# DENTAL TRIBUNE

The World's Dental Newspaper · South African Edition

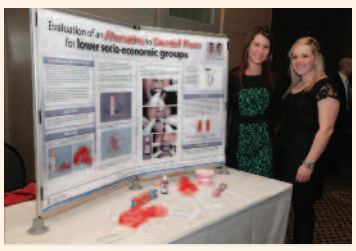
*October 2013 - Volume 1 no. 3*

www.dental-tribune.com



**STUDENT CLINICIAN PROGRAMME.**

Page 2


**ISTRODENT MOBILE CLINICS.**

Page 1 and Page 3

**IFED 2013.**

Page 6

# Istrodent: a South African company leading the way in mobile health care

Chris Jenkins

Istrodent is a leading South African supplier of dental equipment and consumables but is also a market leader in designing and manufacturing mobile clinics in South Africa and Africa.

Formed in 1989, Istrodent has grown from strength to strength within the South African dental industry. However, Istrodent does not only supply the dental industry with equipment and consumables but also manufactures and supplies mobile dental and mobile health clinics. These mobile clinics have been built into trucks, 4x4s, trailers, minibuses and even trains to provide access to healthcare for isolated communities and communities where only limited and basic healthcare is available. The foundation for the development and building of mobile clinics stems back to 1976 when the director of Istrodent designed and built mobile military hospitals in a variety of different platforms.

A mobile clinic is able to provide a range of functions to patients in rural areas from dental care to ear and eye care, surgical clinics, mammogram clinics, circumcision clinics, TB stations and any other healthcare based clinic that would be required. Istrodent designs and builds the mobile clinics as per the specifications from their clients.

Typically a mobile clinic will have two sources of power; a generator and a mains that can be connected to a local electricity supply. However, a recent development that is being incorporated into the mobile clinics are solar panels to provide electricity to power up a number of appliances used by the mobile clinic. The research into improving the solar panel electricity is ongoing so that in the near future a mobile clinic will be able to move away from the need of a generator and/or a mains electricity supply to run the on-board equipment. Within the actual clinic is all the necessary equipment in order for the medical professionals on board to treat their patients. (continued on Page 3)

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# Student Clinician Programme Awards 2013

Chris Jenkins

The Hyatt Hotel in Rosebank was the venue of this year's awards dinner for the 14th Student Clinician Programme, a South African Dental Association initiative in partnership with Dentsply.

A total of 10 students represented the Universities of the Witwatersrand, Pretoria, Western Cape and the Univeristy of Nairobi in Kenya. The students were tasked with researching clinical or basic research directly related to the art or science of dentistry under the supervision of a lecturer from their respective university for presentation to a panel of judges. The program has been mainly for student dentists, however, this year saw two oral hygienists enter.

The Dentsply Student Clinician Program begun in 1959 in the USA and since then there has been over 5000 students participate in it. Currently there are 17 programs across 36 countries worldwide. In 1999 SADA and Denstply formed a partnership in hosting the program. SADA president, Dr I Solomons said the program is geared on not only the principles of research but also for reminding the new generation of dentists why research is still important to the future of dentistry.

The judges panel included: Prof J Olivier, Medunsa; Prof S. Shangase, WITS; Dr A Siebold, SADA; Dr R Lombard, UP and Dr N Mohamed, UWC. The students work was judged on the following criteria: subject matter/content, oral presentations and questions and table clinic.

The entrants, their university and supervisors were as follows: W Kibandi from the University of Nairobi, supervised by Dr J Gakonyo; A Malit from the University of Nairobi, supervised by Dr J Gakonyp; JC Krynauw and JC Julyan, of UP, supervised by Prof S Dawjee; M van Zyl and M Muller, of UP, supervised by Prof van Wyk; H Ranchod and T Moddley of UWC, supervised by Dr D Moodley; J Veeran of UWC, supervised by Dr R Mulder and N Dlamini of Wits supervised by Prof M Patel.

Topics researched by the students varied from safely suturing mechanism, management of periodontal endodontic lesions by dentists in Nairobi and an evaluation of an alternative to dental floss for lower socioeconomic groups to name a few.

The winning presentation was by JC Krynauw and JC Julyan of UP with their research on lip tape therapy prior to surgery in patients with a cleft lip. DT

# UP Students Win Student Clinician Programme

Prof. SM Dawjee

The Student Clinical Programme, co-ordinated by the SA Dental Association and sponsored by Dentsply International, provides the opportunity for two students or student teams from each accredited Oral Health Teaching School in South Africa and surrounding territories to participate and compete in the annual Dentsply Student Clinicians Competition. Participants from the Universities of Pretoria, Witwatersrand, the Western Cape and Nairobi, presented their research at this year's event.

Mr. JC Krynauw and Mr. JC Julyan from the BChD V class at the University of Pretoria won by a unanimous decision for their outstanding work on pre-surgical lip tape therapy on babies born with a cleft lip. This prestigious award qualifies Mr Krynauw to an all expenses, paid trip to attend the ADA (American Dental Association) Annual Session in New Orleans, USA, where he will represent the University of Pretoria and present his work. DT

*Prof. SM Dawjee (Research supervisor) flanked by Mr. JC Krynauw on his right and Mr. JC Julyan on his left.*

*Sitting are: Maretha Smit (CEO of SADA) and Richard Ashton (CEO of Dentsply).*

DENTAL TRIBUNE
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(continued from Page 1) The clinics come with awnings to provide shade to patients waiting outside and a TV in a secure housing on the outside of the truck which plays educational videos for the waiting patients on healthcare and health awareness. A water tank and built in compressor are also features of the clinics so that the mobile clinic is a self-sustaining unit.

