

WELCOME TO COLORFUL COLORADO **APRIL 25–28, 2018**DENVER



A A E 18

## ON-SITE MEETING GUIDE

View full program information at aae.org/aae18.



#### TABLE OF CONTENTS

Online CE Verification Process	
Schedule Key	.6
Course & Exhibit Hall Schedule	10
Special Events / Spouse and Guest Activities	20
List of Exhibitors	22
Exhibit Hall Schedule	24
Exhibit Hall Map2	26
Alumni and Affiliate Events	28
Oral Research Presentations 3	30
Poster Research Presentations 3	34
Table Clinic Presentations	40
Record Your CE	47

#### **FUTURE ANNUAL MEETINGS**



MONTRÉAL April 10-13, 2019

Palais des congrès de Montréal





ATLANTA
April 21-24, 2021
Georgia World Congress Center



NASHVILLE April 1-4, 2020

Music City Center



PHOENIX
April 27-30, 2022
Phoenix Convention Center

### **Controversies & Hot Topics Track**

Rethinking the way endodontists define treatment outcomes.

## WEDNESDAY, APRIL 25 in the Four Seasons Ballroom

**9 a.m. - noon** | Canal Cleaning and Disinfection: Today's Challenges. Tomorrow's Solutions.



Mehrzad Khakpour, Ph.D.



Anil Kishen, B.D.S., M.D.S., Ph.D



Martin Trope, D.M.D.



Robert S. Roda, D.D.S., M.S. (Facilitator)

1 - 2:30 p.m. | Conundrums in Endodontic Treatment Planning. Surgery Versus Retreatment: The Decision Making Process.



George A. Bruder,



Stephen P. Niemczyk, D.M.D.



Donna J. Mattscheck, D.M.D. (Facilitator)

2:45 - 3:45 p.m. | It Is All in the Eye of the Beholder – What Is the Ideal Clinical Outcome Study?



Kenneth M. Hargreaves,

## **FREE WiFi**



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

Network: AAE Annual Meeting

Password: AAE18

Join the conversation online by using #AAE18

#### DOWNLOAD THE MOBILE APP

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

The AAE18 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 "AAE18" as the event code.

Find and download the app by searching AAE Meetings in the Apple App Store or Google Play Store. Then select AAE18 from the events listing.

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#### 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 1.5 CE hours for each 90-minute session 2.0 CE Hours for each 120-minute session 2.25 CE hours for each 135-minute session 3.0 CE hours for each 180-minute session
CE Express	0.5 CE hours each
Submitted Presentations	1.0 CE hour for each 60-minute bundle of sessions 1.5 CE hours for each 90-minute bundle of sessions Must attend all sessions within a bundle to earn CE
Educational Workshops	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 May 11, 2018.

#### 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:

- 1 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 May 11, 2018.

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)
.....Room

Note: Session times and locations are subject to change.

Corporate Workshop (CW)

To The Point Lecture (TTP)

Not recorded for EndoOnDemand

#### TRACK CODES:

HT	Controversies and Hot Topics
<b>EWL</b>	Endodontics Without Limits
EP	Essentials for Endodontic Practice
I	Interdisciplinary
<b>SP</b> Su	ıbmitted Presentations*
S	Surgical

### 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.

\* Submitted Presentations Track is sponsored by



## Veteran's Passport \*\*\* TO Hope \*\*\*

# Support the local Colorado veteran community!

Veteran's Passport to Hope (VP2H) raises local awareness of issues veterans face.

Through fundraising events—which support local, veteran-friendly nonprofits—VP2H is helping to unite organizations with the community to more efficiently and effectively help veterans.

To learn more about this important organization, visit veteranspassport2hope.org.

## WANT TO SUPPORT VP2H?

Stop by the registration desks to make a donation!

## General Session with Keynote Speaker: Aron Ralston

## WEDNESDAY, APRIL 25

4 - 5:15 p.m. • Bellco Theater

Author of the New York Times best-selling book, "Between a Rock and a Hard Place," which inspired the major motion picture, "127 Hours," Ralston brings his gripping story to life through his onstage presentation. Celebrate the power of the human spirit and value of relationships that allow us to overcome life's challenges.

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







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

aae.org/careercenter

## Celebrate Denver!

## FRIDAY, APRIL 27

8:30 - 11:30 p.m.

Join your friends and colleagues at Wings Over the Rockies – Colorado's Official Air and Space Museum. Enjoy drinks, hors d'oeuvres and live entertainment in the middle of an immense hangar among a B-52 bomber, an RF reconnaissance plane and other aircraft in this unique and fascinating venue!

Important: Attendees and their registered guests are welcome to attend. Everyone must have a badge for admittance to the event. Complimentary shuttles will depart from Lobby B of the Colorado Convention Center at 7:45 p.m. Shuttles will run continuously from 7:45 p.m. - midnight providing transportation between the convention center and the venue.





Thank you to our sponsor



### COURSE & EXHIBIT HALL SCHEDULE

TUESDAY, APRIL 24	10 - 11 a.m.
1 - 6 p.m.	TTP-1 🐚 🕅 S. Gholian
Registration and Information Level 2, Lobby	The Art of RetreatmentLevel 2, Exhibit Hall Sponsored by Brasseler USA.
Speaker Ready Room 612	No CE awarded.
	10 a.m 5:30 p.m.
WEDNESDAY, APRIL 25	Exhibit Hall / AAE Member Center OpenLevel 2, Exhibit Hall
7:30 a.m 5 p.m.	10:15 - 10:30 a.m.
Registration and InformationLevel 2, Lobby	BreakLevel 2, Exhibit Hall
Speaker Ready Room 612	10:30 - 11:30 a.m.
Nursing Mother's Room 606 8 a.m noon	OR23-OR26  Endodontic Technology 2
S-1 R. Rubinstein Mandibular Molar	10:30 a.m noon
Microsurgical Workshop 505 Advance registration required.	EP-1 J. Mausolf Performance Excellence -
8:45 - 9:45 a.m.	C.L.E.A.R. Leadership 601
OR07-OR10 ► Endodontic Technology 1 711	OR17-OR22
8:45 - 10:15 a.m.	OR27-OR32 Regeneration Basic 2/Clinical 712
<b>OR01-OR06 №</b> Pain Control	10:30 a.m 1:30 p.m.
OR11-OR16  Regeneration Basic	CW-1 ♀      J. Reiss Carestream Dental: 3D Imaging Hands-On Workshop
9 a.m noon	Level 2, Exhibit Hall
HT-1 A. Kishen, M. Khakpour, M. Trope, R. Roda (Facilitator)	Advance registration required. No CE awarded.
Canal Cleaning and Disinfection:	11:30 a.m 12:30 p.m.
Today's Challenges. Tomorrow's Solutions Lower Level, Four Seasons Ballroom	TTP-2 D. Fang Advancing Endodontics with the J. Morita ZX FamilyLevel 2, Exhibit Hall Sponsored by J. Morita. No CE awarded.

