

# IMPLANT TRIBUNE

— The World's Dental Implant Newspaper • U.S. Edition —

FEBRUARY 2015 — Vol. 10, No. 2

www.dental-tribune.com

## AO puts 'Focus on South Korea' at its annual meeting



The Academy of Osseointegration is a recognized international association for professionals interested in implant dentistry, and attendees at its annual meeting represent countries from across the globe. Photo/Provided by the AO

### *Symposium will feature AO members from across the globe*

By Academy of Osseointegration Staff

**S**outh Korea has the world's highest per capita use of dental implants, and the Asia Pacific area is projected to witness the industry's fastest growth during the next five years. Last year, the Ministry of Health and Welfare announced dental implants for patients ages 75 and older would be covered by South Korea's national health insurance.

"South Korea is not only a highly developed implant market but also a leader in clinical research in the dental implant industry," says Dr. David M. Kim, explaining why the Academy of Osseointegration (AO) has dedicated a symposium to South Korea at its 30th annual meeting,

to be held in San Francisco in March. "It's both important and refreshing to see and hear how dentistry is practiced in different countries."

With 6,000 members from 70 countries, AO is truly an organization with global influence and reach. With that in mind, AO began a new tradition last year by hosting a symposium dedicated to a single country. AO members Drs. David M. Kim and Brian M. Chang will moderate this year's Focus on South Korea Symposium.

"This symposium is an excellent opportunity for AO members from across the globe to hear and learn from top-notch speakers — all of whom have a university affiliation, conduct research and see patients on a daily basis," Kim said. "These presentations will address clinically relevant information that can be applied in the clinic the following Monday."

All three organizations specializing in implant dentistry in South Korea — the Korean Academy of Oral & Maxillofacial Implantology (KAOMI), the Korean Acad-

emy of Implant Dentistry (KAID), and the Korean Academy of Osseointegration (KAO) — have provided speakers for this symposium.

A group of renowned experts from South Korea will address this symposium, in English, and a wide range of clinically relevant topics.

"This symposium will not just be one-way. We're going to encourage a lively discussion and interaction both during and after the programming," Kim said.

The Focus on South Korea Symposium will be held from 1:30 to 5 p.m. on Friday, March 13, at the Moscone Convention Center in San Francisco during the AO Annual Meeting.

For more information and to register, visit [www.osseo.org/events/meetings/2015/index.html](http://www.osseo.org/events/meetings/2015/index.html). To stay up-to-date on the academy's news, follow the AO on Facebook and Twitter.

Kim is an associate professor at the Harvard School of Dental Medicine, as well as the school's director of the post-graduate program in periodontology and continuing education.

### Study measures micromotion at implant-abutment interface

*This study was published in the November/December issue of The International Journal of Oral and Maxillofacial Implants (JOMI), the official journal of the Academy of Osseointegration (AO).*

#### Background

Micromotion at the implant-abutment level has been identified as a major determinant of long-term implant success. Technical problems ranging from screw loosening to screw fracture may occur as a consequence of excessive micromotion. Different concepts for the design of the implant-abutment connection have been proposed in the past. These affect micromotion at the restorative interface as well as the stability of the abutments used.

While initial micromotion depends predominantly on the fabrication accuracy achieved, long-term micromotion appears to be related primarily to wear phenomena at the implant-abutment interface.

Despite the clinical importance of micromotion phenomena at the implant-abutment interface, no universally valid method for quantifying this phenomenon has been described.

#### Key point

It cannot be predicted that a certain type of abutment will always lead to a certain level of micromotion. Relative displacement of components occurs at varying magnitudes. However, strict adherence to manufacturers' guidelines with respect to tightening torque may help reduce implant-abutment micromotion. Because micromovement occurs during the initial phase of loading, it may be prudent to routinely retighten the abutment screws, which might have lost preload.

#### Authors

Dr. Matthias Karl, department of prosthodontics, University of Erlangen-Nuremberg, Erlangen, Germany; Dr. Thomas D. Taylor, department of reconstructive sciences, University of Connecticut, Farmington, Conn.

► See STUDY, page C2

# Why dental students should attend the AO Annual Meeting

By Academy of Osseointegration Staff

*We asked young clinicians why they're looking forward to the Academy of Osseointegration Annual Meeting and how the event has benefited them in the past. In their own words:*

I attended the AO 2014 Annual Meeting as a second year graduate prosthodontic resident, and it was an enriching experience. The comprehensive accumulation of lectures by specialists in the field of prosthodontics, oral surgery and periodontics elevated my clinical and academic benchmark.