A mobile dental clinic for example will include; a dental chair, dental light, an x-ray unit and x-ray developer which are also digital now for instantaneous viewing, W&H hand pieces set, autoclave, mobile suction unit, cordless curing light, digital amalgamator, water distiller, cabinets to house equipment, a sink and cold water tap (connected to a water tank at the bottom of the clinic), fridge, a dental unit with 2 hand pieces, manual controls and a 3 in 1 syringe as well as a compressor to supply air and clean water to the unit. In effect, Istrodent mobile dental clinics are fully functional practices and even come with air-conditioners to provide a comfortable environment for both the patient and dental practitioner. In addition, special UV disinfectant lights are fitted inside the clinics to assist with disinfection, killing germs and bacteria. A mobile clinic requires minimum maintenance from Istrodent once they are out on the road and are basically maintained the same as a normal dental practice bar the service of the vehicles and equipment touch ups.

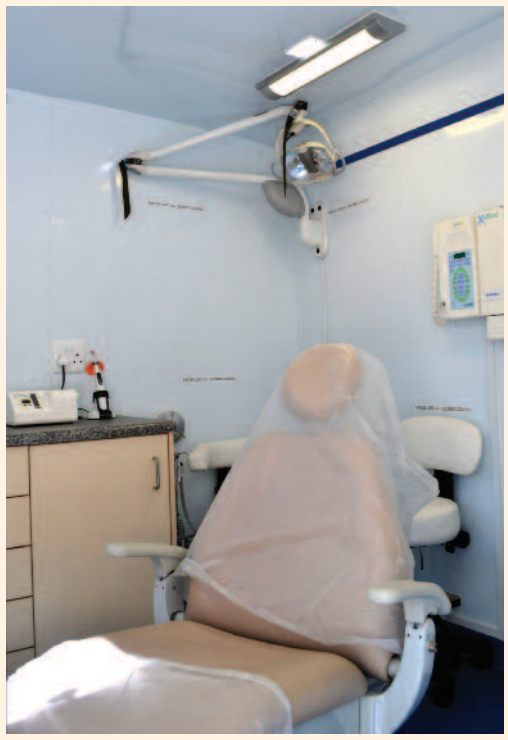
However, a mobile clinic is not limited to only one specific clinic type. For example, the latest Samsung mobile clinics include an ear clinic, a dental clinic, eye clinic and a blood test unit on one truck. These clinics offer a one stop healthcare solution for rural patients. Presently all nine provinces of South Africa have mobile clinics of varying types operating in them, either in a private or corporate and/or government capacity. Advertising by the government or companies and word of mouth are used to spread the news around rural areas that a mobile clinic will be coming. The various professionals who staff the clinics are provided for by the company or entity who runs them, however, private individuals have bought mobile clinics and run them successfully on their own in the rural areas on a cash basis. It is possible for one mobile dental clinic to see up to 60 patients per day.

Mobile clinics as mentioned early are not limited to just the roads but have also been built into trains. Istrodent has designed and constructed dental clinics on train carriages for the Phelophepa (Phelophepa means 'good, clean health' in Sotho and Venda) Trains which criss-cross South Africa's railways providing healthcare for rural residents. The Phelophepa trains are a fully functioning mobile hospital. There are currently two trains; the 1st train was built in the early 1990s and the 2nd one was built in 2011/2012. The trains are fully functional and complete hospitals with different clinics in each carriage with a total of 18 carriages. The trains even have on board sleeping quarters for the 40 plus professionals manning their stations and a kitchen to provide them with meals. The Phelophepa Train is a joint initiative between Transnet and the Government and also provides rural residents with educational programs and awareness campaigns. It is estimated that the trains see an average of 45 000 patients a year.

