

DENTAL TRIBUNE

The World's Dental Newspaper • Asia Pacific Edition



PUBLISHED IN HONG KONG

www.dental-tribune.asia

No. 1+2 Vol. 13



Neoss
Guy Leaver on expansion plans in Asia

▶ Page 9



Google
How to get on to Page 1 in 2015

▶ Page 10



Cone Beam CT
Ready for a new standard of care?

▶ Page 14

Regional declaration on amalgam phase-out signed in Bangladesh

Asia poised to become first continent free from dental mercury waste

DT Asia Pacific

Dhaka, Bangladesh: Representatives of dental and civil society organisations in Asia recently signed a declaration in Dhaka, Bangladesh, that calls for a phase-out of dental fillings containing mercury throughout the region. The agreement also aims for the cease of trade in amalgam and to educate dental professionals about mercury-free alternatives, such as Atraumatic Restorative Treatment.

Use of amalgam in the treatment of children and pregnant women is to be prohibited already this year, the paper states. It also strives for developing measures to raise public awareness about the environmental hazards of amalgam and to help hospitals and dental institutions continent wide to provide mercury-free dental health care services. An overall phase-out of amalgam in dentistry in Asia is targeted for 2020.



The declaration was formulated last November in Dhaka. (Photo OSVSWA, India)

Signed by dental representatives from India, Nepal, Bangladesh, Thailand, Pakistan and Sri Lanka, the declaration is con-

sidered a practical step towards implementing the Minamata Convention on Mercury, an international agreement signed by

87 countries two years ago in Japan that has banned the use of the

→ DT page 2

Dental icon dies at 85

The father of the modern dental implant, Per-Ingvar Brånemark, has died at age 85 in his hometown of Gothenburg in Sweden from a heart attack. He leaves behind his wife, three children and four grandchildren.

A physician and dedicated researcher, Brånemark accidentally discovered how to anchor titanium in bone, a process known as osseointegration, when studying the effects of blood flow on bone healing. He successfully placed the first titanium implant in the mid-1960s in a Swedish patient with several jaw deformities and missing teeth. His invention was approved by Swedish health authorities in the early 1970s. It is still sold today as the Brånemark system by Nobel Biocare.

During his lifetime, Brånemark received several honours, including the Swedish Society of Medicine's Söderberg Prize and the European Inventor Award for Lifetime Achievement. □



Dr John Williams and colleagues from the Colorado State University in the US demonstrating a device that could allow deaf patients to hear with their tongue. (Photo courtesy of CSU, USA)

Recommendations changed

The Food and Drug Administration has updated its recommendations for the use of bone graft substitutes containing recombinant proteins or synthetic peptides in patients under the age of 18. Owing to reported adverse effects, the regulatory body advises against routine use of such products in this population. □

Dentist best job in the United States

US News & World Report has announced that dentist and dental hygienist are again among the best jobs in the United States, with dentist at No. 1. Dentist is also among the 2015 top best-paying jobs in the country, only preceded by physicians, who top the list with an average of US\$188,440 earned in 2015. □

Dentures pose health risk during sleep

Japanese researchers have found that people who wear dentures at night are at an increased risk of pneumonia. According to their study, patients who wore their dentures during sleep were at a 2.5-fold risk of developing the condition compared with those of a control group who removed their dentures before they went to bed. Denture wearers were also more likely to suffer develop tongue and denture plaque, *Candida albicans*, as well as periodontal inflammation.

The study conducted at the Nihon University's School of Dentistry and Keio University's School of Medicine in Tokyo examined 228 men and 296 women aged 85 and over in terms of their oral health status and behaviour. □



Distinguished by innovation

Healthy teeth produce a radiant smile. We strive to achieve this goal on a daily basis. It inspires us to search for innovative, economic and esthetic solutions for direct filling procedures and the fabrication of indirect, fixed or removable restorations, so that you have quality products at your disposal to help people regain a beautiful smile.

www.ivoclarvivadent.com

Ivoclar Vivadent AG
Benderstr. 2 | FL-9494 Schaan | Liechtenstein | Tel.: +423 / 235 35 35 | Fax: +423 / 235 33 60

ivoclar
vivadent:
passion vision innovation

AD

← DT page 1

substance in industrial products like batteries and fluorescent lamps, on the continent. Although amalgam is generally exempt from the ban, the convention recommended phasing down its use in dentistry worldwide.



Dr Mahesh Verma, President of the Indian Dental Association.

If implemented effectively, the new declaration, formulated in Dakha, Bangladesh, last November, would make Asia the largest and most densely populated continent to phase out the controversial material, said Dillip Pattanaik, Executive Director of the Orissa State Volunteers and Social Workers Association, a local non-profit organisation, and one of the initiators of the initiative.

“Amalgam is a primitive, polluting product whose high metal content leads to cracked teeth. It is so old that it pre-dates the birth of Mahatma Gandhi. It has no role in 21st century dentistry and it is generally rejected among younger and more modern dentists,” he commented.

While mercury-free dentistry is growing even in rural parts of India, Pattanaik said, more than 70 per cent of dentists in the country are still using it as their primary filling material. The widespread use results in 65 tons of amalgam waste per year, which, despite new initiatives to educate dentists about the benefits of amalgam separators, is released into the environment. It is then transformed into methylmercury, a highly toxic form of the metal that poses health risks to wildlife and human beings.

“The large number of dental practitioners and dental professionals both in the private and government sectors are unaware of these things and required to be sensitised to avoid amalgam disposal through the normal sewer system,” Prof. Mahesh Verma, Indian Dental Association President and Director and Principal of the Maulana Azad Institute of Dental Sciences in New Delhi, told *Dental Tribune Asia Pacific*.

Religious practices like Hindu cremations further add to the environmental problem, as they release mercury from dental fillings into the air.