Noon - 1 p.m.	2:30 - 2:45 p.m.
Lunch Break	BreakLevel 2, Exhibit Hall
1 - 2 p.m.	2:45 - 3:45 p.m.
TTP-3  E. Herbranson Challenging Legacy Ideas and the Endodontic TriadLevel 2, Exhibit Hall Sponsored by Sonendo. No CE awarded.	HT-3 K. Hargreaves It Is All in the Eye of the Beholder - What Is the Ideal Clinical Outcome Study? Lower Level, Four Seasons Ballroom
OR33-OR36	3:45 - 4 p.m.
Pain Control 2/ Regeneration Basic 3 707	BreakLevel 2, Exhibit Hall
OR43-OR46 ऒ Basic Science712	THURSDAY, APRIL 26
1 - 2:30 p.m.	7:30 a.m 5 p.m.
HT-2 G. Bruder, S. Niemczyk, D. Mattscheck (Facilitator)	Registration and Information Level 2, Lobby
Conundrums in Endodontic	Speaker Ready Room 612
Treatment Planning. Surgery Versus Retreatment: The Decision Making Process	Nursing Mother's Room 606
Lower Level, Four Seasons Ballroom	8 a.m noon
OR37-OR42 ₪	EWL-1 B. Azevedo, M. Fayad
Technology711	CBCT Interpretation:
1 - 3:30 p.m.	Case Evaluation and Diagnosis Workshop507
EP-2 🕅 B. Valachi	Advance registration required.
Getting to the Root of Work-Related Pain in Endodontics: Evidence-	9:30 - 10 a.m.
based Strategies for a Long &	BreakLevel 2, Exhibit Hall
Healthy Career601	9:30 a.m 5:30 p.m.
1 - 5 p.m.	Exhibit Hall / AAE Member
S-2 R. Rubinstein Mandibular Molar	Center OpenLevel 2, Exhibit Hall
Microsurgical Workshop 505	10 - 10:45 a.m.
Advance registration required.	SP-1 K. Sabey
2:15 - 5:15 p.m.	What an Endodontist Can Learn from Captain Sully501
CW-2 🥯 🕄 J. Reiss	Must attend SP-2 to receive CE.
Carestream Dental: 3D	SP-3 R. Greenfeld
Imaging Hands-On Workshop Level 2, Exhibit Hall	Long Term Treatment Outcome of Complicated
Advance registration required.	Endodontic Cases 603
No CE awarded.	Must attend SP-4 to receive CE.

10 - 11:15 a.m.	SP-4 M. Malek
OR47-OR51	Invasive Cervical Resorption: Long- term Follow-up, the Use of CBCT in Early Diagnosis, and Various Treatment Modalities
OR52-OR56 M Materials/Sealers/	Must attend SP-3 to receive CE.
Microsurgery711	11:30 a.m 12:30 p.m.
10 - 11:30 a.m.	Lunch Break
EP-3 J. Hadley	11:45 a.m 12:30 p.m.
Online Reviews: Getting Them, Managing Them and Benefitting From Them	TTP-6 (Seeing the Invisible: CBCT Imaging in the Modern Endodontic
EWL-2 T. Renton Prevention and Management of Nerve Injury Related to	PracticeLevel 2, Exhibit Hall Sponsored by J. Morita. No CE awarded.
Endodontics and Local Anesthesia	12:30 - 1:15 p.m.
I-1 M E. Byrne, E. Hersh, J. Partridge Prescribing Opioids as Pain	SP-6 A. Paranjpe SCAP: Let's Get Introduced 603 Must attend SP-7 to receive CE.
Relievers: Unfounded Hype, Abuse Potential, and Moral and	12:30 - 1:45 p.m.
Legal Responsibilities 503	OR63-OR67 ₪
S-3 S. Niemczyk Procedures, Molar Surgery Demystified	Anatomy/Basic Science/ Technology 2711
•	12:30 - 2 p.m.
10 a.m 1 p.m.  PR 01-108, TC01-58  Poster Research and Table ClinicsLevel 2, Exhibit Hall	EP-4 T. Cole, K. Gehring, A. Law Improving the Patient Experience: Lessons Learned From Patient Feedback
10:15 a.m 1:15 p.m.	EWL-4 M. Drum I Want a New Drug712
CE Express (0.5 CE Credit for Every Session Attended)706	I-2 D. Landwehr, L. Gaalaas Diagnosing Oral Pathosis –
10:45 - 11:30 a.m.	What to Look for on Imaging and
SP-2 J. Irelan Evaluating the Restorability of Endodontically Treated Teeth: Do Dogma and Fact Agree? 501 Must attend SP-1 to receive CE.	When to Refer

SP-5 A. Horalek, L. O'Leary, Y. Terauchi, K. Tittle Clinical and Behavioral Management of "Risky"Teeth 501	S-5 E. Kim Prognostic Factors for Clinical Outcomes in Intentional Replantation and
1 - 2 p.m.	Autotransplantation of Teeth with Complete
TTP-7 🦏 🕄 J. Khademi	Root Formation
The ABC's of CBCT: Academic Answers, Best Practices and Compelling Cases Level 2, Exhibit Hall	SP-47 L. Buchanan, C. Maupin Dynamic CT-Guidance for EndodonticsLevel 2, Exhibit Hall
Sponsored by Carestream Dental. No CE awarded.	OR68-OR73  ☐ Treatment Outcomes
1 - 5 p.m.	Software User Group - EndoVision
EWL-3 B. Azevedo, M. Fayad CBCT Interpretation:	2:15 - 4:15 p.m.
Case Evaluation and Diagnosis Workshop	CW-4  D. Fang J. Morita USA: Here Comes the Newest Endodontic
1:15 - 2 p.m.	Gadget, J. Morita Tri Auto ZX2!Level 2, Exhibit Hall
SP-7 M. Kang Minced Pulp Tissue as Source of Pulpal MSCs	Advance registration required.  No CE awarded.
Must attend SP-6 to receive CE.	2:15 - 4:30 p.m.
2 - 2:15 p.m.	EWL-5 C. Boutsioukis, M. Khakpour
BreakLevel 2, Exhibit Hall 2:15 - 3 p.m.	Role of Fluid Dynamics in Endodontics
SP-8 V. Kanter	2:15 - 5 p.m.
Laser Activated Irrigation: Light at the End of the Tunnel	I-3 A. Diogenes, J. Mao, P. Yelick Regenerative Endodontics: What Does the Future Hold? 503
SP-10 A. Chaniotis Saving Hopeless Teeth with	2:30 - 3:30 p.m.
Regenerative Endodontic Procedures	TTP-8 (S. Frost, J. Uhles Incorporating the GentleWave Procedure into a Busy
2:15 - 3:45 p.m.	Multi-Location Endodontic PracticeLevel 2, Exhibit Hall
EP-5 J. Hadley Effectively Using Social Media to Grow Your Endodontic Practice	Sponsored by Sonendo. No CE awarded.