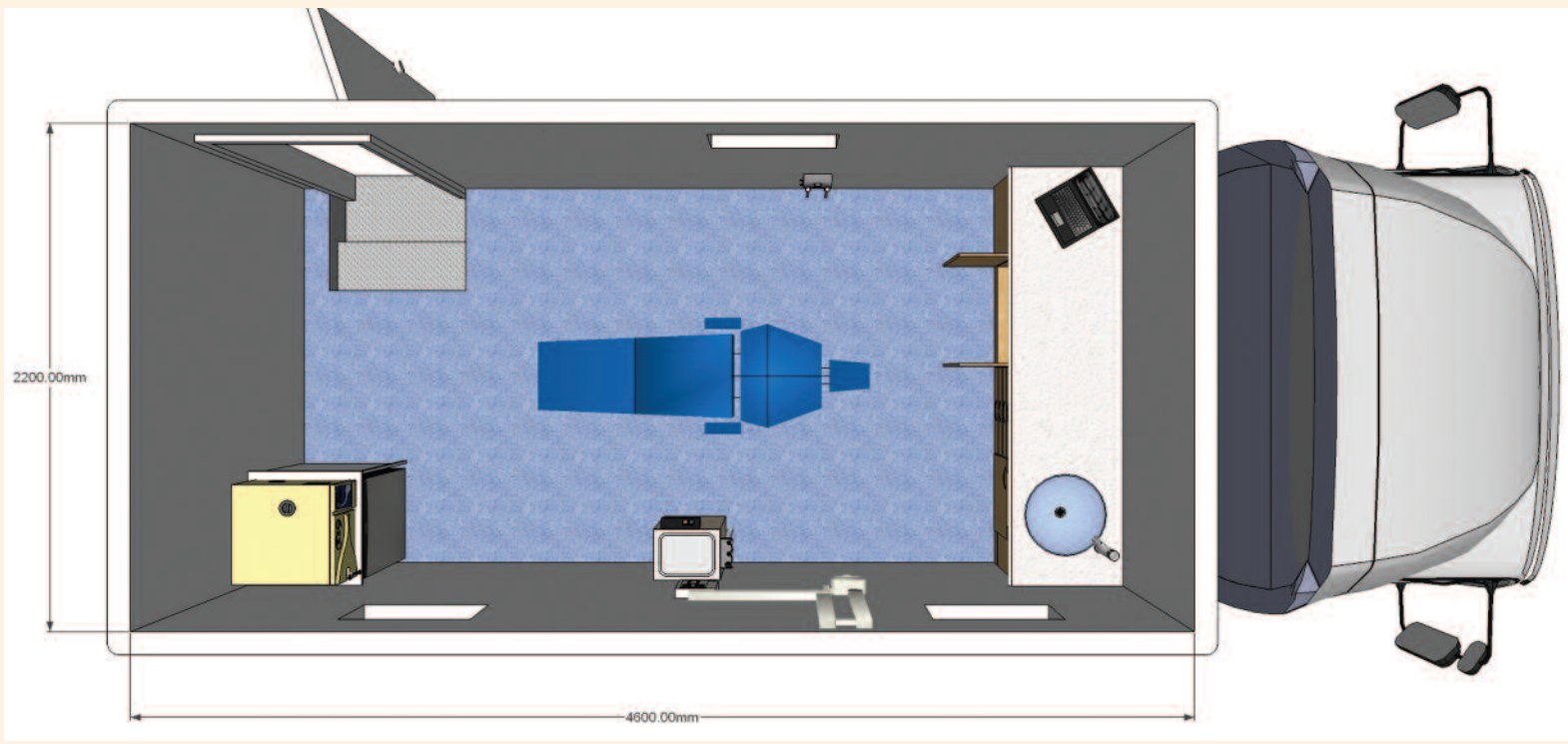
To date Istrodent has produced over 160 mobile clinics that have not only served companies such as Colgate, Samsung and Aquafresh but also the South African Government and the South African National Defence Force. Various African countries such as Botswana, Zimbabwe, Ghana and also the United Nations have been supplied with mobile clinics. It is difficult to set a firm price on a mobile clinic due to numerous factors such as the make of the vehicle and what exactly is required in them but a starting figure would not be less than R600 000-00 or US$60 000-00 (based on an exchange rate of R10/$1). Istrodent is constantly developing new ideas and implementing those ideas into their new clinics not only to remain a leader in the industry but also to make the clinics easier to operate and in the long run to produce self-sustaining green units.

In the South African and African context, the use of mobile clinics has and still is providing millions of people with essential healthcare they normally would not be able to access. With infrastructure issues, limited funding and remoteness of patients, the mobile clinic is a truly successful piece of equipment and a unique idea to combating the lack of health provision in poor and underdeveloped regions.

*The Samsung Solar Powered Mobile Health Center ready for patients.*



*Inside the Samsung Health Center Dental Clinic.*




*3D Diagram of a Mobile Dental Truck.*

*The Aquafresh and Tswane Health Services Mobile Dental Clinics.*

*The Eye Clinic and Blood Test Room onboard the Samsung Health Center.*

# 3M opens South African Customer Innovation Center

Chris Jenkins

World innovation leader and product producer, 3M, officially opened its Johannesburg based Customer Innovation Center on Friday the 23rd of August.

3M is a company built on the principles of innovation and pioneering new technologies for various markets to make life easier, better and safer. The Customer Innovation Center which is located at their Woodmead offices in Johannesburg offers visitors the chance to see 3M's products and experience them in a hands-on manner assisted by 3M field experts.

The opening was attended by Minister of Information and Technology, Derek Hanekom, who officially opened the Customer Innovation Center as well as MEC Department of Roads and Transport, Gauteng Provincial Government, Ismail Vadi who officially opened the Customer Training Center.

*From Left to Right: Ismail Vadi, MEC Department of Roads and Transport, Gauteng Provincial, Government, Mr Haitham Sibai, 3M Head of Research and Development for MEA, Derek Hanekom, Minister of Science and Technology and Mr Ismail Mapara, 3M SA Managing Director.*

3M produces over 75 000 different products across 46 technology platforms with 3M ESPE producing over 2000 dental products. 3M ESPE is recognized globally for bringing numerous firsts to the dental industry and covering a wide range of dental products from implants to infection control and even to CAD/CAM.

Regarding CAD/CAM, 3M is focusing on producing and supplying the blocks used in the milling machines, even to the extent of having agreements in place with other manufacturers to supply blocks for their machines. "We want to focus more on giving solutions to the dentists that would make things easier." Said Thilo Naidoo, Director of the Healthcare Division SA about 3M deciding to focus more on providing blocks; "We've seen a bigger opportunity to develop the blocks, we haven't really put a focus on the milling units." This is due to more dentists having chairside milling units, where they can scan a patient, mill the crown and then place the crown in only one or two appointments.

In today's dental practice there is certainly a high chance of not only a 3M ESPE product being used but also one of 3M's numerous other products such as Post-its. DT

*Rene Dove of 3M and 3M country technical manager, Gunter Halfar, demonstrate 3M Novec Fire Protection Fluid.*

# Wright-Millners Dental Training Facility

Chris Jenkins

The Wright-Millners Dental Training Facility (DTF) at their Johannesburg offices provides lecturers and students with a state of the art and fully equipped learning facility to further their dental skills and knowledge.

Opened on the 19th of May 2011, many doctors, companies, technicians and university students have made use of the facility. There are a number of different areas each with their own function and are all linked to a live video and audio feed. For example, if a surgery is in process in the dental surgery it can be viewed and listened to throughout the facility. The areas include: the boardroom, the showroom, the sterilisation area, the dental surgery and the techniques area. In addition, there is also the digital imaging suit. Each area has its own equipment specific to its function.

