Hickey Award in the Clinical Science and Research Category organised by the Editorial Council of The Journal of Prosthetic Dentistry.

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> **Gerdien TELLEMAN**

Peri-implant bone levels around short implants: a 3D analysis of the impact of crown-implant ratio.

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> **Anna KLINGE**

3D investigation of the alveolar process morphology in relation to the vertical facial dimension.

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> **Kai FISCHER**

On the relationship between gingival biotypes and gingival thickness – a case-control study.

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> **Daniele CARDAROPOLI**

Soft tissue contour changes at immediate restoration following immediate single-tooth post-extraction implants: a 1-year clinical study.
Plenary Session 4

IMPLANTS IN AN AGING POPULATION

> Allen FINBARR

Allen Finbarr is currently Professor/Consultant in Oral Rehabilitation and Prosthodontics, and recently completed a 7 year term as Dean of Dental School and Hospital, Cork, Ireland. He graduated from the National University of Ireland, Cork, with honours BDS degree in 1988. He worked in general dental practice for four years in Dordrecht, UK, until 1992. He then completed a Masters degree in Restorative Dentistry at the University of Manchester, UK. From 1983-1995, he worked at Leeds Dental Institute, and was awarded his FDS by the Royal College of Physicians and Surgeons of Glasgow in 1995. He completed higher specialisation training and was awarded a PhD at the University of Newcastle upon Tyne, UK. He received his certificate of completion of specialist training by the GDC in 2000, and was awarded the intercollegiate specialty fellowship in the same year. He was appointed Dean of Dentistry/Head of Cork Dental School and Hospital in 2005, and became Professor of Prosthodontics and Oral Rehabilitation in 2009.

To date, he has published over 170 peer reviewed scientific papers and research abstracts in the scientific dental literature and is the author of 2 textbooks and six book chapters. In addition to his research interests, he is co-coordinator of Prosthodontics teaching at undergraduate and postgraduate level in Cork Dental School. His clinical interests are Prosthodontics, implantology, craniofacial rehabilitation and restorative treatment of the elderly patient.

> Rose Anne KENNY

Professor Kenny is Head of the academic Department of Medical Gerontology at Trinity College and St. James’s Hospital, Director of the newly established Menor’s Institute for Successful Ageing and Director of the Falls and Blackout Unit at St. James’s Hospital. Prior to present appointment Professor Kenny held the chair of Cardiovascular Research at University of Newcastle, UK where she was head of academic and clinical departments of Medical Gerontology for 12 years. Rose Anne Kenny is the Principal Investigator and founder of the Irish Longitudinal study on Ageing (TILDA). Professor Kenny has developed the study from its inception in 2006. Professor Kenny’s research expertise in cardiovascular and mobility disorders of ageing has promoted incorporation of traditional and novel tests of locomotion, autonomic function and cardiovascular health into TILDA coupled with traditional measures of health care utilisation and economics. Formerly Professor of Cardiovascular Research at the Institute for Ageing & Health, Newcastle upon Tyne in the UK, she is best recognised for longstanding research into cardiovascular and mobility disorders in ageing and more recently population studies in syncope, falls, stroke, cognitive impairment and dementia. The overarching aims of the research programmes are to understand the mechanisms for cardiovascular and cerebral dysfunction in order to develop early diagnostics and intervention strategies for falls, syncope, cognitive impairment and dementia. The research involves collaborative partnerships with disciplines from basic science (lead ageing animal models of cardiovascular and cerebral dysfunction) through to health services development and implementation.

She has represented her field as chair or member of international working groups for falls, syncope and heart failure. Since her appointment Trinity College and St. James’s have committed strong support for ageing research, education and training (i.e. the Trinity College 2011 Strategic plan has highlighted Ageing Research as one of 8 priorities for further strategic development and investment supporting a new Institute of Ageing on the hospital site, new Trinity Centre for Ageing Research (Professor Kenny is director) and new Centre for Longitudinal Studies Analyses.

TENTY FIRST CENTURY SCIENCE AND THE IMPACT OF GLOBAL AGEING

Population ageing will have a profound and pervasive effect on our global society in the future. In 1990, one out of every ten persons in the world was aged 60 or over but projections indicate that by 2050 this ratio will have increased to one in five. This ageing transformation will pose formidable challenges: how to sustain an adequate standard of living and quality of life for older people, and to provide appropriate services and facilities such as healthcare and social care, while ensuring the effectiveness and financial sustainability of our systems and institutions.

Across Europe there are significant differences in life expectancy and the amount of time after 60 spent in good health- Healthy life years (HLYs). Understanding the underlying causes of these national differences is fundamental if we are to maximize HLYs across Europe and thus minimize healthcare costs.

Analyses that integrate multiple levels of inquiry, ranging from genes to biomarkers to neural systems to behaviors, are critical for elucidating pathways linking social behaviours and social environments to age-related outcomes and ultimately, for guiding interventions and public health policy. Longitudinal Studies are required to understand causal. Collection of core data sets from such studies, which are comparable across countries, has the advantage of better understanding policies and programs to promote active healthy aging and advance structural reforms in health and long-term care systems. Such information exchanges and cross-national research will enable collaborative biobehavioural and behavioural research to improve action through collaboration and reduce disenchantment.

Examples from the Irish longitudinal study on ageing (TILDA) are presented - data is derived from objective and subjective health measures in a nationally representative population study of persons over 50. The study population represents 1 in 142 people over 50 years in Ireland. Future analyses of TILDA will inform the proposed vision for the new European policy for health, “Health 2020” - “A European Society that all people are enabled and supported throughout their lives to make the best use of their health potential and well-being, and in which countries, individually and jointly, work towards reducing inequalities in health within the Region and beyond.”

