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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
<table>
<thead>
<tr>
<th>Wed. Oct. 16</th>
<th>Thursday Oct. 17</th>
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<tr>
<td><strong>Overview</strong></td>
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<tr>
<td><strong>Auditorium</strong></td>
<td><strong>Liffey B</strong></td>
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<td>Liffey B</td>
<td>Wicklow</td>
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<tr>
<td><strong>Breakfast Symposia</strong></td>
<td><strong>Symposia</strong></td>
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<tr>
<td>7:45</td>
<td>8:00 -</td>
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<tr>
<td><strong>Osstell Sunstar</strong></td>
<td><strong>Parallel Session 2</strong></td>
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<tr>
<td>8:00</td>
<td>8:30</td>
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<tr>
<td><strong>Learning and sharing clinical dentistry in a virtual world</strong></td>
<td><strong>Plenary Session 2</strong></td>
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<tr>
<td>8:30</td>
<td>9:00 -</td>
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<tr>
<td><strong>Set up exhibition opening</strong></td>
<td><strong>Plenary Session 4</strong></td>
</tr>
<tr>
<td>9:00 -</td>
<td><strong>Implants in an ageing population</strong></td>
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<tr>
<td><strong>Plenary Session 2</strong></td>
<td><strong>Parallel Session 5</strong></td>
</tr>
<tr>
<td>9:00 -</td>
<td><strong>Emerging technologies in computer assisted implant rehabilitation</strong></td>
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<tr>
<td><strong>Satellite Industry Symposia</strong></td>
<td><strong>Plenary Session 5</strong></td>
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<tr>
<td><strong>Geistlich</strong></td>
<td><strong>Peri-implantitis - a growing problem or a manageable complication?</strong></td>
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<td><strong>Camlog</strong></td>
<td><strong>Risk factors in implant dentistry</strong></td>
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<td><strong>Ushio</strong></td>
<td><strong>Basic Research Competition</strong></td>
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<tr>
<td><strong>Parallel Session 3</strong></td>
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<tr>
<td><strong>Treating the partially edentate resorbed posterior maxilla</strong></td>
<td><strong>Implants in an ageing population</strong></td>
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<tr>
<td><strong>Parallel Session 4</strong></td>
<td><strong>Clinical Research Competition</strong></td>
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<tr>
<td><strong>Replacing a missing incisor</strong></td>
<td><strong>Short Oral Comm. 3</strong></td>
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<tr>
<td><strong>Short Oral Comm. 3</strong></td>
<td><strong>Parallel Session 5</strong></td>
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<tr>
<td><strong>Emerging technologies in tissue regeneration that can enhance patient care</strong></td>
<td><strong>Closing Ceremony</strong></td>
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<td><strong>Workshop Certification Programme</strong></td>
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<td><strong>Poster Presentation</strong></td>
<td><strong>Closing Ceremony</strong></td>
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<tr>
<td><strong>Poster Presentation</strong></td>
<td><strong>Closing Ceremony</strong></td>
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<tr>
<td><strong>Welcome Address</strong></td>
<td><strong>Welcome Address</strong></td>
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<tr>
<td><strong>Plenary Session 1</strong></td>
<td><strong>Plenary Session 1</strong></td>
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<tr>
<td><strong>Treatment planning for success - How to make it all go right</strong></td>
<td><strong>Emerging technologies in tissue regeneration that can enhance patient care</strong></td>
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<tr>
<td><strong>Parallel Session 1</strong></td>
<td><strong>Presentation</strong></td>
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<td><strong>Emerging technologies in tissue regeneration that can enhance patient care</strong></td>
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<td><strong>Poster Presentation</strong></td>
<td><strong>Poster Presentation</strong></td>
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<tr>
<td><strong>Welcome Reception</strong></td>
<td><strong>Welcome Reception</strong></td>
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<tr>
<td><strong>Congress Center</strong></td>
<td><strong>Congress Center</strong></td>
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<tr>
<td><strong>EAO Members’ and Speakers’ Dinner</strong></td>
<td><strong>EAO Members’ and Speakers’ Dinner</strong></td>
</tr>
</tbody>
</table>
**Friday Oct. 18**

**Auditorium** | **Liffey B** | **Wicklow** | **Liffey Hall 2** | **Liffey Hall 1**
--- | --- | --- | --- | ---

**Breakfast Symposium**

- **07:45 - 08:00**
  - Osstell
  - Sunstar

**Parallel Session 2**

- Learning and sharing clinical dentistry in a virtual world

**Plenary Session 2**

- Pen-implantitis - a growing problem or a manageable complication?

**Short Oral Comm. 2**

- Basic Research Competition

**Satellite Industry Symposia**

- Nobel Biocare
- BTI
- MIS

**CONGRESS CEREMONY**

- EAO General Assembly

**Plenary Session 3**

- Treating the partially edentate resorbed posterior maxilla

**Short Oral Comm. 3**

- Basic Research Competition

**Parallel Session 4**

- Replacing a missing incisor

**Satellite Industry Symposia**

- Nobel Biocare
- BTI
- MIS

**Saturday Oct. 19**

**Auditorium** | **Liffey B** | **Wicklow** | **Liffey Hall 2** | **Liffey Hall 1**
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**Plenary Session 4**

- Implants in an ageing population

**Plenary Session 5**

- Emerging technologies in computer assisted implant rehabilitation

**Clinical Research Competition**

- Short Oral Comm. 4

**Short Oral Comm. 2**

- Basic Research Competition

**Parallel Session 3**

- Risk factors in implant dentistry

**Plenary Session 4**

- Implants in an ageing population

**Parallel Session 5**

- Emerging technologies in computer assisted implant rehabilitation

**Clinical Research Competition**

- Short Oral Comm. 4

**AWARDS CEREMONY**

- EAO MEMBERS' AND SPEAKERS' DINNER

**Plenary Session 5**

- Extended defects in the aesthetic zone - dreams, nightmares, reality

**CLOSING CEREMONY**

- ClOSING CEREMONY

**Satellite Industry Symposia**

- Nobel Biocare
- BTI
- MIS
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:

Ms. Gloria Guevara

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

EAO Board members (2013-2014)
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Pascal Valentini, France
Past President
Søren Schou, Denmark
President Elect
Björn Klinge, Sweden
Secretary General
Luca Cordaro, Italy
Treasurer
Alberto Sicilia Felechosa, Spain
Board Members
Gil Alcoforado, Portugal
Reinhilde Jacobs, Belgium
Ronald Jung, Switzerland
Henning Schliephake, Germany

EAO Council (2012-2013)
Chairman
Franck Renouard, France
Members
David Harris, Ireland
Massimo Simion, Italy
Welcome Cocktail
Wednesday, October 16, 2013

| EVENING |

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

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!

**Plenary Session 1**

**13:50**

01

*Minimising errors in implantology: prevention vs intervention*

Mark Pinsky (USA)

**14:15**

02

*Simple methodology for successful planning in implant dentistry*

David Sarment (USA)

**15:10 - 15:30**

Coffee break

**15:30**

03

*Can we depend on generally held beliefs in implant dentistry?*

Anselm Wiskott (Switzerland)

**15:55**

Panel discussion chaired by:

Franck Renouard, Alberto Sicilia Felechosa

Abstracts and speakers cv p. 46-47

* The figures refer to the abstracts you will find in the CDIR 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>Abstract</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:45</td>
<td><strong>23</strong> The future of stem cells and tissue engineering</td>
</tr>
<tr>
<td></td>
<td><em>Ivo Lambrichts (Belgium)</em></td>
</tr>
<tr>
<td>14:10</td>
<td><strong>24</strong> Future developments in implant surfaces: can they enhance clinical outcomes?</td>
</tr>
<tr>
<td></td>
<td><em>Peter Thomsen (Sweden)</em></td>
</tr>
<tr>
<td>14:35</td>
<td><strong>25</strong> Recent developments in bone substitutes and membranes</td>
</tr>
<tr>
<td></td>
<td><em>Simon Storgard Jensen (Denmark)</em></td>
</tr>
<tr>
<td>15:00-15:30</td>
<td><strong>Coffee break</strong></td>
</tr>
<tr>
<td>15:30</td>
<td><strong>26</strong> Should implants have a periodontal ligament?</td>
</tr>
<tr>
<td></td>
<td><em>Philippe Gault (France)</em></td>
</tr>
<tr>
<td>15:55</td>
<td><strong>27</strong> 3-D tissue regeneration: is it fantasy or reality?</td>
</tr>
<tr>
<td></td>
<td><em>Isabella Rocchietta (Italy)</em></td>
</tr>
<tr>
<td>16:20</td>
<td><strong>Panel discussion chaired by: Nikolaos Donos, Carlo Maiorana</strong></td>
</tr>
</tbody>
</table>

Abstracts and speakers cv p. 48-49

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

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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>Presentation Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00</td>
<td>Protein and blood adsorption on titanium and titanium zirconium implants as a model for osseointegration</td>
<td>Simon Berner, Brigitte Kopf, Stefanie Lischer, Sylvie Ruch, Katharina Maniura-Weber (Switzerland)</td>
</tr>
<tr>
<td>14:15</td>
<td>Bioactive PEEK implants enhance osseointegration: a biomechanical investigation</td>
<td>Pär Johansson (Sweden)</td>
</tr>
<tr>
<td>14:30</td>
<td>Computer-assisted flapless implant placement reduces the incidence of surgery-related bacteremia</td>
<td>Volkan Ansan (Turkey), Nilufer Bolukbasi, Lutfiye Oksuz</td>
</tr>
<tr>
<td>14:45</td>
<td>Withdrawn</td>
<td></td>
</tr>
<tr>
<td>15:00</td>
<td>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</td>
<td>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</td>
</tr>
<tr>
<td>15:45</td>
<td>Physically adsorbed magnesium ions on mesoporous titanium surfaces enhance osseointegration</td>
<td>Silvia Galli (Sweden), Francesca Cecchinato, Yoshito Naito, Johan Karlsson, Wenxiao He, Martin Andersson, Ryo Jimbo, Ann Wennerberg</td>
</tr>
<tr>
<td>16:00</td>
<td>Osseointegration of biochemically modified implants in an osteoporosis rodent model</td>
<td>Bernd Stadlinger (Switzerland), Paula Korn, Ninette Todtmann, Uwe Eckelt, Stephen Ferguson, Matthias Schnabelrauch, Michaela Kneissel, Falko Schloettig</td>
</tr>
<tr>
<td>16:15</td>
<td>Enhanced osseointegration of titanium implants in ovariectomized rats by magnetron-sputtered strontium containing coatings</td>
<td>Vincent Offermanns (Austria), Ole Zoffmann Andersen, Gregor Riede, Michael Rasse, Inge Hald Andersen, Søren Sørensen, Michael Sillassen, Christian Sloth Jeppesen, Morten Foss, Frank Kloss</td>
</tr>
</tbody>
</table>

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

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Speakers cv p.52-53
13:45 - 16:30 | Liffey Hall 1 |

**POSTER PRESENTATION**
Chairpersons: Karl Andreas Schlegel (Germany), Reinhilde Jacobs (Belgium)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Number</th>
<th>Title</th>
<th>Presenter(s)</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, Andreea 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 Juaned, 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 Yilmaz, 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, Elio Marcantonio Jr, Andreas Stavropoulos, Ann Wenzel</td>
</tr>
</tbody>
</table>

Speakers cv p. 54-55

* The figures refer to the abstracts you will find in the COIR supplement / ** Presenter
Friday, October 18, 2013

**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>
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<tbody>
<tr>
<td>09:00</td>
<td>04*</td>
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<td>11:00</td>
<td>07</td>
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<tr>
<td>11:50</td>
<td>08</td>
</tr>
</tbody>
</table>

- **09:00 04*** Rethinking implants as foreign bodies
  Torsten Jemt (Sweden)

- **09:25 05** Physiological bone remodelling - systemic and local risk factors
  Reinhard Gruber (Switzerland)

- **10:00 - 10:30** Congress Ceremony

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

- **11:00 06** Peri-implant diseases-systemic and local risk factors
  Stefan Renvert (Sweden)

- **11:25 07** Peri-implant bone loss related to cement- and screw-retained prostheses
  Paolo Vigolo (Italy)

- **11:50 08** Can soft tissue augmentation minimize the risk of peri-implantitis?
  Gerhard Iglhaut (Germany)

- **12:15** Panel discussion chaired by: Niklaus Lang, Frank Schwarz

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)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>08:30</td>
<td>28*</td>
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<td>08:50</td>
<td>29</td>
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<td>09:10</td>
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<td>09:30</td>
<td>31</td>
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<td>09:50</td>
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</tr>
</tbody>
</table>

- **08:30 28*** Application of today’s technology towards e-learning
  Brian Millar (United Kingdom)

- **08:50 29** Future trends in dental education
  Nikos Mattheos (China)

- **09:10 30** Digital platforms from a developers point of view
  Florian Schober (Switzerland)

- **09:30 31** Health and E-health - legal aspects
  Yvo Vermylen (Belgium)