As stated above the facility has top of the range equipment provided by Wright-Millners. Equipment within the facility includes: the Carestream corner with a 3D panoramic unit, RVG digital sensor and a 1500 intra oral camera, 18 Zeiss Microscopes in the techniques area, NSK electric micro motors with red and blue ring hand pieces also in the techniques area, a B class autoclave and a Statim cassette for infection control, a mobile Zeiss microscope and an A-dec 500 dental chair.

The DTF hosts numerous courses each year and is open 7 days a week. Courses vary from endodontics to aesthetic and restorative dentistry as well as courses for dental assistants. It has basic amenities available and can also be used for launches and other events. A typical course consists of about 14-18 delegates, however, depending on the course and what it entails the facility can accommodate up to 60 people.

For more information about the Dental Training Facility please visit their website: www.millners.co.za or speak to Tanith Oram: Tanith@Wright-Millners.co.za. DT

*Fully operational surgery featuring the stylish A-dec 500.*

*Live Surgery in Session.*

# SASO show-cases famed international speaker at Mount Grace Congress during August 2013

Professor Errol Stein

SASO prides itself in regularly bringing the very best lecturers and academics on the international circuit to present courses to its members in South Africa. Over the past 49 years the list of international speakers coming to share their knowledge and expertise reads like a veritable catalogue of "who's who" in the world of orthodontics. Foremost among those are: Cecil Steiner, Reed Holdaway, Bill Crockatt, Howard Lang, Bob Goshgarian, Hal Perry, Don Woodside, Bill Proffit, Eugene Roberts, Bob Ricketts, Bjorn Zachrisson, Charles Burstone, Hans Pancherz .....the list is practically endless!

The guest-speaker at the Annual Congress of the South African Society of Orthodontics held at Mount Grace Country Resort during August of this year was Dr Gerry Samson who hails from Marietta (near Atlanta, Georgia USA) where he has a flourishing orthodontic practice. An outstanding teacher, he is in constant demand as a speaker on the international lecture programme. His university teaching duties include associate professorships at St Louis University, Case Western University and the University of Nevada, Las Vegas, and he is an adjunct professor at the University of Texas, San Antonio. He also is a guest lecturer at seven other universities in the United States, Australia, New Zealand, and China. SASO was fore-warned that Gerry's lectures would be authoritative, clinically relevant, and exceptionally entertaining. Given his high level of expertise, it was anticipated that his biomechanics lectures would perhaps prove to be the most valuable and most beneficial. And delegates were in no way disappointed as Dr. Samson's presentations on biomechanics did what would seem to be almost impossible - they made clinical biomechanics "come alive" in an interesting, innovative, and highly informative manner.

Samson's lectures were punctuated by antics, theatrics, occasionally edgy humor,

audience participation, and a dollop or two of 1960's rock 'n' roll music effectively used to turn the glassy-eyed into energized learners. In discussing his unique presentation style, Gerry explained: "Most people find a lecture on the subject of biomechanics very difficult to absorb, let alone tolerate. Their response is to either fall asleep or fidget. But as difficult as biomechanics is to learn, it's also perhaps the most important thing of all for an orthodontist to know. The way I overcome the barriers to learning this - or any subject, for that matter - is by teaching in the most entertaining and informative fashion possible." "The hardest thing about teaching biomechanics is getting people to actually visualize how all these forces act and react," he said. To achieve this end, Samson used computer-generated graphics during the course of his lectures together with comically painted plywood replicas of molars and incisors. "These teeth are almost like puppets that I move this way and that to illustrate Newton's Third Law of Equilibrium, which is at the heart of biomechanics," he explained.

*Dr Gerald Samson, keynote speaker (right) with Drs Mark Weirtheimer (left) and Steven Flax (center).*

And if that wasn't enough to rivet the audience, the wild-haired Samson periodically unleashed 9-second-long snippets of Golden Oldies hits from his high school days. "The music comes up without warning and, when it does, I start bopping around the stage like a rock musician. I do this to give people's brains a sort of seventh-inning stretch. It's a very effective way to immediately refresh and refocus people's attention before moving on to another part of the presentation."

Over two-and-a-half days Gerry held his audience of some 85 delegates totally captivated by his infectious humour, warmth and friendliness, as well his exceptional ability to unravel the mysteries of complicated engineering principles in order to transform these into easily understood clinical pearls. DT

# 8th IFED 2015 World Congress, Munich, 18-21 September 2013

*SAAAD Committee, from left to right, Jean van Lierop, Dr Ivonne Meyer, Dr Mark Bowes and Dr Andy Effting.*

Dr Mark Bowes, SAAAD President

I recently visited Munich for the 8th International Federation of Esthetic Dentistry (IFED) World Congress, held from the 18th - 21st of September 2013. What an incredible honor and privilege it was for me to represent South Africa. IFED at present has 29 members representing all Continents.

The Congress was hosted by the German Academy for Esthetic Dentistry and carries on the tradition of the previous 7 meetings which have been held every 2 years since 1994. The conference has been held in the following cities; Florence, Kyoto, Washington, Venice, Seoul, Las Vegas and Rio de Janeiro.

The theme of this year's Congress was 'Innovative Dentistry - Practice meets Science' and all disciplines of dentistry were covered at the highest level. There were 60 International speakers from 15 different countries. I had the privilege of being the Session President for one of the most exciting sessions, during which Dr Mauro Fradeani and Dr Claudio Pinho discussed 'State of the Art Direct and Indirect Restorations'. Delegates from over 50 different countries were treated to presentations (directed at dentists and technicians), hands on courses and poster and trade exhibitions of the highest quality.