> Angus WALLS

Degree: BCh (Hons) Newcastle 1979
PhD Newcastle 1986
FDSRCS (England) 1982
FDSRCS (Edinburgh) 1986 (ad eundam)
Posts held (with dates):
Director Edinburgh Dental Institute.
Laurnston B9uldine, Laurston Place, Edinburgh. From Jan-2013
Hon. Consultant in Restorative Dentistry to NHS Lothian
Professor of Restorative Dentistry Newcastle School of Dental Sciences 1993-2012
Director of Research Newcastle School of Dental Sciences 2009-2012
Director Centre for Oral Health Research, Newcastle 2009-2012
Research Interests:
The oral health status of older people is changing rapidly with many more older people retaining their natural teeth for longer; rather than relying upon full dentures. Consequently, the oral health needs of this population group are changing. This will impact both upon the individuals themselves and all carers for older persons. My research interests revolve around identifying oral health care problems for the ageing population and working with colleagues both to clarify the problem and develop interventions to address the issues concerned.

Current Grants:
Richardson Trust: B Barriers to access for denta kare in rural areas of Yorkshire £930k
MRC Clinical Training Fellowship Oral microbial carriage as a risk of nosocomial pneumonia in people with hip fracture Victoria Ewan Colin £380k
BBSRC CASE studentship with GlaxSmithKline erosive pattern tooth damage to enamel from diet ES4k
BBSRC CASE studentship with GlaxSmithKline erosive pattern tooth damage to enamel from diet ES4k
Publications:
Over 100 publications in peer-reviewed journals
Co-Auth or Editor of 4 test books and over 50 other book chapters

IS OLD AGE COMPATIBLE WITH ORAL HEALTH?

Ageing results in a number of changes in physiological function both at a bodily level and also within the oral environment. These include variations in the immune response, alterations in oral mucosal, alterations in bone metabolism and particularly the development of osteoporosis and changes in salivary gland structure. These variables will influence the oral environment and its ability to respond to change. This presentation will focus on the changes in oral and bodily function that are associated with ageing and explore how these can impact on oral health, both for subjects with teeth and those in whom new transmucosal structures are being planned.

The objective of this presentation is to develop further the understanding of the impacts of ageing on oral health with particular reference to the implant patient and what dentists can do to maximize health outcomes for their patients.

Saturday, October 19, 2013 | 09:00 - 12:20 |

72
**TARA RENTON**

Tara Renton (Specialist in Oral Surgery) is a dentist with a particular interest in trigeminal nerve injuries and pain. After completing her Oral and Maxillofacial surgical training in Melbourne Tara undertook a PhD in trigeminal nerve injury at KCL 1999-2003. She was later appointed Senior Lecturer at GMU, and then was awarded her chair in 2006 at Kings College London. Over the past 5 years Tara has led the teaching of 180 dental students for each year 3, 4 and 5 modernising Oral Surgical teaching with minimal access approach and modern LA techniques. She has Co-Edited the BDJ Book 1 on Oral surgery. She has established an academic training programme which now has taught 5 Academic Oral Surgery SpRs of which 3 are undertaking PhDs. She was a member of the core team developing BSP Oral Surgery online training and sits on the ABADMS Education Committee. In collaboration with i2P KCL and Imperial College Tara and collaborators have established an international leading programme of trigeminal nerve injury and pain research. Tara co-edited the recently published BDA clinical manual for Oral Surgery. She is Lead for Dental Pain at IMPD and National Recognised Pain management programmes based at St Thomas’ Hospital. Tara is the National Advisor for Oral Surgery, she is an elected council member for BAOS and National advisor for Oral Surgery, she is based at St Thomas’ Hospital. Tara co-edited the recently published BDA clinical manual for Oral Surgery. She is Lead for Dental Pain at IMPD and National Recognised Pain management programmes based at St Thomas’ Hospital. Tara is the National Advisor for Oral Surgery, she is an elected council member for BAOS and National advisor for Oral Surgery, she is based at St Thomas’ Hospital.

**GLEN LIDDELOW**

Dr Liddelow completed a Bachelor of Dental Science and a Master of Dental Science from the University of Western Australia and a Doctorate in Clinical Dentistry (Prostodontics) from the University of Sydney. He is a Member and Fellow of the Royal Australasian College of Dental Surgeons, a Fellow of the Pierre Fauchard Academy and the International College of Dentists. He is a member of the Australian Prosthodontic Society, the Australasian Osseointegration Society and the Academy of Osseointegration. Dr Liddelow is a prosthodontist primarily concerned with both the surgical and prosthetic aspects of implant dentistry. He is a consultant prosthodontist at Princess Margaret Hospital, Royal Perth Hospital and the University of Western Australia. He is a current faculty member of gIDE (Global Institute for Dental Education), a reviewer for the Australian Dental Journal and an examiner for the Australian and New Zealand Academy of Prosthodontists. His research and publications include immediate loading, risk factors, surface technology and implant aesthetics.

The IMMediate LOaded sinGle IMplant-Retained MaNdbuLar overtuREnture: A 9-10 YoEAR ReVIew oF A ProSPECTIvE Study

This presentation will show the 9-10 year follow up results of a prospective study that simplifies mandibular overdenture treatment using single stage surgery and immediate prosthetic loading of a single implant placed in the midline of the mandible. Clinical parameters such as implant success, marginal bone loss, functional improvement, prosthetic and surgical complications, maintenance and patient satisfaction were recorded. As part of the study, the Mk III Branemark implant with an oxidised surface was compared to the classic turned Mk III Branemark implant.

