

**Dr Mark Cronshaw PhD B.Sc(Hons), BDS, LDS RCS (Eng),
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Co-Director Dental Laser Training Academy Ltd www.dentallaseracademy.co.uk

President Pandora Dental Training and Guidance Ltd

Dr Mark Cronshaw trained at Guys Hospital in London. He graduated in 1981 with a degree in biomedical sciences before completing his dental studies in 1984. Post-graduation Dr Cronshaw became a post graduate trainer in general dental practice. Following training in the USA under the tutelage of Dr John Kois he maintains a busy private general practice in Cowes, UK. He was appointed a professor a.c. at the University of Genoa in 2014-2020 where he taught the Advanced Masters Degree course in oral laser applications and he lectures on oral laser applications Worldwide

In 2012 he was awarded the prestigious Fellowship award of the International Academy of Dento-Facial Esthetics. Dr Cronshaw is on the editorial peer review panel of the journals *Lasers in Medical Science* and *Photochemistry and Photobiology* and also is a Board member of Laser Education International. His clinical interests are in phototherapy, aesthetic dentistry, holistic dental care, minimally invasive dentistry as well as the application of laser therapy as an adjunct to tissue regeneration and pain management in periodontics and surgery. In collaboration with his co-Director Professor Steven Parker, he runs a highly active laser training academy offering a variety of dedicated oral laser training programmes.

Dr Cronshaw has written over 20 recent peer reviewed scientific papers on the clinical applications of lasers in dentistry and he is actively involved in continued research. Dr Cronshaw is a contributory author and provided a chapter on orthodontics in the best-selling textbook "*Lasers in Dentistry: Current Concepts*" ,editors Steven Parker and Don Coluzzi, published by Springer in October 2017. He is the author of a chapter on photobiomodulation in the second edition of the Springer textbook which was published in January 2024.

Dr Cronshaw has recently completed his studies for a doctorate at De Montfort University. As a researcher and active clinician Dr Cronshaw has studied the literature on the application of photobiomodulation therapies for very many medical clinical applications including oncology, sports physiotherapy, CNS disorders, peripheral neuropathic syndromes and the management of failed wound healing.

Most recently he presented a number of papers to the World Association of Photobiomodulation Therapies (WALT) in London on the use of LED devices in PBM as well as an update on dose delivery parameters in PBM. In March he presented on comopntaion PBM therapy and cryotherapy at the World meeting of the International Association of Dental

Research (IADR) in New Orleans. Last year he presented at the World Federation of Laser Dentistry meeting in Wroclaw, Poland on aspects of dosimetry in photobiomodulation therapies. His current research involves trans-national collaboration with groups involved in oral medicine, oncology and sports physiotherapy in France, Spain, Syria and Italy. As a leading International figure in research and development into PBM therapies he has a particular interest in the practical aspects of PBM management.

During the recent Covid-19 crisis he founded a UK national think tank Pandora Dental Training and Guidance Ltd. This has been influential in formulating a practical response to the challenges in general dental practice to the disruption caused by Covid-19. In recognition of his work, he was awarded UK National recognition in 2022 as one of the UK's most influential dental professionals.

Publications:

Al-Falaki R, Cronshaw M, Hughes FJ. Treatment outcome following use of the erbium, chromium: yttrium, scandium, gallium, garnet laser in the non-surgical management of peri-implantitis: a case series. *British dental journal*. 2014 Oct 24;217(8):453-7.

World Federation of Laser Dentistry "Treatment outcome following use of the erbium chromium yttrium gallium garnet laser in the non-surgical management of peri-implantitis: a pilot study" abstract no.64510

Open Dentistry Journal "The adjunctive use of the erbium chromium yttrium gallium garnet laser in closed flap periodontal therapy. A retrospective cohort study" Al-Falaki R, Cronshaw M, Parker S. 2016;10:1-20

Benedicenti A, Benedicenti S "Atlas of Laser Therapy: State of the Art" 4th Ed. Teamwork mediasrl2016;ISBN88-89626-02-X Case report

Lasers in Dentistry: Current Concepts Ed. Coluzzi d & Parker S Springer 2017; ISBN: 978-3-319-51943-2 "Lasers in Orthodontics" pp.260-271

EC Dental Science "Pain inflammation and infection: a daily challenge in every clinical practice" 2019;18.6 (2019)

EC Dental Science "Photobiomodulation Therapy and Periodontitis: A Discussion Paper". *EC Dental Science* 18.8 (2019): 1791-1797.