I had the opportunity to present a table clinic, which gave me a chance to interact with many co-residents going through the same training as myself. It was a great educational experience, and an environment in which to share new thoughts and ideas about what's up and coming in our respective fields. The AO meeting also had the perfect circumstances for me to connect with eminent members of our field, like Dr. Steve Eckert and Dr. Dennis Tarnow, and to talk about future professional goals and tips on how to achieve them.

As a graduate resident, my aim was to collect maximum information for my masters thesis, and the various lectures on CBCT scanning and virtual treatment planning of implants were of immense value. The most comprehensive and up-to-date data provided on these subjects

greatly helped my research. My keen interest being in immediate loading and virtual planning of implants, I found it very beneficial to interpret the long-term follow up of experienced professionals in this discipline.

*Vrinda Mohunta, BDS  
graduate resident  
advanced prosthodontic program  
Ohio State University,  
College of Dentistry*

I attended the AO 2014 Annual Meeting as an advanced surgical implant trainee at UCLA. It was my third time attending, and I consider it to have been the most profitable in all aspects regarding education, experience and networking.

I used the meeting to make new contacts with other residents and colleagues from other programs, as well as have fun and relax at the social events with my friends. I also did an oral presentation at the meeting, and my advice to students and residents is to attend these presentations and visit the posters. Do *not* be shy of asking questions and discussing them with others.

AO has such an amazing environment, which makes it easy to introduce oneself and have good conversation with the most important leaders in the field. It's a wonderful opportunity to be at the forefront of implant science around the globe. I will be attending AO's 2015 Annual Meeting, so

I can continue to learn and see my friends again!

*Rodrigo G. Beltrao, DDS, PhD  
oral maxillofacial surgery and  
implant dentistry  
Prof. Implant Dentistry Sobracid/Imed  
UCLA Advanced Surgical Implant*

I attended the AO 2014 Annual Meeting as a graduate prosthodontics resident at University of Michigan. The meeting provided a great opportunity to combine learning with socializing. It was an opportunity to exchange ideas and lay the groundwork for future collaborations, as well as meet up with old friends and make new ones.

The uniqueness of this meeting is that it gives you multidisciplinary exposure to clinical advances and interventions, while also giving you an opportunity to participate in social events that allow you to have fruitful dialogue about the progress being made in our field.

The opportunity to meet leaders in this field is nothing less than inspiring for the new dental generation. Plus, the destination gives you a chance to experience cultural and culinary flavors while mingling with future colleagues from around the world. I am looking forward to this year's meeting.

*Anastasia Katsavochristou, DDS  
graduate prosthodontics  
University of Michigan*

## - STUDY, Page C1

### Purpose

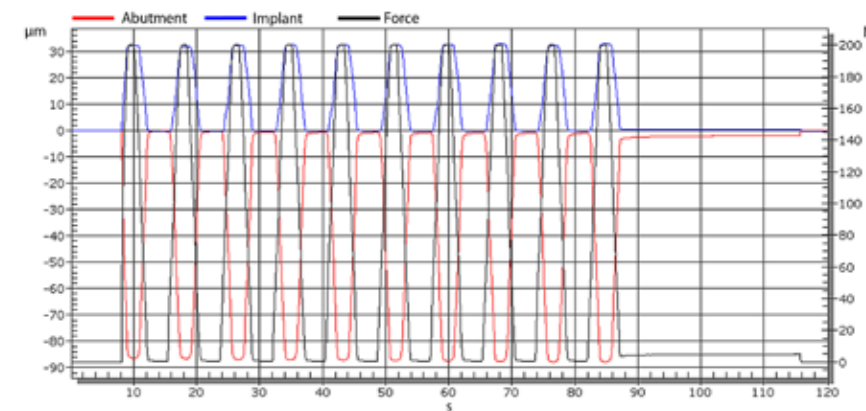
Scientists aimed to establish a biomechanical approach to directly measure relative motion at the implant-abutment interface and to quantify micromotion in a variety of implant-abutment combinations. Geometry of the implant-abutment interface, fabrication method of the abutment, engagement of antirotational features, abutment material, tightening torque and type of manufacturer (original, clone) were investigated.

