11th Annual Columbia University Dental Implant Symposium

The Latest Techniques, Technology and Research
Saturday, December 12, 2020
Live All Virtual Symposium

AGENDA

Scientific Chairman and Moderator Dr. Dennis Tarnow

8:45 a.m. Welcoming Remarks: Dean Christian Stohler and Dr. James B. Fine

8:55 a.m. Introductions: Dr. Dennis Tarnow

9:00 a.m Next Level of Hard and Soft Tissue Regeneration
Dr. Ronald Jung (Switzerland)

10:00 a.m. Anatomical Limitations and their Management in Implant Prosthetic Reconstruction
Dr. Zvi Artzi (Israel)

11:00 a.m. Soft Tissue Augmentation as an Important Factor for Long-term aesthetic results
Dr. Ueli Grunder (Switzerland)

12:00 p.m. Lunch break

12:45 p.m. New Perspectives on Vertical and Horizontal Ridge Augmentation
Dr. Istvan Urban (Hungary)

1:45 p.m. Effectiveness of Antibiotics to Reduce Early Implant Loss in Systemically Healthy Patients
Dr. Gary Greenstein (New Jersey, USA)

2:45 p.m. Effect of Macrogateometry and Microtopography of the Implant and Abutment on Peri-implant Soft Tissue Stability
Dr. Hanae Saito (Maryland, USA)

3:45 p.m. Digital Implant Dentistry Strategies to Treat the Hopeless Tooth in the Esthetic Zone
Dr. Farhad Boltchi (Texas, USA)

4:45 – 5:00 p.m Concluding Remarks

Note: Timing subject to slight adjustment.
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SCIENTIFIC CHAIRMAN AND MODERATOR

Dennis P. Tarnow, DDS, is a clinical professor in the Division of Periodontology and director of Implant Education at Columbia University College of Dental Medicine. He is the former professor and chair of the Department of Periodontology and Implant Dentistry at New York University College of Dentistry, where he has a building wing named after him. Dr. Tarnow has a certificate in periodontics and prosthodontics. He received the Master Clinician Award from the American Academy of Peridontology, Teacher of the Year Award from New York University, and the Distinguished Lecturer Award from the American College of Prosthodontics. Dr. Tarnow has lectured extensively in over 45 countries, published over 225 articles on perio-prosthodontics and implant dentistry, and co-authored three textbooks as well as a new textbook with Dr. Stephen Chu titled, The Single Tooth Implant: A Minimally Invasive Approach for Anterior and Posterior Extraction Sockets, published by Quintessence. Dr. Tarnow maintains a private practice in New York City.

Christian S. Stohler, DMD, DrMedDent, began his tenure as dean of the Columbia University College of Dental Medicine, and senior vice president of Columbia University Irving Medical Center, in 2013. He received his DMD degree from the University of Bern, Switzerland, where he also earned the DrMedDent degree and obtained certificates in oral surgery and prosthodontics. From 2003-2013, he was the dean of the School of Dentistry, University of Maryland. Before this, he held several positions at the University of Michigan, including professor at the School of Dentistry, research scientist at the Center for Human Growth and Development, director of research at the School of Dentistry, and professor and chair of the Department of Biologic and Materials Sciences. Dean Stohler is a leading expert on pain management and on jaw disorders such as temporomandibular joint and muscle disorders (TMJD). His more than 120 articles and book chapters have been cited more than 5,400 times.

James B. Fine, DMD, is the senior associate dean for Graduate Education and chief practice director of Faculty Practices, professor of dental medicine (Periodontics) CUMC, with tenure of title at Columbia University's College of Dental Medicine, and attending dental surgeon on the Presbyterian Hospital Dental Service. He has been on the faculty of the College of Dental Medicine for over 30 years. He has participated extensively in the educational program, teaching dental students and postdoctoral students. Dr. Fine is the elected chairman of the college’s Curriculum Committee and the chairman of the Postdoctoral Education Committee. He is currently the course director of numerous courses in Postdoctoral Periodontics program. Over the years he has redesigned parts of the predoctoral curriculum in Periodontics. He has authored or co-authored numerous articles, chapters and abstracts in the periodontal literature. In addition, he has presented at invited lectures and seminars. Dr. Fine maintains a clinical practice limited to Periodontics and Implantology at the Columbia University Medical Center faculty practice in Northern and Midtown Manhattan.
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9:00 a.m.  Ronald E. Jung, Prof., DrMedDent, PhD

Next Level of Hard and Soft Tissue Regeneration

ABSTRACT

Currently, there are a variety of successful techniques available for hard-and soft tissue regeneration. For GBR procedures we have excellent long-term documentations.

