





# **ON-SITE MEETING GUIDE**

View full program information at aae.org/aae19.



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# **FUTURE ANNUAL MEETINGS**



NASHVILLE April 1-4, 2020 Music City Center



ATLANTA
April 21-24, 2021
Georgia World Congress Center



PHOENIX
April 27-30, 2022
Phoenix Convention Center



CHICAGO May 3-6, 2023

# **Opening Keynote: Mike Walsh**

# WEDNESDAY, APRIL 10 9:30 - 11 a.m. in 517 B

# Kick off AAE19 with a spark of inspiration!

Bestselling author Mike Walsh is the CEO of Tomorrow, a global consultancy on designing companies for the 21st century. In addition to speaking engagements and spending over 300 days a year traveling worldwide, he hosts a weekly podcast, "Between Worlds," in which he interviews provocative thinkers, innovators and troublemakers.

Important: Attendees and their registered guests are welcome to attend. Everyone must have a badge for admittance to the event.



Thank you to our sponsor



# **Exhibit Hall Grand Opening**

Immediately following the keynote address. Lunch will be available for purchase from various kiosks in the Exhibit Hall.

# **WEDNESDAY, APRIL 10**

11 a.m. - 12:30 p.m. in the Exhibit Hall

# Celebrate the opening of the AAE19 Exhibit Hall!

Special meet and greet with keynote speaker Mike Walsh at the Dentsply Sirona booth, **#1306** 



# **FREE WiFi**



Available in all session rooms, AAE Member Center and attendee lounge

Network: AAE Annual Meeting Password: WORTHSAVING

Join the conversation online by using #AAE19

# DOWNLOAD THE MOBILE APP

This comprehensive tool should be your primary source for information on site.

The AAE19 mobile app lets you:

- Access the schedule, session descriptions and speakers' bios.
- View speakers' handouts and take notes.
- Get notifications, including changes and announcements.
- Message fellow attendees.
- View exhibitor information.
- Plus, the customized schedule you created online will be automatically synced!

Members, use your AAE credentials to log in. Nonmembers and exhibitors, easily create an account using "AAE19" as the event code.

Find and download the app by searching AAE Meetings in the Apple App Store or Google Play Store. Then select AAE19 from the events listing.

Sponsored by





# Are you aware of all the ways to earn CE?

SESSION TYPE	CE HOURS AWARDED
Educational Sessions	1.0 CE hour for each 60-minute session 1.25 CE hours for each 75-minute session 1.5 CE hours for each 90-minute session 2.0 CE hours for each 120-minute session
Data Blitz	1.5 CE hours for each 90-minute session
Submitted Presentations	0.75 CE hour for each 45-minute session 1.0 CE hour for each 60-minute session 1.5 CE hours for each 90-minute bundle of sessions
Educational Workshops	3.0 CE hours for each 3-hour workshop 4.0 CE hours for each 4-hour workshop
Oral Research	1.0 CE hour for each 60-minute bundle of sessions 1.25 CE hours for each 75-minute bundle of sessions 1.5 CE hours for each 90-minute bundle of sessions Must attend all presentations within a bundle to earn CE
Poster Research and Table Clinics	2.0 CE hours
To The Point Lectures and Corporate Workshops	No CE awarded

# Have additional CE questions or ready to submit?

Visit aae.org/CEcredit by April 26, 2019.

# Online CE Verification Process

The AAE utilizes an online CE verification and evaluation process. Attendees have the ability to complete this process from a personal computer at any time. Log in as often as you like, whenever you like.

# Follow these simple step-by-step instructions to log your CE hours:

- Record the CE verification number announced at the conclusion of each session.
- 2 Go to aae.org/CEcredit or select "Enter CE" from the mobile app.
- 3 Log in with your AAE username and password.
- 4 Search for the session you attended.
- 5 Enter the corresponding CE verification number and complete a session evaluation.
- 6 INSTANTLY DOWNLOAD, PRINT OR SAVE YOUR CE LETTER.

The website will remain open until April 26, 2019.

After that date, contact the AAE at **ceverification@aae.org**, or by calling 800-872-3636 (U.S., Canada, Mexico) or 312-266-7255.



# SCHEDULE KEY

Track Code -Session Number / Session Title

Title.....

Speaker Name(s)

Note: Session times and locations are subject to change; refer to the mobile app for the latest listings.

Corporate Workshop (CW)

To The Point Lecture (TTP)

Not recorded for Endo On Demand

#### TRACK CODES:

PM. Essentials for Practice Management
IInterdisciplinary
<b>S</b> Microsurgery–Fundamentals to Advancements & Alternatives
NS Non-Surgical
OSCOral Systemic Connection
FRPot-pourri d'endodontie à la façon de Montréal
SPSubmitted Presentations

# ORAL RESEARCH, POSTER RESEARCH & TABLE CLINICS:

OR	Oral Research Presentations
PR	Poster Research Presentations
TC	Table Clinic Presentations

See pages 30-42 for detailed listings.

la fondation de l'hôpital de montréal pour enfants the montreal children's hospital foundation



# Help give back to the Montréal community!

Since its inception in 1973, the Montréal Children's Hospital Foundation has raised over \$428.5 million to help transform the lives of sick children through innovative research and teach projects, and cutting-edge care.

To learn more about their work, visit childrenfoundation.com.

# Want to support their work?

Stop by the registration desks to make a donation!

# INTRODUCING



aae.org/EndoVoices

# Coming JULY 2019

Subscribe to the podcast and visit Endo Voices in the Exhibit Hall to receive a FREE GIFT!

Stop by to listen in on our **live recordings** and to see the most up-to-date schedule!

# WEDNESDAY

1 - 2 p.m. GentleWave System

4 - 5 p.m.
Restorative Endo

# **THURSDAY**

**10 - 11 a.m.** Trauma

2:30 - 3:30 p.m. Regeneration

4 - 5 p.m. Endo vs. Implants

# FRIDAY

**10:30 - 11:30 a.m.** CBCT

2:30 - 3:30 p.m.
Practice
Management





This comprehensive resource, exclusively for endodontists, provides AAE members with the tools they need to plan their next career step or find their next great hire.

# Job Seeker Benefits

Free Access
Personalized Job Search
Easy Job Application
Résumé Search

# **Employer Benefits**

Competitive Pricing
Easy Management
Company Awareness
Candidate Alerts

careercenter.aae.org

# Celebrate Montréal!

# FRIDAY, APRIL 12

8:30 - 11:30 p.m.

Join your friends and colleagues at the scenic Port de Montréal! Located along the majestic St. Lawrence River, we invite you to enjoy a fun evening featuring hors d'oeuvres, drinks and entertainment.

Important: Attendees and their registered guests are welcome to attend. Complimentary shuttles will depart from the Viger Avenue entrance on Level 1 of the Palais des congrès de Montréal starting at 8:15 p.m. Shuttles will run continuously from 8:15 - 11:45 p.m. Everyone must have a badge for admittance to the event.





1 - 6 p.m.

**TUESDAY, APRIL 9** 

# COURSE & EXHIBIT HALL SCHEDULE

12:30 - 2 p.m. NS-2

Separated Instruments

Y. Terauchi

- opini	Separated instruments
Registration and Information	Retrieval220 A
Viger Hall, Level 2	PM-2 J. Mausolf
Speaker Ready Room522 C	Cultivating Cohesive, Loyal and Happy Referal and Patient Relationships515 C
WEDNESDAY, APRIL 10	12:30 - 2:30 p.m.
7 a.m 5:15 p.m.	CW-1 ♀ ⋒ A. Welk Finding Your Way: Using the
Registration and Information	Morita Tri Auto ZX2 for Complete Canal NavigationExhibit Hall
Speaker Ready Room522 C	Sponsored by J. Morita. Advanced registration required. No CE awarded.
Nursing Mothers' Room 522 B	1 - 5 p.m.
8 - 9:15 a.m.	S-12 R. Rubinstein
NS-1 L. Buchanan Dynamic CT Guided Endodontics	Mandibular Molar Microsurgical Workshop
PM-1 L. Philp	2 - 2:30 p.m.
Managing a Successful Team: 3 Layers of Leadership 515 C	BreakExhibit Hall
11 a.m 12:30 p.m.	2 - 3 p.m.
Exhibit Hall Grand Opening	TTP-2 A. Nasseh 3D Imaging In Private
Lunch Available	Practice: Refer It Out
for PurchaseExhibit Hall	or Do It Yourself?Exhibit Hall Sponsored by J. Morita. No CE awarded.
11 a.m 6 p.m.	
Exhibit Hall Open	2:30 - 4 p.m.
ll:15 a.m 12:15 p.m.	PM-3 N. Walsh Patient Perceptions:
TTP-1 J. Smith	Experience Matters 515 C
Why GentleWave?	S-1 J. Ray, J. Wealleans
Efficacy, Efficiency,	Targeted Endodontic Microsurgery:
and Practice ImpactExhibit Hall	This Changes Everything 220 A
Sponsored by Sonendo. No CE awarded.	

