Dental researchers meet in Thailand

Chulalongkorn University to host AP meeting on science in dentistry

DT Asia Pacific:

BANGKOK, Thailand/GENEVA, Switzerland: The latest dental research from the Asia Pacific region will be presented in August when the International Association for Dental Research–Asia Pacific Region (IADR–APR) holds the second Asia Pacific meeting of the IADR in partnership with Chulalongkorn University in Bangkok in Thailand. Among other topics, new strategies for bone augmentation, and advances in the regeneration of dental and craniofacial tissues will be discussed. Other important topics are polymicrobial infections and the benefits of interdisciplinary research, the organiser said.

According to IADR–APR, more than 1,000 professionals from the region had already registered for the event in late July. With over 900 abstracts, submissions have also exceeded original projections. A large number of attendees from the host country, South Korea, Japan, and China are expected. In addition to poster presentations and scientific lectures, the event will feature a symposium on oral health research methods and an industry exhibition. Dental students with promising research will be competing for both the Joseph Lister and Unilever Divisional awards. The organiser said that this year’s meeting, to be held at one of the oldest universities in Thailand, will offer dental researchers and clinicians the opportunity to learn about the latest research and technological breakthroughs in the field of oral health.

The first Asia Pacific meeting of the IADR, which attracted 700 delegates, took place in 2009 in Wuhan in South Central China. Established in 1920, the region, which is part of the US-based IADR, currently comprises 4,000 members from all over Asia Pacific. According to its mission statement, the organisation’s main goal is to advance research and increase knowledge and understanding of oral health worldwide. Its general session, held annually in collaboration with the American Association for Dental Research, is one of the most recognised meetings for research in dentistry worldwide.

RCLM considered helpful in detecting metal allergies

Clinicians from universities in Tokyo and Kyoto in Japan have recommended reflectance confocal laser microscopy (RCLM) for evaluating allergic contact dermatitis owing to dental materials such as alloys. In a comparison test conducted by several members of the research team in 2010, RCLM demonstrated advantages over patch testing for visualising features of allergic contact dermatitis due to nickel and cobalt, two substances that have been found to cause the highest incidence of allergies in dental patients.

“While it might become a real-time diagnostic or adjunctive tool to identify a suspicious lesion or to delineate tumour margins,” RCLM still has limitations, such as the inability to detect deep objects in the dermis of normal skin, the researchers stated in the report. They recommended that in order to distinguish between different cells and determine pathological characteristics better, higher and better contrast is needed for these devices. Despite the increasing use of non-metal materials in dental treatment, contact allergies to different metals remain a problem for almost one in five dental patients worldwide.

Teeth confirm T. rex was a hunter

The crown of a T. rex tooth found in South Dakota in the US and lodged in the fossilised spine of a plant-eating hadrosaur provides direct evidence of the dinosaur’s predatory behaviour. Previous evidence of predation included only fossil discoveries with preserved stomach contents like bones.

Have better gums with vegetables

German researchers have reported that vegetarians have a better periodontal status compared with meat eaters. In a recent study, they showed less inflammation, less periodontal damage and better dental home care. Their dental status however was worse than that of non-vegetarians.

More demand for cosmetic procedures

Dental clinics in Singapore have noted a rise in demand of an estimated 25 to 50 per cent for cosmetic dental procedures in the last five years, according to a report by the online news platform AsiaOne. An increasing number of dentists refer patients to plastic surgeons for dental fillers to remove facial lines to patients to plastic surgeons for dermal fillers to remove facial lines to improve their appearance, the website cited Dr Gerald Tan, President of Aesthetic Dentistry Society Singapore.

According to Tan, especially women are more willing to undergo cosmetic procedures, such as having their gums reshaped with laser, because they are more aware of the importance of healthy smiles. Moreover, treatment outcomes have become more predictable owing to advances in dental technology, he added.
Participants will learn:

- To make intelligent purchase decisions
- To use digital and 3D radiography and associated implant and treatment planning
- How to best manage Diabetic Patients with Periodontal Disease and how Periodontitis can impact Diabetes control
- How to help diabetic patients maintain their periodontal health
- How to avoid diabetic emergencies in your office
- How to track a set of LEDs that send infra-red signals, giving students live feedback in a virtual simulation of a treatment area that includes a msnakin with an adjustable head and lifelike mouth.

The system has been used in dental education since 1998, when the University of Pennsylvania installed the first units in its School of Dental Medicine. It is backed by 56 studies and over 100,000 hours of student learning, the manufacturer said. According to DentSim figures, over 400 DentSim units are currently in use worldwide, primarily in dental schools in the US, Japan and Taiwan.

“By integrating state-of-the-art technology, advanced expert performance teaching methodologies and an innovative curriculum, Mahidol is setting a new standard for dental education,” Image Navigation CEO Lawrence Oshfield commented in view of the latest acquisition.

Virtual methods have increasingly found their way into dental education. Along with SimDent, a few other systems are available on the market, including the Simodont trainer by Dutch technology provider Moog, which is based on high-fidelity flight simulation technology and used by a number of dental schools in Australia (see page 5, DT Asia Pacific, Vol. 11, No. 1+2). 

**UPCOMING WEBINARS**

**25 SEP**

NEW TECHNOLOGY TRENDS IN DENTAL PRACTICE

Paul Feuerstein, DMD

08:00 PM (EST)

An introductory look at new canines detection systems (including early detection/CAMBRA/decalcification), 3D digital radiography ( Conebeam), digital impression systems and lab CAD/CAM.

Participants will learn:

- How to understand high tech diagnostic aids and digital impression/CAD systems
- To use digital and 3D radiography and associated implant and treatment planning
- To make intelligent purchase decisions

**05 NOV**

DIABETES AND PERIODONTAL DISEASE MANAGEMENT

Luciana M. Shaddox, DDS, MS, PHD

08:00 PM (EST)

In this webinar, the association between Diabetes and Periodontal Diseases will be elucidated, with special emphasis to how it impacts Periodontal health and the management of diabetic patients with periodontal disease.

Participants will learn:

- How does Diabetes impact Periodontal Health and how Periodontitis can impact Diabetes control
- How to best manage Diabetic Patients with Periodontal Disease
- How to avoid diabetic emergencies in your office
- How to help diabetic patients maintain their periodontal health and concomitant metabolic control

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Regional Offices

Asia Pacific

DT Asia Pacific Ltd.

c/o Tsunio Communications Ltd., 20A, Harvard Commercial Building, 115–111 Thomson Road, Phana, Hong Kong
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Thai university backs virtual reality simulation technology

Mahidol in Bangkok opens advanced training centre at Faculty of Dentistry

BANGKOK, Thailand: The Faculty of Dentistry at Mahidol University in Bangkok in Thailand has introduced computerised simulation technology to its dental programme. Since June, students at the faculty have been trained in the new Dental Simulation Centre equipped with 120 DentSim units, which was opened on the school’s 45th anniversary.

With more than 600 undergraduates, the faculty is currently one of the largest dental learning institutions in the South-East Asian country. Prof. Passiri Nisalak, dean of the faculty, said that the new technology, developed and marketed by US manufacturer Image Navigation, is going to enhance the learning experience for students through the simulation of a full clinical environment.

By using DentSim simulators, students will be able to develop their cognitive and motor skills in dental surgery, as well as other fields, such as implantology, periodontology, prosthodontics and endodontics, he said.