**FRAUKE MÜLLER**

Frauke Müller is professor and chair for gerodontology and removable prosthodontics at the University of Geneva. She was born in Kiel, Germany and studied dentistry in Bonn, where she received her Dental and Doctorate Degree. Until 2003, she worked at the Department of Prosthetic Dentistry of the University of Mainz, Germany where she completed her habilitation (PD) in 1995. Thanks to fellowships, she had the opportunity to spend several years at the London Hospital Medical College, England (1998 and 1993/94). Professor Müller served on the board of several professional associations: ECG (European College of Gerodontology), IGORD (German Oral Research Group) and ISRD (Swiss Society for Reconstructive Dentistry). Since 2010 she is President of the Swiss Society for Dentistry for elderly and handicapped persons (SGZBB). Frauke Müller is the first female board member of the IIT and chairman of the IIT scholarship committee. She is Associate Editor of Gerodontology and the textbook “Oral Healthcare and The Final Eater”. In 2013 she was awarded the IADR Distinguished Scientist Award in Geriatric Oral Research. Her research activity is mainly related to gerodontology, oral function as well as complete and implant prosthodontics.

Simplification of Prosthetic Treatment: Options and Complications

Nowadays tooth loss tends to occur later in life when ageing and multimorbidity impact dental treatment decisions. There is sufficient evidence to state that the mandibular implant overdenture is a well-established treatment modality, certainly in non-dependent edentulous individuals, but little is known on the very old and geriatric edentulous patients. They often present unfavourable anatomical conditions, keratosis and a lack muscle control. Although the benefits of dental implants are well documented, elderly adults are often reluctant to agree to an implant insertion, even if cost is removed as limiting factor. The main reasons for implant refusal are the fear of surgery and pain. The present talk therefore describes the use of minimal-invasive and simple treatment concepts for elderly, edentulous patients. It further highlights possible complications which may arise with the onset of dependency and/or frailty and advises further simplification of the implant—restorations when needed. Recall and maintenance in this group of patients is crucial to assure the patients’ benefit from the intervention until late in life.
Digital Planning and CAD CAM Materials in Implant Prosthodontics

Digital technologies and CAD CAM materials are increasingly used in implant dentistry. Latest applications include digital planning, design and manufacture of implant abutments, multiple unit and full-arch frameworks as well as custom-made bars to support fixed and removable prostheses. This presentation will summarize advantages of the digital technology, and will provide clinical data and the present scientific knowledge on CAD CAM materials and bi-layer as well as monolithic all-ceramic systems such as zirconia and lithium disilicate ceramics. The material properties and how they influence their indications in clinical application will be highlighted. An analysis of strength characteristics after fatigue and the in-vitro longevity of various CAD CAM and all-ceramic systems will be presented to develop a rationale for material selection. The advantages of digital technologies and CAD CAM monolithic materials compared to core-veneer bi-layer systems such as zirconia based restorations will be addressed. Predictable and aesthetic clinical outcomes attributed to digital design and manufactures will be provided by selected cases.

Digitalization process can be initiated at the diagnostic, clinical, impressions on current implant-prosthetic workflows. This lecture will analyze the impact of digital implant prosthesis.

Comparing the efficiency and accuracy of digitally fabricated Prosthetics against gypsum models from conventional impression techniques.

Objectives: upon completion of this lecture participant should be able to:

1. Understand implant prosthodontic digital workflows.
2. Familiarize with the use of an intraoral scanner for the fabrication of implant prostheses.
3. Compare the efficiency and accuracy of digitally fabricated vs. gypsum models from conventional impression techniques.

Digital planning, design and manufacture of implant abutments, multiple unit and full-arch frameworks as well as custom-made bars to support fixed and removable prostheses, will be presented to develop a rationale for material selection. The advantages of digital technologies and CAD CAM monolithic materials compared to core-veneer bi-layer systems such as zirconia based restorations will be addressed. Predictable and aesthetic clinical outcomes attributed to digital design and manufactures will be provided by selected cases.
the traditional manufacturing is still beneficial. Highlight today's digital possibilities, and indicate at which point and traditional procedures are still needed. The lecture will reconstructions. Yet, the workflow also has several limitations today offer numerous advantages, like e.g. the precision of the variety of new diagnostic tools. The digital systems available dental reconstructions but also for a better patient/dentist These digital systems are linked to corresponding CAD/CAM framework material increased the general interest for CAD/CAM of high-strength ceramics like zirconia. These ceramics can only be processed by milling pre-fabricated ingots using CAD/ CAM of all-ceramic fixed dental prostheses led to the development only used by specialized clinicians maybe due to the fact that it Due to system-based limitations this first chairside system was nowadays named the “digital workflow”. The art of reconstruction of the mandible and maxilla has rapidly progressed due to the advent of virtual surgery. The development of computer-aided, three dimensional planning along with computer-fabricated surgical splints and cutting jigs now allow for a prosthodontically-driven, occlusally-based rehabilitation in combination with unprecedented precision in surgical reconstruction of form and function. The culmination of technology employed in an active multidisciplinary team setting has resulted in the ability to deliver an implant-supported prosthetic rehabilitation for the mandibular or maxillary resection patient during a single reconstructive surgical episode. This presentation reviews the evolution of the collaborative effort of our team of an oral and maxillofacial surgeon, a microvascular plastic surgeon and a maxillofacial prosthodontist in optimizing the outcomes in our mandibular resection patients.

Learning Objectives:
1. The importance of pre-surgical computerized planning and functional occlusal design will be emphasized.
2. Review the benefits of interdisciplinary virtually planned and prosthetically-driven functional maxillomandibular reconstruction and rehabilitation.
3. Provide an algorithm for one-stage jaw rehabilitation.
The extraordinary technological resources that are now available enable us to carry out extraordinary treatments - some of which will be presented in this session.

