

Vanquishing Foes: The Haapasalo Method

Tuesday, January 25, 2022 | 2:00 - 5:00 p.m. PST | Virtual Event

PRESENTATION SYNOPSES



UBC ENDODONTIC RESEARCH ON THE CUTTING EDGE

DR. MARKUS HAAPASALO

This presentation starts with a brief insight into the path of the Division of Endodontics at the UBC Faculty of Dentistry from one full-time employee in 2004 to a 3.6 FTE research powerhouse in 2022. Not only did the graduate endodontics training start in 2008, but the research activity has grown into an international influencer for the widely recognized impact of its translational (“clinically related”) research. Since 2004, over 150 peer-reviewed papers in international scientific journals have been published by UBC Endodontics. Many of these studies have included as authors and co-authors our graduate students and visiting scientists in addition to the endodontic faculty members. After this short introduction, Dr. Haapasalo will focus on the research itself: irrigation dynamics, a new commercial irrigating solution developed at UBC, new biofilm models to serve endodontic translational research, and groundbreaking work on minimal or even non-instrumentational endodontics, where root canals are cleaned and disinfected “without going there”. Our research team—together with our own students, alumni, and other clinicians and researchers—is pushing endodontics into a new era of better outcome predictability while preserving tooth structures.



EXTERNAL CERVICAL RESORPTION: DETERMINANTS AND TREATMENT OUTCOMES

DR. ELENI IRINAKIS

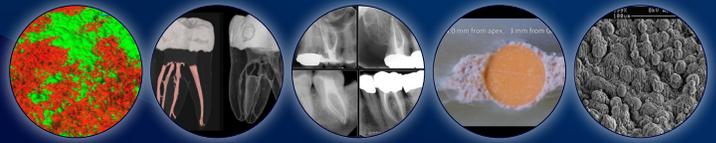
External cervical resorption (ECR) is a pathological process progressively resulting in a loss of dental hard tissue. The ECR initiation location—typically at the coronal third of the root—has been associated with the level of the junctional epithelium and the probing depth. The ECR starts as a small defect but it may progress vertically and horizontally towards the root canal space. Frequently, the ECR is an incidental clinical or radiographic finding, and the pulp status is normal. However, it can also be associated with clinical findings. While the etiology is not well understood, several predisposing factors have been associated with the presence of ECR. The treatment objectives are to remove the resorbing ECR tissue, to prevent its reoccurrence, and to retain a strong tooth structure. The treatment options can be determined based on the size and nature of the lesion, the approachability of the affected area, and the patient’s chief complaint. Currently, the treatment prognosis is supported by limited scientific evidence. This talk will present the recent findings on ECR determinants and treatment outcomes.



THE EVOLUTION OF ENDODONTICS

DR. MARK PARHAR

There has been a shift in thinking with regards to how endodontic treatment is applied to teeth as traditional methods have shown shortcomings and teeth do not always survive for the long term. New philosophies in treatment along with advances in key technologies have allowed ultra-conservative treatment that preserves dentin with the goal of keeping the tooth functional for the long term. Modern conservative treatment will preserve vital tooth structure to ultimately decrease post-treatment failure rates. A brief look into this shift will be presented in a case-based manner.



A NEW FRONT IN ENDODONTIC MATERIALS: BIO-CERAMIC CEMENTS AND SEALERS
DR. YA SHEN

One of the truly beneficial advancements in dentistry has been the introduction of mineral trioxide aggregate (MTA) into endodontic treatment. The development of bioceramic-based materials has greatly improved possibilities for the dentist to successfully treat challenging clinical cases. Our knowledge and understanding of new bioceramic-based materials as well as the recommendations for clinical protocols are based both on clinical experience and the results of past and ongoing research. How differences in experimental methods may affect the results of the mechanical properties will be explained. The *in vitro* and *in vivo* research that sheds light on the clinical use of the materials will also be discussed.



**KEYNOTE PRESENTATION — ENGINEERED MULTIFUNCTIONAL NANOPARTICLES:
NEW POSSIBILITIES FOR OLD PROBLEMS IN REGENERATIVE ENDODONTICS**
DR. ANIL KISHEN

Microbial biofilms are important and challenging targets for disinfection in any regenerative-based endodontic procedure. The microbial biofilm may not only impair the interaction between the stem cell and dentin matrix but also influences the degree of host response essential for healing. Antibiotics and chemicals are currently employed for biofilm elimination. However, the emergence of antibiotic resistance in bacterial species and chemically induced irreversible alteration to the dentin matrix have been additional concerns. Natural, bioactive, and antibacterial nanoparticles exhibit unique physical and biological characteristics. They may also be conjugated with other chemical moieties or bioactive molecules of interest to generate multifunctional nanoparticles for tissue-specific functions. This talk will present the recent findings on the ability of multifunctional bioactive nanoparticles for regenerative endodontic procedures.

For more information visit:

www.dentistry.ubc.ca/researchday