The school is estimated to have invested several million US dollars in the technology. The DentSim system is based on GPS technology and uses a camera to track a set of LEDs that send infra-red signals, giving students live feedback in a virtual simulation of a treatment area that includes a manakin with an adjustable head and lifelike mouth.

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Image Navigation’s Curriculum Development Advisor Laura A. Darnell demonstrating the SimDent technology to Mahidol clinicians.

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New Zealand changes rules for tooth-whitening products

In June, the Environmental Protection Authority (EPA) announced that restrictions will be placed on the sale of all tooth-whitening products containing more than 7 per cent hydrogen peroxide. In particular, products containing more than 7 per cent and up to 12 per cent hydrogen peroxide will only be available from a dentist, a registered oral health practitioner or a non-registered practitioner working under the supervision of a dentist. However, products with concentrations of less than 7 per cent will continue to be freely available on the market.

The EPA resolved that all tooth-whitening products containing hydrogen peroxide will have to carry safety warnings in the future, including a statement advising that the product is not recommended for children younger than 16.

"The EPA expects the industry to be ready to comply as soon as the new rules come into force, as the industry has had two years to prepare for the change," said Andrea Eng, the EPA’s General Manager for Compliance.

The rules were amended in response to concerns raised by the Dental Council of New Zealand and the Ministry of Health that tooth whiteners containing hydrogen peroxide may cause irritation to gums, tooth sensitivity, and more severe damage when used excessively.

Food waste used to make composite

KUBANG KERIAN, Malaysia: Synthesising silica for use in dental nano-composites through the sol–gel process is considered a time-consuming and often dangerous method owing to the toxicity of the materials involved. Researchers from the School of Dental Sciences of Universiti Sains Malaysia claim to have developed a more cost-effective and environmentally friendly method to extract the vital substance from rice husks, the outer shell of rice grains.

In Malaysia alone, an estimated 0.5 million tons of this crop residue from the milling of rice are discarded annually. The global annual production is estimated to exceed 100 million tons, resulting in a vast amount of organic waste in South-East Asia particularly, where it is used as fertiliser and insulation material, among other applications.

With a silica content of 10 per cent, it could be a low-cost source for the production of silica nanoparticles, which are the main component of composite fillings used in dentistry, according to project leader Prof. Ismail Ab. Rahman from the school. He said that production costs could be reduced by almost two-thirds using his method compared with conventional synthesis of silica.

The first dental composite produced from silica components acquired from rice husks was presented by Rahman and his research team at the 24th International Invention, Innovation and Technology Exhibition in Kuala Lumpur, where it was awarded a silver medal, among 1,000 innovations from around the world.

Rahman said that the material could be ready for market launch by as soon as 2016 and after it has undergone thorough testing on animals and humans. According to him, the material can last in the mouth for up to ten years, a life expectancy comparable to commonly used metal fillings, such as amalgam, and other composite resins.

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Daniel Zimmermann
Group Editor
Dental Tribune International

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With the Snowden revelations about the mass surveillance of online communication by the US National Security Agency and other intelligence services around the world, this perception has changed fundamentally. It clearly demonstrates that anything we do on the internet is made available on our blog on the World Wide Web.

It is more important than ever before to exercise extreme caution with digital client or patient data, who increasingly have to deal with forces we have no personal or legal control over.

For professionals like you who increasingly have to deal with digital client or patient data, this perception has become.

Yours sincerely,

Daniel Zimmermann
Group Editor
Dental Tribune International

Coming closer to simulating teeth

Dr Phattanapon Rhienmora
Macau

Dental education is a discipline in which a significant proportion of preclinical training requires trainees to depend primarily on tactile sensations to achieve a high level of precision. This makes haptics ideally suited for all kinds of dental training systems that will teach, provide practice in and improve tactile skills.

The ideal dental training simulators should provide sensations similar to those felt when executing the same procedure on a real tooth. Manikin-based dental training simulators, such as DentSim, allow procedures to be performed using real dental instruments; therefore, tactile feedback involved in simulated procedures is naturally provided. However, most manikin-based dental simulators use only disposable plastic teeth for training. While they are becoming more realistic and coming closer to simulating the real feel of actual teeth, it is still difficult to provide its level of detail and material properties. Using real teeth with such systems might be possible, but there are still problems regarding availability of extracted teeth in various conditions, sales and regulations about how they can be used, and standardisation.

The alternative dental simulators currently being developed and investigated by few research groups is haptic-enabled virtual reality dental training. In this kind of system, the trainer holds a haptic device style, which is a virtual representation of real dental tools and executes movements over virtual models of projected or on-screen human teeth. Some of these simulators use reconstructed virtual teeth from CT images of real teeth to simulate the tissues that form the tooth structure or even cavities. However, simulating realistic force sensations for different dental materials, instruments, and procedures is very challenging and still an active area of research.

Force-computing techniques currently used vary from basic spring force models to sophisticated methods involving CT density value and torque.

There is still room for improvement for both types of simulators in terms of haptic sensation. The manikin-based simulators will benefit from much more realistic plastic teeth that are not prohibitively expensive, and the virtual reality simulators need a novel, high-fidelity force-computing algorithm.

Advice on peroxide products not being recommended for children younger than 16 is appropriate, given the limited need for their use in this group of patients and the greater likelihood of pulp responses to reactive oxygen species. A period of two years to prepare for the change would seem more than ample for the required labelling changes to be made to dental products. Overall, these changes will protect the public from the indiscriminate and inappropriate use of bleaching products by aestheticians and others outside of dentistry, and are a good model for other jurisdictions to consider.

Contact Info
Prof. Laurence J. Walsh
Australia

Prof. Laurence J. Walsh is head of the University of Queensland’s School of Dentistry in Brisbane, Australia. He can be contacted at l.walsh@uq.edu.au.

Contact Info
Dr Phattanapon Rhienmora
Macau

Restricting sales of all tooth whitening products that contain 7 per cent hydrogen peroxide or more is logical, given that the well-accepted threshold level for soft-tissue adverse effects is 6 per cent. Higher-strength products with 7–12 per cent hydrogen peroxide should be limited in the control of a registered dental practitioner, who will take responsibility for appropriate diagnosis, product administration and monitoring, as well as appropriate follow-up care after bleaching. In my view, the restriction makes sense for the even higher-strength products, which are those typically used for in-office bleaching.

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The Koreans did a great job with putting together an outstanding scientific programme in which all the main issues in paediatric dentistry were presented. I think that everyone who attended this excellent meeting will remember it for a long time.

Sedation and early caries prevention were two of the main topics discussed during the congress. What progress has been achieved in these two fields over the last two years, and what new information was communicated in the presentations?

With the most important researchers and clinicians in both areas present, these two topics were discussed comprehensively during the meeting. According to Dr Stephen Wilson, Keira Mason, Leda Mugayar and Eduardo Alcaino, there is still a great need to improve the training of dental providers for the purpose of reducing adverse effects and improving sedation outcomes. In addition, new sedative agents were discussed that may improve the efficacy, quality and outcome.

With regard to early caries prevention, Prof. Svante Twetman from Denmark emphasised the importance of biofilm in dental caries and how we can prevent dental decay through measures like metabolic inhibitors, diet frequency interventions, saliva stimulation and anti-bacterial therapy. Special attention was given to the caries balance concept, and how we should strengthen the protective factors and avoid the pathological factors. The importance of risk assessment to determine the correct management protocol was discussed too.