3 - 3:45 p.m.	FRIDAY, APRIL 27
SP-9 W. Freccia The Effect of Bruxing on Endodontically Treated Teeth 501 Must attend SP-8 to receive CF.	7 a.m 5:30 p.m.  Registration and Information Level 2, Lobby
SP-11 J. Cymerman	Speaker Ready Room 612
Update of Regenerative Endodontic	Nursing Mother's Room 606
Therapy in Open Apex Teeth with Apical Periodontitis	8 a.m noon
Must attend SP-10 to receive CE.	EP-8 📓 B. Quenzer
3:45 - 4 p.m.	Medical Emergencies in the Dental Office: What Do We Do? A Hands-
BreakLevel 2, Exhibit Hall	on Interactive Workshop 507
4 - 5 p.m.	Advance registration required.
EP-6 M. Gannon	9:45 - 10 a.m.
Presenting with Power: Confident Communications 601	BreakLevel 2, Exhibit Hal
S-6 P. Tawil	10 - 11 a.m.
De Rigueur Root-end Assessment & Management of Dentinal Defects	S-7 T. von Arx CBCT Assessment of Healing After Apical Microsurgery: The Third Dimension (Part 1)
SP-12 D. Li Intentional Replantation -	SP-14 A. Azarpazhook Chairside Statistics603
A Viable Option in Everyday Practice	SP-15 R. Salehrab Treatment Outcomes: Why We Need a Radical Change? 707
Software User Group - EndoTrak	SP-19 A. Azim, B. Khaya
TTP-9 C. Drbal Take the Pain Out of Patient PaymentsLevel 2, Exhibit Hall	New Philosophies in Surgical Endodontic Treatment. Part 1: Managing the Root
Sponsored by TSYS. No CE awarded.	10 a.m 12:15 p.m.
SP-48  J. Levine Three Direct-to-Patient Digital Marketing Strategies to Supplement a Slowing Referral	EP-7 T. Cole, G. Dietz, T. Dines, B. Douglas, N. Flake, M. Kusienski, M. Sullivan, T. Webb Practice Options
Environment	EWL-6 S. Friedman, A. Siggurdsor

I-4 🕅

Current Concepts for Conservative Endodontic Treatment............ 706

Vital Pulp Therapy: Clinical and Biological Considerations ...... 504

G. Bogen, J. Nor, S. Simon

10 a.m 6 p.m.	12:15 - 1:15 p.m.
Exhibit Hall / AAE Member Center OpenLevel 2, Exhibit Hall	TTP-11 S. Buchanan Inflection Points In Endodontics:
10:30 a.m 1:30 p.m.	How Technology is Changing Root Canal Therapy
CW-5   A. Chaniotis Coltene: Making the Endodontic Management of Complicated	Level 2, Exhibit Hall Sponsored by Sonendo. No CE awarded.
Canal Systems Simple, Safe and Predictable. A New Approach	1 - 1:45 p.m.
with Hyflex CM and EDM FilesLevel 2, Exhibit Hall Advance registration required. No CE awarded.	SP-21 B. Cha Let's Talk About the Mucosal Thickening in the Maxillary Sinus. 707
11 - 11:15a.m.	Must attend SP-22 to receive CE.
BreakLevel 2, Exhibit Hall	1 - 2:30 p.m.
11:15 a.m 12:15 p.m.	EP-11 M. M. Ragan Cyber Liability, Social Media,
S-8 T. von Arx CBCT Assessment of Healing After Apical Microsurgery: The Third Dimension (Part 2)	Confidentiality and HIPAA603  EP-14 J. Dahle Resident and New Practitioner Personal Finance Considerations601
Challenging the ABE Case History Portfoio Exam: What You Need to Know	<b>EWL-7</b> Y. <i>Terauchi</i> Separated Instruments 706
SP-18 C. Goodis Heat Treated NiTi Rotary Files and Superior Results	C. Goodacre, F. Setzer, D. Tarnow What Every Endodontist Needs to Know About Implants
SP-20 A. Azim, B. Khayat New Philosophies in Surgical Endodontic Treatment: Part 2: Managing the Supporting Structure	S-9 E. Kim Outcomes and Prognostic Factors of Surgical Endodontics; Endodontic Microsurgery, Resurgery503
	1 - 4 p.m.
Noon - 1:30 p.m.  REACH Committee Meeting 608 By invitation only.	EP-10 M H. Rakusin, R. Rubinstein When Is It Time To Hang 'Em Up? Workshop 505
12:15 p.m 1 p.m.	Advance registration required.
	1 - 5 n m

Lunch Break

## 

1:45 - 2:30 p.m.	4:30 - 5 p.m.
SP-22 P. Cruci, A. Gaon Maxillary Sinusitis of Dental Origin – a New Classification to Guide Diagnosis, Treatment Planning and Outcome	C. Hirschberg CODA Accreditation Standards for Advanced Education Programs in Endodontics
2 - 4:30 p.m.	SATURDAY, APRIL 28
EWL-8 A. Nasseh, M. Torabinejad Managing Root Perforations 501	8 - 9:30 a.m.
2:30 - 3 p.m.	SP-50 J. Peranson Endodontic Program Directors –
BreakLevel 2, Exhibit Hall	National Matching Services Presentation
3 - 4 p.m.	No CE awarded.
I-6 J. Bowling	8 a.m 2 p.m.
Antimicrobial Drug Resistance – Implications for Patients, Providers, and the Population601	Speaker Ready Room 612
·	8 a.m 3:15 p.m.
B-4:30 p.m.  EP-12  A. Behnia, J. Bierig, A. Gluskin, K. Wiltbank  How Should the AAE  Respond to Substandard  Endodontic Care?	Registration and Information
SP-24 C. Falcon, M. Natera, K. Tavares Educator Forum: The Use of Electronic Health Records for Retrospective Research 707 SP-49 C. Noblett ABE Boardwalk 706	EP-13 C. Pastan Introduction to Yoga

I-7 R. Steelman, F. Teixeira, R. Wise Multidisciplinary Approach	Noon - 1:30 p.m.
for Dental Traumatic Injuries From Early Mixed Dentition to the Adult	EWL-11 J. Bitting, A. Feck Oral Conscious Sedation for the Endodontist
S-11 T. Pannkuk Cervical Root Resorption: Assessment, Treatment and Management	EWL-12 C. Laghios Surgical and Conservative Management of Cervical and Mid Root Resorption706
9:15 - 10 a.m.	I-8 R. Dionne, J. Gibbs, K. Hargreaves, B. Sessle
SP-26 M. Ahmed The Potential of Human Induced Pluripotent Stem Cells in	Pain Perspectives – A Conversation Between Three Generations of Pain Gurus
Regenerative Endodontics 707  Must attend SP-25 to receive CE.	S-12 A. Diogenes, J. Ray, J. Wealleans
SP-28 C. Berthold Make Them Smile Again! Comprehensive Treatment Considerations After Crown and	An Innovative Approach to Endodontic Microsurgery Utilizing 3-D Printed Guides and Trephine Burs
Crown-Root Fracture	12:45 - 1:30 p.m.
10 - 10:15 a.m.	SP-30 J. Argueta, D. Jaramillo
10 - 10:15 a.m.  BreakLevel 2, Exhibit Hall 11:45 a.m noon	Surgical Extrusion, a Reliable Technique for Saving Compromised Anterior Teeth503
BreakLevel 2, Exhibit Hall	Surgical Extrusion, a Reliable Technique for Saving Compromised Anterior Teeth
BreakLevel 2, Exhibit Hall  11:45 a.m noon	Surgical Extrusion, a Reliable Technique for Saving Compromised Anterior Teeth
BreakLevel 2, Exhibit Hall  11:45 a.m noon  BreakLevel 2, Exhibit Hall  Noon - 12:45 p.m.  SP-29 A. Sigurdsson, D. Jaramillo  Evaluation of Pain Following	Surgical Extrusion, a Reliable Technique for Saving Compromised Anterior Teeth
BreakLevel 2, Exhibit Hall  11:45 a.m noon  BreakLevel 2, Exhibit Hall  Noon - 12:45 p.m.  SP-29 A. Sigurdsson, D. Jaramillo	Surgical Extrusion, a Reliable Technique for Saving Compromised Anterior Teeth
BreakLevel 2, Exhibit Hall  11:45 a.m noon  BreakLevel 2, Exhibit Hall  Noon - 12:45 p.m.  SP-29 A. Sigurdsson, D. Jaramillo Evaluation of Pain Following Endodontic Treatment: Prospective, Multicenter Clinical Study Results503 Must attend SP-30 to receive CE.  SP-31 C. Safi	Surgical Extrusion, a Reliable Technique for Saving Compromised Anterior Teeth
BreakLevel 2, Exhibit Hall  11:45 a.m noon  BreakLevel 2, Exhibit Hall  Noon - 12:45 p.m.  SP-29 A. Sigurdsson, D. Jaramillo Evaluation of Pain Following Endodontic Treatment: Prospective, Multicenter Clinical Study Results	Surgical Extrusion, a Reliable Technique for Saving Compromised Anterior Teeth
BreakLevel 2, Exhibit Hall  11:45 a.m noon  BreakLevel 2, Exhibit Hall  Noon - 12:45 p.m.  SP-29 A. Sigurdsson, D. Jaramillo Evaluation of Pain Following Endodontic Treatment: Prospective, Multicenter Clinical Study Results	Surgical Extrusion, a Reliable Technique for Saving Compromised Anterior Teeth

