

**41ST ANNUAL SESSION
AMERICAN ASSOCIATION OF ENDODONTISTS
APRIL 25-29, 1984**



TORONTO '84

TABLE OF CONTENTS

	Page
AAE Officers/Board of Directors	4
ABE Board of Directors	22
Annual Session Committee	5
Award Recipients	22
Committee Meetings (AAE)	18
Condensed Program	24
Endowment and Memorial Foundation Trustees	22
Exhibitors	21
Floor Plan	20
General Information	6
Participants' Index	19
Past Presidents	22
Program	
Wednesday	8
Thursday AM	8
Thursday PM	9
Friday AM	11
Friday PM	13
Saturday AM	14
Saturday PM	17
Sunday AM	17
Study Clubs/Alumni Groups	18
AAE Auxiliary	23

PRESIDENT'S MESSAGE

Welcome, my friends, to the 41st Annual Session of the American Association of Endodontists.

The beautiful city of Toronto, with its international flavor, stimulates an air of excitement and anticipation as we gather to share knowledge, experiences, and friendships.

Throughout the year, the Officers and the Board of Directors have tried to put before you an attitude of optimism that hopefully would be contagious. We talked little of the past, and spoke only of the new and exciting things planned for the future. We tried not to fix on problems but to address solutions. For this reason, it seems only appropriate that the theme for our meeting should be **"Tomorrow's Endodontic Practice."**

Through the untiring efforts of Drs. Stephen Cohen, Jerry S. Smith and Duane E. Compton, a fantastic array of internationally respected speakers has been gathered. These people will not only stimulate your scientific appetite but also will introduce you to the new world of practice management and marketing. It is obvious that tomorrow's practice will require knowledge, dexterity, communications, efficiency, and fortitude to survive in a competitive society. You already have the ability to succeed; we feel this program will provide direction.

As for the social activities, you will be the delightful recipients of the efforts of local arrangements chairman Dr. F. Bruce Burns and his many cooperative colleagues as they welcome you with a spectacular Caravan Cocktail Party featuring entertainment and delicacies from the rich and overwhelming heritage of international Toronto. Throughout the balance of your stay, you will be invited to experience the beauty, history, and pageantry of this magnificent area of the world, (not to mention the shopping and suggested tours which have been headlined for our lovely ladies).

Now, it is my great pleasure to pay thanks to those who put it all together. My sincerest appreciation to General Chairman, Mike Chubin, Executive Director, Irma Kudo, and the entire Central Office staff. Fantastico! These dedicated people along with all those associated with this meeting have been preparing for our visit for two years. Can you imagine the thousands of ideas considered, investigated, and culled; the excitements, the disappointments, the phone calls, the pressures of budget and, most of all, the time away from their families? All of these sacrifices were for us. Although they would enjoy our individual thanks, what will really please them is to see you enjoying the fruits of their labor by having the best time of your life in the great city of Toronto. To all of you, salute and God bless.

DONALD E. ARENS, DDS, MSD
President

AMERICAN ASSOCIATION OF ENDODONTISTS



Donald E. Arens
President



Stephen F. Schwartz
President-Elect



Herbert Schilder
Vice-President



Michael A. Heuer
Secretary



Charles J. Cunningham
Treasurer



Irving J. Naidorf
Editor

Board of Directors

1984

Stephen Cohen
Joseph D. Maggio
M. Lamar Hicks

1985

Leif K. Bakland
Garth A. James
Carl L. Tinkelman

1986

Nguyen T. Nguyen
Milton Siskin
Herbert F. Spasser

Ex-Officio members of the Board of Directors

Immediate Past-President: Noah Chivian
Executive Director: Irma S. Kudo

WELCOME

The American Association of Endodontists is delighted to return to Canada to have the 41st Annual Session in scenic Toronto, one of the most sophisticated and dynamic cultural and commercial centers of Canada. The members of your Program Committee have done their best to offer you exciting courses, lectures, roundtables, and table clinics that will stimulate your clinical and scientific interests in the fine facilities of the Royal York Hotel. Responding to the newly emerging needs of the clinical endodontist, we have internationally prominent experts offering programs on marketing, business and computers for the endodontist. Our speakers and guests from many parts of the world will find Toronto a perfect setting for sharing information and exchanging ideas. Your local Arrangements Committee has done an outstanding job in arranging excellent parties, tours, cultural events and athletic activities to supplement and enhance your stay in Toronto.

My personal thanks go not only to the members of the Program Committee and the Local Arrangements Committee, but also to Dr. Jerry Smith as well for his helpful input and unfailing cooperation. I want to also thank Dr. Don Arens and Dr. Myron Chubin for their guidance and advice. I am especially indebted to our Executive Director, Ms. Irma Kudo and our Central Office staff for their assistance and coordination of numerous details which made my job so much easier.

Please let me know if there is anything more we can do to help you enjoy your stay in Toronto.

STEPHEN COHEN, DDS
Program Chairman

1984 ANNUAL SESSION COMMITTEE



Myron Chubin
General Chairman



Stephen Cohen
Program Chairman

Program

Program Co-chairman	Jerry S. Smith
Program Coordinator	Duane E. Compton
Continuing Education	James L. Gutmann
Endodontic Roundtable Seminars	Herb H. Borsuk, chairman Joe H. Camp, co-chairman
Printed Program	Irma S. Kudo
Research Seminars	Melvin Goldman
Sunday Session	Jerry S. Smith
Table Clinics/Poster Clinics	William E. Bernier, chairman Donald J. Kleier, co-chairman

General Arrangements

Local Arrangements	F. Bruce Burns
Audio-Visual	Terrence W. Hayes, chairman George E. Sas, co-chairman
Banquets & Meals	Kenneth S. Serota
Hospitality/Information Center	Calvin G. Pike
Luncheon Entertainment	Richard C. Burns
Publicity	Calvin G. Pike, Sandy DiRocco
Registration	Barry L. Chapnick
Signs	Lionel Lenkinski
Special Events	Biruta A. Osins
Sports (Fun Run)	Ian D. Watson
Technical Exhibits	Letty Catrambone
Ushers/Monitors	Joel J. Edelson

AAE Auxiliary

Chairperson	Josephine Burns
-------------	-----------------

GENERAL MEETING INFORMATION

The Royal York Hotel is the headquarters hotel for the 41st Annual Session.

