Combating peri-implantitis

By DTI

SEUL, South Korea: The most common cause of peri-implantitis is the formation of a biofilm on the implant surface. Researchers in South Korea have now tested a novel surgical procedure and shown promising results in combating this inflammation.

In two case studies of male patients over the age of 50 who exhibited severe peri-implantitis, the clinicians used the R-Brush (Neobiotech), a round brush with titanium alloy bristles, to clean the affected implant surfaces. In addition, a regenerative approach incorporating bone grafting materials was used to rebuild the bone surrounding the implant.

The titanium brush proved to be highly effective at removing biofilm from the implant surface, the researchers noted. In addition to eliminating the contaminated original rough surface, the brush created a new rough implant surface. This newly created surface made the regenerative process more successful and predictable, the follow-up assessment at three, six and 12 months after treatment indicated. During the two-year follow-up, the bone level was maintained.

The results are in line with those of previous studies that have shown that re-osseointegration can occur on surfaces previously contaminated by dental plaque and surrounded by a bone defect. Although there is no similar protocol in the treatment of severe peri-implantitis yet, the two cases in which the R-Brush was used suggest that open debridement may result in re-osseointegration and that this integration may be more pronounced on a rougher implant surface, the researchers wrote.

Researchers in South Korea have described the protocol for using a newly developed round titanium brush to clean and modify the contaminated surfaces of an implant affected by severe peri-implantitis.

Artificial blood vessels

US researchers have developed a revolutionary process by which to engineer new blood vessels in teeth using prevascularised dental tissue constructs. The technique involves placing a fibre mould made of sugar molecules across the root canal and injecting a gel-like material, similar to proteins found in the body, filled with dental pulp cells. After seven days, dentine-producing cells proliferated near the tooth walls and artificial blood vessels formed inside the tooth. “This result proves that fabrication of artificial blood vessels can be a highly effective strategy for fully regenerating the function of teeth,” said principal investigator Dr Luis F. Bertassoni. “We believe that this finding may change the way that root canal treatments are done in the future.”

Water fluoridation funding

New Zealand Health Minister Dr Jonathan Coleman has announced that the federal government’s 2017 budget will commit NZ$12 million (US$8.66 million) over the next four years to help build the infrastructure needed to fluoridate drinking water. “Increasing access to fluoridated water will improve oral health and mean fewer costly trips to the dentist,” Coleman said.

ADA: Dental Health Week

From 7 to 13 August, the Australian Dental Association will be celebrating Dental Health Week. Among other things, the campaign aims to motivate dental professionals to become more actively engaged with one another and with the community they serve. Dentists can find guidance on running their own events at www.ada.org.au/Dental-Health-Week.

Higher caries risk

ADELAIDE, Australia: A study conducted at the University of Adelaide has suggested that children who are breastfed for at least two years could be at a higher risk of dental caries. The researchers considered this finding against the children’s pattern of sugar intake from foods.

Dr Karen Glazer Peres from the Adelaide Dental School explained that children still breastfed at age 2 or older had an increased risk of developing dental problems, including teeth that showed signs of decay, were missing or had a filling.

According to the study, their risk of having severe early childhood caries was also 2.4 times higher compared with those who were breastfed up to 1 year of age. However, the researchers found that breastfeeding up to the age of 15–23 months had no effect on dental caries incidence. Overall, 1,129 children born in 2004 in Pelotas in Brazil, a community with a public fluoridated water supply, were included in the study.
A sweet remedy? New lozenges aim to tackle dental caries

By DTI

OSAKA, Japan: Osaka-based confectionary company UHA Mikakuto has introduced flavoured pastilles claimed to be helpful in maintaining a healthy oral flora. According to the company, its UHA dentaclear sweets contain a strain of lactic acid bacteria that is believed to effectively suppress the proliferation of pathogenic bacteria in the mouth and hence reduce the risk of dental caries.

The lozenges are available in yogurt or clear mint flavour and have been available from Japanese chemists and convenience stores since June. According to UHA Mikakuto, the incidence of caries and other oral diseases can be reduced by sucking the sweets after meals.

In addition to strains of Lactobacillus rhamnosus 181200, the pastilles contain various sweeteners, including 0.85 g of xylitol per lozenge. Xylitol has been shown to have caries-preventive qualities, mainly because most plaque bacteria lack the ability to ferment xylitol into cariogenic end-products. Other ingredients include crystalline cellulose, fine silicon dioxide and green tea extract.

The lozenges have a recommended retail price of ¥376 (US$3.75) per 13.9 bag. Further information can be found on the Japanese product website at www.uha-18020.jp.

UHA Mikakuto jointly developed the product with Prof. Hiroki Nikawa from the School of Oral Health Science at Hiroshima University and trading company Mitsui & Co. The idea of using the beneficial properties of L. rhamnosus 181200 to enhance oral health arose after Nikawa discovered the increased presence of the bacterial strain in research on patients with resistance to caries.

The lozenges have a recommended retail price of ¥376 (US$3.75) per 13.9 bag. Further information can be found on the Japanese product website at www.uha-18020.jp.

Dental tourism experts support Philippine mission

By DTI

PLYMOUTH, UK/MANDAUE CITY, Philippines: Supporting UK charity Dentalaid, two dental experts from Plymouth University Peninsular School of Dentistry will be bringing oral health care to one of the poorest cities in the Philippines. In addition to providing emergency and preventative dental services during their two-week mission, Dr Robert Witton and Ruth Potterton will be providing oral health education for the children and their teachers and set up a school toothbrushing programme.

The operation and project activities will be based around Uma-pad Elementary School in Mandaue City on the island of Cebu. This publicly funded school with approximately 1,500 pupils provides education to a group known locally as ‘scavenger children’, who live in and around the city’s dump sites and earn a living recycling other people’s waste.

“Our mission with Dentalaid is to get all the school children dentally fit,” said Potterton. “We’ll do this by offering pain relief treatment — where necessary, traumatic restorative treatment if possible, and fluoride varnish for all the children,” Potterton said.

The two Plymouth volunteers are among a wider group of relief teams who will be working together across a range of activities, including providing support in teaching English, IT equipment and community support training, and rebuilding after the region’s suffering from two major typhoons.

“For our dental team, the operation and clear mission of this trip is rather indirect: The signing of the MRA with the Philippines has enabled us to operate within the ASEAN framework, which is rather complex. Our Mandaue mission is not only about giving people a new smile, but also changing the awareness of dental health,” said Potterton.

Australian dental tourists tend to travel to a wide variety of places for cheaper procedures, from South East Asian hotspots like Bali and Thailand to eastern European destinations. Though it is in no way illegal to have dental procedures performed away from Australia — and the initial cost of the treatment may be relatively cheap — there can often be unforeseen complications that are unable to be handled effectively in the time span of the period abroad, the ADA warned.

“The decision to become a dental tourist usually comes to down to one simple thing — saving money,” said Dr Michael Foley, Vice Chairman of the ADA’s Oral Health Committee.

“While it’s true you may save some money in the short term, the reality is that things can go wrong and all those expected savings can quickly disappear and end up costing more than the holiday itself.”

In addition to procedural complications, dental tourists may be subject to less-stringent quality standards and lower-grade materials in comparison with Australian dentists. If a patient is dissatisfied with dental work performed overseas, the ADA cautioned, it can sometimes be extremely difficult to repair satisfactorily and may lead to the extraction of the affected teeth.
Labour migration still difficult

By DTI

CEBU CITY, Philippines: Aiming to facilitate dental workforce mobility among member states of the Association of Southeast Asian Nations (ASEAN), a mutual recognition agreement (MRA) for dental practitioners was signed by member economies in 2009. However, almost a decade later, the ASEAN community still sees far from realising the unhindered movement of skilled professionals.