SP-39  T. Montagnese Sedation in Endodontic Practice: What Does It Take?	2:30 - 3:15 p.m.	
	SP-36 T. McClammy Hope for the Hopeless: Tackling the Tooth That Is Too Far Gone	
	SP-40 G. Yared Emergency Treatment of Acute Irreversible Pulpitis in Mandibular Molars with One IAN Block of a Long-acting Anaesthetic and One-day Large Dose Corticosteroid Without a Pulpotomy or Pulpectomy 603 Must attend SP-39 to receive CE. SP-42 M. Garala, B. Gilbert Navigating from What's Now to What's Next in Endodontics: Irrigation Technology - Is the Evidence Strong Enough? 706 Must attend SP-41 to receive CE.	
Must attend SP-46 to receive CE.  1:45 - 2:45 p.m.		
I-9 B. Peltier		
Working Effectively with Patient Anxiety and Pain: Behavioral Methods	SP-44 S.Schneider Periradicular Extended Lesions as a Cause of Persistent Symptoms (in 2-D and 3-D)	
as a Cause of Persistent Symptoms (in 2-D and 3-D)	SP-46 L. Burns Survival of the Fittest: A Look at Clinical Outcomes	
S-13 S. Niemczyk Intentional Replantation Revisited	and Economic Factors Impacting Endodontists	



The Foundation's AAE18 RAFFLE drawing will be announced on Friday at the Exhibit Hall Happy Hour!

Ticketholders do not need to be present to win.

Raffle tickets can be purchased onsite at the AAE18 registration desks in the Colorado Convention Center.

#### A PREVIEW OF SOME OF THE PRIZES!



Five-Day/Six-Night All Expenses Paid Trip for Two to Montreux, Switzerland

Retail Value: \$10,000

Generously donated by Dentsply Sirona.



12 Tickets in Suite at Golden Knights Hockey Game in Las Vegas (Includes Food and Beverage)

Retail Value: \$4,000

Generously donated by Pacific Dental Services.



Registration for Insight Track 2019, January 24-26, The Resort at Squaw Creek Lake Tahoe, California

Retail Value: \$1,030

Generously donated by the AAE.

Additional prizes have been added since the printing of this on-site meeting guide. Visit aae.org/AAE18 to learn more!

#### SPECIAL EVENTS

#### WEDNESDAY, APRIL 25



General Session with Aron Ralston

**4 - 5:15 p.m.** Bellco Theater

No CE awarded. Sponsored by Dentsply Sirona

#### Welcome Reception

**5:30 - 7 p.m.** Centennial Ballroom, Hyatt Regency All registered attendees and their registered guests are welcome to attend.

#### Foundation Donor and Leadership Reception

By invitation only. Sponsored by Dentsply Sirona and Treloar & Heisel, Inc.

#### **THURSDAY, APRIL 26**



#### 5k Fun Run and Walk

**6-7** a.m....Centennial Ballroom E, Hyatt Regency Sponsored by Sonendo

#### President's Breakfast

8 - 9:30 a.m. Lower Level, Four Seasons Ballroom

Sponsored by Dentsply Sirona

#### Past President's Luncheon

**11:30 a.m. - 1 p.m.** 608

By invitation only

#### Louis I. Grossman Ceremony

4-5 p.m.....Centennial Ballroom E, Hyatt Regency

#### Diplomate Reception

**5 - 6 p.m.** Capitol 4, Hyatt Regency

#### Professional Staff Reception

5 - 6 p.m....Centennial Ballroom Foyer, Hyatt Regency
Sponsored by Brasseler USA & EndoVision

#### FRIDAY, APRIL 27

District	Caucuses
7:30 - 8:	15 a m

<b>District I</b> 50	1 <b>District V</b> 706
District II50	B <b>District VI</b> 707
District III60	1 <b>District VII</b> 711
District IV60	3

#### General Assembly

8:30 - 9:45 a.m. Lower Level, Four Seasons Ballroom

Sponsored by Dentsply Sirona

#### Career Fair

Sponsored by Radman, White & Associates, Inc.

#### Exhibit Hall Happy Hour

**4:30 - 5:30 p.m.** Level 2, Exhibit Hall

All registered attendees and their guests welcome to attend.

#### Resident Reception

4:45 - 5:45 p.m. Lucky Strike Denver

By invitation only. Sponsored by MedPro and Treloar & Heisel, Inc.

#### Celebrate Denver!

8:30 - 11:30 p.m. ..... Wings Over the Rockies Air and Space Museum

Meet in Lobby B of the Convention Center for shuttle service beginning at 7:45 p.m. Shuttles will run continuously from 7:45 p.m. - midnight.

Sponsored by Dentsply Sirona

#### SATURDAY, APRIL 28

#### Edgar D. Coolidge Brunch

10:15 - 11:45 a.m. Lower Level, Four Seasons Ballroom

Sponsored by Dentsply Sirona

#### SPOUSE AND GUEST ACTIVITIES

#### WEDNESDAY, APRIL 25

#### Spouse/Guest Alliance Breakfast & Meeting

8:30 - 10 a.m. Agate Room, Hyatt Regency

Join us for the annual spouse/guest continental breakfast for a wonderful start to your AAE18 experience. This is open only to spouses and guests of AAE members. No advanced registration required.

