

Academy News



**Academy of
Osseointegration**

Advancing the Vision of Implant Dentistry

www.osseo.org

Volume 16, Number 2 ■ 2005

A quarterly publication of the Academy of Osseointegration

In This Issue

President's Message: Setting the year's priorities . . .	2
Dr. Rounsaville leads 2005-06 officers	3
Profile of French implant practice	5
Clinical technique feature: Immediate implant placement	6
Editor's E-Mailbag: readers respond	7
Near record attendance in Orlando/Annual Meeting photo highlights	8-9
Foundation Grant helps 9/11 firefighter	11
Dr. Triplett heads Foundation slate	11

Dental implants – simply antiques or state-of-the-art?

By **Dr. William V. Giannobile**

Over the last decade, we have seen many presentations and much literature on tissue engineering, gene therapy and the use of bone morphogenetic proteins (BMPs) to optimize bone reconstruction. Yet many Academy News readers may wonder when such technology will become a commercially commonplace reality.



Dr. William V. Giannobile

At a recent bone conference in Switzerland, I listened as the great and good told us how far we have come in being able to regenerate lost/damaged periodontal tissues. It is now possible to consider saving what would have previously been deemed hopeless teeth, the speakers at this tissue engineering session said. Their comments came against a conference background where clinicians were promoting and favoring early extraction to reduce the impact of disease, save bone, and demonstrate preferential bias toward our implants. I couldn't help wondering: are we genuinely on the cusp of a major paradigm shift back to saving teeth and toward an ultimate goal that could consign our metal screws to the annals of dental history?

With these thoughts in mind, I approached a leading expert in the tissue engineering field, AO member Dr. William V. Giannobile, Ann

Arbor, MI. He is the Najjar Professor of Dentistry and Director at the Michigan Center for Oral Health Research; also, Associate Professor of Biomedical Engineering, University of Michigan Clinical Research Center. I asked Dr. Giannobile to consider these questions and share his insight into the current position, how he sees the future for tissue engineering and assesses its impact on implant dentistry.
– **Dr. Michael R. Norton, Newsletter Editor**

The dental community has been quite patient with what many consider to be slow progress with respect to tissue engineering technologies. One factor affecting clinical availability is the U.S. Food and Drug Administration's drug and device regulatory process, which must assess safety and effectiveness of new technologies. For example, BMPs were cloned nearly 20 years ago, and despite the first report in implantology dating back to 1992, we still do not have them available in dentistry. However, I am optimistic that over the next year or so we will see the introduction of growth factors to the field of alveolar bone reconstruction, including periodontal regeneration and implant site development.

We certainly have seen some successes in enamel matrix proteins and biomimetic peptides (such as cell binding peptides

...continued on page 14

Academy News

Academy of Osseointegration
85 W. Algonquin Road, Suite 550
Arlington Heights, IL 60005
847/439-1919

Editor
Michael R. Norton, BDS

Editorial Consultants
Nicholas Caplanis, DMD, MS
John Schmitz, DDS, MS, PhD
Dennis Flanagan, DDS

© The Academy of Osseointegration. All rights reserved.

President's Message

Year's priorities: planning, predoctoral training, general recruitment, leadership continuity

By Dr. Richard K. Rounsavelle

Strategic planning, predoctoral implant training, recruitment of general dentists and continuity of leadership are among the Academy's top priorities as we start a new year.

June strategic planning conference

The Board will hold an important strategic planning conference in June. We have achieved most of the objectives under the goals established at our last major planning session in 2003. In June, we will establish new goals for the next three years.

Among the 2003 goals accomplished are:

- Transfer scientific and technical knowledge. Objectives completed include reviewing the Annual Meeting program and structure and providing online information and database resources.
- Develop and improve clinical skills. Next year's Workshop on the State of the Science of Implant Dentistry (SSID) is one objective under this goal. Another objective just accomplished is establishing a student award for North American programs that have adopted a core curriculum on dental implants.
- Assure the Academy is structured efficiently and effectively to achieve its strategic outcomes. The creation of our Advisory Committee on Committees responds to this goal.
- Assure that the organization's values and histories are reflected in Members' communication, volunteerism, recognition procedures, customer service and committee/staff recognition. Objectives accomplished include re-

purposing Academy News as solely an internal communications vehicle, Website enhancements, and exploring publication of an electronic newsletter.



Dr. Richard K. Rounsavelle accepts the President's gavel from Dr. Marjorie Jeffcoat.