Among other factors, the implementation of the MRA has reportedly faced difficulties because of differences in national regulations. According to Rahmat Pramono, representative of Indonesia to the ASEAN, implementation of services by medical and dental practitioners are among the most difficult to negotiate because of the different systems of instruction and curricula followed in each country.

According to a Migration Policy Institute report, titled Open Windows, Closed Doors: Mutual Recognition Arrangements on Professional Services in the ASEAN Region, dental, medical and nursing MRAs are the least open of those signed by ASEAN member states. Unlike their counterparts in tourism, for which the framework automatically recognises competency certificates as issued at origin, health professionals interested in working in another ASEAN country have to follow a complex application process. After obtaining a licence from their respective professional regulatory agency and meeting MRA-related criteria, such as minimum years of experience, applicants are still faced with additional local requirements, which vary from country to country.

In an interview with Philippine newspaper SunStar, oral surgeon and implantologist Dr Steve Mark Gan, the Philippines’ representative to the MRA on dental practitioners, pointed out that members of the economic bloc are still apprehensive about allowing foreign dental professionals to practise in their respective countries. “It’s a tricky situation right now. It may take some time,” Gan said.

While Philippine dentists still cannot work freely in the ASEAN region, the country’s own products remain among the world’s best, drawing dental tourists from the US and Australia, Gan remarked.

In 2015, medical tourism in the Philippines generated US$3 billion in revenue from about 200,000 tourists, according to data from the Department of Tourism. In the ASEAN community, Singapore and Thailand are the country’s strongest competitors in the field, but services in the Philippines still cost 40 per cent less, Cebu Daily News recently reported.

In addition to the MRA for dental practitioners, the Philippines has signed agreements for eight other professions, including surveying, engineering, nursing, architecture and accountancy.

However, so far, the ASEAN bloc has only managed to implement the MRAs for engineers, architects and tourism professionals.

Addressing the untapped potential of the MRAs to build and utilise human capital in the long term, Dovelyn Rannveig Mendoza, a senior policy analyst at the Migration Policy Institute and lead author of the above-mentioned report, said: “The greatest achievement of the ASEAN MRAs so far is rather indirect. The signing of these agreements has inspired a significant capacity-building effort in the less-advanced ASEAN Member States to upgrade professional regulation and training standards.”

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Researchers identify DNA sections responsible for periodontitis

By DTI

BERLIN, Germany: An international network of researchers led by scientists at the Charité—Universitätsmedizin Berlin in Germany has identified variations of certain DNA sequences that are clearly associated with an increased risk of developing different forms of periodontal disease. For at least two gene regions, the study team found a highly significant association with the disease.

In a genome-wide association study, the group, led by Prof. Arne Schäfer from the Charité Institute for Dental and Craniofacial Sciences, investigated the relationship between sequence differences in genetic information and the incidence of the disease in several thousand patients with aggressive and chronic periodontitis. The results were compared with healthy individuals.

“This type of study is very systematic in nature. It aims to identify the genes that have an effect on a person’s risk of developing a specific disease,” Schäfer explained. Millions of DNA sequence variants, distributed throughout the genome and describing most of a person’s genetic information, were examined in various patient groups. “DNA sequence variations can have an effect on a person’s risk of developing a particular disease. By comparing frequencies of variants in patients and healthy controls, it is possible to find which areas of a chromosome are associated with the disease,” he added.

The scientists found two gene regions that appeared to be associated with an increased risk of developing different forms of periodontitis. One of the two regions is responsible for the synthesis of alpha-defensins (antimicrobial peptides), which are produced by specialized immune cells. These immune cells, neutrophils, are part of the body’s immune response and are involved in the identification and destruction of microorganisms. The second gene region inhibits the activation of these immune cells.

“Our results show that the different forms of gum disease share a common genetic origin,” said Schäfer. He emphasised: “This means that there are groups of patients who are susceptible to developing gum disease, but whose susceptibility is independent of other risk factors, such as smoking, oral hygiene or aging.”

 Worldwide, the prevalence of severe periodontal disease is estimated to be about 11 per cent.

The disease is considered complex because individual susceptibility is determined by the interaction between the oral microbiome and the immune system, smoking and diet, as well as by metabolic disorders such as diabetes mellitus. The response of the body to these factors is largely influenced by the individual’s genetic make-up.

The study, titled “A genome-wide association study identifies nucleotide variants at SIGLEC5 and DEFA1A3 as risk loci for periodontitis”, was published in the July issue of the Human Molecular Genetics journal.

Less is more: Study looks into the traits of a “perfect” smile

By DTI

MINNEAPOLIS, USA: Lopsided, big, toothy—smiles are described in many different ways. However, according to research from the University of Minnesota, how people perceive the facial expression in social interaction and non-verbal communication can differ significantly.

In the study, the researchers asked 800 study participants to rate 27 computer-animated smiles on their perceived effectiveness (very bad to very good), genuineness (fake vs. genuine), pleasantness (creepy to pleasant) and emotion expressed (anger, contempt, disgust, fear, happiness, sadness or surprise). The animated expression was altered by variations in the mouth angle, the extent of the smile, the degree to which teeth were shown and how symmetrical the smile developed.

The findings suggest that for a winning smile—one that is perceived as effective, genuine and pleasant—less is more. In the study, smiles with a medium angle tended to be more favorably judged, while wide open-mouth smiles were often interpreted as a sign of fear or contempt. In fact, the two lowest-rated smiles were both very toothy.

Although research has suggested that facial symmetry is often perceived as being more beautiful than asymmetry, slightly crooked smiles were rated higher in the current study. According to the researchers, this result is consistent with principles of smile design, in which dynamic symmetry, that is being very similar but not identical, allows for a more vital, dynamic, unique and natural smile compared with static symmetry.

The study’s results could have broad applications in a variety of areas, such as facial reanimation surgery and rehabilitation in individuals who have suffered from trauma, cerebrovascular accidents, neurological conditions, cancers or infections that have robbed them of the ability to express emotions through facial movement.

The psychological and social consequences of facial impairment can be extensive. Research has shown that individuals with partial facial paralysis are often misunderstood, have trouble communicating, and often report symptoms such as anxiety and depression.

The study, titled “Dynamic properties of successful smiles,” was published on 28 June in the PLOS ONE journal.
Researchers at the Charité—Universitätsmedizin Berlin in Germany have identified DNA sections of a “perfect” smile.

By DTI

Researchers identified DNA sections of a “perfect” smile.

Researchers at the University of Minnesota investigated the traits that can distinguish a likeable grin from a grimace.

Asking participants to rate computer-animated smiles, researchers at the University of Minnesota investigated the traits that can distinguish a likeable grin from agrimace.

University of Minnesota, how people perceive the facial expression.

Toothy, shy—smiles are described.
“There are several barriers to using bones in useful age determination”

An interview with Prof. John Clement and Dr Rita Hardiman from the Melbourne Dental School at the University of Melbourne, Australia

By Kristin Hübner, DTI

With the Melbourne Femur Collection, the University of Melbourne holds a unique archive of human bone samples that has allowed for a multitude of interdisciplinary research projects in the past two decades. Dental Tribune spoke with Prof. John Clement, who has worked with the collection since its initiation, and Dr Rita Hardiman about its forensic and anthropological value and the experiences the dental profession brings to the methodological mix that help unlock the information recorded in the bone tissue.