The aim of this presentation is to illustrate how 3D printing can create new objects and new approaches to treatment that could never have been previously considered.

Andrew Dawood runs the Dawood and Tanner Dental Practice, together with partner Susan Tanner, in London’s West End. The partners lecture regularly on surgical and prostodontic aspects of implant dentistry, in the UK and internationally, and are published in the scientific literature.

Andrew also heads Cavendish Imaging, an imaging and medical modelling facility. CBCT scanning, and 3D photography along with 3D printing and virtual surgical planning are used to facilitate all types of implant placements as well as complex craniofacial surgical procedures. This service is widely used by dentists placing implants, surgical colleagues, and National Health Hospital Trusts.

Andrew qualified from The Royal London Hospital. He devotes his time to dental implant surgery, research and development in the implant world and in 3D imaging and manufacturing. He has honorary appointments to University College Hospital, St Bartholomew’s and the Royal London Hospitals, Chelsea and Westminster, and Moorfields Eye Hospital, working in the implant rehabilitation of patients who have undergone extensive resection or trauma.

Andrew has a number of significant innovations to his name, including the development of an award winning computerised implant drill controller, and various implant designs.

EMERGING DEVELOPMENTS IN 3D IMAGING AND 3D PRINTING TECHNOLOGIES

Rapid technological advances in imaging have been accompanied by synergistic advances in CAD and in 3D printing and manufacturing technologies. The ability to export 3D data to planning software or for use in CAD CAM systems has revolutionised implant dentistry.

Access to 3D imaging and printing technologies enhances the operator’s ‘3D-thinking’ and 3D perception, improving diagnosis, facilitating and expediting treatment, and linking the surgical plan to the planned prosthetic result, transforming the reconstructive process.

3D imaging and manufacturing technologies have dramatically changed the management of patients requiring complex treatments, transforming implant surgery and prosthetics, and contributing to a more enjoyable and predictable practice.

The extraordinary technological resources that are now available enable us to carry out extraordinary treatments - some of which will be presented in this session.

The aim of this presentation is to illustrate how 3D printing can create new objects and new approaches to treatment that could never have been previously considered.
Dr. Bonnet received his DDS degree from the University of Paris 7 in 1987. Then he completed advanced education programs. He was trained in implantology at UCLA and obtained a postgraduate degree in implantology from the University of Marseille. He also received three specialty certificates: Oral Biology; Periodontics; Fixed Prosthodontics from the University of Paris 7. Dr. Bonnet belongs to professional organizations including the European Academy of Osseointegration and the French society of periodontology and oral implantology. He is an active member of the European Academy of Esthetic Dentistry. He lectures nationally and internationally on the subjects of aesthetics and implantology. Dr. Bonnet founded a private learning center FIDE: Formation Implantaire et Dentaire Esthetique (fide.fr), where he conducts clinical courses in his private clinic in collaboration with Professor Paul Mariani. Dr. Bonnet with his partners maintains private practice in Cannes–Le Cannet, France, dedicated to Aesthetics, Periodontics, and Implants.

**Dr. Bonnet**

**SAtuRdAy mORnIng**

**CHaIrPersOn**

> **Franck BONNET**

Ultrasonic implant site preparation vs. drills: A 4 weeks clinical study comparing insertion torque, reverse torque and resonance frequency analysis

Influence of a collagen membrane and recombinant PDGF on early bone formation after vertical augmentation with bovine bone in rabbits

Sonic oscillating handpiece versus conventional turbine handpiece for maxillary sinus augmentation procedures

Clinical, histologic and histomorphometric evaluation of biphasic calcium sulfate in extraction sockets’ augmentation: a human study

Ultrasonic implant site preparation vs. drills: A 4 weeks clinical study comparing insertion torque, reverse torque and resonance frequency analysis

Influence of the bucco-palatal position of a single-tooth implant on the vertical position of the mid-buccal mucosa

Influence of a collagen membrane and recombinant PDGF on early bone formation after vertical augmentation with bovine bone in rabbits

Implant success in microvascular bone grafts

Sonic oscillating handpiece versus conventional turbine handpiece for maxillary sinus augmentation procedures

Clinical, histologic and histomorphometric evaluation of biphasic calcium sulfate in extraction sockets’ augmentation: a human study
Irena Sailer received her dental education and Dr. med. dent. degree from the Faculty of Medicine, University of Tübingen, Germany in 1997/1998. In 2003 Dr. Sailer received an Assistant Professorship at the Clinic for Fixed and Removable Prosthodontics and Dental Material Sciences in Zurich. Since 2010 she is an Associate Professor at the same clinic. In 2007 Dr. Sailer was a Visiting Scholar at the Department of Biomaterials and Biomimetics, Dental College, New York University, USA. Additionally, since 2009 she holds an Adjunct Associate Professorship at the Department of Preventive and Restorative Sciences, Robert Schattner Center, School of Dental Medicine, University of Pennsylvania, Philadelphia, USA.