- **09:50** Panel discussion chaired by the Junior Committee

Abstracts and speakers cv p. 58-59

* The figures refer to the abstracts you will find in the COIR supplement
Friday, October 18, 2013

Conference Programme

10:00 - 10:30  |WEBCASTED TO ALL ROOMS|

CONGRESS CEREMONY

10:00  European Association for Osseointegration
       An update
       Pascal Valentini, EAO President

10:10  Welcome to Dublin
       David Harris & Brian O’Connell, Congress Chairmen

10:15  Irish Music and Dance Show; a celebration of traditional Irish
       music, song and dance

11:00 - 12:30  |LIFFEY B|

RISK FACTORS IN IMPLANT DENTISTRY
Chairpersons: Theodoros Kapos (United Kingdom), Leo Stassen (Ireland)

11:00  32* Surgical causes of neuropathic pain
       Keith Smith (United Kingdom)

11:20  33  Does mechanical loading affects implant prognosis?
       Joke Duyck (Belgium)

11:40  34  Update on bisphosphonate therapy and implant surgery
       Carlos Madrid (Switzerland)

12:00  35  Is smoking still a risk factor?
       Raffaele Cavalcanti (Italy)

12:20  Panel discussion chaired by: Theodoros Kapos, Leo Stassen

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>Session</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 Oritetta 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></td>
<td>Congress Ceremony</td>
<td></td>
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<tr>
<td>10:30</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>11:00</td>
<td>81</td>
<td>Accuracy of intra-oral scanning versus lab scanning</td>
<td>Stefan Vandeweghe* *(Belgium), Melissa Dierens, Christian Vanhove, Hugo Dé Bruyn</td>
</tr>
<tr>
<td>11:15</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 Effier</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), Jungjoo 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
### BASIC RESEARCH COMPETITION

Chairpersons: Ioannis Polyzois (Ireland), Gil Alcoforado (Portugal)

<table>
<thead>
<tr>
<th>Time</th>
<th>Number</th>
<th>Title</th>
<th>Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00</td>
<td>48</td>
<td>Soft tissue adhesion/integration patterns following the use of different PEG hydrogel membranes</td>
<td>Asmaa El-Kaddar** (UK), Nikos Mardas, Ricardo Zambon, Aart Molenberg, Michel Dard, Nikos Donos</td>
</tr>
<tr>
<td>11:20</td>
<td>49</td>
<td>Accelerated bone ingrowth of titanium dental implants by magnetron-sputtered strontium containing coatings</td>
<td>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</td>
</tr>
<tr>
<td>11:40</td>
<td>50</td>
<td>Roles of αCGRP on attachment, proliferation and differentiation of mice BMSCs cultured on titanium surfaces</td>
<td>Li Ma** (China), Lin Xiang, Na Wei, Yingying Wu, Ping Gong</td>
</tr>
<tr>
<td>12:00</td>
<td>51</td>
<td>Development of in vitro prevascularised synthetic block graft for dental implant reconstructions</td>
<td>Borvoruwut Buranawat** (Thailand), Richard Palmer, Lucy Di Silvio, Lertrit Sarinnaphakorn</td>
</tr>
</tbody>
</table>

Speakers cv p. 64

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

** Presenter
14:00 - 16:30  [AUDITORIUM]

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

14:00  09*  ■Restorative options for the posterior maxilla: possibilities and limitations
        Henry J. Meijer (The Netherlands)
14:20  10  ■The lateral osteotomy approach in sinus augmentation: possibilities and limitations
        Friedrich W. Neukam (Germany)
14:40  11  ■The transalveolar approach in sinus augmentation: possibilities and limitations
        Marc Quirynen (Belgium)
15:00 - 15:30 Coffee break
15:30  12  ■Are short implants a reliable option? Possibilities and limitations
        David Nisand (France)
15:50  13  ■The role of zygomatic implants: possibilities and limitations
        Ruben Davo (Spain)
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

14:00 - 16:30  [LIFFEY B]

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

14:00  36*  ■Clinical techniques for predictable results
        Franck Bonnet (France)
14:20  40  ■Management of gingival recession on adjacent teeth
        Markus Hurzeler (Germany)
14:40  38  ■Is immediate implant placement worth the risk?
        Mariano Sanz (Spain)
15:00 - 15:30 Coffee break
15:30  39  ■The role of socket preservation
        Mauricio Araujo (Brazil)
15:50  37  ■Restorative options for aesthetic defects
        Irena Sailer (Switzerland)
16:10
Panel discussion chaired by: Klaus Gutschredsen, Ailsa Nicol

Abstracts and speakers cv p. 68-69

* The figures refer to the abstracts you will find in the COIR supplement
# SHORT ORAL COMMUNICATIONS 3

**Chairpersons:** Carlo Maiorana (Italy), Paolo Vigolo (Italy)

<table>
<thead>
<tr>
<th>Time</th>
<th>Abstract</th>
<th>Authors</th>
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</thead>
<tbody>
<tr>
<td>14:00</td>
<td>Treatment of peri-implantitis. An experimental study in dogs</td>
<td>Olivier Carcuac** (Sweden), Tord Berglundh, Ingemar Abrahamsson</td>
</tr>
<tr>
<td>14:15</td>
<td>Biological complications after early/delayed/late implant placement: 10-year results from a RCT</td>
<td>Andreas Stavropoulos** (Sweden), Ann Wenzel, Lars Schropp</td>
</tr>
<tr>
<td>14:30</td>
<td>Immediate provisional restorations on bone level implants</td>
<td>Nikos Mardas** (UK), Attila Horvath, Dina Dedi, Luis Mezzomo, Nikolaos Donos</td>
</tr>
<tr>
<td>14:45</td>
<td>Immediate loaded implants in subjects with type I osteoporosis: 1-year prospective controlled study</td>
<td>Jamil Shibli** (Brazil), Kelly Aguiar, Tatiana Onuma, Renata Mainink, Alessandra Cassoni, Jose Rodrigues, Poliana Duarte, Marta Bastos, Magda Feres</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>Peri-implant bone levels around short implants: a 3D analysis of the impact of crown-implant ratio</td>
<td>Gerdien Telleman** (Netherlands), Henny Meijer, Arjan Vissink, Gerry Raghoebar</td>
</tr>
<tr>
<td>15:45</td>
<td>3D investigation of the alveolar process morphology in relation to the vertical facial dimension</td>
<td>Anna Klinge** (Sweden), Karin Becktor, Jonas Becktor, Christina Lindh</td>
</tr>
<tr>
<td>16:00</td>
<td>On the relationship between gingival biotypes and gingival thickness - a case-control study</td>
<td>Kai Fischer** (Germany), Timo Richter, Ulrich Schlagenhauf, Stefan Fickl</td>
</tr>
<tr>
<td>16:15</td>
<td>Soft tissue contour changes at immediate restoration following immediate single-tooth post-extraction implants: a 1-year clinical study</td>
<td>Daniele Cardaropoli** (Italy), Lorena Gaveglio, Giuseppe Cardaropoli</td>
</tr>
</tbody>
</table>

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

** Presenter
14:00 - 16:20

**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, Thalita Queiroz, Eloá Luvizuto, Roberta Okamoto, Marcos Kuabara, Edilson 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, Meizi Eliezer** (Israel), Haim Tal, Miron Weinreb, Carlos Nemcovsky

* The figures refer to the abstracts you will find in the COIR supplement
** Presenter
09:00 - 12:20 | AUDITORIUM|

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

<table>
<thead>
<tr>
<th>Time</th>
<th>Number</th>
<th>Title</th>
<th>Speaker</th>
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</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>Coffee</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>
</tbody>
</table>

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

12:00

Panel discussion chaired by: Finbarr Allen, Pascal Valentini

Abstracts and speakers cv p. 72-73

12:45 - 13:00 | AUDITORIUM|

**RESEARCH AWARD CEREMONY**
Chairperson: Pascal Valentini (France)
## Parallel Session 5

**Emerging Technologies in Computer Assisted Implant Rehabilitation**

**Chairpersons:** Ioannis Polyzois (Ireland), Soren Schou (Denmark)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>09:00</td>
<td>41*</td>
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<tr>
<td>09:05</td>
<td>42</td>
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<tr>
<td>09:10</td>
<td>43</td>
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<tr>
<td>10:10</td>
<td>44</td>
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<td>10:40</td>
<td>Coffee break</td>
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<tr>
<td>11:10</td>
<td>45</td>
</tr>
<tr>
<td>11:35</td>
<td>46</td>
</tr>
<tr>
<td>12:00</td>
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</tbody>
</table>

### 09:00 - 12:20 | Liffey B |

**Digital planning and CAD CAM materials in Implant Prosthodontics**

*Petra Guess (Germany)*

**Developments in digital implant impressions**

*German Gallucci (USA)*

**Advances in CAD/CAM technologies**

*Vincent Fehmer (Switzerland)*

**Extending the boundaries of computer assisted rehabilitation**

*Lawrence Brecht (USA)*

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

**Research Award Ceremony**

**Chairperson:** Pascal Valentini (France)

---

Abstracts and speakers cv p. 74-75-76

* The figures refer to the abstracts you will find in the COIR supplement
## Clinical Research Competition

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

<table>
<thead>
<tr>
<th>Time</th>
<th>No.</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:40</td>
<td>58*</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 Raghoebar, Arjan Vissink, Henry Meijer</td>
</tr>
<tr>
<td>09:00</td>
<td>59</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, Natalija Maslova</td>
</tr>
<tr>
<td>09:20</td>
<td>60</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>61</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>62</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>63</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>
<tr>
<td>10:40-11:00</td>
<td></td>
<td>Coffee break</td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>64</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>65</td>
<td>The extremely resorbed mandible; 10-year results of a randomised controlled trial on 3 treatment strategies</td>
<td>Kees Stellingsma** (Netherlands), Gerry Raghoebar, Anita Visser, Arjan Vissink, Henry Meijer</td>
</tr>
<tr>
<td>11:40</td>
<td>66</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>67</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, Natalija 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>
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</thead>
<tbody>
<tr>
<td>09:00</td>
<td>94* 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 Demercioglu, Tomaso Vercellotti, Pierre Lahoud, Nada Naaman</td>
</tr>
<tr>
<td>09:15</td>
<td>95 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</td>
</tr>
<tr>
<td>09:30</td>
<td>96 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</td>
</tr>
<tr>
<td>09:45</td>
<td>97 Implant success in microvascular bone grafts Christian Mertens** (Germany), Jürgen Hoffmann</td>
</tr>
<tr>
<td>10:00</td>
<td>98 Sonic oscillating handpiece versus conventional turbine handpiece for maxillary sinus augmentation procedures Dimitrios Papadimitriou** (USA), Daniel Weitz, Carlo Ercoli, Changyong Feng, Jack Caton, Alessandro Geminiere</td>
</tr>
<tr>
<td>10:15</td>
<td>99 Clinical, histologic and histomorphometric evaluation of biphasic calcium sulfate in extraction sockets’ augmentation: a human study Ioannis Gisakis** (Greece), Demos Kalyvas, Konstantinos Tosisos, Vasilios Petsinis, CONSTANTINOS Alexandridis</td>
</tr>
<tr>
<td>10:30 - 11:00</td>
<td>Coffee break</td>
</tr>
<tr>
<td>11:00</td>
<td>100 Reconstruction of three-dimensional alveolar ridge defects: effectiveness of the titanium mesh technique Giuseppe Lizio** (Italy), Noemi Mazzone, Giuseppe Corinaldesi, Claudio Marchetti</td>
</tr>
<tr>
<td>11:15</td>
<td>101 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</td>
</tr>
<tr>
<td>11:30</td>
<td>102 Histological and dimensional alteration of alveolar crest after bundle bone removal at tooth extraction Shichong Qiao** (China), Jiaji Mo, Hongchang Lai</td>
</tr>
<tr>
<td>11:45</td>
<td>103 Withdrawn</td>
</tr>
<tr>
<td>12:00</td>
<td>104 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</td>
</tr>
<tr>
<td>12:00</td>
<td>105 Osteotome sinus floor elevation with and without grafting: an animal study in labrador dogs Misi Si** (China), Jiaji Mo, Hongchang Lai</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>13:00</td>
<td>19*</td>
</tr>
<tr>
<td>13:35</td>
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<tr>
<td>14:10</td>
<td>21</td>
</tr>
<tr>
<td>14:45</td>
<td>22</td>
</tr>
</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

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## 15:30 - 15:45

**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.

**Otto Zuhr | Marc Hürzeler**

**PLASTIC-ESTHETIC PERIODONTAL AND IMPLANT SURGERY**
Set price for all 10 DVDs: €600 | £522 + VAT

**Single DVD: €68 | £60 + VAT**

Volume 1: Autograft Harvesting
Volume 2: Gingival Augmentation with Autologous Connective Tissue
Volume 3: Singular Gingival Recession Coverage
Volume 4: Multiple Gingival Recession Coverage
Volume 5: Esthetic Crown Lengthening
Volume 6: Horizontal Papilla Augmentation with Autologous Connective Tissue
Volume 7: Management of Extraction Sockets
Volume 8: Soft Tissue Augmentation Under Bridge Pontics
Volume 9: Defect Reconstruction and Concurrent Implant Placement
Volume 10: Implant Placement Using a Modified Roll Flap Technique

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Satellite Industry Symposia

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

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 alternatives 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 coverage, gain of keratinised tissue and improvement of gingival thickness. 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 Wismeijer & Mariano Sanz

Case I: Frank Schwarz
“Platform switching or not?”
The presentation will be challenging and will offer the starting point for discussions in terms of 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 Bauer
“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 Wismeijer
“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 type tested. Clinically, the implant stability increase 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](http://www.dentsplyimplants.com)

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**STRAUMANN**

**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 regeneration by using an innovative granule surface structure are an illustration for high-performance innovation by Straumann®. Clinical data on pioneering implant technologies such as the Roxolid® material and SLActive® 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 everyday practice? These questions will be addressed in the following topics from a bone regeneration, implantation and prosthetic point of view.

