

Developments and risks in regenerative dentistry

CARLY WOOD recently attended an Osteology Foundation press conference, which took place at the International Osteology Symposium held in Cannes...

ALMOST 3,000 delegates descended on to The International Osteology Symposium: *Clinical Excellence, Risk Factors and Complications in Regenerative Dentistry*, which took place on April 14-16, to learn about the latest news and developments in regenerative dentistry.

Organised by the Osteology Foundation and held at The Palais des Festivals des Congrès, it was the third International Osteology Symposium since the Foundation was established in 2003. It also holds various National Osteology Symposia around the world every year.

The Symposium focused on a range of topics relating to implantology and periodontology. It featured a total of 85 speakers and moderators, and 24 workshops, over its three days, as well as 145 posters in the Poster Presentation, and an Exhibition enabling companies to promote their products.

Topics included, surgical techniques in soft and hard tissue regeneration, avoiding risk factors and complications, complex cases, peri-implantitis, ridge-preservation, sinus grafting procedures and the use of biomaterials in optimising aesthetics.

New developments

During the three-day programme, members of the dental press were invited to a press conference to hear more about the Symposium and the Osteology Foundation.

President of the Foundation, Professor Christoph Hämmerle was the first to present, with his talk entitled *Osteology Foundation today and tomorrow*. In providing background information on the Foundation, Prof Hämmerle said, "The focus is regenerative dentistry, the aim is continued progress and the main activities focus on research and education."

Prof Hämmerle noted the continued success of the Foundation, with a total of 15,000 participants attending the National and International Osteology Symposia to date.

He went on to discuss the new activities of the Foundation, starting with news that an Osteology Research Academy will shortly be launched. The Academy offers clinicians theoretical and practical continuing training and education in scientific techniques. A choice of Core and Expert Modules are available to suit both young investigators and those researchers looking for focused, in-depth training. The courses have been designed by the Foundation's Committee and promote research and evidence-based dentistry.

He next spoke about the launch of new book, *Osteology Guidelines for Oral and Maxillofacial Regeneration*. He commented,

"We hope it will be of great help to researchers all around the world."

The Guidelines are intended to improve the knowledge and skills of researchers conducting animal research in oral tissue regeneration. The book provides a set of tools for implementing effective research strategies and for conducting high-impact, practice-orientated, pre-clinical research.

Prof Hämmerle also spoke about the Foundation's new Osteology Expert Council, which initially consists of 11 scientists from successful research teams, and hopes to expand into a large, international network of scientists and clinicians with expertise in regenerative therapies. He explained, "The Expert Council is an extension of the Osteology Foundation, with more brains and more people that are eager to work in the Foundation to make further and faster progress."

Prof Hämmerle finally discussed the introduction of a second granting cycle in the Osteology Granting Programme. This means the Foundation is now offering two dates per year for the submission of project proposals. So far, 340 applications have been funded from 41 countries.

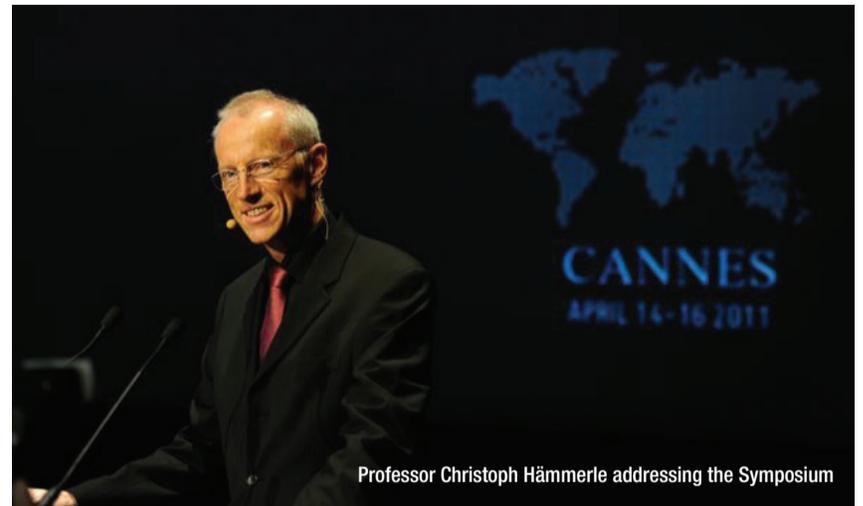
Hard tissue regeneration

Professor Daniel Buser, International Chairman and member of the Osteology Foundation Board, was next to address the audience with *Hard Tissue Regeneration: Scientific evidence and today's challenges*. Here, he gave some background information on the concept of the Congress, regarding bone regeneration.