AAE Headquarters Office

The Headquarters Office is located in Salon B of the Royal York Hotel. It will be staffed by Central Office personnel—Laura Cancilla, Letty Catrambone, Sandy DiRocco, Elizabeth Peralta and members of the Annual Session Committee. Office hours are 8:00 am-6:00 pm, Wednesday-Friday and 8:00 am-12:00 noon on Saturday.

General Registration—Convention Lobby, Convention Level

Wednesday 11:00 am - 8:00 pm
Thursday 8:00 am - 6:00 pm
Friday 8:00 am - 5:00 pm

AAE Members (after March 5)	\$160 (includes all scientific sessions Welcome/Fellowship Reception, one full breakfast on Thursday, two luncheons on Friday and Saturday, three continental breakfasts and one ticket to the Saturday evening Dinner Dance)
AAE Associate Members	\$215 (same as above)
AAE Student Members	\$ 75 (All scientific sessions, Welcome/Fellowship Reception)
Non-Member Professionals	\$190 (All scientific sessions)
Non-Member Students	\$ 75 (All scientific sessions)
Dental Auxiliaries	\$ 55 (All scientific sessions)
Spouses	\$ 55 (Welcome/Fellowship Reception, hospitality suite)

Exhibits

The exhibits are located in the Concert Hall, Convention Level. Exhibit hours are:

Thursday 8:00 am - 5:00 pm
Friday 8:00 am - 5:00 pm
Saturday 8:00 am - 12 Noon

Endodontic Roundtable Seminars/Computer Workshop

Tickets reserved in advance are enclosed in each doctor's registration packet. To register for an open Roundtable Seminar or Computer Workshop, or to exchange tickets, inquire at the special desk located in the AAE registration area on the Convention Level.

IMPORTANT NOTICE

Be sure to exchange your voucher by 5:00 pm Thursday and reserve a seat for the Canada Sea-to-Sea Dinner Dance on Saturday. Your cooperation will be appreciated as we cannot extend this deadline.

Cassette Tape Recordings

American Audio Association will record many of the sessions. The cassette tapes are available for purchase at the American Audio Association booth located in the foyer of the Concert Hall.

Speaker Ready Room

Program participants are urged to review their AV material in the Speaker Ready Room (Prince Edward Island Room) prior to their presentation, to avoid possible problems that may occur.

Saturday Dinner Dance

Your table selection for the Saturday Dinner Dance must be made as soon as possible **before 5 pm on Thursday** by exchanging your voucher for a banquet ticket at the AAE registration desk. If you wish to make up a party, you must present a voucher **for each person** in your group in order to reserve the space. No exceptions will be made.

Smoking

For the comfort of others, no smoking is permitted in the meeting rooms.

ADA Continuing Education Registry

Individuals* whose constituent societies, federal dental service or state boards of dentistry participate in the ADA registry program will receive continuing education credits as follows:

- 5 credits for general attendance at annual session. This includes attendance at table clinics and/or exhibits.
- Hour-for-hour credit for attendance at a scientific presentation of at least one hour's duration. This must be of a scientific or clinical nature.
- A separate form for each presentation attended, as well as a separate form for general attendance, should be completed in detail, and deposited in the special box located in the AAE Headquarters Office.

**Refers only to those individuals from Connecticut, Georgia, Maine, Massachusetts, Minnesota, New Hampshire, North Dakota, South Dakota, Rhode Island, Tennessee, Vermont, US Army, Veterans Administration.*

California Board of Dental Examiners

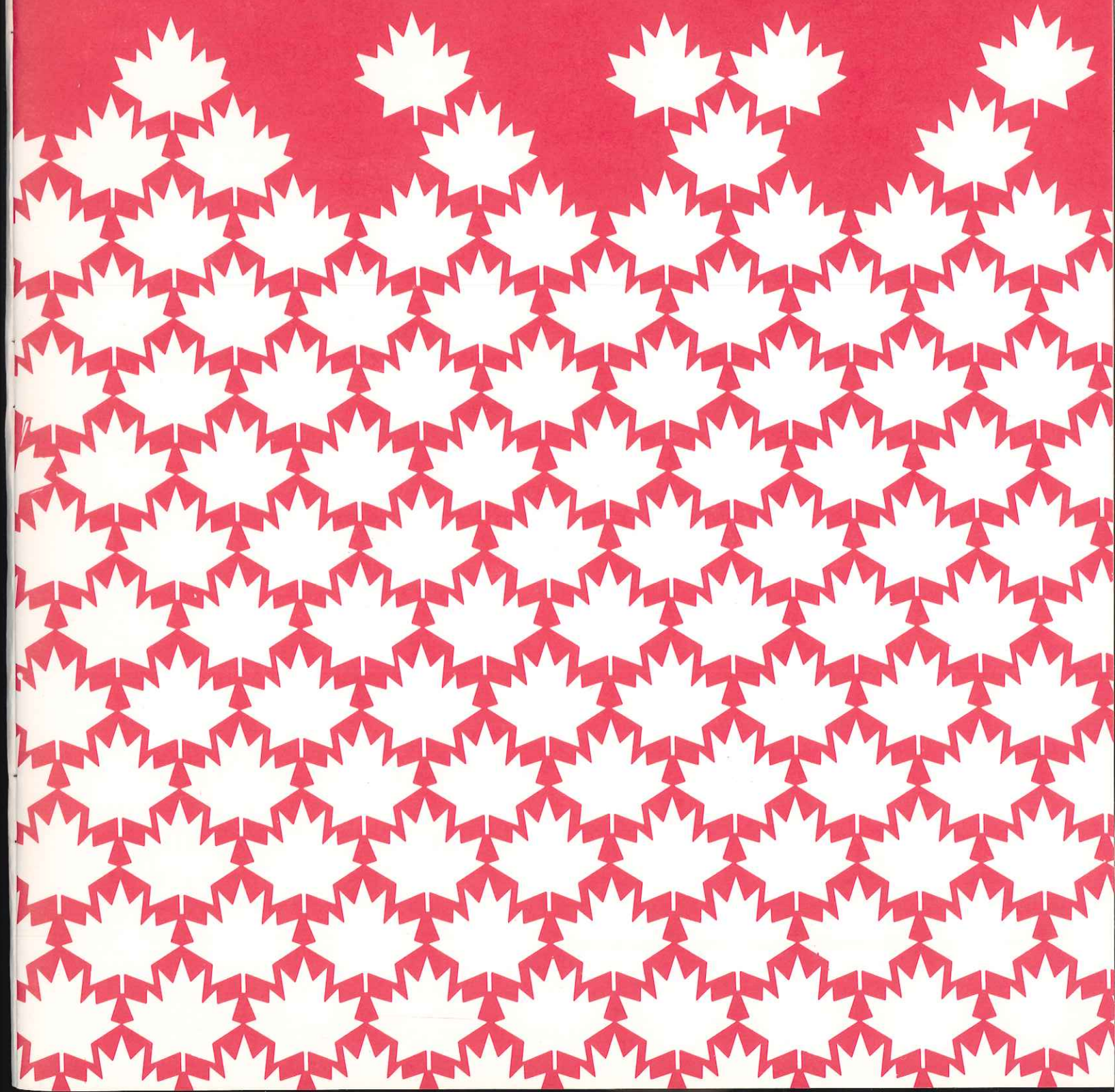
California dentists may obtain a certificate of completion sheet to receive continuing education credits. The forms are available at the Headquarters Office and each California member is required to complete the information requested. The maximum total number of credit hours approved for the Annual Session is 28.