3 - 6 p.m.	NS-18 🕅 L. Buchanan, Y. Terauchi
CW-2 © M J. Reiss Carestream Dental: 3D Imaging (CBCT) Hands-On WorkshopExhibit Hall Sponsored by Carestream Dental. Advanced registration required. No CE awarded.	Predictable and Minimally Invasive Techniques for Instrument Retrieval Workshop
4 - 4:15 p.m.	BreakExhibit Hall Sponsored by EndoVision.
BreakExhibit Hall	9:30 a.m 6:30 p.m.
4:15 - 5:15 p.m.	Exhibit Hall Open
OSC-1 A. Kishen, H. Shemesh, D. Landwehr (Facilitator) Asymptomatic Periapical Radiolucency: To Treat or	10 - 10:45 a.m.  SP-5 M. Ibrahim From Lussi's Non-Instrumental
Not To Treat	Technique to GentleWave: Is Mission Accomplished? 516 B
D. Wogan Managing Complicated Questions Patients Ask515 C	SP-62 M. Levin What Can Teeth Tell Us? Life and Death in Early Colonial Jamestown©
5:15 - 6 p.m.	
Visit with Exhibitors Prior to the Opening Reception Exhibit Hall	10 - 11:30 a.m.  1-1 A. Law, D. Nixdorf, M. Pigg International Classification of Orofacial Pain Disorders: What's In It for Endodontists? 511 A
THURSDAY, APRIL 11	I-2 R. Dionne
7 a.m 5:30 p.m.	A Milligram of Prevention Is Better Than a Pound of
Registration and Information	Resuscitation
Speaker Ready Room 522 C	Is Ninja Access the Way to Go? 510 B
Nursing Mothers' Room 522 B	OR01-06 ₪ Endodontic Technology 513 A
8 a.m noon	
I-13	OR07-12 M Basic Science
Advance registration required.	OR13-18 M Antimicrobials513 F



OSC-2 O. Abubaker	11:30 a.m 12:30 p.m.
The Myths and Facts About Opioid Epidemic and Management of	TTP-4 👣 🖟 A. McOmber
Odontogenic Pain 510 A	Keys to Lawsuit Prevention,
Odontogenici ani	Medical License Protection
PM-5 S. Jenniges	and Tax SavingsExhibit Hall
Recognition & Rewards	Sponsored by Legally Mine. No CE awarded.
Rebooted: A Smarter and More	
Productive Approach to	12:30 - 1:15 p.m.
Employee Recognition515 C	SP-8 J. Alberdi
S. Chen, B. Karabucak	Nonsurgical Retreatment:
CBCT & Microsurgery: What Every	Management of Different
Clinician Should Know 516 C	Clinical Situations 516 B
10 a.m noon	12:30 - 2 p.m.
<b>I-3</b> ₩. Chee, E. Rindler, R. Schwartz	I-4 E. Byrne, K. Hargreaves, `N. Ruparel
The Endo is Done, the Tooth is	Management of
Restored, Now What? 511 D	Acute Pain511 D
	NS-5 J. Camillari, A. Nasseh
10:30 - 11:15 a.m.	Are We Ready for
TTP-3 🐃 ) 🔊 A. Welk	Single Cone Obturation? 510 B
Using Morita Technology	NS-6 A H. Shemesh
to Navigate the World	Do Your Instruments
of Endodontics Exhibit Hall	Crack the Root?512 E
Sponsored by J. Morita. No CE awarded.	
10:45 - 11:30 a.m.	OSC-3 C. Migliorati Systemic Manifestations of Oral
	Disease and Oral Manifestations
SP-2 S. Cho	of Systemic Disease/Drug Related
Long-Term Outcome and Improved	Osteonecrosis
Procedure of Intentional	PM-6 🖟 L. Canham
Replantation512 H	Top 10 Things a Dental
SP-4 T. McClammy	Practice Needs to Know
A New Paradigm in	to be Compliant: HIPAA 514 A
Endodontic Debridement	•
and Disinfection 514 A	PM-7 W. Mandell
SP-6 J. Uhles	Practice Transitions515 C
Can We Predictably Disinfect	S-3 C. Pertl
Minimally Invasive Canal	Optimized and Advanced
Preparations? 516 B	Flap Designs in Endodontic
	Surgery516 C
11 a.m 12:30 p.m.	10:45 0
Lunch Available	12:45 - 2 p.m.
for PurchaseExhibit Hall	OR27-31 🕅
	Pain Control513 F

1 - 2 p.m.	2:30 - 3:15 p.m.
OR19-22   Materials/Sealers/ Microsurgery 1513 A	SP-10 G. Jouanny Incision Techniques and Flap Designs in Endodontic Microsurgery
OR23-26  Materials/Sealers/ Microsurgery 2513 C	SP-12 P. Wohlgemuth Aesthetic Aspects of Endodontic Surgery:
<u>1 - 4 p.m.</u>	Prevention and Outcome 516 B
PR01-114, TC01-67 Poster Research	2:30 - 4 p.m.
and Table Clinics Exhibit Hall	I-6 N. Cohenca, B. Sheller Interdisciplinary Approach to Dental Trauma511 D
1 - 5 p.m.	
I-14 B. Azevedo, M. Fayad Hands On CBCT Interpretation Workshop 520 C Advance registration required.	NS-3 M. Ree Restorative Options for the Long- Term Success of Endodontically Treated Teeth
NS-19 L. Buchanan, Y. Terauchi Predictable and Minimally Invasive Techniques for Instrument Retrieval Workshop	NS-7 A. Diogenes, A. Paranjpe, D. Ricucci Are Regenerative Endodontics Procedures Working?
Advance registration required.  1:15 - 2 p.m.	NS-8 A. Kishen Is Instrumentation Passé?: Future of Root Canal
SP-64 C. Wenckus	Disinfection 512 E
Challenging the ABE Case History Portfolio Exam: What You Need to Know 512 H	OSC-4 E. Hersh Three Adverse Drug Reactions Every Endodontist Needs
2 - 2:30 p.m.	to Know
BreakExhibit Hall Sponsored by EndoVision.	PM-8 L. Canham Top 10 Things A Dental Practice Needs to Know to Be Compliant: OSHA 514 A
2 - 3 p.m.	•
TTP-5 (**) M K. Coury, J. Douthitt A GentleWave System Case Study: Investing in Efficacy and Growing	PM-9 E. Weinstock The Convergence of Endodontics, Ethics and Law 515 C
Practice ProfitabilityExhibit Hall Sponsored by Sonendo. No CE awarded.	2:30 - 4:30 p.m.
	S-4 A. Azim, B. Khayat Advanced Approaches to Endodontic Microsurgery 516 C



3 - 4 p.m.	PM-10 M. Desrosiers
<b>OR44-47</b> Basic Science	Life Balance and Debt Management 514 A
OR48-51  Retreatment / Treatment Outcome	PM-11 J. Chang Keep Your Referring Doctors Smiling
<b>OR52-55 ₹</b> Technology	S-14 A. Fakhry Aesthetic Principles of Soft Tissue Management in Microsurgical Endodontics
3:15 - 4 p.m.	SP-14 J. Argueta
SP-11 N. Nguyen Laser-Assisted Endodontic Micro-Surgery: Thoroughly Planned, Optimally Equipped, Effectively Executed and	Vital Pulp Therapy, When, Why and How? Long Follow-Up Case Series Presentation and Literature Review 511 A
Swiftly Healed512 H	SP-15 D.Cerny Root to Crown: Advanced
SP-13 L. Meng Outcomes of Endodontic	Adhesive Post-Endodontic Concept511 D
Microsurgery Analysis: A Retrospective Study 516 B	SP-16 J. Barbizam Mind the Gap: Clinical
4 - 4:30 p.m.	and Scientific Controversies Regarding Conservative
BreakExhibit Hall Sponsored by EndoVision.	Endodontics512 H
4:30 - 5:30 p.m.	SP-17 J. Small What is a Coaching Culture
NS-9 G. Gambarini, M. Trope	and Why Do I Need It? 516 B
Can One File Do It All?510 B	5:30 - 6:30 p.m.
NS-10 K. Yapp How Understanding Testing Theory Will Make You a Better Diagnostician	Exhibit Hall Happy Hour Co-Sponsored by Brasseler USA
<b>OR32-35</b>	FRIDAY, APRIL 12
<b>OR36-39</b>	7 a.m 5:30 p.m.
OR40-43   Factors Affecting Healing/	Registration and Information Viger Hall, Level 2
CBCT/Other513 F	Speaker Ready Room522 C
OSC-5 Y. Rawal Systemic Disease Presenting as Intriguing Oral Lesions: The Mouth IS the Mirror of the Body 510 A	Nursing Mothers' Room 522 B

