

DENTAL TRIBUNE

The World's Dental Newspaper · Asia Pacific Edition

PUBLISHED IN HONG KONG

www.dental-tribune.asia

No. 1 VOL. 8



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Cold plasma jets found useful against oral bacteria German scientists release promising results for dental applications

Jeannette Enders
DT Germany

LEIPZIG/HOMBURG, Germany: The use of cold plasma jets could soon improve antibacterial treatment measures in dentistry, results released by a team of German experts indicate. Recent data gathered by scientists from the Leibniz Institute for Surface Modification in Leipzig and the Saarland University Dental Hospital in Homburg has demonstrated increased effectiveness of atmospheric plasma for the treatment of tooth surfaces and infected oral tissue. Amongst other applications, the technology could significantly improve the treatment of oral diseases, the researchers told *Dental Tribune*.

Cold plasma jets are ionised local gas flows that are triggered by microwaves in plasma jet sources using inert gases, such as argon, helium or nitrogen. Adding those gases under normal atmospheric pressure produces reactive oxygen species that react with surfaces and are capable of changing it.



Close-up of a cold plasma jet which is tested under laboratory conditions. (DTI/Photo courtesy of IOM Leipzig)

Currently, hot plasma jets are used in an increasing number of medical applications, including disinfecting surgical instruments. Their high temperatures, however, have prevented them from being used for the treatment of body tissue.

According to Dr Stefan Ruf, the lead researcher from the Saarland University Dental

Hospital, the application of cold plasma jets will allow significantly smoother treatment compared to mechanical removal with dental instruments. "Dental pulp in the centre of the tooth is linked to blood supplies and nerves; therefore, heat damage must be avoided at all costs," he said. "The low temperature of the cold plasma jets means they can kill

the microbes while preserving the tooth."

The study, which won an award in the Competition for Innovation in Medicine Technology in 2006, was funded by the German Federal Ministry of Education and Research. The results were published in the February issue of the *Journal of Medical Microbiology*. [DTI](#)

Make no bones about implants

Bone loss around dental implants is far more common than previously thought, a doctoral study at the Sahlgrenska Academy at the University of Gothenburg in Sweden has revealed. The study, which examined X-rays of over 600 implant patients, found that about one quarter had lost some degree of supporting bone around their implants. The more jaw implants a patient had, the more common it was to find loss of supporting bone, the thesis states.

The study also demonstrated that the bone loss was not linear but accelerated with time. Furthermore, soft tissues surrounding an implant with bone loss were often found to be inflamed.

Dental implant companies are investing heavily in the development of new materials and coatings that increase osseointegration and prevent significant bone loss. Latest research has shown that "smart coatings" that include hydroxylapatite encourage bone growth around implants. [DTI](#)



Malaysia's Health Minister Y.B. Dato' Liow Tiong Lai (second from right) celebrates a new cooperation in dentistry with China Stomatological Association President Dr Wang Xing. (DTI/Photo courtesy of Bernama)

▶ More on Malaysia in ASIA NEWS, page 2

China's largest hospital expands

The Beijing Stomatological Hospital, one of the largest dental hospitals in China, will be moved from its current location near the Temple of Heaven to the Fengtai District. City officials said that the new venue will be five times larger and increase the hospital's bed capacity to over 200. [DTI](#)

S'pore increases med contributions

The Health Minister of Singapore has announced that the Ministry will increase its contribution to the country's national medical savings scheme from 6.5 to 9 per cent. The 25-year-old Medisave is intended to cover major hospitalisation. Recently, it has been expanded to include a number of out-patient benefits. [DTI](#)

Sensitive teeth plague India

Cases of sensitive teeth have tripled over the last five years, a nationwide survey in India has found. The findings released by the Indian Dental Association earlier this year also indicate that only 19 per cent of Indians suffering from dentine hypersensitivity visited a dentist to diagnose and treat the condition. Most of these cases occurred in the age group of 30 to 40 years.

Dentine hypersensitivity is recognised as a common dental condition and has been referred to as the 'common cold of dentistry'. It is caused by dentine exposure through gingival recession, or the loss of enamel or periodontal tissues, resulting from mechanical pressure or chemical forces such as teeth whiteners. Treatment options include blocking neural transmission at the pulp through desensitising toothpaste. [DTI](#)



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Asia News

Continuing education compulsory for all dentists in Malaysia

Daniel Zimmermann
DTI

HONG KONG/LEIPZIG, Germany: Private dentists in Malaysia are soon required to participate in a Continuing Professional Development (CPD) scheme in order to continue practising.

Through the scheme, which is an addition to the Malaysia Dental Act of 1971, those dentists will be able to collect points by attending CPD seminars and participating in other CPD learning activities organised by the Malaysian Dental Association (MDA) in collaboration with the country's Ministry of Health.