While the environmental effects of amalgam waste in Asia remain largely unknown, it is believed that the continent contributes significantly to the overall global burden. According to a 2013 report released by the United Nations Environment Programme, amalgam waste entering the solid waste stream amounts to 340 tons worldwide.

Total emissions of mercury resulting from cremation of human remains were estimated at 3.6 tons. DT

Journalist, doctor and colleague: A tribute to Elsa Cayat



From right to left: Marc Revise with Elsa Cayat and fellow journalist Antonio Fischetti. (Photo Archive)

Dr Marc Revise
Scientific Editor,
Dental Tribune France

Elsa Cayat was killed along with 11 of her colleagues, in the attack against French newspaper *Charlie Hebdo* in Paris on 7 January 2015. She leaves behind a 22-year-old daughter.

Elsa worked as a psychiatrist and psychoanalyst. She had her internship at the age of 22. “Charlie Divan”

was the name of the column she wrote for *Charlie Hebdo*. She also published two books, *Un homme + une femme = quoi ?* [A Man + A Woman = What?] and *Le Désir et la putain* [Desire and the Whore]. In a twist of irony, we had been working together on an essay about death, transmission and love over the past year. Parental authority and the lasting damage it can cause was also one of her favourite themes.

Although a free spirit, Elsa was always attentive. Her very special

laugh was distinctive. Her enthusiasm and lust for life could be felt when she would say, “Sooooo, what’s new with you?”.

Open to many things, she loved to flick through the *Dental Tribune* that I would sometimes leave on her desk. On 3 June 2014, we celebrated the release of Patrick Pelloux’s book *On ne vit qu’une fois!* [You only live once!] with *Charlie Hebdo* editor Stéphane Charbonnier and the rest of the *Charlie Hebdo* team. DT

AD

Join the largest educational network in dentistry!

DT STUDY CLUB
courses | discussions | videos | mentoring

www.DTStudyClub.com

- education everywhere and anytime
- live and interactive webinars
- more than 500 archived courses
- a focused discussion forum
- free membership
- no travel costs
- no time away from the practice
- interaction with colleagues and experts across the globe
- a growing database of scientific articles and case reports
- ADA CERP-recognized credit administration

Register for FREE!

ADA CERP® Continuing Education Recognition Program
ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP does not approve or endorse individual courses or instructors, nor does it imply acceptance of credit hours by boards of dentistry.

fdic dti

International Imprint

Licensing by Dental Tribune International	Publisher Torsten Oemus
<i>Group Editor/Managing Editor DT Asia Pacific</i>	<i>Copy Editors</i>
Daniel Zimmermann newsroom@dental-tribune.com Tel.: +49 341 48474-107	Sabrina Raaff Hans Motschmann
<i>Clinical Editor</i>	<i>President/CEO</i>
Magda Wojtkiewicz	Torsten Oemus
<i>Online Editors</i>	<i>Media Sales Managers</i>
Yvonne Bachmann Claudia Duschek	Matthias Diessner Peter Witteczek Maria Kaiser Melissa Brown Veridiana Mageswki Hélène Carpentier
International Editorial Board	<i>CFO/COO</i>
Dr Nasser Barghi, Ceramics, USA Dr Karl Behr, Endodontics, Germany Dr George Freedman, Esthetics, Canada Dr Howard Glazer, Cariology, USA Prof. Dr I. Krejci, Conservative Dentistry, Switzerland Dr Edward Lynch, Restorative, Ireland Dr Ziv Mazor, Implantology, Israel Prof. Dr Georg Meyer, Restorative, Germany Prof. Dr Rudolph Slavicek, Function, Austria Dr Marius Steigmann, Implantology, Germany	<i>Marketing & Sales Services</i> Nadine Dehmel <i>Accounting</i> Karen Hamatschek <i>Business Development</i> Claudia Salwiczek <i>Executive Producer</i> Gernot Meyer <i>Ad Production</i> Marius Mezger <i>Designer</i> Franziska Dachscl
DENTAL TRIBUNE The World's Dental Newspaper - Asia Pacific Edition	Dental Tribune International Holbeinstr. 29, 04229, Leipzig, Germany Tel.: +49 341 48474-302 · Fax: +49 341 48474-175 Internet: www.dental-tribune.com E-mail: info@dental-tribune.com
Published by Dental Tribune Asia Pacific Ltd.	Regional Offices
© 2015, Dental Tribune International GmbH. All rights reserved.	<i>Asia Pacific</i> DT Asia Pacific Ltd. c/o Yonto Risio Communications Ltd, 20A, Harvard Commercial Building, 105-111 Thomson Road, Wanchai, Hong Kong Tel.: +852 3115 6177 · Fax: +852 3115 6199
Dental Tribune makes every effort to report clinical information and manufacturer's product news accurately, but cannot assume responsibility for the validity of product claims, or for typographical errors. The publishers also do not assume responsibility for product names or claims, or statements made by advertisers. Opinions expressed by authors are their own and may not reflect those of Dental Tribune International.	<i>The Americas</i> Dental Tribune America, LLC 116 West 25 th Street, Suite 500, New York, NY 10001, USA Tel.: +1 212 244 7181 · Fax: +1 212 224 7185

Study finds e-learning as good as traditional training for health professionals

DTI

LONDON, UK: Electronic learning could enable millions more students to train as doctors and nurses worldwide, according to the latest research. A review commissioned by the World Health Organization (WHO) and carried out by Imperial College London researchers concluded that e-learning is likely to be as effective as traditional methods for training health professionals. These new findings support the approach to continuing education Dental Tribune International (DTI) has adopted with its free online education platform for dental professionals.

The Imperial team, led by Dr Josip Car, carried out a systematic review of the scientific literature to evaluate the effectiveness of e-learning for undergraduate health professional education. They conducted separate analyses on online learning, which requires an Internet connection, and offline learning, delivered via CD-ROMs or USB flash drives, for example.