EC Dental Science "Laser Essentials for the Dental Practitioner: Foundation Knowledge - Construction, Modes of Operation and Safety". *EC Dental Science* 18.9 (2019): 2020-2027.

Photobiomodulation, Photomedicine and Laser Surgery "Feeling the heat: evolutionary and microbial basis for the analgesic mechanisms of photobiomodulation therapy" Cronshaw M, Parker S, Arany P. 2019; Sep 1;37(9):517-26

Photobiomodulation, Photomedicine and Laser Surgery “Parameters for Photobiomodulation Therapy in Clinical Dentistry: A Systematic Review” Parker S, Cronshaw M, Anagnostaki E, Bordin-Aykroyd SR, Lynch E. 2019; Dec 1;37(12):784-97

Photobiomodulation, Photomedicine and Laser Surgery Cronshaw M, Parker S, Anagnostaki E, Lynch E. “Systematic Review of Orthodontic Treatment Management with Photobiomodulation Therapy” 2019; Dec 1;37(12):862-8

Parker S, Cronshaw M, Anagnostaki E, Mylona V, Lynch E, Grootveld M. Current Concepts of Laser–Oral Tissue Interaction. Dentistry Journal. 2020 Sep;8(3):61.

Mylona V, Anagnostaki E, Parker S, Cronshaw M, Lynch E, Grootveld M. Laser-Assisted aPDT Protocols in Randomized Controlled Clinical Trials in Dentistry: A Systematic Review. Dentistry Journal. 2020 Sep;8(3):107

Parker S, Anagnostaki E, Mylona V, Cronshaw M, Lynch E, Grootveld M. Systematic Review of Post-Surgical Laser-Assisted Oral Soft Tissue Outcomes Using Surgical Wavelengths Outside the 650–1350 nm Optical Window. Photobiomodulation, Photomedicine, and Laser Surgery. 2020 Oct 1;38(10):591-606

Anagnostaki E, Mylona V, Kosma K, Parker S, Chala M, Cronshaw M, Dimitriou V, Tatarakis M, Papadogiannis N, Lynch E, Grootveld M. A Spectrophotometric Study on Light Attenuation Properties of Dental Bleaching Gels: Potential Relevance to Irradiation Parameters. Dentistry Journal. 2020 Dec;8(4):137

Cronshaw M, Parker S, Anagnostaki E, Mylona V, Lynch E, Grootveld M. Photobiomodulation Dose Parameters in Dentistry: A Systematic Review and Meta-Analysis. Dentistry Journal. 2020 Dec;8(4):114

Cronshaw M, Parker S, Anagnostaki E, Mylona V, Lynch E, Grootveld M. Photobiomodulation and Oral Mucositis: A systematic review. Dentistry Journal. 2020 Sep;8(3):87.

Parker S, Cronshaw M, Grootveld M. Photobiomodulation delivery parameters: an evidence-based approach. Photobiomodulation, photomedicine and laser surgery 2022; 40:42-50.

The Influence of Delivery Power Losses and Full Operating Parametry on the Effectiveness of Diode Visible – Near Infra-red (445 - 1064nm) Laser Therapy in Dentistry – A Multi-Center Investigation. Parker S, Cronshaw M, et al. Lasers in Med. Sci. 2022 14: 1-9

Sobouti F, Chiniforush N, Saravani HJ, Noroozian M, Cronshaw M, Navaei RA, Rakhshan V, Dadgar S. Efficacy of compound topical anesthesia combined with photobiomodulation therapy in pain control for placement of orthodontic miniscrew: a double-blind, randomized clinical trial. Lasers in Medical Science. 2022 Feb 1:1-6.

Cronshaw M, Parker S, Grootveld M, Lynch E. Photothermal Effects of High-Energy Photobiomodulation Therapies: An In Vitro Investigation. Biomedicines. 2023 Jun 4;11(6):1634.