Giuseppe Lizio
Reconstruction of three-dimensional alveolar ridge defects: effectiveness of the titanium mesh technique

Jong-Ho Lee
Clinical outcome of dental implants placed through the skin flap

Shichong Qiao
Histological and dimensional alteration of alveolar crest after bundle bone removal at tooth extraction

Withdrawn

Semaan Abi Najm
Potential adverse events of endosseous dental implants penetrating the maxillary sinus: long term clinical evaluation

Misi Si
Osteotome sinus floor elevation with and without grafting: an animal study in Labrador dogs
Ronald Jung is trained in oral surgery, prosthodontics and implant therapy. He is currently Vice Chairman of the Department of Fixed & Removable Prosthodontics and Dental Material Sciences at the University of Zurich in Switzerland (Chairman: Prof. Dr. Ch. Hämmern). In 2006 he worked as Visiting Associate Professor at the Department of Periodontics at the University of Texas Health Science Center at San Antonio, USA (Chairman: Prof. Dr. D. Cochran). In 2008 he finalized his „Habilitation” (venia legendi) in dental medicine and was appointed associate professor at the University of Zürich. In 2011 he became his PhD doctorate degree of the University of Amsterdam, ACTA dental school, The Netherlands. In 2013 he worked as Visiting Associate Professor at the Department of Restorative Dentistry and Biomaterials Sciences at Harvard School of Dental Medicine in Boston, USA.

He is an accomplished and internationally renowned lecturer and researcher, best known for his work in the field of hard and soft tissue management and his research on new technologies in implant dentistry.

A comparison of 6-mm implants with 11-mm implants in combination with a sinus floor elevation in the resorbed posterior maxilla: 1-year follow-up

Crestal bone stability around implants with horizontally matching connection after mucosal tissue thickening. A randomized controlled clinical trial

Esthetic outcome of implant restorations replacing two adjacent missing teeth in the esthetic zone and its relationship to labial bone thickness

Microbiological assessment of the implant/abutment interface in different connections. Cross-sectional study after 5 years of functional loading

Different times for loading dental implants, Systematic Review
Mariano SANZ

I obtained my medical degree (MD) from the Universidad Complutense of Madrid. I then became specialist of Stomatology from the same university (DDS) and then Specialist in Periodontology from the University of California, Los Angeles (UCLA).

I am a Doctor en Medicine (DrMed) degree and I hold a Honorary Doctorate from the University San Sebastian (Santiago de Chile).

I currently hold the position of Professor and Chairman of Periodontology at the Universidad Complutense de Madrid, where I am also the Director of the Graduate Programme “Master in Periodontology”.

I am Past-President of the European Federation of Periodontology (EFP), Past-President of the Spanish Society of Periodontology (SEPA) and President of the Pan European Region of the International Association for Dental Research (IADR-PER).


I have published scientific more than 200 articles and book chapters in Periodontology, Implant Dentistry and Dental Education and I have lectured extensively in Periodontology, Implant Dentistry and Dental Education.

Eli MACHTEI

A double blind, randomized multi-center clinical trial using repeated local application of Chlorhexidine chips in Periimplantitis site.

Ralf KOHAL

Zirconia Oral Implants: Three-year Results from a Prospective Cohort Study.

Kees STELLINGSMA

The extremely resorbed mandible: 10-year results of a randomised controlled trial on 3 treatment strategies.

Soon Jung HWANG

Evaluation of Efficacy and Safety of rhBMP-2 for Maxillary Sinus Floor Augmentation: Multi-center Prospective Study.

Tomas LINKEVICIUS

Influence of vertical tissue thickness on crestal bone changes around implants with platform switching. A prospective controlled clinical study.
Plenary Session 5

EXTENDED DEFECTS IN THE AESTHETIC ZONE - DREAMS, NIGHTMARES, REALITY

> 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.

> Ronald JUNG

Ronald Jung is trained in oral surgery, prosthodontics and implant therapy. He is currently Vice Chairman of the Department of Fixed & Removable Prosthodontics and Biomaterials Sciences at the University of Zurich in Switzerland (Chairman: Prof. Dr. Ch. Hämmerle). In 2006 he worked as Visiting Associate Professor at the Department of Periodontics at the University of Texas Health Science Center at San Antonio, USA (Chairman: Prof. Dr. D. Cochrane). In 2008 he finalized his Habilitation (venia legendi) in dental medicine and was appointed associate professor at the University of Zurich. In 2011 he became his PhD doctorate degree of the University of Amsterdam, ACTA dental school, The Netherlands. In 2013 he worked as Visiting Associate Professor at the Department of Restorative Dentistry and Biomaterial Sciences at Harvard School of Dental Medicine in Boston, USA. He is an accomplished and internationally renowned lecturer and researcher; best known for his work in the field of hard and soft tissue management and his research on new technologies in implant dentistry.

> Stefano GRACIS

Stefano GRACIS, DMD, MSD

Dr. Gracis received his D.M.D. degree in 1986 from the University of Pennsylvania, (Philadelphia, Pennsylvania, USA) and, in 1987, from the University of Pavia (Pavia, Italy). In 1990, he obtained the certificate in Prosthodontics with an M.S.D. degree at the University of Washington in Seattle. He then returned to Milan, Italy, where he has been working ever since in private practice limiting his activity to prosthodontics and restorative dentistry. From 1998 to 2004, he was a guest lecturer at the University of Parma (Parma, Italy). He is an active member and past Secretary General of the European Academy of Esthetic Dentistry (EAO) and a past president of the Italian Academy of Prosthetic Dentistry (AIOP). He is on the Editorial Board of the International Journal of Prosthodontics, European Journal of Esthetic Dentistry and European Journal of Oral Implantology. He has contributed several articles in the field of restorative dentistry and he lectures and gives courses regularly, both nationally and internationally, on topics related to fixed prosthodontics and implant prosthodontics.