Academy of General Dentistry

Members of the Academy of General Dentistry may have their course forms validated at the AAE Headquarters Office.

PROGRAM

TOMORROW'S ENDODONTIC PRACTICE



TUESDAY, APRIL 24

- 9:00 am- **E&M FOUNDATION BOARD MEETING**
4:30 pm Saskatchewan Room
- 12 Noon **E&M FOUNDATION BOARD LUNCHEON**
New Brunswick Room
- 5:00 pm- **ABE BOARD MEETING**
9:00 pm Room 3-132

WEDNESDAY, APRIL 25

- 8:00 am- **ABE ORAL EXAMINATIONS**
6:00 pm Rooms 3-110, 3-132, 3-134, 3-140
- 9:00 am- **AAE BOARD OF DIRECTORS MEETING**
5:00 pm Saskatchewan Room
- 12 Noon **AAE BOARD OF DIRECTORS LUNCHEON**
New Brunswick Room
- CONTINUING EDUCATION COURSE**
Ballroom (Pre-registration required.)
- BIOLOGICAL AND CLINICAL ASPECTS OF BONE REPAIR AND REGENERATION
- Moderators: JAMES L. GUTMANN, DDS, Dallas
EDWARD M. OSETEK, DDS, MA, Chicago
- 8:30 am Bone histophysiology: an update
J.N.M. HEERSCHKE, MSc, PhD, University of Toronto
- 10:15 am COFFEE BREAK
- 10:30 am Principles of wound healing in bone, including periodontium
ANTONY H. MELCHER, MDS, HDD, PhD, University of Toronto
- 12 Noon LUNCHEON
Ontario Room
- 1:15 pm Biological and clinical aspects of bone repair and regeneration
JAMES T. MELLONIG, DDS, MS, Periodontics Naval Dental Clinic, Great Lakes, IL
- 2:45 pm COFFEE BREAK
- 3:00 pm Correction of intrabony defects—state-of-the-art
GERALD M. BOWERS, DDS, MS, University of Maryland
- 4:30 pm Discussion
- 11:00 am- **REGISTRATION OPENS**
8:00 pm Convention Level
- 7:30 pm- **WELCOME/FELLOWSHIP RECEPTION**
10:00 pm Canadian Room (By ticket only)

THURSDAY MORNING, APRIL 26

- 8:00 am- **REGISTRATION**
6:00 pm Convention Level
- 8:00 am- **EXHIBITS OPEN**
5:00 pm Concert Hall
- 8:00 am- **ABE ORAL EXAMS**
6:00 pm Rooms 3-110, 3-132, 3-134, 3-140
- 6:00 pm- **ABE BOARD MEETING**
9:00 pm Room 3-140
- 8:00 am- **OPENING SESSION BREAKFAST**
10:00 am **Canadian Room**
- Welcome: MYRON CHUBIN, General Chairman
STEPHEN COHEN, Program Chairman
F. BRUCE BURNS, Local Arrangements
- Keynote: "It's now or never"
KAREN MOAWAD, BS, Piedmont, CA
- Pres. Address: DONALD E. ARENS
- BUSINESS SESSION I**
Ballroom
- Moderator: NOAH CHIVIAN, DDS, West Orange, NJ
- 10:15 am Creative marketing within the endodontic practice
12 Noon KAREN MOAWAD, BS, Piedmont, CA
- A discussion of the ways to increase productivity in an endodontic office through effective personnel management. Topics addressed will include increasing salaries without adding payroll costs, developing and implementing workable personnel policy, improving inter-office communication, generating enthusiastic staff attitude, marketing your practice imaginatively and more.
- SCIENTIFIC SESSION I**
Ontario Room
- Moderator: PAUL M. VANEK, DDS, Ann Arbor, MI
- 10:15 am Is the formation of a new periodontal attachment possible on endodontically treated teeth?
12 Noon GERALD M. BOWERS, DDS, MS, Baltimore
- A discussion of this controversial issue and presentation of clinical and histological evidence to demonstrate that both hard and soft tissue attachment is possible on endodontically treated teeth.

