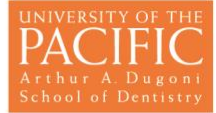




University of the Pacific Arthur A. Dugoni School of Dentistry
126th Alumni Association Annual Meeting – 2025 Alumni Weekend
Including The 39th Frederick T. West Orthodontics Lectureship and
The 2nd Alan H. Gluskin Endodontics Symposium



Anil Kishen, BDS, MDS, PhD

Saturday, February 1, 2025

2 CE units

Subject Area: Endodontics

Title: "Engineered Nanoparticles: A Paradigm Shift in the Treatment of Apical Periodontitis"

Course Description:

Therapeutic options to eliminate root canal biofilm have been the primary focus for innovations in recent years. In spite of some significant technological advances in the past two decades, the root canal environment remains a challenging niche in which to eliminate surface-adherent bacterial biofilms predictably. Additionally, there has been a growing interest in dentin preservation to maintain the mechanical integrity of endodontically treated teeth. However, the question remains: Can the current strategy of utilizing minimally invasive endodontic cavity, root canal preparation and sealer-based obturation improve the mechanical integrity of root-filled teeth while maintaining the efficacy of root canal disinfection? This lecture will review the challenges associated with conventional disinfection strategies and introduce a newly developed multimodal therapy based on engineered bioactive biomaterials to treat apical periodontitis.

Objectives:

- 1) At conclusion, participants should be able to understand the microbiological and mechanical challenges in the treatment of teeth with apical periodontitis.
- 2) At conclusion, participants should be able to understand the conventional applications of nanoparticles in endodontic treatment.
- 3) At conclusion, participants should be able to understand the mechanisms by which engineered bioactive nanoparticles improve mechanical integrity of root-filled teeth, enhance root canal disinfection as well as modulate periapical wound healing.

Short Bio:

Dr. Anil Kishen is an Associate Dean for Graduate Education at the University of Toronto's Faculty of Dentistry. He is also a Professor and Canada Research Chair (Tier 1) in Oral Health Nanomedicine as well as Dr. Lloyd and Mrs. Kay Chapman Chair in Clinical Sciences. He is cross appointed at the Mount Sinai Hospital's Department of Dentistry, in addition to other roles such as the Visiting Professor of Endodontics at the University of Hong Kong in Hong Kong, and the King Juan Carlos University in Madrid, Spain.

Dr. Kishen's academic work includes more than 250 journal articles, 24 book chapters and three books. He is the recipient of the W. W. Wood Award from the Association of Canadian Faculties of Dentistry (ACFD) for excellence in Dental Education. While his exemplary research contributions have been recognized with the 2021 Louis I. Grossman Award from the American Association of Endodontics and the 2023 National Dental Research Award from the Canadian Association for Dental Research (CADR) and ACFD for exceptional contributions to dental research in a Canadian University.

As a prolific researcher and Principal Investigator for the Kishen Lab, Dr. Kishen's research explores new developments in bioactive nano biomaterials and phototherapeutic to fight oral infections and improve outcomes for patients. He is a co-inventor in 12 patents and has presented over 200 invited plenary or keynote lectures worldwide.