

Endodontics News 2017



André Mickel, DDS, MSD, '91, '94

From the Chairman **André Mickel, DDS, MSD, '91, '94**

As the CWRU School of Dental Medicine has expanded efforts for globalization, the international reputation of the Endodontics program at CWRU has grown substantially. We have trained endodontists

from five continents, all except Australia and Antarctica. The map is getting bigger.

We have gathered and invited endodontists from around the world, and our alumni continue to lecture around the world, myself included. Most recently, I visited Qassim University College of Dentistry in Buraydah, Saudi Arabia as a guest speaker at their Continuing Education Symposium. I gave a 2-day lecture covering a number of topics on "Rotary Instruments and Microscopes in Endodontics."

As you may know, Dr. Waleed Almutairi was our first fellow from Qassim University. Dr. Almutairi will continue his education with us as a resident in the Fall. Before coming to CWRU, he served as junior faculty at Qassim. He was able to bring that experience and education with him, and he will use the experience and education he receives at CWRU to train more endodontists back in Saudi Arabia.

This year all eight residents, comprising four first-year and four second-year residents, will be presenting at the 2017 AAE meeting in New Orleans and at CWRU Research Showcase. We have more entrants than any other department in the dental school. We are also participating in community services like sealant duty and Give Kids a Smile.

As a whole, the department has been fortunate to publish several articles in new areas, a trend that has been increasing over the past 2 years. Our department is among those with the highest rate of publications. In the past

continued on back



From the Dean **Kenneth Chance, DDS '79**

Our dental clinic plans are progressing well. The Endodontic department has participated in the schematic phase and is now working in the design development phase. It is planned that site excavation will begin in April. Both the education building and the dental clinic will be completed by June 2019.

In other news, our 125th Anniversary Celebration is building momentum since the kick off at the October Homecoming in 2016. We have a nine-city "Meet and Greet Events Tour" leading to our extravaganza on October 7, 2017. I hope you will return to Cleveland for the fun.

More updates will be forthcoming via email to keep you informed of our progress on these exciting projects. I invite you to volunteer with the Endodontic department towards the efforts of building a stronger program.

dean-sodm@case.edu



SCHOOL OF DENTAL MEDICINE
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Welcome New Residents and Fellow

Incoming Residents



Waleed Almutairi, BDS

Dr. Waleed Almutairi graduated from Qassim University in Saudi Arabia in 2013 and served as a teaching assistant in the Endodontics department there. He also participated in an exchange program with the Herman Ostrow School of Dentistry at USC for two months. He has always wanted to be an endodontist. "To see a patient come into the clinic enduring severe pain and leaving with a big smile gives me a great sense of accomplishment," he says. "Last year, I spent a wonderful time with the endo team [as a fellow] and I learned a lot." Dr. Almutairi is excited to continue his training as a resident in 2017.



Alvaro Rodriguez, DMD

Dr. Alvaro Rodriguez received his DDS degree in 1999 from Instituto Odontológico de Matamoros, Mexico. He completed his residency in endodontics at Universidad Autonoma de Tamaulipas in 2002. Dr. Rodriguez has been in private practice in Nuevo Progreso Tamaulipas since then, doing general dentistry and endodontics. He also completed the Advanced Education General Dentistry shadowing program at University of Rochester (New York) in 2012 and earned his national board dental certification (NBDE) in 2013. When he is not working, Dr. Rodriguez likes to spend quality time with family, cook on the barbecue, travel, and meet new people.



Qian Wang, BDS, DMD, MSD, DScD

Dr. Qian Wang received her DMD from West China School of Stomatology, Sichuan University in 2013, where she also received 7 years of training in modern endodontics. "I consider endodontics to be a sublime art, in that it is both intellectually challenging and sensitive to refined manual dexterity," she says. "The opportunity to further my endodontic specialty training at one of the world's best dental schools is a dream come true!" She chose CWRU's endodontic program because it goes beyond providing a world-class education; it creates an environment that develops residents personally and professionally. "I firmly believe that participating in CWRU's endodontic program will help polish and perfect the basics of endodontics that I initially learned in my home country of China." Dr. Wang wants to build a long-term career in academic dentistry where she would pursue clinical service, teaching, and research. In her spare time, Dr. Wang enjoys travel and cooking.