- Assure the Academy has sufficient resources to accomplish its strategic plan.

We have a problem many organizations would like to have. Due to the unbelievable success of our last four or five annual meetings (and some good management, too), our organization has grown very rapidly. I remember when we were struggling

to get a six-month budget in place, and less than \$500,000 separated us from deficit spending. Last year, the excess of revenues over expenses exceeded \$1 million. We now have a net reserve of \$3.3 million. We are in a position to support much more in research grants and other member benefits.

It is a time of great opportunity for the Academy. The purpose of June's strategic planning session will be to review, refine and measure progress on the goals and determine how best to utilize this record financial growth for the benefit of our more than 5,100 members.

Predoctoral implant training

A major thrust, I am sure, will be to act as a resource for establishment of curricula for implant dentistry at the undergraduate level. Predoctoral implant training in all dental schools remains at the top of our agenda. We believe AO should be the organization establishing criteria for certification for implant dentistry after graduation, before students begin post-graduate specialty study.

Another important program in undergraduate implant training will be our

new award program. The Academy will offer the top implant dentistry student at every dental school an award certificate, \$500 award, one-year free AO membership including a subscription to the *International Journal of Oral & Maxillofacial Implants*, and a complimentary registration to attend the Academy's next Annual Meeting. Each school will receive a handsome perpetual plaque bearing the names of each year's outstanding implant students. We see this as one important way to enhance the appeal of taking undergraduate training in implant dentistry.

In addition, we are well aware that The Commission of Dental Accreditation of the American Dental Association is considering requests for advanced general dentistry licensure from non approved specialties. The Academy needs to position itself by preparing similar guidelines for implant dentistry. We have appointed a Board committee to write or help establish an accreditation process for a dental implant program as an area of advanced training in general dentistry.

Recruitment of general dentists

It is time for us to place a renewed emphasis on recruitment of general dentists into the Academy's membership. New Chair Dr. **Ajay Setya** and the Membership Committee will be developing an outreach program to recruit general dentist attendees to our 2006 Annual Meeting in Seattle. The Board has also charged the Membership Committee with developing a strategy to recruit and retain general practitioners.

Leadership continuity, member involvement

As we strive to achieve these priority goals, President-elect Dr. **Ed Sevetz** and I plan to work very closely together over the next two years. We will be concentrating on two years of achievement. We will integrate this new two-

...continued on page 14

Dr. Richard Rounsavelle leads 2005-06 officers,

Dr. **Richard K. Rounsavelle**, Torrance, CA, was installed as AO President during the Academy's Annual Business Meeting in Orlando, FL. He succeeds 2004-05 AO President Dr. **Marjorie K. Jeffcoat**, Philadelphia, PA. Dr. Rounsavelle became the second general dentist to head the Academy, following 2002-2003 President Dr. **Dayn C. Boitet**, Orange Park, FL.

Newly-elected members of the AO Board of Directors along with Dr. Rounsavelle are:

- Dr. **Edward B. Sevetz, Jr.**, Orange Park, FL, President-elect;
- Dr. **Steven E. Eckert**, Rochester, MN, Vice President;
- Dr. **Vincent J. Iacono**, New York, NY, Secretary;
- Dr. **Russell D. Nishimura**, Agoura Hills, CA, Board Member.

Dr. Rounsavelle: President

Dr. Rounsavelle runs a private practice in Torrance, CA, having graduated from the University of Southern California School of Dentistry in 1969. He is a former clinical instructor in restorative dentistry at USC.

An AO Fellow and Academy member since 1988, Dr. Rounsavelle chairs the AO Council on Infrastructure and is Board Liaison to the Allied Profes-

sional Staff Education Subcommittee. He serves on the Finance and Audit Committee, and sits on the 2006 World Workshop Ad-Hoc Committee. He also served on the Committee to Oversee Specialty Status and the Annual Meeting Committee.



Dr. Edward B. Sevetz, Jr.



Dr. Russell D. Nishimura



Dr. Vincent J. Iacono



Dr. Steven E. Eckert

Dr. Sevetz: President-elect

Dr. Sevetz is a Clinical Associate Professor at the University of Florida School of Medicine, Department of Surgery, Section of Oral and Maxillofacial Surgery, Jacksonville, FL. He also runs a private practice in Orange Park.