The findings, drawn from a total of 108 studies, showed that students acquire knowledge and skills through online and offline e-learning as well as or better than they do through traditional teaching.

E-learning, the use of electronic media and devices in education, is already used by some universities to support traditional campus-based teaching or to enable distance learning. Wider use of e-learning might help to address the need to train more health workers across the globe. According to a recent WHO report, the world is short of 7.2 million health care professionals, and the figure is growing.

The authors suggest that combining e-learning with traditional teaching might be suitable for health care training, as practical skills must also be acquired.

According to Car, from the School of Public Health at Imperial, "E-learning programmes could potentially help address the shortage of healthcare workers by enabling greater access to education; especially in the developing world the need for more health professionals is greatest."

While the study focused on the education of students, DTI follows a similar approach to continuing education, offering webinars via its Dental Tribune Study Club, which it launched in 2009. The platform regularly offers free online courses and in

several languages. The wide range of topics includes general dentistry, digital dentistry, practice management, as well as specialties, such as implantology and

endodontology. The webinars are presented by experienced speakers and participants are awarded continuing education credits. [DTI](#)



AD

Tetric® N-Ceram Bulk Fill

The nano-optimized 4-mm composite



Discover the new time-saving composite



4 mm to success

- Bulk filling is possible due to Ivocerin®, the patented light initiator
- Special filler technology ensures low shrinkage stress
- Esthetic results are achieved quickly and efficiently in the posterior region

www.ivoclarvivadent.com

Ivoclar Vivadent AG
Bendererstr. 2 | 9494 Schaan | Liechtenstein | Tel.: +423 235 35 35 | Fax: +423 235 33 60

ivoclar
vivadent
passion vision innovation

Je suis Charlie



Daniel Zimmermann
DTI

A few weeks ago, this simple French expression brought people around the globe together in solidarity. Unfortunately, a dear friend of our French editor was killed in the terrorist attacks against the *Charlie Hebdo* newspaper on 7 January and a Jewish supermarket in Paris on 9 January. Our thoughts are with her family and the bereaved of the other 15 victims.

What remains now after these horrific events? Obviously, there is the revealing fact that security, wherever you are, is an illusion. Barbaric acts of violence are not things that happen to someone else somewhere else; they can affect you directly and without warning.

Do we persist and go on or do we give in and play the game of the devil? My sincere hope is that, whatever happens, people will always choose humanity and reason over ignorance and hate. **DT**

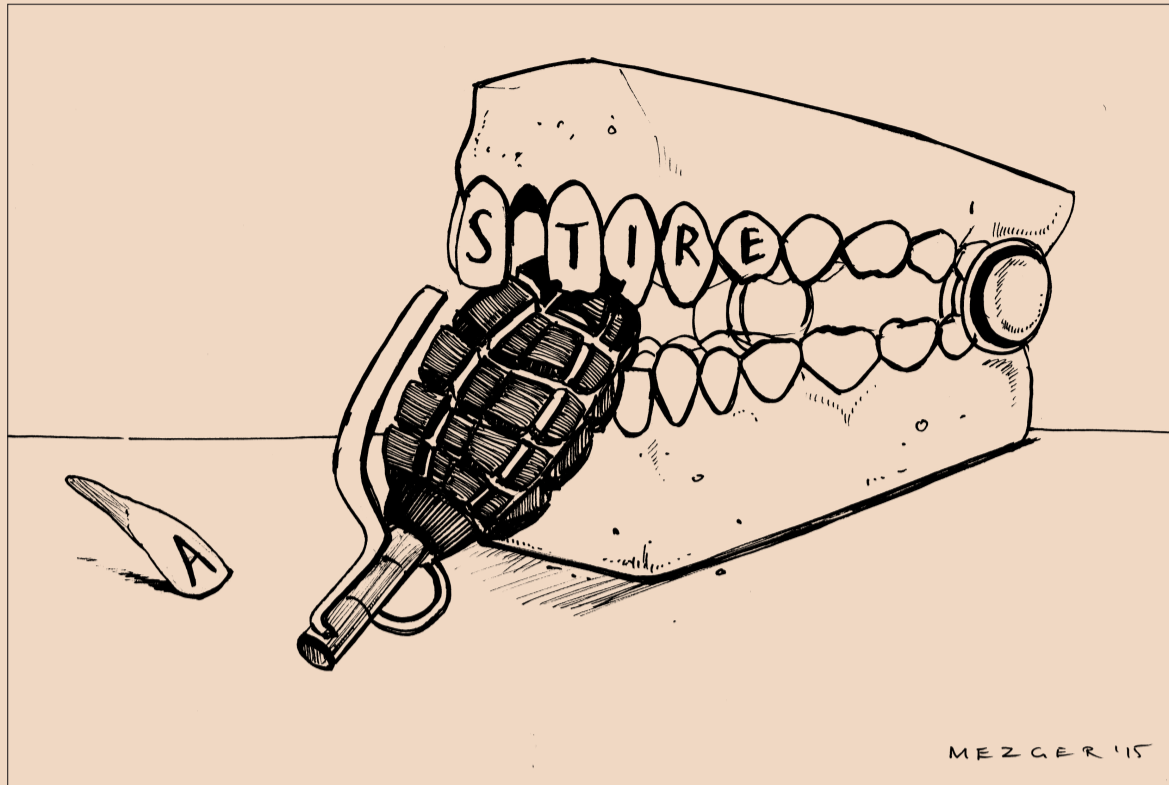
Yours sincerely,

Daniel Zimmermann
Group Editor
Dental Tribune International

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



For quick access to our contact form, you may also scan the following QR code.



No place in clinical dentistry



Dr Sushil Koirala
Nepal

The use of mercury in dental restorative materials has a long history. While amalgam fillings are still popular among dentists in both developed and developing countries, the toxic effects of the metal remain a subject of controversy.