### Materials and methods

Implant-abutment assemblies were fixed in a universal testing machine at a 30-degree angle. A cyclic load of 200 N (Newtons) was applied to the specimens 10 times at a cross head speed of 100 N/s while relative displacement between the implant and the abutment was quantified using extensometers. For five consecutive loading cycles per specimen, micromotion was recorded as a basis for statistical analysis. Comparative analysis was based on Welch tests.

### Results

Investigated implant-abutment combinations produced a broad range of micromotion values. Researchers did not find perfect implant shoulder geometry or perfect fabrication technique that would result in undetectable micromotion. The values for



Graph/Provided by JOMI/the AO

micromotion at the implant-abutment interface ranged from 1.52 to 94.00 µm (micrometers).

Researchers found tightening torque significantly affected the level of micromotion when one specific abutment type was investigated.

Implant shoulder design did not reveal a significant effect in all cases. Lack of engagement of antirotational features of the implants resulted in increased micromotion, regardless of the implant system investigated.

Casting onto prefabricated gold cylinders resulted in abutments with significantly less micromotion as compared to copy-milled stock abutments. Computer-aided design/computer-assisted manufacture (CAD/CAM) zirconia abutments

showed less micromotion than CAD/CAM titanium abutments. Inconsistent levels of micromotion were recorded for CAD/CAM abutments coupled to proprietary and competing implant systems.

In most cases, the CAD/CAM abutments performed as well as stock abutments. Great variations in micromotion were found with clone abutments and clone implant systems.

### More information

For a complete copy of the study and the JOMI November/December table of contents, visit [www.osseo.org/NEWJOMI.html](http://www.osseo.org/NEWJOMI.html). To join AO and begin receiving JOMI (bi-monthly) or obtain online access to JOMI, visit [www.osseo.org/NEWMembershipApply.html](http://www.osseo.org/NEWMembershipApply.html).

## IMPLANT TRIBUNE

### PUBLISHER & CHAIRMAN

Torsten Oemus [t.oemus@dental-tribune.com](mailto:t.oemus@dental-tribune.com)

### PRESIDENT/CHIEF EXECUTIVE OFFICER

Eric Seid [e.seid@dental-tribune.com](mailto:e.seid@dental-tribune.com)

### GROUP EDITOR

Kristine Colker [k.colker@dental-tribune.com](mailto:k.colker@dental-tribune.com)

### MANAGING EDITOR IMPLANT TRIBUNE

Sierra Rendon [s.rendon@dental-tribune.com](mailto:s.rendon@dental-tribune.com)

### MANAGING EDITOR

Fred Michmershuizen  
[f.michmershuizen@dental-tribune.com](mailto:f.michmershuizen@dental-tribune.com)

### MANAGING EDITOR

Robert Selleck [r.selleck@dental-tribune.com](mailto:r.selleck@dental-tribune.com)

### PRODUCT/ACCOUNT MANAGER

Humberto Estrada  
[h.estrada@dental-tribune.com](mailto:h.estrada@dental-tribune.com)

### PRODUCT/ACCOUNT MANAGER

Will Kenyon  
[w.kenyon@dental-tribune.com](mailto:w.kenyon@dental-tribune.com)

### PRODUCT/ACCOUNT MANAGER

Maria Kaiser  
[m.kaiser@dental-tribune.com](mailto:m.kaiser@dental-tribune.com)

### MARKETING DIRECTOR

Anna Kataoka  
[a.kataoka@dental-tribune.com](mailto:a.kataoka@dental-tribune.com)

### EDUCATION DIRECTOR

Christiane Ferret [c.ferret@dtstudyclub.com](mailto:c.ferret@dtstudyclub.com)

### Tribune America, LLC

116 West 23rd Street, Suite 500  
New York, NY 10011  
Phone (212) 244-7181  
Fax (212) 244-7185

### Published by Tribune America

© 2015 Tribune America, LLC  
All rights reserved.

Tribune America strives to maintain the utmost accuracy in its news and clinical reports. If you find a factual error or content that requires clarification, please contact Managing Editor Sierra Rendon at [s.rendon@dental-tribune.com](mailto:s.rendon@dental-tribune.com).

Tribune America cannot assume responsibility for the validity of product claims or for typographical errors. The publisher also does not assume responsibility for product names or statements made by advertisers. Opinions expressed by authors are their own and may not reflect those of Tribune America.

