"Technology has allowed my work to evolve enormously"

An interview with Dr Carlo Fornaini, president-elect of the World Federation for Laser Dentistry

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Pr. Carlo Fornaini is teacher at the University of Parma(Italy) and Researcher at the university of Nice (France). He is also Coordinator of EMDOLA Master in these two Universities. He published more than 100 papers , mainly on the use of laser in dentistry. He is President-elect of the World Federation for Laser Dentistry (WFLD).



Dr Carlo Fornaini

_Dr Fornaini, congratulations on your election as the next president of WFLD. I understand you will assume your post during the next congress in Paris, in July 2014. Are you already able to discuss your goals for your two-year tenure?

First of all, I would like to say that the governance of our federation entails teamwork and results are achieved with the contributions of all the executive committee members. This is the reason for the nomination of the president-elect two years before his or her effective start as president: in this way, he or she has the opportunity to work with the other members of the executive committee, including the past president. That said, it is normal that each president will have his or her own way of leading the federation, and I too have my own vision, which is concentrated on three main related points.

I think it is now necessary for a renewal of the federation's leadership including the divisions, there are several colleagues who served since many years the Association and are now able to actively participate to its leadership. This is related to the second point of my vision, the need to promote young members by encouraging them to participate in the association's activities and in congresses.

Then, my goal is to expand the federation to new countries and thereby disseminate information on the use of laser technology to people who are still not using lasers, through the organisation of courses and events in these countries.

But I must say that the organising and scientific committees for the Paris congress pre-empted me by choosing to invite many new young speakers, and this makes me very happy.

_Could you tell us more about the European Master Degree in Oral Laser Applications (EMDOLA)? What do you think makes it stand out from other programmes? It seems to be an important part of WFLD congresses. Do all students have to defend a master's thesis in front of the international jury during the congress?

The EMDOLA is one of the most important post-graduate opportunities for comprehensive education on the use of laser in dentistry and it is unique in that all five universities involved in it (the University of Parma and Sapienza University of Rome in Italy, Nice Sophia Antipolis University in France, University of Liège in Belgium and University of Barcelona in Spain)

offer the same programme in eight modules. A student may thus choose to attend a module at any one of these universities.

I think it is important to distinguish between universities and scientific societies and, while in some cases EMDOLA graduation ceremonies have been held during WFLD congresses, the difference between these two entities must be pointed out: the EMDOLA is offered at the universities and all the academic activities, including the master's thesis defence, take place at the universities.

That said, I think that EMDOLA is a great resource for WFLD and in recent years I have seen many of its graduates start participating in WFLD congresses, giving lectures and publishing in journals.

So, EMDOLA can be considered to bring new blood to WFLD to avoid its ageing, and WFLD can be considered to represent the new ground where little plants of the EMDOLA may grow into large trees.

_You had a lecture on laser welding at the IMAGINA Dental congress in February in Monaco. Would you tell our readers why this topic is important? Since you co-authored the book Laser Welding, published three years ago, has much changed in this area?

IMAGINA Dental is a very interesting event on new technologies in dentistry and this was the second edition to which I have been invited. I am very eager to be participating for two main reasons. The first is that the laser session will be combined with the congress of the EMDOLA ACADEMY, of which I am president. The second is that laser welding is a topic about which I am passionate: I spent several years of my life discovering a way to weld intra-orally and, once I had achieved this and published my papers, many people from different countries congratulated me.

The invitation to contribute a chapter to the book Laser Welding was most satisfying for me, giving me the opportunity to collaborate with engineers and physicists, each of us describing in our chapter our study.

I think intra-oral laser welding is still today a field of dentistry full of potential applications in orthodontics, prosthetics and implantology.

_The use of laser treatment in the dental practice appears to be very limited still. What are the reasons in your opinion, and do you feel this will change in the future?

Even if the percentage of laser users among dentists is still not high, in recent years, there has been a dramatic increase in publications, courses and the establishment of scientific societies concerned with this topic. The course I give on laser to the undergraduate students at the dental school at my university serves as an example of the extent to which laser is given consideration today at university.

In any case, the number of laser users in dentistry is growing and this is probably due to the reduced prices of the devices and the increased number of treatments possible today. If I think back to the first appliance I used, with their great dimensions, high costs and poor ergonomics, I think I was really a pioneer!

Fortunately, technological expertise is increasing rapidly and I am often surprised when visiting countries where, some years ago, I had helped my colleagues to start using laser in their practice to find that they have become expert laser dentists.

_As with any medical field, the industry is constantly changing. The integration of CAD/CAM dentistry is constantly being promoted and it will become increasingly easier to integrate it into a dental practice. Is the situation the same for lasers, and how has this affected your curriculum or the way you teach your students?

When I recall when I started to work as a dentist (around the Middle Ages!), it is evident that technology has allowed my work to evolve enormously. I am happy to have had the opportunity to live in a time of such great technological progress. I think that laser is able to integrate with every dental technology device, in particular CAD/CAM devices. When I began my last study on a laser scanning handpiece, which led to the realisation of X-Runner (Fotona), I had in mind the possibility of fully assisted prosthetics: the inlay preparation programmed in advance and performed with a laser scanning handpiece, optical impression taking and fabrication with a CAD/CAM device. The result? Perfection!

_What are the advantages and/or limitations of using laser in dental practice?

I think that the main aspect that in the past damaged the image of laser in dentistry was that it was presented as being something almost magical that was able to produce the best results possible in the hands of anybody. Evidently, it is not so and we must be honest and realise its limits and the importance of knowledge of all aspects of this technology, physics and laser–tissue interactions included.

Only with comprehensive theoretical and practical training is it possible to use laser in every clinical situation to advantage and without risk to patients.

I always say to my students, "Laser is not the magic wand that transforms the worst of dentists into stars!".

Thank you very much for the interview.