In my practice, I stopped performing tooth restorations with amalgam 15 years ago, not because of its toxicity, but because it is not a naturo-mimetic and such restorations require more invasive tooth preparation. Now, we have various tooth-coloured adhesive restorative materials at our disposal as an alternative to amalgam. Therefore, its use in clinical practice largely depends on the

mindset and choice of the dentist and patient. I personally believe that, if a dentist considers do no harm dentistry his or her practice philosophy and adopts minimally invasive restorative techniques to achieve naturo-mimetic clinical results, then silver amalgam restorations no longer have a place in clinical dentistry.

When discussing banning mercury-containing restorative materials in dentistry, we must consider what we have been teaching our students at undergraduate level. If we carefully look at the restorative dentistry syllabus in Asia, we see that almost every dental department still teaches conventional restorative procedures with amalgam. They also focus on G.V. Black's principles of cavity preparation, which are now considered very invasive and becoming increasingly obsolete in quality dental practice.

Unless we reconsider restorative techniques and materials science in dental curriculums, it will be difficult to induce practical changes in clinical practice.

As a practitioner and advocate of minimally invasive cosmetic dentistry, I have been effectively promoting tooth-coloured adhesive restorative materials. I strongly urge young dentists to perform minimally invasive and naturo-mimetic dentistry for the long-term health and beauty of teeth and smiles. **DT**

Contact Info

Dr Sushil Koirala is President of the Asian Academy of Aesthetic Dentistry and a regular contributor to *Dental Tribune*. Dr Koirala can be contacted at drsushilkoirala@gmail.com.

Contact Info

Yataro Komiyama is founder of the Brånemark Osseointegration Center in Tokyo, Japan, and Clinical Professor at Tokyo Dental College. He can be contacted at yataro@teabreak.jp.

AD

GUANGZHOU

PROMEDICA

Highest quality made in Germany

- high quality glass ionomer cements
- first class composites
- innovative compomers
- modern bonding systems
- materials for long-term prophylaxis
- temporary solutions
- bleaching products ...

All our products convince by

- excellent physical properties
- perfect aesthetical results

Glass ionomer filling cement

- perfectly packable consistency
- excellent durable aesthetics
- also available as application capsules

Light-curing micro-hybrid composite

- universal range of application
- high filler content
- excellent physical properties
- fast and easy application

Dental desensitising varnish

- treatment of hypersensitive dentine
- fast desensitisation
- fluoride release
- easy and fast application

PROMEDICA Dental Material GmbH
 phone: +49 43 21/5 41 73 · fax +49 43 21/5 19 08 · eMail: info@promedica.de · Internet: www.promedica.de

Clinical governance – A system for better health care



Dr Kashif Hafeez
UK

While accountability and improvement have been eminent in health care systems for quite some time, there is probably no other time in history when the relevance and importance of these have been more advocated. Learning from our shortcomings and improving our health care system towards better patient care is the goal of clinical governance. I refer to it as the democracy of the health care system, in which all members of the health care team have the right to bring about positive changes.

Accountability and learning from self-criticism forms the basis of clinical governance, which provides the framework for taking all

we can provide the best care possible for our patients. It is a structural framework that incorporates all pillars of the health care system. There are channels for the health care team, management and patients alike. Particularly for the last, clinical governance provides an environment free from potential hazards. In addition, patients are given a voice in the system through patient feedback, ensuring that if they draw attention to any wrongdoing, lessons are learnt and such mistakes are not repeated.

For our staff and team members, clinical governance ensures that they will be inducted into the system effectively in the beginning and be a part of that system through organisational meetings and their annual appraisals throughout their whole career. This way, they

of improved patient care and keeps all involved units in the loop. The management of an organisation can monitor the quality of care provided

by it. It can also rate the clinical effectiveness of a particular specialty or clinician. With patient feedback, it can furthermore identify any shortcomings in the system. It will compel the organisation to strive for the professional development of its employees, safeguarding the clinician's right to develop professionally. The impartiality of the system opens the organisation to scrutiny and maintains the absolute system of checks and balances.

Audit is an indispensable part of clinical governance, as it allows the system to self-analyse and induce changes, if needed, that is, we make improvements and then re-audit. Once this cycle has been initiated, it will become a continuous process of reanalysis and improvement. The prime feature of this system is that the whole process is self-sustainable once the system has been implemented. The checks and

balances in the system will keep it going and evolving.

The process of clinical governance is quite well established in the Western world, but it is time that this essential system of health care delivery become established in developing economies. After all, it is all about the patients: it is to ensure their continued good care that we study intensely and pursue professional development. [DT](#)



Contact Info

Dr Kashif Hafeez is currently in private practice in Carterton in the UK. He can be contacted at hafeezkashif@hotmail.com.

AD

“...it is time that this essential system of health care delivery become established in developing economies.”

the steps necessary to make the system more patient friendly. It is a cyclical process that once established can help to identify the decisive factors for the quality of patient care. When asked by one of my trainees when the mechanisms of clinical governance ensue in everyday practice, my answer was, “In a patient-centred practice it never stops”. It starts as early as the patient first contacts a practice or a hospital and encompasses the entire health care scenario, starting with welcoming and managing a new patient, ensuring his or her safety on our premises and advising him or her about all aspects of treatment. This combination is all about our transparency to the outside world, ensuring that arbiters and our patients can be certain of our quality of care.

More simply put, clinical governance is the umbrella under which

will have the best opportunity to improve their skills and advance their professional development. Moreover, this allows them to better judge their clinical effectiveness and communication skills.

Since training and career development are integral parts of clinical governance, it helps the clinicians to identify their learning needs and plan their continued professional development accordingly. Continuing in this loop, they are able to develop improved awareness about the safety of their work environment, as risk management is one of the basic pillars of clinical governance. Through research and development opportunities, they can also learn new skills and treatment protocols.

Clinical governance is the girdle of an organisation in a health care system: it encompasses all aspects



worldoralhealthday.org
#WOHD15



20th March 2015
World Oral Health Day
Smile for life!