Speaking of treatment concepts, what is your personal view of the use of dental implants in adolescents? Congenitally absent teeth is a common condition. When a patient is missing a tooth, you can either close the space orthodontically or you can replace it with an implant or a bridge.

The techniques and materials in implantology have improved so much in the recent years that the results obtained after placing implants and restorations thereafter are indeed impressive; however, there are many factors to consider regarding this option. In adolescents, we should wait until growth is complete to avoid problems with the position of the implant.

The congress paid tribute to genetics with a lecture series. How does this new field improve the understanding of processes in children’s dental health?

As we gain more knowledge about the way genes regulate normal and abnormal processes in the human body, we have more tools at our disposal to fight certain conditions and diseases. At the meeting, genetic factors in the development of enamel and other dental features, such as the size and number of teeth, were discussed.

It is very important to know that genomics plays a significant role in the development of caries. The information we gain in this area in the future will help in terms of personalised risk assessment, as well as disease prevention and treatment, as discussed in another lecture series.

Overall, we aim to contribute significantly to the improvement of oral health in children through our activities worldwide.

You have just taken over the responsibilities of the IAPD presidency from Dr Alaino from Australia. What are the most important issues that you feel need to be addressed in the years to come?

We will continue with the programmes the IAPD has developed in the past and include others that are aimed at strengthening our association. For example, we intend to organise more regional meetings, similar to those we held in countries like Russia, Brazil and India in recent years. We will also continue helping individuals from underdeveloped countries to attend our meetings and organise educational programmes in countries that need help in the field of paediatric dental care.

Furthermore, we want to increase the already huge IAPD membership by including more national associations and individual members, especially postgraduate students, who are the future of our specialty. In addition, increased participation of our members through our website, online lectures and other Internet resources will be promoted.

The International Journal of Paediatric Dentistry is one of the most important scientific publications worldwide in our field and we intend to continue supporting it.

Overall, we aim to contribute significantly to the improvement of oral health in children through our activities worldwide.

The oral health of children in underdeveloped and developed nations alike leaves much to be desired. Is there generally a lack of awareness?

Unfortunately, dental caries prevalence in many countries is almost 100 per cent, with little potential for improvement. We need better policies, greater involvement by governments, as well as resources to prevent and treat dental disease. A coalition between dental scientists, authorities, and institutions could improve oral health in many parts of the world.

Did the congress meet expectations with regard to the scientific programme and participation?

If this congress has demonstrated one thing, it is that interest in paediatric dentistry has increased all over the world. With more than 1,800 delegates attending from all five continents, the number of participants at this year’s congress undoubtedly exceeded the expectations of the local organising committee.

The Koreans did a great job with putting together an outstanding scientific programme in which all the main issues in paediatric dentistry were presented. I think that everyone who attended this excellent meeting will remember it for a long time.
Dental patients in the US receive millions in compensation

According to the online newspaper, Henri Duyzend had performed nearly 2,200 root canals on about 500 patients before he retired in 2007. So far, the state health department has received 76 complaints against the practitioner. One of his former patients reported that Duyzend made patients feel comfortable when he started his practice in Shoreline, Wash., in 1977. However, she started questioning his work about 15 years ago. “I was afraid to tell him anything was wrong with my teeth, because I was afraid he would say I needed a root canal,” said the woman, who had to have four of her teeth replaced with implants after having been treated at Duyzend’s practice.

In addition, Dr David To, the dentist who took over Duyzend’s practice, noticed a high number of patient infections from root canals that were missed, unfilled or not packed properly after the root had been removed, causing the patients enormous pain. To found that in five years the average patient had had four root canals performed by Duyzend, the Seattle Times stated.

The King County Superior Court found that the dentist had been negligent, failed to obtain informed consent from patients and committed fraud. The damages awarded to individual patients range from US$440,000 to US$2.09 million.

More options for atrophic patients

Researchers from the Cleveland ClearChoice Dental Implant Center reported on the results of the All-on-4 treatment used with the Nobel Active implant by Swiss-based dental manufacturer Nobel Biocare. After one to three years of follow-up of 227 implants, they found a cumulative implant survival rate of 98.7 per cent at the end of three years.

In the All-on-4 concept, four implants are used to support an acrylic, screw-retained provisional prosthesis, then a final prosthesis about four months later. Two of the implants are distally tilted in areas where bone height, nerve proximity, or other conditions make it impossible to place the implant axially. This tilting allows the placement of longer implants that have good anchorage in the best positions for prosthetic support.

Previously, standard practice called for dental implants of at least 4 mm in diameter. For tilted implants in particular, this was considered the smallest diameter that could guarantee sufficient anchorage. The NobelActive implant, introduced in 2008, made it possible to use a 3.5 mm diameter implant for patients with atrophic jaws.

With a variable thread and an inward-tapered collar, this tapered implant is self-drilling and condenses bone gradually. High torque values can be achieved, giving the implant high initial stability. Previous studies have found that failed implants using the All-on-4 method were a result of soft bone and lower insertion torque values.
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Mitsui purchases DENTCA shares
Japanese manufacturer acquires advanced denture technology

TOKYO, Japan/LOS ANGELES, USA: In order to strengthen its dental material business, Mitsui Chemicals, a Japanese manufacturer and supplier of chemicals, plastics and similar materials for various markets, has purchased 50.01 per cent of issued and outstanding shares of DENTCA, a US-based manufacturer and distributor of CAD/CAM dentures produced using the company’s proprietary 3-D modelling and printing technology.

As the dentures market is expected to continue to grow owing to an aging population worldwide and rising incomes in emerging countries, Mitsui Chemicals is targeting expansion of its global denture business through DENTCA’s denture design technology, which uses its own advanced material development and processing technology, to develop dentures that meet global needs, the Japanese company announced last week.

According to Minoru Koshibe, Executive Vice-President of Mitsui Chemicals, the overall aim of the company is to expand its portfolio in businesses resilient to changing economic conditions, such as health care. As part of the strategy, Mitsui Chemicals acquired the dental materials business of German Heraeus Holding in April.

The CAD/CAM DENTCA dentures are involved in just two visits using the company’s proprietary 3-D modelling and printing technology. As the first CAD/CAM denture company in history, DENTCA received the Pride Institute’s Best of Class Technology Award in 2012.

Lamoiyan expects losses in oral care
Cosmetics business to be expanded

PARAÑAQUE CITY, The Philippines: Owing to the reduced growth expected from its oral health care segment, Filipino toothpaste manufacturer Lamoiyan has announced plans to expand its portfolio of personal care products this year. In addition, the company is in negotiations with the government in Myanmar regarding a new production facility, president and CEO Cecilio Pedro recently told the Manila Standard newspaper.

Lamoiyan, which is currently estimated to hold a 15 per cent share in the Philippines’ P9.7-billion (US$218 million) oral health care market, which is dominated by global companies Colgate-Palmolive, GlaxoSmithKline and Unilever.

With a new joint venture between the Japanese Lion Corporation and Peerless Products Manufacturing in Pasay City, the country has seen the entry of another significant competitor recently.

Ultradent takes on market in China with new office
New subsidiary located in the city of Guangzhou

GUANGZHOU, China: US dental products provider Ultradent has recently opened its 11th international subsidiary in China. Located in Guangzhou, the new office is intended to achieve better coverage of the East Asian market through stocking of products and distribution to a larger number of dealers and customers, the company told Dental Tribune Asia Pacific in June.