He is a member of the Academy's Finance and Audit Committee and Board Liaison to the Membership and Awards Committee. An AO Fellow, Dr. Sevetz previously served on the Board as director and treasurer. He is the Chair of the new Advisory Committee on Committees.

Dr. Eckert: Vice President

Dr. Eckert is Associate Professor of Dentistry at the Mayo Clinic College of Medicine, Rochester, MN, where he is also Consultant, Division of Prosthodontics, Department of Dental Specialties.

An AO Fellow and Active Member since 1992, Dr. Eckert has served on the Board of Directors since 2001.

Dr. Iacono: Secretary

Dr. Iacono is Professor and Chairman, Department of Periodontics, School of Dental Medicine, State University of New York at Stony Brook. He is also Director of the school's Advanced Education Program in Periodontics. He is currently President of the American Academy of Periodontology (AAP).

Dr. Iacono chairs the Academy's 2006 Workshop on the State of the Science of Implant Dentistry, and has served on the Board of Directors since 2000.

...continued on page 14

Plan to focus growth "at the grass roots"

As new Chair of the Academy's Membership Committee, Dr. **Ajay B. Setya**, Mission Viejo, CA, says he'll put the emphasis on "growing the organization at the grass roots through the dental students" and building membership among general dentists.

Dr. Setya, a periodontist, would also like to expand the Academy's Fellowship program, "so that more people can climb the ladder," while maintaining standards that make Fellowship a goal of excellence for which implant dentists strive and are proud to achieve.

The Board approved the applications of four new fellows at the Orlando Annual Meeting, bringing to 77 the total number of Academy Fellows. New fellows are **Kenneth F. Hinds**,

DDS, Laguna Niguel, CA; **Michael R. Norton**, BDS, London, England, UK; **Avishai Sadan**, DMD, Cleveland, OH; and **Robert L. Schneider**, DDS, MS, Iowa City, IA. Dr. Hinds is a general practitioner, Dr. Norton an oral & maxillofacial surgeon, and Drs. Sadan and Schneider prosthodontists.

Under current guidelines, Fellows must have been active Academy members for five years and have attended at least five annual meetings. The Academy uses a point system to qualify Fellowship applications, covering a member's qualifications (presentations, publications) and contributions (Academy service). To review the guidelines in detail or obtain an application for Fellowship, go to the AO Website (www.osseo.org) and click on "Membership."

Profile of a French implant practice: Centre d'Implantologie Suédoise, Paris, France

In this practice profile, we are pleased to feature an overseas member practice, based in the beautiful city of Paris, France.



Dr. Guy J. F. Michaux

As a committed clinician in surgical and prosthetic implant treatments, Dr. **Guy J. F. Michaux** has been an active

member of the AO since 1993.

At the *Centre d'Implantologie Suédoise* (the Swedish Implant Center), Dr. Michaux works with his fellow team members in the idyllically located Champs Elysees in the heart of the city of lovers.

The implant center is a dedicated practice offering all aspects of implant dentistry. It delivers up-to-date treatments taking advantage of all the latest technology. The practice offers a surgery service for referring general practitioners and provides full treatment programs for patients coming to the center without direct referral. All patients return to their own dentists for their routine dental care.

As a first point of contact, patients meet and liaise with the senior secretary and practice coordinator, **Marianne Sluijs**, who speaks four languages – Dutch, French, German and English. Her language proficiency helps to create a European feel in the center, attracting patients from a wider geographic area.



The practice is located on Paris' prestigious Champs Elysees.

Marianne is also responsible for establishing and maintaining practice protocols. Marianne's responsibilities include practice media and promotion, working with a team of designers on practice brochures and the practice Website www.drnichaux.com.

...continued on page 13

Immediate implant placement and provisionalization in the anterior maxilla

By Pascal Valentini, DDS, University of Corsica (France)

The desire to immediately temporize implants becomes almost irresistible when it comes to the loss of a front tooth, especially when there is a good gingival architecture.



Dr. Pascal Valentini

In recent years, a number of studies (see References at end) have indicated that immediate temporization of unsplinted implants is realistic, with success rates quoted ranging from 85–100%.



Figure 1.

For the 78-year-old patient presented, oral hygiene was very poor, and tooth #9 (FDI #21) must be removed because of root caries and a failing post crown (Fig 1). There is no

overt clinical or radiographic evidence of infection, so immediate implant placement can be performed.

After a minimal sulcular incision on the adjacent teeth including both papillae, the post/crown with root

is extracted meticulously using a periosteal elevator to prevent damage to the buccal plate.