8 a.m noon	I-8 K. Baker, A. Clavel, A. Law,
OSC-12   S. Bender Orofacial Pain Workshop 520 B Advance registration required.	L. Morrow, D. Nixdorf A Multi-Disciplinary Approach for Managing Persistent Pain
PM-19 B. Quenzer Medical Emergencies in the Dental Office: A Hands-On Interactive Workshop 520 C Advance registration required.	NS-11 L. Berman, C. Munce Things I Learned the Hard Way
S-13 A. Fakhry, S. Niemczyk Microsuturing and Microsurgical Soft Tissue Management in Endodontics Workshop 520 A	Difficult Cases. Difficult Decisions! An Interactive Case-Based Treatment Planning Session
Advance registration required.  9:45 - 10 a.m.  BreakExhibit Hall	PM-12 J. Olmsted, B. Regan You Did What to Whom? They Want How Much? Endodontic Malpractice Case Studies
10 - 11 a.m.	PM-13 M. Vujicic Dental and Endodontic
FR-1 C. Ricci	Economic Trends515 C
Decision-Making and Treatment of Large Periodical Lesions516 D This presentation is in French.	S-5 S. Kim; C. Safi Endodontic Microsurgery with Step- by-Step Demonstration 511 A
SP-18 E. Farmakis Laser Irradiation and Pulp Space	10 a.m 1 p.m.
Decontamination: An Evidence- Based Approach 510 A	CW-5 © M J. Reiss Carestream Dental:
SP-20 M. Coelho Root Canal Instrumentation and Dentinal Defects: Should We Be More Conservative?	Sponsored by Carestream Dental: 3D Imaging (CBCT) Hands-On WorkshopExhibit Hall Sponsored by Carestream Dental. Advanced registration required. No CE awarded.
SP-22 P. Abbott Dilemmas in Managing	10 a.m 6 p.m.
Immature Teeth513 A	Exhibit Hall Open
10 - 11:30 a.m.	ll a.m noon
SP-24 J. West Your Roadmap to Predictable Outcomes: The Three	SP-19 K. Boyer, A. Lee Are You Ready for Augmented Reality in Endodontics?510 A
Critical Skills	SP-21 L. Amador
10 a.m noon	Clinical and Radiographic Correlation of Pulpal
I-7 H. Boyer, R. Tataryn Rhinosinusitis and Endodontic Disease	Changes in Patients with Periodontal Disease512 H

SP-23 A. Paranjpe SCAP: To Regenerate or Not to Regenerate	NS-13 P. Lambrechts External Cervical Resorption Part 1: Etiology, Morphological and Histological Complexity511 D
Noon - 1 p.m.	NS-14 S. Simon
TTP-7 (A. McOmber Keys to Lawsuit Prevention,	Pulpotomy as a Final Treatment: Is It Predictable? 512 E
Medical License Protection and Tax SavingsExhibit Hall Sponsored by Legally Mine. No CE awarded.	OSC-6 G. Clark Orofacial Pain: Distinguishing It from Endodontic Pain
Lunch Available for PurchaseExhibit Hall	PM-14 D. Harris How to Outsmart an Embezzler
1 - 1:45 p.m.	
SP-27 A. Azim, G. Huang Strategies Concerning Endodontic Disinfection for Regenerative Endodontics	PM-15 U. Odiatu Fit to Lead: Transform Your Body and Transform Your Practice!
	S-6 📓 B. Karabucak, A. Kim
<u>1 - 2 p.m.</u>	Tooth Transplantation: A Better
FR-2	Way of Replacement
SP-55 J. Aranguren New Designs in Mechanical Instrumentation: How Metalurgia	Outcomes of Endodontically Treated Teeth
Can Help Us to Work Safer and with	1 - 4 p.m.
Better Clinical Results512 H  SP-60 A. Fouad  Preliminary Analysis of Microbiological Data in a Clinical Trial of Regenerative Endodontic	PM-20 H. Rakusin, R. Rubinstein When Is It Time to Hang 'Em Up? Workshop 520 C Advance registration required.
Treatment	1:45 - 2:30 p.m.
	SP-28 S. Lee
1 - 2:30 p.m.	Infection Control in Regenerative Endodontic Procedures 516 B
I-9 ₩. Scarfe Flexing Your Mental Muscle	Endodontie Procedures 510 B
to Approach CBCT Diagnostic	2:30 - 3 p.m.
Dilemmas	BreakExhibit Hall
I-10 A. Gluskin, J. Gregg Endodontic Overfill and	3 - 3:45 p.m.
Neurologic Injury: Considerations and Strategies to Address Legal, Surgical and Neuropathic	SP-29 A. Goerig The Quickest Way to Eliminate Dental School Debt

Outcomes . . . . . . . . . . . . . . . . . . 510 B

<b>SP-33</b> <i>I. Mer</i>	3 - 5 p.m.
Treatment of Endodontic Failures: Non-Surgical or Surgical Approach?	S-7 S. Kratchman, Y. Yu Intentional Replantation with Step- by-Step Demonstration 511 A
3 - 4 p.m.	3:45 - 4:30 p.m.
FR-3 C. Safi Obturation with Bioceramics 516 D This presentation is in French.	SP-30 L. Oxenham Improved Patient Care Through Lawsuit Protection and Prevention for Endodontists
SP-32 J. Gibbs Pain Outcomes After Root End Resection Surgery: Risk Factors for Acute and Persistent Pain 513 A	SP-34 J. Irelan Evaluating the Restorability of Endodontically Treated Teeth: Do Dogma and Fact Agree? 516 B
3 - 4:30 p.m.	4:30 - 6 p.m.
I-11 E. Lam From Features to Image Interpretation: What to Look for and What It Means	Exhibit Hall Closing Party with Wine Tasting Co-Sponsored by Avalon Biomed, Carestream and EndoVision
I-12 S. Patel External Cervical Resorption Part 2: Diagnosis & Treatment 511 D	SATURDAY, APRIL 13
NS-15 M. Davis, M. Fayad Cracked Teeth: New Perspectives	
on Diagnosis, CBCT Imaging, Treatment Strategies, and Outcomes	8 a.m 3:15 p.m.         Registration and Information
OSC-7 B. Taylor	Speaker Ready Room522 C
Marijuana and Opioids and Their Effects on Oral Health510 A	Nursing Mothers' Room 522 B
PM-16 K. Wiltbank	8:30 - 9:15 a.m.
Procedure Coding and Communication with Dental Benefit Providers (Insurance Companies): Efficiency and Effectiveness	SP-38 L. Alsofi Post-Operative Endodontic Pain: Prevalence, Predictability, Risk Factors, and Management 516 B
PM-17 B. Rundquist "Root Cause," A Thoughtful Counterpoint	8:30 - 10 a.m.  DB-1  B. Azevedo, F. Barnett,
SP-31 E. Cotti Factors Influencing Healing of Apical Periodontitis: From the Clinics to the Host Response	A. Fouad, K. Hargreaves, A. Khan, A. Nasseh, D. Nixdorf, N. Ruparel, R. Silva Data Blitz



NS-16 T. Kvist	Noon - 12:45 p.m.
Endodontic Outcome: Critical Review of Our Criteria 510 B	SP-44 J. Bahcall Vital Pulp Cryotherapy 516 B
OSC-8 U. Odiatu 50 Shades of Inflammation: The Mouth Body Connection 511 A	Noon - 1 p.m.
OSC-9  Management Considerations for the Medically Complex	SP-40 A. Azarpazhooh A Practical Approach to Evidence- Based Endodontics
Patient	SP-43 R. Dionne, A. Khan Management of Acute Odontogenic Pain in the Opioid Overdose Era: Differentiating Drug Seeking from Analgesic Need 513 A
SP-37 S. McClanahan ABE Boardwalk	Noon - 12:45 p.m.
SP-61 T. Adams PPRC Session: AAE Consumer Campaign:	SP-41 B. Blicher Values-Based "Soft Skills" for the Endodontic Practice 510 B
Making Endodontists Part of a Bigger Conversation 513 C	Noon - 1:30 p.m.
9 - 10 a.m.  SP-35 M. Haapasalo Past, Present and Future: A Look at	OSC-11 J. Hartsfield Will Genetics and Personalized Medicine Have an Impact on Endodontics?
the Evolution of our Specialty and What the Future Holds 510 A	PM-18 J. Austin #ReputationMatters: Grow Your Practice for FREE! 514 A
SP-36 P. Rosenberg Endodontic Controversies: Clinical and Pharmacologic	S-9 T. Sollecito Medical History Assessment for Surgery: Are You Prepared? 516 C
9:15 - 10 a.m.	S-11 J. Anderson, C. Giacomino
SP-39 A. Davis Endodontic Pain: Do We Have to Accept It or Are	Principles of Endodontic 3D Printing and Surgical Guide Design: Tools to Get Started
There Alternatives?	SP-7 S. McClanahan, C. Noblett So You'd Like to Be an ABE Director
BreakExhibit Hall	SP-63 B. Basrani. A. Gluskin.
11:45 a.m noon	C. Hirschberg, W. Johnson Educator Forum: Teaching a Single
BreakExhibit Hall	Standard of Endodontics513 F