The Femur Collection was initiated in 1991. Can you explain the initial purpose of the collection?

Prof. Clement: The initial purpose of the collection was to test the theory that femoral cortical bone microstructure could be used to establish age at death for an individual. This relied on being able to reliably measure the rate of turnover of bone during life, and age changes in the bone’s features. The aim was to collect samples of the midshaft of the femur covering the entirety of the human lifespan and both sexes. The femur was chosen because it is a durable part of the skeleton, likely to survive unscathed in cases in which deceased individuals are not discovered for a long time. These are also the cases in which an anthropological assessment of age at death is required.

Why is it located at the Melbourne Dental School?

Dr Hardiman: When the Femur Collection was initiated to try to determine a pattern of microstructural change to establish age at death, Professor Clement was working at the Victorian Institute of Forensic Medicine as a consultant forensic odontologist, as well as fulfilling his academic role at the School of Dental Science—as it was then called—at the University of Melbourne. The collection was established to answer questions about unknown deceased individuals’ identity, in particular: how old was the person when he or she died? This is part of the work of a forensic odontologist. I joined the collection at a later date, in 1998, to answer questions about sex differences and age changes in the cortex of the femoral midshaft.

Is there a similar collection elsewhere in the world that you know of?

Prof. Clement: Not such a well-documented, well-provenanced collection from recently living individuals, collected in accordance with national ethical guidelines and with explicit permission of the next of kin, for the express purpose of research into age-related changes.

How many individuals are represented in the collection today, and where were the specimens obtained?

Dr Hardiman: The collection represents over 600 individuals. Specimens are either physical samples of femoral bone or digital data recordings of microstructural features. The collection is currently used as an age determination, which is necessary, for example, owing to the rapid inflow of refugees into Europe, and the support of the Victorian Government and the Melbourne Dental School do have a commitment to this project, with coordinators and mortuary staff who collect and record a great deal of information about the bone donors in their care, and in the materials and artefacts that are associated with these remains. Data on socio-economic status, diet, environment, trauma, and infectious disease are all recorded in the collection.

“The next big step in the collection’s future is to couple the results of genetic investigations with the morphological outcomes from the bones.”

Fig. 1: Cortical thickness mapping of the proximal femur in women of different ages.—Fig. 2: Two rows of microradiographs of the femoral midshaft cortex illustrating the wide variation in bone structure. All from individuals between the ages of 18 and 80; top row men, bottom row women.
“The ultimate aim is to maintain people’s bone health throughout life.”

The collection is a rich source of information for researchers in various fields. What methodologies and experiences does the dental profession contribute?

Prof. Clement: Dental academics and researchers have a long history of intrepid research into all five types of mineralised tissues that are important in the jaws and faces of people, using a number of methodologies at the forefront of scientific technology. All research conducted on the collection is done with expert knowledge of bone growth and development and of age changes. This field of knowledge is one with which the dental profession is closely linked.

Just as with the femur bone, teeth are very resistant to decomposition and record a great deal of information about people’s lives. Given that you have all the information about the bone donors in the collection, have you ever considered doing cross-research with teeth samples to compare the teeth and bone findings?

Prof. Clement: The ethical constraints of this collection mean that we cannot do this for specimens we have collected so far. Besides that, removing teeth results in significant disfigurement—something we as researchers are reluctant to do unless absolutely necessary. Teeth are also able to be studied in living individuals, reducing the need to study extracted cadaveric teeth. Lastly, teeth are exposed to a variety of very different environmental factors, such as diet and habitual wear, thus not easily correlated with the changes in bone due to mechanical influences. Researchers at the Melbourne Dental School do have a keen interest in determining life histories through mineralised tissue, though, so I would be a very interesting idea for the future.

To date, over 80 papers have been published based on the collection. Could you name a few key findings?

Dr Hardiman: The key findings of research on this collection broadly relate to the ability to study features in recently deceased individuals from a prosperous urban environment that are impossible to study in the living. An example of a really interesting finding is that of the level of porosity in the cortical bone being a function of the size of individual pores, rather than pore density in the bone. More recently, researchers on the collection have been able to reconstruct the osteocyte lacunar network and the 3-D structure of Haversian systems at age determination using cranial sutures. Unfortunately, there are several barriers to using bones in useful age determination. The first is that there is no reliable method to determine age accurately within a reasonable range. The second is that any investigative technique that can be used on living individuals would not be sensitive enough. The third is that there are inevitably population differences in rates of change of bone features, and environmental effects that would probably confound any results, such as malnutrition and diseases that affect bone metabolism.

With the emergence of new digital technology, the collection probably offers the potential for even further discoveries. In your opinion, what do you foresee in this regard for the future?

Prof. Clement: The insights for the future will probably come from more precise mathematical modelling of the effects of physical changes on bone tissue. We now have the capability to work effectively with big data to predict changes in bone by inputting very detailed information about its morphological structure and the bone tissue’s physical composition. Perhaps soon we will be able to watch a skeleton ageing virtually and test the effects of preventative therapies on the structure of bone. The ultimate aim is to maintain people’s bone health throughout life so that everyone can remain as active and have as enjoyable, productive and long a life as possible!

Thank you very much for the interview.

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Inroads into Japanese market

By DTI

SEOUL, South Korea: South Korean dental implant manufacturer OSSTEM IMPLANT is aiming to increase its market share in Japan, OSSTEM Japan CEO Kim Hae-gon told the Korean Times in an interview. Among other measures, the company plans to almost double its Japanese offices, from 12 to 22, by 2019.

Currently, the company, which was founded in 1997, holds only 3 per cent of the Japanese implant market. However, building on its success in South Korea, where the market. However, building on its success in South Korea, where the implant manufacturer has 50 per cent of the market share in the segment, OSSTEM plans to slowly expand its presence and over time compete with premium competitors from overseas, such as Straumann and Nobel Biocare.

“Seoul-based discount implant manufacturer OSSTEM aims to make significant inroads into the Japanese market over the next several years. The key behind our success in Korea is our strategy of not taking excessive royalty profits, but instead, investing more in research and development to enhance product quality,” Kim said.

Compared with Europe and America, the demand for implants is not yet as high in Japan. However, it is steadily growing and the company is confident that it will reach its annual sales target of JPY’s billion by 2023. In 2016, OSSTEM Japan already generated JPY600 million (US$5.48 million) in sales, growing more than 150 per cent compared with its 2012 figures.

One reason for this success is the company’s focus on research and development, Kim said. Consequently, OSSTEM not only produces quality implants and dental equipment, but also puts emphasis on educating dental professionals in the field. For example, the company runs advanced education seminars for dentists wishing to learn surgical procedures for implant placement. “This is part of our efforts to raise the awareness of implants in Japan, which will also improve our brand image in the country,” the branch head remarked.

“It is true it will not be an overnight thing for us to make tons of profits in Japan in the next few years, but we are confident that the implants industry here will definitely take more concrete shape as time goes on. Our price-competitive and quality products will then pose serious threats to market leaders, as we had done with our products in Korea.”

MIS releases new EZ-Base abutment

By DTI

BAR-LEV INDUSTRIAL PARK, Israel: MIS Implants Technologies has announced the release of a new TiBase abutment that offers a solution for anterior screw-retained restorations. According to the implant manufacturer, restoration placement has never been simpler than with the EZ-Base system. The new abutment is designed for extreme angulation and offers safe handling within its screw channel. In addition, more angle options allow for greater comfort for the clinician performing anterior and posterior restorations with convenient handling and placement.

