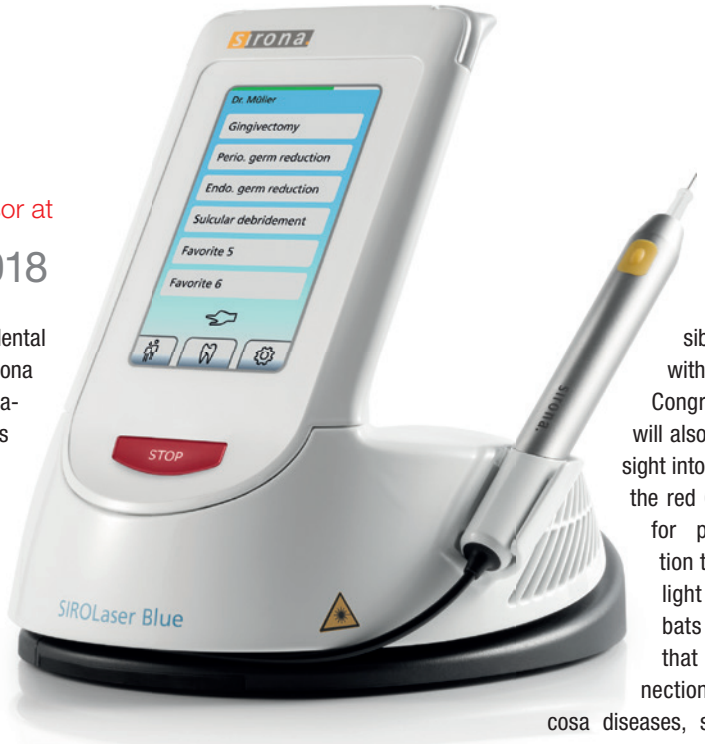
Dentsply Sirona as Gold Sponsor at

WFLD congress 2018



As the market leader in innovative dental products and technologies, Dentsply Sirona will be present at this year's World Federation for Laser Dentistry (WFLD) congress in Aachen with its SiroLaser Blue. With three different wavelengths, this dental laser is a versatile laser therapy device. Dentists from all over the world will be able to find out more about the quality of the treatment results for a range of indications at numerous specialist lectures, a workshop and a treatment carried out live on site.

The first dental diode laser to feature blue, infrared and red wavelengths; the SiroLaser Blue can be used to treat more than 20 indications. That can also be seen from the many different specialist lectures which Dentsply Sirona will be supporting as a Gold Sponsor at the 16th WFLD congress from 1–3 October 2018 in Aachen, Germany.

Attendees will be able to learn about the advantages of laser applications in clinical settings. The short wavelength of the blue 445 nm diode improves the results of surgery thanks to its high absorption even though it requires less power. Moreover, after surgery there is often no need for sutures, usually allowing the wound to heal without scarring. In endodontics and paradontology, the infrared 970 nm diode helps to reduce germs right into the dentinal tubules during adjuvant therapy. Another advantage is that it may be possible to dispense with antibiotics.

Congress attendees will also be given an insight into how well suited the red 660 nm diode is for photobiomodulation treatments: This light therapy combats inflammation that occurs in connection with oral mucosa diseases, supports wound healing after surgery and helps reduce postoperative pain.

Practical workshop:
Try out the SiroLaser Blue for yourself

Any dentists wanting to try out the SiroLaser Blue for themselves are warmly welcome to join the practical workshop. Whether they experience the clean, usually bloodless incision achieved in microsurgery, the procedure for treating mucous membrane alterations, or adjuvant therapy following root canal preparation, after the presentation attendees can test out the many different applications of the dental laser very simply, under guidance on a porcine jaw, and see the excellent results first hand.

Source: Dentsply Sirona

Kangaroo ancestors identified by

Fossil molars

Kangaroos are icons of Australia's unique living fauna whose earliest ancestry has yet to be discovered. However, using archaeological findings that were unveiled in Australia approximately 30 years ago, researchers from Uppsala University in Sweden recently identified the most distant ancestor of today's kangaroos with the help of new technology.