**Moderator:** Prof. David Cochran, San Antonio, USA

**A new bone grafting material bridging existing gaps in clinical bone regeneration**

Dr. Isabella Rocchiotta, 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

Please check our website for the speakers’ abstracts, CVs and program updates: [www.straumann.com/eao2013](http://www.straumann.com/eao2013)

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**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.
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 Ostell 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 Ostell has been used to reduce treatment time in a controlled way.

Moderator:
Prof. Willfried 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

Kick-start Friday morning with the latest in science, a cup of coffee and a pastry!

www.osstell.com

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 mayor 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 incisor, 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.
Satellite Industry Symposia

Friday, October 18
16:45 - 18:45

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. Pir-Olov Östman together with Dr. Peter Wohlrie 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 esthetic results?
- How can new technologies in the CAD/CAM workflow be utilized, combining surgical and prosthetic input for optimal esthetic 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 (PR.G.F.- ENDORET®)
Lectured by: Dr. Eduardo Antuña (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 Antuña 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 lifting techniques, etc. Dr. Eduardo Antuña 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 (PR.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 drivers and expectations. Dr. Eduardo Antuña 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 lifting techniques, etc. Dr. Eduardo Antuña 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.

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.

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.

Aim:
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

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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 2 Text Books with Bo Rangert. The first one « Risk Factors in Implant Dentistry: Simplified Clinical Analysis for predictable Treatment» was published in 10 languages. He lectures intensively on Implants, Immediate loading, Biomechanics and Bone Grafting procedure. Dr. Renouard was elected to the European Association for Disseointegration 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
> Alberto SICILIA FELECHOSA
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”.

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.
Emerging Technologies in Tissue Regeneration that Can Enhance Patient Care

Nikolaos Donos

DDS, MS, HEA, FRCSIEng, PhD

Professor Nikolaos Donos is the Head & Chair of Periodontology, Director of Research and Programme Director for the MClinDent training programme (IEP) 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 title of Honorary Professor at the Faculty of Dentistry at the Chinese 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.

Ivo Lambrecht

Ivo Lambrecht, 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 printed titanium jaw and custom made jaw. He was expert from the European Commission in the COST action BB on odontogenesis and member of the management committee of the COST action B23 on oro-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 progress 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 cell scaffolds, implant material. In order to produce custom-made scaffolds and implants, high standard imaging techniques will 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-I Brånemark 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 VVIN 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 focused 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.
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 Preprosthetic 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

SIMON STORGARD JENSEN
Simon Storgard 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 Stomatognathic Surgery, 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 2003-2003, 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.

RECENT DEVELOPMENTS IN BONE SUBSTITUTE 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 allogenic, 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.

PHILIPPE GAULT
D.D.O. of Paris ’78
Private practice in Periodontology and implantology since 1986.
Natural implant SA clinical research director and cofounder.
Born in Orléans, France, in 1951.
Postgraduate studies at the at the Odontologic Faculty of Garancière, University of Paris 7.
Undergraduate studies at the in 1976-1980, University of Paris 7.
Private practice in Periodontology and implantology since1985 in Orléans, France.
I developed a new protocol of tooth autologous transplantation which enhance their results. This approach validated the principle of tissue stimulation and cell in vivo culture and led to another clinical application in bone grafting (Publication in work).
Foundation of Natural implant S.A., in 1998, with the object of developing desminodontal fibroblasts tissue engineering techniques, and a periodontally integrated dental implant.
Natural implant received the Bio-technology Innovation first Trophy in 2004, attributed by the French Senate.

ISABELLA ROCCHIETTA
Graduate in dentistry at the University of Milan, Italy, in 2000 awarded one year scholarship from the department of Medicine, University of Milan. Research Fellow, Department Periodontology, Harvard School of Dental Medicine, Boston, MA.
Fellow and instructor at the department of Periodontology, University of Milan, Italy. Research consultant for the Institute for Dental Research and Education (IDRE) U.K. Director, Chairman of the EAO Junior Committee from 2007 to 2011. Member of the Experts Council of the Osteology Foundation, Member of the Academy of Osseointegration, European Academy for Osseointegration (EAO).
Currently affiliated with Department of Biomaterials, Institute for Clinical Sciences, The Sahlgrenska Academy at the University of Gothenburg, Sweden and performs clinical work limited to periodontics and implant dentistry in London, U.K.
Author of several national and international peer-reviewed publications and book chapters.
International speaker on: bone regenerations by means of growth factors and scaffolds, tissue engineering, soft and hard tissue neo-formation with autogenous living cells, osseointegration and implant surface modifications.

3D TISSUE REGENERATION; IS IT FANTASY OR REALITY?
The prime dictate prerequisite to predict long-term success for osseointegrated implants is a sufficient volume of healthy bone at recipient sites. However, a sufficient amount of bone volume is frequently lacking as a result of trauma or infectious diseases such as advanced periodontitis. A number of different techniques have been developed to reconstruct deficient alveolar ridges to allow dental implant placement in either a simultaneous or staged approach. Vertical bone loss in partially edentulous patients constitutes a major challenge due to anatomical limitations and technical difficulties. Extra or intra-oral harvesting of autogenous bone constitutes a high degree of patient discomfort and morbidity, as well as a limited supply.

Advances in tissue engineering may offer solutions that resolve bone volume deficits and soft tissue defects while at the same time eliminating some of the concerns posed by current techniques. The recombinant platelet derived growth factor (r-PDGF- BB) has been extensively used as a potent regenerating factor in orthopedics and periodontics with success. The principal aim in hard tissue regeneration would be to eliminate the need for autogenous bone harvesting and possibly eliminate the non-resorbable membranes. Pre-clinical studies have shown exciting results in 3D bone reconstruction avoiding the use of autogenous bone, but are these results transferrable to the clinical practice? The future is moving towards an era where less invasive treatment regimes are now available to minimize complications and side effects of a surgical procedure, decrease patients’ morbidity, increase success rates and decrease technical difficulties. The maturation of tissue engineering and its application to clinical surgical procedures has helped create a new paradigm.
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.
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 at 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 commenation 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.

**Katharina MANIURA-WEBER**
**Pär JOHANSSON**

**Volkan ARISAN**

**Withdrawn**

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

**Bioactive PEEK implants enhance osseointegration: A biomechanical investigation**

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

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**THURSDAY AFTERNOON**

**Thursday, October 17, 2013 | 14:00 - 16:30 |**

**Short Oral Communication 1**
> Raffaele CAVALCANTI
Graduation cum laude in dentistry, PhD in Biotechnologies Applied to the Dental Sciences. Active Member of the Italian Society of Periodontology (SIdP), 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
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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

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

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

> Vincent OFFERMANNS
75
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 University 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 University of Jena, Head: Prof. Dr. Dr. S. Schultze-Mosgau
2006 - 2012  Senior staff member maxillofacial surgery Department University 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 oft he 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 University 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 the german implant society (2007).
Winner of the annual Dentsply research price by the German Society for Dentistry (2008).
Best poster presentation 14th Dentsply Friadent World Symposium in Barcelona, Spain(2010).
Price for the best poster at the International Osteology Meeting in Cannes, France (2011).

> Yan DUAN

Enhanced implant osseointegration by mesenchymal stem cell sheet technique in OVX rats

> Thao LE

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

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

> **Soo Hwan BYUN**
110
A case-controlled cohort study to evaluate the performance of Straumann bone level implants in single tooth gaps in the anterior maxilla

> **Juan Carlos IBANEZ**
111
High torque, its effect on implants clinical results.

> **Hyun-Ki SHIN**
112
Multi-centre, randomized controlled trial on the efficacy and safety of rhBMP-2 coated demineralized bone matrix in human extraction sockets.

> **Hwa-Sun LEE**
113
Biologic response of osteoblastic cells on titanium surface treated with Er:YAG laser

> **Maria DEVINE**
114
The influence of removal of implants on the resolution of inferior alveolar nerve injuries caused by implant placement in the mandible.

> **Luis Andre MEZZOMO**
115
Meta-analysis of single crowns supported by short implants in the posterior region

> **Jin Young PARK**
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Multi-center randomized controlled trial on sinus graft using Escherichia coli-produced rhBMP-2 with biphasic calcium phosphate carrier

> **Rubens SPIN-NETO**
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Influence of fresh-frozen allogeneic bone grafts architecture on its incorporation: radiographic and histomorphometric comparison to the gold-standard
PERI-IMPLANTITIS - A GROWING PROBLEM OR A MANAGEABLE COMPLICATION?

**Chairperson:**

**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 Zürich 2013 -

Published over 530 articles in peer-reviewed scientific journals and several textbooks (h-Index: 62). Over 2500 lectures in 5 continents. Editor-in-chief: Clinical Oral Implants Research. Editor: Oral Health and Preventive Dentistry. Assoc. Editor: Journal of Investigative and Clinical Dentistry

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 Implantology (ITI), Australian-New Zealand Academy of Periodontology (ANZAP).

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**Speaker:**

**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 Dr. odont. (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 2009. 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 a 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.

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**Speaker:**

**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 23) 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 Stomatology and Occlusion 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 – SYSTEMATIC 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.
Supra structure should be designed in development of peri-implantitis. The risk for the bacterial load at a specific site due to presence of infections elsewhere like implant placement, prosthetic design and plaque indices, higher bleeding on attachment might be the potential for complete passivity when a cemented restoration is placed on the implants.

The purpose of this presentation will be to evaluate the behaviour of the peri-implant soft tissues when cemented or screw-retained implant restorations are provided.

**Frank SCHWARM**


January 1999 - October 2000 Department of Periodontology and Operative Dentistry University of Saarland, Homburg, Germany

November 2000 - March 2002 Research Associate Department of Oral and Maxillofacial Surgery, Ludwig Maximilians University, Munich, Germany

April 2002 - 2006 Assistant Professor Department of Oral Surgery Heinrich Heine University, Düsseldorf, Germany, Associate Professor - Heinrich Heine University since 2010

Main research activities: Guided Bone Regeneration, Growth Factors, Implant Surfaces, Treatment of Peri-implant Diseases

**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 Odontostomatolgy 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.

**Gerhad IGLHAUT**

Dr. Iglhaut earned a degree in dentistry from Justus Liebig University Giessen, Germany. At the same university he served as a scientific assistant in the department of Oral Surgery for three years and earned a specialist certificate in Oral Surgery, later a specialist certificate in Oral Implantology (IDGI and Periodontology (IDIA)).

He is lecturer of the German Association of Oral Implantology (IDGI). In the same society he is board member since 2004 and actually the President. Since 2005 he is docent in Oral Implantology at the Steinbeu University in Berlin, since 2009 docent at the Georg-August-University in Göttingen. He has lectured internationally on Oral Implantology, Periodontology, Plastic Periodontal Surgery and Periodontal Microsurgery.

He holds membership in numerous dental professional organizations e.g. American Academy of Esthetic Dentistry, American Academy of Restorative Dentistry, European Academy of Disintegration. Dr. Iglhaut maintains a private practice in Memmingen, Germany.

**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 some individuals are more prone to its development than others. Local or general factors that are associated with development of disease are considered to be risk indicators.

At present, data have shown that individuals with a history of periodontal disease, smokers and individuals with poor oral hygiene are at greater risk of developing peri-implant disease. When implants are placed in previous periodontitis patients, it is important that the patient is thoroughly 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 differences in obtaining an adequate oral hygiene and patients with a diagnosis of peri-implantitis often present with a reduced or no accessibility/capability 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.
The College's online PhD programme is about to launch and will provide the potential to radically change higher education. The kCL use of MOOCs (Massive Open Online Courses) to deliver free education will be summarised as we now adopt Online learning. The challenges of Distance Learning in dentistry require 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 use of MOOCs (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.

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. Until recently he was 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.

> Theodoros KAPOS

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 (Prosthetics) 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.