According to MDA president Dr Lee Soon Boon, the new scheme was developed to further advance the quality and standard of dental care in Malaysia. Speaking at the 17th FDI/MDA Scientific Convention and Trade Exhibition in Petaling Jaya in January, he said CPD is essential for dental practitioners to maintain and improve their knowledge and skills throughout their working life.

"CPD has been compulsory for dentists in the civil service for the past five years and we believe that expanding the scheme to private dentists will greatly benefit the profession," he said. Currently, more than 50 per cent of Malaysian dentists work in the private sector.

Although a specific guideline has not been officially announced, the new scheme could also recognise points collected in other parts of the region, Dr Lee told *Dental Tribune Online*. He added that his organisation has already established transnational cooperation with the Singapore Dental Association and has been invited to be an accredited CPD provider for Singaporean dentists and oral-health therapists.

Dr Lee also said that the first FDI/MDA convention was the first MDA-organised CPD event to be accredited by the Singapore Dental Council and Ministry of Health. [DTI](#)

South Korea drives medical tourism with April conference

Daniel Zimmermann
DTI

HONG KONG/LEIPZIG, Germany: In an effort to promote medical and dental tourism in Asia, the Medical Tourism Association (MTA) has announced its first Global Healthcare and Medical Tourism Conference, which will be held in Seoul in South Korea. The event, which has support of the government, is expected to draw over 1,000 experts from 25 countries to the capital of South Korea, including healthcare and insurance providers, travel agents and referring physicians.

According to the MTA, the conference is scheduled to take place in early April 2010.

South Korea is the latest country in Asia to encourage medical tourism. Last year, the Chung government passed legislation to allow hospitals for the first time to advertise for foreign patients. The country is hoping to follow nations like Thailand, India, Singapore and the Philippines, which currently have the largest share of patients in the regional medical tourism market.

South Korea, which saw some 50,000 foreigners visiting for treatment in 2009, aims to increase the number to 1 million patients by 2020.

"Korea is one of the leading countries in the world where the government has made medical

tourism a priority, enacted legislation and made other efforts to facilitate fast and stable growth of medical tourism in the country," said Renée-Marie Stephano, Founder and Chief Operating Officer of the MTA.

She said that medical tourism in Asia will continue to grow because of low-cost, yet high quality medical procedures. "The level of health care there is excellent and advances at a fast rate equal to that around the world in the most advanced countries."

She told *Dental Tribune Asia Pacific* that her organisation wishes to expand and hold other regional conferences around the world in the years to come. [DTI](#)

International Imprint

Licensing by Dental Tribune International

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DENTAL TRIBUNE

The World's Dental Newspaper · Asia Pacific Edition

Published by Dental Tribune Asia Pacific Ltd.

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Filipinos back-up improved implant education

Daniel Zimmermann
DTI

HONG KONG/LEIPZIG, Germany: Dental implants in the Philippines are on the upswing, attendees at an implantology conference in the capital Manila have agreed. They also indicated their support of the plans of dental colleges and universities throughout the country to include im-

plantology as part of their curriculum by 2011.

The conference, which was organised by the Philippine Academy of Implant Dentistry (PAID), drew almost 200 attendees to Manila. Owing to the demand, representatives of the organisation have announced that more seminars around the country will be arranged with

an increased number of foreign speakers in order to advance the speciality further.

“The economic prospects are very good,” said Dr Carlos Buendia, President of PAID. “With the influx of dental implant companies offering affordable implant fixtures and dental laboratories catering to dental implant prosthesis, the

overall cost for the dentist has gone down.”

In the last few years, more implant companies have entered the country, assisted by dental awareness programmes and dental tourism campaigns. The Philippines dental implant market, however, is still behind other markets in the region, like Singapore, Taiwan and Hong Kong. 



Dr Carlos Buendia (DTI/Photo courtesy of PAID)

Australian patients are waiting too long

Claudia Salwiczek
DTI


HONG KONG/LEIPZIG, Germany: According to a news report in the Australian newspaper *Sunday Mail*, patients in South Australia are waiting very long periods for dental treatment in the public health system. Of 26 adult community clinics, more than 50 per cent have waiting lists of longer than a year for basic treatment, the article states.

Amongst all clinics, the centre in Berri, a small town north-east of Adelaide, has the longest list, with two years' waiting time for a dental check. Community clinics in Kadina, Naracoorte, Gawler, Salisbury Downs and Gilles Plains have 18-month waiting lists.

The President of the South Australia Branch of the Australian Dental Association (ADA) Dr Sharon Liberali told *Sunday Mail* that the waiting lists were “absolutely” too long. “People will wait between 12 and 18 months, but once they get in, they'll get their routine care,” she said.