Some studies have stipulated strict guidelines for implant placement, such as the need for a minimum amount of apical



Figure 2 a(top) and b (bottom)

bone, a measurable degree of primary stability and the absence of apical infection – all of which are essential to know for the clinician wishing to embark on this technique.

However, one area of concern is often the fabrication of the temporary crown itself. How should the information on implant position and soft tissue architecture be transferred to the laboratory, and is it practical to get a temporary crown inserted on the same day?



Figure 3 a and b.

One alternative is to fabricate the temporary crown chairside using prefabricated components and a shell-former crown technique. In this clinical technique feature

article, I present my own technique for temporization of an immediate single-tooth implant along with a review of the guidelines that help to govern immediate implant placement.

The implant osteotomy is prepared, moving the axis palatally to achieve better primary stabilization in the basal palatal bone, beyond the apex. In this case, there is plenty of bone apical to the socket (Fig 1) such that a 5.0 x17mm implant (Astra Tech AB, Sweden) is carefully inserted, ensuring a cortical anchorage apically for improved primary stabilization. The author considers the ideal insertion torque for this technique to be 40 Ncm.

The circumferential defect around the implant is filled (Fig 2a) with a xenograft (Bio-Oss®, Geistlich, Switzerland) to prevent buccal plate resorption. The material must be condensed against the implant surface and into surrounding bone defect. In the author's experience, only cancellous bovine bone with the 0.25mm-1mm particle size has been used. A prefabricated abutment (Abutment ST®, Astra Tech AB, Sweden) is then installed and tightened to within the limits of the implant stability to prevent any implant rotational movement (Fig 2b). Sutures are placed if indicated.



Figure 4 a and b.

In the system being presented, a friction-fit plastic coping is reduced and shaped (Fig 3a) and placed over the abutment. A commercially available shell former is then relined over the plastic cap (Fig 3b). The margins of the provisional crown are checked and corrected using an abutment analog to ensure a good marginal fit.

...continued on page 7

Technology can give clinicians more control

Editor Dr. **Michael R. Norton** invites readers to comment or express a point of view at the end of his editorials, which are published on page 14 of each edition of *Academy News*. The last editorial prompted Dr. **Scott D. Ganz**, Fort Lee, NJ, to speak out on proper use of CT imaging technology:

I read with great interest the Editor's Editorial entitled, "If the surgeon becomes a robot, who's responsible?"

You state, "In many instances, technology has become so powerful that we would do well to adopt it, and we ignore it at our peril." You then give the pertinent example of how interactive CT technology allows us to view impressive 3-D images, place implants, and create accurate templates to precisely guide the surgical placement of the implants. CT imaging has evolved significantly as you state. Each new step of the evolutionary process empowered the clinician with more

accurate diagnostic and treatment planning tools, as CT moved from film to the interactive digital world of our desktop and notebook computers.

Today, there is a new excitement with "Image Guided Navigational Systems," as you describe in your editorial, and the advent of smaller cone beam CT scan machines that can be placed in a clinician's office. You state, "If the surgeon becomes a robot, who's responsible?" This is an excellent question when related to your suggestion that manufacturers of these imaging, software, and template devices promote it for "aiding flap-free surgery, which is, after all, tantamount to being partially blind, surgically speaking." You also state, "Fast and accurate as they are, computers still don't match the computational power or reliability of the human brain." You conclude that it would be a "giant leap for mankind if surgeons were to choose unilaterally to decommission their brains in favor of computer-guided surgery."

I agree that we must not lose control. However, we must put technology into perspective and understand that the underlying goal of implant dentistry is the tooth, and not the implant. The restorative needs of the patients should be the ultimate guide, and tooth position overrides the available bone. "It is not the scan, but the plan" that in the long run is the most important part of the equation. The computer does NOT make the plan. Humans do. I disagree that we have lost control with advanced technology.

Your editorial highlighted certain aspects of technology that may be misunderstood and amplifies the need for further education to teach clinicians about the advantages of this important imaging methodology.

Interactive CT imaging, with accuracy of tooth borne, soft tissue borne, and bone borne templates gives clinicians exponentially more control than with any other conventional method.

Clinical Technique Feature . . . continued from page 6

The provisional crown is then inserted (Fig 4a) without any cement for one week. Retention is achieved only by the friction fit on the abutment. The absence of contacts in centric and excursive movements is confirmed since the temporary crown is not designed to be immediately loaded. The patient is instructed not to bite on the provisional crown for 10 weeks.