BADGES MUST BE WORN AT ALL OFFICIAL AAE FUNCTIONS

**RESEARCH SEMINARS I
Confederation Rooms**

Moderator: SAMUEL SELTZER, DDS, Philadelphia

- 10:15 am- Clinical effectiveness of root canal medicaments
HISASHI NAGASAWA*, DDS; MASAKO HIRATA,
DDS, Kyushu University
- 10:30 am Tissue response to root fillings with a medicated
material
T. R. PITT FORD, PhD, Guy's Hospital, London,
England
- 10:45 am Microleakage under full cast crowns and possible
pulpal effects
PINIT LAOSONTHORN, DDS; MELVIN GOLDMAN*,
DDS; RUSTAM DeVITRE, DMD; GINO PASSAMON-
TI, MD, DMD, Tufts University
- 11:00 am Dentinal morphology in various cavity preparations
ROBERT R. WHITE*, DMD; MELVIN GOLDMAN,
DDS; JOSEPH I. TENCA, DDS, MA, Tufts University
- 11:15 am A means of blocking dentinal microleakage
SCOTT A. D. WILLIAMS*, DDS; MELVIN
GOLDMAN, DDS; JOSEPH I. TENCA, DDS, MA;
Tufts University and DAN NATHANSON, DDS,
Boston University
- 11:30 am Relation between pulpitis and acute periodontal
abscesses in multirooted teeth
LEON A. WEISS, DDS, Tufts University
- 11:45 am A long term histological study of root fractures in
baboons
ABDUSSALAM S. BENASHUR*, BDS, MS; AN-
DREW E. MICHANOWICZ, DDS; ROBERT
MUNDELL, PhD; JOHN SCHMUTZ, DDS, PhD;
JOHN P. MICHANOWICZ, DDS, University of
Pittsburgh

SMOKING

For the comfort of others, no smoking is permitted in the meeting rooms.

IMPORTANT NOTICE

Be sure to exchange your voucher by 5:00 pm Thursday and reserve a seat for the Canada Sea-to-Sea Dinner Dance on Saturday. Your cooperation will be appreciated as we cannot extend this deadline.

*Presenter

THURSDAY AFTERNOON, APRIL 26

12 Noon **LUNCHEON**
(On Your Own)

**BUSINESS SESSION II
Ballroom**

Moderator: NOAH CHIVIAN, DDS, West Orange, NJ

1:30 pm- Creative marketing within the endodontic practice
5:00 pm KAREN MOAWAD, BS, Piedmont, CA
(Continuation of morning session)

**SCIENTIFIC SESSION II
Ontario Room**

Moderator: LEIF K. BAKLAND, DDS
Loma Linda, CA

1:30 pm- The pulp: function and clinical disorders
5:00 pm HENRY O. TROWBRIDGE, DDS, PhD, Philadelphia

One of the difficult problems facing the endodontist is how to accurately assess the status of the pulp of a diseased tooth. The focus of this presentation is on the etiology and pathophysiology of specific disease processes as well as the dynamics of pulpal repair. Important background material in basic science is offered so that the logic of diagnosis and therapeutic measures can be better understood. Topics include development of the dentin-pulp complex; singular characteristics of the pulp; nature of inflammatory, reparative and degenerative processes and rationale of pulp therapy.

**RESEARCH SEMINARS II
Confederation Rooms**

Moderator: SEYMOUR OLIET, DDS, Philadelphia

1:30 pm In vitro study of root canal morphology
JOSE LUIS MEMBRILLO*, DDS, MSD; MARIA
MARQUEZ, DDS; JUAN MANUEL FERNANDEZ,
DDS, University of Mexico

1:45 pm Resistance to fracture of restored, endodontically
treated teeth
MARTIN TROPE*, DMD; D. O. MALTZ, DMD, MS;
LEIF TRONSTAD, DMD, PhD, University of
Pennsylvania

- 2:00 pm A comparison of five irrigating solutions: SEM study
EGILL L. JACOBSEN*, DDS; MARK S. BERG, DDS; GORDON L. STASTNY, DDS; NIJOLE A. REMEIKIS, DDS, University of Illinois
- 2:15 pm Laser utilization in endodontics
ALLEN R. HELFER*, DDS, MScD; STANLEY M. SHAPSHAY, MD, Boston University
- 2:30 pm Effectiveness of a sonic vibratory endodontic instrument
FREDERIC BARNETT*, DMD; LYON J. SCHWARTZ-BEN, DDS; LEIF TRONSTAD, DMD, PhD, University of Pennsylvania
- 2:45 pm Complex endodontic anatomy: a microradiographic study
MICHEL E. EVENOT*, DSO, Fac., Chir. Dent. Paris, Boulogne, France; A. M. LAVAL-JEANTET, DSO, Fac. de Medecine, Paris, France
- 3:00 pm The effect of different files on the final canal shape
MAHMOUD E. EIDEEB, BDS, MS, University of Minnesota
- 3:15 pm Apical leakage vs. density with different gutta percha filling techniques
MAHMOUD E. EIDEEB*, BDS, MS; KENNETH J. ZUCKER, DDS, MS; HAROLD H. MESSER, BDS, MDSc, PhD, University of Minnesota
- 3:30 pm Evaluation of injection-thermoplasticized gutta percha using radioactive isotopes
MARIO CZONSTKOWSKY*, DDS, MS; ANDREW E. MICHANOWICZ, DDS; JORGE VAZQUEZ, MD, University of Pittsburgh
- 3:45 pm Sealing ability of intermediate restoratives used in endodontics
AIDA A. CHOAYEB*, DDS, MSD, Howard University; M. BASSIOUNY, BDS, MSc, PhD, Temple University
- 4:00 pm Radiographic evaluation of iatrogenic root perforations repaired with amalgam and gutta percha
FRED W. BENENATI*, DDS, MEd; JAMES B. ROANE, DDS, MS; JOHN T. BIGGS, DDS, MS, MEd, University of Oklahoma; JAMES H. SIMON, DDS, VA Medical Center
- 4:15 pm Cytotoxicity vs. antibacterial activity of CMCP in vitro
HAROLD H. MESSER*, BDS, MDSc, PhD; R. J. FEIGAL, DDS, PhD; L. TELLEFSON, BS; G. R. GERMAINE, PhD, University of Minnesota
- 4:30 pm Effect of sealer cement consistency on apical leakage of endodontic implants
STELLA M. VERGARA-KITZENBERG*, DMD; HAROLD H. MESSER, BDS, MDSc, PhD, University of Minnesota

1:30 pm **ENDODONTIC ROUNDTABLE SEMINARS**

& 3:15 pm The following Roundtable Seminars will be presented twice—at 1:30 pm and again at 3:15 pm. Pre-registration is required. Tickets still available may be obtained from ERS Information Desk.

