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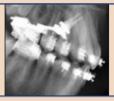
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Miniscrews Dr Björn Ludwig presents first clinical examples

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Enamel weakened by teeth whitening

US study has found that bleaching teeth at home has side effects

From news reports

New research has shown that human teeth can lose some enamel hardness following the application of teeth whitening products used in the home. According to lead author Shereen Azer, Assistant Professor of Restorative and Prosthetic Dentistry at Ohio State University in the US, the average loss of enamel ranged from 1.2 to 2 nanometres on the treated teeth. Tooth bleaching products contain solutions of varying strengths of either hydrogen peroxide or carbamide peroxide, which produce free radicals that attack pigment molecules in the organic parts of enamel, to provide the whitening effect.

Several studies have sought to determine the effect of tooth whitening on tooth enamel hardness but results have been inconclusive, Azer said. He added that previous studies measured the loss of enamel hardness in microns, or millionth of a metre, while he used a nanometre scale in his study.



 $Enamel\ is\ the\ hardest\ structure\ in\ the\ human\ body.\ Tooth\ whitening\ products\ may\ weaken\ this\ natural\ barrier.\ (DTI/Photo\ bg_knight\)$

In his research, he used whitening strips and trays filled with whitening gel on extracted molars, as well as an atomic force microscope to observe the tiny nanometre-scale effects on the teeth. The reduction in hardness and elastic modulus amongst the different products was largely similar. However, there was a significant difference between one strip treatment method and one tray method, with the tray method reducing enamel hardness more significantly than the strip treatment.

Although the study did not address methods of restoring hardness to bleached teeth, Azer

noted that extensive research has indicated that fluoride treatments, including the use of fluoride toothpaste, can promote enamel remineralisation. He suggested that, based on the study, future generations of teeth whitening products be reformulated in an effort to reduce these side effects.

Online resources on swine flu

The Organization for Safety and Asepsis Procedures (OSAP) in the US is currently providing special online resources to help dental professionals protect themselves and their patients against swine flu. The swine flu section includes an overview of the disease, up-to-the-minute reports on the current outbreak, tips for prevention, and links to reports and updates from the US Center for Disease Control and Prevention, the American Dental Association, Pan American Health Organization, World Health Organization, and even the White House Briefing Room.

In addition, the OSAP symposium Infection Prevention: Spread the Word, which will be held from 11 to 14 June 2009 in Plano, TX, USA, will feature courses that address this issue. Dr Michael Glick will present Emerging Diseases with special focus on Swine Flu and Dr Molly Newlon will present the 6 p's of Emergency Preparedness, in which swine flu will be addressed.



Switzerland forward Thierry Paterlini (left) grabs hold of Christoph Ullman from Germany at the Ice Hockey World Championship in Switzerland. We spoke with the emergency dental team on page 20. (DTI/Photo Matthew Manor, HHOF-IIHF Images)

Records at Hawaii meeting

Approximately 3,200 dentists have attended the American Academy of Cosmetic Dentistry's Scientific Session in Honolulu in the US. According to the organiser, the session will generate more than US\$15 million in statewide spending. Next year's meeting will be held in May in Grapevine in the US. DI

Bad breath worries women

Women are more worried about having bad breath than about their partners disliking their appearance. Toothpaste manufacturer Macleans found that 78 per cent of women worry about having smelly breath, while only 4 per cent said they were concerned about what underwear to wear. DT

Malaysia starts oral health campaign

The Malaysian Dental Association has started a new campaign with Colgate-Palmolive to improve oral health among Malaysians. The campaign, in its sixth consecutive year, will provide free dental check-ups for at least 500,000 people at over 560 dental clinics and at road shows nationwide. Colgate will also be giving out free oral-care product samples at the various road shows, instore venues and dental clinics throughout the month-long campaign.

Malaysia's Oral Health Month is in line with the National Oral Health Plan 2010, which aims to create awareness of and educate the public on better oral



Dentists should be aware of swine flu, says top Mexican infection control expert



Dr Enrique Acosta-Gio, head of infection control at UNAM's Dental School in Mexico City, showing the package dental patients have to purchase and give to the attending dentist at the university, which treats thousands of patients. (DTI/Photo Jan Agostaro)

Javier Martínez de Pisón DT Latin America

MEXICO CITY, Mexico: The head of infection control at the School of Dentistry of the National University of Mexico (UNAM), Dr Enrique Acosta-Gio, said in an interview with Dental Tribune Latin America that the outbreak of the swine flu pandemic came as a total surprise.