Figure 5 a and b.

One week after surgery, the patient returns for suture removal, and, if necessary, the proximal contact point is reconstructed with composites to encourage papilla fill (Fig 4b). At this time, the absence of occlusal contacts has to be checked weekly. After a healing period of 10

weeks, the impression of the implant is taken at fixture level and, one week later, the Zirconia ceramic abutment (Fig 5a) is



Figure 6 a and b.

secured to the implant via the abutment screw, and the definitive crown can be cemented in normal occlusion (Fig 5b). It is also possible to use the initial titanium abutment as a permanent abutment, taking an abutment level impression of it, assuming there is no greying of the soft tissues and the margin is ideally related to the mucosal line.

One year and two years later (Figs 6a and 6b), the esthetic result and the bone level are perfectly stable.

References

1. Andersen E, Haanaes HR, Knutsen BM. Immediate loading of single-tooth ITI implants in the anterior maxilla: a prospective 5-year pilot study. *Clin Oral Impl Res* 2002; 13:281-287.
2. Chaushu G, Chaushu S, Tzohar A, Dayan D. Immediate loading of single-tooth implants: Immediate versus non-immediate implantation. A clinical report. *Int J Oral Maxillofac Implants* 2001; 16:267-272.
3. Cooper L, Felton DA, Kugelberg CF, Ellner S, Chaffee N, Molina A, Moriarty JD, Paquette D, Palmqvist U. A multicenter 12-month evaluation of single-tooth implants restored 3 weeks after 1-stage surgery. *Int J Oral & Maxillofac Implants* 2001; 16:182-192.
4. Ericsson I, Nilson H, Lindh T, Nilner K, Randow K. Immediate functional loading of Brånemark single tooth implants. An 18 months' clinical pilot follow-up study. *Clin Oral Impl Res* 2000; 11:26-33.
5. Kan J et al Immediate placement and provisionalization of maxillary anterior single implants: 1-year prospective study *Int J Oral & Maxillofac Implants*, 2003; 18: 31-39
6. Norton M R. A 1- to 2-year follow-up of immediately restored maxillary TiOblast single tooth implants: Technique and results. *Int J Oral & Maxillofac Implants*, 2004; 19: 274 - 281.

Award winners honored



Accepting awards at the Annual Meeting are (from left): **Dr. Frank Butz**, UCLA School of Dentistry, Los Angeles, Osseointegration Foundation Research Grant; **Dr. John P. Schmitz**, San Antonio, TX, 2004 AO/3i Research Grant; and **Dr. Marjorie K. Jeffcoat**, Philadelphia, PA, lead author of the best article published in *International Journal of Oral & Maxillofacial Implants (IJOMI)* for 2003.

Exciting speaker presentations



Popular feature speakers during the opening symposium, "Global Approaches to Form Meeting Function," included (from left): **Dr. Cobi Landsberg** (Team Israel), **Markus Huerzler** (Team Germany) and **Ueli Grunder** (Team Switzerland).



Student member **Dr. Zinaida Kaleinkova**, Columbus, OH, presented a poster prepared by a team from Ohio State University.



Outgoing President **Dr. Marjorie Jeffcoat** celebrates with her husband, Robert.



Past President **Dr. Dayn C. Boitet** and his daughter, **Natalie**, enjoy a Welcome Reception moment with Past President **Dr. James H. Doundoulakis**.



Top quality presentations kept the meeting rooms packed.

Near record attendance Orlando Meeting

By **Kevin P. Smith, MA, MBA, Executive Director**

The Academy's Corporate Forum – featuring 36, 45-minute presentations – kicked off the 21st Annual Meeting Thursday morning. With the theme "Implant Esthetics: Form Meeting Function," the Annual Meeting was held March 10-12 at the refurbished Walt Disney World Dolphin Hotel, Orlando, FL.



Dr. Michael S. Block
Annual Meeting Chair

Four new Corporate Forum participants presented this year: **Camlog Biotechnologies, Dentatus USA LTD, Thommen Medical USA** and the **Institute for Dental Implant Awareness (IDIA)**. Coupled with nine returning companies, this year's roster of 13 Corporate Forum participants was the largest ever. AO's regular and returning participants – **3i, Zimmer Dental, Nobel Biocare, Straumann** and **Astra Tech** – all staged multiple presentations that filled the entire morning's schedule.