### EDITORIAL BOARD

Dr. Pankaj Singh  
Dr. Bernard Touati  
Dr. Jack T. Krauser  
Dr. Andre Saadoun  
Dr. Gary Henkel  
Dr. Doug Deporter  
Dr. Michael Norton  
Dr. Ken Serota  
Dr. Axel Zoellner  
Dr. Glen Liddelow  
Dr. Marius Steigmann

## Corrections

Implant Tribune strives to maintain the utmost accuracy in its news and clinical reports. If you find a factual error or content that requires clarification, please report the details to Managing Editor Sierra Rendon at [s.rendon@dental-tribune.com](mailto:s.rendon@dental-tribune.com).

## Tell us what you think!

Do you have general comments or critique you would like to share? Is there a particular topic you would like to see featured in Implant Tribune? Let us know by e-mailing [feedback@dental-tribune.com](mailto:feedback@dental-tribune.com). We look forward to hearing from you! If you would like to make any change to your subscription (name, address or to opt out), please send an e-mail to [c.maragh@dental-tribune.com](mailto:c.maragh@dental-tribune.com) and be sure to include which publication you are referring to. Also, please note that subscription changes can take up to six weeks to process.



PEOPLE HAVE PRIORITY



Because it's sometimes  
a tight squeeze:



NEW

Visit us at the CDS booth #4801  
and AO booth #133  
for more information

The surgical contra-angle handpiece with 45° angle head  
The new WS-91 and WS-91 LG high-speed surgical contra-angle  
handpieces feature a 45° angle head. They allow completely new,  
considerably better access to hard-to-reach operating areas such  
as in cases of wisdom tooth extraction or apical resection.

Scan the QR code  
with your mobile  
telephone for more  
information on WS-91 LG





# Academy of Osseointegration hosts scientific meeting in India

From left, AO Indian Ambassador Dr. D. Gopalakrishnan, AO Board Member Dr. Michael Norton, AO President Dr. Joseph Gian-Grasso, and AO DPU Liaison Officer Dr. Georgios Romanos.

Photo/Provided by the AO



By Academy of Osseointegration Staff

The Academy of Osseointegration (AO) recently hosted its first-ever AO Indian Outreach Meeting (AOIOM), in collaboration with Dr. D.Y. Patil Vidyapeeth (DPU) of Pune, India. More than 275 dentists gathered Jan. 22–24 to discuss and exchange information related to the event's theme, "Innovation and Practice in Modern Implant Therapy."

This three-day scientific program included plenary lectures from internationally and nationally acclaimed experts. In addition, delegates shared their scientific expertise during an e-poster session.

"Renowned experts from across the world shared their vast knowledge of the field and its latest advances. The interdisciplinary makeup of these speakers provided a refreshing and unparalleled learning experience," said Dr. D. Gopalakrishnan, AOIOM 2015 organizing chairman.

The speaker lineup included Dr. Joseph E. Gian-Grasso (USA), Dr. Michael Norton (UK), Dr. Paresh Kale (India), Dr. Hugo De Bryun (Belgium), Dr. Saphal Shetty (India), Dr. Dhirendra Srivatsava, Dr. Georgios Romanos (USA), Dr. T. V. Padmanabhan (India), Dr. Suvarna Nene (India), Dr. Fernando Viscaya (Spain) and Dr. Jocelyne Feine (Canada).

There were 50 e-poster submissions, of which 20 were selected for a blind-review competition. Prize winners for each category are listed below:

- *Original research*: Dr. Shuchi Tripathi
- *Case series*: Dr. Gurbani Kaur
- *Case report*: Dr. Binita Srivastava

"AOIOM exemplifies the successful network AO is creating internationally to facilitate the exchange of new technologies, emerging trends and research in the fields of implant dentistry and tissue engineering," said AO President Gian-Grasso. "This is consistent with, and critical to, the academy's mission. Exchanging ideas and learning with international colleagues is the fabric of our organization."

For more information about AO's global outreach and chapter charters, visit [www.osseo.org/charterChapters.html](http://www.osseo.org/charterChapters.html). To stay up-to-date on the academy's news and upcoming meetings, follow the AO on Facebook and Twitter.

## About the Academy of Osseointegration (AO)

With 6,000 members in 70 countries around the world, the AO is recognized as a premier international association for professionals interested in implant dentistry. AO serves as a nexus where specialists and generalists can come together to evaluate emerging research, technology and techniques, share best practices, and coordinate optimal patient care using timely, evidence-based information.