CLINICAL PROCEDURES TO ACHIEVE PREDICTABLE AESTHETICS

The possibility to create an aesthetic implant prosthesis depends on the availability of a sufficient volume of hard and soft tissues, on the correct positioning of the implant and on the application of sound and proper clinical protocols. This lecture will analyze the consequences on the appearance of the prosthesis and on soft tissue stability both of the 3-dimensional implant placement and of the clinical/technical procedures performed. Through the description of different clinical cases, the speaker will stress the importance of proper presurgical planning and of the application of protocols that preserve and promote an ideal soft tissue volume around the implant supported restorations. In those cases where this was not done, he will demonstrate the possible solutions and the limits that the prosthodontist faces when fabricating implant restorations in the event of compromises in the mesio-distal, bucco-lingual and apico-coronal positioning.
Brian O’CONNELL

Brian O’Connell received his undergraduate degree in dentistry at the National University of Ireland, Cork and postgraduate training in Prosthodontics and Biochemistry at the Eastman Dental Center-University of Rochester, New York. He continued his work at the National Institutes of Health in Bethesda, Maryland, where he was Chief of the Gene Regulation and Expression Unit, NIDCR.

Brian is currently Professor of Restorative Dentistry and Director of Postgraduate Prosthodontics at Trinity College, Dublin, with a clinical emphasis on multidisciplinary care. He is a Diplomate of the American Board of Prosthodontics and a Fellow of the Royal College of Surgeons in Ireland. Prof. O’Connell is an investigator in the Trinity Centre for Bioengineering with an interest in bone biology and remote monitoring of oral diseases. He has published and lectured widely on Prosthodontics and Implantology.

Mauro FRADEANI

After graduating in medicine and surgery in 1979, Mauro Fradeani completed a specialization in dentistry at the University of Ancona, Italy in 1982. Past President of EAED - European Academy of Esthetic Dentistry (biennial 2003/2004) and Past President of AIDP - Accademia Italiana di Odontoiatria Protesica (biennial 1999/2000), he has served as Visiting Associate Professor in Prosthetics at Louisiana State University - New Orleans (USA) from 1999 until 2008. Active Member of The American Academy of Esthetic Dentistry, he maintains membership in The American Academy of Fixed Prosthodontics. He is Founder and Director of ACE Institute, Advanced Continuing Education centre in Pesaro, Italy. Associate Editor of The European Journal of Esthetic Dentistry (EJED), Member of the Editorial Board of Practical Periodontics & Aesthetic Dentistry (PPAD) and of the Journal of Esthetic and Restorative Dentistry (JERD).


Ueli GRUNDER

Dr. Ueli Grunder received his DMD degree from the University of Zurich, Switzerland, in 1982. His post-graduate education in advanced fixed prosthodontics also came from the University of Zurich, where he is senior lecturer since 1987. He maintains a private practice since 1989 in Zollikon-Zurich together with Dr. Gaberthüel and has published numerous papers and extensively lectured nationally and internationally on the surgical and prosthetic aspects of implant dentistry.

Dr. Grunder is Past-president of the Swiss Society of Oral Implantology (SSOI) and Past-President of the European Academy of Esthetic Dentistry (EAED).

HOW TO DEAL WITH AESTHETIC COMPLICATIONS

To place implants has become a routine procedure, and results can be achieved with high predictability. But still we have to understand the biological limitations and therefore the limitations of each individual therapy as a whole as well as the difficulties of every clinical step. Complications can be the result of unrealistic expectations from the patient or of wrong treatment by the clinician. It is sometimes very difficult or even impossible to correct an unpleasant outcome of an implant restoration in the aesthetic zone. During this lecture short term as well as longterm complications and the possibilities to solve the problem will be discussed.
Congress General Information

Date
From Thursday 17th, October to Saturday 19th, October 2013.

Venue
The EAO congress 2013 will be held at the Convention Center Dublin (CCD), Spencer Dock, North Wall Quay, DUBLIN1, Ireland.
The CCD sits at the heart of Dublin’s transport hub with excellent air, road, rail and sea connections, meaning the CCD is only minutes from the airport, motorway network, Port Tunnel, rail stations and ferry terminals.
Increased availability of taxis in Dublin means that it is easy to travel to and from Dublin city, day or night.
For more information on how to get to the Convention Centre Dublin, please visit www.theccd.ie

Official language
The official language of the EAO Congress is English.

Welcome desk opening hours
Wednesday 16th 18:00 - 20:00
(collection of the badges only)
Thursday 17th 09:00 - 19:00
Friday 18th 07:30 - 19:00
Saturday 19th 08:30 - 16:00

The welcome desk is situated at the entrance of the Convention Center Dublin. You will be able to register on site and collect your access badges.

Exhibition opening hours
Thursday 17th 09:00 - 19:00
Friday 18th 08:30 - 19:00
Saturday 19th 08:30 - 14:00
Congress General Information

Registration fees for delegates include:
- Admission to all congress sessions, poster areas and technical exhibition
- The opening ceremony
- Congress documents (final programme, abstract book, congress bag)
- Lunch and coffee breaks

Terms of payment
- By credit card: Visa or Master Card
- By cash
- By cheque in €

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

- EAO members and national societies members* 600 €
- Non members 770 €
- Undergraduate Students** 330 €

* Members of the following Societies:
   - Royal College of Surgeons in Ireland
   - Prosthodontic Society of Ireland
   - Irish Society of Periodontology
   - Oral Surgery Society of Ireland

** This rate is subject to presentation of a valid student identification confirming the undergraduate student status.

Refreshments
Lunch 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 green T-shirts. They will be happy to assist you with any queries you may have.