> Brian MILLAR

Nikos MATTHEOS
Nikos Mattheos DDS, MAGC, PhD http://www.mattheos.net
Nikos Mattheos was born in Athens in 1973. He graduated from the Dental Faculty of the University of Athens. After graduation, Dr. Mattheos worked as a general dentist in private practice and received Medical Officers training in the Hellenic Air Force, where he worked as a medical officer in various military sites. He completed a Masters degree in Health Informatics and his PhD degree in the University of Malmo, Sweden. He completed a residency program in the Periodontology, Implant Dentistry and Fixed Prosthodontics in the University of Bern, Switzerland under Professor N.P. Lang. He organised the first European Consensus Workshop in Implant Dentistry Education in Prague in 2008 and the second one in Budapest in 2013. As associate professor of Griffith University in Australia, he designed and directed the first Australian Masters of Clinical Dentistry in in Implant Dentistry program (2009-2012), after receiving a competitive 2-year grant from Australian Federal Government. His research is disseminated through more than 45 publications in international peer reviewed journals and he has received the IADR young researcher’s award in 2003. Previous positions include Associate Professor (docent) in Malmo University, Sweden and Associate Professor Griffith University, Australia. Since September 2012 he is Associate Professor of Implant Dentistry in the Faculty of Dentistry in the University of Hong Kong, where he is the director of the two post graduate programmes in Implant Dentistry and also Assistant Dean. He is active with teaching, research and clinical patient care.

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FROM TEACHING AND LEARNING: CONSTRUCTING UNIVERSITY EDUCATION IN IMPLANT DENTISTRY
The last couple of decades have seen significant paradigm shifts in Universities around the world. Rather than a sage and source of knowledge and experience, a modern academic teacher is more perceived as learning manager, who guides the students by setting the learning objectives and designing learning experiences accordingly. Clinical education has always been particularly challenging, as the educators need to balance a wide array of methods, techniques and media in order to achieve the multiple level competences required for clinicians. Implant Dentistry is a discipline that has enjoyed a tremendous growth in the last 3 decades. Achievements in both research and development have widened the application of dental implants and benefited millions of people worldwide. Quality education, stands as the key to ensuring that the current achievements in research and development will be transformed to successful clinical outcomes who will benefit our patients. Compromise in the education standards will have a direct negative impact in the trust of the public to implant dentistry but also the dental profession as a whole. Two consecutive European consensus workshops have taken place in 2008 and 2013 aiming to develop a quality assured education pathway to the competent practice of Implant Dentistry. The outcomes of these workshops can pinpoint the factors of importance and serve as guidelines for the structure of quality assured and effective education in implant dentistry.
> 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 neuromas with neuropathic pain, and also studies into the effects of different anti-scarring agents on nerve regeneration.

SURGICAL CAUSES OF NEUROPATHIC PAIN
Probably the most serious complication of dental implant placement in the mandible is damage to the inferior alveolar and mental nerves. Injury to these nerves can lead to partial or complete loss of sensation to the lower lip and chin which in itself can be very debilitating. A few unfortunate patients also develop painful dysesthesia, experiencing not only loss of sensation but also constant pain, burning and other unpleasant sensations in their lower lip and chin. Neuropathic pain originating from these damaged nerves can be very difficult to treat. The aetiology and management of these injuries will be discussed.

> 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 overloading 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 microcirculation 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.
Bisphosphonate (BP) drugs are a commonly prescribed group of medications used in the treatment of metabolic and oncologic bone diseases. The aim of this lecture is to update the available evidence assessing whether patients on BP therapy are appropriate candidates for dental implants as compared to patients not taking BP with respect to successful implant osseointegration and the risk of developing bisphosphonate-related osteonecrosis of the jaw (BRONJ) after implant placement both for oral and IV bisphosphonates. The lecture will also approach the risk of loss of osseointegration for already osseointegrated implants after the onset of bisphosphonate treatment. Based on the current literature, a history of oral BP use is not an absolute contraindication for dental implant placement, and dental implants can osseointegrate successfully in this patient population. Nevertheless, the studies currently available are of moderate to weak strength of evidence with inherent bias and limitations and hence results must be interpreted cautiously. Recently several case reports or case series have been published reporting the loss of integration after starting bisphosphonate treatment. New bone antiresorptive agents used both in oncology and in the treatment of osteoporosis have been recently suspected to be at risk of BRONJ. The risk of BRONJ related to these new medications, frequently prescribed, after several courses of bisphosphonates, will be discussed.
Short Oral Communications 2

> **Friedrich W. NEUKAM**

Born in 1949 in Vlotho/Germany. 1970 to 1976 dental studies at Mainz University. 1979 to 1984 medical studies at Hannover University. Trainee in oral and maxillofacial surgery and senior staff at the Department of Oral & Cranio-Maxillofacial Surgery at Hannover University Medical School. 1990 PhD, 1994 Associate Professor. Since 1995 Chairman and Head at the Department of Oral & Cranio-Maxillofacial Surgery at Erlangen-Nuremberg University Dental School.


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

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> **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 Stomatognathics, 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.

> Stefan VANDEWEGHE
Accuracy of intra-oral scanning versus lab scanning

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

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

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

> 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**  
48  
Soft tissue adhesion/integration patterns following the use of different PEG hydrogel membranes

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

> **Li MA**  
50  
Roles of αCGRP on attachment, proliferation and differentiation of mice BMSCs cultured on titanium surfaces

> **Borvornwut BURANAWAT**  
51  
Development of in vitro prevascularised synthetic block graft 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 Profs. Jorgen Slots, Sture Nyman and Max Listgarten - 1986 (Full Time)
Visiting Professor at the University of Michigan in Ann Arbor - 1989/1990 (Full Time)
Ph.D. in Periodontology at the University of Lisbon - 1995
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
Past-President of the European Federation of Periodontology
Fellow of the International College of Dentists (1985) and Regent for Portugal since 2009
Fellow of the Pierre Fauchard Academy
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
Private Practice limited to Periodontology and Implant Rehabilitation
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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 oCGRP overexpression on osteogenic differentiation of human periodontal ligament cells in periodontal tissue engineering

> Meizi ELIEZER
57
Excessive Degradation of collagen membranes in diabetic rats is associated with increased infiltration of macrophages and capillaries
POSSIBILITIES AND LIMITATIONS

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.

Results of two prospective studies with respectively 8.5 mm and 6 mm implants in the partially edentate 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, correlation of crown-implant ratios from the prosthodontic literature might not apply to implant-based rehabilitation of the partially edentulous posterior maxilla.

Correlation of crown-implant ratios from the prospective 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.

THE LATERAL OSTEOTOMY APPROACH IN SINUS AUGMENTATION: POSSIBILITIES AND LIMITATIONS

Indication: According to the literature, the lateral osteotomy approach is indicated when treating the resorbed posterior maxilla with implants and a residual bone height of less than 6 mm is present preoperatively. Especially the insertion of a series of implants often requires the lateral approach. This approach might also be beneficial if an augmentation in alveolar rim width is necessary.

Pitfalls: This lecture should illustrate the results achievable with the lateral osteotomy approach. Compared to the transalveolar approach, this technique allows a significantly increased gain in bone height. It also provides a superior overview and thus facilitates detection and treatment of possible Schneiderian membrane perforations. Finally a better intraoperative control of the surgical result is possible. The use of ultrasonic osteotomy might lead to reduced bleeding and a reduced risk of perforating the Schneiderian membrane.

Limitations: Narrow sinus, transient mucosa swelling and sinus septa represent relative contraindications to the lateral osteotomy approach. There are also various conceivable complications. The lateral approach is more invasive than the transalveolar approach and maxillary septa may complicate the procedure. Preoperative 3D-imaging can be useful for defining the appropriate operative strategy. Occurring in 15% to 56%, perforation of the Schneiderian membrane is a common complication. In contrast to this, obstruction of the antro-sinus communication and severe hemorrhages are no likely complications.
Henning SCHLIEPKAHE

Henning Schliephaake received his training in Oral Maxillofacial Surgery and Facial Plastic Surgery from 1989 to 1996 at the Medical University Hannover, where he also did his PhD degree on in-vivo cultivation of bone in 1995. He became full professor and chair of the Department of Oral Maxillofacial Surgery at the Georg August University in Göttingen in 2001. He has chaired several scientific associations. Currently he is president of the German Society of Dental Oral and Craniomandibular Sciences (DGZMK) and chairman of the Standing Committee on Research (S.D.R.G.). He is member of a couple of scientific journals such as the International Journal of Oral and Maxillofacial Surgery and Oral Oncology. His research foci are reconstructive microsurgery and Quality of Life in head and neck oncology as well as tissue engineering, growth factors and biomaterials.

Marc QUIRYKEN

Professor M. Quirynen graduated in 1980 as dentist at the Catholic University of Leuven and finished in 1984 his training in periodontology at the department of Periodontology (Catholic University Leuven). In 1986 he presented his Ph. D. entitled: Anatomical and inflammatory factors influence bacterial plaque growth and retention in man. In 1989 he was appointed professor at the Faculty of Medicine of the Catholic University of Leuven to teach periodontology and anatomy. His research deals mainly with oral microbiology (with special attention to the influence of surface characteristics on bacterial adhesion and the effect of antiplaque), oral malodour, simplification & optimization of periodontal therapy including implant surgery. He published over 300 full papers in international peer-reviewed journals. He is member of the editorial board of the Journal of Clinical Periodontology (associate editor), Clinical Oral Implants Research, Journal of Dental Research, Periodontal Practice Today & Periodontology.

David NISAND

Education
1996-2001: Dental Studies, University of Paris V, France
2002: Licencie degree in Biology
2003: Certificate in Periodontology, Full-time resident in the department of Periodontology and Oral Surgery, University of Paris VII
2003-2005: Post-graduate education in advanced Periodontology and Oral Implantology, University of Paris VII

Current Position
Private practice limited to Periodontology and Oral Implantology in Paris
Guest lecturer in the Department of Periodontology, University of Paris VII
Board member of the French Society of Periodontology and Oral Implantology (SFPO)
Board member of the EAO communication committee
Scientific Activities
Dr David Nisand main scientific interests are located in the field of periodontal reconstructive surgery, periodontal and implant therapy.

ARE SHORT IMPLANTS A RELIABLE OPTION? POSSIBILITIES AND LIMITATIONS

Rehabilitation of the severely resorbed posterior maxilla remain 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.

However, current literature 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 cross-over-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.
Those reconstructions are supposed to be stable but is it bone volume to maintain soft tissue.

Guided bone regeneration can create horizontal and/or vertical reconstructions a lack of buccal and interdental soft tissues. This problem predominantly causes loss of the initial situation? And, what if loss of bone leads to the loss of soft tissue support? This problem 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 esthetic 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 reality? Do we have other treatment options?

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-aesthetic black triangles. Besides the surgical techniques, defects and/or esthetic 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.
Ailsa NICOL
Ailsa is a Specialist in Restorative Dentistry, Prosthodontics and Periodontics. She divides her time between a part-time National Health Service Consultant position; one at James Cook University Hospital, Middlesbrough, and one at Newcastle Dental Hospital and School, UK. Ailsa completed her Specialist training at Glasgow Dental Hospital and School in conjunction with her role as Clinical Lecturer in Restorative Dentistry at the University of Glasgow; a position she held for ten years. She obtained a PhD during this time and continues to teach on the Masters programme at the University of Glasgow, Scotland. She was a founder member of the Junior Committee of the EAO. Her clinical interests include the management of hypodontia and the oral rehabilitation of patients with head and neck cancer.

IS IMMEDIATE IMPLANT PLACEMENT WORTH THE RISK?

It is well established that tooth extraction will result in an apico-coronal as well as bucco-lingual reduction of the alveolar ridge, mostly in the buccal aspects of the extraction site. In order to avoid this physiological bone remodelling, some clinicians have advocated the immediate installation of implants in fresh extraction sockets. This therapeutic concept is especially relevant for the replacement of a missing incisor due to the aesthetic demands and the presence of a thin buccal bone crest. However, the presence of a thin buccal bone crest. The need for soft tissue augmentation procedures is increasing as the need for improved aesthetic results increases in our patients. Not only the aesthetic implant procedure need to be consider 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 it is to 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.

Mariano SANZ
I obtained my medical degree (MD) from the Universidad Complutense de Madrid; I then became specialist of Stomatologist from the same university (DDS) and then specialist in periodontology from the University of California, Los Angeles (UCLA). I am a Doctor en Medicine (MD) and I hold a Honorary Doctorate from the University of 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 (SEP) and President of the Pan European Region of the International Association for Dental Research (IADR PER). I am Associate Editor of the Journal of Clinical Periodontology and the Journal of Evidence-Based Dental Practice and I am Member of the Editorial Committee of Journal of Periodontal Research. Journal of Periodontology, Clinical Oral Implant Research, Clinical Oral Investigations, European Journal of Dental Education and European Journal of Implantology. I have published scientific more than 200 articles and book chapters in Periodontology, Implant Dentistry and Dental Education and have lectured extensively in Periodontology, Implant Dentistry and Dental Education.