“But they have to go back on the waiting list for any further work and wait all over again.”

The ADA is opposing plans by the Rann government to address the problem with a new dental health-care scheme called Denticare. This US\$3.57 billion scheme recommended by the National Health and Hospitals Reform Commission aims to provide universal dental health care to all Australians. The ADA has released a counter-proposal that aims for a targeted scheme funded by a tax on sugar and soft drinks.

Minister for Health John Hill has defended the government, saying that waiting lists have been cut by half in the last 10 years. He expects the average wait to be down to 15 months by June, regardless of the implementation of Denticare. 

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AD

Dear reader,



Daniel Zimmermann
DTI

Much has been said and written about the last decade and how it has changed the way we live. Take the iPod for example. Back in 2000, who would have thought that in only ten years, you would be able to carry a little touch screen device that allows you to check your electronic mail, measure your heart rate or tell you where you can find the closest Italian restaurant?

Given all of the recent hype, it is easy to think that the future of dentistry also lies in digital technology. According to industry experts, the advantages seem to be at hand. Tooth restorations and replacements, for example, will be less time consuming for the patient, saver and much more reliable.

However, while digital technology is a welcome advancement in most fields of dentistry, it is far from being a revolutionary paradigm shift. It may improve office efficiency or be useful for practice marketing, but it is not likely to make better dentists. The fundamentals of the profession basically remain the same. Whether these technologies will become a must-have for dental practices in the years to come will depend on their affordability and whether insurance companies are willing to reimburse treatment concepts based on them.

As a dental news company, we cannot turn a blind eye to these developments. With a new specialist title called *CAD/CAM the international magazine of digital dentistry* to be released this spring, we aim to inform you about the latest trends in all fields of digital dentistry. Therefore, the range of topics will include not only CAD/CAM, but also digital imaging or software processing.

If you are interested in receiving a sample copy, we invite you to check our website or visit our booths at all major dental trade shows this year. [DTI](#)

Yours sincerely,

Daniel Zimmermann
Group Editor
Dental Tribune International

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

“Those new dental weapons are a pain”



Dental CBCT vs. medical CT scans



Dr Bruce Howerton
USA

In the past few weeks, various media sources have published articles regarding high exposure to radiation from medical CT scans. Unfortunately, these have generated misconceptions about the dental CBCT, or 3-D CBCT, scans. The dental CBCT-imaging method allows dentists to obtain vital 3-D information without exposing patients to high levels of radiation that come from medical CT scans. An in-office imaging method is more convenient: it saves the patient travel time to and from the hospital and time for follow-up examinations after treatment.

Dentists and other medical professionals ascribe to the ALARA (as low as reasonably achievable) approach concerning radiation levels. This approach guides practitioners to expose patients to the least amount of radiation possible, while still gaining the most pertinent information for proper diagnosis. For example, for dentists placing implants, having this information beforehand is imperative to determining anatomical variations that can affect the procedure's success or failure.

The differences between dental and hospital scans derive,

in part, from the method of capturing the information. The average medical CT scan of the oral and maxillofacial area can reach levels of 1,200 to 3,300 micro-sieverts, the measurement of radiation absorbed by the body's tissue. These significant levels are attributed to the method of exposing tissues to radiation. With the hospital scan, the anatomy is exposed in small fan-shaped or flat slices as the machine makes multiple revolutions around the patient's head. In order to collect adequate information, there is overlapping of radiation. In contrast, the dental scan captures all the anatomy in one single cone-shaped beam rotation, decreasing the patient's exposure to radiation by up to 10 times. For example, radiation exposure using the standard full field of view from an i-CAT CBCT machine (Imaging Sciences International) is 36 micro-sieverts. These machines are also available in different fields of view, thereby reducing radiation exposure even more, depending upon the needs of the patient.

For other comparisons of exposure, consider that a typical 2-D full-mouth series runs 150 micro-sieverts, while a 2-D digital panoramic image ranges between 4.7 and 14.9 micro-sieverts. The researchers who developed this technology have achieved the goal of allowing dentists to receive the same information gained from medical CT without the additional radiation exposure.

Dentists who do not own their own CBCT machines can take advantage of this imaging method, by referring patients to imaging centres in order to acquire this valuable information.

The knowledge obtained from capturing 3-D scans can influence the effectiveness and efficiency of dental treatment. A dental CBCT scan offers the views and detail required to perform the latest procedures, while avoiding the unnecessary higher levels of radiation from hospital scans. As the technology continues to evolve, the possibilities for improved dental care can only increase. Increased software compatibility with surgical guides and orthodontic applications has made CBCT scanners an imperative for some dental offices.