However, one major drawback today is the lack of volume stability of bone augmentations on the buccal aspects of implants. In order to improve volume stability in esthetic areas and to reduce the invasiveness and improve patient care the next level for hard and soft tissue regeneration needs to be achieved. On the level of hard tissue regeneration this presentation provides you with a new GBR technique using stabilized bone graft materials (L-shape technique) providing better volume stability on the buccal aspect.

On the level of the soft tissue there is a need to replace the invasive techniques of autogenous grafts and replace them by volume stable soft tissue substitutes. Highly interesting results of randomized controlled clinical studies will be presented.

SPEAKER BIOGRAPHY

Prof. Ronald Jung is trained in oral surgery, prosthodontics and implant therapy. He is currently head Division of Implantology at the Clinic of Reconstructive Dentistry, Center of Dental Medicine, University of Zürich.

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 at the University of Zürich. In 2011 he earned his PhD doctorate degree of the University of Amsterdam, ACTA dental school, The Netherlands.

In 2013 Prof. Jung worked as visiting associate professor at the Department of Restorative Dentistry and Biomaterials Sciences at Harvard School of Dental Medicine in Boston, USA. In 2015 he was promoted to full professorship for implantology at the University of Zürich.

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. He is currently treasurer of the EAO, past president of the Swiss Society of Reconstructive Dentistry, and member of the Board of Directors of the Osteology Foundation.
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10:00 a.m.  Zvi Artzi, DMD  
*Anatomical Limitations and their Management in Implant Prosthetic Reconstruction*

**ABSTRACT**

When examining the composition of the osseous tissue, there is a marked difference between the edentulous maxilla to the mandible. The proportion of bone marrow is greater in the maxilla than in the mandible. The anterior maxilla is comprised of a high proportion of bone marrow whereas the anterior mandible contains large amounts of mineralized bone. Nevertheless, both jaws comprise high proportion of lamellar bone. Additionally, the cortical crest is wider in the mandible than in the maxilla particularly at the symphyseal area where it is at its widest.

Consequently, to restore a deficient alveolar ridge, different surgical techniques are recommended for different bony deficiencies at the different anatomical locations. Various anatomical conditions, such as an enlarged incisive foramen, an impacted canine in the maxilla, or a residual steep ridge, also require challenging surgical techniques to achieve successful as well as predictable bone volume outcome.

**SPEAKER BIOGRAPHY**

Prof. Zvi Artzi is a professor of periodontology at Tel Aviv University, Israel.

He has published over 100 articles and research abstracts in peer-reviewed leading journals in Periodontology and Oral Implantology. His current main research topics are related to the quality of regeneration and osseointegration, the evidence-based efficacy of different grafting biomaterials and advancing surgical modalities.

Recently, in 2020, the textbook titled *Bone Augmentation by Anatomical Location: Treatment Plan and Decision Making* was published by Wiley-Blackwell and sons. Editor: Zvi Artzi with 50 worldwide known contributors. The book contains 25 chapters with about 1,000 clinical slides of different step-by-step surgical techniques to predictably restore the alveolar ridge.
ABSTRACT

Bone and soft tissue augmentation are necessary to compensate for or prevent tissue deficits around implants placed in the esthetic region. Soft tissue augmentation appears to be of enormous importance, particularly for long-term success. Depending on the initial situation, various techniques are successful if they are applied correctly. This presentation will discuss important surgical details and present astonishing long-term results.