Munich, being so rich in culture and tradition, did not disappoint! On the social progamme, we were treated to three memorable evenings with the highlight being the gala dinner at the BMW Headquarters. At the handing over ceremony, in front of 650 guests, I accepted the responsibility of bringing the 9th World IFED Congress to Cape Town in 2015.

There are many delegates who might feel the final social event; a night at the famous Oktoberfest was the highlight of the congress, although the next morning they might have had different thoughts!

With Munich behind us, the focus is now on SAAAD and the 9th World meeting to be held in Cape Town from 5th - 7th November 2015. These are exciting times for Dentistry in South Africa. The thought of bringing many international speakers and delegates from all over the world is truly mouthwatering. The energy and commitment from our colleagues abroad is already building, and we need to keep the momentum going.

Plans to make this, the 9th World Congress, the best ever are already well under way and I urge all you South African Dentists and Technicians to diarise the date and make a firm commitment not to miss one of South Africa's most exciting Dental events ever. DT

*Dr Siegfried Marquardt Munich IFED Congress President hands over to Dr Mark Bowes the IFED 2015 Cape Town President.*

*Standing (left to right): Zelda Coetzee and Dr Andy Effting. Seated (left to right): Dr Mark Bowes, Jean van Lierop and Dr David Klaff (IFED treasurer).*

# Interview: Becoming one of the top five manufacturers of dental materials in the world

by DT Japan

In a surprising move, German precious metals group Heraeus sold its dental business to Mitsui Chemicals in April. Recently, Dental Tribune Japan had the opportunity to visit the company's headquarters in Tokyo and sit down with Executive Vice-President Minoru Koshibe to talk about the reasons for the acquisition and the reasons his company, which specialises in chemicals and plastics manufacturing, sees its future in the dental field.

**Dental Tribune Japan: Mr Koshibe, economic growth in Japan has been slow in recent years. Was this one of the major reasons for the Heraeus acquisition?**

Minoru Koshibe: As a diversified chemicals company, 70 per cent of our business comes from the manufacturing of chemicals, including petrochemicals. For this reason, we are naturally affected by macroeconomic changes like rising oil prices. After the Lehman Brothers bankruptcy and the harsh economic conditions that followed, we no longer perceived a future of growth and continuity, so we decided to move our corporate direction to areas that would be less affected by economic cycles, such as health care.

Although we originally operated in the medical field, we were not able to advance immediately in that business because we sold this segment very early on. However, we subsequently started to develop monomer optical lenses, which gained a huge market share in Japan. With Sun Medicalas our next business endeavour, we planned to expand operations to a worldwide level. Unfortunately, we soon realised that this would probably take 20 to 30 years, so we finally decided to take the plunge and acquire a company with a global foothold in the dental materials market.

**Had you been looking into other companies, and what factor made you decide on Heraeus over all available options?**

We made a list of the top ten manufacturers of dental materials in the world and narrowed it down to a few companies after having reviewed them from various perspectives. For our envisioned global expansion, Heraeus seemed to be the best choice, also because the company was constantly trying to expand its reach into dental CAD/CAM, which is a new business segment, for which extraordinary growth in the future is anticipated. Had Heraeus not had such a digital services division, I guess we would have had to acquire another company, but the company's existing foothold in the CAD/CAM business was a decisive factor. Therefore, it was also the first company we contacted.

**Heraeus has significant market share in the European and North American dental markets. Do you intend to increase your reach there in particular?**

With the bonding agent Super-Bond as key product, we have been operating through Sun Medical in North America and Europe already, but sales there has not met our expectations in the past. Despite the difficult market environment, we still want to expand our sales channels in Europe and North America, as these are the most important markets for materials with higher price points.

In order to achieve this, we aim to integrate our technologies with Heraeus Kulzer's sales channels. Dental materials have shifted to composite resins and hybrid new materials that meet various aesthetic requirements, and we intend to create a synergy in making the best possible use of our polymer technologies for the new digital services. Methyl methacrylate is certainly the gold standard at the moment, but we want to develop dental materials with new polymers. We believe the key technology for achieving this will be CAD/CAM and 3-D printing.

**What outcomes do you expect from the acquisition for your domestic dental business?**

We want dental materials to become the core of our overall business. Since Sun Medical is much smaller than Heraeus, we decided to establish our dental materials head office in Germany, which started operations in April. From there, Sun Medical will expand its business globally. The value of Heraeus and our group companies is currently a little less than ¥50 billion (US$500 million), which we want to increase through mergers and acquisitions similar to 3M, which we regard as a model. Our aim is to growth faster than Heraeus Kulzer did before the acquisition.

*Minoru Koshibe. (DTI/Photo Dental Tribune Japan)*

**How will your company influence business decisions at Heraeus, and how do you evaluate the company's position in dental markets right now?**

Although they have a strong presence in the North American and European markets, their market position in Asia is not very significant. On the other hand, we are a strong force in Japan and South-East Asia, and thus have more information on markets like Thailand, Indonesia and Malaysia. We believe that with the right marketing, the Heraeus Kulzer brand can be successfully expanded in that region. Our company and Heraeus complement each other's strong and weak points well.

Decisions at Heraeus will be made within the management resources of the entire Mitsui Chemicals Group. Heraeus is a wholly owned subsidiary, which means investments will be under our control and implemented with consideration of the overall balance sheet. As we do have a management strategy to shift our positioning towards the health care business, people at Heraeus can expect us to make good use of our management resources and give high priority to this field when it comes to investments in the future.

**You also acquired shares from DENTCA, a US denture manufacturer, recently. Are you currently looking into opportunities to acquire other dental companies?**

We do believe a business model like that of DENTCA may be a good business opportunity, where the intra-oral data of a patient is read into a computer to create a full denture or partial denture, and sold online on Amazon. This is because the US pharmaceutical legislation is not as stringent as in Japan.