Although the company has been selling its range of restorative, endodontic and tooth-whitening products to customers in China, growth has been limited in recent years owing to the small number of customers with the ability to import, according to the company. It said that its new Guangzhou office will allow for the storing of Ultradent products to ensure the availability of its full inventory and fast supply to its Chinese customer base.

In addition, the company said it will profit from favourable logistics and tax implications.

“Our investment in China is representative of what we feel is a very promising future for Ultradent products in this important market,” commented a company representative. “Having a local presence, including a warehouse, will allow us to offer a wider range of products, provide better customer service, and make our products available in parts of the country that previously did not have access.”

Adding further subsidiaries in China is not anticipated, according to the source. Rather, the focus will be on meeting the market’s needs, with Guangzhou as home base and sales personnel throughout the country to support Ultradent’s sales efforts. Besides sales, the new office will assume marketing, regulatory, logistics, and administrative responsibilities.

Prior to the opening, Ultradent had been working with several distributors in the country with geographic emphasis on eastern China. The company maintains ten other offices in Europe, Asia and South America.

According to its figures, 70 per cent of its products are exported to markets outside the U.S.
“Our problems in Asia are of mathematical nature and concern our business in Japan.”

An interview with Nobel Biocare CEO Richard Laube

Richard Laube has been CEO of Nobel Biocare since mid 2011.

With a record number of 2,000 participants, dental implant solutions provider Nobel Biocare held its second Global Symposium in the US in June. Dental Tribune Asia Pacific had the opportunity to speak with CEO Richard Laube about the state of his company, business in Asia and the newly launched Foundation for Oral Rehabilitation.

DT: Mr Laube, this is the first Global Symposium you are attending as CEO of Nobel Biocare. Has the event met your expectations?

Richard Laube: So far the meeting has been a pleasant surprise for us. We were sold out already in April and even had to turn 500 to 600 customers away. On the positive side, this makes it a real special event. We were a little bit nervous about the logistics, but all went very well. Speakers have also been extremely disciplined and very focused in their messages that they wanted to convey. I am only hearing good things from the participants.

You joined Nobel Biocare during turbulent times. What is the state of the company compared to when you took over as CEO in 2011?

It is true that we have been drifting over the years but we are back with patient-focused, clinically-relevant and evidence-based innovation. We are materially better shape today when I joined the company two years ago. The results from Q1/2013 were a pleasant surprise as we expected the numbers to be lower. We are seeing good things in our business and are confident we can keep this momentum going. We are seeing good things in Asia and the newly announced NobelProcera software platform.

We also have a couple of new announcements here. All this combined offers probably the most exciting product line-up in the industry and provides us with the opportunity of leading again.

Richard Laube: (DTIPhotos Fred Michmershuizen, DTAP)

DT: How do you think Nobel Biocare seems to struggle in Europe, while your figures show a positive rebound in other markets?

Richard Laube: Over the years we have been selling too many implants in Europe. As we were a little bit fooled by the negative press on dental implants, we were actually going down. As we are now starting ordering more when we are doing good things for them in the area of innovation, commercial relationship partnering programs, as well as in training and the education that we provide to allow them to treat more patients and do new things, it is a fact that there are only 11 to 12 per cent of licensed dentists in the world that are placing dental implants.

We grow when customers order from us and these customers are starting ordering more when we are doing good things for them in the area of innovation, commercial relationship partnering programs, as well as in training and the education that we provide to allow them to treat more patients and do new things. It is a fact that there are only 11 to 12 per cent of licensed dentists in the world that are placing dental implants.

Richard Laube: We grow when customers order from us and these customers are starting ordering more when we are doing good things for them in the area of innovation, commercial relationship partnering programs, as well as in training and the education that we provide to allow them to treat more patients and do new things.

I also think that we have good stability in the team which is very important. A workforce consists of business relationships and you can’t have that relationship by changing people.

You have been working for big corporations like Neute in the past. How does the dental industry differ from your previous working experiences?

It has taken me some time to adjust but I have been learning quickly for the team’s sake. Generally speaking, in work in the dental market is like a contact sport where you have to deal with customers on the frontline every day. Take this symposium for example, where 2,000 of our customers have gathered.

The size of Nobel Biocare is also much smaller and I learned the recent past, we have not taken on that challenge of helping dentists learn how to place implants properly. These are opportunities where we can also contribute to the growth of the total market.

With the NobelProcera 2G Scanner and a new open access partnership with iShape you have recently consolidated your foothold in dental CAD/CAM. How important has this field become for your company and will we see new products to be introduced for this segment in the future?

Richard Laube: We have a disproportionate market share in what we call complex screw-retained componentry. We can put together a 12-unit zirconia implant bridge with eight holes for any example, in a way that is very difficult to replicate by our competition.

Besides new third-party platforms, implant bridges and scanning design centers we presented at IDS in Cologne this year, we are announcing angulated screw channels here in New York. With this subtle but almost revolutionary development, we can now go in by 25 degrees on the back site or the tongue site and make access to screw-retained components much easier.

With the DENTSPLY-Astra Tech merger and growing competition from manufacturers in Asia, e.g. Korea, the implant market seems to be on the brink of major change. How do you evaluate the development of the market and how is your company positioning itself in the years to come?

We welcome any competition as it is beneficial for patients. Our challenge is to stay ahead and innovate. Implant dentistry is still a field that is emerging rapidly and transforming itself constantly through innovation. Our aspiration is to stay in front of that.

How does your company intend to return to sustainable growth?

We grow when customers order from us and these customers are starting ordering more when we are doing good things for them in the area of innovation, commercial relationship partnering programs, as well as in training and the education that we provide to allow them to treat more patients and do new things.

I would like FOR to give Nobel Biocare sweaty palms because they are talking about patient care in ways that the industry cannot deliver yet. FOR is supposed to always be a big step ahead of us providing us with the chance to develop new ideas and open new business opportunities in the future.

Thank you for the interview.
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**Noise comparison**

[Graph showing noise comparison between KaVo's MASTERtorque and other turbines]

*Compared to KaVo’s GENTLEsilence 8000 B*

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**Comparision of noise between KaVo’s MASTERtorque and other turbines**

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For more information: www.kavo.com
KaVo replaces GENTLEsilence 8000 turbine with MASTERtorque

KaVo introduced MASTERtorque in Germany in March, during the IDS 2013 held in Cologne. At the International Dental Show 2013 held in Cologne, SINGAPORE/BIBERACH, Germany: KaVo sells and distributes the MASTERtorque in all major markets. In addition to the regular version, special colour editions of the turbine are available in anthracite and brown.

Combined with an anti-reflux system, the feature is supposed to improve hygiene and increase the instrument's lifetime by preventing contaminated aerosols being drawn into the instrument.

According to KaVo, the new MASTERtorque runs at a maximum of 25 W, which is 20 per cent more power than its predecessor. Better visibility of the treatment area is provided by a smaller head and offset light and spray outlets that prevent glare. With a low noise level of 57 dB(A), the turbine is whisper quiet both during treatment and coast down.

The new high-end turbine will replace the GENTLEsilence 8000 and comes with a number of new features, such as Direct Stop Technology, which makes it possible to halt the bur's rotation in just one second. This allows the clinician to check the treatment site quickly during preparation with a reduced risk of injury and improved safety, the company said.

French scientist Louis Pasteur first used the word ‘fluoride’ in 1881. Since then, fluoride has become a standard part of almost every patient’s dental care.