Mauricio ARAUJO
Dr. Araujo is a Periodontist working both in private practice and at The State University of Maringá, Paraná, Brazil. He completed his PhD at The University of Gothenburg, Sweden in 1998. He is the Director of the Perio/Implant Research Unit, State University of Maringá and Senior-researcher at the Department of Periodontology, Gothenburg University. He has together with his co-workers published groundbreaking research in the fields of ridge alterations following tooth extraction, ridge preservation, bone formation in extraction sockets and immediate implant placement. He is an ITI Fellow, the ITI Chairman in Brazil and on Osteology Foundation Board member. He is member of the editorial board of several journals.

HÜRZELER

Received his dental degree from the University of Zurich, his certificate as a Specialist in Periodontics from the Swiss Society of Periodontology, the Docent (Associate Professor) degree from the Department of Periodontics at Albert-Ludwigs University in Freiburg, Germany, and his certificate in Prosthodontics from the German Society of Prosthodontics. He is Clinical Associate Professor at the Albert-Ludwigs University of Freiburg, Department of the Operative Dentistry and Periodontology and Clinical Associate Professor at the University of Texas in Houston, Texas.

MANAGEMENT OF GINGIVAL RECESSION ON ADJACENT TEETH

The need for soft tissue augmentation procedures is increasing as the need for improved aesthetic results increases in our patients. Not only the aesthetic 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 it is to 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. Incisionfree «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 Preprosthetic 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.

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

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

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

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 AGEING POPULATION

> Allen FINBARR

Allen Finbarr is currently Professor/Consultant in Oral Rehabilitation and Prosthodontics, and recently completed a 7 year term as the Chair of the Dental School at the University of Sheffield. He graduated from the National University of Ireland, Cork, with an honours BDS degree in 1988. He worked in general dental practice for four years in Oxfordshire, UK, until 1992. He then completed a Masters degree in Restorative Dentistry at the University of Manchester, UK. From 1993-1995, he worked at Leeds Dental Institute, and was awarded his PhD by the Royal College of Physicians and Surgeons of Glasgow in 1995. He completed higher specialist training in Restorative Dentistry and a PhD at the University of Newcastle on 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 Oral Rehabilitation and Dental Hygiene at Teesside University, where he has held his current position since 2005.

He has represented the dental profession as an expert witness in the UK and internationally. He has recently devised a model of treatment delivery adapted for the dental profession, which is currently being piloted in numerous countries worldwide. Since his recent appointment, he has established a centre for research into oral rehabilitation and implantology. The centre is a multidisciplinary team comprising dentists, nurses, clinical staff, and research associates.

The centre is currently involved in a number of research projects, including the development of new restorative materials and techniques, as well as the evaluation of the long-term effects of implant treatment.

Research Interests:

- Implantology
- Prosthodontics
- Oral rehabilitation
- Clinical trials

> Rose Anne KENNY

Professor Kenny Head of the academic Department of Medical Gerontology at Trinity College and St. James’ Hospital. Director of the newly established Menopause’s Institute for Successful Ageing and Director of the Falls and Blackout Unit at St. James’ 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 syphynoc, 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, syphynoc, cognitive impairment and dementia. The research involves collaborative partnerships with disciplines from basic science (adapting animal models of cardiovascular and cerebral dysfunction) through to health service development and implementation.

She has represented her field as chair or member of international working groups for falls, syphynoc and heart failure. Since her appointment Trinity College and St. James’ have committed strong support for ageing research, education and training (i.e. the Trinity College 2011 Strategic plan has highlighted Aging 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 1900, one out of ten people 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 to how we maintain an adequate standard of living and quality of life for older people, and to provide appropriate services and facilities for their health 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 65 spent in good health. Life expectancy years (HLE). Understanding the underlying causes of gross national differences is fundamental if we are to maximise HLE across Europe and thus minimise health care costs.

Analyses that integrate multiple levels of inquiry, ranging from genes, to biomarkers to neural systems to behaviours, 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 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 biomedical and behavioural research to improve active life expectancy and reduce disability.

Examples from the Irish longitudinal study on ageing (TILDA) are presented - data is derived from objectives and subjective health measures in a nationally representative population study of persons over 50. The study population represents 1 in 42 people over 50 years in address the many causal pathways for ageing. The creation of longitudinal infrastructures and systems requires a validated information platform from which to develop public health policy. The longitudinal design further enables testing of the impact of new health care policies and health promotion strategies. TILDA actively fosters multidisciplinary research and development opportunities with Irish SNFIs, international partners and academic institutions. Accurate data sources are critical for such developments. This model could be replicated to support employment creation across Europe. TILDA will inform the proposed vision for the new European Policy for health, ‘Health 2020’.

"for a WHO European Region where all people are enabled and supported in achieving their full health potential and well-being, and in which countries, individuals and societies work towards reducing inequalities in health within the Region and beyond."
Pascal VALENTINI

Pascal Valentini received his DDS of the University of Paris 7 Denis Diderot in 1982 and the post graduate in Oral Implantology from the same university in 1992. Director of the European Post Graduate Program of Oral Implantology at the University of Carcisa (France). Adjunct Associate Professor of Implant Dentistry at the University of Loma Linda (USA). Author of several articles in the field of osseointegration and bone regeneration with a special emphasis on minimally invasive and simple treatment concepts.

International lecturer:
President Elect of the European Association for Osseointegration
He maintains a private practice limited to oral and implant surgery in Paris (France).

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 GMUH and then was awarded her chair in 2005 at Kings College London. Over the past 5 years she has lead the teaching of 180 dental students for each year 3, 4 and 5 modernising Oral Surgical teaching with minimal access approach and taking 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 BADP Oral Surgery online training and sits on the ABADSMS Education Committee. In collaboration with iOp 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 INJP a Nationally Recognised Pain management programme based at St Thomas Hospital. Tara is the National Advisor for Oral Surgery, she is an elected council member for BDS and is an elected member of the RCS England FDS Board.

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.

SIMPLIFICATION OF PROSTHETIC TREATMENT: OPTIONS AND COMPLICATIONS

Nowadays tooth loss tends to occur later in life when 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, xerostomia 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 minimally invasive and simple treatment concepts for elderly, edentulous patients. It further highlights possible complications which may arise with the use 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.
Parallel Session 5

EMERGING TECHNOLOGIES IN COMPUTER ASSISTED IMPLANT REHABILITATION

> Ioannis POLYZOIS

Dr. Ioannis Polyzois received his undergraduate degree (DMD) from Semmelweis University in 1995 and he was awarded his MMSc 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 Tyndall National Institute, University College Cork 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.

> Petra GUESS

Dr. Guess, graduated and received her DDS from Albert-Ludwigs University, Freiburg, Germany in 2001. She was an Assistant Professor (2001-2006) at the Department of Prosthodontics (Chair Prof. Dr. Dr. h.c. J.R. Scibba), College of Dentistry, Albert-Ludwigs University, Freiburg, Germany and is a certified Prosthodontist (2006) at the German Society of Prosthodontics and Dental Materials (GSPM). From 2006-2009 she was a Visiting Scientist at the Department of Biomechanics & Biomimetics (Chair Prof. Dr. V.P. Thompson), NYU College of Dentistry, New York, USA. In 2009 Dr. Guess was appointed Associate Professor at the Department of Prosthodontics (Chair Prof. Dr. Dr. h. c. J.R. Scibba) College of Dentistry, Albert-Ludwigs University, Freiburg, where she accomplished the Habilitation (Dr. med. dent. habil.) in 2011.

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 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.

> German GALLUCCI

Dr. Gallucci is the Head of the Division of Regenerative and Implant Sciences at Harvard School of Dental Medicine. He obtained his Doctorate in Dental Medicine at the department of Prosthodontics, School of Dental Medicine at the University of Geneva, Switzerland. Dr. Gallucci actively participates in clinical research related to implant-prosthodontics and Digital Dentistry. His work has been published in international peer reviewed journals and is member of the editorial board for several scientific dental journals. Dr. Gallucci participates as invited lecturer in international and national conferences and congresses. He is fellow of the International Team for Implantology (ITI, Switzerland, active member of the Academy of Osseointegration (AOI) - USA, European Academy of Osseointegration (EAOI), and International Academy of Dental Research (IADR). DEvELOPMENTS IN DIGITAL IMPLANT IMPRESSIONS

This lecture will analyze the impact of digital implant impressions on current implant-prosthetic workflows. This digitalization process can be initiated at the diagnostic, clinical, and laboratory level by a combination of different technology such as CBCT, Intraoral Scanning, and Laboratory Scanners (CAD). In particular, direct intraoral scanning of implants can create not only a 3-dimensional (3D) virtual model to design and mill the restoration but also facilitate milled/printed models containing implant analogues. However the translation from digital into the clinical field opens an unaccounted number of treatment workflow possibilities and the need for understanding the efficiency and accuracy aspects of intraoral scanning. Objectives: upon completion of this lecture participant should be able to:

• Understand the potential of implant Intraoral scanning.
• Understand implant-prostodontic digital workflows.
• Familiarize with the use an intraoral scanner for the fabrication of implant prosthesis.
• Compare the efficiency and accuracy of digitally fabricated vs. gypsum models from conventional impression techniques.
The traditional manufacturing is still beneficial. and traditional procedures are still needed. The lecture will today offer numerous advantages, like e.g. the precision of the dental reconstructions but also for a better patient/dentist manufacturing procedures, and thereby offer a broader application. These digital systems are linked to corresponding CAD/CAM framework material increased the general interest for CAD/CAM technology. The success of zirconia as a ceramic only be processed by milling pre-fabricated ingots using CAD/CAM lab-side systems, which led to a further development of fabrication of dental reconstructions, i.e. an entirely digital way, with the development of the Cerec CAD/CAM system. This first chairside system was due to system-based limitations this first chairside system was nowadays named the “digital workflow.”

ADVANCES IN CAD/CAM TECHNOLOGIES

Optical impressions, or more specifically digital impressions, have been introduced to dentistry more than 25 years ago with the development of the Cerec CAD/CAM system. This first chairside CAD/CAM system opened up a completely new way of fabrication of dental reconstructions, i.e. an entirely digital way, nowadays named the „digital workflow“. Due to system-based limitations this first chairside system was only used by specialized clinicians maybe due to the fact that it was and still is only applicable for the fabrication of small single reconstructions like e.g. inlays/ onlays, partial crowns and single crowns. This development was visionary, however, it did not replace the traditional procedures. The need for multiple-unit all-ceramic fixed dental prostheses led to the development of high-strength ceramics like zirconia. These ceramics can only be processed by milling pre-fabricated ingots using CAD/CAM technology and German Society of Esthetic Dentistry (Deutsche Gesellschaft für Ästhetische Zahnheilkunde, DGAZ). He is active as speaker on a national and international level. Mr. Fehmer has received honours like the prize for the Best Master Program of the Year (Berlin, Germany). He has published numerous articles within the field of fixed prostodontics and dental technology.

Master Dental Technician (MDT), chief dental technician at the Clinic for Fixed and Removable Prostodontics and Dental Material Science, Center for Dental and Oral Medicine and Cranio-Maxillofacial Surgery, University of Zurich, Switzerland (Head: Prof. Dr. C.H.F. Hämmerle) Vintage Fehmer received his dental technical education and degree in Stuttgart, Germany in 2002. From 2002 to 2003 he preformed fellowships in Great Britain and the US in Oral Design certified dental technical laboratories. From 2002 to 2009 he worked at an Oral Design certified laboratory in Berlin, Germany - The Dental Manufaktur Mehroth. In 2009 he received the degree as a MDT in Germany. Since 2003 he is chief dental technician at the Clinic for Fixed and Removable Prosthodontics in Zurich, Switzerland.

MDT Fehmer is a Fellow of the International Team for Implantology, and a member of European Association of Dental Technology (EADT) and German Society of Esthetic Dentistry (Deutsche Gesellschaft für Ästhetische Zahnheilkunde, DGAZ). He is active as speaker on a national and international level. Mr. Fehmer has received honours like the prize for the Best Master Program of the Year (Berlin, Germany). He has published numerous articles within the field of fixed prostodontics and dental technology.

SPEAKER

Dr. Vincent Fehmer is Professor and Chairman of the Department of Oral and Maxillofacial Surgery and Oral Pathology, School of Dentistry, University of Aarhus, Denmark. He gained his DDS in 1988, PhD in 1993, board certification in oral and maxillofacial surgery in 1999, and Dr Odont in 2004. Between 1988 and 1989 he undertook military dental service and from 1989 to 2002 he was a PhD student, Assistant Professor and finally Associate Professor at the School of Dentistry, University of Copenhagen and University Hospital, Rigshospitalet, Denmark. Subsequently, he was full-time consultant at Aalborg Hospital, Aarhus University Hospital, Denmark, until 2007. Professor Schou has published in national and international scientific journals, focusing on oral and maxillofacial surgery and oral implantology, with special emphasis on peri-implantitis. He is secretary general of the European Association for Deseintegration and associate editor of European Journal of Oral Implantology. His current research interests are oral implantology, including implant treatment of individuals with congenitally missing teeth and periodontal/associated tooth loss, as well as bone biology, bone regeneration, and surgical endodontics.