ERS 1 & ERS 2 — Manitoba Room

Endosonic endodontics

HOWARD MARTIN, DMD, Silver Spring, MD and
WALTER T. CUNNINGHAM, DDS, Annapolis, MD

ERS 3 & ERS 4 — Alberta Room

Endocomputodontics: adaptation of a dental computer program to endodontic practice
MITCHELL LEVINE, DDS, Willowdale, Canada

ERS 5 & ERS 6 — New Brunswick Room

The computer and the dental office
THOMAS L. JONES, DDS, MS, Asheville, NC

ERS 7 & ERS 8 — Algonquin Room

New horizons in endodontics—the complete in-office cast gold post and core service
MANUEL I. WEISMAN, DDS, Augusta, GA

ERS 9 & ERS 10 — Quebec Room

Endodontic aspects of transplantation of teeth
LEIF TRONSTAD, DMD, PhD, Philadelphia

ERS 11 & ERS 12 — British Columbia Room

Xelan—a guaranteed financial success plan
JOHN E. MAROSKY, DDS, MSD, Indianapolis
CARL J. FLATLEY, DDS, MSD, Clearwater, FL

5:00 pm- **AADS ENDODONTIC SECTION MEETING**

6:00 pm **Confederation Rooms**

6:30 pm **DINNER THEATER**

(Optional—By ticket only)

Buses depart from hotel front (south) entrance.

NEED A BREAK?

Visit the Technical Exhibits. Complimentary coffee service will be provided in the Exhibit Area (Concert Hall) on Thursday and Friday, 10:30 am - 12 Noon and 2:30 pm - 4:00 pm.

* Presentor

FRIDAY MORNING, APRIL 27

7:00 am **FUN RUN**
(Pre-registration required)
Buses leave from hotel front (south) entrance at 7:00 am.

8:00 am- **CONTINENTAL BREAKFAST**
9:00 am **Canadian Room**

8:00 am- **REGISTRATION**
5:00 pm **Convention Level**

8:00 am- **EXHIBITS**
5:00 pm **Concert Hall**

BUSINESS SESSION III **Ballroom**

Moderator: JOSEPH D. MAGGIO, DDS, Oak Brook, IL

9:00 am- Marketing techniques for the endodontic practice
12 Noon ROBERT A. HANKIN, PhD, Chicago

Marketing the endodontic practice is a specialized component of marketing, just as endodontics is a specialized component of dentistry. The key lies in developing new inter-relationships with the general practitioner and in developing a profile with the general public. These approaches will be discussed.

SCIENTIFIC SESSION III **Ontario Room**

Moderator: CALVIN D. TORNECK, DDS, MS,
Toronto, Canada

9:00 am- Understanding pulpal pain
12 Noon HENRY O. TROWBRIDGE, DDS, PhD, Philadelphia

Although pain is an unreliable criterion of pulp disease, it is an important diagnostic consideration. This session examines pain processes in the dentin and pulp. Topics include development of neural elements, extent of innervation of dentin, how sensory signals arise, chemical mediators, hyperalgesia and sensitivity associated with exposed root surfaces.

CASSETTE TAPES OF SCIENTIFIC SESSIONS are available from American Audio Association in the foyer of the Concert Hall.

RESEARCH SEMINARS III — Graduate Section **Confederation Rooms**

Moderator: MELVIN GOLDMAN, DDS, Boston

9:00 am Histologic appraisal of osseous healing kinetics after apicoectomy
STEVEN M. SIERASKI*, DDS; JOHN F. CORCORAN, DDS, MS; ROBERT L. ELLISON, DDS, MSc; R. M. COURTNEY, DDS, MS, University of Michigan

9:15 am Endodontic implications of orthodontic tooth movement
FRANCINE T. CWYK*, DMD; FRANCOISE SAINT-PIERRE, DDS; LEIF TRONSTAD, DMD, PhD, University of Pennsylvania

9:30 am Periodontal ligament injection: saline vs. 2% lidocaine (1:100,000 epinephrine)
KERRY D. MOORE*, DDS, MS; ALFRED W. READER, DDS, MS; F. MIKE BECK, DDS, MA; WILLIAM J. MEYERS, DMD, MEd, Ohio State University

9:45 am Pulpal and periodontal tissue effects of the periodontal ligament injection
JAMES O. ROAHEN*, DDS; F. JAMES MARSHALL, DMD, MS; ROBERT QUINTON-COX, PhD, Oregon Health Sciences University

10:00 am Human lymphocyte subpopulations in chronic periapical lesions
JEROME J. CYMERMAN*, DMD; DIANE H. CYMERMAN, MD, Long Island Jewish-Hillside Medical Center; JAMES WALTERS, BS; ALAN J. NEVINS, DDS, Nassau County Medical Center

10:15 am Radiation effects on dental pulp responses to operative and endodontic procedures
MERVAT I. FAWZI*, BDS, MS; GERALD SHKLAR, DDS, MS; ALVIN A. KRAKOW, DDS, Harvard/Forsyth Dental Center

10:30 am BREAK

10:45 am The effects of pH on apical closure of immature teeth
JEFFREY M. JAVELET*, DDS; MAHMOUD TORABINEJAD, DMD, MSD; LEIF K. BAKLAND, DDS, Loma Linda University

11:00 am The incidence of mandibular premolars with two canals in different race groups as assessed radiographically
LESLIE R. ELFENBEIN*, DMD; MARTIN TROPE, DMD; LEIF TRONSTAD, DMD, PhD, University of Pennsylvania

*Presenter

11:15 am Use of xeroradiography for length determination in endodontics
PAUL A. SAN MARCO*, DDS, University of Texas at Houston; STEVE MONTGOMERY, DDS, University of Texas at San Antonio

11:30 am A comparison of culture media and methods of specimen collection
THOMAS J. RYSZ, DDS; RICHARD A. MURPHY, PhD; ROBERT ZELIKOW, DDS; JOSEPH E. VAN CURA, DDS; NIJOLE A. REMEIKIS, DDS, University of Illinois

9:00 am **COMPUTER WORKSHOP**

12 Noon **Tudor Rooms**

& repeated

1:30 pm- GERALD C. DIETZ, DDS, MS, Birmingham, MI
4:30 pm (Equipment provided by Kelly Systems of Birmingham, MI)

Limited attendance. Pre-registration required. If you have not registered but would like to attend, please check with the registration desk to see if there are any remaining tickets available.