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 16th 18:00 - 20:00
Thursday 17th 09:00 - 19:00
Friday 18th 07:30 - 19:00
Saturday 19th 08:30 - 16:00

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

Contact
EAO Congress Organization and Scientific Secretariat Office
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Fax. +33 (0)1 44 64 15 16
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Fax. +32 (0)2 645 26 71
E-mail: eao@congrex.com
Web: www.eao.org
USEFUL LINKS

Venue: www.theccd.ie

Tourism: www.visitdublin.com

Dublin Airport: www.dublinairport.com

Car rentals, at the airport: www.dublinairport.com/gns/to-from-the-airport/car-rentals.aspx


Restaurants: www.visitdublin.com/Dining

Hotels: www.accommodationbooking.eu/wipresa/congres_eao
Discover Dublin

EAOK 22nd meeting will be held in a captivating and attractive capital city: Dublin is a key location for healthcare and medical devices companies. Renowned for its hospitality, Dublin is a unique destination to experience many cultural activities while discovering the future of Implant Dentistry.

Designated as a UNESCO city of literature, Dublin is the capital city of the Republic of Ireland with a population over 1 million.

Dublin can trace its origins back over 1,000 years. From a small Viking settlement it has evolved into one of the most vibrant capitals in the world. A city rich in cultural heritage, from the beautifully illuminated Book of Kells dating from 800 AD, to its splendid Georgian architecture, magnificent medieval castles and fine cathedrals. Dublin is a medieval city where the charming and cosmopolitan converge in delightful diversity. Fine museums and art galleries chronicle Dublin's long and colourful past, while the pubs and cafes buzz with traditional and contemporary entertainment.

1. **Royal Hospital Kilmainham – Irish Museum of Modern Art**  
   *Dinner for EAO Members and Speakers*

2. **Dublin Spire**

3. **Trinity College Dublin and the Book of Kells**

4. **Christchurch Cathedral**

5. **Guinness Storehouse**

6. **Liffey River**
Discover Dublin

The 22nd meeting will be held in a captivating and attractive capital city: Dublin is a key location for healthcare and medical devices companies. Renowned for its hospitality, Dublin is a unique destination to experience many cultural activities while discovering the future of Implant Dentistry. Designated as a UNESCO city of literature, Dublin is the capital city of the Republic of Ireland with a population over 1 million.

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Convention Centre Dublin

1. Royal Hospital Kilmainham – Irish Museum of Modern Art
2. Dublin Spire
3. Trinity College Dublin and the Book of Kells
4. Christchurch Cathedral
5. Guinness Storehouse
6. Liffey River
7. Temple bar
8. St. Patrick's Cathedral
9. St Stephen's Green
10. National Museum of Ireland
11. O'Connell Bridge
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</tr>
</thead>
<tbody>
<tr>
<td>BIMET 3i</td>
<td>FGS E</td>
</tr>
<tr>
<td>DENTSPLY IMPLANTS</td>
<td>FGS D</td>
</tr>
<tr>
<td>NOBEL BIOCARE</td>
<td>FGS B</td>
</tr>
<tr>
<td>STRAUMANN</td>
<td>FGS C</td>
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<tr>
<td>WILEY</td>
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</tbody>
</table>

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</tr>
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<tbody>
<tr>
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<td>G12</td>
</tr>
<tr>
<td>ANTHOGRY / SIMEDA</td>
<td>G14</td>
</tr>
<tr>
<td>BEGO</td>
<td>G15</td>
</tr>
<tr>
<td>BICON DENTAL IMPLANTS</td>
<td>G6</td>
</tr>
<tr>
<td>BIOHORIZONS</td>
<td>G2</td>
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<tr>
<td>BTI</td>
<td>G7</td>
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<tr>
<td>CAMLOG</td>
<td>G13</td>
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<td>GEISTLICH</td>
<td>G1</td>
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<tr>
<td>MIS Implants Technologies Ltd</td>
<td>G10</td>
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<td>OSSYSTEM</td>
<td>G9</td>
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<tr>
<td>QUINTESSENCE</td>
<td>G18</td>
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<tr>
<td>THOMMEN MEDICAL</td>
<td>G3</td>
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<tr>
<td>TRINON TITANIUM GMBH</td>
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<td>ZIMMER DENTAL</td>
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<table>
<thead>
<tr>
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<th>Stand No.</th>
</tr>
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<tbody>
<tr>
<td>3SHAPE</td>
<td>S21</td>
</tr>
<tr>
<td>ADIN DENTAL IMPLANT SYSTEMS LTD</td>
<td>S3</td>
</tr>
<tr>
<td>BREIDENT</td>
<td>S33</td>
</tr>
<tr>
<td>CLARON TECHNOLOGY</td>
<td>S22</td>
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<tr>
<td>CORTEX DENTAL</td>
<td>S14</td>
</tr>
<tr>
<td>DENTIUM</td>
<td>S11</td>
</tr>
<tr>
<td>DIO IMPLANT</td>
<td>S36</td>
</tr>
<tr>
<td>EQUINOX</td>
<td>S20</td>
</tr>
<tr>
<td>EUROTEKNIKA</td>
<td>S16</td>
</tr>
<tr>
<td>HENRY SCHEIN</td>
<td>S19</td>
</tr>
<tr>
<td>HERAEUS KULZER GMBH</td>
<td>S37</td>
</tr>
<tr>
<td>HU FRIEDY</td>
<td>S4</td>
</tr>
<tr>
<td>IMPLANT DIRECT</td>
<td>S31</td>
</tr>
<tr>
<td>IVOCLEAR</td>
<td>S7</td>
</tr>
<tr>
<td>KEYSTONE DENTAL</td>
<td>S18</td>
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<tr>
<td>MECTRON</td>
<td>S13</td>
</tr>
<tr>
<td>MEGAGEN</td>
<td>S9</td>
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<td>NEOBIO TECH</td>
<td>S1</td>
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<td>SHINHUNG</td>
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<td>S8</td>
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<td>SOUTHERN IMPLANT</td>
<td>S12</td>
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<td>SUNSTAR</td>
<td>S32</td>
</tr>
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<td>SWEDEN &amp; MARTINA</td>
<td>S2</td>
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<tr>
<td>TRI DENTAL</td>
<td>S15</td>
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<tr>
<td>USHIO</td>
<td>B31</td>
</tr>
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</table>