AD

## Immediate Implant Placement in a Molar Extraction Socket

The 7, 8 and 9 mm diameter, tapered body implants

- Fits the natural architecture of the site
- Minimizes food impaction
- Significantly reduces treatment time



Courtesy: Richard B. Smith, DDS, Specialized Dentistry of New York

Please Visit Us at Booth #731 at the Academy Of Osseointegration 30th Annual Meeting



For more information, scan with your smartphone.

**Keystone**  
DENTAL

1.866.902.9272 • [www.keystonedental.com](http://www.keystonedental.com)

## The MAX Dental Implant System



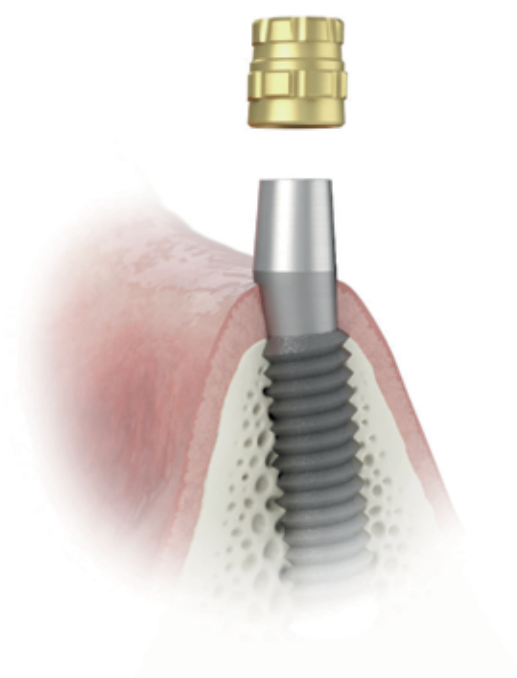
NEW

ATLANTIS™

# A removable prosthesis with the comfort of a fixed restoration

ATLANTIS™ Conus concept

Available for all major implant systems, the **ATLANTIS Conus concept** allows for friction-fit, non-resilient prosthetic solutions for fully edentulous patients.



- Individually designed using the patented ATLANTIS VAD (Virtual Abutment Design) software for parallel abutments and margin levels as close to the soft tissue as possible.
- Designed to fit SynCone caps, ensuring a tightly-seated final restoration and minimizing gaps and micro-movement.
- Stable and comfortable implant-supported, palate-free prosthesis designed for optimal chewing function, sense of taste and oral hygiene.



STEPPS™



SIMPLANT™



SYMBIOS™



ANKYLOS™



ATLANTIS™

ASTRA TECH  
IMPLANT SYSTEM

XiVe™



# For tight situations when extracting wisdom teeth, here's how to extend your surgical viewing angle

By W&H Staff

**S**urgical drive instruments face anatomical limits when extracting wisdom teeth: The cheek obstructs straight handpieces in the case of small mouths, or the distal molar makes burr access difficult for contra-angle handpieces.

In either case, the new surgical contra-angle handpieces from W&H offer a solution — even for wide apical tooth sectioning. Dental handpieces WS-91 and WS-91LG combine the advantages of surgical straight and contra-angle handpieces for the first time ever. The extended angle between the shank and burr axis allows good access to the tooth row both buccally and occlusally. Displaced teeth can be comfortably sectioned.

The dentist also has a significantly better view of the surgical site than with the instruments previously available.

Dr. Mario Kirste from Frankfurt/Oder

had this to say: "If I turn the contra-angle handpiece head slightly, I can work particularly quickly and safely in the retromolar region. The instrument has the potential to reconcile the contrasting positions taken up by the users of straight and contra-angle handpieces."

### Power plus hygienic safety

The new contra-angle handpieces WS-91/WS-91LG are real powerhouses at the same time, W&H asserts. Their transmission ratio of 1:2.7 results in a speed of up to 135,000 revolutions per minute. The key factor, however, is their high power combined with a surgical motor.

The contra-angle handpieces achieve an effective power of more than 2 Ncm on the working part of the burrs, making them almost three times as powerful as standard dental contra-angle handpieces combined with an electric dental motor.

Biologically necessary and hygienically safe cooling is also taken care of: An external triple spray cools the rotating instru-

ment with a sterile saline solution. As with all dental handpieces from W&H, the surface of the new contra-angle handpieces is scratch-resistant and therefore easy to clean, according to W&H. They can also be easily disassembled without tools.