Organized by:
fdi
The World Dental Federation

Media partner:
dti
Dental Tribune International

In partnership with:
LISTERINE

Signal

HENRY SCHEIN

WRIGLEY
Oral Healthcare Program

“Bowie’s teeth were like everything else about him: different”

An interview with German tooth artist Jessine Hein



Hein's hand-sculpted recreation of David Bowie's natural teeth.

David Bowie was undoubtedly a major figure in popular music in the 1970s and 1980s. He is also one of the many celebrities who have undergone cosmetic dental treatment and had his characteristically crooked teeth replaced with a set of crowns in the early 1990s. Inspired by Bowie's unique original look, Jessine Hein, a German painter and sculptor, made a reproduction of the singer's natural teeth. *Dental Tribune* had the opportunity to speak with Hein about her denture sculpture and her perception of beautiful teeth.

Dental Tribune: Ms Hein, how did you come up with the idea of recreating David Bowie's teeth?

Jessine Hein: Bowie's teeth were like everything else about him: different! Not the aesthetic norm, not perfect, but they were strikingly beautiful in the context of his whimsical and miraculous being. His smile revealed an imperfection that made him seem more real, more human, someone to identify with even.

An imperfection worn confidentially inspires sympathy. Bowie was a role model for many people and I think his teeth contributed to that. The vast variety of talents, iconic style and incomparable physique that make up Bowie, and the different universes he created around himself, have always impressed and inspired me. I have been incredibly fascinated with teeth for a long time and have paid close attention to the ivories of those I admire. Therefore, I was very conscious about the loss of the Ziggy Stardust choppers.

Teeth are an integral part of interhuman communication. They are inevitably involved in laughing, talking, screaming and of course singing. Bowie sang to us through his crooked gaps and it was enchanting! So the idea for the sculpture evolved while I was nostalgically longing back to Bowie's old teeth.

Have you done any other artistic projects related to dentistry that inspired you to create a denture sculpture?

In the past, I have done small projects at a dental laboratory, such as a tooth pendant for my necklace, which I have worn ever since and never taken off, as well as another sculpture: Tooth Nuckles. With the knowledge acquired during those projects, I gained an idea of how I could actually construct this replica.

In your opinion, what drove David Bowie, who was celebrated as a nerd, to have his crooked teeth made into a “perfect” Hollywood smile?

I find it noteworthy that a pioneer of individualism, the archetype of “acting out oneself”, decided to “normalise” his mouth. It seemed paradoxical. However, the dental change was parallel to a change in his image and music. It accompanied his development and I assume that was not pure accident, owing to the Hollywood set of teeth that was chosen rather than recreating a natural look when medical intervention was needed.

I cannot imagine that a person like David Bowie willingly left the interior design of his mouth to someone else, so I interpret the pearly whites he got as a bold statement that

signalled a new chapter in his career—maybe a comment on the beauty obsession of our society: “You want regulated perfection? Here you have it!”. The transformation was part of his development from alien hero of the heart to world star. My sculpture intends to underline this, as well as pay homage to the eras of the crooked-toothed miracle who fell to earth once upon a time.

Could you believe that Bowie was not satisfied with his teeth and underwent cosmetic dental treatment for that reason? Perhaps, his crooked teeth were a source of suffering, as is the case with many other people.

I do understand how orthodontics can improve one's self-



The artist herself wearing a tooth mask.

confidence, as I went through years of tooth alignment myself in my teens. There are four teeth missing in my maxillae.

Besides having had trouble chewing properly, I looked like a freakish vampire. It was not very helpful to have an odd-looking set of teeth in this awkward phase of adolescence. Back then, I did not appreciate the beauty in the difference because I was too concerned with trying desperately to survive as a shy teenager at school.

Today, however, I celebrate teeth that are not the norm. I love the diversity and character they bring to the human head. I find it quite sad that these days almost every child undergoes some kind of dental treatment to align his or her differences solely for aesthetic reasons. Some of them might grow up wishing they still had their characteristic natural look.

I have heard Bowie talk about his old teeth in a confident way. He stated they looked fine to him. So, no, I do not think he felt uncomfortable about them at the time, quite the opposite; he was famous for celebrating his striking body in all its otherworldliness.