Cronshaw M, Mylona V. Photobiomodulation Therapy Within Clinical Dentistry: Theoretical and Applied Concepts. InLasers in Dentistry—Current Concepts 2024 Jan 9 (pp. 173-236). Cham: Springer International Publishing.

Coluzzi DJ, Cronshaw M, Weintraub J. Laser-Assisted Multi-tissue Management During Aesthetic or Restorative Procedures. InLasers in Dentistry—Current Concepts 2024 Jan 9 (pp. 479-505). Cham: Springer International Publishing.

Parker S, Cronshaw M, Anagnostaki E, Mylona V, Lynch E, Grootveld M. Effect of Photobiomodulation Therapy Dosage on Orthodontic Movement, Temporomandibular Dysfunction and Third Molar Surgery Outcomes: A Five-Year Systematic Review. Applied Sciences. 2024 Apr 4;14(7):3049.

Parker S, Grzech-Leśniak K, Cronshaw M, Matys J, Brugnera A, Namour S. Full operating parameter recording as an essential component of the reproducibility of laser-tissue interaction and treatments. Advances in Clinical and Experimental Medicine. 2024;33(6).

Cronshaw M, Parker S, Anagnostaki E, Mylona V, Grootveld M. Combination laser PBM therapy and cryotherapy: an in vitro study IADR post presentation 1999, March 2024

Cronshaw M, Parker S, Anagnostaki E, Mylona V, Grootveld M. Dose delivery parameters in PBMT: High energy vs. Low energy PBM. Energy, power & irradiance & treatment outcomes. A systematic review. WALT 2024 presentation (publication pending)

Cronshaw M, Parker S, Anagnostaki E, Mylona V, Grootveld M. LED Home Use PBMT Devices: Design, Function & Potential. A pilot study. WALT 2024 presentation (publication pending)

Recent Laser Post Graduate Activities:

September 2024: Instructor DELTA London Diode & Erbium 2 day Advanced Laser Training

August 2024: Speaker WALT, London

June 2024: Instructor DELTA London Diode & Erbium 2 day Advanced Laser Training

March 2024: Instructor DELTA London Diode & Erbium 2 day Advanced Laser Training

March 2024: IADR World congress New Orleans

January 2024: Instructor DELTA London Diode & Erbium 2 day Advanced Laser Training

November 2023: Instructor DELTA London Diode & Erbium 2 day Advanced Laser Training

November 2023: European Medical and Dental Oral Laser Masters Programme (Paris)

October 2023: Kuwait Diode & Erbium 2 day Advanced Laser Training

October 2023: Dubai International Laser Symposium

September 2023: Instructor DELTA London Diode & Erbium 2 day Advanced Laser Training

June 2023: Instructor DELTA London Diode & Erbium 2 day Advanced Laser Training

May 2023: Asian Pacific Laser Institute, Online

April 2023: Lecture: World Federation Laser Dentistry Conference Wroclaw Poland

March 2023: Instructor DELTA London Diode & Erbium 2 day Advanced Laser Training

January 2023: Visiting lecturer SciVision South Africa 2 day Johannesburg/CapeTown

January 2023: Instructor DELTA London Diode & Erbium 2 day Advanced Laser Training

December 2022: Visiting instructor DELTA 3 day programme Tallinn Estonia (Medivar eu)

December 2022: European Medical and Dental Oral Laser Masters Programme (Paris)

November 2022: DELTA London Diode & Erbium 2 day Advanced Laser Training

November 2022: Asian Pacific Laser Institute, Online November 2022

September 2022: Instructor DELTA London Diode & Erbium 2 day Advanced Laser Training

September 2022: Lectures South African Dental Association

July 2022: DELTA one day programmer Dr Justin Kolnick Royal Society of Medicine

June 2022: DELTA London Diode & Erbium 2 day Advanced Laser Training

April 2022: DELTA London Diode & Erbium 2 day Advanced Laser Training

April 2022: Lectures (online) European Medical Laser Association New York

February 2022: DELTA London Diode & Erbium 2 day Advanced Laser Training

Other activities:

De Montfort University Leicester: Post doctoral research associate

Commercial links: Research and design collaboration Mectronics Medicale (Italy)

Approved trainer- Biolase(Ca.USA).

Principal- Amery House Dental Practice, Cowes.