Noon - 2 p.m.	SP-56 M. Tulkki
OSC-10 B. Azevedo, D. Landwehr, D. Nixdorf, S. Doyle (Facilitator)	Obturation in the New Small World
Thinking Beyond the Pulp 511 A	SP-59 G. Huang
12:45 - 1:30 p.m.	Where Are Dental Pulp Stem Cells in the Pulp? What Can
SP-42 L. Kuznetsova	They Do for Us? 512 E
Differential Diagnosis of the Root Resorptions and Their	1:45 - 3:15 p.m.
Treatment Modalities 510 B	NS-17 A. Azim, O. Peters Education 2030: New Prospects and
SP-45 L. Lin Treatment of Mature	Future Direction513 F
Permanent Teeth with Irreversible Pulpitis: A Forgotten Vital Pulp Therapy516 B	S-10   ■ J. Cochet  Piezo Surgery and GTR: Emerging  Technologies in Endodontic  Microsurgery for Bone
1 - 2 p.m.	Regeneration516 C
SP-46 S. Abbey Pathways to the Dental	2 - 3 p.m.
Pulp Proteome	SP-58 D. Sayman
SP-50 J. Cymerman New Clinical Techniques and Research in Regenerative Endodontics	Is High Resolution Limited Field of View Advanced 3D CBCT Imaging Really a Reliable Tool in Endodontic Diagnostic Dilemmas?511 D
1:45 - 2:30 p.m.	2:15 - 3:15 p.m.
SP-47 P. Abbott Management of Horizontal	SP-57 B. Blicher, R. Pryles Differentiating Resorption 513 A
Root Fractures 510 A	2:30 - 3:15 p.m.
SP-51 F. Rodríguez-Lozano Biological Effects and Clinical Behavior of Calcium Silicate- Based Materials	SP-48 M. Alharbi Occlusal Consideration for Endodontic Therapy
SP-53 S. Kim Scaffolds for Regenerative Endodontics: Translation of Research into Clinical Practice	SP-52 J. Gibbs, A. Khan Outcomes of Apexification and Regenerative Endodontic Procedures in Immature Permanent Teeth: Predictability, Surprises and Future Directions 514 A
l:45 - 2:45 p.m.	SP-54 A. Chandra
SP-49 M. Abdennour Endodontics and Saving Teeth: Pushing the Limits or Business as Usual?	In Vitro Evaluation of Dental Pulp Stem Cells Proliferation and Differentiation on Three Dimensional Scaffolds 516 B



# SPECIAL EVENTS

Events take place in the Palais des congrès de Montréal unless otherwise noted.

#### WEDNESDAY, APRIL 10

Sponsored by Sonendo

Opening Keynote: Mike Walsh 9:30 - 11 a.m. No CE awarded. Sponsored by Dentsply Sirona	517 B
Exhibit Hall Grand Opening 11 a.m 12:30 p.m.	Exhibit Hall
Welcome Reception 6-7:30 p.m All registered attendees and their registered guests are welcome to attend.	710

#### Foundation Donor & Leadership Reception

7:30 - 8:30 p.m.  By invitation only. Sponsored by Dentsply Si	Montréal A, Flr. 11 - Le Westin
THURSDAY, APRIL 11	
5k Fun Run and Walk 6-7 a.m	Fortifications, Flr. 9 - Le Westin
President's Breakfast 8 - 9:30 a.m Sponsored by Dentsply Sirona	517 B
Past Presidents' Luncheon 11:30 a.m 1 p.m.  By invitation only.	518 B
Louis I. Grossman Ceremony 4:30 - 5:30 p.m.	Montréal Ballroom, Flr. 11 - Le Westin
Diplomate Reception 5:30 - 6:30 p.m.	Grand Place, Flr. 8 - Le Westin
<b>Exhibit Hall Happy Hour</b> <b>5:30 - 6:30 p.m.</b> Co-Sponsored by Brasseler USA	Exhibit Hall
D ( 1 10) ((D ))	

# Professional Staff Reception

 6:45 - 7:45 p.m.
 Reporter Bar, Flr. 3 - Le Westin

 Sponsored by EndoVision

#### International Reception

**7-8 p.m.** Fortifications, Flr. 9 - Le Westin By invitation only.

#### FRIDAY, APRIL 12

#### FRIDAY, APRIL 12 (continued)

District Caucuses	
7:30 - 8:15 a.m.	
District I	513 A
District II	513 C
District III	513 F
District IV	514 A
District V	515 C
District VI	516 B
District VII	516 C
General Assembly	
8:30 - 9:45 a.m.	517 B
Sponsored by Dentsply Sirona	
Resident and New Practitioner Career Fair	
10 a.m 11:30 a.m.	517 D
Sponsored by Radman, White & Associates	

# Exhibit Hall Closing Party with Wine Tasting

4:30 - 6 p.m. Exhibit Hall
Co-Sponsored by Avalon Biomed. Carestream and EndoVision

#### Resident Reception

5:30 - 6:30 p.m. Inspiration, Flr. 6 - DoubleTree
Sponsored by Treloar & Heisel

### Celebrate Montréal!

8:30 - 11:30 p.m. Offsite - Port de Montréal

 $Shuttles \, depart \, from \, the \, Viger \, Avenue \, entrance \, on \, Level \, 1 \, of \, the \, Palais \, des \, congrès \, de \, Montréal \, starting \, at \, 8:15 \, p.m. \, Shuttles \, will \, run \, continuously \, from \, 8:15 \, - \, 11:45 \, p.m.$ 

### **SATURDAY, APRIL 13**

Edgar D. Coolidge Brunch

10:15 - 11:45 a.m. 517 E

Sponsored by Dentsply Sirona

# SPOUSE AND GUEST ACTIVITIES

# WEDNESDAY, APRIL 10

# Spouse/Guest Breakfast & Meeting

**8:30 - 10 a.m.** Ramezay, Flr. 8 - Le Westin

Join us for the annual spouse/guest continental breakfast for a wonderful start to your AAE19 experience. This is open only to registered spouses and guests of AAE members. No advanced registration required.

# FRIDAY, APRIL 12

Spouse/Guest Montréal City Tour & Lunch at the Sugar Shack

**8:45 a.m. - 3 p.m.** Depart from the Lobby of Le Westin

Meet at 8:45 a.m. in the lobby of Le Westin Hotel. This is open only to registered spouses and guests of AAE members. Advance registration required. Space is limited.



# LIST OF EXHIBITORS

Company Name	Booth#	Company Name	Booth#
12th IFEA World Endodontic Congress 2020	247	Endodontic Practice US	
Academy of Microscope		EndoVision	506
Enhanced Dentistry	314	Engineered Endodontics	
ACADENTAL		Forumtec	
Accurate Manufacturing, Inc	1711	Fotona	
ACTEON North America	400	Global Surgical Corporation.	
Alltion (Guangxi)		Hawaiian Moon	
Instrument Co., Ltd	1119	Helse Ultrasonic	
American Dental Association	1102	Henry Schein Dental	
American Dental Partners	422	Hu-Friedy Mfg. Co., LLC	399
ANGELUS	312	Hunter & Spence	415
Aseptico	705	ILC New York	304
ASI Dental	1502	Infinity Massage Chairs	
Aspen Dental	412	Innovative Material and Devi	ces214
Avalon Biomed	305	J. Morita	602
B&L Biotech USA, Inc	202	JEDMED	514
Bassi Endo	521	Jordco, Inc	413
BeamReaders	1799	Kavo Kerr Endodontics	1314
Boyd Industries	1805	Labo America, Inc	520
Brasseler USA	806	Laschal Surgical	300
Brookwood Endodontics	100	Laschal Surgical	1020
Carestream Dental	706	Legally Mine	1903
CJ-Optik GmbH & CoUG	421	LumaDent, Inc	306
ClaroNav	104	MacPractice	1713
Clinical Research Dental	420	MANI, Inc	1611
Coltene	406	Maxxeus Dental	201
Cornerstone Dental Specialt	ies 1911	Maruchi	320
Cornerstone Training Institut	te 1512	Medidenta	411
DenMat	315	MedPro Group	1113
Dental Tribune America	1814	Meta Biomed	418
Dental Savings Club	322	MoraVision	1217
Dentsply Sirona	1306	Obtura Spartan Endodontics	1214
Designs for Vision, Inc	606	OSADA, Inc.	1018
DiaDent Group International	1 1612	Pac-Dent, Inc	405
EdgeEndo	716	Pacific Dental Services	1603
Elsevier	1901	PBHS, Inc	1012
Endo Mastery	620	Phase II Dental Transitions	1117
Endo/Tech	1806	Planmeca	419