As an oral and maxillofacial radiologist and an educator, I firmly believe that with knowledge comes responsibility to provide patients with the best dental care in the safest way possible—a dental CBCT accomplishes this goal without the additional risks involved with hospital scans. [DTI](#)

Contact Info

Dr Bruce Howerton is a board-certified oral and maxillofacial radiologist who practises privately in Raleigh in the US. He can be contacted at bhowerton@carolinaomfimaging.com.

Time to show solidarity



Dr Adolfo Rodríguez
Dominican Republic

The earthquake that struck Haiti in January will be remembered for a long time. Its devastating magnitude has spread desolation amongst the population and resulted in the gravest crisis in Haiti's history, leaving behind a completely destroyed country with little likelihood of recovery without assistance.

As the first Latin American nation, Haiti gained independence from France in 1804. Even before disaster struck on 12 January 2010, it had suffered deeply from poverty and political unrest. It is the duty of developed nations to help rebuild this nation so that our Haitian brothers can look forward to a new and improved country.

Many of our colleagues in Haiti have lost everything: family, work, resources and, even worse, hope. The dental profession cannot be oblivious to this reality.

The Latin American Dental Federation (FOLA) has launched an international campaign to assist dental colleagues in Haiti by providing resources to rebuild their lives and their professional practices. FOLA, FDI, *Dental Tribune* and dentists from all over Latin America are making great efforts to collect instruments, materials and equipment to restore oral-health services in Haiti. We hope you also join us in this effort.

We are also planning a dental congress in the Dominican Republic to collect funds for the reconstruction of Haiti.

Dr Samuel Prophet, the President of the Association Dentaire Haitienne, wrote in an e-mail from Port-au-Prince to *Dental Tribune Latin America*: “Knowing that FOLA, FDI and *Dental Tribune* will help dentists in Haiti is great news because it gives us hope!”

This is a call to cooperate with us to help those who have been left without work or resources. Now is the time to show solidarity with our Haitian colleagues. [DTI](#)

Contact Info

Dr Adolfo Rodríguez is President of the Latin American Dental Federation in Santo Domingo in the Dominican Republic. He can be contacted at arn@codetel.net.do.

FDI, FOLA and DTI launch campaign for Haitian dentists

Javier M. de Pison
DT Latin America

PANAMA CITY, Panama: The president of the Haitian Dental Association Dr Samuel Prophet has told *Dental Tribune Latin America* that he and several colleagues he was able to contact in Port-au-Prince were fine after the devastating earthquake in his country. "So far, we only have reports of two missing dentists," Dr Prophet wrote in an e-mail.

The recent earthquake not only devastated Haiti's meagre health resources, but also most dental practices. Before January 12th, the country had only 500 dentists for 9 million people. The extent of the aftermath has affected regular people and dental professionals alike.

President of the Latin American Dental Federation (FOLA), Dr Adolfo Rodríguez, launched a campaign immediately after the quake to help both the general population and dental professionals in Haiti. Dr Rodríguez, who is also President of the Dominican Dental Association (AOP), is asking companies and dental professionals to donate dental instruments, materials and equipment. He is organising the

campaign in collaboration with the FDI World Dental Federation and *Dental Tribune International*.

In addition, Dr Rodríguez is putting together teams of dental volunteers to travel to Haiti once the major health and humanitarian crises are under control or at least manageable, in order to attend to the dental needs of the population. This effort will be based at the headquarters of AOP in Santo Domingo.

In his e-mail, Dr Prophet said that "many of our colleagues have lost their practices and we were thinking about how to help them. It's very good news to know that FOLA, FDI and *Dental Tribune* are trying to help Haitian dentists." If dentists know "that help is on the way they can have hope!"

At a meeting in Panama, Dr Rodríguez received the support of the presidents of Central American dental associations, and made an emotional appeal to dental manufacturers to donate much-needed supplies. He said Colgate has already agreed to donate brushes and toothpaste.

Dr Rodríguez added that it was moving to witness dental profes-



FOLA President Dr Adolfo Rodríguez (centre), asking for help for Haiti at a meeting in Panama. To the left is the President of the Panama Dental Association and to the right is its Vice-President. (DTI/Photo Javier M. de Pison)


sionals from countries with few resources, such as Honduras, Nicaragua or El Salvador, commit to collecting funds from their members, second-hand equipment and dental supplies to help their Haitian colleagues.

Some prominent Latin American dental professionals from Brazil, Uruguay and Costa Rica, amongst others, have already expressed their interest in participating in dental teams to attend

to the most urgent needs of the Haitian population. Current conditions indicate that these teams will operate in mobile units at the Dominican-Haiti border, once the most pressing health needs are somewhat under control. The reason for this is that most of Port-au-Prince is in ruins. The Dominican government has thus moved the majority of its mobile health resources to the border in an effort to treat Haitians, and avoid a migratory exodus.