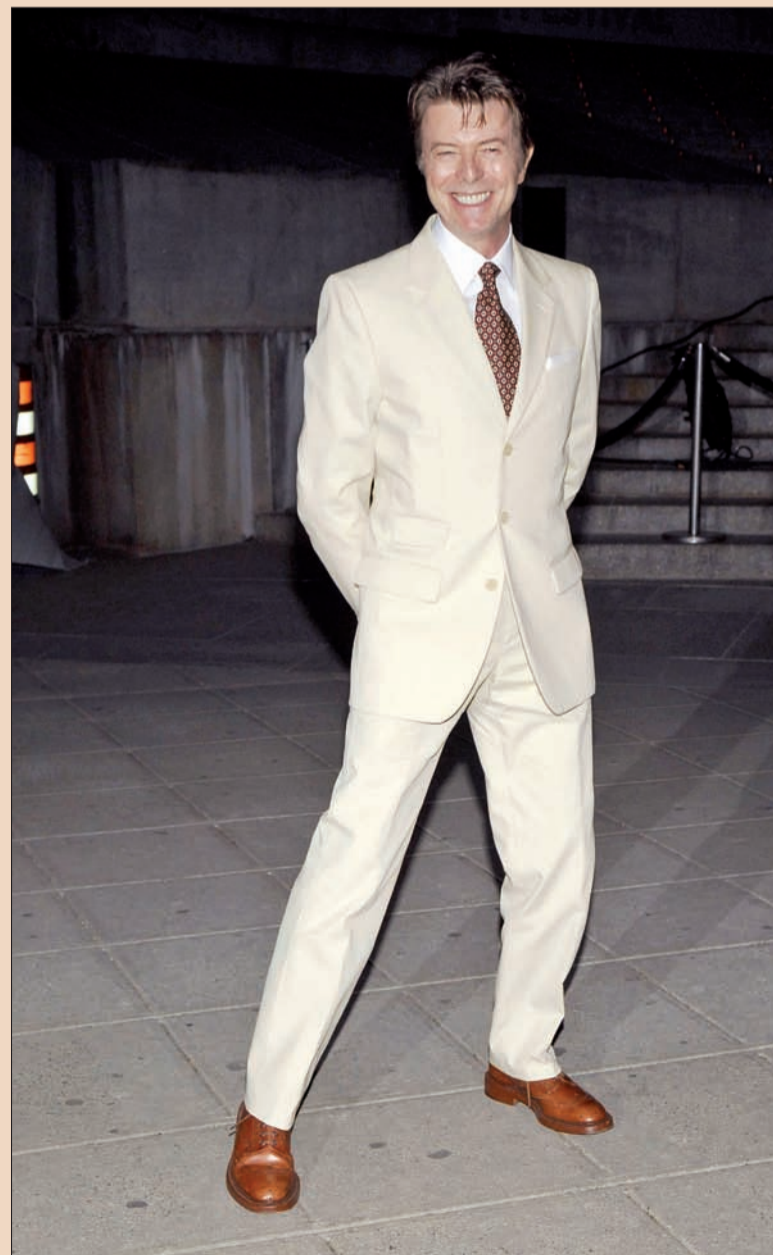
What do you intend to do with the sculpture? Have you been approached by collectors and fans of the singer who would like to purchase it?

The sculpture is currently with me and will be until an opportunity for exhibiting comes up. I have various kinds of sculpture and painting projects in the making that will need some more time to develop. Once they are completed, I envision the David Bowie dentures being presented in the context of the new pieces.

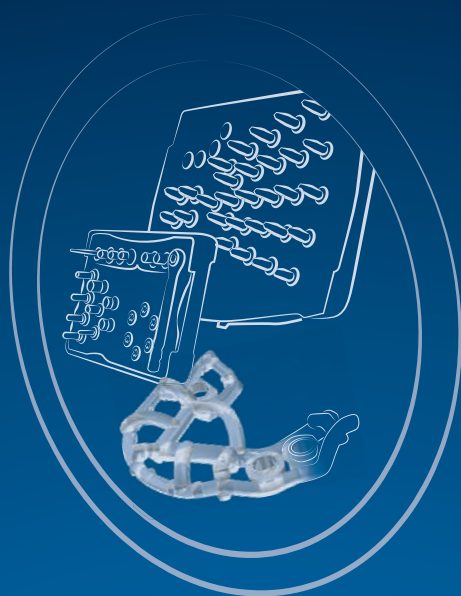
I have been contacted by several potential buyers, but the sculpture is not currently for sale, as I would like to have the option of putting it on display.

Thank you very much for this interview. ☐

“...the idea for the sculpture evolved while I was nostalgically longing back to Bowie's old teeth.”

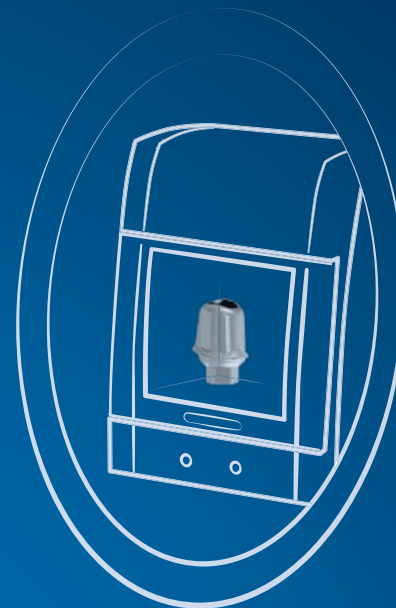


A photo from 2007 showing Bowie with his new smile. (Photo Everett Collection)



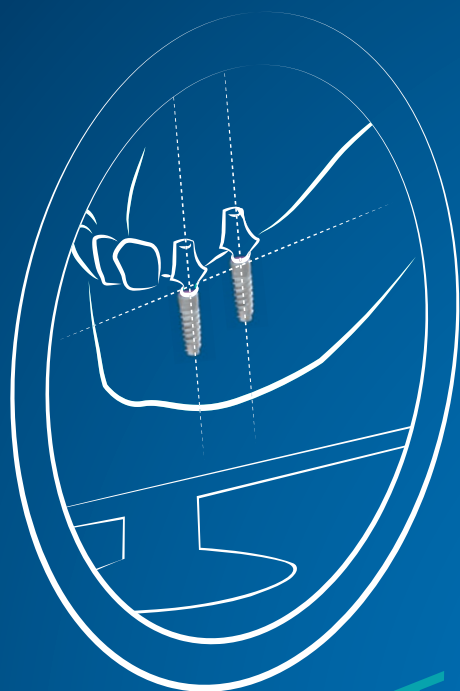
MGUIDE

Open wire-frame 3D printed surgical template allows irrigation + anesthesia from all angles. Surgical drills and tools eliminate the need for guidance keys, freeing-up hands & saving time.



MLAB

Precision CAD/CAM fabrication of customized abutments plus temporary crowns & bridges in a range of materials.