Another thing we wanted to acquire was DENTCA's method of processing data. DENTCA is a venture company run by dentists. They do not use the patients' data as is for CAD/CAM; they process the data according to their experience. We unfortunately do not have the technology to process this data, and we believe we need to recruit dentists and dentistry graduates as employees in the future. They have a significant amount of expertise in terms of data processing, and we wanted to use that as a competitive tool in the expansion of business. That is why we decided on the acquisition.

With regard to your question about acquiring other manufacturers in the dental industry, we will grow using our own strengths in feasible areas, but if there are companies that can improve on our weak points then we will consider the acquisition of such companies. We want to expand the scope of dental materials through technological innovation in order to become one of the top five manufacturers of dental materials in the world able to compete with North American and European companies.

**Thank you very much for the interview.** DT

# GC International opens head office in Switzerland

by Dental Tribune International

***LUCERNE, Switzerland:*** GC International, the new international branch of dental products manufacturer GC, has opened its head office in Lucerne, Switzerland. The company's CEO and president, Makoto Nakao, personally welcomed representatives of the industry and the press to the newly built office during the official opening at the beginning of September.

At the meeting, guests were guided through the upper floor of the office building, which was redesigned by Carlos Antonietty, a Lucerne-based architect. In order to create a tranquil working atmosphere, the various offices, which are separated by glass walls, were painted in pure white. In addition, a large conference hall offers a panoramic view of the Lucerne mountains.

Attendees spent the remainder of the evening at Hotel Astoria Lucerne, close to the new office. Drs Heinz Erni and Orlando Monteiro da Silva, both past presidents of the FDI World Dental Federation, and Stefan Roth, Mayor of Lucerne, attended the event.

The multinational office, GC International, which was founded earlier this year, will be guiding the international affairs of GC Asia, GC Europe und GC America in future. GC Corporation will continue to operate independently from Japan. DT

# GC expands into orthodontic business

by Dental Tribune International

***AUGSBURG & BRECKERFELD, Germany:*** At the beginning of September, global dental manufacturer GC Corporation announced that it will be extending its product portfolio to orthodontics. With the foundation of GC Orthodontics Europe, the company will be selling its new range of products to customers in Europe and the Middle East.

According to GC Orthodontics, the new product portfolio primarily includes modern solutions for fixed orthodontics, such as the self-ligating bracket system of the Experience line. In addition to Experience Metall, Experience Ceramic and Experience Lingual, the line includes Experience Mini Metal brackets, a novelty in fixed orthodontics owing to its discreetness.

While most products are provided by TOMY, a Japanese manufacturer of orthodontic appliances, a part of the production and sales will be run from the new head office in Breckerfeld, a city in north-west Germany.

*GC Orthodonctis warehouse in Breckerfeld, Germany. (Photo courtesy of GC Orthodontics).*

The company stated that it will be distributing its products in Germany and France directly. Through its exclusive local suppliers, the products will also be made available in other European countries and the Middle East. DT

# Thailand wins bid for 2015 FDI Annual World Dental Congress

***BANGKOK, Thailand/ ISTANBUL, Turkey:*** For the third time in five years, the Annual World Dental Congress of the FDI World Dental Federation will be held in an Asian country. An agreement between the Geneva-based dentists' organisation and the Dental Association of Thailand (DTA) to organise the 2015 edition in Bangkok was at this year's FDI congress in the Turkish capital of Istanbul.

It will be the first time that the South-East Asian country will host the prestigious international dental event. According to DTA President-elect Dr Adirek S. Wongsa, who spoke to Dental Tribune on Friday, his organisation has bid to host the congress in Thailand each year since 1999. It will be a unique event that will not only highlight the rapid development of dentistry in Thailand, but also bring all professions in dentistry together, he said. Preparations have already commenced and more information will be released in the upcoming months.

The congress in Bangkok will follow the 2014 edition, which is being organised by the Indian Dental Association and hosted in New Delhi. The FDI's most recent congresses in Asia were held in Hong Kong and Singapore. The Korean Dental Association won the bid to organise this year's congress in Seoul in South Korea but the event there was cancelled, and hosted instead by the Turkish Dental Association last week in Istanbul.

The DTA is currently organising its own dental event, the Thailand International Dental Congress, to be held in November this year. According to Wongsa, the event attracts around 3,000 dental professionals each year. Thailand has a workforce of 12,000 dentists. DT

*The FDI and the Dental Association of Thailand will organise the 2015 congress in collaboration. (Photo: Serban Veres, DTI)*

# FDI General Assembly 2013 - Corrigendum

FDI President Dr Tin Chun Wong officially began her two-year term on 30 August after a brief handover ceremony. A symbolic handover took place two days earlier during the official 2103 Welcome Ceremony. She takes over from outgoing President Dr Orlando Monteiro da Silva (Portugal).