8:45 am **ENDODONTIC ROUNDTABLE SEMINARS**
(Pre-registration required)

The following Roundtable Seminars will be presented once, from 8:45 am-10:15 am

ERS 13 — Manitoba Room
A #10 File: the problem solver in lateral condensation of gutta percha
HOWARD H. POMERANZ, DDS, Millburn, NJ

ERS 14 — Alberta Room
Root sectioning therapy—hemisection and root amputation
MARVIN WERBITT, DDS, MSc, Montreal, Canada

ERS 15 — Nova Scotia Room
Post and crown consideration in the restoration of endodontically treated teeth
RAYMOND S. GREENFELD, DMD, Richmond, Canada

ERS 16 — Quebec Room
Endodontic diagnostic perplexities
MARSHALL D. PEIKOFF, DMD, MSD, Winnipeg, Canada

ERS 17 — British Columbia Room
Root fractures—their diagnosis, treatment and repair
ANDREW E. MICHANOWICZ, DDS, Pittsburgh

ERS 18 — New Brunswick Room
Calcium hydroxide therapy for traumatic injuries
RAYMOND T. WEBBER, DDS, MS, Gainesville, FL

ERS 19 — Algonquin Room
Where do we go from here?
STUART B. FOUNTAIN, DDS, MSc, Greensboro, NC

10:30 am **The following Roundtable Seminars will be presented once, from 10:30 am-12 Noon**

ERS 20 — Manitoba Room
Intraligamentary anesthesia—no block needed
JOSEPH J. WILLIAMS, DDS, Boston

ERS 21 — Alberta Room
The saga of multiple offices
JAMES S. TATE, DDS, Atlanta

ERS 22 — Quebec Room
"Wanted: dead or alive"—update on clinical diagnosis
ROBERT E. AVERBACH, DDS, Denver, CO

ERS 23 — British Columbia Room
Success and failure in endodontics—doctor versus patient expectations
RALPH BELLIZZI, DDS, West Germany

ERS 24 — Nova Scotia Room
Pulpal and periapical pathology—diagnosis and treatment
GIANFRANCO VIGNOLETTI, MD, DDS, Verona, Italy

ERS 25 — New Brunswick Room
Retrograde amalgam filling: let's discuss why and when
GIORGIO M. LAVAGNOLI, DDS, Milan, Italy

ERS 26 — Algonquin Room
Functional splinting of luxated teeth
DONALD D. ANTRIM, DDS, MS, MA, Olney, MD

NEED A BREAK?

Visit the Technical Exhibits. Complimentary coffee service will be provided in the Exhibit Area (Concert Hall) on Thursday and Friday, 10:30 am - 12 Noon and 2:30 pm - 4:00 pm.

SMOKING

For the comfort of others, no smoking is permitted in the meeting rooms.

FRIDAY AFTERNOON, APRIL 27

12 Noon **LUNCHEON**

Canadian Room (By ticket only)
Presentation of the Grossman and Sommer Awards.
Speaker: MR. DAVE BROADFOOT
A witty, well-known Canadian satirist

BUSINESS SESSION IV
Ballroom

Moderator: JOSEPH D. MAGGIO, DDS,
Oak Brook, IL

1:30 pm Marketing techniques for the endodontic practice
5:00 pm ROBERT A. HANKIN, PhD, Chicago
(Repeat of morning session)

SCIENTIFIC SESSION IV
Ontario Room

Moderator: NGUYEN T. NGUYEN, DDS, San
Francisco

1:30 pm- Root canal obturation utilizing the PAC-160
5:00 pm method of thermoplastic injection-molding
G. JOHN SCHOEFFEL, DDS, MMS, Lancaster, CA
and FULTON S. YEE, DDS, San Francisco

Technical advancements in the thermoplastic injection-molded gutta percha obturation method now address the problem of apical control. Clinical applications, indications, limitations and contraindications of this technique will be presented and supported by current research, including studies in density, SEM, and sealing ability. Clinical case histories will also be presented.

RESEARCH SEMINARS IV—GRADUATE SECTION
Confederation Rooms

Moderator: ALVIN A. KRAKOW, DDS, Boston

1:30 pm Effect of degree of preparation on leakage of apical
dentin plug
RANDALL D. J. YEE*, DDS, MSD; SAMUEL S PAT-
TERSON, DDS; CARL W. NEWTON, DDS, MSD;
MARJORIE L. SWARTZ, MS, Indiana University

1:45 pm The effectiveness of a dentin plug in sealing pulpless
teeth
PAUL F. BERY*, DDS; EGILL L. JACOBSEN, DDS;
ELLEN A. BeGOLE, PhD, University of Illinois

2:00 pm The morphology of the prepared post space
MELVIN GOLDMAN, DDS; RUSTAM DeVITRE,
DMD; CHARLES RAY MOSER*, DMD, Tufts
University

2:15 pm Dowel space preparation and the apical seal
JOHN A. SUCHINA*, DDS, MS; JOHN R.
LUDINGTON JR., DDS, MSD, University of Texas at
Houston

2:30 pm Clockwise torsional properties of used root canal files
BRUCE L. CHENAIL, DMD, Marquette University

2:45 pm BREAK

3:00 pm The effectiveness of engine driven root canal
instruments
STEPHEN P. NIEMCZYK*, DMD; PETER VELVART,
DMD; FREDERIC BARNETT, DMD; LEIF
TRONSTAD, DMD, PhD, University of Pennsylvania

3:15 pm A comparison of the efficiency of various delivery
methods on sealer distribution
ROBERT B. AMATO, DMD; MELVIN GOLDMAN,
DDS; JOSEPH I. TENCA, DDS, MA; GREG A.
BURK*, DDS, Tufts University

3:30 pm Comparative sealing abilities of gutta percha using
McSpadden and engine plugger compactors
ZVI FUSS*, DMD; S. A. LEON, PhD; BRUCE D.
RICKOFF, DDS, Albert Einstein Medical Center

3:45 pm The efficacy of the serialization technique vs. a
serialization/ultrasonic technique
ALAN T. GOODMAN*, DDS, MS; ALFRED W.
READER, DDS, MS; F. MIKE BECK: DDS, MA;
RUDY MELFI, DDS, PhD; WILLIAM J. MEYERS,
DMD, MEd, Ohio State University

4:00 pm A six month bacterial microleakage evaluation of
reverse-filling materials
JAMES A. AURELIO*, DDS, MS; HAROLD GER-
STEIN, DDS; WILLIAM KOS, PhD; PAUL
HOEHENFELD, DDS, Marquette University