“It’s critical to keep our R & D in direct correlation with the market’s needs,” commented Dr Shelly Akazany, Implants Product Manager at MIS, on the launch. “Both screw-retained solutions and CAD/CAM technologies are in accelerated growth. The EZ-Base belongs to both worlds.”

The EZ-Base screwdriver features a unique tip that allows safe and reliable access from multiple angles, as well as gripping, tightening and loosening within the angulated screw channel with the convenience and at a torque similar to that of a straight screw channel.

According to the company, the system provides an entire range of possibilities for prosthesis restorations in the aesthetic zone. Whereas screw-retained restorations may not have been an option for many anterior cases in the past, the EZ-Base system now provides a solution. It may be used in a digitally planned procedure incorporating CAD/CAM technologies or using conventional methods.

Akazany explained: “It’s important for us, in the Products Division, to offer a broad range of prosthetic options in order to make the clinician’s life simpler, by having the most appropriate solution for each specific case without having to compromise. The EZ-Base system enables more freedom of choice and the ability to perform screw-retained restorations in cases that would have been previously ruled out.”

The EZ-Base system is available for narrow, standard and wide platforms and in both conical and internal hex connections. EZ-Base is also offered in both fixed gingival heights and adjustable options for optimal customization and convenience.
3Shape opens TRIOS for STL file export

By DTI

COPENHAGEN, Denmark: Danish digital dental solutions provider 3Shape has announced the opening of its TRIOS intra-oral scanner system for STL file export. According to the company, the export option will be included in a software upgrade for TRIOS users in the release of the new 3Shape Dental Desktop platform expected in the fourth quarter of 2017.

Currently, 3Shape only provides open STL CAD file export from its design software. With the addition of TRIOS STL export, both STL CAD files and digital impressions taken with the company’s TRIOS scanners will soon be available to dental professionals or laboratories using any system.

“As doctors and the industry in general, go more and more digital, the need for across-the-board seamless connectivity is essential. We believe that professionals should have the freedom to choose the partner and solution they want to work with. Whether it’s a dental lab or appliance-maker that needs a STL or DCM file for their workflow, or a preferred milling machine and 3-D printer, it should be up to the professionals to decide how and who they work with,” commented 3Shape co-founder and Chief Technology Officer Tais Clausen on the move.

However, data exclusive to the TRIOS system will not be available in STL format in the upgrade, the company pointed out. This includes features such as shade measurement, high-definition photographs, colour imaging, annotations and patient data, along with its colour digital impressions. This data will still be exclusively available as DCM files produced and used in the TRIOS system.

With the decision to open its systems, the Danish manufacturer is following the current trend to provide dental professionals with greater flexibility through completely open solutions. For example, competitor Dentsply Sirona just announced the opening of its CEREC system during the International Dental Show in March. Previously, CEREC impressions were automatically sent to the CEREC milling system, which prevented clinicians using other solutions for further processing of scans.
Digital dentistry community gathers for Singapore Dental Week

CAD/CAM and Digital Dentistry International Conference

By DTI

SINGAPORE: From 18 to 21 August, the fourth Asia-Pacific edition of the CAD/CAM and Digital Dentistry International Conference will bring together leading experts in the field of digital dentistry at the Suntec Singapore Convention and Exhibition Centre.

Over the last 12 years, new developments in CAD/CAM and digital dentistry have played a key role in underpinning the scientific understanding of dentistry. Thus, the conference programme aims to convey how to achieve effective results while updating attendees with the latest knowledge in this field. To meet this goal, the scientific committee has selected a multitude of scientific sessions, panels and problem-based cases that will provide intensive learning opportunities through hands-on experiences presented by practitioners in diverse disciplines, according to the organizer.

After the overwhelming success of the 2015 edition—which was attended by 780 dental professionals and 89 dental technicians—this year’s conference falls under the umbrella of Singapore Dental Week 2017 and will feature a series of specialty events. The main programme on 19 and 20 August is complemented by the first Digital Orthodontic Forum on 18 August, the Dental Technician Parallel Session and Table Clinic Presentations on 19 and 20 August, and a select offering of multidisciplinary hands-on courses.

Overall, this year’s scientific line-up consists of 40 presentations by 28 world-famous speakers on a range of topics, including chairside CAD/CAM solutions, smile analysis, prosthodontic dentistry and applications in digital orthodontics. Recent findings with clinical implications, marketing opportunities and emerging technologies will be covered through interactive sessions and live demonstrations, alongside essential update sessions and hands-on demonstrations.

An industry exhibition with over 40 leading dental manufacturers will be held alongside the scientific programme.

More information can be found on the event website at www.cpp-asia.com.

Visitors can also follow the conference updates on social media under #SDW and #CAD-CAMSG.

Safe high-speed preparation with W&H’s new Primea Advanced Air drive solution

BURMOS, Austria: With the Primea Advanced Air System, the first controllable air-driven high-speed drive solution, W&H is setting benchmarks in the dental market. According to the manufacturer, the new device allows dentists to work more quickly and safely with improved control owing to sophisticated sensor and digital airflow control technology.

In the field of dentistry, turbines are by far the most widely used drive solution for high-speed preparation. Yet, despite their popularity, dentists continuously come across usability limits due to the uncontrollable bur speed. By introducing the new Primea Advanced Air System, W&H now offers the first high-speed drive solution of its kind, breaking down all previous barriers.

Compared with traditional turbines, the innovative drive system provides new possibilities in practice. According to the company, the new functions of the Primea Advanced Air System offer turbine users absolute control and allow them to work particularly efficiently. For example, it is possible to excavate cavities effortlessly, easily remove old fillings and even cut crowns and bridges with ease, all without loss of speed. Constant cutting performance is ensured, even when pressure is increased, owing to the combination of an air drive and electronic controls.

The bur speed of the Primea Advanced Air turbine can be adjusted from 60,000 rpm to 320,000 rpm and remains constant at all times throughout treatment. The stability of the selected speed when varying pressure is exerted on the bur is ensured by sophisticated sensor technology in the head of the turbine and by the control module of the Primea Advanced Air System.

In addition to the innovative drive technology, the Primea Advanced Air turbine offers all the advantages of a W&H Synea Vision turbine. Ergonomically designed, light and perfectly balanced, it allows relaxed working without fatigue. In addition, the sterilizable 5x ring LEDS of the RK-97 L ensures perfect illumination. Dentists benefit from the completely shadow-free illumination of the preparation site, and patients from improved treatment safety.

Alternatively, the company also offers a turbine with a single LEDS, the RK-97 L. The integrated 5x spray with its five outlet nozzles ensures perfect cooling and cleaning of the treatment site. The turbines are very quiet and provide optimal tactile feedback. The special scratch-resistant surface coating guarantees particular durability and preserves the value of the instruments.

Furthermore, the Primea Advanced Air System can easily be used as an add-on version or integrated into new units or existing units as a built-in solution. This makes it possible to upgrade dental units with future-oriented technology, giving them a considerable innovation boost.

More information can be found at www.wh.com.
A restoration must be conditioned for a reliable adhesive bond between the luting composite and the hybrid ceramic. In a current in vitro study Dr Julián Conejo from the University of Pennsylvania is investigating how different types of conditioning and protocols influence the bond strength to the VITA ENAMIC hybrid ceramic (VITA Zahnfabrik). In this interview, he talks about his findings and what to consider when aiming for optimal results.

Dr Conejo, could you briefly explain the study methodology? What parameters were modified in the conditioning and pretreatment of the hybrid ceramic?