"You talk to dentists about global health risks, about a biological event of worldwide significance and they look at you and wonder, 'how does this relate to me?' People thought that this sounded like a doomsday scenario. Even I was not prepared for an outbreak originating in Mexico," said Dr Acosta-Gio, who has been head of dental infection control at UNAM since 1992.

UNAM, one of the largest universities in the world with a campus twice the size of New York's Central Park, has research facilities and highly trained human resources who have studied influenza in animals and humans. and its president is a permanent advisor to Mexico's Health Secretary. Mexico's Health Department has shut down the campus as well as schools from kindergarten to the university level until reliable data on the evolution of the pandemic is available.

It came as a surprise

The top expert added that the potential scenario of a pandemic case study involved a virus originating in Asia or other distant country, which eventually would reach Mexico. Dr Acosta-Gio emphasized that this outbreak should make dentists aware of infection procedures to protect themselves and their patients.

"Back in 2006 Dr José Naro, now president of the National University of Mexico, was the Dean of the Medical School, and called for a meeting on pandemic preparedness. We talked differ-

ent scenarios-first that it would come from South East Asia and that we would be reacting to something outside of Mexico," explained Acosta-Gio. "We were considering what the University would do in case of an outbreak. We believed the University would stay open and respond as the outbreak evolved. Now, it shows up first in Mexico, and the authorities closed the University. It has taken us one week to understand and re-accommodate all the university components. Dr Naro has formed committees; I am a member of the science and technology committee providing and structuring the institutional response to this outbreak."

Since the outbreak, the Deans of Health Sciences and the university's president meet every morning at 8 am. The dental school has a well-structured program in infectious control on UNAM's web page, which has been linked to all its infection control resources. "We are providing concise information from UNAM, WHO, CDC and OSAP in Spanish and in English so that people who want to find the sources can see where it came from. At this stage I am editing this information into three concise paragraphs of information," the doctor said.

"People are not really interested in understanding the biological behavior of the virus; they only want to know what to do," explains Acosta-Gio. "We are trying to formulate all the frequently asked questions to a 'yes, no and information is not available at this time' so we can respond briefly to the questions and provide some advice on what to do, how to act."

What is UNAM doing

Thousands of UNAM nursing and medical students are working in the hospitals of Mexico City to fight the outbreak. The University is providing them with information on safe clinical behavior and safe clinical prac-

"These outbreaks have a series of peaks, so we cannot just loosen our control of the situation," continues Dr Acosta-Gio. "We will have to be in continuous vigilance after the outbreak subsides and the university reopens. We want to make sure that we can interview the patients and provide elective dental treatment for patients with infectious communicable diseases. We won't be seeing patients that have an active case of flu-like symptoms, a cold, or influenza. And, we want to make sure that patients who had it have shown no symptoms for at least seven days in the

Dr Acosta-Gio said they want to make sure "our students have these procedures well integrated into their practice, and we want to make sure the faculty watch these events. We want to make sure that we can guarantee all the safety we can provide for our patients with sterilization, disinfection and the use of personal protective equipment, and the right kind of personal protective equipment according to the activities."

Asked about the infection control procedures dentists should follow for this and other outbreaks, Dr Acosta-Gio said "the dental profession should has access to all the correct information on the flu outbreak. We also want to know that they have access to all the right supplies, and we have been training people in infection control. It is a matter of scenarios. The first part is a public health measure, a state of health care emergency where

people are advised to avoid crowds, wear a face mask, to wash their hands, and avoid the splash and splatter exposure to other people's coughing and sneezing."

"In the dental office you don't want to have a waiting room full of people. You have to have a good patient flow and a good airflow for ventilation. The infectious control issues are basically the same with this outbreak as with shot is recommended for every health care professional, including dentists and their staff, as well as tetanus and Hepatitis B," he explained. "We don't want sick dentists and staff handling patients and instruments. Work restrictions should be applied to workers who may have flu-like symptoms."

"The second principle is to avoid contact with blood and body fluids. This is standard



Waterproof face masks being tried by DrAcosta-Gio at the Microbiology Lab of UNAM. (DTI/Photo Jan Agostaro)

any other, except for elective dental procedures for people with suspicious flu-like disease," he added.