MSOFT

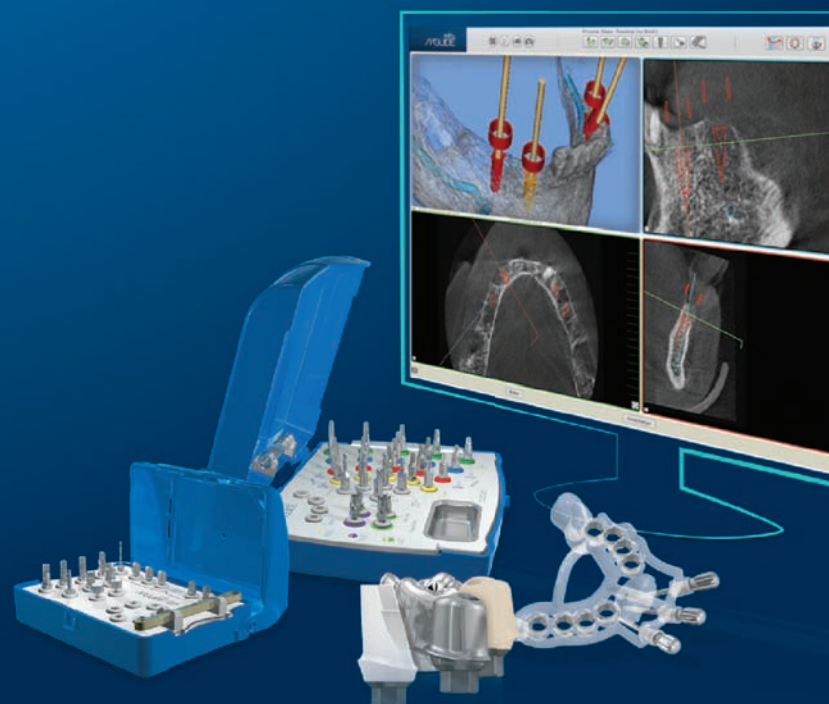
Highly accurate multi-level implant placement planning software, for more accurate surgical procedures & less chair-time.

MCENTER

**ON THE CUTTING EDGE
OF DIGITAL IMPLANT
DENTISTRY**
MAKE IT SIMPLE

MIS[®]
MCENTER

All MCENTER products and services, from the initial plan to temporary restoration, are available in one location. MSOFT, MGUIDE and MLAB systems provide doctors with optimum support for quicker, more accurate surgical procedures resulting in better esthetics, predictable outcomes and reduced chair-time. Learn more at: www.mis-implants.com



Per-Ingvar Brånemark — An innovative genius

Prof. Tomas Albrektsson, Sweden, remembers the man who changed dentistry with the discovery of osseointegration of dental implants

Per-Ingvar Brånemark passed away on 20 December 2014 at the age of 85. Throughout his career as a researcher, he overcame fierce opposition to dental implants and revolutionised methods for treating edentulous patients.

An extremely gifted scientist, Brånemark was also as witty and quick on his feet as they come. Various language editions of *Reader's Digest*, hardly considered a medical journal of note, published an article in the late 1960s about his research on microcirculation. At the end of his first lecture about dental implants in Landskrona in Sweden in 1969, a member of the audience, who turned out to be a senior academic of Swedish dentistry, rose and commented, "This may prove to be a popular article, but I simply do not trust people who publish themselves in *Reader's Digest*." As it happened, that senior academic was well known to the Swedish public for having recommended a particular brand of toothpick. Brånemark immediately rose and struck back, saying, "And I don't trust people who advertise themselves on the back of boxes of toothpicks."

Young and naive as I was, I thought they were just poking fun at each other, but it turned out to be the opening shot of an eight-year battle with the dental profession. When someone cast aspersions on dental implants several years later because Brånemark was not a practitioner, he lost no time in replying, "Teaching them anatomy is good enough for me."

Brånemark completed his medical training at Lund University in 1959 with a doctoral thesis on microcirculation in the fibula of rabbits. Grinding the bone to a state of transparency permitted the use of intravital microscopy to analyse the blood flow in both bone and marrow tissue. The thesis, which found wide recognition both in Sweden and abroad, landed Brånemark an appointment at the Department of Anatomy of the University of Gothenburg just a year later. He was appointed as Associate Professor of Anatomy (later received a full professorship) in 1963, which qualified him for laboratories of his own and the opportunity to



Per-Ingvar Brånemark.

surround himself with a team of researchers.

Brånemark continued to pursue his studies in microcirculation in animal models and ultimately in humans. A plastic surgery technique was used to prepare soft-tissue cylinders on the inside of the upper arm. He then inserted optical devices encased in titanium that enabled intravital microscopy of microcirculation in male volunteers.



Dental Group Editor Daniel Zimmermann talking to Per-Ingvar Brånemark at a conference in Gothenburg in 2009. (Photo Archive)

By the late 1960s, he was able to produce the highest resolution images of human circulation in the history of medicine. Many people are familiar with Lennart Nilsson's photographs of circulation that were taken at Brånemark's laboratories and developed at the De-

partment of Anatomy. Brånemark used a hollow optical device surrounded by titanium to study microcirculation in rabbit bone, permitting both bone and blood vessels to grow through a cleft where they could be examined by means of light microscopy. During such an experiment in 1962, he discovered that the optical device had fused into the bone, a process that he eventually dubbed osseointegration. He revealed his incomparable strength as a researcher at that very moment, realising immediately that the discovery had clinical potential and determining to focus on the development of dental implants, an enterprise that had hitherto been regarded as beyond the scope of medical science.

Brånemark grasped the fundamental truth that edentulousness represents a significant disability, particularly for people who cannot tolerate dentures for some reason. He operated on his first patient in 1965, a mere three years later. The academic community was largely distrustful and hostile to the new approach. The debate was not put to rest until 1977, when three professors at Umeå University in Sweden announced that Brånemark's technique was the recommended first-line treatment. Opposition in other countries eventually waned as well and dental implants, origi-

nally manufactured by a mechanic in the basement of the Department of Anatomy, scored one international triumph after another.

Nowadays, an estimated 15–20 million osseointegrated dental implants are installed every year, and a number of different academies in the field hold annual conferences attended by as many as 5,000 participants each. The University of Gothenburg features a permanent exhibit on osseointegration technology and there is a museum in Brånemark's honour at the Faculty of Stomatology of Xi'an Jiaotong University in Xi'an in China. The P-I Brånemark Institute has been also established in Bauru in Brazil.