### Successful balance

Apical resection is another indication for the contra-angle handpieces WS-91/WS-91LG. The sophisticated geometry ensures excellent vision in cases involving maxillary molars and small mouths, according to W&H. In the WS-91LG, a mini LED+ also illuminates the operating area with daylight quality.

"The new contra-angle handpieces are a really successful balance. This achievement by W&H extends my viewing angle and my options in routine surgery," Kirste said.

AO  
BOOTH  
NO. 133



The new surgical contra-angle handpiece WS-91LG. (Photos/Provided by W&H)



At left, application of the WS-91LG by W&H.

Below, a visual comparison and the W&H surgical contra angle handpiece.



At left, X-ray visual.

Below, the contra angle with 45-degree head and the W&H surgical handpiece.



VISIT US AT  
AO BOOTH #743

# Simple & Predictable

## 10 Years of Clinical Evidence



### Simplicity

Single implant-abutment connection size - each abutment fits all fixture diameters.



### Platform Switching



### Tight Internal Conical Connection

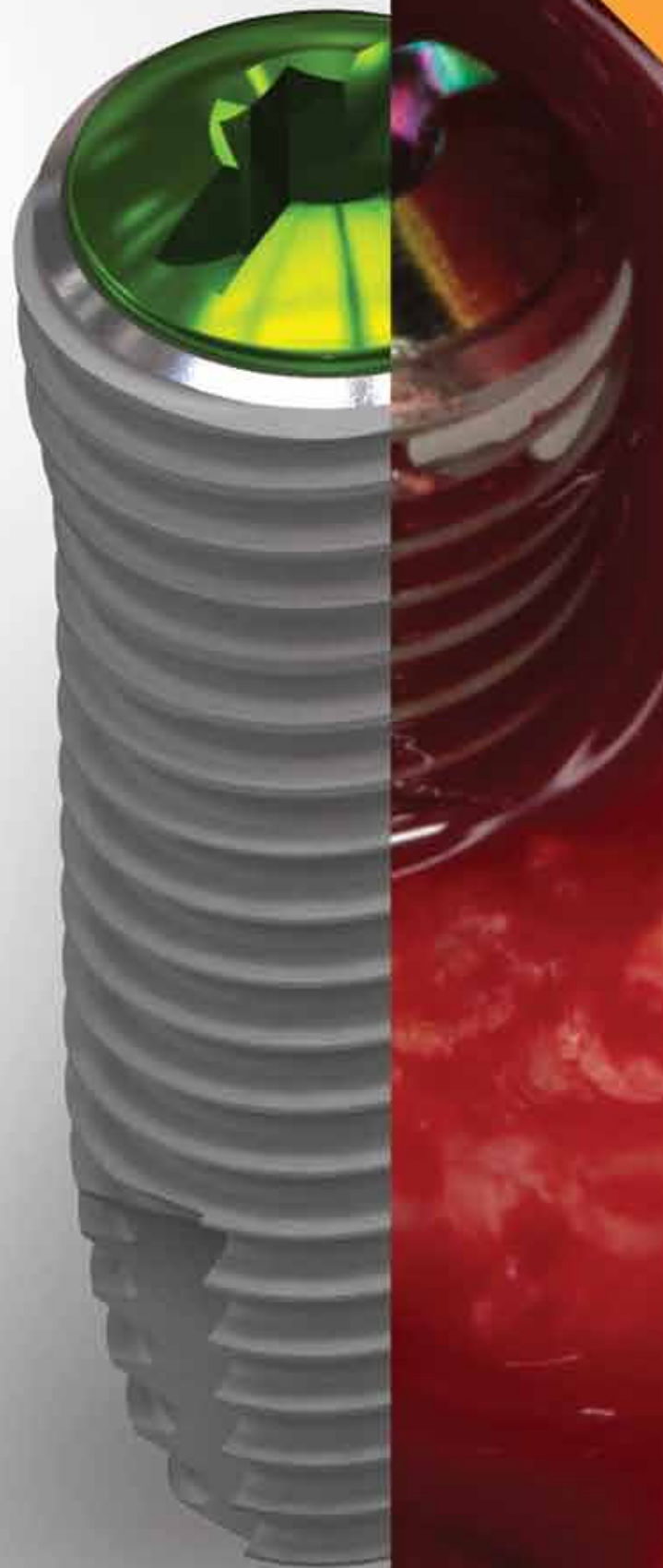


### Optimal Initial Stability



### S.L.A. Surface Treatment

(Sandblasted with Large grits and Acid etched)