Basic rules of infection control

The Mexican researcher said that Infection Control has four main principals points. The first principle is to act to be safe, which means that before seeing patients, you have to get your immunization shots. "A seasonal flu precaution as well as cough and sneeze etiquette. Wash your hands. The third principle of infection control is to keep the instruments safe, which means sterilization and high-level disinfection in a sporicidal solution of the instruments. And the fourth principle has to do with the disinfection of surfaces and the use of protective barriers to avoid the dissemination of the contamination after or during the patient treatment." DT

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Taiwan to attend World Health Assembly

Reuters

TAIPEI, TAIWAN: China has allowed Taiwan to attend the annual United Nations-sponsored World Health Assembly (WHA) in Geneva in May, a further sign of warming ties between the political foes. Taiwan, a self-ruled island that Beijing sees as its own, can be an observer at the World Health

Organisation's (WHO) assembly under the name Chinese Taipei. China must approve any WHA role for Taiwan before the island can be formally invited. A spokesman for China's Taiwan Affairs Office would only say that Beijing had a 'positive' attitude toward the issue.

Beijing, backed by about 170 diplomatic allies including

the world's most powerful nations compared to Taiwan's 23, normally blocks the island from joining international organisations that require statehood as a prerequisite. Relations between Taiwan and China have improved since the island's President Ma Ying-jeou took office last May, with top negotiators on both sides holding meetings and signing a se-

ries of deals to boost trade ties. Ma welcomed the decision to let Taiwan attend the health assembly, saying it was a question of basic human rights. "Joining WHO activities isn't just a simple political matter. It's more a matter of human rights and 23 million Taiwan people's health human rights shouldn't be ignored," Ma stated

Taiwan officials say their exclusion from the WHO and its annual assemblies has made it tough to handle major health issues such as SARS in 2003. The WHA is the supreme decision-making body for the WHO. It is held from 18–27 May 2009 in Geneva, attended by delegates from all 193 members.

(Edited by Claudia Salwiczek, DTI)

