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Spring Meeting - Friday April 6, 2001

Advances in Clinical Periodontics and Implant Therapy:

Enhancing the Outcome of Treatment - Part I

New York Marriott Marquis Hotel
1535 Broadway
New York, NY

The use of biologic factors to enhance the outcome of regenerative periodontal and implant therapy is gaining momentum. As usual NESP is at the forefront of bringing to its members a digest of emerging new modalities of treatment. The Program Chairman, Dr. Gail G. Childers has organized a day full of renowned speakers in this field. The attendants will undoubtedly be immersed in principles of exciting changes in cellular and molecular biology where it applies to clinical practice of periodontics and implant therapy. Registration starts at 8:15 A.M. Dr. Raymond Yukna will be the first speaker at 9 A.M. followed by Dr. Samuel Lynch. Dr. Donald Clem will start the afternoon session at 1:45 P.M. followed by Dr. William Becker. Lunch will be served from 12:15 to 1:45 P.M.

DR. RAYMOND A. YUKNA is Professor and Coordinator of Graduate Periodontics at the Louisiana State University School of Dentistry and has a part-time private practice. He is a diplomate of both the American Board of Periodontology and the American Board of Oral Medicine, and is a member of Omicron Kappa Upsilon. He is a former director of the American Board of Periodontology. A graduate of Tufts University School of Dental Medicine, he received his periodontal training at the National Naval Dental Center, Bethesda, Maryland, and a Master of Science Degree from George Washington University. Prior to accepting his current position, he was in full-time private practice in Denver, Colorado and had a short stint as Director of Graduate Periodontics, University of Pittsburgh. Dr. Yukna is a member of the American Academy of Periodontology, the American Dental Association, the Academy of Osseointegration, and the IADR, and is continuing his research and publications, concentrating in the fields of reconstructive periodontics and dental implants.

Dr. Yukna will present Peptide-Enhanced Bone Replacement Grafts. PepGen P-15, which combines an anorganic bovine bone matrix (ABM) and a synthetic cell binding peptide (P-15), has shown superior clinical results in two separate multicenter intrapatient design studies for the

surgical treatment of adult periodontitis osseous defects. Inpatient comparisons, diminished need for defect retreatment, and 3-year follow-up evaluations further illustrate the strong and consistent clinical benefits of PepGen P-15. Human histologic samples provide proof of the principle of regeneration. Clinical use in sinus grafting, ridge augmentation, and implant therapy suggest benefit in these applications as well. PepGen P-15 provides an advanced, tissue-engineered bone replacement graft material that provides superior results in the treatment of periodontal osseous defects and substantial promise in other applications.

LEARNING OBJECTIVES: To understand the biochemical principles of P-15 in guided bone regeneration and its application in repair of periodontal osseous defects.

DR. SAMUEL E. LYNCH received his D.M.D. from Southern Illinois University School of Dental Medicine in 1985 and Certificate of Specialty in Periodontology from Harvard School of Dental Medicine in 1989. He also received a Doctorate of Medical Sciences (D.M.Sc.) from Harvard Medical School in 1989. Upon completion of training, he served on the faculty at Harvard from 1989 to 1995. In addition, during this period he served as the Executive Director of Research and Development at the Institute of Molecular Biology. In 1995 he was appointed Vice President of Sankyo Pharmaceuticals and Director of the Osteohealth Company (a division of Sankyo). Consistent with his dual expertise in industry and clinical medicine, he also received an appointment as a Clinical Professor at the State University of New York at Stony Brook. In late 1999, he founded and is currently Chairman and Chief Executive Officer of BioMimetic Pharmaceuticals, Inc., a biotechnology company focused in tissue engineering.

Dr. Lynch has served as a scientific reviewer on study sections for the National Institute of Arthritis and Musculoskeletal Research, and National Institute of Dental and Craniofacial Research, both divisions of NIH. He is also on the Editorial Board and is a reviewer for the International Journal of Periodontics and Restorative Dentistry, Journal of Periodontology, Journal of Periodontal Research, Journal of Dental Research, Archives of Oral Biology, and Gut, as well as Wound Repair and Regeneration. He recently published a new textbook entitled Tissue Engineering: Applications in Maxillofacial Surgery and Periodontics. He has also recently contributed a chapter on bone repair to a new orthopedic textbook. Dr. Lynch has maintained a part-time private practice limited to periodontics and implant dentistry since 1989.