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<table>
<thead>
<tr>
<th>Sponsor</th>
<th>Stand No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesculap</td>
<td>B30</td>
</tr>
<tr>
<td>AMERICAN DENTAL SYSTEMS</td>
<td>B26</td>
</tr>
<tr>
<td>ASEPTICO</td>
<td>B2</td>
</tr>
<tr>
<td>BIEN-AIR</td>
<td>B21</td>
</tr>
<tr>
<td>BIOMATLANTE</td>
<td>B4</td>
</tr>
<tr>
<td>BTI (BTKG The Smile system)</td>
<td>B52</td>
</tr>
<tr>
<td>BIOTECK</td>
<td>B1</td>
</tr>
<tr>
<td>BOTISS</td>
<td>B15</td>
</tr>
<tr>
<td>DENTAL RATIO</td>
<td>B50</td>
</tr>
<tr>
<td>DENTALURUM</td>
<td>B19</td>
</tr>
<tr>
<td>IBS</td>
<td>B61</td>
</tr>
<tr>
<td>INSTRUMENTARIUM DENTAL</td>
<td>B16</td>
</tr>
<tr>
<td>ITI</td>
<td>B24</td>
</tr>
<tr>
<td>JDENTALCARE</td>
<td>B22</td>
</tr>
<tr>
<td>KAVO GENDEX</td>
<td>B6</td>
</tr>
<tr>
<td>MAILLEFER</td>
<td>B28</td>
</tr>
<tr>
<td>MASTER OF ORAL IMPLANTOLOGY (MOI)</td>
<td>B51</td>
</tr>
<tr>
<td>GOETHE UNIVERSITY</td>
<td></td>
</tr>
<tr>
<td>MAXILLENT</td>
<td>B27</td>
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<td>MEDENTIS MEDICAL</td>
<td>B12</td>
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<tr>
<td>MEISINGER</td>
<td>B18</td>
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<td>B23</td>
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<td>NBM</td>
<td>B25</td>
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<tr>
<td>NEOSS</td>
<td>B29</td>
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<td>NEWTOM</td>
<td>B53</td>
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<td>NIBEC</td>
<td>B63</td>
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<tr>
<td>OMNIA</td>
<td>B7</td>
</tr>
<tr>
<td>OSTETELL</td>
<td>B10</td>
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<tr>
<td>OSTEOGENICS</td>
<td>B20</td>
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<td>PLANMeca</td>
<td>B13</td>
</tr>
<tr>
<td>PREVEST DENTPRO GMBH</td>
<td>B9</td>
</tr>
<tr>
<td>SAEHIN PRECISION LTD</td>
<td>B8</td>
</tr>
<tr>
<td>SIRONA</td>
<td>B54</td>
</tr>
<tr>
<td>SOREDEX</td>
<td>B11</td>
</tr>
<tr>
<td>SYMMETRY MEDICAL</td>
<td>B17</td>
</tr>
<tr>
<td>OSTEOBIO by TECNOSS</td>
<td>B14</td>
</tr>
<tr>
<td>USTOMED</td>
<td>B5</td>
</tr>
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<td>W&amp;H</td>
<td>B3</td>
</tr>
<tr>
<td>IRISH SOCIETY OF PERIODONTIOLOGY</td>
<td>B59</td>
</tr>
<tr>
<td>ROYAL COLLEGE OF SURGEONS IN IRELAND</td>
<td>B60</td>
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G 12

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G 14

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Tom Peterson
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G 15

BEGO IMPLANT SYSTEMS GMBH & CO. KG

Bremen-based BEGO Implant Systems GmbH & Co. KG is a thriving, 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 1956. Dental implants “Made by BEGO” epitomise top German-quality products at a fair price, delivering a perfect combination of safety, durability, aesthetics and reliability. BEGO Implant Systems GmbH & Co. KG has patented many of its developments.

Makke Wachendorf
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E-mail: wachendorf@bego.com
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G 16

BICONDENTAL PLANTS

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Tom Peterson
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**4**

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**8**

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For more information about the company’s broad portfolio of products, solutions and services, please contact Keystone Dental or visit: www.keystonedental.com

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The I.S.P is an association of specialist practitioners, periodontists, general dentists and consultants who have a special interest in the prevention, diagnosis and treatment of diseases affecting the gums and the supporting structures of the teeth and in the placement and maintenance of dental implants. The aim of the society is to promote the periodontal and general health of the public and advance excellence in periodontics.

There are thirty two active members of the Irish society of Periodontology and the society has an annual scientific meeting and two to three small meetings during the year.
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Web site: www.rcsi.ie

THE PROSTHODONTIC SOCIETY OF IRELAND

The Prosthodontic Society of Ireland (PSI) is the representative specialist organisation for the discipline in Ireland. Membership of the PSI is freely open to all dental practitioners who have completed an accredited training programme and have been certified by an approved educational institution. The goals of the society are the continuous evolution of the standard of care in the delivery of prosthodontic services to better serve the public and to contribute to the further development of the specialty in Ireland and internationally. The society is actively involved with the public and wider dental profession in both the development and dissemination of general information in relation to prosthodontic services and of established international clinical and ethical practice guidelines in Prosthodontics.

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