Effective fluoride use is essential to maintain that healthy smile. But how do you maximize the patient’s tooth benefits? To help you promote the benefits of fluoride, KaVo created Fluoridation Fact Sheets that include information on the importance of fluoride in maintaining healthy teeth, different fluoride sources and how to use fluoride products effectively.

Indications for use:

- First advanced fluoride varnish optimized to provide valuable tooth-building ions of calcium and phosphate
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Fluoride uptake, release and diminished hydraulic conductance created in vitro, Enamel Pro Varnish displayed greater fluoride release than both 3M Vanish and Colgate Duraphat.

In a 2012 study evaluating incubation conditions on fluoride release in vitro, Enamel Pro Varnish displayed greater fluoride release than both 3M Vanish and Colgate Duraphat.

**To protect your patients’ teeth!**

Independent studies show Enamel Pro® Varnish delivers more enamel fluoride uptake and greater fluoride release than 3M Vanish™️.

**Distinguished:**

- First advanced fluoride varnish optimized to provide valuable tooth-building ions of calcium and phosphate
- Designed to create substantive forms of CaF₂ and ACP

**Indications for use:**

- Enamel Pro® Varnish is a fluoride containing preparation for the treatment of dental hypersensitivity, and for the reduction of post operative sensitivity.
- Enamel Pro® Varnish offers a nice esthetic appearance, is patient pleasing and has studies which support fluoride uptake, fluoride release and diminished hydraulic conductance.

**Fluoride Release**

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- Colgate Duraphat
- 3M Vanish
- Enamel Pro® Varnish

In a 2012 study evaluating incubation conditions on fluoride release in vitro, Enamel Pro Varnish displayed greater fluoride release than both 3M Vanish and Colgate Duraphat.

**New treatment room solution by A-dec**

Newberg, USA: Complementing its A-dec 500 and A-dec 500 product lines, A-dec’s latest treatment room solution is now available to dentists worldwide. The new A-dec 400 comprises a delivery system and dental chair and that, according to A-dec, exceeds industry standards for strength, rated for a 400 lb maximum patient load. Featuring an ultra-thin backrest, new armrest design and optimised positioning of controls and ancillaries, such as a monitor, light, control, cuspidor and assistant’s arm, the system was designed more ergonomically for better access to the patient and improved treatment room functionality, the company said.

The new delivery system for A-dec 400 comprises a delivery system and ancillaries that can be integrated into the delivery system and pre-wired for the touchpad controls. Moreover, the chair comes in a number of designer colour options, and can be covered with sleek seamless upholstery or plush sewn upholstery.

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Thriving on all-ceramics, Ivoclar Vivadent prepares for the future

Dental Tribune recently visited the company’s headquarters in Liechtenstein

DTI

SCHAAN, Liechtenstein: Walled off by the majestic elevations of the Rätikon mountain range and the Appenzell Alps, several industrial hydraulic mixers are continuously at work. Every now and then, a worker brings new barrels filled with raw materials that are turned into a new compound that forms the base for IPS e.max blocks from Ivoclar Vivadent.

Launched on dental markets for the first time seven years ago, the game-changing dental restorative system has earned Ivoclar Vivadent from the small European principality of Liechtenstein wide international acclaim as a provider of materials for highly aesthetic all-ceramic dental restorations. According to some industry sources, it has also defined the new gold standard in the field.

Comprising lithium disilicate glass-ceramic, zirconium oxide materials and veneering ceramics for the press and CAD/CAM techniques, it has an impressive clinical track record and has won the company a number of acknowledgments, including a Celebration of Excellence Award for Outstanding Innovation in Cosmetic Dentistry at the recent annual meeting of the American Academy of Cosmetic Dentistry in Seattle in the US in June.

With double-digit growth last year, the materials, whose composition remains a well-kept secret, have also become one of the company’s most important drivers of economic success. Ivoclar Vivadent held an international expert symposium last year in Germany for the first time that was focused entirely on the system and the treatment results dentists are able to achieve with it in daily practice. According to Chief Sales Officer Josef Richter, the system still has much potential.

"With IPS e.max, it is fair to say that we started a revolution in the field of fixed prosthodontics, as it provides a highly aesthetic and durable solution not only for single-tooth restorations but also for more complex indications, like three-unit bridges," he recently told Dental Tribune Asia Pacific.

In addition to the high market acceptance of its poster child product, Richter said that his company performed above the market average last year with its entire portfolio, including removable prosthetics and filling materials. Sales of clinical equipment and luting cements like Multilink Automix and Variolink II increased by over 10 per cent, he said, despite unfavourable conditions that made it more difficult for the company to operate in regions affected by the economic crisis, such as Southern Europe.

"Market reports from most of our offices show that fewer patients are currently visiting a dentist than potentially should, which is a matter of concern. As a result, we expect 2015 to be a difficult business year for the industry. However, expansion is still possible, if the market is growing slightly or at all," he predicted. "Driven by our core business and innovations, our goal is to come out higher than the market average next year."

Among the recent developments Ivoclar Vivadent launched this year is Tetric EvoCeram Bulk Fill, a further development of its nano-hybrid composite line, which the company says was designed with a powerful initiator for use with the bulk-fill technique and for tooth restorations in the posterior regions that are difficult to reach. It also introduced Silux Universal KFG, a golden, high-expansion universal casting for milling and the telescopic crown technique suited to veneering low-melting special ceramics, for example. The IPS e.max CAD range has been expanded and now covers all possible indications, from light veneers to hybrid abutments and bridges with three or more units. To make it easier for customers to navigate their way through Ivoclar Vivadent’s extensive product offering, the entire portfolio was redesigned into three main categories: direct restoratives, and fixed and removable prosthetics.

The company has invested heavily in its infrastructure recently, with €16 million reported to have been spent on a new building expanding its headquarters in Liechtenstein, which is intended to increase storage capacity and hosts high-end dental facilities where the latest developments are regularly put to the test under clinical conditions. Moreover, the manufacturing plants in nearby Bürs in Austria, where Ivoclar Vivadent produces dental equipment, such as its Bluephase curing light, and in Amherst near Buffalo in the US have been expanded too. New sales offices and subsidiaries are planned for Russia and Ukraine, among other countries, a step that will expand the company’s already large reach in 120 countries.

"A few years back, we decided to specifically target emerging markets, which now helps us to compensate for moderate growth in established regions like Europe or North America," Global Region Head Asia/Pacific Christian Brutzer explained. "In India, for example, we have grown from only 10 people in 2009 to more than 80."

According to Brutzer, the emphasis on increased local presence has not only facilitated growth in most of these regions, but also dramatically changed the way the company is perceived there. Education according to its own standards is considered a key factor for long-term development, a concept that has found its way into customer relationships through the establishment of International Centres for Dental Education, which are intended to offer training to existing and future customers through lectures and practical courses. Currently, the company maintains 25 of these centres worldwide, with the largest one in Schaan itself, where training laboratories are occupied almost around the clock by dentists and technicians from all over the globe.

"All of our subsidiaries or sales offices currently provide some form of training. No other company in the market invests so much in education," Richter said.

"The increase in solutions available on the market has led to confusion among many customers of what is right for them," he continued. "Therefore, we want our customers to understand the fundamental advantages that come with buying a product from us. In this respect, we see an opportunity to provide them with confidence and peace of mind."

Richter is confident his company can grow in 2015.

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Preparing crown margins that are defined, continuous and of the proper depth and position is a significant daily challenge in fixed prosthodontics. However, once these margins have been formed, capturing the margins with high fidelity in an elastomeric impression can be just as challenging.