Ghaeth H. Yassen, BDS, MSD, PhD

Dr. Ghaeth Yassen is originally from Iraq. He graduated from Mosul University School of Dentistry in 2000. He went on to study pediatric dentistry at Baghdad University School of Dentistry (2002-2005) and had a private dental practice in Iraq for several years before coming to the United States. He earned his PhD at Indiana University School of Dentistry in 2013. He has also been involved with research and teaching at Mosul University and Indiana University during his career. Dr. Yassen says, "I am excited to be an endodontic resident at CWRU and learn from the well-known faculty members at the department of endodontics." In his spare time, Dr. Yassen likes running and trying different ethnic food.

One-Year Fellow



Yu-Chen (Michael) Ling, DDS

Dr. Yu-Chen (Michael) Ling graduated from Taipei Medical University School of Dentistry in Taiwan in 2011. He completed a general practice residency (2012-2014) and endodontics residency (2014-2016) at Cardinal Tien Hospital and was the attending endodontist after graduation. During his time as a resident, Dr. Ling published several articles and was recognized as the "best resident" in 2013. In addition to dentistry, Michael enjoys playing basketball and trumpet in his free time. Dr. Ling's personal philosophy is to "face every challenge in the upcoming new life with an optimistic mind!"

AAE 2017 Poster Presentations

by CWRU Endodontic Residents

Navid Akbarzadeh, DMD

The Association Between the Anatomical Landmarks of the Pulp Chamber Floor and the Prevalence of Middle Mesial Canals in Mandibular First Molars: An In-Vivo Cone Beam Computed Tomography Analysis

The purpose of this study is first, to determine the incidence of middle mesial (MM) canal in mandibular permanent first molars using CBCT, and second, to evaluate the morphology and location of the MM canal and orifice, such as proximity to danger zone and Weine type. Finally, possible correlation between MM canal and MB-ML orifice distance, ismuth presence within mesial root, age, and gender were evaluated. We found an association between ismuth presence and occurrence of middle mesial canal, and mesial roots with Weine configuration of III are almost 3 times more likely to have MM canals. We also report that MB-ML intra-orifice distance is inversely associated with presence of middle mesial.

Daisy Bachala, BDS

Immune Response of LPS-activated Macrophages Following Lunasin Treatment: Lunasin as a Potential Anti-Inflammatory Medicament

Lunasin has a suppressive effect on the production of cytokines responsible for inflammation and bone resorption. 100 μ M of Lunasin significantly reduced the production of IL-1 β , IL-6, TNF- α , and increased the production of IL-10. Considering this, the use of Lunasin as a potential anti-inflammatory agent should be evaluated in future studies.

Martina W. Gerges, BDS

Analysis of Factors Associated with Vertical Root Fracture in Treating Maxillary First Molars: A Risk Analysis Study

The purpose of this study was to investigate the association between apical-size preparation of MB2 with the risk of vertical root fracture (VRF) occurrence

while controlling for confounders. First molars that received adequate NSRCT/adequate crowns without posts in the endodontic department between 2008-2016 were collected. MB roots in which MB2 was prepared to apical sizes ($> 25/.04$) were two times more likely to be diagnosed with VRF (HR = 2.3; $p = 0.021$). However, instrumenting MB2 to these sizes did not increase the risk of VRF of MB roots compared to cases where MB2 could not be located ($p = 0.43$).

Khaled N. Sahly, BDS

Association of End Stage Renal Disease with Radiographically and Clinically Diagnosed Apical Periodontitis: A Hospital-Based Study

The purpose of this study was to investigate the association between end-stage renal disease (ESRD) and apical periodontitis (AP). AP in one or more teeth was found in 73% of patients in ESRD group compared to 40% in the control group (OR = 3.9; $p = 0.004$). Interestingly, we also found that 52% of patients in the ESRD group had AP in one or more root-filled teeth compared to only 28% in the control group (OR = 2.9; $p = 0.03$). We concluded that AP is epidemiologically associated with ESRD, and considering that AP is linked with an increase in systemic levels of IL-6, a mediator associated with pathogenesis of ESRD, AP must be actively sought and treated in ESRD patients.