In the early 1980s, palaeontologists excavated a few enigmatic molars around a dry salt lake in northern South Australia. The rare specimens were recognised as belonging to an ancient kangaroo ancestor and stored in a museum collection for more than three decades until modern computer-based analysis enabled scientists to confirm the significance of the discovery. The kangaroo ancestor was named Palaeopotorous priscus, which is Latin for "ancient rat-kangaroo".

"Our results showed that Palaeopotorous was most similar to living rat-kangaroos, as well as some other extinct kangaroo relatives. Using information from fossils, and the DNA of living species, we were able to further determine that at around 24 million years old, Palaeopotorous is not just primitive, but likely represents the most distant forerunner of all known kangaroos, rat-kangaroos and their more ancient ancestors," said lead author Dr Wendy den Boer, recent doctoral student at the university and current staff member of the Swedish Museum of Natural History.

Source: DTI


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Laser-supported treatment shall improve

Peri-implantitis therapy

Scientists of the University of Greifswald are currently working on developing a plasma-supported method that can be used for the cleaning of infected implants. Implants, just like teeth, have to be properly maintained, regularly checked and professionally cleaned in order to prevent health issues like peri-implantitis. This disease, if untreated, can lead to tissue infection, bone reduction and ultimately implant loss. A three-year project funded by the Federal Ministry of Education and Research to explore new approaches for proper cleaning of infected implants was thus initiated. In a cooperation between scientists from Greifswald and two medical technology companies the PeriPLas project is aiming at establishing a basis for a safe and effective method for curing peri-implantitis that can eventually be used in daily clinical practice. The advantages of efficient therapy methods like mechanical cleaning with abrasive systems, treatment with a diode laser and with an atmospheric-pressure plasma jet shall be analysed and most promisingly combined. "Mechanical cleaning is necessary to remove the biofilm. The reduction of living microorganisms can be supported with the diode laser. Cold plasma can eliminate remaining bacteria and activate the implant surface in order to favour osseointegration […]," stated project manager Dr Lukasz Jablonowski. A large clinical pilot study at the end of the project is intended to test the efficiency and safety of such a combined treatment.

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Source: University of Greifswald

Lack of guidance may delay

Child's first trip to dentist

Parents should start taking their child for regular dental check-ups as soon as the first tooth appears. What seems like a logical step to secure a child's oral is, however, not evident to all parents as a poll on children's health conducted by the University of Michigan C.S. Mott Children's Hospital demonstrated. It was found that without a doctor's or dentist's guidance some parents do not follow the updated national recommendations for early dental care to start around age 1, when the primary teeth emerge. One in six parents who did not receive such advice believed they should delay dentist visits until age 4 or later. "Parents hear clear guidelines on when they should begin well-child visits for their child's health and often schedule the first visit before they even bring their baby home from the hospital. Parents get much less guidance, however, on when to start taking their child to the dentist […]. This lack of guidance may mean many parents delay the start of dental visits past the recommended age," said poll co-director Sarah Clark.

The nationally representative poll was based on responses from 790 parents with at least one child under 5. 60 per cent of the parents reported that their child had had a dental visit. Among the remaining 40 per cent common reasons for not going to the dentist were that the child was not old enough, and the child would be scared of the dentist.

Source: DTI



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Periodontal treatment improved

Control of type 2 diabetes



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Spanish researchers have now discovered further evidence for the connection between periodontitis and type 2 diabetes. Their study "Benefits of non-surgical periodontal treatment in patients with type 2 diabetes mellitus and chronic periodontitis (…)" showed that control of type 2 diabetes improved notably after the patient underwent scaling and root planing using ultrasound and curettage. Head of the study Dr Miguel Viñas, Professor of Microbiology at the University of Barcelona stated that a relation does not only exist between going from diabetes to periodontal diseases, but also from periodontal disease to diabetes. 90 patients with type 2 diabetes participated and were randomly assigned to either the treatment or the control group. Treatment group participants received oral hygiene instructions, scaling and root treatment. "The main conclusion of the study is that nonsurgical treatment of periodontitis improves the glycaemic status and the levels of glycated haemoglobin, and therefore proves the great importance of oral health in diabetic patients," summarised Prof. José López, medical director of the university's dental clinic.