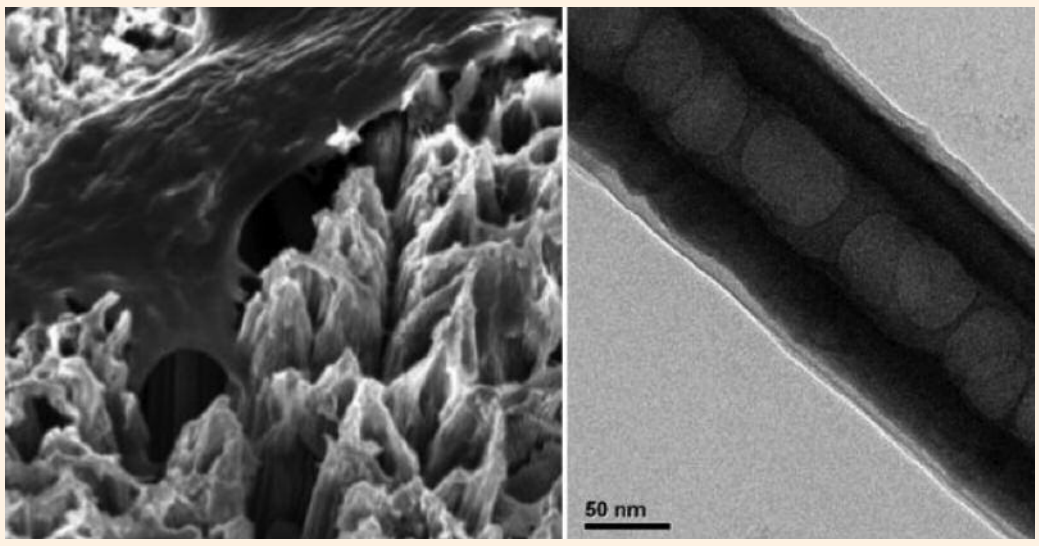
Dr Wong has played a key role within the FDI Council and Standing Committees over more than two decades. She was Chair of the 83rd Annual World Dental Congress held in Hong Kong in 1995.

Dr Wong is a former President of the Hong Kong Dental Association and of the Hong Kong Society of Orthodontists. She has been a Member of the Dental Council of Hong Kong since 1996 and is former Chair of its Preliminary Investigation Committee on Professional Conduct.

Dr Wong carried out her dental and orthodontic training in London, and has been in private orthodontic practice in Hong Kong since 1981. She is married to an architect with whom she has three children. DT

*FDI President Dr Orlando Monteiro da Silva hands over the FDI Presidency to Dr Tin Chun Wong at the FDI Annual World Dental Congress Welcome Ceremony, 28 August 2013.*

# New nanotechnology may help provide longer-lasting dental implants




*Left: A bone cell anchoring itself to the surface of titanium dioxide nanotubes. Right: A cutaway view of a titanium dioxide nanotube reveals the drug naproxen sodium inside. (Photo courtesy of Michigan Technological University)*

by Dental Tribune International

***HOUGHTON, Mich., USA:*** In order to lower the failure rate of dental implants, a team of researchers from the U.S. is currently investigating a new nanomaterial that may help fight bacterial infections after implant placement and improve bone healing around the implant. The researchers believe that their invention could help dental implants last a lifetime.

In collaboration with dental experts from the University of Illinois at Chicago, Dr. Tolou Shokuhfar, assistant professor at Michigan Technological University's Department of Mechanical Engineering–Engineering Mechanics, is currently working on an inexpensive and easy-to-produce dental implant surface made of titanium dioxide ($TiO_2$) nanotubes.

She has been researching the use of the nanomaterial for several years and has demonstrated that bone cells growth faster and adhere better to titanium coated with $TiO_2$ nanotubes than to conventional titanium surfaces.

Her research has also shown that nanotubes can be used as a drug delivery system to release naproxen sodium, an anti-inflammatory drug, gradually after surgery, reducing the risk of the unpleasant side effects that arise when drugs are injected orally.

In another study conducted by Shokuhfar involving orthopedic and dental implants, TiO2nanotubes were laced with silver nanoparticles. Owing to the antimicrobial properties of silver, the material proved to be effective in preventing biofilms, which are increasingly recognized as an important issue in dental health care, as they can cause serious infections, particularly around medical implants.

As the material is transparent, it also holds cosmetic advantages. Furthermore, Shokuhfar expects that $TiO_2$ nanotube implants will be easily accepted on the market because they would have the same appearance as conventional titanium implants. "A surgeon would not have to do anything different," she said.

According to a press release issued by Michigan Technological University, the researchers have received a provisional patent and are currently working with two hospitals to develop the technology further.

The research article, titled "Intercalation of Anti-inflammatory Drug Molecules within $TiO_2$ Nanotubes," was published in the October issue of the RSC Advances journal. The article "Biophysical Evaluation of Osteoblasts on $TiO_2$ Nanotubes" is currently under revision for the Nanomedicine: Nanotechnology, Biology, and Medicine journal. The paper "Survivability of $TiO_2$ Nanotubes on the Surface of Bone Screws" has been accepted by the Surface Innovations journal. DT

# Results from large international clinical trials provide dentists and patients with a new level of confidence in dental implants

**Basel, 6 August 2013:** Results from two of the largest international clinical studies performed to date with dental implants have just been published and demonstrate excellent clinical performance. Together, the studies have evaluated more than one thousand Straumann Bone Level implants in Europe, the US and Australia. The scope of these studies is particularly remarkable in view of the fact that most dental implant companies do not conduct clinical trials because they want to cut costs and do not have the capabilities.

The studies are also remarkable in that they both reported very high implant survival rates of more than 98% with practically no bone loss around the implants. The findings are considerably better than values reported in a comprehensive review of previously published studies with other implants[1]. The new studies add to the wealth of strong clinical evidence backing the Straumann dental implant system and thus provide very good reasons for patients and dentists to insist on Straumann implants rather than undocumented alternatives.

## The benchmark in clinical research

The first study was a randomized controlled clinical trial (RCT) at 11 clinical centers in Europe, USA and Australia[2]. RCTs are the benchmark in clinical research because they offer the highest level of clinical evidence. However, few are performed with dental implants and very rarely on such a large scale.