Magdy Beshay, BDS

Apical Periodontitis, A Predictor Variable for Preeclampsia: A Hospital Based Case-Control Study

The purpose of this study was to evaluate the association between apical periodontitis (AP) and preeclampsia. Patients with a history of preeclampsia were compared to healthy, age-matched individuals (control). The mean number of teeth diagnosed with AP was 3.6 versus 1.2 in the preeclampsia group versus control group, respectively. The adjusted odds ratio (OR) suggested that mothers with AP had about three times higher odds of being diagnosed with preeclampsia than women without AP (OR = 3.43; $p = 0.033$).



(Left to right) Drs. Navid Khalighinejad, Navid Akbarzadeh, Karishma Patil, Khalid Sahly, André Mickel, Daisy Bachala, Martina Gerges, Jeannie Wang, Magdy Beshay, Waleed Almutairi

Navid Khalighinejad, BDS

The Effect of the Dental Operating Microscope on the Outcome of Nonsurgical Root Canal Treatment: A Retrospective Case Control Study

The purpose of this study was to assess the effect of the dental operating microscope (DOM) on the nonsurgical root canal treatment (NSRCT) outcome with regards to MB root of M1. Cases of endodontically treated M1 with adequate NSRCT or adequate restorations referred for nonsurgical retreatment at the endodontic department (2008–2016) were collected. Cases with a periapical lesion (PAI > 3) on at least one of the roots were included and divided into two groups: 1) received initial NSRCT by an endodontist (with DOM) or 2) received by a general dentist (without DOM). MB root of M1 was three times more likely to present with apical lesion at the time of retreatment if the initial NSRCT was performed by a general dentist (OR = 3.1; $p = 0.004$), and there was a significant association between missed MB2 and MB lesions in this group (OR = 5.1; $p = 0.022$). When performed by endodontists, there was no association between missed MB2 and MB lesions.

Karishma Patil, BDS

The Effect of Preoperative Buprenorphine Nerve Block on Endodontic Postoperative Pain of the “Hot Tooth”: A Prospective, Randomized, Double-blind, Control Trial

The purpose of this study was to investigate the effect of an inferior alveolar nerve block (IANB) of

buprenorphine on postoperative pain following nonsurgical root canal treatment (NSRCT) of symptomatic mandibular molars (MM). Patients with moderate to severe preoperative MM pain were randomly divided into a treatment group (2% lidocaine IANB followed by 1 mL of 0.3 mg/mL buprenorphine IANB) and placebo group (2% lidocaine IANB followed by 1 mL saline IANB). Patients recorded their pain immediately after NSRCT and at 6, 12, 18, 24, 36, 48, and 72 hours postoperatively using the visual analog scale (VAS). Pain scale was significantly lower in the buprenorphine group compared to placebo at 6 hours postoperatively ($p = 0.021$), and the need for escape medication was significantly lower in the buprenorphine group ($p = 0.03$).

Jeannie Wang, DMD

Periodontal Clinical Attachment Loss at the Time of Root Canal Treatment: Its Influence on the Survival of Endodontically Treated Teeth

The purpose of this study was to investigate the association between periodontal status and survival rate of teeth that received nonsurgical root canal treatment (NSRCT). We analyzed data for patients who received successful NSRCT and restoration from 2008–2016 in the graduate endodontic clinic. Teeth diagnosed with mild periodontitis were nearly two times more likely to be extracted compared to endodontically treated teeth (ETT) diagnosed with normal periodontium at the time of NSRCT (OR = 1.9, $p < 0.05$). This increased risk of tooth loss was 3.1 (OR = 3.1, $p < 0.05$) for ETT diagnosed with moderate periodontitis.

Alumni Spotlight

Caroline Ghattas Ayoub, BDS, MSD '15



Growing up in the Middle East, Dr. Ayoub never imagined herself being a dentist, but the people closest to her encouraged her to pursue the profession because of her great attention to detail. She followed their advice and earned her dental degree

in Cairo, Egypt, where she practiced general dentistry for 6 years. While in Cairo, one of the places Dr. Ayoub worked was in a charity hospital, where she treated patients with teeth that needed saving. "People just wanted to pull their teeth because that's all they knew, but I would encourage them to save their teeth through root canal treatment. The process was very rewarding for me and my patients," says Dr. Ayoub. Eventually, all she wanted to do was endodontics.

