1st Meeting of the WFLD North American Division

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_**The Stony Brook University**, School of Dental Medicine, hosted the first meeting of the World Federation of Laser Dentistry (WFLD), North American Division on May 10, 2013 at the newly opened Hilton Garden Inn Hotel located on the Stony Brook University Campus. Close to 100 participants from the United States, but also from other countries, especially South America, had the opportunity to learn about the innovative laser technology and the applications of lasers in all areas of dentistry. The meeting was co-sponsored by a dental publishing house as well as corporate sponsors from different laser companies. The aim of the World Federation for Laser Dentistry (WFLD) is to serve as a non-profit medium for the exchange, advancement and dissemination of scientific knowledge, related to the use of lasers for application and research in the oral and dental environment. The Dean of the School of Dental Medicine, Dr Ray Williams (Stony Brook, NY) opened the meeting and welcomed the guests. He congratulated the team responsible for the organisation and emphasised the importance of incorporating lasers in dental education. "Laser technology is part of our education at the School of Dental Medicine", he said and "we are interested for the innovation and latest news to improve the quality of patient care."

The Chair of the North American Division of the WFLD and Associate Dean for Clinical Affairs at Stony Brook University, School of Dental Medicine, Dr Georgios Romanos (Stony Brook, NY) introduced the WFLD organization, its history and role of the WFLD in the laser dental community and the role of lasers in the dental profession. He introduced the speakers, who all have diverse clinical and research backgrounds, and informed about their professional accomplishments in laser dentistry.

The meeting contained information about basic laser physics, the properties of laser light, the role of light absorption by the chromophores and the use of specific laser wavelengths in the dental fields. Dr Robert Convissar (New York, NY) focused on the use of lasers in general dentistry, important aspects of the laser marketing and the costs of the laser technology, which is significant in order to promote this technology in the dental profession. According to his lecture, training is important and should be provided by the laser companies. Peer-reviewed literature should follow in order to make the correct decision in the purchase a laser. He presented a high number of clinical cases treated by different laser wavelengths with main focus on operative dentistry, pediatric dentistry and periodontology. His final statement was to improve the internal marketing, educating the medical doctors (in hospitals and private practices) about the possibilities of laser dentistry. Dr Khalid Almas came from the University of Connecticut, School of Dental Medicine and presented the criteria of evidence to make the assessment for decision-making in laser dentistry. Based on his presentation, there are so many differences in publications and the role of Patient and Problem, Intervention, Comparison and Outcomes (PICO) questions is important to present quality, quantity and consistency of evidence. Bringing examples from the literature, he was able to show differences in the examined parameters to grade the quality of evidence and to balance between desirable and undesirable effects. The speaker was able to show the increase









of publications of laser dentistry in the last ten years according to data presented via Pubmed. He demonstrated the number of meta-analyses in the various fields of dentistry, such as scientific publications of the lasers and oro-facial pain, lasers in pediatric dentistry, lasers in endodontics, lasers in orthodontics, lasers and photodynamic therapy (PDT) and last but not least lasers in the treatment of periimplantitis. The third speaker of the day focused on the use of lasers in oral surgery. Dr Georgios Romanos (Stony Brook, NY) presented clinical studies and case series. Through a step-by-step analysis, he illustrated in his presentation the different clinical examples of the surgical treatment of benign tumors with various wavelengths (CO_2, diode lasers), the removal of vascular lesions using the Nd:YAG or high power diode lasers. The removal of leukoplakia using the CO_2 laser and bone removal for implant placement with the laser-assisted technology, like the use of the Er:YAG or Er,Cr:YSGG laser was also part of his presentation. He was able to clearly demonstrate evidence of excellent wound healing without postoperative complications, such as bleeding and scar tissue formation. The next presentation provided scientific information about the use of photodynamic therapy (PDT) in the dental profession. Dr George Bilalis (New York, NY) presented the different studies with PDT in the areas of cancer treatment, periodontal therapy and use of this method in the treatment of periimplantitis. He was able to explain the role of the different photosensitisers for the effective use of PDT and also to differentiate the laser systems of the market in order to provide a good clinical outcome.

Further presentations of the day (Dr Georgios Romanos, Stony Brook, NY) included the use of laser systems in the treatment of periodontal and periimplant diseases. He reviewed different concepts of therapeutic options using laser technology, such as the decontamination of implant surfaces, reduction of periodontopathogenic bacteria in the pockets, stimulation of the bone and improvement of healing, the use of soft lasers for bone regeneration and the use of surgical lasers for crown lengthening procedures without flap elevation.

The afternoon was filled with new advances in laser technology using low intensity laser therapy (LILT). One of the well-known international leaders in the field, Dr Aldo Brugnera (President of the WFLD, Unicastelo, Brazil) was able to present animal and clinical studies, promoting the healing in chronic wounds, and improving the postoperative clinical result, reducing the pain using the correct dose and method with LILT. One of the final presentations was focused on the use of lasers in orthodontics to reduce pain during orthodontic treatment and also to accelerate the dental movement in order to improve the clinical outcome. Dr Celestino Nobrega (São Paulo, Brazil) enthusiastically covered his topic and provided a lot of good energy to the audience with new ideas and future trends of the use of low power lasers in dentistry.

The last lecture was given by Dr Robert Convissar (New York, NY) who reviewed the requirements for laser safety using all different laser systems. He also explained the role of the laser safety officer for the dental office and classified the lasers according to safety groups. The meeting was finalised with a written examination for participants to achieve Basic Laser Certification, according to the WFLD requirements. The full day of learning was concluded with a wine reception, where speakers and attendants had the opportunity to chat and network. During the course of the meeting, participants had the opportunity to visit the exhibition of the laser systems. They had the chance to learn more about the various laser systems and have the opportunity to receive some hands-on training in the use of CO_2 lasers (LuxarCare), diode lasers (Alta), Er,Cr:YSGG lasers (Biolase) and other lasers that were being showcased, such as systems of Helios Laser Inc. (Henry Schein) and AMD lasers (DENTSPLY).

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