A survey conducted by Gordon Christensen that was published in the *Journal of the American Dental Association* reported that the most frequently reported problem encountered by laboratory technicians fabricating fixed prosthodontics was the poor quality of the impressions. Subsequent studies have shown that the poor quality of impressions for fixed prosthodontic procedures is prevalent and of significant concern. There are many factors that contribute to inaccurate impressions; however, the most observable problem would appear to relate to accuracy of capture of the margin finish line.

The margins of a crown preparation can be difficult to capture in an impression owing to inadequate soft-tissue retraction, to moisture or to poor control of bleeding. Traditionally, using retraction cord has been the preferred means of achieving both tissue retraction and haemostasis. A survey of over 1,200 members of the American College of Prosthodontists (all specialist prosthodontists) found that 98 per cent used retraction cord. Of those using cord, 81 per cent soaked it first in a haemostatic solution, and 55 per cent of those who soaked their cord used aluminium chloride.

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Placing a retraction cord is a precise procedure that requires the placement of the cord at the level of the preparation and within the confines of the gingival sulcus. Finer, braided cords are easier to place, and, similarly, fine placement instruments are required. The cord should retract the tissue horizontally, not displace it vertically. Practice is needed to allow the clinician to rotate and roll the cord as it goes into the sulcus, and the cord must remain in the sulcus for longer than 10 minutes to achieve effective retraction and haemostatic control.

This complicated and time-consuming process has encouraged the development and adoption of alternative, cordless retraction techniques. Expanding polyvinyl siloxane and kaolin-based paste materials have been introduced to the market with the claim of faster, easier and more effective retraction. A recent study has hinted that these materials may be even more efficient, as they stimulated bleeding in the gingival sulcus less often either during placement or immediately after removal, compared with retraction cord.

The following case report describes the use of Traxodent (Premier). The material is a clay-based paste that contains 15 per cent aluminium chloride. The paste is delivered to the sulcus directly by syringe as an alternative to the use of a separate haemostatic solution and retraction cord. It can be used alone for haemostasis or in combination with Retraction Caps (Premier) if greater retraction is desired. It is recommended that the paste be left in place for two minutes before rinsing it off.

**Clinical case**

A patient presented with symptoms associated with gross caries in the distal area of the mandibular right second premolar (45). He was referred to an endodontist and the tooth was subsequently root-canal treated (Figs. 1–3). Following the root-canal treatment, the tooth was restored with a direct post and core, then prepared for a Lava Zirconia crown (3M ESPE). The extent of the caries meant that the distal margin was very deep and in a subgingival position. This resulted in significant bleeding because gingival curettage was performed with a preparation bur (Figs. 4 & 5). Significant haemostasis was needed; therefore, Traxodent was syringed directly into the gingival sulcus and left in place for two minutes before rinsing it off.
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Infection Control
The Traxodent was then rinsed off, and the bleeding was observed to have stopped (Figs. 9 & 10). A retraction cord then was placed and the impression taken.

Approximately four weeks later, the patient returned for seating of the definitive crown. At this appointment, the soft tissue had healed very nicely, with no residual inflammation and no recession. The crown was adjusted and seated, and the procedure was performed in a healthy gingival environment (Figs. 11 & 12).

**Conclusion**

I have found this material to be invaluable in situations where there is excessive gingival bleeding. In particular, when necessity has meant margins are placed deep subgingivally or electrosurgery has been performed, I have observed Traxodent to work very quickly and effectively in controlling the bleeding in these instances.

The last six case images (Figs. 13–18) demonstrate a maxillary right first premolar that lost its palatal cusp through fracture nearly 3 mm subgingivally. A combination of electrosurgery and tooth preparation resulted in a significant amount of bleeding, which was arrested by the application of Traxodent for two minutes. Once the Traxodent had been rinsed off and the surface dried, the clean, dry tissue surface then facilitated an accurate impression for the fabrication of a gold post and core. The final crown was subsequently made and cemented in place.

**Acknowledgement**

I would like to thank the teams at Prestige Milling Services and Slater Dental Studio for their excellent technical skills in ensuring successful restoration of these two challenging cases.

**Editorial note:** A complete list of references is available from the publisher.

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**Contact Info**

Dr Michael N. Mandikos maintains a private dental practice in Graceville in Australia. He can be contacted at info@brisbaneprosthodontics.com.au.
The new Assistina 3x3 cleans and maintains up to three instruments automatically. Automatic internal and external cleaning, short cycle time, easy to use: perfect preparation of straight and contra-angle handpieces and turbines for sterilization.

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Resin-bonded bridge—A patient-friendly prosthesis

Although resin-bonded bridges were introduced over 30 years ago, there is little data on their longevity. However, recent systematic reviews have estimated their five-year survival rates to be 87.7 per cent. Although this is comparable to the 90 per cent survival rates of conventional bridges, dentists often question whether resin-bonded bridges are reliable for restorations.

The main reason for the failure of this type of treatment is the debonding of the metal framework from the abutment teeth. The selection of non-mobile abutment teeth, preparation to enhance retention and resistance, the selection of appropriate materials, and tooth bonding techniques are essential to success.

In this article, a uniquely designed resin-bonded bridge, patented in the US (no. 6,394,810 B1) and Germany (no. DE 100 55 435), will be discussed. It is simple and only requires minimal tooth reduction, and is therefore a patient-friendly prosthesis.

Dr Yong-Keun Lee
South Korea

Other advantages of this design include ease of maintenance, the absence of a gingival metal line typical of porcelain-fused-to-metal restorations, and the realistic shade simulation of the artificial tooth. In addition, should failure occur after bonding, the natural teeth can be restored easily.

As shown in Figure 1, the design consists of an artificial tooth (20) and a pair of small inlay-type metal wings (22) bonded at each abutment tooth separately. The prosthesis comprises an artificial tooth that replaces a missing tooth or teeth, which is secured and bonded between two abutment teeth.

In order to secure the artificial tooth and abutment teeth, a pair of coupling elements are used.

The artificial tooth includes female coupling elements at both sides and a pair of wings with a male coupling element, which are bonded to each abutment tooth independently with a resin-based cement.

The artificial tooth, which is made of a suitable material such as metal or metal-ceramic combination, is bonded to the abutment teeth independently to resist occlusal forces.

As shown in the illustration, the artificial tooth is independently secured using a pair of inlay components (22), which are bonded to the abutment teeth. The two wings have pins that are inserted into holes drilled in the enamel to form a male attachment, which are cast in one piece. Each inlay wing has an H-shaped key in cross-section (fitting part), which is inserted into the fitting groove in the artificial tooth.

Each inlay component has a fitting part (27) and a securing pin (25), the design of which is parallel to the occlusal plane instead of downward. This pin design, resistance to occlusal forces is improved after the artificial tooth has been secured to the abutment teeth. In order to prepare the abutment teeth, two pinholes are made in the abutment teeth. In other words, two pinholes are prepared in the adjoining surfaces of the abutment teeth so that the pulp of the abutment teeth is not damaged.

Each pinhole is prepared in such a way as to have an inner diameter of around 1 to 1.5 mm and a depth of around 1.5 mm.

After drilling the pinholes in the abutment teeth, the inlay components are fabricated following the usual impression-taking procedures using a suitable elastic impression material, then making a wax-up and a cast with precious or base metal alloys. In case of the artificial tooth, a wax-up and cast are made, and/ or porcelain build-up procedures are performed.