Enrolment quotas missed in Japan

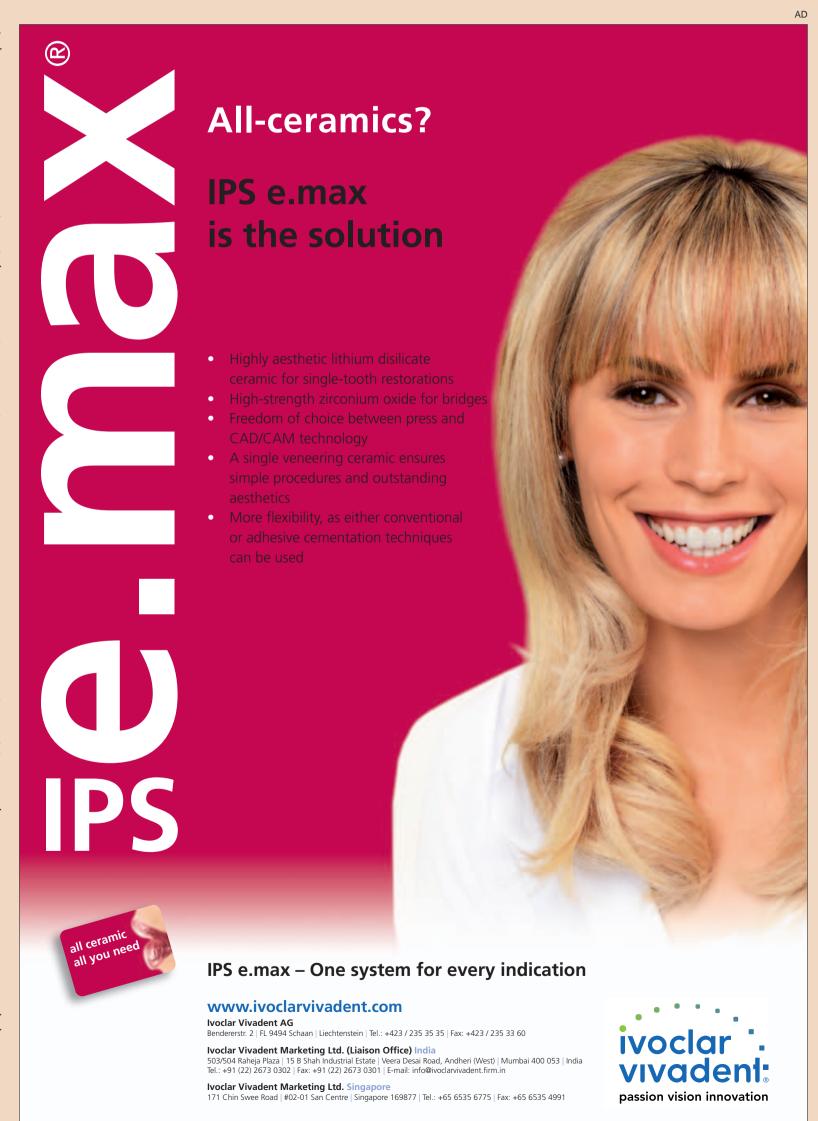
From news reports

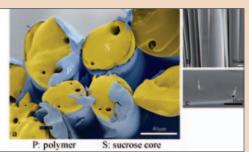
According to a survey by the Japanese newspaper Yomiuri Shimbun, more than half of private dental colleges and schools across Japan fell short of enrolment quotas for the academic year. Three schools even saw enrolment fall by 40 per cent, which numbers between 35 and 43 students. The number of people who took entrance examinations for private dental colleges or schools this year was 4,973, a sharp fall from over 10,000 in previous years.

According to major prep schools and other sources, the biggest reason for the fall in enrolment is a belief that the nation has a surplus of dentists. In 1990, there were 74,000 dentists, the number of which rose each year to 97,000 in 2006; yet, there was no rise in total dental care costs over this period. This led to excessive competition among dental clinics.

The fall in enrolment is expected to hurt finances at dental schools because of a decrease in income streams, such as students' enrolment fees and initial payments for the freshmen year, which are usually between US\$72,000 and US\$10,000 per student. The Japanese Association of Private Dental Schools plans to investigate possible countermeasures, out of fear that the shortage could lead to the collapse of the nation's dental care system.

Observers say it will be difficult for colleges and schools to draw up effective countermeasures to reverse the situation any time soon. Commenting on the issue, Toshikazu Yasui, Vice Chairman of the Japanese Association of Private Dental Schools, told Yomiuri Shimbun, "We had anticipated some fall in enrolment but not anything like this. We're going to have to explain to the public how important dental care is."





The image on the left, taken with a scanning electron microscope and artificially coloured, shows the sugar strands in yellow and the polymer coating in blue. Images on the right, taken with the same instrument, show a side view of the tubes and tiny pores that are ideal for supplying nutrients to growing nerve cells and removing waste products from the cells. (DTI/Photo Purdue University)

Spun-sugar fibers spawn sweet technique for nerve repair

Emil Venere

USA

WEST LAFAYETTE, IN, USA: Researchers at Purdue University in the United States have developed a technique using spun-sugar filaments to create a scaffold of tiny

synthetic tubes that might serve as conduits to regenerate nerves severed in accidents or blood vessels damaged by disease. The sugar filaments are coated with a corn-based degradable polymer, and then dissolved in water, leaving behind bundles of hollow polymer tubes

that mimic those found in nerves, said Riyi Shi, an associate professor in Purdue's Weldon School of Biomedical Engineering and Department of Basic Medical Sciences.

The scaffold could be used to promote nerve regeneration by

acting as a bridge placed between the ends of severed nerves. The approach also might have applications in repairing blood vessels damaged by trauma and disease such as atherosclerosis and diabetes, Shi said.

The researchers are initially concentrating on the peripheral nerves found in the limbs and throughout the body because nerve regeneration is more complex in the spinal cord. About 800,000 peripheral nerve injuries are reported annually in the United States, with about 50,000 requiring surgery. The new approach represents a potential alternative to the conventional surgical treatment, which uses a nerve 'autograft' taken from the leg or other part of the body to repair the injured nerves. Researchers are trying to develop artificial scaffolds to replace the autografts because removing the donor nerve causes a lack of sensation in the portion of the body where it was removed.