Seventy test specimens of VITA ENAMIC were etched for 20, 60 or 120 seconds with 5% hydrofluoric acid. The etched surfaces were cleaned either with phosphoric acid or in an ultrasound bath. For the study, including the control group with no pretreatment, seven different subgroups were formed. After the application of the bonding agent and the composite, the test specimens were stored in distilled water. The final shear strength was determined and the data was statistically analysed.

Based on your findings, how important is etching with 5% hydrofluoric acid for a reliable adhesive bond of the luting composite to the ceramic restoration?

It is very important to apply hydrofluoric acid to create a roughened surface for good micromechanical retention. All etched sample specimens showed a significant increase in bond strength to the luting composite. In order to ensure sustained clinical success of the restoration, hydrofluoric acid is a critical process step for the treatment provider.

Did the exposure time to the hydrofluoric acid affect the bond strength of the luting composite?

Different etching patterns on the test specimens were generated. Seventy test specimens of VITA ENAMIC were etched for 20, 60 or 120 seconds with 5% hydrofluoric acid. The etched surfaces were cleaned either with phosphoric acid or in an ultrasound bath. For the study, including the control group with no pretreatment, seven different subgroups were formed. After the application of the bonding agent and the composite, the test specimens were stored in distilled water. The final shear strength was determined and the data was statistically analysed.

Under the leadership of Prof. Markus B. Blatz, Chairman of the Department of Preventive and Restorative Sciences at Penn Dental Medicine (left), Dr Julián Conejo is currently investigating the properties of VITA Zahnfabrik’s hybrid ceramic VITA ENAMIC.

Achieving the best bond strength with VITA ENAMIC

An interview with Dr Julián Conejo from the University of Pennsylvania, US
“All etched sample specimens showed a significant increase in bond strength to the luting composite.”

How important is it to carefully observe the manufacturer’s conditioning protocol when applying hydrofluoric acid and bonding agents?

It is very important. Our results show that the current surface conditioning recommended by VITA Zahnfabrik enables the greatest adhesion and is the simplest. According to the instructions for use, the hybrid ceramic should be etched for 60 seconds. Afterwards, the silane bonding agent (primer) should be massaged in for 60 seconds.

In your experience, can the treatment provider have a positive influence on the adhesive bond with additional steps?

Not really. That was one of our hypotheses. Now, we know that additional cleaning steps after etching with hydrofluoric acid do not produce any significantly higher values. Neither the additional surface treatment with phosphoric acid nor the ultrasonic bath improved the adhesive strength values compared with the hydrofluoric acid etching. For a reliable bond, a clean, pretreated surface of the restoration is always important after the try-in.

Besides the conditioning of the restoration, what is important in the pretreatment of the tooth substance in order to achieve a good adhesive bond?

Isolation with a rubber dam allows absolute dryness and a clean working field. The surface of the preparation should also be conditioned with an adhesive system prior to attachment. This, in turn, makes a perfect connection between the hard tooth substance and the luting composite possible.
The reproduction of natural dentition
All-ceramic crowns in a complex anterior restoration

By Yuji Tsuzuki, Japan

The wide variety of materials and manufacturing techniques available provide the ideal fabrication method for every indication. In combination with dental technical skills and a good understanding of shades and colours, this leads to outstanding restorations.

Imitating natural dentition is the greatest challenge in the fabrication of prosthetic restorations. A natural appearance is always determined by a number of various characteristic features, so the technique applied for the reproduction of the teeth cannot always be the same. This is the reason that it is essential for us to observe, learn and recognise fine details and continue to develop, step by step, every day. The basis for imitating nature is an understanding of the characteristics of healthy teeth and of ceramic materials. The reproduction of light optical properties in particular is a challenge that requires an in-depth perception of colours. Properties such as light reflection, transmission and fluorescence contribute significantly to a successful result.

When imitating the light optical properties, the basic structure consists of three different layers: translucent, semi-translucent and opaque. The surface colour is then applied based on a 3-D colour concept. Even though state-of-the-art materials (e.g. polychromatic zirconium dioxide) have become very popular owing to advances in materials science, layering ceramic, built up by hand, is still indispensable for aesthetic restorations. In this article, well-proven techniques will be presented based on two case reports. The IPS e.max Ceram Selection Enamel and Effect materials were used together with the IPS Ivocolor stains and glazes (both Ivoclar Vivadent). Both situations proved to be a challenge in terms of the reproduction of light optical properties. However, imitating nature is possible!

Case 1
Initial situation and treatment plan
The approximately 50-year-old patient had suffered a fracture of the roots of teeth #11 and 21 as a result of an accident. The teeth could not be saved. After careful extraction, considerable resorption of the soft tissue at the labial aspect was observed. After consultation, the patient opted for implant treatment. Prior to this, however, an intervention had to be carried out in the area of the labial soft tissue. The aim was to adjust the gingival contours so that a perfect result could be achieved despite the high smile line. Owing to the advanced soft-tissue resorption, a removable implant superstructure made from gingiva-coloured ceramic was produced, taking aesthetic and hygienic aspects into account.

The two maxillary central incisors occupy an important position from an aesthetic perspective, since the prominence of these teeth expresses the patient’s individuality. Furthermore, the central incisors are the starting point for the continuity and symmetry with the other teeth. Therefore, restoration specifically requires these teeth to be unique and crafted carefully. In this case, from a prothetic perspective, it was important to integrate the asymmetrical anterior teeth. The mandibular anterior teeth were crowded and there was no contact with the antagonists.

For functional integration, the maxillary anterior crowns had to be placed in a narrow mesiodistal area. The implants were inserted in regions #11 and 21, taking surgical and prosthetic requirements into consideration (Fig. 1). After osseointegration, the implants would be restored with a splinted, screw-retained all-ceramic restoration (Fig. 2).

Inspiration during the build-up
When building up all-ceramic crowns, the following steps must be carried out with great care: (i) control of the opacity, which influences the brightness, and (ii) characterization of the incisal edge with translucent or opaque materials. Concerning the first point,
The individuality was shown here through the result. The natural tooth shade, it is important to ensure that the surface texture is adjusted to suit the oral environment. To allow the surface texture to appear as natural as possible, fine characteristics (e.g., surface gloss) must be imparted. The surface gloss changes the light reflection; it therefore affects the shade. For this reason, it is imperative to adjust the surface texture carefully. In this case, the IPS Ivocolor staining and glazing system was used for surface finishing.

Results
The finished crowns were screw-fixed to the implants and the result was assessed. The natural appearance was enhanced by a conscious asymmetry of the teeth, among other factors. The gingival contours were ideally adjusted. The teeth (crowns) and soft tissue complemented each other beautifully. The individuality was shown perfectly. Although this was a challenging and complex case, the results were pleasing for all involved.

Case 2
Initial situation and treatment plan
This patient was also around 50 years old at the time of treatment and came to practice with an aesthetic problem in the anterior region. The existing restorations on teeth #32–34 were defective and strongly discoloured and no longer suited the patient’s requirements. A slight overbite was noted. Tooth #32 had inadequate contact with the antagonist. In addition, vertical and horizontal restoration of the alveolar ridge in region #22 was observed. Resorption of the soft tissue owing to tooth loss also affected the situation (Fig. 4).

This patient needed extensive treatment in order to achieve an aesthetically pleasing result. An alveolar ridge augmentation procedure was thus first performed. On the basis of the pre-operative examination, a soft-tissue reconstruction was then carried out. The aim was to create a harmonious gingival area (Figs. 9a & b). In this case, sufficient tissue was important, since the horizontal restoration of the alveolar ridge adversely affected the vestibular extent of the crowns. By the time the temporary restoration had been made, the final result had already been defined and the framework for the final restoration planned. It should be pointed out that, in the case of aesthetic restorations, close cooperation between dentist and dental technician is essential. Of course, the patient too must be involved in planning and treatment. The treatment goals are determined together in order to achieve outstanding and satisfactory results for all involved.