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Botulinum toxin injection promises

Improvement of sleep bruxism

A new pilot study currently investigated the positive effects of onabotulinum toxin-A (BoNT-A) as a possible treatment for bruxism. The study titled "Onabotulinum toxin-A injections for sleep bruxism: A double-blind, placebo-controlled study" focused on determining the safety and efficacy of such a treatment. 22 patients, between 18 and 85 years of age, with clinically diagnosed sleep bruxism, confirmed by polysomnography, participated. 13 participants were injected with 200 BoNT-A units (60 into each masseter and 40 into each temporal muscle) and the remaining patients with the placebo. After the four- and eight-week check-ups, participants who were given the placebo injection recorded no improvement to their bruxism condition. However, those who were injected with BoNT-A reported a positive effect with minimised tooth grinding and clenching, as well as a reduction of the associated pain.

Head researcher Dr William Ondo specified that, owing to the muscle relaxation effect of the botulinum toxin, the movements causing the condition are reduced. According to the researchers from the Houston Methodist Neurological Institute, this indicates BoNT-A being an effective and safe way to improve sleep bruxism; however, a large multicentre trial to confirm the initial findings is recommended.

Join DGL!

Register now at **www.qr.oemus.com/6152** or scan the QR on the right and become a member of the German Association of Laser Dentistry (DGL).

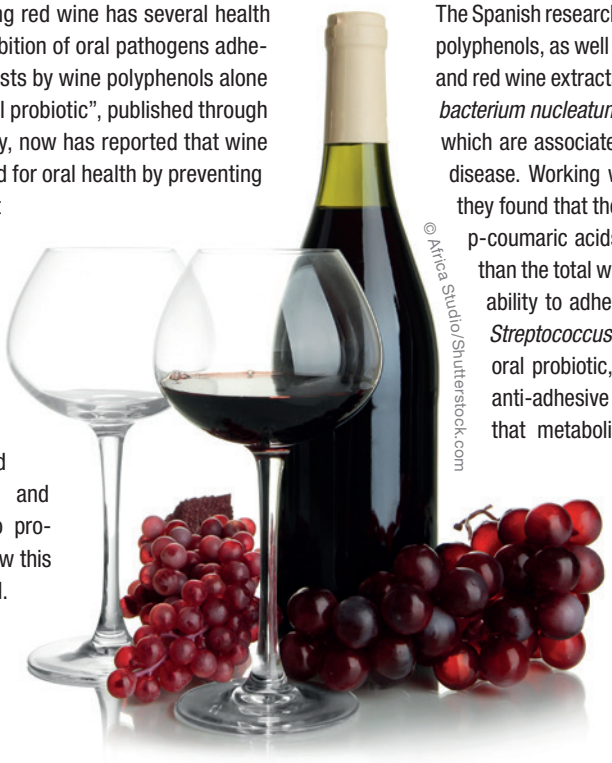
Application form

Wine polyphenols may

Prevent caries and periodontal disease

Evidence suggests that drinking red wine has several health benefits. The study titled "Inhibition of oral pathogens adhesion to human gingival fibroblasts by wine polyphenols alone and in combination with an oral probiotic", published through the American Chemical Society, now has reported that wine polyphenols might also be good for oral health by preventing the adhesion of bacteria that could cause periodontitis and other diseases.

Study author Dr M. Victoria Moreno-Arribas, Director of the Instituto de Investigación en Ciencias de la Alimentación, Madrid, Spain, and her colleagues aimed to investigate whether wine and grape polyphenols would also protect teeth and gingivae, and how this could work on a molecular level.


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The Spanish researchers studied the effect of two red wine polyphenols, as well as commercially available grape seed and red wine extracts, on *Porphyromonas gingivalis*, *Fusobacterium nucleatum* and *Streptococcus mutans* bacteria, which are associated with dental caries and periodontal disease. Working with cells that model gingival tissue, they found that the two wine polyphenols—caffeic and p-coumaric acids—in isolation were generally better than the total wine extracts at reducing the bacteria's ability to adhere to the cells. When combined with *Streptococcus dentisani*, which is believed to be an oral probiotic, the polyphenols had an even better anti-adhesive capacity. The research also showed that metabolites, formed when digestion of the polyphenols begins in the mouth, might be responsible for some of these effects.

Source: DTI