SPEAKER

Dr. Lawrence Brecht, DDS, is Clinical Associate Professor of Prosthodontics and Occlusion at New York University College of Dentistry where he serves as the Director of Maxillofacial Prosthetics in the Advanced Education Program in Prosthodontics. He has a joint appointment at the Institute of Reconstructive Plastic Surgery of New York University School of Medicine where he is Director of the Dental Services and serves on the Institute’s Cleft Palate, Craniofacial and Ear Anomalies teams. In addition, he serves on the Executive Committee of the Institute. Dr. Brecht received his DDS from New York University and completed a residency at Boston’s Brigham & Women’s Hospital and a Fellowship at Harvard School of Dental Medicine. He then earned his Certificates in both Prosthodontics, as well as Maxillofacial Prosthetics from the New York Veterans Administration Hospital. Dr. Brecht is a member of the American College of Prosthodontists, and serves on its Board of Directors. He is currently the President of the American Academy of Maxillofacial Prosthetics and is a Fellow of the Academy of Prosthodontists, President-elect of the Greater New York Academy of Prosthodontics and a member of the American Cleft Palate/Craniofacial Association. He is a frequent contributor to the cleft, plastics and maxillofacial literature. He maintains a practice limited to prosthodontics and maxillofacial prosthetics in New York City.

EXTENDING THE BOUNDARIES OF COMPUTER ASSISTED REHABILITATION

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 prosthetically-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. Provides an algorithm for one-stage jaw rehabilitation.
Parallel Session 5

EMERGING TECHNOLOGIES IN COMPUTER ASSISTED IMPLANT REHABILITATION

> Andrew DAWOOD

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 prosthodontic 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 cranio-maxillofacial 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 attachments 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 operators ‘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 prosthodontics, 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 have never been previously considered.

> Matts ANDERSON

Inventor of high-precision manufacturing of dental crowns

Matts Andersson is a dentist and inventor. The Procera method of high-precision, repeatable manufacturing of dental crowns is one of his most important inventions. Matts Andersson was born in Karlskoga, where his father was a developing engineer at Bofors AB. He graduated as a dentist 1978 from the dental school at the University of Gothenburg. Matts Andersson initially practiced as a general dentist at the Public Dental Clinic in Fäker, Jämtland, for ten years. Matts' ideas grew into the Procera project. Parallel with his dental practice, Andersson started to develop ideas on how to create dental crowns with high precision in tissue-friendly materials. In 1983 he set up a research project, which later became a small business project funded by the Institute of technology in Sweden. With the help of his father and fellow engineers at Bofors AB, he developed an industrial high-precision, manufacturing process for dental crowns. Introduction of CAD/CAM in dentistry

Andersson became head of R&D of Procera at Nobel Biocare. One of his first tasks was to turn Procera to an IT-based production method and also include ceramics in the process. In 1996 the Procera AllCeram was launched in the USA. Back to research

Since 2010 Matts Andersson is active as a researcher at Chalmers University of Technology. Matts Andersson has been granted 33 patents, of which several have turned into commercial products. A VIEW OF THE FUTURE: CLOSING REMARKS

Knowledge about the causes for dental diseases and awareness over the importance of keeping full dentition for general health and quality of life have big impact on the way we treat patients. Just some decades ago it was almost considered normal to lose teeth with rising age. Gradually replacing lost tooth substance with not biocompatible materials led to more needs and later with crowns and bridges, together with a reluctance to treat the ground causes for caries and periodontitis resulted for a lot of people in full dental prosthesis that could be kept in a glass of water over night. The modern treatment methods leads to that more and more people keep their teeth their whole life. Ceramic materials play an important role in this new situation. Chemical stability, biocompatibility, strength and wear resistance are some of the factors that have resulted in an increasing use of ceramic materials in dentistry. CAD/CAM technology plays an important role in making ceramic materials available for patients.

An important factor is to develop methods that are cost effective, to make the modern materials and treatments available for the broad mass of patients. With background from thirty years in development of new methods and introduction of new materials in dentistry, this lecture will discuss how to develop solutions for prosthetic rehabilitation; historically and for the future.

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

Christian MAKARY

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

Elise ZUIERVELD

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

Victor PALARIE

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

Christian MERTENS

Implant success in microvascular bone grafts

Dimitrios PAPADIMITRIOU

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

Ioannis GISAKIS

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

Jong-Ho Lee
101
Clinical outcome of dental implants placed through the skin flap

Shichong Qiao
102
Histological and dimensional alteration of alveolar crest after bundle bone removal at tooth extraction

Withdrawn
103

Semaan Abi Najm
104
Potential adverse events of endosseous dental implants penetrating the maxillary sinus: long term clinical evaluation

Misi Si
105
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 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. 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.

Felix GULJÉ
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

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

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

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

Hassan MAGHAIREH
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.

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**Eli MACHTEI**

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

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**Ralf KOHAL**

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

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**Kees STELLINGSMA**

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

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**Soon Jung HWANG**

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

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**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 EAD he is currently a member of Council and an examiner for the EAD certification programme in Implant Dentistry. He is co-chair for the updated EAD 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 Dental Material Sciences at the University of Zurich in Switzerland (Chairman: Prof. Dr. Ch. Hämmerle).

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**IS HARD AND SOFT TISSUE GRAFTING THE KEY TO SUCCESS?**

Hard- and soft tissue grafting alone are not sufficient for the success. For a successful implant therapy it is even more important to perform a thorough risk analysis of the patient’s case profile in order to evaluate an adequate implant treatment plan, which is in compliance with the patient’s clinical, aesthetic as well as his economic needs. Further, it is of utmost importance to identify the critical parameters and to make the right decisions of the individual patient situation in order to be successful and to avoid failures. This decision process encompasses the planning, the extraction, the implant position, the augmentation and the management of the soft and hard tissue. The presentation will sharpen your mind and eyes for the key factors for success to achieve long-term success for dental implants, as well in functional as in aesthetic parameters.

> **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 (EAED) and a past president of the Italian Academy of Prosthetic Dentistry (AIOPI). 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 ADP - 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 2003. 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). He is the author of the book “Esthetic Rehabilitation in Fixed Prosthodontics” edited by Quintessence International: Vol 1 “Esthetic Analysis translated into 11 languages and Vol 2 “Prosthetic treatment: a systematic approach to esthetic, biologic and functional integration” translated into 9 languages. He runs a private practice limited solely to prosthetics on natural dentition and on implants in Pesaro (Italy).

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).

SPEAKER

DESIGNING RESTORATIONS TO IMPROVE AESTHETIC OUTCOMES

Designing anterior restorations with optimum aesthetics requires correct treatment planning, evaluation of a suitable ceramic material and skillful application and techniques. A predictable aesthetic final result is often largely dependent upon close co-operation between prosthodontist, and implantologist, especially in the case of patients with high smile line.

Tissue management procedures on implants during the provisional phase will be discussed and their importance emphasized in order to integrate anterior restorations into the oral environment in such a way as to achieve aesthetic and biological predictability.

Selection of the appropriate ceramic material is fundamental to obtain an excellent result. Nowadays, the undeniable role played by CAD-CAM technology allows the clinician to achieve an ideal abutment shape and final restoration contour, either in the case of single or multiple restorations in the anterior area.

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.
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

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<tr>
<th>Category</th>
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<tr>
<td>EAO members and national societies members*</td>
<td>600 €</td>
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<tr>
<td>Non members</td>
<td>770 €</td>
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<td>Undergraduate Students**</td>
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*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.

Certificated 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.

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.

Contact
EAO Congress Organization and Scientific Secretariat Office
c/o Colloquium
13-15 rue de Nancy
75010 Paris - France
Ph. +33 (0)1 44 64 15 15
Fax. +33 (0)1 44 64 15 16
E-mail: eao2013@clq-group.com

EAO Office
C/o Congrex
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1050 Brussels - Belgium
Ph. +32 (0)2 643 20 49
Fax. +32 (0)2 645 26 71
E-mail: eao@congrex.com
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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

EAO 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. It 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.

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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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BIOMET 3i

BIOMET 3i, a division of BIOMET, Inc., is a leading manufacturer of dental implants, abutments and related products. Since its inception in 1987, BIOMET 3i has been on the forefront in developing, manufacturing and distributing oral reconstructive products, including dental implant components and bone and tissue regenerative materials. The company also provides educational programs and seminars for dental professionals around the world. BIOMET 3i is based in Palm Beach Gardens, Florida, with operations throughout North America, Latin America, Europe and Asia-Pacific.

NOBEL BIOCARE

Nobel Biocare is a focused and specialized global leader in implant-based dental restorations - including implant systems, high-precision individualized prosthetics, CAD/CAM systems, diagnostics, treatment planning and guided surgery. Nobel Biocare is headquartered in Zürich and listed at the SIX Swiss Exchange.

Nobel Biocare is committed to improving the quality of life of every patient by providing innovative solutions with a focus on customer and patient needs. The company’s mission, “Designing for Life”, reflects its resolution to provide products and solutions that result in fully functional, natural-looking restorations with the aspiration to last a lifetime.

DENTSPY IMPLANTS

DENTSPLY Implants is the union of two successful and innovative dental implant businesses: Astra Tech Dental and DENTSPLY Friadent. DENTSPLY Implants offers a comprehensive line of implants, including ANKYLOS®, ASTRAS TECH Implant System™ and XIVE®, as well as high-precision digital solutions, guided surgery, regenerative bone solutions and professional education programs. In combination with the strength of DENTSPLY International, the world’s largest manufacturer of professional dental products, DENTSPLY Implants creates value for dental professionals, and allows for predictable and lasting implant treatment outcomes, resulting in enhanced quality of life for patients. Welcome to the powerhouse in implant dentistry!

WILEY

Wiley is the world’s premier dentistry publisher, representing the very best in academic research, student learning and clinical expertise. Wiley is honored to be the publisher of Clinical Oral Implants Research, the official journal of the European Association for Osseointegration, and offers to attendees at this conference a special discount of 20% on all books on display at our booth.

DEUTSCHE STRAUMANN (INDUSTRIESTR AUMANN AG)

Straumann is a pioneer and global leader in implant dentistry. In collaboration with leading clinics, research institutes and universities, Straumann researches, develops and manufactures dental implants, instruments, prosthetics and tissue regeneration products for use in tooth replacement and restoration solutions or to prevent tooth loss. With its roots in Swiss precision engineering and clinical excellence, the Straumann® Dental Implant System is renowned for its quality and reliability. It is one of the most extensively documented implant systems in the world.
ACE SURGICAL SUPPLY COMPANY

ACE Surgical Supply is the only multi-disciplinary dental equipment supply company in the world. We have served our customers with the best products available at affordable prices. ACE Surgical continues to develop and manufacture the highest quality, state-of-the-art products, while keeping a focus on customer service. Our highly qualified team is always available to answer any questions you may have about our extensive inventory. Whether by phone, in person or online, our dedication to customer service is second to none. We are a worldwide leader in the industry. As technology pushes forward in the dental world, we work hard to stay one step ahead of the competition and serve each of our customers. We are aware of the many choices you face daily in your practice, and we’re confident that ACE is your best choice for all your dental surgical and medical needs.

Christopher Ganchi
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E-mail: chris@acejudical.com
Web site: www.acejudical.com

ANTHOGYR / SIMEDA

At the first dental implant provider to develop a comprehensive offer of dental implant systems and devices. Manufacturers distributes a complete range of implants and instruments to dental professionals and implant surgeons in over 60 countries. The range of implants includes the following: - Implant systems and range of abutments - Implantology devices: Meters, contra-angles, handpieces, dynamometric wrenches, bone collector, automatic crown and bridges remover - Digital CAD/CAM Simeda and guided surgery - Services: Trainings, patient communication and personalized coaching

Tel: +33 4 50 58 02 37
Contact: anthogyr.com
Web site: www.anthogyr.com

BEGO IMPLANT SYSTEMS GMBH & CO. KG

Begomebego is a leading global manufacturer of and distributor for high-quality dental implants and implant-related bone and soft tissue products. The company is headquartered in Bremen, Germany with production facilities in the USA, Brazil, and China. BEGO Implant Systems GmbH & Co. KG has been developing and manufacturing dental implants and accessories for implant-based treatment of patients around the world since 1955. Dental implants “Made by BEGO” epitomize top German-made quality 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.

Make Wachendorf
Tel: +49 421 20 28 267
E-mail: webmaster@bego.com
Web site: www.bego-implantology.com

BICENT DENTAL IMPLANTS

The Bicent Design is driven by simplicity. A cornerstone of its simplicity is short implants. When the Bicent system was first introduced in 1995, its 9.0 mm length implants were considered quite short. Most other implants were at least 12.14 mm and sometimes 18-20 mm long! Since then, the nature progression of Bicent design philosophy has resulted in a 5.0 mm, 5.7 mm, and 6.0 mm short implants, all with proven clinical success.