This tragedy "is also an opportunity to build a public health service that includes dental care. We have asked the Pan American Health Organization, FDI, all Latin American dental associations, companies and other institutions for help in putting together teams of dental professionals to travel to Haiti and start working there, and leave in place basic dental treatment centres," said Dr Rodríguez.

He said that this will be a long-term programme that will include rebuilding the dental school at the university and private practices. He stated further that it will take some time to start the programme and the treatment of children and pregnant women will be priority.

The Latin American dental leader said he has also asked for funding from the government of the Dominican Republic. Companies and dentists interested in helping the Haiti campaign can contact Dr Rodríguez at arn@codetel.net.do or +809 5190789. 

AD

"Plasma jets should be integrated into dental hand pieces"

Dental Tribune Germany Editor Jeannette Enders spoke with Dr Stefan Rupf, Saarland University, and Dr Axel Schindler, Leibniz Institute for Surface Modification, about their study on cold plasma jets and its future applications in dentistry.

Jeannette Enders: Dr Rupf, how did you hit upon the idea of using plasma jet technology for dentistry?

Dr Stefan Rupf: Plasma jets are used primarily to clean and treat surfaces, for example, to manufacture high-performance optical lenses in the near future. My colleague Dr Schindler came up with the idea, following the long development phase of a miniaturised plasma jet source with body-like temperatures at the Institute for Surface Modification.

Cold plasma allows us to generate surface temperatures of less than 40 °C at the point of impact. Through these cold atmospheric plasma jets, cleaning and hydrophilisation of surfaces with biologically tolerable temperatures is possible.

Could you explain the study in further detail?

In our study, we examined the antibacterial efficiency of plasma on oral pathogens, such as *Streptococcus mutans* and *Lactobacillus casei*. Dentine from extracted human molars was contaminated with four different bacterial strains

and exposed to plasma for 6, 12, or 18 seconds. We found that the longer the dentine was irradiated, the higher the reduction in bacteria was.

What treatment procedure could potentially incorporate this technology?

Dr Axel Schindler: I think that plasma jets could be integrated into dental handpieces. Technically, this will not be much of a challenge as these devices are already highly miniaturised.

Dr Rupf: Treatment with plasma jets requires guiding the plasma jet over the treated area. As plasma jets are very flexible and locally effective, they will allow us to treat enamel, dentine and cementum very gently. The procedure promises therapy measures that could be applied not only in dentistry, but also in surgery and dermatology.

When will the procedure be tested on patients and when will it be available in markets?

Dr Schindler: We intend to test the procedure on patients this year. As far as market release is concerned, we expect that it will be another three years before it will be available for use in dentistry.

Thank-you very much for the interview. 

(Edited by Daniel Zimmermann, DTI/Translation provided by Anne-Marie Fischer)

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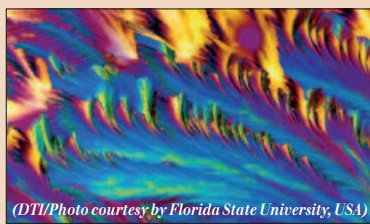
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Breakthrough in tooth-tissue engineering

Fred Michmershuizen
DTA

NEW YORK, NY, USA/LEIPZIG, Germany: Researchers at the University of Illinois in the US could have discovered the key to re-growing tooth enamel. In a comparative study on animals, they found that repeated simple amino acids, or Prolines (photo), are responsible for making teeth stronger and more

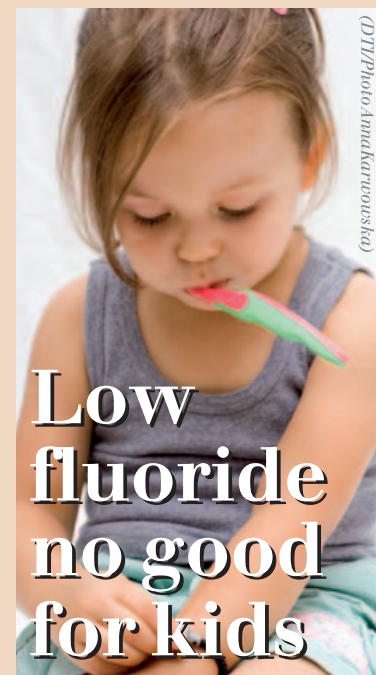


resistant. Their findings could help in replacing lost parts of teeth in patients suffering from dental decay. Proline is a major component of

the protein collagen, the connective tissue structure that binds and supports all other tissues. It can be also found in protein bubbles that help to form enamel.