Fabrication of the restoration
The frameworks (crowns and bridge) were produced from the lithium disilicate glass-ceramic IPS e.max Press (Ivoclar Vivadent; e.max Press offers countless possibilities for the production of aesthetic restorations. In this case, the framework was specifically reduced and therefore a perfect basis was created. The vestibular regions were then built up with ceramic layers. After the internal shade composition and adjustment of the tooth morphology were completed, IPS Ivocolor was used to replicate the surface characteristics. In contrast to conventional stains, these stains can be fired at a lower temperature (750°C). The reasons for staining are adjustment of the degree of saturation, characterisation and correction of the internal structure.
IPS e.max Ceram is a low-fusing ceramic. In order to adjust the surface texture during the glaze firing, it is necessary to handle it carefully and manage the firing programs. In cases such as this, in which a distinctive characterisation is required, the stain-firing sequence must be lengthened. Texture control then becomes more difficult. In view of this, IPS Ivocolor is a good product that allows characterisation at a low temperature. It can therefore be applied without losing the surface texture. During the final glaze adjustment, the delicate surface characterisations and the stained areas were retained. By applying the individual characteristics of natural teeth, we aimed to create a natural appearance. IPS e.max Ceram Selection was also used here. A successful combination of light transmission and reflection was achieved: a perfect reproduction of natural shade with the effect of depth (Figs. 12–14).

Conclusion

The most important advantage of IPS e.max Press is the combination of a high level of aesthetics and exceptional strength. Incidental light on IPS e.max lithium disilicate behaves in a similar way to that on natural teeth. This ensures maximum aesthetics. In addition, the material provides ideas and inspiration. The integration of IPS e.max Ceram Selection and IPS Ivocolor, as well as IPS e.max Ceram Power Dentin and Power Incisal ceramic, greatly expands the range of aesthetic possibilities. In the future, the clinical indications for the IPS e.max system will be increased even further.

Acknowledgements: We would like to extend our gratitude to Drs Hitroyuki Takino and Yusuke Yamaguchi, who provided the two patient cases.
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The Silk Road Economic Belt and 21st Century Maritime Silk Road (or Belt and Road Initiative) is a development strategy initiated by the Chinese government. With reference to the historic Silk Road, it focuses on connectivity and cooperation between Eurasian countries. At this year’s HKIDEAS, the Hong Kong Dental Association (HKDA) is hosting the Inaugural Belt and Road Oral Health Summit to foster exchange and cooperation between Hong Kong’s dental professionals and their counterparts from countries along these routes.

With presentations by oral health experts and representatives, the summit will give an overview of the current local developments regarding the dental profession and the oral health strategies in participating countries. According to the HKDA, it is hoped that the summit will generate synergies and enable both Hong Kong itself and the relevant regions to draw on each other’s strengths to ensure better oral health for their respective populations and formulate long-term dental health strategies that fulfill their corresponding needs.

Since the success of the first HKIDEAS in 2010, the event has become one of the most important meetings for the dental community in the region. HKIDEAS presents current expertise and knowledge in many dental disciplines and gives attendees the opportunity to deepen and broaden cooperation in many areas of importance to the future of dentistry. It is thus fitting that the theme of this year’s programme is “New horizon in dentistry”. At this year’s event, the exchange of ideas, continuing education and the presentation of new research in various fields of dentistry takes centre stage.

Running concurrently with the scientific programme, the trade exhibition showcases the most advanced technologies and products.

With your participation, I am confident that the congress will be a great success. Let’s join hands to ensure the continued advancement and success of the dental profession. We hope all of you will have a meaningful and fruitful meeting in Hong Kong.

HKIDEAS 2015: Dr Sigmund Leung, President of the Hong Kong Dental Association, during his welcome speech (left). *Representatives of the organizing committee with traditional lion dancers.

HKIDEAS 2017: An introduction to the trend of ageing populations and associated challenges for the dental profession, addressed in three lectures at HKIDEAS.

HKIDEAS is an excellent opportunity to see the latest technologies and achievements in the field of dental medicine.

From colourful Cantonese opera to the International Drummer Festival, find out what’s on in vibrant Hong Kong from 4 to 6 August.

Using synergies to promote oral health

Inaugural Belt and Road Oral Health Summit at HKIDEAS 2017

The Silk Road Economic Belt and 21st Century Maritime Silk Road (or Belt and Road Initiative) is a development strategy initiated by the Chinese government. With reference to the historic Silk Road, it focuses on connectivity and cooperation between Eurasian countries. At this year’s HKIDEAS, the Hong Kong Dental Association (HKDA) is hosting the Inaugural Belt and Road Oral Health Summit to foster exchange and cooperation between Hong Kong’s dental professionals and their counterparts from countries along these routes.

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In addition to serving as a starting point to foster exchange through which the strengths and needs in the oral health sector of the respective countries can be identified, the organisers believe that the initiative will benefit both the local dental profession and its counterparts along the belt and road by identifying key areas that necessitate improvement.

Depending on their actual situation, participating countries may highlight their experience in various areas related to dentistry, such as dental education, workforce status and planning, market supply of advanced dental equipment and technology, dental laboratory service, infection control, and the current state of dental services for underprivileged and vulnerable populations.

By taking the lead, the summit seeks to promote Hong Kong’s role as the super-connector and hence further advance the international status of the Hong Kong dental profession, HKDA stressed.

The summit takes place on 6 August from 9:00 to 12:45 in meeting room S428 at the Hong Kong Convention and Exhibition Centre.
Emerging challenges to health care professionals and policymakers

Introduction to Forum on Aging Population at HKIDEAS 2017 by Prof. Li-jian Jin, Hong Kong

The ageing population is increasingly becoming a critical issue in various countries and regions around the world, mainly due to a decreased fertility rate and increased life expectancy. Consequently, advocates for healthy ageing and effective care of the elderly are emerging great challenges to all health care professionals and policymakers. According to the United Nations, the current rate of population ageing has exceeded that of the last century. Notably, Hong Kong is becoming an ageing society with a significant increase in the grey population. The World Health Organization has strongly advocated for a life-course approach to healthy ageing, and the FDI World Dental Federation has recently released a global policy statement on the role of oral health care professionals in the promotion of healthy ageing globally.

During this year’s HKIDEAS, three invited medical and dental experts will be jointly addressing this notable issue opportune at the Forum on Aging Population.

Prof. Jean Woo, Director of the CUHK Jockey Club Institute of Ageing at the Chinese University of Hong Kong, will be highlighting the key issues and challenges of population ageing in Hong Kong, and elaborating on possible strategies to effectively deal with the challenges, via a model of medical social integration and promotion of a self-management scheme.

Dr. Kai Hang Yiu, from the Li Ka Shing Faculty of Medicine at the University of Hong Kong, will be discussing the challenges dental professionals are facing, and emphasizing the importance of health promotion and disease prevention through the collaboration of dental and medical professionals for maintaining natural dentition and contributing to healthy ageing.

Editorial note: The Forum on Aging Population takes place on 4 August from 16:30 to 18:00 in Hall 5G. Read more about the HKIDEAS 2017 scientific programme on page 6.
Periodontal health in focus at FDI congress 2017

From 29 August to 1 September, the FDI World Dental Federation is holding its Annual World Dental Congress (AWDC) in Madrid. For the sixth time, the organisation is hosting its World Oral Health Forum (WOHF) as part of the congress. With future initiatives in mind, this year’s forum will focus on periodontal health.