Not only dentistry

Back in the 1970s, Brånemark began collaborating with ear specialists and technicians at Chalmers University of Technology to explore the additional potential of osseointegrated implants for developing hearing aids inserted behind the ear. Hundreds of thousands of patients around the world have had operations based on the technology initially developed in Gothenburg under his direction. Those of us who were on the team at the time will never forget a teenage girl who suffered from the effects of thalidomide. The medicine had caused not only limb deformities, but also hearing loss in many patients. Equipped with the new hearing device, she learnt to speak flawlessly.

The team also targeted facial deformities occasioned by congenital or acquired injuries. A number of implants installed in the visce-

rocranium served as fasteners for silicon prostheses, a much more attractive option than attaching them to the patient's glasses. Since the first operation in 1977, the use of the technology has become widespread internationally.

Titanium implants installed in the femur were the next spin-off of Brånemark's research. Patients with above-knee amputations cannot have socket prostheses around soft tissue and may have to rely on a wheelchair to get around. Inserting titanium screws in the femoral stumps permitted the installation of a prosthesis and the ability to walk again. I can still remember the first patient as if it were yesterday. Another teenage girl had been run over by a streetcar in Gothenburg and had above-knee amputations in both legs. She was consigned to spending the rest of her life in a wheelchair. The operation was highly successful and she learnt to walk again.

Acclaimed around the world

Brånemark was fuelled by a passion to help difficult-to-treat patients, and many of his clinical discoveries from the first dental implant on were made in response to cases that had been regarded as hopeless. His innovative genius, fortified by a large research laboratory at the Department of Anatomy, also skyrocketed Gothenburg-based pharmaceutical companies like Nobel Biocare and Astra Tech into leading positions in the global market. He was devoted to the academic community's social responsibility long before many of his colleagues were aware of, much less accepted, the concept. Ultimately, the world came around and he was awarded honorary doctoral degrees by 29 universities and honorary memberships by more than 50 scientific associations—not to mention the Royal Swedish Academy of Engineering Sciences's medal for technical innovation, the Swedish Society of Medicine's Söderberg Prize, the European Inventor Award for Lifetime Achievement and many other distinctions around the world. [\[1\]](#)



Contact Info

Prof. Tomas Albrektsson is working as a professor at the universities in Gothenburg and Malmö in Sweden. He can be contacted at tomas.albrektsson@biomaterials.gu.se.

“Operating in Asia is completely new to us”

An interview with Neoss Chief Financial Officer Guy Leaver, UK



Guy Leaver



tage of this development by choosing the right contacts for this marketplace.

Where do you want to position yourself in the market?

We want to position ourselves in the same way as we do in most markets by delivering a product that is the best there is. We strongly believe that we have a good package. Our company was founded by a clinician and an engineer, so our focus is on delivering exceptional clinical performance and product quality. There is no point in introducing a product that is not as good as someone else's. Our product has to be that good or even better.

We always want customers to understand that they are getting

a value product. We do not sell cheap or offer massive discounts. It is a good quality product at good pricing. In terms of customer service, we aim for exceptional logistics and support. Take Europe, for example, it is pretty much next-day delivery, so if you buy something from us in Germany, it will probably be there at noon the following day. Few of our international competitors can achieve the same.

Thank you very much for the interview. ■

As one of the few manufacturers of dental implants, UK company Neoss has not operated in Asia before. With a recent financial support package of £1.5 million from Yorkshire Bank, the company intends to develop new business in countries like Japan, China and Taiwan. *Dental Tribune Asia Pacific* had the opportunity to speak with Chief Financial Officer Guy Leaver about the upcoming market entry and what makes Neoss stand out from its numerous competitors there.

DT Asia Pacific: Mr Leaver, how is this investment package helping you with your market entry into Asia?

The investment package will support our product launch in Asia initially. Currently, we are going through regulatory approval processes in Japan, China and Taiwan. It is difficult to say exactly when, but our expectation is that this year, probably in the second half, we will actually start to make initial sales. While we expect the growth to be significant, we need the facility for our cash flow in the beginning, as there will be a certain amount of money going out before money actually comes in.

What are your initial expectations for the region?

Since we do not have any sales in these countries at the moment, operating in Asia is completely new to us. We obviously have projections and want to see this business grow consistently over time into something substantial.

Initially, we will focus on our dental implant system, as this is the product segment we are expecting approval for this year. In the future, we will expand to our full product range, including new products we are introducing that could also potentially target these markets. It is not an implant

but works in conjunction with implants and is going to address the same customer base. We will be launching it at the International Dental Show in Cologne and at other shows and congresses around the world in the upcoming months.

Will you sell directly in Asia or through distributors?

We have already signed up with business partners in these markets. In Japan, for example, we have an experienced distributor who has personal contact with a number of leading clinicians in the country who we understand are interested in using our implant system. It always helps to have this kind of endorsement. We are also working with a major distributor in China and will see how that evolves. Potentially, we will put a person in charge of China, but this will depend on how successful we are. If we feel there are more opportunities, we can always tweak the model. There is also an experienced distributor we will be partnering with in Taiwan who has previously distributed a competitor's product.

Generally, we try to choose people who understand what our product is all about, are familiar with the market and know what works in that marketplace.

For Western manufacturers, the market environment in Asia can be tough. Where do you see the challenges for your company there?

As with many of these markets, business in Asia is primarily relationship based, so you need to become involved with the right people and institutions. This is particularly important in China, where there are a growing number of small private dental practices offering dental care in addition to the large government-run hospitals. We aim to take advan-



AD





The 18th APEC Congress & the 4th Jordanian Endodontic Conference

‘NEXT GENERATION ENDODONTICS’

**APRIL 8-10/2015 - Le Royal Hotel
Amman - Jordan**



www.apec2015.jo