In the study, the researchers compared the number of Proline repeats in amphibian and mammal models, such as mice, cows and frogs, and discovered that when the repeats are short, teeth lack the en-

amel prisms that are responsible for the strength of human enamel. In contrast, when the Proline repeats are long, they contract groups of molecules that help enamel crystals grow. According to the researchers, the findings could aid other important areas of scientific research in addition to dentistry, including the treatment of neurodegenerative diseases, such as Alzheimer's Disease or Creutzfeldt-Jakob Disease. [DTI](#)



Low fluoride no good for kids

Lisa Townshend
DT United Kingdom

LONDON, UK: Children's toothpaste that contains low concentrations of fluoride fails to effectively combat tooth decay. For optimal prevention of cavities in children over age six, toothpastes should contain at least 1,000 parts per million of fluoride, according to a study carried out by the University of Manchester School of Dentistry. Toothpaste containing fluoride concentrations of less than this is as ineffective as toothpaste with no fluoride at all.

The study, published in the latest issue of *the Cochrane Library*, a publication of the Cochrane Collaboration, examined results from 79 controlled clinical studies on 75,000 children and found that the benefits of fluoride are reduced for low fluoride toothpastes.

"Toothpastes with lower fluoride levels, in the 440 to 550 range, give results that are no better than the results seen with toothpaste that does not contain fluoride," said co-authors Prof. Helen Worthington and Dr Anne-Marie Glenny.

The study also found that brushing children's teeth with fluoride toothpaste before the age of 12 months could lead to an increased risk of developing mild fluorosis. Children's toothpastes currently range from 100 parts per million to 1,400 parts per million.

"From a public health point of view, the risk of tooth decay and its consequences, such as pain and extractions, is greater than the small risk of fluorosis. Children would have to swallow a lot of toothpaste over a long period of time to get the severe brown mottling on the teeth, as opposed to the more typical mild white patches," Dr Glenny said.

She added that for children considered to be at a high risk of tooth decay by their dentist, the benefit to oral health is likely to outweigh the risk of fluorosis. In such cases, careful brushing of children's teeth with a small amount of toothpaste containing higher levels of fluoride would be beneficial.

"If in any doubt, we would advise parents to speak to their family dentist," Dr Glenny said. [DTI](#)

(Edited by Daniel Zimmermann, DTI)

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New job survey gives smiles to hygienists

Daniel Zimmermann
DTI

NEW YORK, NY, USA/LEIPZIG, Germany: Dental hygienists rank amongst the best ten jobs in the US, a new survey has found. According to CareerCast.com, a job search site based in Carlsbad (US) and the Netherlands, the hiring outlook for hygienists is second only to soft-

ware engineers in the top ten list, which includes accountants and computer systems analysts. Dental hygienists held about 174,100 jobs in 2008 according to figures from the US Bureau of Labour Statistics.

The report analysed 200 jobs in North America based on a set of criteria, including work environment, income, outlook, stress

and physical demands. Dental technicians ranked 72 in the survey, while orthodontists only ranked 94.

“Dental team members like the dental hygienist and dental assistant can be a great help to improve the delivery of dental care,” Dr Jerry Gordon, a dentist from Bensalem in Pennsylvania, told

Dental Tribune Asia Pacific. “With the population of the US ageing, more people are seeking dental care than ever before. The field will continue to have a positive outlook for the foreseeable future.”

He added that pending health-care legislation in the US will not have a negative impact on the field. [DTI](#)



UK tax campaign targets dentists

Claudia Salwiczek
DTI

LONDON, UK/LEIPZIG, Germany: Dentists and other medical professionals in the UK are being encouraged by the government to declare understated income. The campaign launched by the HM Revenue and Customs department earlier this year follows efforts to uncover taxable income hidden by UK taxpayers in offshore bank accounts. In the case of medical professionals, HMRC is looking for taxable income regardless of where it has been hidden.

A spokesperson for HMRC said the tax authorities had been gaining information about doctors, and others, from employers such as National Health Service trusts, private hospitals and medical insurance firms. He said that those dentists or physicians who contact HMRC by 31 March to make a voluntary disclosure will be able to put their tax affairs in order and only be charged a 10 per cent penalty. He confirmed that his department will turn its attention to other professionals—solicitors, lawyers and accountants—later this year.

In its most recent offshore disclosure campaign, which closed earlier this month, the department flushed out 10,000 people who said they wished to pay tax on income hidden abroad.

“Our aim is to make it as easy as possible for people to come forward, make a full disclosure and benefit from the certainty of a reduced 10 per cent penalty that HMRC is making available to those who qualify for this opportunity,” said Mike Wells, HMRC’s Director of Risk and Intelligence. “This is the first step in enabling those with undisclosed income or gains to avoid a full tax investigation together with much higher penalties.”