The first step in making the tubes is to spin sugar fibers from melted sucrose. "It's basically like making cotton candy," said biomedical engineering doctoral student Jianming Li, who is a member of Shi's research team. The sugar filaments were coated with a polymer called poly L-lactic acid. After the filaments were dissolved, hollow tubes of the polymer remained. The researchers then grew nerve-insulating cells called Schwann cells on these polymer tubes. These cells automatically aligned lengthwise along the tubes, as did nerve cells grown on top of the Schwann cells.

Nerve cells grew not only inside the hollow tubes but also around the outside of the tubes. "This finding is important because the increased surface area may accelerate the regeneration process following an accident," Li said.

The researchers also discovered that the polymer tubes contain pores that are ideal for supplying nutrients to growing nerve cells and removing waste products from the cells. The work was done using cell cultures in petri dishes, but ongoing work focuses on implanting the scaffolds in animals.

"The method for creating the scaffolds is relatively simple and inexpensive and does not require elaborate laboratory equipment," Shi said. "We used the same kind of sugar found in candy and a cheap polymer to make samples of these scaffolds for a few dollars. The process easily lends itself to mass production. It is a unique idea, and the simplicity and efficiency of this technology distinguish it from other approaches for nerve repair."

A provisional patent application on the material has been filed. \blacksquare

 $(Edited\ by\ Daniel\ Zimmermann,\ DTI)$



Research adds colour to gum disease detection

Renee Cree

USA

Dentists at Temple University's Maurice H. Kornberg School of Dentistry in the United States have found that a simple colour-changing oral strip can help detect gum disease in a patient more quickly and easily than traditional screening methods.

According to lead researcher Dr Ahmed Khocht, DDS and Associate Professor of Periodontology, test results among 73 patients have shown a strong correlation between the patients with gum disease detected by traditional clinical evaluation methods and those detected with the oral strip, suggesting the strips would be a comparable screening method.

The colour reaction was scored based on a colour chart and the scores were compared with scores from the plaque index, gingival index, attachment levels and bleeding on probing.

"The strip changes from white to yellow depending on levels of microbial sulphur compounds found in the saliva," said Dr Khocht. "A higher concentration of these compounds means a more serious case of gum disease, and shows up a darker shade of yellow."

Because periodontal disease can affect a person's overall health, it's important to have a screening method like the oral strips that is quick and easy for clinicians to use, according to Dr Khocht. "The faster we can find out the disease is present, the sooner we can begin treatment," he said. "And because the strips can change colour, they can also act as a benchmark to help doctors find the right treatment for their patient and monitor their progress."

(Edited by Daniel Zimmermann)

AD

Stains mistaken as tooth decay

 $\frac{Penny\,Palmer}{DT\,UK}$

LONDON, UK: Stains on teeth are often mistaken for signs of decay, according to new research. A study of 200 private dental patients in the UK found that in over 60 per cent of cases, stains that were hard to remove were mistaken for decay. The stains were only identified using an advanced device that cleans teeth with a blast of fine abrasive particles.

Dental researchers examined a particular 'premolar' situated between the front and back teeth and found signs of decay in 78 per cent of cases. But 63 per cent of them turned out to be false alarms when they were examined again, using the CrystalAir abrasion device instead of mirrors and scrapers. The research suggests that stained teeth may result in dentists drilling unnecessarily.

Dr Robin Horton, from the Wayside Dental Practice in Harpenden in Hertfordshire, who coled the study, claimed that "traditional dental check-ups have led to unnecessary dental treatment for millions of patients." The CrystalAir abrasion device blasts away dirt, debris and stains using a narrow stream of aluminium oxide particles propelled by helium. It is used in conjunction with a laser probe that can detect deeply hidden decay by shining a light beam through the tooth. The research found that using the two systems together was 70 per cent more accurate in picking up decay than traditional techniques.

Dental Tribune welcomes comments, suggestions and complaints at feedback@ dental-tribune.com





Games technology to help in future dental training

Ray McHugh

GLASGOW, UK: Dentists of the future could be using games technology to hone their clinical skills. Three final-year dental students at the University of Glasgow Dental School have developed the concept of using Wii technology to help dental students practise their operative skills.

The students were announced the winners of *The Dental Inno-*

vation Technology Ideas Award last week. The competition challenged final-year students to develop an idea for a new piece of technology or innovation in the dental field.