The WOHF was launched in 2012, inspired by the model of the World Economic Forum Annual Meeting, an initiative that engages the foremost political, business and other leaders of society to shape global, regional and industry agendas. The WOHF is in line with the FDI’s Vision 2020 initiative to shape the future of oral health.

Although generally a single-session format, the forum has also consisted of a number of sessions in the past, featuring diverse speakers discussing global challenges and opportunities related to oral health. The WOHF sessions typically include short presentations by the panelists on topics relevant to both dentists and the wider society, followed by questions and answers.

According to the FDI, the WOHF seeks to expose FDI members to matters not necessarily discussed at dental congresses and to attract audiences who might not regularly attend dental events. Panels are usually made up of one representative of an international organisation (such as UN agencies WHO, UNICEF and UNDP) or of a political body (like ministries of health, the environment, and the economy), one representative of the dental and oral health industry, one or two representatives from FDI membership and one representative of a non-dental organisation (such as cardiology associations and IT organisations).

Past forums have addressed topics such as the Minamata Convention regarding amalgam phase-down, guidelines on sugar intake and challenges of oral health care in an ageing society. The 2017 WOHF in Madrid, held on 31 August from 9:00 to 12:00, will explore the theme ‘Global periodontal health: Challenges, priorities and perspectives’. The panelists will discuss why periodontal diseases are an important topic to address and whether they are preventable and treatable. They will talk about current problems and recommended actions. Each presentation will be followed by a panel debate.

The FDI AWDC is held every year in a different country. Visitors can attend lectures given by prominent international speakers on the latest advances in dentistry and oral health. This year’s scientific programme will feature 47 expert speakers from 24 countries and cover nearly 30 major areas and topics of concern to today’s dental and oral health care practitioners.

The parallel Spanish programme will include 28 lectures by 25 speakers addressing 12 fields of dentistry, such as public health, dental materials, periodontics and restorative dentistry. In addition, visitors will have the opportunity to attend the accompanying exhibition and hands-on sessions according to their preferences.

The FDI Madrid 2017 App, with a detailed congress programme and exhibitor list, is now available for download.

More information on the WOHF can be found at www.dtiworlddental.org.

GC Chairman receives honorary doctorate

In acknowledgement of the long-standing mutually beneficial relationship between Japanese dental manufacturer GC and the University of Turku in Finland, GC Chairman Makoto Nakao has been awarded an honorary doctorate from the university’s Faculty of Medicine.

“For me, this is the most significant personal recognition that I have received,” Nakao told the audience at the conferment ceremony in Turku. Although it was not the first award given to him, his previous international honours were primarily from the business sector and from science communities and governments, he said.

The collaboration between GC and the university started in 1999. In cooperation with the Turku Clinical Biomatlas Centre, GC was able to further advance the development of preventive bioactive composites, among other things. In 2013, the fruitful cooperation led to the launch of a dental composite that has since won five different innovation and quality awards.

Playing a vital role in the partnership between GC and the university, Prof. Pekka Vallittu, director of the centre, said that GC is one of the world’s largest developers, manufacturers and sellers of oral biomaterials. Therefore, the cooperation helps ensure that science and research at the university remain updated on the needs of the dental industry.

This year, the medical faculty at the university only awarded one other honorary doctorate, to immunology and stem cell biology expert Prof. Irving Weissman from Stanford University in the US.

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*GC Chairman Makoto Nakao has received an honorary doctorate from the University of Turku.
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Ivoclar Vivadent acquires Swiss start-up Kapanu

Ivoclar Vivadent, one of the world’s leading dental manufacturers, has acquired the Swiss start-up company Kapanu, specialized in custom software solutions for desktop, web and mobile applications. Both companies intend to work together on the development of innovative dental applications.

Kapanu is a start-up and spin-off company of ETH Zurich, a science, technology, engineering and mathematics university. The company was founded in 2015 and consists of a team of scientists and developers who produce leading-edge software for the dental industry.

Ivoclar Vivadent and Kapanu plan to work together to develop innovative dental applications that connect real-life processes with the digital world. Their main objective will be to determine how the usage of augmented reality can facilitate dental diagnostics, case analysis and treatment therapies. Ivoclar Vivadent announced in a press release:

Further details of the acquisition were not disclosed.

Nobel Biocare offers quicker delivery for NobelProcera bridges

Nobel Biocare has announced that customers using the company’s NobelProcera solutions can now receive NobelProcera bridges in zirconia sooner:

Estimated delivery times have been cut from four days to three, helping dental professionals significantly reduce treatment times. The time-saving is the result of a concerted effort to further enhance efficiency at the NobelProcera production centres in Mahwah in the US and Chiba in Japan.

Victor Nieto, Vice President of Global Operations at Nobel Biocare, said: “We are pleased that we can now offer our customers high-quality NobelProcera bridges in less time. Time is precious for dental professionals and patients alike. Across Nobel Biocare, we are innovating to offer superior solutions that shorten treatment times. Providing precision-engineered restorations faster is an important part of this.”

Moreover, quality control is a priority for the teams at the NobelProcera production sites, where stringent procedures are in place to help ensure that customers receive only restorations of the highest quality.

In this regard, Belgian master dental technician Luc Rutten, who recently visited the NobelProcera facility in the US, stated: “The plant in Mahwah really impressed me. Quality assurance is there. Outstanding. After every step in the production process, they carry out a precision review. Rigorous accuracy is maintained at the level of a few microns. The result of the precision of the copings, abutments, bridges and implant bars in titanium and zirconia leaves nothing to chance—which means that I feel noth-

World Summit Tour heads to Shanghai

After hosting major events in Tokyo in Japan in February, San Diego in the US in May, and Nice in France in June, the 2017 World Summit Tour will make its final stop in Shanghai on 25 and 26 November.

Once again, attendees can again expect an extensive programme of scientific lectures by international and regional speakers, hands-on workshops on various solutions, as well as a display of Dentsply Sirona’s comprehensive portfolio. The company’s products cover the full range of implant treatment, including imaging systems for diagnostics and treatment planning, computer-assisted surgical procedures and bone regenerative materials, as well as a variety of patient-specific CAD/CAM prosthetic solutions, such as Atlantis and CEREC.

Congress participants will again be invited to view the poster exhibition, for which dental professionals can submit poster abstracts in the categories of clinical application and research until 15 September. The winning entries in the competition in both groups will be awarded €1,500 each.

With the World Summit Tour, Dentsply Sirona brings together current scientific news with the latest clinical and digital developments in implant dentistry.

The theme of the tour—“Because inspiration and confidence matters”—is intended to reflect the company’s dedication to improved oral health and enhanced quality of life for implant patients worldwide.