LEARNING OBJECTIVES

Upon completion of this presentation, participants should be able to:

- Understand the need for soft tissue augmentation procedure in different situations
- Know the different techniques and their indications
- Understand the benefits of soft tissue augmentation for long-term results

SPEAKER BIOGRAPHY

Dr. Ueli Grunder received his DMD degree from the University of Zurich, Switzerland, in 1982. His postgraduate education in advanced fixed prosthodontics also came from the University of Zurich. He received his specialist in fixed prosthodontics of the Swiss Society of Prosthodontics (SSRD) and in implantology of the Swiss Society of Oral Implantology (SGI). He maintains a private practice together with Thomas Gaberthüel from 1989 – 2014 and with David Schneider and Jörg Michel since 2018 in Zollikon-Zurich, and has published numerous papers and extensively lectured nationally and internationally on the surgical and prosthetic aspects of implant dentistry. His book, Implants in the Aesthetic Zone, was published by Quintessence in 2015 and has been translated into 11 languages.

Dr. Grunder is past-president of the Swiss Society of Oral Implantology (SSOI) and past-president of the European Academy of Esthetic Dentistry (EAED).
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12:45 p.m.  Istvan Urban, DMD, MD, PhD
New Perspectives on Vertical and Horizontal Ridge Augmentation

ABSTRACT

Vertical and horizontal augmentation presents one of the greatest challenges of bone regeneration in implant dentistry. This is primarily due to the difficulty of the surgical procedure and its potential complications. However, it has been demonstrated that successful clinical outcomes can be predictably achievable when strict protocols are followed. The detailed understanding of clinical anatomy should guide the clinician when managing the soft tissue flaps in an attempt to securely close the flaps to achieve optimal healing environment of the graft. Graft immobilizations, the optimal use of graft materials are essential in achieving bone formation even in a distance from the bony walls. This presentation will summarize the essential steps of ridge augmentation and gives an insight how a clinician can learn these demanding procedures.

SPEAKER BIOGRAPHY

Dr. Istvan Urban teaches implant dentistry in the graduate program at Loma Linda University in Loma Linda, California. He is licensed in the state of California (USA) and has a private practice in Budapest, Hungary. Additionally, he is an honorary professor at the University of Szeged, Hungary, where he received his PhD degree in Periodontology in 2012. Recently, Dr. Urban was also appointed an adjunct clinical associate professor in the Department of Periodontology and Oral Medicine at the University of Michigan.

He received his DMD degree and his MD degree from Semmelweis University School of Medicine and Dentistry (Budapest, Hungary) in 1991 and 1996. He completed a residency program in oral surgery at St. Istvan Hospital in Budapest, Hungary (1992-1996). He then completed his internship program in Periodontics at UCLA. After graduation from the Fellowship Program (1999-2000) in Implant Dentistry at Loma Linda University, he was appointed assistant professor the following year.

Dr. Urban is a board member of the Osteology Foundation and has published scientific articles and textbook chapters on bone regeneration and soft tissue reconstructive surgery around dental implants. He is the author of the textbook titled, Vertical and Horizontal Augmentation, published by Quintessence.
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1:45 p.m.  Gary Greenstein, DDS, MS

*Effectiveness of Antibiotics to Reduce Early Implant Loss in Systemically Healthy Patients*

**ABSTRACT**

The decision to prescribe an adjunctive antibiotic when placing a dental implant in a systemically healthy patient who is not receiving a bone graft remains a controversial issue. In an effort to elucidate this enigma, the presenter analyzed, from a statistical and clinical significance perspective, seven current systematic reviews that address this concern. Hypothesis testing often does not provide clear understanding regarding the efficacy of the administration of antibiotics in association with clinical implantations. Therefore, number needed to treat (NNT) calculations may be used to determine the effectiveness of antibiotics to reduce dental implant losses. The NNT indicates how many additional patients need to be treated with antibiotics to avoid an additional implant failure in another patient. This presentation addresses two questions: Do antibiotics help reduce implant loss, and if they do, what is the best drug dosage to use when placing dental implants? Based on NNT calculations, the data is interpreted to denote that adjunctive antibiotics help reduce early implant loss in systemically healthy patients who are not receiving bone grafts and that 2 gm of amoxicillin prior to implant placement in non-allergic patients appears to be a satisfactory drug dose that provides a clinically significant benefit.