Dr. Ayoub came to CWRU to study endodontics, and she graduated in 2015 with her endodontics certificate and masters degree. During her residency, Dr. Ayoub was an Ohio Dental Association poster presentation winner in 2014 and an AAE poster presentation winner in 2015. Her husband also graduated from the CWRU School of Dental Medicine (periodontics). Family has always come first for Dr. Ayoub, so joining her husband at CWRU was perfect. Plus, "CWRU's endo program is a diverse one that inspires greater learning through each other, which made CWRU a win-win," she says.

Currently, Dr. Ayoub volunteers every Friday at CWRU, where she oversees the endodontic residents in the clinic and pilots case presentations. She also works part time at a corporate endodontic office. The rest of her week is devoted to her husband and their baby boy.

Her advice to fellow endodontic residents and graduates is to "Take all the advice you can get, work hard, play hard, and choose honesty above all!! I live by what my mentor always taught us: God first, then family, then endodontics!"

Dr. Ayoub will be pursuing board certification for endodontics in the very near future, with only one part out of three remaining for her diplomate status. She will also be attending the 2017 AAE annual conference in New Orleans.

JOIN THE MOLAR CLUB!

How many root canal treatments do you perform in a year? Hundreds? The next time you perform a root canal, why not join the Molar Club? Many of your fellow alumni are participating by making a one-time donation each year. Simply donate the cost of one root canal per year to the department and you're in the club! You can make your donation online through our website at giving.case.edu/dental

The money raised directly supports the activities within our department including sending all of our residents to the AAE, APICES and Endodontology Academic Review conferences each year and bringing in guest speakers, exploring new technology and procedures in our field, and enhancing the clinic. We are very fortunate to have alumni who continually give their time and dollars to support our program.

Please join these Molar Club members by giving back one molar root canal treatment annually.

(Donations made through December 2016)

Tasneem Ahmad	Kimberly Lindquist
Shahin Etemadi	Michael Mindiola
Joong Hahn	Andy Suresh
Dania Kafri	Clifford Wong
John King	

By becoming a member of the CWRU Endodontics Molar Club, you not only are giving back to the internationally recognized program that enhanced your career, but you are giving to the future generations of endodontists who will eventually be your colleagues.

TO JOIN THE MOLAR CLUB, please go to giving.case.edu/dental. You can join the Molar Club simply by making a donation to the **Endodontic Molar Club**.

FOR MORE INFORMATION ON DONATING, please contact the Office of Development and Alumni Relations at 216-368-3480 or dentalalumni@case.edu.



Department of Endodontics
10900 Euclid Avenue
Cleveland, Ohio 44106-4905

From the Chairman continued

year, we have published articles on nonsurgical root canal treatment outcomes using a dental operating microscope and the influence of time lapse between root canal completion and crown placement on survival of endodontically treated teeth. We've also published two systematic review articles on the association between systemic diseases and apical periodontitis and endodontic outcomes. Dr. Navid Khalighinejad and I have also published three study guides in the College of Diplomates for the endodontics board review course.

The department is hosting a monthly series on laser therapies in endodontics, focusing on research

and surgical applications for Biolase products. Lectures are given by guest speaker, Dr. Nguyen Tuong Nguyen (aka "Win-Win") once a month on Fridays. Alumni are welcome to attend any time!

Of course, none of these activities would be possible if not for the generous donations from our alumni. We recently launched the "Molar Club," which is a fundraiser that helps Endo students attend annual meetings and do research. You can learn more about the Molar Club in this newsletter.

andre.mickel@case.edu

Alumni and Friends Reception during the American Association of Endodontists Annual Meeting

April 27, 2017

Hilton New Orleans Riverside
2 Poydras Street
New Orleans, LA
6:00 p.m. - 8:00 p.m.

To register, contact the Office of
Development & Alumni Relations
at 216.368.5758 or email
dentalumni@case.edu



In October 2017, the School of Dental Medicine will celebrate its 125th anniversary. We are interested in hearing from you about how your lives have been impacted by the school over the years. We are looking for stories, anecdotes, letters, archival photos and artifacts that highlight your personal connection to the school.

You can share your story by emailing us at Celebrate125SODM@case.edu or by calling 216-368-5758