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Friday, 4 August
9:00–10:30
Endodontics vs Implants
Hall 5F (Parallel Session A)
Speaker: Dr Meetu Kohli
The Various ‘Ideas’ of a Hong Kong Implant Prosthodontist
Hall 5G (Parallel Session B)
Speaker: Dr Patrick Wu
10:30–11:15
Break
11:15–12:45
Modern Endodontics: Effect of Technological Advances
Hall 5F (Parallel Session A)
Speaker: Dr Meetu Kohli
Mastering the Art of Caries Management in Higher Risk Patients
Hall 5G (Parallel Session B)
Speaker: Prof. Jean Woo
12:45–14:15
Lunch break
14:15–15:45
Current Challenges of Modern Oral Diagnosis and Imaging using CBCT
Hall 5F (Parallel Session A)
Speaker: Prof. Michael Borsstein
Endodontics: Can We Do Better?
Hall 5G (Parallel Session B)
Speaker: Dr Alex Chan
Workshop 1: The Use of Diode Lasers in Clinical Dentistry
Meeting Room 5A225-4
Speaker: Dr Kenneth Luk
15:45–16:30
Break
16:30–18:00
Zirconia is Not Alike Glass Ceramics
Hall 5F (Parallel Session A)
Speaker: Dr Peter Pospelich
FORUM ON AGING POPULATION
Hall 5G (Parallel Session B)
Oral Health Care for Older People
Speaker: Prof. Frankie So
Oral Health and Aging Population: A Medical Perspective
Speaker: Dr Kai Hang Yu
Ageing in Hong Kong
Speaker: Prof. Jean Woo
Workshop 1: The Use of Diode Lasers in Clinical Dentistry
Meeting Room 5A225-4
Speaker: Dr Kenneth Luk
10:30–11:15
Break
11:15–12:45
Proactive Periodontal Care in Dental Practice: Challenges, Key Issues for Success and Perspectives
Hall 5F (Parallel Session A)
Speaker: Prof. Li-juan Jin
Complex Oral Rehabilitation Involving Dental Implants and Natural Teeth: Aesthetic Management
Hall 5G (Parallel Session B)
Speaker: Dr Keng-mun Wong
12:45–14:15
Lunch break
14:15–15:45
Mid-Facial Expansion and Airway Improvement with Micro-Implant (MI) Assisted Maxillary Skeletal Expander (MSE)
Hall 5F (Parallel Session A)
Speaker: Dr Peter Moy
Preparation Rules for CAD-CAM Restorations—Improving your Skills and your Teamwork through Practice
Hall 5G (Parallel Session B)
Speaker: Dr Alan Reid
Saturday, 5 August
9:00–10:30
Pink and White Esthetics from the Periodontal Point of View
Hall 5F (Parallel Session A)
Speaker: Dr Jeanette Chua
Genetics for Clinicians, What Dentists Need to Know
Hall 5G (Parallel Session B)
Speaker: Dr Thomas Hart
10:30–11:15
Break
11:15–12:45
Mid-Facial Expansion and Airway Improvement with Micro-Implant (MI) Assisted Maxillary Skeletal Expander (MSE)
Hall 5F (Parallel Session A)
Speaker: Prof. Won Moon
Traditional Techniques vs CAD-CAM Restorations. Nature vs Machines and Softwares. How Can We Combine both Worlds and Is Any of them Going to Prevail?
Hall 5G (Parallel Session B)
Speaker: Dr Eduardo Mahn
Workshop 2: Medical Emergency—Improving your Skills and your Teamwork through Practice
Tang Shiu Kin Hospital
Speaker: Dr Alan Reid
12:45–14:15
Lunch break
14:15–15:45
Workshop 3: Maxillary Skeletal Expander (MSE)
Meeting Room 5A226-7
Speaker: Dr Yu-chih Chiang
A Minimally Invasive Approach to Oral Rehabilitation Challenges in the Dentate Older Adult
Hall 5G (Parallel Session B)
Speaker: Prof. Patrick Allen
Workshop 3: Maxillary Skeletal Expander (MSE)
Meeting Room 5A226-7
Speaker: Prof. Won Moon
Summit: Inaugural Belt & Road Oral Health Summit, Hong Kong
Meeting Room 5A26
10:30–11:15
Break
10:45–12:45
A Comprehensive Review of Current Composite Technologies: How to Interpret the Scientific Data in order to Find your Ideal Material and Achieve Optimal Restorations?
Hall 5G (Parallel Session B)
Speaker: Dr Peter Moy
11:15–12:45
Use of Growth Factors for Hard and Soft Tissue Augmentation: Status Report
Hall 5F (Parallel Session A)
Speaker: Prof. Won Moon
Sunday, 6 August
9:00–10:30
Advancements in Surgical Implant Dentistry: Moving from Freehand to Guided to Navigational Implant Placement
Hall 5F (Parallel Session A)
Speaker: Prof. Won Moon
Management of the Unwell or Deteriorating Patient—A Practical Approach
Hall 5F (Parallel Session A)
Speaker: Prof. Won Moon
Professionalism in 21st Century Dentistry—Balancing the Risks; Delivering Oral Health Care
Hall 5G (Parallel Session B)
Speaker: Dr Stephen Henderson
What’s on in Hong Kong 4–6 August

Chinese Opera Festival: Battle of the Throne
Date: 4–6 August
Starting times: 19:30 Friday and Saturday | 15:00 Sunday
Venue: Friday and Saturday: Ko Shan Theatre, 77 Ko Shan Rd; Sunday: Yuen Long Theatre, 9 Yuen Long Tai Yuk Rd
www.cot.gov.hk

Established in 2010, the Chinese Opera Festival annually captivates audiences with a compelling mix of productions featuring opera genres from various parts of China, such as Beijing, Guangdong and Jiangsu. This year’s event will be even more festive, as it celebrates the 20th anniversary of Britain’s handover of Hong Kong to China. In addition to alternating shows, the festival will feature lectures, podium discussions, exhibitions and operatic film screenings aimed at providing an even deeper understanding of this beautiful opera feast.

On the programme this weekend is the opera Battle of the Throne, set in the Wanli period under Ming Emperor Shenzong. Blending old and new artistic elements, the palace drama follows two brothers that become enemies in their fight over the throne—a contemporary new classic performed in the format of traditional Cantonese opera.

Yesterday Once More—sky100 Observation Deck
Date: daily
Opening times: 10:00–22:30 Friday and Saturday | 10:00–21:00 Sunday
Venue: International Commerce Centre, West Kowloon
www.sky100.com.hk

The sky100 Observation Deck, located on the 100th floor of the International Commerce Centre—the tallest building in Hong Kong—is one of the city’s must-see attractions. This summer, however, visitors will not only be able to enjoy panoramic views of Hong Kong from 393 m above ground, but also be able to revisit the colourful story of the city with sky100’s summer installation: Yesterday Once More.

Take a trip down memory lane on Hong Kong’s old shopping street and see long-gone tenement buildings, retro signs and even an egg waffle cart to bring the golden seventies back to mind. In the installation Our Estate, Our Home, visitors can wander through a reimagined public housing estate, including a typical home setting, an old-time photo studio and a barber shop. This is a unique opportunity to experience the lifestyle of a bygone era and at the same time enjoy breathtaking 360-degree views of modern Hong Kong’s skyline.

Hong Kong International Drummer Festival
Date: 4 August
Starting time: 20:00
Venue: Kwai Tsing Theatre, Hing Ng Road
www.hkdrumfest.com

From the classical perspective, drums are seldom viewed as a solo instrument in the performance setting. The Hong Kong International Drummer Festival aims to change that. Featuring acclaimed national and international drummers in concerts and drum competitions, the festival—for the second time—aims to foster exchange between drummers from different music cultures, such as drum set, marching snare drum, timpani and Chinese drum, to nourish a unique Hong Kong drum culture.

One of the highlights of this year’s event is award-winning German drummer Benny Greb, who will take centre stage at the Kwai Tsing Theatre on Friday night. For the festival, the world-famous drummer and composer will be accompanied by his band Moving Parts, featuring British musicians Kit Downes on the keyboard and Chris Montague on the guitar.

With the combination of jazzy improvisations with electronic lucidity and snotty indie sounds, concertgoers will be left in no doubt about the musical diversity of drumming.
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