The winning idea suggests the use of the Nintendo Wii console and special software to simulate operative techniques. The wireless controllers would be used by dental students to control the handling of instruments on a virtual patient on the screen. The controllers would also be used to provide sensory feedback to the user.

"Simulation of clinical procedures is normally carried out in the operative techniques lab. However, dental students sometimes have limited opportunity to practise their techniques outside of the lab," said Dr David Watson of the University of Glasgow Dental School. "The use of Wii technology could be a really innovative and cost-effective solution which students could use to improve their manual dexterity."

There is considerable research to back up the concept of using video games to improve dentists' coordination, and the Wii-based application would complement the simulation technology already used in dental schools worldwide," Dr Watson added.

The students—Pearse Hannigan, David Lagan and Adam Gray—were presented with a cheque for £300 and a glass obelisk by Craig Leaver, CEO of Dental Innovation, the competition sponsor.

Leaver said: "We received over 40 entries for the competition, all of which were of an extremely high standard. The judging panel were impressed by the depth of research and hard work which had gone into the submissions, which made it very difficult to choose an outright winner. However, we were struck by the inventiveness of adapting an existing piece of technology in a very novel way."

"We are absolutely delighted that Glasgow Dental School has given us the opportunity to host this annual award," he added. "As more dental practices become reliant on digital systems, it is vital that students are up to speed with the latest technologies. We hope the award will inspire them to think about how technology can be applied in practice for greater efficiency and better patient care."

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* Source: Millennium Research Group

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US demands data on older medical devices

Reuters

WASHINGTON, DC, USA: US regulators have ordered makers of 25 types of medical devices to supply safety and effectiveness data so the US government can decide whether the products must undergo the most stringent review process. The order addresses complaints that the Food and Drug Administration had allowed some devices that were sold before 1976 without agency approval to remain on sale without a thorough evalu-

The devices include metal hip joints, dental implants and

screws used for spinal surgery, an FDA notice said. The FDA oversees medical devices ranging from simple bandages and tongue depressors to the most complex products such as pacemakers and heart-valve replacements. Each is classified based on the level of risk to patients. The most dangerous are labeled "Class III" and subject to the most rigorous level of review.

Some Class III devices that were on the market before 1976 were allowed to go through a less stringent evaluation while the FDA developed regulations to address them or decided they were less risky.

In January, the Government Accountability Office criticized the FDA for failing to complete work on all of the pre-1976 Class III devices more than three decades later.

The GAO, a watchdog arm of Congress, urged the FDA to "expeditiously" deal with the remaining products. The order is the first step toward completing that process, FDA officials

"We are now committed to addressing this quickly," Kate Cook, associate director of regulation and policy in the FDA's device center, said in an inter-

"Nobel Biocare said it had

obtained a positive decision from the German Federal

Patent Court invalidating all

relevant claims of Materi-

alise's patent, which according

to Materialise, is infringed by

Nobel Biocare's NobelGuide

software," Nobel Biocare said

in a statement.

GlaxoSmithKline Consumer Healthcare is to provide three US\$75,000 unrestricted research grants to researchers at the University of Melbourne School of Dental Science in Australia, as well as the Baylor College of Dentistry and the University of Washington School of Dentistry in the US. The awards are administered by the International Association for Dental Research.

China Medicine Corp. in Guangzhou in China has increased its fourth quarter revenues by 51.2 per cent to US\$24.4 million. The company, which distributes dental and medical products in China, also increased its net income by 26.6 per cent to US\$3.5 million.

Philips Electronics India Ltd. has begun marketing products for the treatment of obstructive sleep apnoea, in India. The firm is a subsidiary of Royal Philips Electronics in the Netherlands.

The Venetian hotel and casino resort in Macao plans to open a dental clinic in the facility. The site will have over 50 dentists, physicians and other healthcare professionals, casino officials said.

The worldwide oral hygiene market in 2008 was worth US\$25 billion, which included US\$2.3 billion in Japan.

Hager Worldwide has announced that it will be moving from its multi-tiered dealer pricing, which gave margins of 30 to 45 per cent. The firm will now provide their distributors with a gross margin of 40 per cent across the board on its entire line of 1,350 products.