#### FRIDAY, APRIL 27

#### Spouse/Guest Colorado Springs Tour

9 a.m. - 3:30 p.m. Depart from Lobby of Hyatt Regency

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

### LIST OF EXHIBITORS

Company Name	Booth#	Company Name	Booth#
Academy of Microscope Enhanced Dentistry		Elsevier, Inc. Endo Mastery Endo-Exec by DSN Softwar EndoVision Endodontic Practice US Ma Engineered Endodontics Fotona Global Surgical Great Expressions Dental C Hartzell Instruments by De Hawaiian Moon Helse Ultrasonic Henry Schein Dental Hu Friedy International Federation of Endodontic Association	
BeamReaders		ILC New York, Inc Infinity Massage Chairs	
Bien-Air		Innovative Material	1410
BioMTA		and Devices, Inc.	1408
Bisco Dental Products		J. Morita USA	
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Boolean Review Systems		Jordco, Inc	
Boyd Industries, Inc		JS Dental Manufacturing, Ir	тс424
Brasseler USA		Karl Kaps GmbH & Co. KG	326
Bratt Systems, Inc		Karl Schumacher	1501
BRED Agency	100	Kerr Endodontics	1019
Brookwood Endodontics	1509	Kohdent Roland Kohler	
Burkhart Dental	422	Medizintechnik GmbH & Co	
CareCredit		Kool Smiles	
Carestream		Labo America Inc Laschal Surgical Instrument	
CJ Optik		LumaDent, Inc	
Clinic Sheild, LLC		MacPractice	
Coltene Endo		Mani, Inc	
Cornerstone Dental Specialti		Maruchi	
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Dental Engineering Laborator		Medidenta	
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Doctor.com		North American Dental Gro	oup 201
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Osada, Inc	1209
Otto Trading	102
Pac-Dent	
Pacific Dental Services	304
Patterson Dental Supply, Inc	408
PBHS Inc.	
PBS Endo	300
Phase II Dental Transitions	625
Planmeca USA, Inc	
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Severon Healthcare	
Shenzhen SuperLine	10 1
Technology Co., Ltd	207
Simplifeye	
Snoasis Medical	
Sonendo, Inc	
SS White Endodontics	
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#### EXHIBIT HALL SCHEDULE

#### WEDNESDAY, APRIL 25

#### **THURSDAY, APRIL 26**

 Open Hours
 9:30 a.m. - 5:30 p.m.

 Poster Research and Table Clinics
 10 a.m. - 1 p.m.

#### FRIDAY, APRIL 27

 Open Hours
 10 a.m. - 6 p.m.

 Exhibit Hall Happy Hour
 4:30 - 5:30 p.m.

## RECHARGE & RELAX

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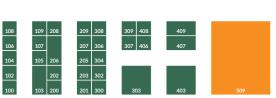
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#### EXHIBIT HALL MAP







#### AAE MEMBER CENTER

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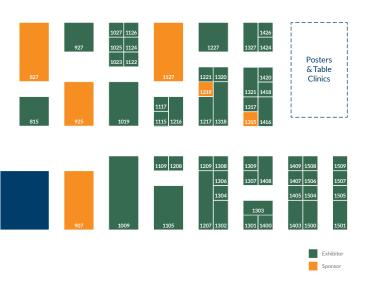
- Learn about membership benefits and services.
- Get to know the AAE staff.
- Explore the new Endo On Demand.
- Celebrate AAE's 75th anniversary.
- Browse publications and resources.

#### Be sure to visit the exhibit hall for:

- Poster Research and Table Clinic Presentations
- Corporate Workshops
- To the Point Corporate Lectures
- EdgeEndo Climbing Wall
- Carestream Attendee Lounge
- New Product Showcase







## Check out the interactive exhibit floor plan on the AAE18 meeting website and mobile app.

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



#### **NEW!**

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#### **ALUMNI AND AFFILIATE EVENTS**

All events will be held at the Hyatt Regency unless otherwise noted.

#### **WEDNESDAY, APRIL 25**

Ellison Jones Group (African American Endodontists)	Granite AB <b>7</b> -8 <b>p.m.</b>
Scientific Advisory Board (SAB) Reception	Mineral A 6:30 - 7:30 p.m.
Spanish Association of Endodontists	Agate A 7:30-8:30 p.m.
Texas A&M University College of Dentistry Alumni and Friends	Mineral BC <b>8-11 p.m</b> .
U.S. Air Force Endodontic Alumni Association Reception	Offsite <b>7</b> -9p.m.
University of Florida	Quartz <b>7-8 p.m.</b>
University of Minnesota Alumni Reception	Mineral DE 6:30-8 p.m.
Virginia Commonwealth University School of Dentistry Reception	Mineral FG 7-8:30 p.m.
THURSDAY, APRIL 26	
Albert Einstein Alumni Reception	Granite C 6:30 - 8 p.m.
BUEAA Reception	Centennial D 6:30 - 8:30 p.m.
Case Western Reserve University School of Dental Medicine Reception	Capitol 6 6-8 p.m.
Columbia University College of Dental Medicine Endodontics Alumni Reception	Quartz B 6-8p.m.
French Society of Endodontics Party	Centennial A 8 - 10 p.m.
Harry J. Healey Endodontic Study Club	Capitol 1 6:30 - 8:30 p.m.
Harvard University Endodontic Alumni Association	Offsite 6:30 - 10:30 p.m.
Loma Linda University	entennial Foyer 6:30 - 7:30 p.m.
Marquette University School of Dentistry	Mineral E 6:30 - 7:30 p.m.
Navy Association of Endodontists Cocktail Reception	
NSU-CDM Alumni Reception	Centennial C 8:30 - 10 p.m.
NYU Endodontic Program Reception	Agate C <b>6-8 p.m.</b>
NYU Langone Hospitals Postdoctoral Dental Residency Program Alumni & Friends Reception	Granite B 6:30 - 8:30 p.m.

#### THURSDAY, APRIL 26 (continued)

The Ohio State University	
Endodontic Alumni Reception	Mineral B 6:30 - 9 p.m.
Penn Endo Alumni Reception	Offsite 6-8 p.m.
Saint Louis University Alumni Reception	Offsite 6-8 p.m.
Tufts University School of Dental Medicine Endodontics Cocktail Party	Centennial G 6-8 p.m.
UCSF Alumni Reception	Agate A 6-8 p.m.
UIC Endodontics Alumni Dinner	Offsite 6-9 p.m.
UNC Alumni Reception	Capitol 7 6-8 p.m.
University at Buffalo Endodontics Alumni Event	Centennial F 6-9 p.m.
University of California Los Angeles Alumni and Friends	Mineral A 6-8 p.m.
University of Connecticut Alumni Reception	Quartz A <b>7-9 p.m.</b>
University of Detroit Mercy Endodontic Alumni Dinner	Offsite 6:30-9 p.m.
University of Iowa Reception	Mineral FG 6-8 p.m.
University of Louisville Reception	Mineral C 6-8 p.m.
University of Maryland School of Dentistry Alumni Reception	Mineral D 6:30 - 8:30 p.m.
University of Michigan Alumni	Offsite 6-9 p.m.
University of Southern California Alumni Reception	
University of Texas Health San Antonio Alumni Reception	Capitol 5 6:30 - 9:30 p.m.
University of Toronto Endodontic Alumni & Friends Reception	Centennial H 6-8 p.m.
University of Washington Alumni and Friends	Agate B <b>6-8 p.m</b> .
USN Association of Endodontists	Granite AB <b>7-9a.m.</b>
West Virginia Endodontic Alumni Association	Granite A 6:30 - 8 p.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.