Orlando attendance was second only to last year's San Francisco Meeting among solely-sponsored AO Annual Meetings. Over 1,511 professionals, 927 registered exhibitors, 231 spouses, guests and non-dentists contributed to the second largest attendance of 2,669.

Just before the Opening Symposium Thursday afternoon, President **Marjorie Jeffcoat** invited past presidents to receive recognition: 14 of the Academy's 18 past presidents came to the stage to accept Past President pins.

Theme for the Opening Symposium was "Global Approaches to Form Meeting Function." Teams from Switzerland, Israel, Italy and the U.S. made presentations to a theater filled with attendees.

dance makes one of AO's best!

tor

The meeting concluded Saturday afternoon with Drs. **Vincent Kokich**, **David Mathews** and **Frank M. Spear** speaking on an interdisciplinary approach to anterior esthetics. Their spectacular presentation brought people in off the golf courses, pools and tennis courts to fill the Northern Hemisphere Ballroom.



*Dr. Kenneth F. Hinds
Annual Meeting Program Chair*

Those who could not attend the meeting or see all of the Oral Research and Clinical Innovation presentations or observe all of the posters can find abstracts on the Academy's Website, www.osseo.org.

Back by popular demand, with special thanks for a generous grant from 3i, the Academy is providing 22 of the most popular lectures on CD-ROM again this year. A CD-ROM order form is included with this newsletter and is also available at www.osseo.org.

Drs. **Kenneth Hinds**, Laguna Niguel, CA, Annual Meeting Chair, and **Avishai Sadan**, New Orleans, LA, Program Chair, are already nearing completion of planning for next year's Annual Meeting to be held March 16-18, 2006, at the Washington State Convention Center, Seattle, WA. More information will be forthcoming on the Academy's Website and in upcoming issues of *Academy News*.



Fireworks lighted the sky to close a successful Annual Meeting.



A well-traveled exhibit area featured compelling live demonstrations.



Incoming President Dr. Richard K. Rounsavelle addresses the Annual Meeting.



Dr. David A. Garber, Atlanta, entertains his guests.

Astra Tech President & CEO Scott Root (left) shares Annual Meeting fellowship with (left to right) Drs. Clarence Lindquist, James Doundoulakis and Alan Pollack.



AO inaugurated a new tradition of presenting a commemorative clock to the Immediate Past President with Dr. Marjorie K. Jeffcoat's presentation to Dr. Clarence C. Lindquist.



At the President's private reception (left to right): Drs. Michael Norton and Robert Eskow and Valerie Sternberg-Smith, RDH.

Thank you for your support

The Academy of Osseointegration thanks the following companies for their generous support of the Academy's 21st Annual meeting:

- 3i
- Astra Tech Inc.
- Bicon Dental Implants
- DENTSPLY Friadent Ceramed
- Lifecore Biomedical
- Nobel Biocare
- Osteohealth Company
- The Straumann Company
- Zimmer Dental

Foundation Grant helps 9/11 firefighter injured in attacks

By **Dr. James H. Doundoulakis**

After the September 11 terrorist attacks, Dr. James H. Doundoulakis, New York, NY, spent 10 weeks identifying the victims as a member of a forensic dental team. During these difficult days, he was contacted by Al Kent, a volunteer firefighter who had been pulled from the debris of the World Trade Center. In this article, Dr. Doundoulakis tells the story of Mr. Kent's rehabilitation through a grant funded by the Osseointegration Foundation.

When asked to write a short piece about 9/11 detailing the completion of Al Kent's implant rehabilitation funded by the Osseointegration Foundation, distinct images of that fateful day in New York City crept into my mind. Without exaggeration, September 11, 2001 changed the lives of every New Yorker, every American and every person on earth.

Forensic teams in New York included a large group of forensic dentists who were vital in the recovery and identification process. The Disaster Mortuary Operational Response Team (DMORT) enlisted the skills of trained dentists and other health professionals from across the country.



Pre-treatment facial appearance

DMORT was supported locally by the dental forensic team of the Medical Examiner's Office of New York. With over 100 volunteers, including myself and AO member Dr. **Jerry L. Halpern**, this group spent thousands of man-hours at both sites. Our efforts yielded hundreds of victim identifications.

Several weeks into this effort, I received an e-mail from a volunteer firefighter caught in the inferno near Tower Two. He wrote:

"An appeal for a grant to help me with dental work. With this help, I will be able to restart my business and my life in a timely fashion. The events of 9/11

caused me much physical pain and financial ruin. I have been unable to work and, as such, have depleted my finances, including retirement monies and funds that I set aside to correct my dental situation."