Company Name	Booth#
Porter Instrument	205
Predictable Surgical Technologi	es 213
Prescott's Inc	318
Q-Optics & Quality Aspirators .	417
Quintessence Publishing Co., In	c 1311
Radman, White & Associates .	515
Ray America	114
RGP, Inc	1605
Seiler Medical Division	614
Septodont	401
Shenzhen Superline Technology Co., Inc	203
Sifary	
Snoasis Medical	
Sonendo, Inc	
SS White Endodontics	
SurgiTel	
Suzhou Semorr	
Medical Tech Co., Ltd	
Synergy Specialists	
TDO / EIE2	
Treloar & Heisel	
Tri Hawk International	1811
TrueVicion Systems Inc	
TrueVision Systems, Inc	
TSYS	1014
TSYSUltimate Dental	1014
TSYS	1014
TSYS Ultimate Dental Ultradent Products, Inc Venta Endo - EndoHandle	101414061991219
TSYS  Ultimate Dental  Ultradent Products, Inc  Venta Endo - Endo Handle  VeriTooth	1014 1406 199 1219 1714
TSYS Ultimate Dental Ultradent Products, Inc Venta Endo - EndoHandle VeriTooth Vista Dental Products	1014 1406 199 1219 1714
TSYS  Ultimate Dental  Ultradent Products, Inc  Venta Endo - Endo Handle  VeriTooth	1014 1406 199 1219 1714 513
TSYS Ultimate Dental Ultradent Products, Inc Venta Endo - EndoHandle VeriTooth Vista Dental Products Wand Dental Inc.	1014 1406 199 1219 1714 513
TSYS Ultimate Dental Ultradent Products, Inc Venta Endo - EndoHandle VeriTooth Vista Dental Products Wand Dental Inc. (Milestone Scientific)	1014 1406 199 1219 1714 513 302 106
TSYS Ultimate Dental Ultradent Products, Inc Venta Endo - EndoHandle VeriTooth Vista Dental Products Wand Dental Inc. (Milestone Scientific) Weave.	1014 1406 199 1219 1714 513 302 106 1118
TSYS Ultimate Dental Ultradent Products, Inc Venta Endo - EndoHandle VeriTooth Vista Dental Products Wand Dental Inc. (Milestone Scientific) Weave. Willamette Dental Group X-Nav Technologies	1014 1406 199 1219 1714 513 302 106 1118 1804
TSYS Ultimate Dental Ultradent Products, Inc Venta Endo - EndoHandle VeriTooth Vista Dental Products Wand Dental Inc. (Milestone Scientific).	1014 1406 199 1219 1714 513 302 106 1118 1804 1899
TSYS Ultimate Dental Ultradent Products, Inc Venta Endo - EndoHandle VeriTooth Vista Dental Products Wand Dental Inc. (Milestone Scientific) Weave. Willamette Dental Group X-Nav Technologies.	10141406199121917145133021061118180418991913
TSYS Ultimate Dental Ultradent Products, Inc Venta Endo - EndoHandle VeriTooth Vista Dental Products Wand Dental Inc. (Milestone Scientific) Weave. Willamette Dental Group X-Nav Technologies XDR Radiology	10141406199121917145133021061118180418991913906

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# EXHIBIT HALL SCHEDULE

# WEDNESDAY, APRIL 10

Exhibit Hall Open	11 a.m 6 p.m.
Exhibit Hall Grand Opening	11 a.m 12:30 p.m.
Lunch Available for Purchase	11 a.m 12:30 p.m.
Visit with Exhibitors Prior to the Welcome Reception	5:15 - 6 p.m.

# **THURSDAY, APRIL 11**

Exhibit Hall Open 9:30 a.m 6:30 p.m
Lunch Available for Purchase
Exhibit Hall Happy Hour5:30 - 6:30 p.m
Co-Sponsored by Brasseler USA

### FRIDAY, APRIL 12

Exhibit Hall Open	a.m 6 p.m.
Lunch Available for Purchase	loon - 1 p.m.
Exhibit Hall Closing Party with Wine Tasting	

# RECHARGE & RELAX

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# EXHIBIT HALL MAP



Exhibitor

Sponsor

# Check out the interactive exhibit floor plan on the AAE19 meeting website and mobile app.

"Favorite" the companies you want to visit and take notes.

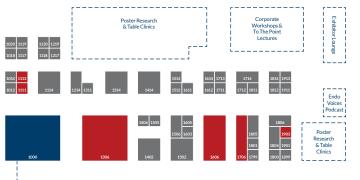


JOIN US for the Exhibit Hall Closing Party with Wine Tasting!

# **FRIDAY, APRIL 12** 4:30 - 6 p.m.



Co-Sponsored by Avalon Biomed, Carestream and EndoVision







# **AAE MEMBER CENTER**

#### Be sure to visit our booth and:

- Learn about membership benefits and services.
- Get to know the AAE staff.
- Spin and win with Endo On Demand.
- Celebrate the launch of our public "Worth Saving" campaign.
- Browse publications and resources.
- Learn about Foundation for Endodontics' initiatives.

# Be sure to visit the exhibit hall for:

- Poster Research and Table Clinic Presentations
  - Corporate Workshops
- To the Point Corporate Lectures
- EdgeEndo Shoot the Puck
- Carestream Attendee Lounge
- New Product Showcase
- Exhibit Hall Wine Tasting







# ALUMNI AND AFFILIATE EVENTS

Event locations listed in blue will be held at Le Westin Montréal. 270 Saint-Antoine St. W.

Event locations listed in pink will be held at DoubleTree by Hilton Montréal, 1255 Jeanne Mance St.

# **WEDNESDAY, APRIL 10**

Endogator Alumni Reception
$\label{lem:continuous} Scientific Advisory  Board    \textit{Journal of Endodontics} \textbf{McGill, Flr. 8  6:30 - 8  p.m.}$
Spanish Association of Endodontists Welcome Reception
Texas A&M College of Dentistry Endodontic Alumni and Friends Reception Montréal B, Flr. 11 7:30 - 10:30 p.m.
University of Minnesota Alumni Reception Montréal C, Flr. 11 7:30 - 9 p.m.
USAF Affiliate Annual Meeting Offsite 7:30 - 8:30 p.m.

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USAF Affiliate Annual Meeting Offsite 7:30 - 8:30 p.m.
THURSDAY, APRIL 11
Albert Einstein Alumni Reception
Boston University Goldman School of Dental Medicine Alumni Reception Inspiration, Flr. 6 7-9 p.m.
Case Western Reserve University School of Dental Medicine ReceptionVictoria, Flr. 3 6:30 - 8:30 p.m.
Columbia University College of Dental Medicine Alumni Reception
French Society of Endodontics
Harry J. Healy Study Club Annual Reception Soprano B, Flr. 4 6:30 - 8:30 p.m.
Harvard Endodontics Annual Alumni DinnerOffsite 6:30 - 11 p.m.
Marquette University School of Dentistry Alumni Reception
Medical University of South Carolina ReceptionSaveur 3, Flr. 6 6:30 - 7:30 p.m.
Navy & University of Washington Alumni and Friends Reception
Nova Southeastern University After Dinner Alumni Reunion
NYU Endodontic Program Reception Saveur 1, Flr. 6 6:30 - 8:30 p.m.
NYU Langone Dental Medicine ReceptionOvation, Flr. 5 6:30 - 8:30 p.m.

# THURSDAY, APRIL 11 (continued)

Temple University Dental School Alumni Reception
Endodontic Alumni Reception
TI III C
The University of Texas at Houston School of Dentistry Alumni Reception
Tufts Endo ReceptionVille-Marie A, Flr. 9 6:30 - 8:30 p.m.
UNC School of Dentistry Endodontic Alumni and Friends Reception
University of Buffalo Reception
University of California Los Angeles Alumni and Friends
University of California San Francisco Reception Wine Bar, Flr. 6 6:30 - 8 p.m.
University of Connecticut Alumni Reception by EdgeEndo
University of Illinois at Chicago Endodontics Alumni Dinner
University of Iowa Reception
University of Louisville Reception
University of Missouri - Kansas City Alumni/Affiliate Reception
University of Southern California Alumni Reception
University of Texas Health Science Center at San Antonio Alumni Reception
University of Toronto Reception <b>Grand Salon Opera A, Flr.4 6:30-8 p.m.</b>
US Army Business Meeting (Active Duty Only) 512 H, Palais des congrès de Montréal 7 - 7:45 a.m.
US Army Social (All Welcome) Saveur 3, Flr. 6 7-9 p.m.
West Virginia University Reception

# **SATURDAY, APRIL 13**

US Navy Association of Endodontists......Imagination, Flr. 6 7-7:45 a.m.



# ORAL RESEARCH PRESENTATIONS

A new oral research presentation starts every 15 minutes during these designated blocks. Speakers are listed in the order of their presentations.

#### THURSDAY, APRIL 11

10 - 11:30 a.m.