After fabrication of the inlay components and artificial tooth, close fit of the male and female coupling elements should be checked. Therefore, the inlay components are bonded to the artificial tooth with resin-based cement, and the artificial tooth is bonded with the same cement.

The remaining procedures are similar to those of the conventional prosthesis.

This method is similar to crownless bridge work (CBW), in which inlay components and an artificial tooth are fabricated separately. In CBW, ready-made inlay components (CBW anchors) are used instead of individually cast components of the current design, and the direction of the securing pin is parallel to the occlusal plane instead of downward.

With the current design, the dovetail shape of the fitting part (27) and fitting groove (25) ensures that the artificial tooth is mechanically secured in addition to the cemental bonding.

A complete list of references is available from the publisher.
HKIDEAS · Hong Kong · 9–11 August, 2013

Independent news for visitors and exhibitors

Oral health in Hong Kong remains poor

Nine out of ten people in the SAR suffer from oral diseases according to new report

Despite preventative measures such as full water fluoridation and school-based dental care services, the oral health status of most people in Hong Kong still leaves much to be desired. According to a report by researchers from the University of Hong Kong’s Faculty of Dentistry, published in the latest edition of The Surgeon, dental diseases affect a significant number of people living in China’s special administrative region.

Among the paper’s findings, caries prevalence was high in all age groups, particularly in the adult population, where eight to nine people out of ten have carious lesions. Children seem to be less affected by tooth decay with prevalence being lowest in 12-year-old schoolchildren. About 50 per cent of preschoolers, however, have caries, which is largely left untreated, the report states. A significant number of youngsters have periodontal disease, with only 6 per cent reported to have healthy gums. A good periodontal status also remains a rare exception among adults and the elderly, with the overwhelming majority experiencing regular bleeding and other symptoms of the disease.

Moreover, the report indicates that oral health is not considered a priority by most Hong Kong people. Awareness of preventative measures other than toothbrushing is very low, and most people skip flossing and do not have their teeth professionally cleaned. Lead author of the report and University of Hong Kong professor Dr Chun Hung Chu told Dental Tribune Asia Pacific that although there are currently no studies exploring the relatively low awareness of oral health benefits in Hong Kong there is a widespread traditional belief among the local Chinese community that tooth loss is a natural result of ageing. Other studies have suggested that financial constraints might be a significant reason for people staying away from the dentist.

“One has to say that awareness of the benefits of good oral health is generally improving, especially among the educated groups,” Prof. Lakshman Samarawayake, Dean of the university’s Faculty of Dentistry, said. “The dentists who deliver the major share of dental services, however, need to convey the message to the public that oral health is intimately related to systemic health and quality of life.”

Dental care in Hong Kong is primarily performed by private practitioners, with only one dentist per 4,000 people. Out of 2,320 registered dentists in 2012, slightly over 300 were in public service.

While Hong Kong has been providing basic services performed by dental therapists to children under the age of 18 through its School Dental Care Service since the 1980s, costs for more advanced treatment have to be paid privately. A three-year pilot project however is currently underway to extend primary dental care services to the elderly.

Useful information

Congress registration

Onsite registration is possible from Friday to Sunday, between 8.30 a.m. and 9 a.m. The following fees apply to visitors of HKIDEAS 2013:

- **Dentist** (HK$2,000/US$260)
- **Dental office personnel** (HK$2,000/US$260)
- **Dental surgery assistant** (HK$600/US$80)
- **Dental technician** (HK$500/US$60)
- **Dental therapist** (HK$600/US$80)
- **Undergraduate dental students** (HK$500/US$60)
- **Registered nurse** (HK$600/US$80)
- **Trade & industry representative** (HK$780/US$100)
- **Accompanying person** (HK$400/US$50)

Opening times of the exhibition

- 9 a.m.–6.30 p.m.

Official language

- English

CME/CPD

Delegates who have registered for the congress are eligible to receive continuing education points (six points maximum per day) by attending scientific sessions during the meeting.

Food & beverages

The Hong Kong Convention and Exhibition Centre provides delegates with a number of dining options. Enjoy authentic Cantonese cuisine at the Golden Bauhinia Cantonese Restaurant, or down at the Port Café for a quick coffee or just to marvel at the magnificent view. Most restaurants are located at Ground level.

Disabled access

All entrances of the Hong Kong Convention and Exhibition Centre are ramped. Lifts can also accommodate wheelchairs.

Emergency numbers

- **Police, fire, ambulance:** 999
- **Police Hotline:** +852 2527 7177

Information provided in this section is subject to change.
“Raising the standards of dental knowledge and care”

An interview with HKIDEAS chairman Dr Nelson C. W. Wong

Dr Nelson C. W. Wong, HKIDEAS chairman, about this year’s edition and prospects for the event.

HKIDEAS is the Hong Kong Dental Association’s (HKDA) annual dental show and has been held since 2005. Today international spoke with HKDA vice-president and chairman of the organizing committee, Dr Nelson C. W. Wong, about this year’s edition and prospects for the event.

Dr Nelson C. W. Wong: HKIDEAS provides a valuable platform for all members of the dental profession to gather for three days of learning and exchange.

Usually, practising dentists in Hong Kong are very busy during office hours and therefore find it difficult to interact with the industry or their peers. By networking at a congress like HKIDEAS, they are able to exchange knowledge and experiences on the latest developments in dentistry.

In addition to showcasing the latest technology and equipment from dental manufacturers and suppliers, HKIDEAS offers a solid scientific programme aimed at raising the standards of dental knowledge and care in Hong Kong through the exchange of information and discussion on current market trends.

Moreover, we think the show makes a significant contribution to promoting Hong Kong as an international convention and exhibition hub to the rest of the world.

Dr Sasha Jovanovic, a world famous expert in dental implantology and gIDE chairman, will be lecturing at HKIDEAS 2013. What other papers can visitors look forward to this year?

In addition to Dr Jovanovic’s contributions, the programme will feature a full-day lecture series by internationally distinguished periodontology expert Dr Luca Cordaro from the Humanitas Dental Hospital in Rome in Italy. Other highlights will be papers on endodontics and periodontology by Prof. Symguk Kim and Denis Kinane from the University of Pennsylvania’s School of Dental Medicine in the USA. We are also proud to welcome one of the top orthognathic surgeons from mainland China to our show, Prof. Guo-fang Shen.

A wide variety of topics addressing the major concerns of dental practitioners today will be covered during the three-day programme. In addition to the traditional lectures, workshops and poster presentations, there will be a new forum on Friday, 9 August, focusing on the treatment of patients with intellectual disabilities, where participants will be able to interact with a leading expert in this field.

The last HKIDEAS in 2011 attracted more than 2,000 visitors. What are your expectations for this year?

Owing to the exceptional scientific programme, we expect participation to grow by 20 per cent. This part of the show received very positive feedback from attendees in 2010 and 2011.

Also, 90 per cent of practising dentists in Hong Kong have reported visiting the last two exhibitions, which reflects how significant something like HKIDEAS is to the local dental profession.

Does this mean the Hong Kong dental market is performing well?

Fortunately, the dental industry is in good shape and is expected to benefit from the latest demographic trends, as well as increasing awareness of the importance of oral health, and improvements in technology. Led by HKDA and the government, a new outreach project providing free on-site primary dental care services to elderly persons and Hong Kong’s underprivileged will be rolled out.

Rapid advancements in technology, such as implant dentistry and 3D imaging solutions, have introduced new equipment and treatment options to the field of dentistry. Subsequently, trade volume has increased.