#### WEDNESDAY, APRIL 25

8:45 - 9:45 a.m.

OR07-OR10 🔊

M. Lentz, H. Wang, M. Korch, T. Reiter and M. Jiorle

Endodontic

Technology 1......709/711

**Resident Session** 

8:45 - 10:15 a.m.

OR01-OR06 🕅

J. Hyde, A. Stamos, M. Fuller, Y. Yu,

R. Alroomy, O. Cook

Pain Control 1......705/707

Resident Session

OR11-OR16 🕅

J. Al-Hashemi, J. Alsenan, C. Kim, W. Cheng, R. Pasiewicz, C. Ritter

Regeneration Basic ... 708/710/712

Resident Session

10:30 - 11:30 a.m.

OR23-OR26 🕅

J. Mason, D. Weyh , G. Hwang,

M. Beshay

Endodontic Technology 2......709/711

Resident Session

10:30 a.m. - noon

OR17-OR22

F. Nieves, K. Strange, N. Khalighinejad, G. Rizzo, J. Hicks, G. Sprague

Factors Affecting

Healing ......705/707

Resident Session

OR27-OR32 🔊

D. Vodopyanov, K. Epkey, C. Ibrahim, R. Biggerstaff, K. Takimoto, J. Sun

Regeneration

Basic 2/Clinical...... 708/710/712

Resident Session

1 - 2 p.m.

OR33-OR36 🕅

S. Bayat, V. Nguyen, E. Chen, H. Yehia

Pain Control 2/

Regeneration Basic 3 ......705/707

**Resident Session** 

OR43-OR46 M

H. Javaheri, J. Shin, Z. Zegar, F. Li

Basic Science ....... 708/710/712

Resident Session

1 - 2:30 p.m.

OR37-OR42 🕅

L. Piasecki and G. Gambarini, H. Kim,

M. Perez-Morales, A. Dua, D. Al-Sudani and H. Al-Zuhair. A. Mann

Technology......709/711

Pre-doctoral Student; Endodontist; International Endodontist:

International Resident:

General Dentist Session



#### **THURSDAY, APRIL 26**

#### 10 - 11:15 a.m.

OR47-OR51 🕅

J. Lopez Gross, B. Crozeta and L. Chaves de Souza, E. Marcoux,

M. Piperidou, E. Shadmehr

Basic Science 2/

Antimicrobials......705/707

Resident Session

OR52-OR56 🕅

M. Marashdeh, C. Giacomino, K. Hursh, E. Arnarsdottir. D. Crossen

Materials/Sealers/

Microsurgery......709/711

Resident Session

#### 12:30 - 1:45 p.m.

OR63-OR67 🔊

D. Guerreiro, F. Wang, L. He, H. Munoz, E. Pedullà

Anatomy/Basic Science/

Technology 2......709/711

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

International Resident; General Dentist Session

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

OR57-OR62 3

K. Chou, C. Bradley, P. Erdle and B. Hays, H. Rabiee, A. Fox, A. Chee

Cone Beam Technology ....705/707 Resident Session

#### 2:15 - 3:45 p.m.

OR68-OR73 🕅

M. Coelho, J. Brodén, N. Al Nuaimi, D. Cerny, A. Weissman, E. Sanz

Treatment Outcomes......705/707

Pre-doctoral Student; Endodontist; International Endodontist; International Resident; General Dentist Session

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

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in the Mineral Hall Ballroom at the Hyatt Regency

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#### POSTER RESEARCH PRESENTATIONS

All presentations will take place in the Exhibit Hall on Level 2.

#### THURSDAY, APRIL 26 - 10 a.m. - 1 p.m.

#### **RESIDENT SESSIONS**

PR01 S. Markovic

3-D File Systems - Fact or Fiction? Evaluation of the Efficacy of Novel 3-D Instrumentation on Bacterial Reduction: A Comparative Study

PR02 C. Atchison

Augmentation of Copper Iodide Nanoparticles in Mineral Trioxide Aggregate and Its Efficacy Against Enterococcus Faecalis

PR03 N. Horwitz

Comparative Analysis of Single File Rotary and Reciprocating NiTi Glide Path Systems

PR04 K. McKitrick

A Survey of Cone Beam Computed Tomographic Use Among General Dentists in South Carolina

PR05 M. Walker, D. McHenry

Clinical Decision-Making in the Treatment of Cracked Teeth

PR06 S. Miller

A Comparative Analysis of the Adaptability of Two Different Sealers

PR07 H Ma

Volumetric Assessment of Sinus Membrane Dimensions in Relation to Endodontically Treated and Healthy Teeth

PR08 F. Gari

Quantitative Analysis of the Antimicrobial Efficacy of Two Rotary Files

PR09 K. Santos

Are Periapical Symptoms Associated With Maxillary Mucositis?

PR10 A. Moore

Factors Effecting the Survival of Teeth with Non-Surgical Root Canal Therapy

PR11 G. Park, M. Mora

Comparing Clinical and Radiographic Outcomes of Apexification and Revascularization/Revitalization

PR12 N. Khougeer

Epigenetic Regulation of Apical Periodontitis by Histone Demethylase Jmjd1c and Jmjd3 in Mice

PR13 A. Fujimura, L. Siu

Centering Ability of Vortex Blue, Vtaper2H and 3D XP Shaper Rotary Files in S-Shaped Canals

PR14 S. Hussain

Evaluation of Reparative Dentin Regeneration and Pulpal Wound Healing Using Mouse Model and Two Different Pulp Capping Materials

5 F. Elbaz

Assessing the Root Morphology Around the Middle Mesial Canal in Mandibular First Molars Using Cone Beam Computed Tomography

PR16 Y. Lee, D. Saccomanno

Effect of Root Canal Sealers on Root Fracture Resistance of Endodontically Treated Teeth: A Systematic Review and Meta-Analysis

PR17 B. Saleem, J. Sun

Association Between Radiographically Diagnosed Apical Periodontitis with Cardiovascular Disease and Diabetes in Endodontic Patients PR18 C. Cho

An Accuracy Evaluation of Apex Locators Integrated in Endodontic Rotary Motors

PR19 O. Dianat

The Effect of Endodontic Regeneration Medicaments on Microhardness and Surface Chemical Properties of Dentin

PR20 S. Johnson

Immunohistochemical Analysis of Pulpal Vascular and Neural Tissue in a Pig Endodontic Regeneration Model

PR21 D. Patel

Effect of Different Crown Preparation Types on Pulp Chamber Proximity in Calcified Mandibular Molars: A Micro-CT Study

PR22 N. Sarmast

Religious Preferences and Considerations With Informed Consent for the Use of Allogenic and Xenogenic Surgical Grafting Materials: A Survey of Religious Communities

**PR23** 

Relationship Between HbA1c and Short-Term Healing of Periapical Lesions after Root Canal Treatment: An Interim Analysis

7. 7hou

PR24 R. Kreitman

Symptomatic Versus Asymptomatic Patients: Who Completes Treatment? Does Insurance Influence Treatment Timeline?