4:15 pm An in vitro model for evaluation of apex locators
YOSEF NAHMIAS*, CD, MS; JAMES A. AURELIO,
DDS, MS; HAROLD GERSTEIN, DDS, Marquette
University

1:30 pm- **COMPUTER WORKSHOP**
4:30 pm **Tudor Rooms**

(Pre-registration is required)

GERALD C. DIETZ, DDS, MS, Birmingham, MI
(Equipment provided by Kelly Systems of Birm-
ingham, MI)

*Presenter

SATURDAY MORNING, APRIL 28

8:00 am- **CONTINENTAL BREAKFAST**
9:00 am **Canadian Room**

8:00 am- **EXHIBITS**
12 Noon **Concert Hall**

SCIENTIFIC SESSION V
Ballroom

Moderator: HOWARD MARTIN, DMD, Silver Spring, MD

9:00 am- Recent concepts of pain control
12 Noon RONALD MELZACK, PhD, Montreal, Canada

Pain experience comprises at least three dimensions—sensory, affective and cognitive. Pain control can be achieved by attempting to influence one or more of these. Sensory modulation procedures, such as local blocks or electrical stimulation, are effective. So are methods aimed at influencing the emotional and cognitive components of pain.

RESEARCH SEMINARS V
Ontario Room

Moderator: JOSEPH I. TENCA, DDS, MA, Boston

The following presentations are updates of the Endodontic Research Seminars which were presented at previous annual sessions.

9:00 am Immunopathology of the human periapical granuloma
MICHAEL H. STERN, DDS, PhD, University of Texas at Houston

Our data suggest that the human periapical granuloma is an immunologically mediated granulomatous reaction. Lymphocytes and plasma cells, accounting for 32% and 13% of the inflammatory infiltrates, are the immune effector cells. Both T and B lymphocytes are present. Macrophages and giant cells comprise the granulomatous component. Although the specific mechanisms have not yet been elucidated, the constituents for both cell mediated and humoral immune reactions have been identified in these lesions.

9:45 am Immunopathology of pulpal and periapical lesions
MAHMOUD TORABINEJAD, DMD, MSD, Loma Linda University

Egress of potential antigens from pathologically involved root canals into the periapical tissues can lead to various types of immunological reactions. The role of immune complexes, IgE mediated reactions, and delayed hypersensitivity responses in the formation of periapical lesions are discussed.

10:30 am Physiology of the pulp
SYNGCUK KIM, DDS, PhD, Columbia University

In the second half of 1970, many new techniques were tried in order to study the dynamic aspects of the pulpal physiology. Among them the 133 Xenon Washout and Radioisotope Labelled Microsphere Injection Methods and vital microscopy of the living pulp were found to be the most suitable. Using these state-of-the-art methods, control mechanisms of pulpal blood flow circulation were studied. Results of this study indicate that pulpal vessels are equipped with both cholinergic and adrenergic receptors. In the past three years, the study has been focused on how various vasoactive agents, released during inflammation affect the pulpal blood flow.

11:15 am Apexification and avulsed teeth—new treatments
ALAN J. NEVINS, DDS, Nassau County Medical Center

Several short presentations will focus on new modalities of endodontic treatment with special consideration to histopathology and immunology. The application of collagen gel to stimulate closure of open apex teeth, the replantation of enzyme treated teeth and the discovery of circulating IgE in patients with infected teeth exhibiting symptoms will be discussed.

BADGES MUST BE WORN AT ALL OFFICIAL AAE FUNCTIONS

9:00 am-
12 Noon

TABLE CLINICS — POSTER CLINICS
Alberta, British Columbia, Manitoba, and
Quebec Rooms

GRADUATE STUDENT SECTION

1. Alternate approaches to silver point removal
JOHN D. ALLEMANG, JR., DDS, and JOHN D. BRAMWELL, DDS, Naval Dental Clinic
2. Endosonics—a new dimension in root canal therapy
BRUCE CHENAIL, DMD and DANIEL G. STAMOS, DDS, Marquette University
3. The effect of removal of the "smear layer" on leakage of endodontically treated teeth—an in vitro study
GERALDINE ROSS BILLS, DDS, University of North Carolina
4. A method for evaluating endodontic failure
BARRY L. BURKETT, DMD and ROBERT K. FLATH, DDS, Naval Dental Clinic
5. Bypassing separated carbon steel instruments through the use of tincture of iodine
MICHEL W. FULLER, DDS and BRIAN A. MYKLEBY, DDS, University of Iowa
6. Management of avulsed teeth
ZVI FUSS, DMD, Albert Einstein Medical Center
7. Anatomical variation in endodontics
JOHN L. GOODRICH, DDS, University of Nebraska
8. In vitro study of root canal morphology
JOSE LUIS MEMBRILLO, DDS, MSD, and JUAN MANUEL FERNANDEZ, DDS, Mexico
9. A 15 ga. tube as an aid to isolation and root canal treatment
THOMAS O. MORK, DDS, and JOHN A. WEISENSEEL JR., DDS, National Naval Dental Center
10. Endodontic surgery: the apical seal
RICHARD J. POCKAT, DDS, University of North Carolina
11. Endodontic stabilizer implants
GINNINE S. RIBOLOW, DDS, Kingsbrook Jewish Medical Center
12. In vivo effect of the application of different thermal stimuli on the dental pulp
BRUCE D. RICKOFF, DDS, Albert Einstein Medical Center
13. Anatomical pathways for the spread of infection
JOHN B. ROSS V, DDS, MSc, and HEDLEY RAKUSIN, BDS, MSc, Baylor College of Dentistry