Prof Buser claimed that, today, a lot of progress has been made in the fields of hard tissue regeneration and bone augmentation procedures, with the two main surgical techniques being guided bone regeneration (GBR technique) and sinus bone restoration. He pointed out that whilst there is a high level of excellence in these techniques, it is also important to consider complications and risk factors.

He told the audience, "The important part is that clinicians know the criteria to select a treatment. Case selection is a very important part, particularly in the aesthetic field. We always do a risk assessment. We try to analyse the case, how predictable the treatment is, and the risk factors. Of course, when we have complications, we also have to develop guidelines on how we manage these."

Prof Buser outlined the key topics involved in bone regeneration, which were being discussed during various lectures throughout the Symposium. Topics included what filling materials offer the best long-term result



Professor Christoph Hämmerle addressing the Symposium

and how to treat fresh extraction sockets or sites, particularly when an implant cannot be placed within a few weeks or months.

In summary, he said that the well-established techniques in hard tissue regeneration are being applied increasingly by colleagues in daily practice.

He also noted that the industry is feeling both pressure to be more cost effective, and a growing expectation from patients in the field of aesthetics. This highlighted the importance of less morbidity and less complications in procedures, and emphasised the benefits of the Symposium in providing vital information in these areas of implant surgery.

Soft tissue regeneration

The third talk, *Soft Tissue Regeneration: What are today's questions?* came from International Chairman and member of the Osteology Foundation Board, Professor Mariano Sanz. He highlighted the importance of both "pink" and "white" aesthetics and spoke of the growing importance to not only replace lost teeth, but also to develop good surgical techniques to improve the soft tissue and overall aesthetic outcome of restorations, as "patients want to see both the teeth and gums in place when they smile."

Prof Sanz argued, "I think we have fantastic technology and fantastic laboratories that provide us with beautiful teeth and beautiful replacement of lost teeth. But to replace the soft tissues in a way that they look aesthetically natural on a smile is not that easy. We must rely on skillful surgical techniques and also on the development of new approaches and new biomaterials to substitute the sometimes lost soft tissues."

He continued to discuss the common use of grafting procedures in repairing gingival tissue. This approach requires two surgeries; one in the area that is going to be grafted, and one in the area that the donor material is being taken from. As a result, Prof Sanz explained that the Foundation

is beginning to develop new programmes that are hoped to eventually substitute the need for these autografts. These soft tissue substitutes were discussed in lectures at the Symposium.

Founding company

To end, Foundation board member and representative of the Donors, Paul Note, delivered his talk, *Aims and Visions of the partners in industry*, which provided some background information on Geistlich Pharma, the company that established the Osteology Foundation in 2003.

He began by identifying the significance of Cannes, famous for the Cannes Film Festival, as the setting for this year's Symposium. He explained, "It would be very inconceivable for George Clooney or Catherine Zeta Jones to make a red carpet entrance with horrible teeth. So appearance counts, and particularly in Cannes. Therefore Cannes is a very relevant location."

He told how Switzerland-based, Geistlich Pharma was founded by the Geistlich family in 1851. Its core business was manufacturing products made out of bone, and, over the years, the company has evolved into the field of biomaterials and regenerative dentistry, manufacturing materials, such as Geistlich Bio-Oss and Geistlich Bio-Gide.

Note explained how, in 2003, Peter Geistlich established the Osteology Foundation in order to create an interdisciplinary network in the field of dental regeneration, combining networking with scientific exchange and research.

In concluding his talk on the company and Foundation, and their combined efforts in producing scientific data and developing new products, such as soft tissue substitutes, Note added, "The industry must provide an effective, concrete solution for its customers that offer predictable, reliable results that balance function and aesthetics. This requires the solid scientific base for a better quality of life, and a lovely smile." ■

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