### OR01-OR06 🕅

M. Kopacz, R. Chan, P. Kim, A. Salman, N. Kim, M. Webber

Endodontic Technology ...... 513 A

Resident Session

#### OR07-OR12 🕅

B. Nadeau, F. Li, A. Alelyani, D. Wong, A. Everhart, R. Alhomrany

Basic Science ...... 513 C

Resident Session

#### OR13-OR18 📓

B. Damlaj, S. Rees, N. Aomin, T. Ren. J. Kindler, B. Minavi

Antimicrobials ......513 F

Resident Session

#### 12:45 - 2 p.m.

# OR27-OR31 🕅

J. Capetillo, K. Watts, M. Hazard, A. Butler, M. Zaniir

Pain Control 513 F Resident Session

### 1 - 2 p.m.

#### OR19-OR22 XII

M Martel A Mainkar T. Carlson, A. Mann

Materials/Sealers/

Microsurgery 1......513 A

Resident Session

#### OR23-OR26 3

J. Anderson, G. Clive. T. Hawkins, D. Harris

Materials/Sealers/

Microsurgery 2..... 513 C

Resident Session



#### 3 - 4 p.m.

# OR44-OR47 🔊

S. Zahran, P. Jalali, N. Binanzan, C. Chang

Basic Science......513 A

Pre-doctoral Student; Endodontist; International Endodontists; International Resident:

General Dentist Session

OR48-OR51 🕅

R. Bharti, R. Scott, H. Aksel, A. Machado

Retreatment/

Treatment Outcomes.......... 513 C

Pre-doctoral Student; Endodontist; International Endodontists; International Resident:

General Dentist Session

OR52-OR55 📓

E. Medioni & S. Pietri, M. Alkadi, L. Piasecki, M. Ibrahim

Pre-doctoral Student; Endodontist; International Endodontists:

International Resident; General Dentist Session

#### 4:30 - 5:30 p.m.

#### OR32-OR35 📓

Resident Session

OR36-OR39 🕅

P. Miron, Y. Park, K. Maheshwari, R. Liu Regeneration 2......513 C

Resident Session

#### OR40-OR43 3

A. Sarhan, E. Irinakis, N. Mastrojanni, P. Karja

Factors Affecting Healing/ CBCT/Other ......513 F

Resident Session

# **DON'T MISS** the Resident and New Practitioner Career Fair!

FRIDAY, APRIL 12 10 - 11:30 a.m. in 517 D

Thank you to our sponsor

RADMAN, WHITE & ASSOCIATES, INC.



Visit the AAE Member Center in the Exhibit Hall to learn more about our new targeted marketing campaign to further position endodontists as the experts in saving natural teeth.

AMERICAN ASSOCIATION
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And pick up a **FREE GIFT** while you're there!

# **Celebrate** with us!





We have devoted the entire month of May to celebrating saving your natural teeth – and recognizing the "savers" who make that possible: endodontists.

We encourage you to get into the spirit with us and spread the word in your community:

Treasure your natural teeth!

**THANK YOU** to our sponsors





# POSTER RESEARCH PRESENTATIONS

All presentations will take place in the Exhibit Hall.

#### THURSDAY, APRIL 11 - 1 - 4 p.m.

#### RESIDENT SESSIONS

# PR01 J. Willison

Antibacterial Efficacy of an Endodontic Sonic-powered Irrigation System: An *In Vitro* Study

#### PR02

Factors Related to Survival Rates of Cracked Teeth after Endodontics

Treatment

PR03 G. Middleton

Preemptive Nonsteroidal Antiinflammatory Drugs and the Success Rate of Inferior Alveolar Nerve Blocks in Mandibular Posterior Teeth with Irreversible Pulpitis: A Systematic Review and Metaanalysis

#### PR04

M. Um

Y. Chen

Buccal Bone Thickness Measurements Utilizing CBCT in Healing Outcomes Assessment in Endodontic Microsurgery

#### PR05

S. Otterson

Surface Integrity of Root Ends Following Apical Resection With Guided Trephine Burs

#### PR06

S. Oknajan

Tip Diameter and Taper Variability of Four Different Brands of Master Gutta-Percha Cones

#### PR07

B. Wheeler

Cone-Beam Computed Tomography Evaluation of the Anatomy of Maxillary Molars in a Selected Tennessee Population: A Pilot Study

### PR08

M. Correa

Heat Generation Changes with Electrically-heated Pluggers After Multiple Autoclave Cycles at Different Operating Temperatures

#### PR09

G. Tischke

Efficacy of Cranberry Extract as an Endodontic Irrigant Against Mixed-culture Endodontic Biofilm in an *In* Vitro Tooth Model

#### PR10

J. Sarmiento

Management of Post-operative Pain in Symptomatic Apical Periodontitis Cases Using a Combination of Antihistamine and Ibuprofen

#### PR11

M. Yang

Apical Extrusion of Sodium Hypochlorite using Photon-induced Photoacoustic Streaming

#### PR12

S. Hoge

Five-year Survival of Teeth Obturated by Hydraulic Condensation of Bioceramic Sealer

### PR13

R. Scott

Root and Canal Morphology of Maxillary and Mandibular Premolars in a Tennessee Subpopulation: A CBCT Study

#### PR14

D. Basali

An Investigation of Torsional Force and Angle of Rotation to Fracture of XP-3D Nickel-Titanium Rotary Files After Simulated Clinical Usage

# PR15

V. Huliyar

An Investigation of Torsional Force and Angle of Rotation to Fracture of Trushape® 3D Conforming NiTi Rotary Files after Simulated Clinical Usage

#### **PR16**

F Park, D. Shin

Time-dependent Outcomes of Endodontic Surgeries: A Systemic Review and Meta-analysis

#### PR17

Slee

The Veracity of the Accuracy for the Different Obturation Systems

**PR18** 

Antibiotics and Antimicrobial Resistance: An Evaluation of the Knowledge, Attitude and Perception Among Dental Students and Academic Deans/Department Chairs of U.S. Dental Schools

M Holz

K. Alhaddad

Effects of Bacterial Micro-leakage in Exposed Root Canal Obturation Material (Gutta-Percha) in Teeth Irrigated With Different Irrigants

**PR20** M Chen, S. Kim

Publication Trends in Outcomes of Pulp Regeneration (2001-2018): An 18-year Bibliometric Study

**PR21** E. Song Efficacy of a Novel Microelectronic Device Against a Single-culture Endodontic Biofilm in an In Vitro Tooth Model

PR22 Y Patel S Kawatra

Anxiety in Endodontics: A Systematic Review

PR23 F Elbaz, D. Saccomanno

Patient-related Factors That Can Affect the Radiographic Interpretation of the Periapical Area

PR 24 V. Cabrera Saez

Micro-computed Tomographic (Micro CT) Analysis of Root Canal Morphology of the Mesiobuccal and Mesial Roots of First Molars

PR 25 L. Kuhn

Endodontics Residents: a Survey on Dental Education and Academic Dentistry

PR 26 A. Paul

The CBCT-PAI Revisited: a Comparison of Linear and Volumetric Measurements in the Evaluation of Periapical Radiolucencies

**PR27** A. Polinsky

Assessment of Periapical Healing, a Comparison Between Periapical Radiography and Cone Beam Computed Tomography

PR28 N. Mallick, S. Whiteman

An Updated Analysis of Analgesic Preferences Among Endodontists

**PR29 JLeer** 

Efficacy of an Alternative Brand Device for Warm Vertical Compaction

**PR30** K. Elsayed

Bibliometric Analysis of the Top 100 Most Cited Articles in Endodontics in the Last Half-century

**PR31** A. Herring

An Assessment of the Disinfection Protocol of Failed Regenerative Endodontic Procedures

PR32 J. Gaw

The Effect of Crown to Root Ratio Following Crown Lengthening on the Outcome of Endodontically Treated Teeth

PR33 S. Alfadda, F. Mahiour

Antimicrobial Effectiveness of a Nano Bubble: Enhanced NaOCI as a Potential Irrigant for Regenerative Endodontic Procedures

**PR34** A. Sarnowski

Management of the Open Apex Using a Bioceramic Apical Barrier: Success and Survival Rates at Virginia Commonwealth University

M. Joodi, F. Douglas

Pulp Regeneration-induced Mineralization: A Systemic Review

Effectiveness of Fluorescein Dye as a Minimally Invasive Diagnostic Aid for Identifying the Second Mesiobuccal Canals in Maxillary First Molars Supported by Cone Beam Computed Tomography

**PR37** I. Chang

Targeting KDM3A and KDM6B to Overcome Cisplatin Resistance in **HNSCC** 

**PR38** B. Boudreaux

Endodontic Treatment Planning the First Molar: A Comparison Survey of General Dentists and Endodontists



#### **RESIDENT SESSIONS** (continued)

#### PR39

J. Phillips

1. Fisher

Survey of Endodontists' Preference for the Treatment of External Cervical Resorption based on Periapical and Cone Beam Computed Tomography Images

PR40 M. Montatskiy, H. Housley Injectable Gels With Potential Use in Endodontics

# PR41

The Evaluation of Geometrical Location of Root Canal Orifices and Root Configuration in Maxillary Molars in Patients Using Cone Beam Computed Tomography Scans

#### PR42 S. Serrano

The Effect of the Residual Irrigants on Tooth Discoloration with the Use of MTA

### PR43 A. Broadsword

The Impact of the Federal Schedule II Prescribing Mandate on Opioid Prescribing Practices Within a Dental School Setting

# PR44 C. Mavo

The Reliability of Limited Field Cone Beam Computed Tomography to Predict Surgical Osseous Findings for Endodontic Microsurgery

# R45 T. Cross

Pediatric Provider Perceptions of Treatment Options for Necrotic, Immature Permanent Teeth: A Web-based Survey

PR46 S. Kargoli

3D Guided Access in Endodontic Retreatment of Mandibular Molar: An *In Vitro* Study

#### PR47 M. Kim

Shear Bond Strength Comparison of Five Bioceramic Materials to Composite Resin

# PR48 A. Rodriguez

Effect of Crown Lengthening on the Short and Long Term Survival of Endodontically Treated Teeth