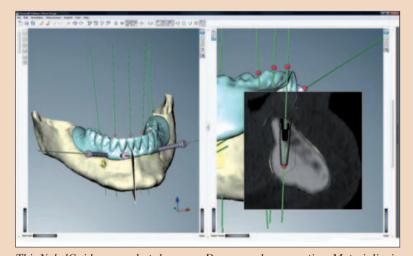
Straumann in Switzerland has formed a partnership with Ivoclar Vivadent in Liechtenstein, through which Straumann will be able to use Ivoclar's proprietary high-performance IPS e.max ceramic technology. The financial terms of the agreement have not been released.

Wrigley in the US is sponsoring a contest in which dentists around the world can submit photographs that capture "what makes them smile". The contest is being run in conjunction with the FDI World Dental Federa-

Nobel Biocare in Sweden has announced the global launch of its new NobelProcera system, which includes a new conoscopic holography enhanced optical scanner. The scanner uses new 3-D software developed by BioCad, a Canadian subsidiary of Nobel.

Biolase Technology, Inc. has announced that its application to transfer the listing of its common stock from the NASDAQ Global Market to the NASDAQ has been approved. The transfer became effective on 16 April 2009, and the company's common stock will continue to trade under the symbol *BLTI*. DT

Nobel Biocare wins patent ruling in Germany



This NobelGuide screenshot shows a 3-D scene and cross section. Materialise in the US says the software infringes their own patents. (DTI/Photo Nobel Biocare)

ZURICH, Switzerland: Swiss dental implant maker Nobel Biocare said it had won a Gerinfringement case brought by Materialise Dental in relation to Nobel Biocare's NobelGuide software.

man court ruling in a patent alise's patent.

Nobel Biocare expects the Higher Regional Court Duesseldorf to rule favourably on its appeal against the first decision of the Lower Regional Court Duesseldorf in August 2007, which found Nobel Biocare had infringed Materi-

Last month, Nobel Biocare won a ruling in a US litigation with Materialise.

Dental biomaterials market growth to continue despite challenging 2009, report says

Although dental biomaterials are being used in a growing proportion of dental implant procedures, the market for these products will be dampened by the global financial crisis in the coming years as many patients postpone dental implant procedures or choose less expensive alternatives such as crowns. This is the conclusion of the US Markets for Dental Biomaterials 2009 report from Millennium Research Group, a global authority on medical technology market intelligence and leading provider of strategic information to the health care sector.

The US market for dental biomaterials continued to grow in 2008 due to several significant market events: BIOMET 3i's Endobon and NovaBone's Nova-Bone were launched in the US in the second quarter of 2008; the US import ban on Straumann's Emdogain and Bone-Ceramic we lifted in August, making these products available toward the end of the year; Curasan's dental business was purchased by RIEMSER Arzneimittel, a German pharmaceutical company; Regeneration Technologies and Tutogen Medical merged and now operate

under the new name RTI Biologics; and Lifecore Biomedical's dental division merged with Keystone Dental following Lifecore Biomedical's acquisition by Warburg Pincus.

"These events supported market expansion in 2008 and highlight the revenue potential in the dental biomaterial space," says Kevin Flewwelling, Manager of the Orthopedics division at MRG. "Although 2009 will be a challenging year for dental biomaterial sales, market growth will continue through 2013." DI



"Asia Pacific will continue to be a key growth driver for implant dentistry"

Interview with Frank Hemm, Senior Vice-President of Straumann Asia Pacific



Frank Hemm

Frank Hemm worked as a management consultant for several years in the health-care industry before he became involved with Straumann, a worldwide leading company in implant dentistry. One of the things that attracted him to the company was its drive for purposeful in $no vation\, and\, the\, improvement$ of the quality of patient care, he says. Dental Tribune Group **Editor Daniel Zimmermann** spoke with him about Straumann's move to Singapore and recent developments and trends in the dental implant markets in Asia.

Daniel Zimmermann: You recently moved your regional $head quarters \ to \ the \ Fuji \ Xerox$ Towers in Singapore. What was behind this decision and how has the dental community reacted?

Frank Hemm: The Asia Pacific region had been managed from our corporate headquarters in Basel up to the middle of 2008 when we decided to establish a regional headquarters in Singapore. Several factors prompted the move. In 2007, we acquired our former distribution partners in Japan and Korea, which gave

us direct access to the two largest markets in the region. At the same time, we acquired a sizeable team that had to be integrated into the Group, which required management support and coordination. Furthermore, the increasing importance of Asia Pacific as a growth region encouraged us to expand our regional presence and influence, to be closer to our customers in order to better understand and meet their needs. The reaction of the dental community to Straumann's commitment and support has been very positive so far.