Tom Peterson
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E-mail: tpeterson@bicent.com
Web site: www.bicent.com

BIOHORIZONS

BioHorizons is dedicated to developing evidence-based, scientifically proven products, from the launch of the External implant system (Maxgraft®) in 1999, to the many choices you face daily in your practice, and we’re confident that ACE is your best choice for all your dental surgical and medical needs.

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E-mail: sxamora@biohorizons.com
Web site: www.biohorizons.com

BTO BIOTECHNOLOGY INSTITUTE

The BTI Biotechnology Institute, established in 1989 and headquartered in Vienna, is one of the leading companies in oral implantology and rehabilitation with presence in over 25 countries. As key part of its strategy BTI is firmly committed to transmit its knowledge to the scientific and medical community through its prestigious teaching activities worldwide at universities, scientific conferences, online training programs, as well as the publication of articles and books.

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Web site: www.bti-biotechnologyinstitute.com

CAMLOG BIOTECHNOLOGIES AG

CAMLOG is an important manufacturer in the area of implant dentistry. CAMLOG Implant Systems lead the way in application and quality. Long-term Research & Development, highest quality standards and the know-how of globally recognized experts in implant dentistry set CAMLOG apart.

Tel: +41 81 565 41 00
E-mail: info@camlog.com
Web site: www.camlog.com

GEISTLICH BIOMATERIALS

Geistlich Biomaterials has been specializing in regenerative biomaterials for more than 35 years. With its pioneer products for hard- and soft-tissue regeneration the company has been world-wide market leader in regeneration for many years. Geistlich Biomaterials is a part of Geistlich Pharma AG, a family-owned Swiss company with experience in bone and tissue processing since 1891. Geistlich Pharma is represented by eight affiliates and a dense distributors’ net covering more than 30 countries. It has established a close scientific cooperation with more than 100 universities worldwide and continuously invests in research and technologies.

Verena Vermuehlen
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E-mail: info@geistlich.ch
Web site: www.geistlich-pharma.com

MIS IMPLANTS TECHNOLOGIES LTD.

Established in 1995, MIS Implants Technologies Ltd. is a global leader in the development and production of advanced products and innovative solutions, to simplify dental implantology. MIS offers a comprehensive range of dental implants and associated products for the highest quality, as well as diverse solutions for oral reconstruction.

Shir Bambhart
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E-mail: info@mis-implants.com
Web site: www.mis-implants.com

OSTEM IMPLANT CO., LTD.

OSTEM has become the No. 1 dental implant company in the domestic and Asia-Pacific market; and No. 6 in the world as a global sales. OSTEM products are widely used in over 45 countries, manufactured through G1 overseas subsidiaries. OSTEM is the company’s most well-established implant that applies surface treatment, suitable for excellent osseointegration and optimal body design that provides a convenient placement and stability. Osstem has all kinds of Implants, components, dental equipment, materials, etc, and its goal is to be 1st world class Implant company in 2023.

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GOLD SPONSORS
For over 60 years the International Quintessence Publishing Group has served the developmental and educational needs of dental professionals, dedicated to making available to the entire dental team a global resource of cutting-edge research, experience, expertise and knowledge. Quintessence is revered for its high quality publications and takes pride in maintaining its high standards to impart specialist knowledge in the dental field. We produce dental books, multimedia and journals. These can be ordered via our website, email or telephone.

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Trinon Titanium is a manufacturer of high quality titanium products - dental implant systems q-Implant and Q-Implant, maxillo-facial plaques and screws, TiMesh, 3D-Mesh and individual mesh for oesophageal surgery modular distractor for alveolar ridge, bone pins system, Q-Bone grafting set for oral plastic surgery, self drilling trocar coated screws and much more. Trinon organizes since 2003 in cooperation with Trinon Collegium Practicum unique practical implantology courses q-Implant Marathon.

As a Swiss company, Thommen Medical focuses exclusively on research, development and production as well as distribution of high quality products for implant-based dental restorations. Our intensive cooperation with leading clinicians and renowned universities throughout the world enables us to offer innovative, reliable, and safe implant systems. The Thommen implant system meets our customers’ needs in every respect. It is very easy to use, extremely precise, affords excellent aesthetic restorations and thus guarantees superb clinical results. Our products consistently meet the most stringent quality requirements and are manufactured in our own production facility in Grenchen (Schweiz).

For decades, Zimmer Dental has gained the trust of thousands of clinicians worldwide who count on our comprehensive line of products to deliver successful patient outcomes. Zimmer Dental is a global leader in the oral rehabilitation market with a mission to improve the quality of life for patients and4

Zimmer Dental remains at the industry’s forefront.
ADIN DENTAL IMPLANT SYSTEMS LTD.
ADIN Dental Implant Systems Ltd., designs, manufactures and markets state of the art, technologically advanced and CADCAM softw...
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HERAEUS KULZER GMBH
Heraeus Kulzer GmbH is one of the world’s leading dental companies with its headquarters in Hanau, Germany. Combining high performance materials and dental techniques with an extensive product range, covering cosmetic dentistry, tooth preservation, prosthodontics, periodontology and digital services. To optimally exploit the possibilities of digital dental technology Heraeus Kulzer offers harmonized system solutions. Unique prosthetic solutions give opportunities with better aesthetics and economy. The skilled hands of dentists or dental technicians give back smiles and quality of life to patients every day. But only the combination with high performance materials it ensures precisely tailored results and therefore satisfies patients.

IMPLANT DIRECT EUROPE AG
Implant Direct Europe AG (ID) has become the “simply smarter” choice by innovating high-quality implant solutions at a marketappropiate price. The combination has resulted in a remarkably broad product line that includes implant systems, prosthetic components and tissue regeneration materials. Besides the unique Spectra-Result system, ID offers implant systems comparable to Nobel Biocare™, Branemark® and Zimmer™. ID sets new standards for high-quality implants with low prices and value added. Only when using the high-tech, highly precise and Boron Free™is it possible to offer implant solutions including the corresponding prosthetic components. Implant Direct offers various Stage1, stage2, 4 and 1-piece implants provide maximum ease and value. Decide today to choose the path of simply smarter solutions.

IVOCLAST VIVADENT AG
Ivoclar Vivadent AG is one of the world’s leading dental companies. The company’s success is based on a comprehensive portfolio of products and systems, strong research and development capabilities and a clear commitment to training and further education. Ivoclar Vivadent operates in the three product areas Direct Restoratives, Fixed Prosthetics and Removable Prosthetics. In these areas, the company offers dental and dental technician products and systems that support them across the entire treatment and fabrication process and enable them to achieve esthetic results.

KEYSTONE DENTAL
Keystone Dental develops, acquires and commercializes oral healthcare technologies that ultimately improve a patient’s treatment and quality of life. Keystone Dental’s product portfolio includes implant systems, biomaterials for tissue and bone regeneration and an implant planning software and guided surgery.

MECTRON
mectron – the origin of PIEzOSURGERY®
MECTRON, established in 1979, is responsible for some of the most important innovations in the dental field

MEGAGEN IMPLANT CO., LTD.
MegaGen is the worldwide leader in the dental implant market. The company is based in Korea, and it is currently one of the fastest growing implant companies in global market. MegaGen is not only manufacturing and selling dental implants but also importing and selling dental products. MegaGen produces wide range of dental implant systems from conventional implants to unique implant systems. One of other MegaGen’s businesses is the education of dental implantology to local dentist through MINEC.

NEODENT
Market leader in Latin America for dental implants and prosthetic abutments. Neodent is known for its continuous investments leading technological advances, scientific researches and innovation in implantology, offering excellence and distinguished quality out of a large range of products.

NEOBIOTECH CO., LTD.
Neobiotech is the prior implant manufacturer which was established on February, 2000, and endeavored to provide the best product and service under motto of Implant service no.1. Neobiotech developed and launched OMI Implant guaranteeing excellant fixation at Crestal Cortical, Middle Cortical, and Inferior Cortical bone. Moreover, Neobiotech released the SOA kit, SLA kit brought out innovation to Sinus operation, and variety of Surgical kit, Remover kit which became to get praise and love from the head of dentistry.

SHINHUNG CO., LTD.
Shinhung Co., Ltd. founded in 1955, is the dental company only dealing a full range of dental products in Korea. It manufactures a wide range of dental equipments, precision abutment, prevailed crown and implant system in the compliance with ISO 13485 and other international quality standards. Shinhung implant system are consolated of LUPA, SOA, and STELLA.
Degradable Solutions AG is a Swiss manufacturer specialized in Bio-Degradable Implants. Our range covers several medical indications for Branded- and OEM-Business. Our specialization bone graft substitute for the dental field where we develop, manufacture and distribute: easy graft® is a bone graft substitute with 100% synthetic origin, whereas each grain is coated with Polyester. The coating can be activated with a special liquid and therefore the grains will form a stable body. It will be applied directly from the syringe, has a paste-like consistency, hardens in situ, has an open interconnected porosity for optimal bone regeneration. All CLASSIC-products are 100% β-TCP and all CRYSTAL-products consist of 40% β-TCP and 60% HA (biphasic degradation).

TRI DENTAL IMPLANTS INT. AG

TRI® Dental Implants is a Swiss emerging leader in innovative modern implant dentistry and can be considered as the leading value supplier in the dental market. TRI offers high quality implants at an attractive and cost effective price range. Following the slogan “Peak Performance at the right price” the TRI Performance Concept was designed to make the life of the practitioner as simple and yet high performing as possible to achieve natural esthetic results.
Using the unique, clinically proven sugar cross-linking technology, Datum Dental develops cross-linked collagen tissue and bone regeneration. Datum Dental Ltd, a subsidiary of Datum Biotech, was founded in order to develop, manufacture and market a full line of dental biomaterial products for tissue and bone regeneration.

Datum Dental develops cross-linked collagen products for the dental regenerative segment. By using the unique, clinically proven sugar cross-linking GlyMATEK™ technology, Datum strives to overcome major deficiencies in biomaterial-based products in use today. Datum Dental’s DDB® PULS Resorbable Collagen Membrane, was cleared for sale in the U.S. by the FDA in 2008 and obtained CE marking, as well as other GMB and CET certifications.

The Company is located in Lon, Israel.

**AESCULAP AG**

Quality and reliability - since 1897 the staff and serpents of Aesculap surmounted with a crown are the company's trademark and has been a symbol of quality and reliability. With Efma-certified products and strict quality control, Aesculap is one of the most successful dental companies in Germany, Austria and Great Britain. We are 100% oriented Biotech company with headquarters in Berlin and developing and production sites in Munich (Germany, Austria and Great Britain). We are 100% oriented Biotech company with headquarters in Berlin and developing and production sites in Munich (Germany, Austria and Great Britain).

**AEGONICS**

Aesculap is the only US manufacturer of implant/ oral surgery/endo products. FDA, CE, ISO certified. After-sale service in Europe. Our motors are compatible with all implants and most handpiece brands. Our high-end features are up to ISO Norm at an affordable price. Unique features include dynamometer, handpiece calibration, customizable preset names, upgradable software, oral surgery and rotary endo functionality. Our AEGONICS® series is more basic for clinicians starting an implant practice. We will also be exhibiting our portable dental equipment ideal for public health and humanitarian applications. Distributor and OEM inquiries welcome!

**BIOATLANTE**

Biomatante is a French manufacturer of synthetic bone graft substitutes, resulting from a collaboration between international scientists, experts in bone architecture. All of our product line is made of MBCP Technology, a unique HA/TCP 3D interconnected scaffold. MBCP® Gel, Injectable Biomatrix Biphase Bone Graft. EZ Cure™: Flexible Resorbable Collagen Membrane - Large (in vials and syringe) and serpentine. Ez Cure™: Flexible Resorbable Collagen Membrane - Large) in vials and syringe. In'Oss™: Moldable Biphasic Putty. MBCP™ Gel: Injectable Biomatrix Biphase Bone Graft - 50% HA/50% TCP. Biomatante is a french manufacturer of synthetic bone graft substitutes, resulting from a collaboration between international scientists, experts in bone architecture. All of our product line is made of MBCP Technology, a unique HA/TCP 3D interconnected scaffold. MBCP® Gel, Injectable Biomatrix Biphase Bone Graft. EZ Cure™: Flexible Resorbable Collagen Membrane - Guided Bone Regeneration. With over 25 years of background and more than 600 scientific and clinical literature, we will offer safe, affordable and innovative regeneration therapies to our patients.

**BIOTISS BIOMATERIALS**

Biotiss biomaterials is an innovative, clinically oriented Biotiss company with headquarter in Berlin and developing and production sites in Germany, Austria and Great Britain. We are 100% focused on dental regeneration. We offer you a unique systematic BTR approach, the complete regenerative biomaterial portfolio for Implantology. Oral Surgery, CMF and Periodontology out of one hand. The biomatante regeneration system includes all long-term proven biologic materials (bovine, synthetic, allografts, collagen, granules, blocks, membranes, soft tissue matrix), matched to each other for specific indications.