# PR49 Q. Wang

The Effects of Non-surgical Endodontic Therapy on HbA1c and Periapical Index in Patients with Type 2 Diabetes

# PR50 G. Park

Evaluation of Complications of Previously Initiated Root Canal Treatment Performed by Undergraduate Dental Students in an Institutional Setting: A Systematic Review Combined with Our Previous Report

### PR51 N. Sarmast

Assessment of the Formation, Prevention and Toxic Effects of the Brown Precipitate Formed by Sodium Hypochlorite (NaOCI) and Chlorhexidine (CHX) Using a Novel Eukaryotic Model

# PR52 A. Yavorek

The Influence of Full-coverage Restorations on Pulp Vitality: A Ten-year Retrospective Study

# PR53 K. Countryman

N-acetyl Cysteine: How Does It

#### PR54 J. Alsenan

Effect of Silicon and Calcium on the Proliferation and Odontogenic Differentiation of Human Dental Pulp Cells

# PR55 D. Estrada

Evaluating Accuracy of PAs and CBCTs For Diagnosing Cysts and Granulomas

# PR56 H. Tsao

VEGF and NGF Treatment of Stem Cells from the Apical Papilla (SCAP) Stimulates Expression of TGFB-1, DMP1 and DSPP

# PR57 S. LaRue

Evaluation of the Removal of Different Filling Materials Using Reciprocating System Followed by Two Supplementary Techniques in Flattened Root Canals PR58 A. Shah

Reparative Dentin Regeneration In Vivo Mice Model

**PR59** 

R. Miguel

Apical Pressures Generated by the XP-3D Finisher and Irrigation Adjuncts

**PR60** 

T. Burningham

Survey of Endodontist Restorative Preference Following Endodontic Therapy

**PR61** 

J. Barrord

An Evaluation of Preoperative Variables and Etiology in Failed **Endodontic Regeneration Cases** Reported in the Literature

PR62

S. Mannan

Observational Study Evaluating Pain in Endodontic Patients Diagnosed with Depression

**PR63** 

G. Yassen

Failed Cases of Endodontic Regeneration Procedures Reported in the Literature: An Evaluation of Intra-operative and Post-operative Variables

**PR64** 

C. Schiller, Y. Lee

Investigation of Multiple Idiopathic Cervical Root Resorption Via a Multimodular Approach

**PR65** 

J. Christensen

Histological Analysis of Dental Pulp Tissue of Teeth Associated with Cancers of the Jaw

**PR66** 

A. Dean

**Ouantitative Evaluation of Biofim** Removal Using Two Different 3D Rotary File Systems

**PR67** 

S. Hasiakos

Naked Cuticle Homolog 2 (NKD2) Mediates Oral Inflammation

PR68

J. Otis

Uninstrumented Canal Walls Following Two Rotary Systems Evaluated by Nano-CT

**PR69** 

M. Belin

Evaluation of Efficacy of 3D File Systems in the Removal of Gutta-Percha and Sealer in Retreatment Procedures Using Nano CT Technology

PR70

S.Lu

Resistance to Cyclic Fatigue of Glide Path Files Under Different Angles of Rotation in Reciprocation

PR71

H. Assad

Analysis of Cone Beam Computed Tomography (CBCT) Guidelines and Their Influence on Endodontic Diagnosis and Treatment Planning

S. Loomis, A. Jahanbakhsh

A Comparison of the Retreatment Capabilities of the XP Shaper and ProTaper Retreatment Files

**PR73** 

S. Ashkanani

Comparison of the Effect of Mineral Trioxide Aggregate and Bioceramics Root Repair Material on Odontoblast Differentiation In Vitro

**PR74** 

W. Almutairi

The Validity of Pulp Tests in Crowned Teeth: A Clinical Study

**PR75** 

K. Yang

Factors That Increase the Risks of Subcutaneous Emphysema in Non-surgical Endodontic Treatment: A Case Report and a Systematic Review

**PR76** 

M. Mora, G. Park

Radiographic Outcomes of Regenerative Endodontic Procedures Versus Apexification in Immature Permanent Teeth: A Multi-centered Cohort Study

Quantitative Analysis of Cement Removal by Nanotechnology

**PR78** 

R. Elsabee

Micro-CT Analysis of Obturation **Ouality Using Single Cone and Warm** Vertical Obturation Techniques After Conventional Rotary or 3D NiTi File Instrumentation



### **RESIDENT SESSIONS** (continued)

### **PR79**

J. Kim. A. Wu Association of Apical Periodontitis with Cardiovascular Disease and Diabetes Mellitus: Part II

**PR80** P. Ham

Antibacterial Efficacy of Gold Titanate Nanoparticles as a Sealer in Obturation

PR81 V. De Armas

Clinical and Demographic Findings in Subjects with Persistent Pain After Root End Surgery

**PR82** I. Bair

Should Pulpotomy Be Considered a Permanent Treatment?

PR83 S. Tadakapalli, D. Messer CBCT Evaluation of the Root and Canal Morphology of Mandibular First and Second Permanent Molars in Patient Population Visiting BUSDM: A Retrospective Study

**PR84** H. Rvan

Efficacy of Splash-less Bleach Versus 2.5% and 5.25% Bleach: Evaluation of Tissue Dissolving and Disinfectant **Properties** 

PRE-DOCTORAL STUDENT; **ENDODONTIST:** INTERNATIONAL ENDODONTIST: INTERNATIONAL RESIDENT: GENERAL DENTIST SESSIONS

H. Jo, J. Jeong, S. Jung, A. Cho Comparison of Soft-tissue Dissolution Efficiency According to Various Activation Methods

A. Vermeer

Micro-computed Tomographic Evaluation of Obturation Quality in Three Techniques Using Bioceramic Sealer: A Pilot Study

**PR87** C. Sells

Endodontics on YouTube: Evaluation of Content Compared to Evidencebased Standards

### PR88 A. Plagenhoef

Efficacy of Root Canal Obturation with Single-cone Technique After Using Multi-sonication Technology. GentleWave vs Conventional Root Canal Treatment

**PR89** Slee

The 5-6 Years Survival Rate of Nonsurgical Endodontic Treatment: A Population-based Cohort Study in Korea

PR90 D. Melkote

MTA vs Biodentine vs Regenerative Endodontic Therapy in Necrotic Open Apices of Teeth: A Systematic Review of Literature

**PR91** L. Pelepenko

Physical, Chemical and Biological Properties of High-plasticity Reparative Cements

J. Dedhia **PR92** 

Antimicrobial Efficacy of Novel Herbal Extract Andrographis Paniculata as Root Canal Irrigant Against C. Albicans and S. Aureus In Vitro

**PR93** Y. Mattar

Does Missed Maxillary Mesial-Buccal Second Canal Lead to Immediate Endodontic Treatment Failure in Type II Canals?: A Systematic Review

**PR94** J. Ha

In a Korean Population, Prevalence and Location of the Second Mesiobuccal Canal in Maxillary First Molars: A Cone Beam Computed Tomography Study

**PR95** S. Kwak

Comparison of In Vitro Torque Generation During Instrumentation with Adaptive Versus Continuous Movement

**PR96** H. Kim

Effect of Spring Machining on the Mechanical Properties of Nickel-Titanium Rotary Instruments

### PR97

Outcome of Root Canal Treatment in Teeth Obturated with a Bioactive Endodontic Sealer: A Twelve Months Follow-up

### PR98 N. Chauhan

Prevalence and Radiographic Indicators of the Vertucci Type V Configuration in Distal Roots of Mandibular Molars: A Retrospective Study

### PR99

N. Pillai

G. Bardini

The Effect of Calcium Hydroxide Application and Removal on the Surface Free Energy of Dentin

### PR100 Z. Hu, F. Wang

Dual Regulation of Tumor Necrosis Factor- $\alpha$  Signaling by Inositolrequiring Enzyme  $1\alpha$  in Human Dental Pulp Stem Cells

### PR101

B. Gomes

Bacterial Profile, LPS and LTA Levels in Endodontic Failures

### PR102

S. Sharma

Effect of Calcium Hydroxide as an Intracanal Medicament on Postoperative Pain: A Systematic Review of Randomized Controlled Trials

### DD402

P. Neelakantan

Cytocompatibility of an Experimental Hydraulic Tricalcium Silicate Cement

### PR104

T. Tamula, D. Colmenar, B. Valley

Evaluation of Gutta-Percha and Sealer Removability in Endodontic Retreatment In Vitro Using Micro-computed Tomography: Comparing ThermaSeal Plus Ribbon, EndoSequence BioCeramic, and Prototype S-PRG Sealer

### PR105

M. Alshehri

Micro-computed Tomographic Assessment of Quality of Obturation in the Apical Third with Continuous Wave Vertical Compaction and Single Match Taper Sized Cone Obturation Techniques

### PR106

D. Cecchin

Glycolic Acid: An Alternative Final Irrigant Solution for Root Canal Preparation

### PR107 M. Zaccaro Scelza

Three-dimensional Qualitative Analysis of Defects and Wear on NiTi Instruments

### PR108

V. Ferrary

The Effect of Photodynamic Therapy on Postoperative Pain in Teeth with Symptomatic Apical Periodontitis

### PR109

F. Ideo, E. Cadoni

The Influence of Osteoporosis on Apical Periodontitis: A Retrospective Clinical Study

### PR110

A. Farina

Glycolic Acid for Root Dentin Etching: Morphological Analysis and Push Out Bond Strength

### PR111

E. Marcoux

In Vitro Effects of Nisin, Cinnamon Oil and Licorice-derived Polyphenols on the Viability and Proliferation of Stem Cells of the Apical Papilla

### PR112

Y. Kim

Comparisons of Different Techniques on Removal of Canal Filling Material Using Microcomputed Tomography

### PR113

B. Kawas

Efficacy of Gutta-Percha Removal and Time Required for Retreatment with XP-3D Shaper and XP-3D Finisher, ProTaper Retreatment Files and Gates Glidden Systems

### PR114

Y. Yoo

Three-dimensional Modelling and Concurrent Measurements of Root Anatomy in Maxillary First Molar Mesiobuccal Roots using Microcomputed Tomography



### TABLE CLINIC PRESENTATIONS

J. Crepps

All presentations will take place in the Exhibit Hall.