Are you planning to extend the trade exhibition in order to bring in more companies from abroad for future events?

Attracting more manufacturers and dealers from mainland China and overseas is our long-term goal. Currently, we are discussing strategies to avoid it overlapping with the holiday season, students’ examination periods or other major dental congresses in the region. Despite these challenges, the next HKIDEAS has already been scheduled for 22 to 24 August 2014.

What other plans do you have for HKIDEAS? Will there be another show next year?

One of the greatest challenges is scheduling the event strategically to avoid it overlapping with the holiday season, students’ examination periods or other major dental congresses in the region. Despite these challenges, the next HKIDEAS has already been scheduled for 22 to 24 August 2014.

Along with an expanded exhibition, we will continue to introduce exceptional scientific lectures, thereby strengthening HKIDEAS as an annual event for all members of the dental profession that is not to be missed. Recognized names and interesting topics will be key to attracting a wider audience.

Dr Wong, thank you for this interview.
Understanding susceptibility to periodontal disease

By Prof. Denis F. Kinane, USA

Gingivitis susceptibility and chronic periodontitis susceptibility

Periodontal disease includes two common, distinct inflammatory conditions: plaque-induced gingivitis, a common, reversible condition, and chronic periodontitis, an irreversible condition involving bone loss. Dental bacterial plaque biofilm initiates gingivitis, which invariably precedes periodontitis.

The maintenance and development of these diseases requires the continuous presence of this microbial plaque biofilm. Although ample evidence supports the role of genetic and host-related factors in the development of periodontitis, there are limited studies on potential host-dependent variation in susceptibility to gingivitis.

Even in the initial reports of experimental gingivitis there appeared evidence suggesting that the onset and severity of the gingival inflammatory response to plaque accumulation differs significantly among individuals. In this context, it is possible that identification of factors related to increased susceptibility to gingivitis may help identify at an early age subjects at risk of chronic periodontitis. Were this the case, it would permit the targeted application of public health resources and clinical preventive measures. Since susceptibility to gingivitis could be ascertained at an early age in a very short period of time, the potential of predicting periodontitis susceptibility based on gingivitis susceptibility would be of advantage in many respects. In this regard, it is possible that identification of factors related to increased susceptibility to gingivitis may help identify at an early age subjects at risk of chronic periodontitis.

Subjects with a history of aggressive periodontitis demonstrate a significantly higher gingival inflammatory response to de novo plaque accumulation compared with periodontally healthy subjects matched for extent and rate of supragingival plaque accumulation (Trebst et al. 2006).

At the present time, there are no reliable means to predict susceptibility to chronic periodontitis. The possibility of such prediction would permit the cost-effective application of public health resources and clinical preventive measures. Since susceptibility to gingivitis could be ascertained at an early age in a very short period of time, the potential of predicting periodontitis susceptibility based on gingivitis susceptibility would be of advantage in many respects. In this context, it is possible that identification of factors related to increased susceptibility to gingivitis may help identify at an early age subjects at risk of chronic periodontitis.
Complications with implants require structured treatment planning
By Dr Nikos Mattheos, Hong Kong

Typically, complications are classified as biological (mainly involving inflammation of the peri-implant tissue) and technical (involving the various implant or prosthetic components). These two types of complications have been traditionally examined as separate and non-related pathologies. The truth however in practice might be very different. At present, there is emerging evidence that shows a close interrelation between biological and technical factors in the aetiology of complications. Very often, a biological problem will be the underlying factor for a technical failure and in other instances a technical deficiency might lead to a biological complication.

Recent studies have identified two important characteristics of complications with dental implants. First, complications appear to be clustered. That means that only a few of the patients account for the majority of the recorded complications. In practical terms, if a patient presents with one complication, either technical or biological, then he or she is at higher risk of having more complications in the future. Second, patients diagnosed with a complication of a technical nature are three times more likely to develop biological complications too. Although this relation is poorly understood, it indicates that there is a much closer interrelation between biology and technology than what we currently understand. This becomes even more evident as we see a significant number of failures due to the increasing trend of using compatible low-cost prosthetic components to reduce treatment costs.

“...only a few of the patients account for the majority of the recorded complications.”

There is an urgent need for a structured treatment planning approach that integrates the use of dental implants into an individualised, evidence-based comprehensive care plan for each patient. Furthermore, comprehensive risk assessment and maintenance protocols are required that will not only maintain the health of the peri-implant tissue, but also ensure the longevity of the mechanical parts.

Currently, implant dentistry stands at a crossroads. Careful, stepwise research and development over decades has provided us with the tools and the techniques to offer predictable and reliable reconstructions to our patients. At the same time, the increase in application and pressure from market factors should not allow any compromise in the skills of the operator, patient selection, the techniques, devices or components that are utilised. An increase in complications, especially when exaggerated by the media, can jeopardise all achievements and have a negative impact not only on implant dentistry as a popular treatment modality, but also on the profession and ultimately the quality of care offered to patients.

On 11 August 2013, Dr Mattheos will be presenting a paper titled “Strategies for prevention and management of complications with dental implants” during the late morning session chaired by periodontology expert Prof. Lijian Jin as part of the 2013 HKIDEAS scientific programme.

Successful treatment depends on good patient–dentist relationship
By Prof. Edward Lo & Dr Ken Zhang, Hong Kong & PR China

Dentistry has undergone considerable progress over the last 50 years. Today’s professionals are increasingly becoming service providers, and the need to understand patients better and for the latest technology for use during chairside treatment is ever growing.

In order to meet these requirements, dentists are increasingly incorporating not only modern dental techniques but also practice management skills in daily practice. They also seek to improve service constantly to enhance patient satisfaction. It is gratifying that dental exhibitions generally showcase modern dental products and offer continuing education in both clinical skills and dental practice enhancement.

For maintaining good oral health, proper self-care and oral hygiene are more important than ever. Owing to an increase in longevity and retention of more teeth in the mouth, people will need to spend more time taking good care of their natural teeth. It is generally acknowledged that most oral diseases are related to lifestyle, such as dietary practice, and other oral health-related factors. An epidemiological survey in Hong Kong recently found that although over 90 per cent of adults brush their teeth on a daily basis the oral hygiene of most of them is unsatisfactory, as proven by the presence of calculus and obvious signs of gingival inflammation. Only one in four adults visit a dentist regularly for a checkup. Therefore, many people in Hong Kong have dental restorations. Successful treatment depends on a good relationship between the patient and dentist. Patients with good oral hygiene help not only to achieve a good treatment outcome and improve the longevity of the restorations, but also to establish the reputation of a dental business. A better understanding of the latest dental technology and improved knowledge about what products to recommend to patients are in the best interests of both dentists and patients. Daily oral care products, such as toothpaste, use newly-developed technology and can deliver multiple benefits in different areas; for example, they can address common oral care challenges and help patients maintain good oral health between dental visits.

On 11 August 2013, Prof. Lo and Dr Zhang will be presenting a paper titled “Improving dental care through patient motivation and participation” during the morning session chaired by Prof. Stephen Wei as part of the 2013 HKIDEAS scientific programme.

Prof. Edward Lo is Clinical Professor in Dental Public Health at the University of Hong Kong’s Faculty of Dentistry. He can be contacted at hkgdplcm@hkucc.hku.hk.

Dr Ken Zhang is the Director of the Procter & Gamble Great Research Institute in Beijing, China.
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