With that plea, I enlisted the expert and brilliant surgical skills of Drs. Halpern and **Steven J. Tunick**, and applied for an Osseointegration Foundation Grant.

Mr. Kent presented with multiple missing teeth and moderate to severe ridge resorption in the upper and lower jaws. After many months of planning and treatment, this patient would receive 13 implants, followed by the delivery of an implant-supported bar-retained overdenture in the upper arch and an implant supported fixed-hybrid prosthesis in the lower arch.

A removable prosthesis with a flange was indicated in the maxilla for adequate lip and facial support. Also, due to a severe gag reflex, the palatal portion was removed.

Because of Mr. Kent's inability to wear conventional removable prostheses, he could not wear transitional dentures while treatment progressed. This fact made delivery of the final implant-supported prostheses on December 9, 2004, even more momentous for him and more rewarding for me.



Final prostheses

fantastic. I really can't believe it! From the bottom of my heart, THANK YOU, THANK YOU! I am a new man! Watch out New York and the world! My confidence will return and a great new "confident" smile will change my life!"

The final results speak for themselves: restored occlusal dimension, function,

Dr. Gilbert Triplett elected Foundation President

Dr. **Gilbert R. Triplett**, Dallas, TX, has been elected President of the Osseointegration Foundation to head a new slate of officers for 2005/06.



Dr. Gilbert R. Triplett

"We are scheduling a strategic planning meeting where we will outline where we are going with the Foundation," Dr. Triplett said.

Other Foundation officers elected by the Academy's Board of Directors during its Orlando meeting are:

- Vice President: **Dr. Ole T. Jensen**, Denver, CO;
- Secretary/Treasurer: **Dr. Joseph E. Gian-Grasso**, Philadelphia, PA;
- Past President: **Dr. Stephen M. Parel**, Dallas, TX.

Officers' terms are one year, except the Secretary/Treasurer, who serves a three-year term.

Elected to staggered three-year terms as OF Directors are Drs. **Dayn C. Boitet**, Orange Park, FL; **Marjorie K. Jeffcoat**, Philadelphia, PA (as AO Past President); **Fraya I. Karsh**, New York, NY; and **Robert C. Rawdin**, New York, NY.

appearance, confidence and self esteem. Most importantly, Mr. Kent is an example of human resilience and spirit.

On a personal note, I believe that helping to identify the victims of 9/11 honored their memory. Being able to rehabilitate one who survived the carnage helped restore New York's broken spirit and dignity. My sincere thanks to the Osseointegration Foundation.

[Implant components were supplied by 3i. Laboratory work fabricated by Aim Laboratory, Brooklyn, NY.]

Profile of a French implant practice...continued from page 5

Within the practice, Dr. Michaux can accommodate the disabled with direct access to low mobility patients. They ergonomically design the clinic for ease of movement. Dr. Michaux is assisted by his Swedish nurse, **Anna Söderback**, who also speaks four different languages and is responsible for the special sterilization procedures, which were designed in-house.

With cross infection at the forefront of concern, the center team has developed



Technician Laure Dora

its own unique sterilization tracking method. It allows the center to ensure a high degree of cross infection control for

each patient. Every instrument or tooling pouch is marked with bar-codes and scanned twice, so the center can trace with complete efficiency the autoclave cycles, the kind of instrumentation used and on what date, on a named patient basis, according to an established protocol.

The whole practice is run electronically and allows access, in just one mouse click, to each patient's computerized file. Along with the sterilization track record, it also displays every treatment, e-mail correspondence, digital photos, digital radiographs and CT-scan documents, thereby making the load of daily paperwork lighter for all.



The clinic is designed to accommodate the handicapped.

To provide the best that modern treatment has to offer, the center also incorporates an in-house laboratory with CAD-CAM technology, including a Procera® scanner.

Technician Laure Dora, who qualified in France in 1975, has worked at the center since 1982. Laure trained in both the U.S.

and Sweden, where she learned the art of restoring implants and combined it with her knowledge of esthetics. This gives the center a significant benefit and further improves the quality of its ceramic restorations.

Although there are no specialists in France except orthodontics, the center prides itself on providing exclusive implant therapy based upon the long-term experiences of the whole team, who have dedicated themselves to the execution of high-quality implant-driven dentistry.