over **10** years  
of long term data

10/07/2002  
Preoperative

10/07/2002  
Postoperative

01/30/2003  
Final Prosthesis

12/01/2003  
1 Year

08/30/2006  
3 Years

11/10/2010  
7 Years

03/16/2011  
8 Years

02/04/2013  
10 Years



**Dentium**USA

[www.dentiumusa.com](http://www.dentiumusa.com)  
[info@dentiumusa.com](mailto:info@dentiumusa.com)  
Customer Service Toll Free 877-304-6752



# PURE GENIUS

25 YEARS OF PROVEN SUCCESS



**MICRODENT**  
IMPLANT SYSTEM



# Dentium celebrates 10 years of clinical success

By Dentium USA Staff

**D**entium is pleased to announce the results of its long-term clinical case study. The study, conducted for more than 10 years, has successfully shown Dentium implants are reliable and predictable.

The study's radiographic images showed a successful osseointegration during a long-term observation period and also showed that Dentium's unique design and surface features resulted in stable osseous crest without bone loss to the first thread, according to the company.

Dentium implants possess S.L.A. (sand-blasted with large grit and acid-etched) surface treatment, which facilitates the osseointegration process with a high predictability of success and provides more complete bone-to-implant contact throughout every thread of the implant.

This produces a well-attached base for osseointegration, the company said. The greater distance between the threads of the implants also helps promote early osseointegration while the increased thread height helps augment initial stability. The double-threaded design of the implants reduces insertion time, thereby decreasing the patient's chair time.

The tapered body design of Dentium dental implants provides initial stability

and bone expansion response for easy installation, according to the company. The tapered design also helps create a stable yet comfortably placed implant that provides integration with surrounding bone anatomy.

Dentium implant systems offer a variety of diameter and length options for individual cases. Dentium implants can bring initial stabilization and osseointegration, especially in soft-bone cases and in sinus graft with implant placement cases.

All implants offered by Dentium share the same internal hex. The conical hex connection between the implant and abutment interface helps ensure greater hermetic sealing and provides an improved tactile sense, the company asserts.

This helps to ensure a more stabilized abutment seating. The biological connection contained within the implant creates an even distribution load to the fixture, helping to minimize micro-movement and marginal bone loss.

Dentium components are equipped with a true single platform; only one abutment connection is used for implants. This reduces the need for multiple prosthetic components and simplifies the surgical and prosthetic procedure, according to the company.

Dentium is a dental implant manufacturing company with a heavy focus on



AO  
BOOTH  
NO. 743

Photo/Provided by Dentium USA

innovative research and development. Dentium has released state-of-the-art dental technology with products ranging from implants to regenerative materials. The motto of Dentium is "Developed by Clinicians for Clinicians" because its products are developed by industry leaders. Dentium is in more than 80 countries and has a manufacturing facility here in

the United States. Dentium is FDA registered and ISO certified. Dentium wants to encourage the academic community as well as future clinicians to follow its passion for research and development.

For more information and introductory specials, call (877) 304-6752 or send an e-mail to [info@dentiumusa.com](mailto:info@dentiumusa.com). You may also visit [www.dentiumusa.com](http://www.dentiumusa.com).

AD

## Master-Pin-Control

# ALL YOU NEED!

Hybrid Pin System - developed with Dr. Istvan Urban

The Bone Management® system Master-Pin-Control is especially designed for the fixation of reabsorbable, non-reabsorbable, and titanium membranes. Since the pins have an extra mini-thread, they are a hybrid between a screw and a pin. The sharp tip and the sturdy construction allow the pins to be inserted into very compact cortical bone. In addition, the pins can easily and safely be removed especially after a successful healing period due to its thread and unique head design.

### At a glance

- Fixation of membrane with titanium pins
- Removal of pins made simple with pin holder
- Easy pin placement even in dense cortical bone



\*Kit complete with 34 pins



BMP00

### MEISINGER USA, L.L.C.

10200 E. Easter Ave. • Centennial • Colorado 80112 • USA

Phone: +1 (303) 268-5400 • Fax: +1 (303) 268-5407

[info@meisingerusa.com](mailto:info@meisingerusa.com) • <http://meisingerusa.com>