Anyone who does not come forward, and is found to have been avoiding tax, could be fined up to 100 per cent of his or her unpaid tax, with a minimum penalty of 30 per cent. [DTI](#)

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Global health care fraud costs put at US\$260 billion

European network finds more than five per cent of spending is lost to corruption

Reuters

LONDON, UK: Some US\$260 billion are lost globally every year to fraud and error in health care—enough to quadruple the World Health Organization's (WHO) and UNICEF's budgets and control malaria in Africa.

A study by the European Health-care Fraud and Corruption Network (EHFCN) and the Centre for Counter Fraud Studies (CCFS) at Britain's University of Portsmouth found that 5.59 per cent of annual global health spending is lost to mistakes and corruption.

"Every euro lost to fraud or corruption means that someone, somewhere is not getting the treatment that he or she needs," said Paul Vincke, EHFCN's president and one of the authors of the report. "They are ill for longer, and in some cases they simply die un-

cessarily. Make no mistake—health-care fraud is a killer."

The report reviewed 69 exercises in 35 organisations in 6 countries to measure health care fraud and error losses. The combined expenditure assessed was more than US\$490 billion

and findings were extrapolated from Britain, the US, New Zealand, France, Belgium and the Netherlands in order to gain a global sense of the situation. Data from developing nations would not have changed the global figure, the authors said, but were difficult to obtain because the study included only exercises based on statistically valid samples with measurable levels of accuracy.

The report found evidence of many different types of fraud, including pharmacists dividing prescriptions into smaller packages to claim extra fees, drug companies forming price cartels, doctors over-claiming travel costs and abusing government grants, and patients submitting fraudulent insurance claims. Two doctors were found to have claimed a government improvement grant for their clinic, which they spent on establishing a car import-export business.

A Thomson Reuters report published last October found that the US health care system wastes between US\$505 billion and US\$850 billion annually, with around 22 per cent due to fraudulent insurance, kick-backs for referrals for unnecessary services, and other scams.

The WHO's latest estimate of global health-care expenditure was US\$4.7 trillion. The fraud report's US\$260 billion loss figure is based on an average of 5.59 per cent of spending lost to fraud.

Jim Gee, chair of CCFS's advisory board, said the report proved it was possible to measure the nature and extent of losses due to fraud and error, which is vital to addressing the issue.

"It may be embarrassing for some organisations to find out just how much they are losing," he said in the report. "Because of the direct, negative impact on human life of losses to fraud, it is never easy to admit they take place."

But Gee said the first step to combating fraud is for governments and institutions to acknowledge that fraud occurs in their organisations. "If an organisation is not aware of the extent or nature of its problem, then how can it apply the right solution?"

The EHFCN was established to assist the region's health-care organisations in determining and reducing losses due to fraud and error so that more money can be better spent on patient care.

Similar networks exist in the US and Canada. [DT](#)

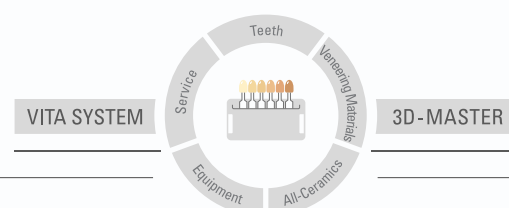
(Edited by Daniel Zimmermann, DTI)

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Nobel Biocare forges new partnerships with material specialists VITA and Ivoclar Vivadent

Collaborations expected to expand the company's NobelProcera and CAD/CAM offerings

Daniel Zimmermann
DTI

LEIPZIG, Germany: In a sweeping campaign, Nobel Biocare has established new partnership agreements with VITA and Ivoclar Vivadent, two European-based companies that specialise in dental restorative and prosthetic materials. The agreements, which form part of Nobel Biocare's newly established Preferred Partner Program, are intended to afford the company access to more state-of-the-art dental materials, the company said in a press note in February.

With the goal of further strengthening NobelProcera's leading market position in CAD/CAM-based dentistry, Nobel Biocare initiated the Preferred Partner Program in January 2010 with selected providers of dental materials. According to CEO Domenico Scala, the goal of this programme is to make it possible for dentists to take advantage of the most comprehensive portfolio of end-to-end restorative and prosthetic solutions available in the market. Nobel Biocare's broadened product range will



A Nobel Biocare employee prepares the isostatic pressing of NobelProcera crowns. (DTI/Photo courtesy of Nobel Biocare, Sweden)

include new products, better veneering solutions, new cost-effective treatment options and complete solutions for edentulous indications, Scala said.