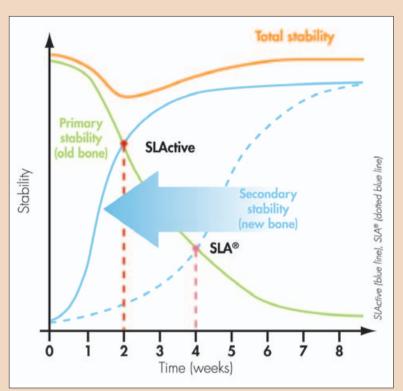
The net revenue growth of your company for Asia was 42 per cent in 2007 compared with only 21 per cent in Europe and 16 per cent in the US. In your opinion, how large is the market for dental implant solutions in Asia?

Obviously, our growth in 2007 benefited considerably from the acquisition effect. Nobody really knows exactly how large the market in Asia is, and estimates vary widely because there is limited and India, do you expect to see a shift of sales away from these regions?

In absolute terms, Asia Pacific will lag behind Europe and North America for some time to come because the penetration rates there are significantly higher. However, in terms of the future growth potential, especially in China and India, Asia Pacific will continue to be a key growth driver and will command an increasing share of overall sales. As the market leader in China, Straumann is well positioned to take advantage of these growth

In which markets do you see the largest potential for growth and why?

In terms of market size, Japan and Korea will continue to be the key markets in Asia Pacific in the short and mid-term. The biggest growth potential, however, is expected to come from China with its strong institutional segment and emerging private sector. India is also expected to contribute substantially to regional



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20 per cent before the economic crisis and are expected to return to similar levels once the economy picks up. The level of educa-

Patients want safe, reliable solutions with predictable longterm aesthetic results. In order to enable dental professionals to meet these requirements, Straumann engages in a broad range of educational activities across all specialisations at all levels of expertise, such as for surgeons, prosthodontists, periodontists, dental technicians and hygienists. These educational activities are offered in collaboration with our global academic partner organisation the International Team of Implantology (ITI). Both Straumann and the ITI share the same passion for science-based innovation and the highest standard of education with the aim of promoting the quality of patient care in implant dentistry.

The ITI furthers expertise in implant dentistry in many other ways, including through the publication of the ITI Treatment Guides, which are now also available in Japanese and Chi-

In order to broaden the pool of speakers to disseminate expertise on implant dentistry, Straumann also orchestrates speaker development programmes in Asia; one of the sessions runs parallel to the Asia Pacific Dental Congress (APDC).

The pool of highly educated Asian dentists also fuels a very active research community in the region, and our academic partner ITI has funded a number research projects from Asia.

Countries like Korea and China have recently become more aware of the opportunities that dental implants have to offer. Are you experiencing

"The level of education in implant dentistry amongst Asian dentists has increased dramatically"

transparency in the sales of the smaller companies. Suffice it to say that the market is particularly attractive for companies that offer integrated dental solutions.

In terms of revenue, Asia is still behind North America and Europe. But with the huge potential of countries like China market growth - partly driven by medical tourism-even though average selling prices are lower than in other markets.

One should not forget smaller dynamic markets, such as Hong Kong, Singapore, Malaysia and Thailand, which achieved annual growth rates of around

tion of many dental practitioners in these markets-many of whom have studied abroad—and the state-of-the-art equipment and procedures make these countries well-placed to not only benefit from strong domestic demand, but also attract an increasing number of medical tourists.

Do you think that Asian dentists are adequately trained in implantology, and have you noticed regional differences? In Taiwan, for example, there is currently no registration procedure for dentists that $want \, to \, provide \, implants.$

In the vast majority of countries worldwide, dental implants are not part of the university curriculum of dental professionals. This is also the case in Asia Pacific. Therefore, continuing medical education provided by implant manufacturers and others is important. The level of education in implant dentistry amongst Asian dentists has increased dramatically in the past few years and, as already mentioned, an increasing number of dental practitioners in Asia have received international educations. Universities in the region, including the University of Hong Kong, have also started to offer master's courses in implant den-



Highest quality standards are maintained at the Straumann headquarters. (DTI/Photo Straumann)



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