This RCT has evaluated 106 patients each treated with one implant and followed for three years. The investigators compared the outcomes of two different approaches – the first involving two surgical steps, in which the implant is covered with gum tissue ('submerged') during healing, and the second involving just a single step, in which part of the implant is left exposed ('transmucosal') thus saving a second surgical operation. The most impressive highlight reported was the fact that only a single implant was lost, yielding 3-year implant-survival rates of 98.1% and 100% for the transmucosal and submerged groups respectively.

Because bone loss around implants has been documented as a common undesirable effect of implant treatment[3], this study looked carefully at bone level changes. It showed that bone level was impressively stable over 3 years after implant placement, with mean decreases of less than 0.7 mm and 0.6 mm in the submerged and transmucosal groups respectively. These values are well below the data presented in previous studies with other implants. An analysis of published data showed that only three implant systems achieved mean marginal bone loss below 1 mm over a period of 5 years[1].

## Excellent results also achieved in everyday practice

While RCTs demonstrate that products or treatments work well, they are usually conducted by specialists in selected and strictly controlled populations. This study was performed by dental practices and University clinics that are highly specialized in dental implantology, which raises the question of whether its excellent results can be reproduced in daily dental practice. To answer this, a large study using the same implant was conducted in Europe and the US, in which the dentists had to follow the product guidelines but were able to use the implant as they would in normal daily practice. The strength of this type of investigation, which is known as 'noninterventional study' (NIS), is that it documents real-life situations, in which indications, patients and conditions all vary widely.

In this study[4], a total of 908 implants were evaluated in 538 patients at more than a hundred dental practices in six countries, revealing an implant survival rate of 98.5% after one year (the risk of failure is highest in the first year after implant placement[5]). Besides the very high survival rates, the bone level remained very stable in the majority of cases. The investigators therefore concluded that treatment with Straumann Bone Level Implants yielded very successful outcomes in 'real life' conditions.

## Results impress further when viewed in the context of other published data

The survival rates reported in both studies are higher than those documented in the literature. The most recent analysis of published data on other implants showed an overall implant survival rate of 95.5% one year after implant placement[5], in contrast to the 98.5% achieved in this NIS in daily dental practice conditions.

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# New treatment center, SINIUS TS, offers maximum flexibility

**Starting in October, Sirona will be rolling out the OTP version of SINIUS, which was previewed at the IDS. Its mobile support arm system means that dentists can adjust the center ideally to their individual working positions, allowing practitioners to work ergonomically at all times.**

***Bensheim/Salzburg.*** The SINIUS TS treatment center from Sirona sets standards when it comes to flexibility and the technical support of the most ergonomic working position possible: With the OTP unit, the tray can be moved in all directions independently, thus allowing it to be flexibly positioned near the patient without having to readjust the dentist element. This solution not only offers practitioners unique freedom of movement – it is also easier than ever to work in an ergonomic position in every situation. "With SINIUS TS, we have once again expanded the central theme of efficiency and flexibility, features that all SINIUS centers have. The capabilities of the OTP system help dentists to position all elements of the center optimally and ergonomically," says Susanne Schmidinger, Head of Product Management at Sirona.

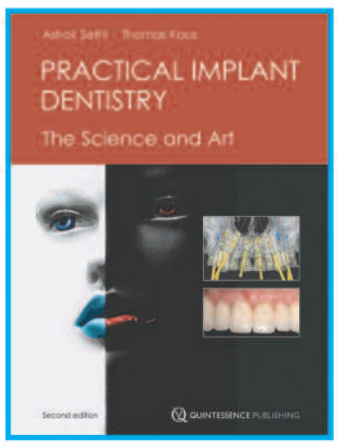
Flexibility is also the keyword for the additional design of the dentist element and tray: The dentist element is particularly suitable for treatments in the 12 o'clock position and can be easily moved in any other position. The 420 mm vertical range of movement allows the dentist to optimally adjust the element for sitting and standing treatments. Thanks to the practical clip system, the tray can be easily removed and cleaned. In addition, the large placement area on the dentist element and tray provide more than enough space. SINIUS TS has particularly compact dimensions thanks to its functional and space-saving support arm system. The unit can also be easily positioned in smaller rooms.

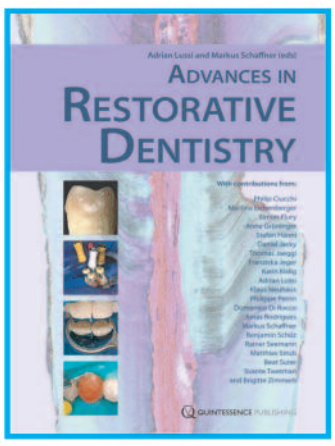
*The Sinius Ts treatment center.*

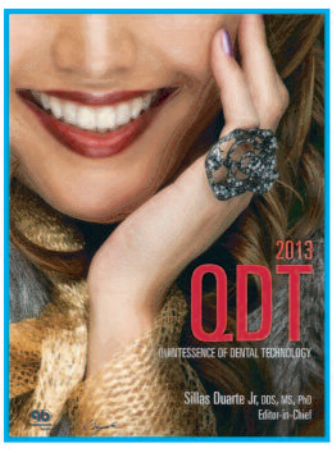
## Expanding the efficiency class

To date, SINIUS, Sirona's efficiency class, has been available in the sliding track and swivel arm versions (SINIUS CS). Like its siblings, SINIUS TS is equipped with the intuitive EasyTouch touchscreen interface, which also allows the dentist to control the optional integrated endodontics function with a stored file library and ApexLocator. To save time while complying with hygiene regulations, sanitation adapters have been integrated into the SINIUS centers, which makes sanitation bowls superfluous. In addition to the three versions (sliding track, swivel arm, OPT), with SINIUS dentists can also choose between six application packages and many individual options, and can configure their center to their exact requirements.

Quintessence Books



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