**DEUTSCHES ZENTRUM**

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Dentaurum Implants GmbH

The family run business has made a distinguished name for itself the world over with an unusually wide range of products and services. On the last 18 years, a unique product range from the root up to the crown has emerged. From Jonum, the longitudinal hollow shaft implant, high-quality casting alloys and dental porcelains, to bridges made of polished implant abutments. Dentaurum Implants has worked intensively in the dental market and last experimental results are the tioLogic® surgical tray ADVANCED and the new designed implant tioLogic® ST.

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Web site: www.dentaurum-implants.de

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MAILLEFER

Maillefer is the leading manufacturer of cutting tools in the dental field. For a subcontractor, we serve the entire implant industry. We operate in developing G3M products for our clients, assisting them in the definition of the drilling sequence and the design of the instruments. Our team of engineers and specialists is dedicated to the development of surgical and prosthetic solutions for the care and comfort of the patients. We designed the world’s first straight handpiece for the dental practitioner for the surgical kit for your dentists. By partnering with us, you can focus on your core business and accelerate the turnover of your products.

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MAXILLENT LTD

Maxillent Ltd. develops and manufactures innovative solutions that are transforming the field of dental implants. The company’s flagship product is FlasMax®, the sinus lift system which allows dental professionals to perform a minimally invasive alveolar floor elevation and implantation in a simple, single procedure. In addition, Maxillent offers a comprehensive range of G3M dental implant prosthetics, bone graft materials and tools that cover the entire spectrum of implant dental procedures. The FlasMax transforms sinus lift surgery from a technically demanding, traumatic surgical intervention into a simple, minimally invasive implantation procedure, thus dramatically improving patients’ quality of life.

Tel: 972 9 9354600
E-mail: mail@maxillent.com
Web site: www.maxillent.com

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IBS Implant Co., Ltd

IBS implant and its Dual Surgical System provides the dental practitioner with refined surgical instrument and a surgical protocol that enhances virtually every aspect of the implant procedure. It is the first and only system that is designed to preserve bone as its first priority. As systematic protocol guides the practitioner in determining hard and soft bone types and then addresses each bone type quality in a particular way. Moreover, a kit of innovative surgical equipment, was introduced in 2003 for dentists to easily apply this new surgical implant surgery system to actual clinical settings. IBS provides the world’s most innovative and simplified bone sparing, sinus lifting and Onlaytma drilling technique.

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Tel: +82 10 4452 1721
E-mail: lavisa@ibsimplant.com
Web site: www.ibsimplant.com

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ITI International Team for Implantology FOUNDATION FOR THE PROMOTION OF ORAL IMPLANTOLOGY

An independent, non-profit organisation, the International Team for Implantology (ITI) unites professionals from every field of implant dentistry and related tissue regeneration worldwide. It actively promotes networking and exchange among its membership. More than 15,000 ITI fellows and members regularly share their knowledge and expertise with the objective of continuously improving treatment methods and outcomes.

The ITI focuses on the development of well-documented treatment guidelines backed by extensive clinical testing and long-term results. It funds research as well as scholarships, organizes congresses, study clubs and continuing education events and also publishes reference books such as the ITI Treatment Guide series.

ITI membership is open to all implant dentistry professionals.

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KaVo DENTAL Sponsorship

KaVo, Gendex and Imaging Sciences International (ISI), part of KaVo Group, have always been committed to the development, production and distribution of advanced, innovative X-ray imaging equipment for the dental professionals around the world.

They offer a complete range of high-quality, state-of-the-art imaging solutions, ranging from intraoral to CBCT systems. The deep knowledge and experience in dental radiology, together with the worldwide sales and service networks, enables KaVo Dental to assist the dental professionals in all their needs, improving both the quality of care and the productivity of the dental office.

Hartmut Kohler
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E-mail: hartmut.kohler@kavo.com
Web site: www.kavo.com

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MASTER OF ORAL IMPLANTOLOGY (MOI)

GÖTHE UNIVERSITY FRANKFURT AM MAIN / GERMANY

The Masters Degree Program Master of Oral Implantology (MOI) has been introduced by Prof. G. Gerber, Director of the Department of Oral Implantology of the Goethe University of Frankfurt, Germany.

The program was awarded accreditation in 2009 and is open to oral surgeons and academicians interested in the field of oral implantology as well as students of the field. The program provides an advanced level of knowledge in the field of implantology. The program is taught by internationally recognized experts in the field of implantology and is attended by students from all over the world. After the successful completion of the program, graduates will receive the academic title of Master of Science (MSc.) in Oral Implantology. The graduates will be able to independently plan and implement therapies concerning the treatment of patients requiring dental implant prosthetics.

For more information and admission requirements please contact:
MRS. Marcela Gisin: info@moi-frankfurt.de
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META

Meta was born with the mission of proposing solutions that allow a simplification of the procedures in the field of dental and bone augmentation treatments. The philosophy of the company is to put both the comfort of the patient and the needs of the surgeon at the very basis of the whole procedure of creation of new products. From the very first outline of the project to the final delivery to our customer. Along with the well-known care-takers collectors, SafeScrape® & Moross, and the Scanning technique for the sinus-lift SinCrest Technique, Meta presents a new line of devices, among which our new systems for the hydration and the graft of biomaterials: ProCells and ProGraft System.

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NANO BRIDGING MOLECULES SA

NBIMolecules®, a Swiss university spinoff and Frost&Sullivan award winner, has developed SurfLig® as a new Q-marketed product for enhanced implant osseointegration. SurfLig® produces a mono-layer of permanently bound multifunctional molecules on the implant surface. SurfLig®’s biomimicking characteristics allow for true osseointegration, creating a clear clinical advantage for dental and orthopedic implants using SurfLig®.

Preclinical testing showed significantly superior bone healing and greater implant integration by enhanced clinical performance with the possibility for earlier loading.

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Email: info@nbimolecules.com
Web site: www.nbimolecules.com

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NEWTOM

NewTom devices, manufactured by QF s.r.l. in Verona (Italy), were the first to use the “Bone Beam” technology in dental field in 1996. NewTom’s products represent the Italian tradition of specialized manufacture and they are known all over the world for their reliability, high standards and state-of-the-art technology. Thanks to more than twenty years of research, development and manufacture of CBCT, NewTom is one of the world’s leading biomedical technology manufacturers. NewTom is known all over the world thanks to our experience in the dental field and to the co-operation with leading surgeons. Our products are aimed at everyday use and realised to avoid infections and producing sterile and non-sterile disposables.

Claudiano Tagliareni
Tel: +39 054 8202727
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Web site: www.newtom.it

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OMNIA

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

Surgical Line: a complete range of sterile surgical accessories meant for simple routine implant surgeries and more complex maxillofacial surgeries.


Med®: a new innovative and complete offer of surgical instruments specifically developed for implantology and maxillofacial surgeries.

Alexander Kerin
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Email: info@omniapa.eu
Web site: www.omniapa.eu

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OSTEOGENICS BIOMEDICAL

Osteogenics Biomedical is a leader in the development of innovative Guided Tissue Regeneration (GTR) products. Osteogenics Biomedical’s total focus is on dental bone grafting, bone regeneration, and implant site development. Osteogenics develops, manufactures and markets dental bone grafting lines of membrane and non-membrane, Cytotile® Barrier Membranes, Cytotile® (RTW) Suture, enCure® Combination and Mineralized Allografts, Vital Extraction Collagen Membranes, and the ProFlex® Precision Fixation System.

Shane Shutlakeworth
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Web site: www.osteogenics.com

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OSTEOGENICS B I O M E D I C A L

B 18

HAGER & MEISINGER GMBH

Hager & Meisinger is one of the world’s leading developers and manufacturers of rotating high-tech products in the field of dental and medical technology. The range of drills, milling, finishing, grinding, and polishing tools, instruments, and special instrument systems (for endodontia, orthodontia, ENT and mouth, jaw and facial surgery, and oral implantology) comprises around 12,000 products. Founded by Artur Meisinger in 1888, the independent, family-run company currently has 350 employees and is managed by the fourth generation and managing partners Dr. Burkard Michel (48) and Sebastian Voß (43). The company is celebrating its 125th jubilee in 2013.

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Web site: www.meisinger.de

B 20

OSTEONECTS BIOMEDICAL

Osteonects Biomedical is a leader in the development of innovative Guided Tissue Regeneration (GTR) products. Osteonects Biomedical’s total focus is on dental bone grafting, bone regeneration, and implant site development. Osteonects develops, manufactures and markets dental bone grafting lines of membrane and non-membrane, Cytotile® Barrier Membranes, Cytotile® (RTW) Suture, enCure® Combination and Mineralized Allografts, Vital Extraction Collagen Membranes, and the ProFlex® Precision Fixation System.

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B 53

NIBEC CO., LTD.

NIBEC is a public company established by professors of School of Dentistry, Seoul National University. NIBEC has own strength in the research and development (R&D) in the field of peptide related therapeutics, Biomaterials and Oral care business. The future core technologies are peptide discovery technology (PEPDiscover), peptide application technology (TGApePolymer) in new drug discovery, drug delivery system and biomaterials. The main product of NIBEC is xenograft dental bone material (OSSgen-x15). Equimatrix), collagen membrane, biomaterials: ProCells and ProGraft System.

B 63

NESSO LS LTD.

Nesso is an innovative developer of dental implant solutions founded in 2000 by Prof. Meritshki and Frilec Engineering. By forging strong relationships with a wide range of clinics, academics and engineers from around the world, Nesso has created an implant system that realize the world simplicity. It is built around a single platform concept which allows to work with different implant diameters with only one set of instruments and fewer prosthesis components.

Nesso head office is located in the UK and we operate in Austria, Austria, Germany, Italy, Sweden, Netherlands, Denmark, Finland, United States and represent by partners in Denmark, Netherlands, Poland, Croatia, Ireland, Turkey and Switzerland.

B 10

OSSTELL AB

More than 20 years ago, two scientists shared the frustration of not being able to determine osteointegration in an accurate, objective, and consistent way – beyond their own dexterity and tactile ability. The concept of Resonance Frequency Analysis was developed. The company was formed in 1995, and today more than 9,000 clinicians all over the world use the Osstell EQ. All Osstell employees are personally committed to the worldwide adoption of our unique diagnostics solution and to the continuous growth of our company. To succeed, we ensure that our customers receive the unmatchable support and service they deserve.

B 13

PLANMECA OY

Planmeca Oy is one of the world’s largest dental equipment manufacturers distributing products to over 120 countries. A global leader in many fields of dental technology, with a product range covering digital dental units, 2D and 3D imaging devices and software solutions, Planmeca is also the largest privately held company in the field. The estimated turnover for 2013 is approximately EUR 780 million with over 2,500 employees.

B 12

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B 11

PELLETIER and ABBOTT

Pepperfry is an online retail marketplace for appliances and consumer electronics. Pepperfry was founded in 2012 by Sanjay Subrahmanya, Aman Gupta and Ravi Prakash. Pepperfry allows users to directly buy products from sellers such as Flipkart, Snapdeal, Amazon, Liberty and others.

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Web site: www.pepperfry.com

B 17

PRITI

Priti is a leading manufacturer of a comprehensive range of premium quality, reliable and high-performance electronic components and sub-systems, including high-quality ICs.

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Web site: www.priti.com

B 15

PROTIMES

Protimes is a leading manufacturer of a comprehensive range of premium quality, reliable and high-performance electronic components and sub-systems, including high-quality ICs.

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Web site: www.protimes.com

B 14

PRUVEO CAPITAL LTD.

Pruveo Capital is a leading finance company in India providing loans to small and medium Enterprises for various business requirements.

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Web site: www.pruveo.com

B 16

PURI GROUP

Puri Group is a leading manufacturer of a comprehensive range of premium quality, reliable and high-performance electronic components and sub-systems, including high-quality ICs.

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Web site: www.puri.com

B 17

PURITY INDUSTRIES LTD.

Purity Industries is a leading manufacturer of a comprehensive range of premium quality, reliable and high-performance electronic components and sub-systems, including high-quality ICs.

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B 18
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. 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 excellence in periodontology. 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.
ROYAL COLLEGE OF SURGEONS IN IRELAND

Founded in 1963. A major contributor to postgraduate dentistry, the Faculty consists of a Board and over 2000 Fellows and Members throughout the world. The Faculty is responsible for the maintenance of the highest standards of postgraduate training in Ireland and in other centres around the world, most notably in the Middle East and Gulf region, North East Africa and New York, through the provision of programmes and examinations at Membership and Fellowship level. The Irish Committee for Specialist Training in Dentistry (ICSTD), a Standing Committee of the Faculty, is the body responsible for approving specialist training posts in Ireland and for advising the Dental Council regarding satisfactory completion of specialist training.

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.

Web site:
http://prosthodonticsocietyireland.com
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eao-congress.com
How do you get optimal long-term treatment outcomes for your patients? The standard norm regarding dental implant treatment success from 1986 does not reflect what is possible to achieve today. There are no reasons why the clinician or the patient should accept a marginal bone loss of up to 1.5 millimeters.

It is time to close the gap. How much bone loss are you willing to accept?