Dental Implants – simply antiques or state of the art ...continued from page 1

coated on bone mineral). The BMPs have received approval in the orthopedic area for tibial fracture repair and for spinal fusion. The dental marketplace has been viewed as small compared with orthopedics. Thus, investment seems slower in dentistry. This will, hopefully, change, given that dentistry far exceeds all fields of medicine in numbers of reconstructive procedures.

The goal of many of these products is, indeed, to save teeth and reduce the need for tooth extraction. However, the field is many years away from entering a paradigm shift and having a major impact on preventing tooth loss. Most of the trials that have tested novel tissue engineering constructs to treat periodontal defects have not evaluated the potential of the materials to regenerate bone around “hopeless teeth.” Thus, the trend in the future will be to perform more regenerative procedures to retain teeth for longer periods. Novel technologies being explored to treat hopeless teeth include gene therapy, stem cell transplantation and cell-interactive scaffolding materials.

As we have seen at many meetings, a dilemma remains with respect to aggressive extraction of teeth for periodontal reasons alone. In many clinical situations, treatment planning decisions require evaluation of prosthetic and functional factors affecting tooth retention versus the use of implants that provide greater long-term predictability. We are seeing a trend toward extracting teeth earlier to preserve bone and allow more strategic and ideal placement of implants, instead of keeping teeth that are compromised due to previous decay, extensive endodontic therapy, restorative work, etc.

When these new regenerative procedures demonstrate predictability and an improved ability to regenerate significant bone volume, both clinicians and patients will likely move in this direction. I don't see this as a backlash against current approaches, since patients have demanded that an effort be made to save their teeth for years. Nonetheless, they eventually understand the clinician's

advice regarding the unpredictability of periodontal regeneration – especially in situations of esthetic compromise, poor crown-root ratio, inadequate available soft tissue, or poor defect morphology. These problems often abrogate the consideration of periodontal regeneration.

The goal, of course, is complete tooth tissue engineering. I truly believe we will eventually be performing such procedures, and tooth tissue engineering could some day replace dental implants. Advances in the development of customized polymeric material designs and interactive polymers containing growth factors and other signaling molecules or stem cells may promote tooth tissue engineering and allow for replacements.

Several investigative groups have done significant research in complete tooth engineering using polymer scaffolds designed to replicate the tooth shape. The major limitations currently in tooth engineering are the diffusion of nutrients and molecules into large tooth-shaped scaffolds, allowing for the formation of teeth of the correct size (currently very small) and without complete root formation (mainly crowns are formed).

Consequently, I believe this technology is at least 10-15 years away from being a viable option, although ongoing development is under way at a biotechnology

company in Seattle with a view to eventual human use. The first challenge is to develop the “proof-of-concept.” The next challenge will be to form these teeth with predictability and, ultimately, gain acceptance of the technology in the clinical arena. Clinical acceptance will undoubtedly be the greatest hurdle to overcome.

Metallic dental implants are not antiquated at this time. Inevitably, patients and clinicians will demand replaceable body parts that are identical or very similar to the real thing (i.e., tissue engineered and maybe “off-the-shelf” replacements). I strongly believe this will be the future. Implantologists may evolve into transplant surgeons delivering tooth replacements or doing more reconstructive therapy to bring back lost tissues.

The fields of tissue engineering and regenerative medicine are in a “golden era” – a major developmental period. However, we are still likely to see many failures of technologies and approaches that are “over-hyped” and may lead to disappointment. This early stage of investigation will hopefully build an exciting foundation for dentistry, which stands to benefit more from advances in tissue engineering than any other medical discipline.

President's Message

...continued from page 2

year teamwork approach into the Academy's leadership process, so that the administration of one president leads right into the next president's term.

One of our first joint actions will be to review carefully member response to the initiative of our new Advisory Committee on Committees and evaluate the applications of members who want to become more involved. We are keenly aware of the fact that member involvement is the key to success of a voluntary organization like AO.

AO elects officers for 2005-06...continued from page 3

Dr. Nishimura: Board Member

Dr. Nishimura is Professor, Division of Restorative Dentistry at the UCLA School of Dentistry, and Co-Director of the Esthetics, Implants and Restorative Dentistry Research and Education Laboratory.

He chaired the AO Membership and Awards Committee, serves on the Program Committee for the 2006 Annual Meeting, and is a participant in the World Workshop on the State of the Science on Implant Dentistry.