PR25 M. Tang

Change in Working Length at Different Stages of Instrumentation as a Function of Canal Curvature

PR26 A. Luong

Physical Properties of Endodontic Paper Points: An Observational Study

PR27 H. Albanyan

Determination of Virulence Among Clinical Isolates of *Tannerella Forsythia* Based on Macrophage Responses PR28

Single Visit Versus Multiple Visit Non-Surgical Retreatment: A Retrospective Outcome Study

PR29 A. Mainkar

J. Wang

The Impact of Troughing Depth on Identifying Mesio-Lingual Canals in Maxillary Molars

PR30 O. Dianat

The Effect of Endodontic Regeneration Medicaments on Microhardness and Surface Chemical Properties of Dentin

PR31 A. Noroozi

Single Nucleotide Polymorphisms in  $\beta$ -catenin Destruction Complex Genes: Potential Role in Apical Periodontitis Development

32 Y. Byun

Proportion of Different Categories of Pre-Doctoral Initiated Cases Referred to Post-Graduate Endodontics in the Academic Institution

PR33 J. Pruden

Immunohistochemical Phenotype Analysis of Cells Associated With Pulpal Mineralized Extracellular Matrix in a Pig Endodontic Regeneration Model

PR34 J. Harris

Endodontic Practices Following Dental School

PR35 R. Sedwick

Observations of Trends and Successes of Revascularization Therapy at Virginia Commonwealth University: A Retrospective Study

PR36 T. Jahnke

Adoption of Endodontic Technological Advancements: A Questionnaire-Based Study

PR37 B. Griffin

Primum Non Nocere - The Effects of Sodium Hypochlorite on Dentin as Used in Endodontics

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

#### PR38 Q. Wang

Discover the Mechanism of FOXO1 in Epithelial Responses to *P. Gingivalis* and Oral Polymicrobial Infection

#### PR39 W. Almutairi

The Effect of Lunasin on Fibroblast Growth Factor Released from Activated Macrophages

#### PR40 M. Joshi

Comparison of Debridement Efficacy Of EndoVac $^{\text{TM}}$  and Passive Ultrasonic Irrigation *In Vitro* 

#### PR41 E. Weinberg, A. Pereda

Incidence of Mid-Mesial Canals Based on Distance Between Mesial Canal Orifi in Mandibular Molars: A Clinical and CBCT Analysis

#### PR42 S. Chen

Spectrophotometric Analysis of Coronal Tooth Discoloration Induced by Bioceramic Materials in the Presence of Blood

#### PR43

The Impact of the Affordable Care Act on Endodontic Services Within a Dental School Setting

J. Peck

7. Goettsche

#### PR44 C. Kendall

Teaching Length Control in Endodontics to Predoctoral Dental Students: Rubber Stoppers or Calibrations Rings?

#### PR45 A. Alshahrani, C. Schiller

Predictive Values of Patient's Psychological Status to Determine Postoperative Pain

#### PR46

CBCT Evaluation of Initial Root Canal Treatment Failure Prior to Retreatment

#### PR47 M. Awad

Ex-Vivo Analysis of BioCeramic Sealer in the Apical Area From Failed Non-Surgical Root Canal Treatment and Analysis of EndoSequence Putty From Failed Surgical Re-Treatment: Case Series

#### PR48 C. Anderson

Cyclic Fatigue Testing: A Comparison of Non-Channel Versus a Novel Channel-Based Apparatus

#### PR49 T. Aqili

Biocompatibility of MTA Mixed with Human Platelet Lysate

#### PR50 A. Steidley

Use of the Microscope in Endodontics: A Questionnaire-Based Study

#### PR51 F. AlMalki

A Comparison of Transportation After Instrumentation Between TruShape and XP-Endo Shaper

#### R52 D. Kanodia

The Protective Role of N-Acetyl Cysteine With MTA and Bioceramic on Pulpal Stromal Cells Against Bacterial Infection

#### PR53 J. Fisher

The Evaluation of Pulp Floor Morphology and Root Configuration in Carious and Non-Carious Maxillary and Mandibular Molars Using Cone Beam Computed Tomography Scans

#### PR54 K. Long, N. Kohly

Assessment of the Influence of Demographic Factors on Patient Compliance With Postoperative Analgesic Directions and Their Effectiveness Following Non-Surgical Endodontic Treatment

#### PR55 L Camba

Effect of Canal Anastomosis on Periapical Fluid Pressure Build-Up During Needle Irrigation in Single Roots With Double Canals Using a Polycarbonate Model PR56 M. Green

The Effect of Instrumentation Taper on Dentin Conservation

**PR57** 

S. Bufersen

Root Canal Treatment in Permanent Teeth of Young Patients

PR58 L. Payne

Resilon: Assessment of Degraded Filling Material in Non-Healed Cases

PR59 D. Husein

The Role of WDR72 in the Secretion of the Enamel Protease Kallikrein-4 During Amelogenesis

PR60 L. Garden

Potential Antimicrobial Methods for Provisionalizing Teeth After Endodontic Treatment

PR61 R. Ordinola Zapata

Analysis of the Pericervical Dentin Thickness of the Mesio-Buccal Root of Maxillary First Molars

PR62 D. Ganesh

The Use of Three-Dimensional Sphere Forming Cells Towards Pulp Revascularization

PR63 A. Rodriguez

The Effect of Lunasin on VEGF release from Activated Macrophages

PR64 R. Teahen

Prevalence and Use of CBCT in Endodontics

PR65 M. Boisvert

Effect of a Collagen Scaffold on DPSCs Differentiation into Odontoblast-Like Cells for Endodontic Regenerative Procedures

PR66 I. Chang

Epigenetic Regression of KDM6B Inhibits MET-Driven HNSCC Invasion and Metastasis

PR67 A. Royzner

Pre-Doctoral Endodontic
Experiences

PR68

Outcome of Primary Root Canal Treatment Using Modern Technologies: A Systematic Review

S. Soumeeh

PR69 C. Choi

Treatment of Mature Teeth With Irreversible Pulpitis: A Long Forgotten Vital Pulp Therapy

PR70 H. Ko

Outcome of Non-Surgical Endodontic Treatments of Dens Evaginatus

PR71 M. James

Efficacy of Different Chitosan Nanoparticle Combinations in Inhibiting Growth of Two Strains of Enterococcus Faecalis

PR72 H. Chang Trends in Endodontic Microsurgery:

Trends in Endodontic Microsurgery: Report of a Web-based Survey

PR73 N. Pettit

Assessment of Dental Fiberoptic Transillumination Devices

PR74 S. Dhawan

Comparison of Torsional Properties Between ProTaper Gold and EdgeTaper Platinum NiTi Rotary Files After Simulated Clinical Use

PR75 P. Nanavati

Comparison in Cyclic Fatigue Resistance Between ProTaper Gold and Edge Taper Platinum After One and Three Simulated Clinical Uses

PR76 M. Miller

Effect of Simulated Intraosseous Sinusoidal Pressure on NaOCI Extrusion

PR77 A. Tory-Godlew

Presence of Apical Periodontitis After Endodontic Treatment Compared to Apical Extent of Root Filling Material Using CBCT Imaging: A Retrospective Study

PR78 J. Surjan

Use of an Evidenced-based Surgical Algorithm for the Retrospective Analysis of Root-End Surgery in a Graduate Endodontic Practice

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

#### **PR79** G. Sánchez-Sanhueza

Antibacterial Action of Copper Nanoparticles (CuNPs) on an Ex Vivo Model of Multiespecies Anaerobic Biofilm