Dr. Lynch will present Tissue Engineering: Applications in Periodontics and Maxillofacial Surgery. As clinicians, it is our challenge to translate the fundamental discoveries of science, such as are now rapidly occurring in cellular and molecular biology and biomaterials, into practical advancements in patient care. This presentation will provide an overview of the current science and clinical applications of tissue engineering. It is hoped that clinicians will not only learn more about the scientific breakthroughs that are occurring in this field but also how to apply some of the most recent advances in tissue engineering and regeneration to their practices.

LEARNING OBJECTIVES: To learn the application of new findings in cellular and molecular biology to clinical practice of tissue engineering and periodontal regeneration.

DR. DONALD S. CLEM received his certificate in Periodontics from the University of Texas at San Antonio in 1984. He is a diplomate of the American Board of Periodontology. He is the recipient of numerous awards in his field including recognition for Outstanding Contribution to the Field of Periodontics by the California Society of Periodontists and a citation by the American Academy of Periodontology; last year he was co-recipient of the Clinical Research Award by the American Academy of Periodontology for his publication on implant function in regenerated bone. He is also a fellow of the American College of Dentists and the Pierre Fuchard Academy. His publications include articles on conscious sedation, periodontal regeneration and dental implants.

He is currently in full-time practice in the fields of periodontics and dental implants in Southern California. He also serves as an assistant professor in the Center of Oral Implants at Loma Linda, California. He serves the Academy as a member of the Board of Trustees and is currently Vice President of the American Academy of Periodontology Foundation.

Dr. Clem will discuss Clinical Perspectives of Enamel Matrix Proteins. Regeneration of lost tissues due to disease or trauma has been a driving force in medicine and dentistry for centuries. Periodontology has seen the rise and fall of numerous materials and techniques designed to aid and enhance the opportunities for regeneration around teeth. In order to assess our progress in this quest, exploration of the behavior of vertical defects and the effects of various treatment modalities on attachment gain, probing depth and posttreatment recession is of primary concern to clinician and patient alike. This presentation will review the behavior of vertical interproximal periodontal bony defects in light of past therapies and explore the current status of the role of enamel matrix proteins. The dominant protein in this matrix is amelogenin, which is found in the formation of acellular cementum. We will explore this protein's use in periodontal regeneration from a clinician's perspective. Surgical technique, postoperative care and case studies will be reviewed to formulate clinical opinions on the efficacy of this material, its current limitations, and potential for future development.

LEARNING OBJECTIVES: To evaluate success of various periodontal vertical defect treatment models and assess the use of enamel matrix proteins in such therapies.

DR. WILLIAM BECKER graduated from Marquette Dental School in 1961 with a D.D.S. degree and completed his specialty training in Periodontology and a M.S.D. at Baylor College of Dentistry in 1966. In November of 1996 he received an Honorary Doctorate in Odontology from Gothenburg University in Gothenburg, Sweden. He is a diplomate of the American Board of Periodontology and served as a Board Director. He is Past President of the Southern Arizona Dental Society and the American Academy of Periodontology. He is a fellow of the American College of Dentists and a member of the National Academy of Practitioners.

Dr. Becker is a clinical professor of Periodontology at the University of Southern California School of Dentistry in Los Angeles, California. He was the Schluger Professor at the University of Washington in Seattle during 1993-95 and is now an affiliate professor at the University of Washington. Dr. Becker has authored over 60 studies relating to periodontal therapy or dental implants and has lectured throughout the United States, Europe, the Far East and the Middle

East. He is co-editor of a new implant journal, *Clinical Implant Dentistry and Related Research*, and is in full-time private practice in Tucson, Arizona.

Dr. Becker will discuss Changes in Implant Surgery. The presentation will focus on three changes that have occurred in implant surgery, plus the rationale and long-term predictability of one-stage implant surgery. This topic includes an update on placement of implants at the time of tooth extraction and the long-term results of this treatment alternative. Dr. Becker will present the results of a study that evaluated use of barrier membranes and small autologous bone chips for augmentation of defects adjacent to immediately placed implants. The idea of Five Day Teeth for restoration of fully edentulous mandibles will be presented. This method is based on Dr. Branemarks Novum concept, which loads implants the same day that implants are placed.

LEARNING OBJECTIVES: To evaluate the new trends in implant dentistry that reduce total time and minimize surgical steps.

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