The agreement with VITA, which currently has one of the broadest portfolios of veneering solutions on the market, complements Nobel Biocare's recent launch of a new scanner, soft-

ware, and new prosthetic products and materials. The agreement with Ivoclar Vivadent will offer the company access to additional high-performance ceramics, including IPS e.max for full-contour crowns and acrylic prosthetic materials for temporary crown-and-bridge ceramics. In January, Ivoclar Vivadent was the first company to partner with Nobel Biocare within the framework

of the Preferred Partner Program. "As a leading materials company, we see a partnership with Nobel Biocare as an ideal combination of premium skills—milling systems and materials," said Robert Ganley, CEO of Ivoclar Vivadent. "NobelProcera is a leader and pioneer in CAD/CAM dentistry, and a unique acrylic provisional material system that is due to be launched in 2010."

"As a market leader in material systems, we have and will continue to partner with the market-leading digital-based CAD/CAM systems," he added.

CAD/CAM-based dentistry is considered to be one of the fastest growing market segments in dentistry. According to an iData Research report, the number of all-ceramic dental prosthetic units is projected to grow by 10 per cent in the US and Europe over the next five years.

According to Dr Henry Rauter, CEO of VITA, "The optimal match between VITA products and the products and manufacturing processes of selected business partners has been our key to success for decades. This new partnership with Nobel Biocare increases our customers' flexibility and enables them to combine VITA products with other leading dental systems."

Nobel Biocare has been under pressure lately after net profits in the fourth quarter of 2009 did not meet forecasts and fell by over 30 per cent, owing to lack of demand in the worldwide dental implant market. Nobel Biocare shares have also dropped by almost 40 per cent since the beginning of the year.

Scala said that the agreements would help to strengthen the company's position as the industry's leading full-solution provider and partner of choice in dentistry. ■

Triodent to extend their New Zealand headquarters



New Zealand Prime Minister John Key (right) inspects Triodent's new laser sintering machine with Dr Simon McDonald. (DTI/Photo courtesy of Triodent, NZ)

Daniel Zimmermann
DTI

HONG KONG/LEIPZIG, Germany: At a recent ceremony, New Zealand dental manufacturer Triodent unveiled a new Innovation Center in the North Island town of Katikati. The centre is the first stage in plans to build new headquarters and bring the company's New Zealand operations onto one site for the first time since 2007. A new factory is also scheduled to open at the site in late 2010, with an administration wing to follow, company officials said.

New Zealand Prime Minister John Key, who attended the unveiling ceremony, gave dental Triodent his seal of approval. Speaking to invited guests at the planned site, he said achieving success in the world market was "ultimately about doing things a lot smarter."

"I want to encourage New Zealand companies to do the things that Triodent is doing, and that is blazing a trail in international markets, being creative and investing in science and research and development, be-

cause that is the future of New Zealand," he said.

Triodent, which specialises in the production of matrix systems and dental instruments, has been named one of the top 10 fastest growing companies in New Zealand. It ranks 134 amongst the fastest growing companies in the Asia-Pacific region, according to a 2008 report by Deloitte Technology.

Triodent founder Dr Simon McDonald said 2009 had been a memorable year for Triodent, owing to the way the company consolidated its position and laid the path for a strong future, as well as the numerous awards won.

"With the advantage of our business agility we have been able to respond quickly to the conditions, and despite the increasing complexity of our operations, we are as focused on our goals now as we have ever been," Dr McDonald explained.

He assured guests that Triodent would not rest on its laurels, and more innovative products would follow in the path of the V3.

The product was named Top Matrix System by Dental Advisor in 2009. ■

Qualitas Medical Group enters Singapore market

Bernama

KUALA LUMPUR, Malaysia: Qualitas Medical Group Ltd's subsidiary Qualitas Healthcare International Sdn Bhd has acquired 75 per cent stake in Dr Marcus Cooney & Associates Pte Ltd, which operates a Singapore dental clinic under the trade name *SmileFocus*. Qualitas' founder, Chairman and Managing Director Dr Noorul Ameen said the acquisition was in-line with the group's strategy to expand its market reach into the region and other health-care-related businesses.

"Our acquisition of SmileFocus follows our first foray into the dentistry business in India earlier this year," he said in a statement in Kuala Lumpur last month.

Located at the Camden Medical Centre, SmileFocus provides

a wide range of specialist dentistry services under one roof, including cosmetic dentistry, family dentistry, as well as implant and restorative dentistry services.

Dr Ameen said the expansion of the Qualitas brand into Singapore would complement its listed status in the country. The acquisition will be paid in two tranches, either fully in cash or partly in cash and partly in Qualitas shares, with the final valuation equal to 7.5 times *SmileFocus*' profit after tax for the financial year 2010. The cash portion will be paid partly from the group's proceeds from its initial public offering in 2008 and partly through internal funding.

The Qualitas Group has one of the largest networks of clinics in Malaysia, with 166 clinics throughout the country. ■