#### PR80 S. Chogle, J. Al-Hashemi MicroRNA Profile of External Apical and Cervical Root Resorption

**PR81** T. Tobe

Mechanical Properties of Teeth Mimetic Processes Caused by X-Ray Irradiation

#### **PR82** A. Polv

The Ability of Four Different Instrumentation Systems in Shaping Oval Canals: A Micro-Computed Tomographic Analysis

#### **PR83** H. Lew

Incidence of Pulpal Complications Following Diagnosis of Cracked Teeth With Vital Pulps

#### **PR84** J. Ha

The Evaluation of the Elastic Limits Using Repetitive Torsional Loading on Reciproc Blue

#### **PR85** Y. Wu

Interrelationships in the Variability of Root Canal Anatomy between Mandibular First Molars with Disto-Lingual Root and Three Different Mandibular Teeth: A Comprehensive Approach by Cone Beam CT

#### **PR86** R. Hasselbach

Novel Strategy for Dental Pulp Regeneration Promotes Cell Migration

#### **PR87** H. Shawli

Evaluation In Vitro of The Accuracy of Three Electronic Apex Locators in Curved Canals of Mandibular Molars

#### PR88 G. Plotino, E. Pedullà

Efficacy of a New Sonic Irrigation Device in the Removal of Debris from Canal Irregularities in Artificial Root Canals

#### PR89 F. Nazer

Comparison Between XP Endo Finisher File and EndoActivator on Removal of Calcium Hydroxide from the Root Canal System: Ex Vivo Study, SEM Analysis

#### **PR90** D. Chen

The Effect of Mechanical Forces on Periodontal Ligament Cells in Mechanical Cell Culture Model

Evaluation of Angiogenic Potentials Mediated by Calcium Silicate Cements

#### **PR92** T. Nishida

Comparison of Root Canal Form After Access Cavity Preparation by Using Guides

#### **PR93**

S. Shin Evaluation of Filling Quality of Calcium Silicate Based Sealer and Gutta-Percha Cones Depending on Canal Obturation Techniques

#### **PR94** K. Patil

The Effect of Lunasin on RANKL-Mediated Osteoclast Formation: An In-Vitro Analysis of Raw 264.7 Cells

#### **PR95** W. Harber

A Retrospective Study of Endodontic Treatment Outcome When Specific Protocols are Used by Undergraduate Dental Students

#### PR96 J. Suzuki

Effectiveness of Reducing Cutting Stress by EDTA Root Canal Conditioner: Evaluation of Electric Current and Visualization

#### DR97

# B. Sagastume-Pinto

Cone Beam Computed Tomography Analysis of the Root Canal Morphology of Mandibular Second Molars in a Guatemalan Population

#### **PR98**

# S. Hays

Evaluation of the Obturation Efficacy of Single Cone and Continuous Wave Condensation Technique

#### PR99

S. Kim

Root Canal Configuration of Burmese (Myanmar) Maxillary First Molar: a Micro-CT Study

#### PR100

#### C. Ota

Small Non-Coding RNAs Functionally Contribute to the Negative Regulation of Type IV Pilus Retraction ATPase PilT and Biofilm Formation in Streptococcus Sanguinis

#### PR101

# K. Pittel

Growth Conditions and Delivery System for the Clinical Use of DPSCs for Cell Therapy

## PR102

# S. Kwak

Effect of the Glide-path
Establishment on the Torque
Generation to the Files During
Instrumentation: In-Vitro
Measurement

#### PR103

#### P. Neelakantan

Disruption of *Enterococcus* Faecalis Biofilm by a Novel Green Synthesized Graphene Oxide-Silver Nanocomposite

#### PR104 M. Tarrosh, H. Shawli

Removal of Root Canal Fillings in Oval Canals Using Three Different Single-File Instruments and the Supplementary Use of XP-3D Finisher

# PR105 R. Fujimaki

Validation of Clear Colored EDTA Root Canal Conditioner Specializing in Visibility of the Root Canal — Evaluation of Smear Layer Removal and Lubrication Effects

#### PR106

# Y. Yoo, W. Lee

Dimethyloxalylglycine-Embedded Poly(¿-caprolactone) Fiber Meshes Promote Odontoblastic Differentiation of Human Dental Pulp-Derived Cells

#### PR107

#### Y. Yahata

Separation Incidence of Nickel-Titanium Rotary Instruments in Clinical Use

#### PR108

# T. Sun, M. Song

The Effect of Calcium Silicate-Based Cements on Osteoclastic Activity Using Murine Bone Marrow Macrophage

# TABLE CLINIC PRESENTATIONS

All presentations will take place in the Exhibit Hall on Level 2.

#### THURSDAY, APRIL 26 - 10 a.m. - 1 p.m.

#### RESIDENT SESSIONS

TC01 E. Balinghasay

Endodontics and Social Media: Facilitating Progress Using a Powerful, yet Underutilized, Educational Medium

TC02 S. Kim\*, M. Chen Minimally Invasive Instrumentation:

Does One File System Fit All?

S. Park, D. Shin Amnion-Chorion Membrane for

Regenerative Endodontics: Is it a Novel Way to Promote Cell Homing?

N. Leon-Guerrero, Y. Isseroff

Silver Diamine Fluoride: A New Allv in the Endodontic Office?

TC05 L. Chang, S. Chan

Post-Intentional Replantation Stabilization Techniques: What You Need to Know

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Skills in Dentistry

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Endodontics

Illustrative Case

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S. Kim. A. Lee.

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K. Ligon, K. Nelson Minimizing Neck and Shoulder Pain

in Dentistry M Relin

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Silver Nanoparticles: Exploration of a Promising Antimicrobial for Endodontics

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A. Mehrabian TC23

The Use of a Collagen-Hydroxyapatite Scaffold in Regenerative Endodontics Followed by Traditional Intracoronal Bleaching Treatment in a Discolored Open Apex Tooth with Apical Periodontitis

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A Materiomics Approach to Pulp Regeneration

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Generated by Gutta-Percha

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J. Christensen

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Canceled TC33

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Autotransplantation P. Miron

Risks of Tooth Devitalization Associated with Surgical Procedures

TC36 G. Yassen

A Novel Intracanal Medicament with Nano-Particles for Regenerative **Endodontics** 

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Barrier Placement Techniques in a Model of Apexification

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(CBCT) Scan on Treatment Planning S. Svetcov

Endodontic Treatment of Non-Restorable Teeth in Patients Taking

IV Bisphosphonates

TC40 B. Rencher

A Novel Method to Deliver Calcium Hydroxide into the Root Canal System

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A Novel Instrument to Enhance Removal of Root Filling Materials

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Dental Abscess to Septic Shock: A Case Report

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Visualization in Endodontics

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#### TC49 M. Harley

Maxillofacial Fractures: Treatment, Management and Considerations for Teeth in the Line of Fracture

#### TC50 L. Cantamessa

Multisonic Irrigation in Endodontics

# TC51 Y. Fan. S. Ackerman

Cone Beam Computed Tomography-Guided Surgical Endodontics

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Intentional Replantation of C-shaped Mandibular Premolar Following Failed Apical Microsurgery and Orthograde Retreatment

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