**LEARNING OBJECTIVES**

Upon completion of this presentation, participants should be able to:

- Discuss from a clinical perspective that antibiotics reduce the rate of early implant failure
- Understand that pre-operative loading of amoxicillin when placing dental implants provides protection against early implant loss

**SPEAKER BIOGRAPHY**

**Dr. Gary Greenstein** is a graduate of New York University College of Dentistry and received his MS from the University of Rochester. A board diplomate of the American Academy of Periodontology, he has authored more than 100 articles on periodontal and implant therapy and has been the recipient of the following awards: the Gies Award for contributions to literature, American Academy of Periodontology; the Hirschfeld Award, Northeast Society of Periodontology; Fellowship Award and the Distinguished Service Award, American Academy of Periodontology, Gold Medal, the highest award that the Academy of Periodontology gives to one member per year for contributions to the field of periodontology.

He is a clinical professor in the Division of Periodontics at Columbia University College of Dental Medicine.
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**2:45 p.m.  Hanae Saito, DDS, MS, CCRC**

*Effect of Macropostrophy and Microtopography of the Implant and Abutment on Peri-implant Soft Tissue Stability*

**ABSTRACT**

Immediate tooth replacement therapy has become a mainstream treatment modality for single and multiple tooth implants in the esthetic zone. However, esthetic risks and complications such as loss of labial plate thickness over time and mid-facial soft tissue recession exist in clinical practice. The effect of implant macro design, abutment, and prosthetic materials are crucial to allow re-establishment of the dentogingival complex around dental implants and for the long-term stability of soft and hard tissues. An implant with an inverted body-shift and restorative angle correction macro design based on biologic principles as well as microtopography of the abutment help minimize esthetic risks and complications such as socket perforation, loss of labial plate thickness, and interdental papilla. In addition, surface modifications of the dental implant-abutment restoration appear to show some effectiveness in promoting soft tissue attachment. The effect of implant design and provisional restoration / abutment on the stability of peri-implant soft tissue with the clinical decision-making process based on the biological response of peri-implant soft tissue will be discussed.

**SPEAKER BIOGRAPHY**

Dr. Hanae Saito is a clinical associate professor and director of predoctoral periodontal education and periodontal clerkship at Division of Periodontics at Department of Advanced Sciences & Therapeutics, University of Maryland. She received her Master of Science in Clinical Research and certificate in Periodontics from New York University College of Dentistry. She is a recipient of the 2014 American Academy of Periodontology Foundation Nevins Education and Clinical Research Fellowship award, 2018 Osseointegration Foundation Research Grant, and 2018 Implant Dentistry Research and Education Foundation. Her most recent research topics include effect of provisional restoration and its materials on peri-implant soft tissue attachment and peri-implantitis. Dr. Saito is a diplomate of the American Board of Periodontology and maintains Faculty Practice.
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3:45 p.m. Farhad E. Boltchi, DMD, MS

*Digital Implant Dentistry Strategies to Treat the Hopeless Tooth in the Esthetic Zone*

**ABSTRACT**

The digital revolution in dentistry is progressing rapidly. The translation of digital technologies into the clinical field of implant dentistry has resulted in new treatment modalities at the surgical and restorative level. This course will focus on the application of digital technologies in surgical and restorative implant dentistry, including digital scanners and cone beam CT scanners, and how the merging of CAD/CAM and CBCT data will culminate in a guided implant surgery technique and digital implant restorative techniques that can ultimately lead to an increased predictability and efficiency in dental implant therapy.

**SPEAKER BIOGRAPHY**

Dr. Farhad Boltchi received his dental degree from the Medical University of Hannover in Germany, and a Certificate in Periodontics associated with a Master of Science degree in Oral Biology from Baylor College of Dentistry in Dallas, Texas.

He is a faculty member of SPEAR/CerecDoctors.com, and also maintains a full-time private practice in Periodontics and Dental implants in Dallas-Fort Worth, Texas. He teaches and lectures extensively both nationally and internationally on the topics of advanced Periodontics and Dental Implants with a special emphasis on Esthetic Implant Dentistry, Periodontal Plastic Surgical Procedures, and digital implant dentistry and is also actively involved with clinical research projects in these topics.

Dr. Boltchi has achieved Board Certification status with the American Board of Periodontology and is a fellow of the International Team for Implantology (ITI).