### THURSDAY, APRIL 11 – 1 - 4 p.m.

### **RESIDENT SESSIONS**

TC01 E. Haybarger

Management of Diabetes Mellitus in Patients Requiring Endodontic Treatment: The Optimal Blood Glucose Range

TC02

Limited Orthodontics to Augment Endodontic Treatment

TC03 E. Arnarsdottir

Periapical Microsurgery: Assessment of Different Types of Light Emitting Diode (LED) Transilluminators in Detection of Dentinal Defects

TC04 A. Fleming, B. Donaldson

Maxillary Sinusitis Versus Odontogenic Sinusitis: An Overview

TC05 J. de la Fuente Balboa,

G. Murphy Echeverria

Diagnosis and Treatment of Radix Entomolaris

TC06 R. Neal

Oral Sedation: Patient Selection and Case Management in Endodontics

TC07 K. Harris, G. Layton

Needle Deformation During Local Anesthesia: Are We Changing Our Needles Frequently Enough?

TC08 K. Strother

Orthograde Obturation with BC Root Repair Material Putty

TC09 J. Journo, M. Hatzke

Strategies for Obtunding the Gag Reflex

**TC10** S. Manhas, D. Guerriero Guided Endodontics

TC11 O. Rotondi, P. Waldon Invasive Cervical Resorption: A Hopeless Prognosis? TC12 S. Park, D. Do

Meth Mouth: Can We Still Do Endodontic Treatment?

C13 N. Pettit

Assessment of Different Types of Light Emitting Diode (LED) Transilluminators in Detection of Coronal Cracks and Fractures

TC14 M. Boisvert

Multidisciplinary Approach on the Treatment of Invasive Cervical Resorption

TC15 J. Levine, Y. Piracha

A New Angle on Glass Fiber Posts: Horizontal or Vertical?

TC16 M. Lewis, K. Ligon

Depth Limitations of Obturation Armamentarium with Continuous Wave Technique

TC17 D. Grigsby, C. Lai

Tips for Success: Time and Cost-saving Adjunctive Uses of Endodontic Armamentarium

TC18 E. Foisy, R. Pandez

Rubber Dam Isolation for Endodontic Therapy in Various Clinical Situations

TC19 M. Saunders, S. Alkanderi Clinical Considerations in Providing an Effective Orifice Barrier

TC20 M. Almaaz, D. Mominkhan, R. Alreddadi

Management of Complications
During Regenerative Endodontic
Procedures

TC21 H. Yang

Selective Canal Pulp Revascularization in an Immature Permanent Molar: A Case Report TC22 M. Chun

The Application of "Bone Window" Technique in Endodontic Microsurgery for the Preservation of Buccal Cortical Bone in Mandibular Molar Cases

TC23 J. Heyse, D. Weitz Predictably Managing the

"Deep Split"

TC24 M. Serebro, T. Alquria,

Piezoelectric in Root End-Surgery: A Safe and Conservative Surgical Approach

TC25 J. Reynolds, S. Chan

Modern Approaches to Caries Removal: What an Endodontist Needs to Know

TC26 F. Toras, P. Guram

A Conservative Clinical Management for Invasive External Cervical Resorption

TC27 R. Hershey

Digital Radiography: Improved
Measurement Accuracy When Using
Reference Point for Calibration

TC28 S. Sandhu

Development and Validation of a Mobile Phone Application to Assess Post-operative Symptoms and the Impact of Treatment on Quality of Life

TC29 A. Barrineau

Systematic Evaluation of Commercially-available Sensors Using Standardized Image Quality Parameters

TC30 G. Benjamin

Clinical Applications of Threedimensional Dynamic Navigation (X-Nav) and Surgical Stents in Endodontics

TC31 E. Silguero Gonzalez

Histological Study on the Efficacy of Advanced Irrigation Techniques of the Root Canal System TC32 C. Carrillo

Retreatability of Tricalcium Silicate Root Canal Sealing Material Using Different Solvents

TC33 S. Aldahmash

Cognitive Dissonance: Do Facts
Change People's Minds?

TC34 M. Jethwani, D. Young A Novel Approach to Retrieve

Overextended Gutta-Percha During
Obturation

**TC35** *C. Dimond, K. Schaetzel* Gutta-Percha: Not Only for

Gutta-Percha: Not Only for Obturation

TC36 N. Limansubroto, H. Denison A Clean Chamber After Retreatment:

Is It Possible?

TC37 K. Salehi
Clinical Treatment Simulation Using
a Robotic Patient

TC38 A. Hinkley, O. Iglesias
Tooth Auto-transplantation:

Tooth Auto-transplantation: Alternative to the Dental Implant

39 C. Liesen

Clinical Utility Of Liposomal Bupivacaine in Endodontics: A Review Of The Evidence

M. Mirpourian, C. Cain

A Review of Dynamic Guidance for Endodontic Procedures

TC41 H. Truong, D. Tran

Evidence-Based Recommendations For Post-operative Pain Relief After Conventional Endodontic Treatment: Providing Resources for the Informed Patient

TC42 L. Wagret

Endodontic Management of an Unusual Mandibular Molars' Morphology: A Case Report of Non-syndromic Oligodontia Associated with Root Morphology Abnormalities

TC43 L. Chang, B. Al Shaikhly Innovative Bioceramic Removal:

A Case of Last Resort



TC44

Altered Root Morphology Resulting from Anomalous Branching of the Mandibular Canal

Y. Barak

V. Thai

TC45

Vertical Root Fracture: Is There Hope for the Hopeless?

**TC46** C. Malagise, K. Clark Does This Tooth Really Need a

Root Canal? Indications for Vital Pulp Therapy

TC47 O. Dianat, Z. Zhou

Portable Scope: A New Perspective to Microscopic Endodontics

**TC48** P. Ghiasi Nanotechnology and Endodontic

Imaging: The Next Generation

**TC49** A. Janabi Meet Your New Assistant:

Smart Suction

TC50 N. Nunez

Lemierre's Syndrome: A Rare Complication of Odontogenic Infection

TC51 M. Bose Pillai

Autotransplantation of Teeth: Utilizing New Technology to Enhance an Old Treatment

TC52 J. Westra

How Hot is Hot? Investigating the Accuracy of Multiple Heating **Devices Used During Obturation** 

TC53 F. Kim

Austenite and Martensite: Phases Simplified

TC54 A. Jang Guided Endodontic Access

TC55 J. Schlesinger P-value Fallacy: P-values Are Not What You Think

**TC56** S. Curtis

Root End Filling Materials

TC57 W. Arden

Global Endodontics: Development and Integration of a Preclinical and Clinical Endodontics Curriculum in a Newly Formed Dental School, Kigali, Rwanda

TC58 M. Mittelsteadt

Guiding Factors in Recommending Surgery Versus Retreatment

PRE-DOCTORAL STUDENT; **ENDODONTIST**;

INTERNATIONAL ENDODONTIST: INTERNATIONAL RESIDENT: **GENERAL DENTIST SESSIONS** 

TC59 J. Langella

Management of Maxillary Sinusitis of Endodontic Origin (MSEO): **Employing Endodontic Treatment to** Regain the Sinus Floor

S. Smith Multiple Idiopathic Apical Root

Resorption: A Case Study

**TC61** G. Patta

Photodynamic Therapy in Endodontics

TC62 M. Courrech Martin

SEM Evaluation of the Smear Layer Removal and Erosive Capability of Acetic Acid on Different Concentrations in Extracted Tooth: A Pilot Study

TC63 S. Wu

Solitary Bone Cyst of Mandible Mimicking Radicular Cvst

**TC64** T. Nishida

Guided Access Opening for Mandibular Incisor with Multiple Canals

TC65 B. Sleeth

Current Uses of Teflon Plumber's (PTFE) Tape in Endodontics and Other Dental Procedures

TC66 M. Fu

Comparison of Buccal Object Rule and a Visualized Finger Technique

G. Schultz, E. Glenn

Overview of Iowa Staging Index for Cracked Teeth

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