NON-GRADUATE SECTION

14. A new three dimensional technique for root canal preparation
GERARD ARMANDOU, DDS, Paris, France
15. Bold endodontic management of large radiolucent lesions
ROBERT A. AUGSBURGER, DDS, MSD, Fort Leavenworth, KS
16. Electronic apex location
PETER BROTHMAN, DDS, Bala Cynwyd, PA
17. Non surgical treatment of large periapical pathology; a new approach
AIDA A. CHOAYEB, DDS, MSD and KHODABAKHSH SALAMAT, DDS, Washington, DC
18. Computer assisted pulpal diagnosis
WALTER DOBLECKI, DMD, Gales Ferry, CT
19. Placing calcium hydroxide powder—a different technique
KEITH V. KRELL, DDS, MA, MS, Iowa City, IA
20. Stereomicroscopic St. M. and scanning electron microscopic study of thermo-mechanical compaction of gutta percha
GIAMPIERO MALAGNINO, Rome, Italy
21. Efficiency of Ultrasonic endodontic treater (super endo)
MASARU MARUHASHI, DDS, Takasaki-shi, Japan
22. Orthodontic extrusion of endodontically treated teeth
KATSUEI MORI, DDS, and KUNIYOSHI IJIMA, DDS, Tokyo, Japan
23. Removal of cemented solid objects from canals with ultrasonic energy
NGUYEN T. NGUYEN, DDS, San Francisco, CA
24. U.B.O.—Unidentified buccal object
ALFRED W. READER, DDS, MS, and WILLIAM J. MEYERS, DMD, MEd, Columbus, OH
25. One-visit-sterilizing and filling of root canals in "hot" teeth by means of iontophoresis
JOACHIM SCHULZ-BONGERT, DMD, Dusseldorf, West Germany
26. Twelve clinical tips for more efficient and easier endodontics
JERRY F. TAINTOR, DDS, MS, Sherman Oaks, CA and ALAN B. ROSENTHAL, DMD, Anchorage, AK
27. Endosonic bio-mechanical obturation system
MASAYOSHI TAKUBO, DDS, and HIROSHI HADA, DDS, Fukuoka-shi, Japan
28. Solving clinical endodontic problems with newly patented Fujii cement
ROBERT V. WEISSMAN, DDS, Fairlawn, NJ
29. Precision access
S. ARTHUR RYBECK, JR., DDS, Wheeling, WV

POSTER CLINICS
Manitoba Room

GRADUATE STUDENT SECTION

1. SEM analysis of canal-wall dentin following Nd-YAG laser irradiation
DOUGLAS N. DEDERICH, DDS, University of Alberta
2. Flow properties of gutta percha
MIAN KHALID IQBAL, BDS, University of Minnesota
3. The radiographic appearance of experimental periapical lesions
SEUNG-JONG LEE, DDS, University of Minnesota
4. Osseous healing kinetics after apicoectomy in monkeys: an isodensitometric interpretation of radiographic images
STEVEN M. SIERASKI, DDS, and JOHN F. CORCORAN, DDS, MS, University of Michigan
5. Hand vs. engine-driven files: the effect on canal preparation shape
SPYRIDON T. SPYROPOULOS, DDS, University of Minnesota

NON-GRADUATE DENTAL STUDENTS

6. In vitro pH and $[Ca^{++}]$ changes associated with $Ca(OH)_2$ apical plugs
DANIEL R. CULLUM, BSc, The University of Alberta
7. An SEM analysis of apical plugs of four condensable materials
D. MORELA, BSc, The University of Alberta
8. Micro-morphology of two dentin bonding agents utilizing six dentin pretreatments
ERNEST REEH, BSc, The University of Alberta

CASSETTE TAPES OF SCIENTIFIC SESSIONS are available from American Audio Association in the foyer of the Concert Hall.

NON-GRADUATE SECTION

9. The infraorbital nerve block: an extraoral approach
ROBERT E. AVERBACH, DDS, and DONALD J. KLEIER, DMD, University of Colorado Health Science Center
10. Leakage associated with apical resection and reverse filling techniques
RICHARD G. BEATTY, DDS, MS, and DAVID K. SULLIVAN, DMD, Gainesville, FL
11. Endodontic microleakage
B. DAVID COHEN, BDS, Manchester, England
12. Potential effects of ultrasonics on root canal sealer dispersion
DONALD M. COLLINSON, DDS, Edmonton, Canada
13. Apical preparation shape: effect of differing instrumentation techniques
DARRELL DANG, Iowa City, IA
14. Endodontic treatment of the medically compromised patient
ROBERT L. ELLISON, DDS, MSc, Ann Arbor, MI
15. Does the innervation of the canine pulp return to normal after damage to the inferior alveolar nerve?
G. REX HOLLAND, BDS, PhD, Edmonton, Canada, and P. P. ROBINSON, BDS, PhD, Oxford, England
16. Blood vessels of the human dental pulp
JEAN-MARIE LAURICHESSE, DDS, Paris, France
17. A study of the relationship between the endodontist and the general dentist
JOHN C. MILLS, DMD, Birmingham, AL
18. Canal filling by syringe: obturation system
MITSURU OTANI, DDS, DMSc and MUTSUO FUJISAWA, MD, DMSc, Tokyo, Japan
19. Endodontic controversies: to treat or retreat. What is your decision?
WAYNE H. PULVER, DDS, Willowdale, Canada
20. Analyzing dentinal tubule morphology as a potential method for reducing leakage variance
DAVID A. SCOTT, MSc, DDS, Edmonton, Canada

21. Apical leakage in root canals filled by the hybrid technic

MICHAEL TAGGER, DMD, MS, Ramat Aviv, Israel

22. The morphology of periapical lesions in monkey molars

RICHARD E. WALTON, DMD, MS, Iowa City, IA and
JERRY J. GARNICK, DDS, MS, Augusta, GA

23. Effects of four apical plug materials on root canal sealability

KENNETH L. ZAKARIASEN, DDS, MS, PhD,
Edmonton, Canada

SATURDAY AFTERNOON, APRIL 28

12 Noon- **EDGAR D. COOLIDGE MEMORIAL LUNCHEON**
1:45 pm **Canadian Room**

Presentation of the Coolidge Award

Speaker: MR. WILLIAM D. BONDS, Detroit
A prominent ABC anchorman

2:30 pm- **GENERAL ASSEMBLY MEETING**
4:30 pm **Ontario Room**

6:30 pm- **PAST PRESIDENTS' RECEPTION**
7:30 pm **Ontario Room**

7:30 pm- **CANADA SEA-TO-SEA DINNER DANCE**
Midnight **Canadian Room**

SUNDAY MORNING, APRIL 29

8:00 am- **CONTINENTAL BREAKFAST**
9:00 am **Ballroom**

9:00 am- **AAE BOARD OF DIRECTORS MEETING**
12 Noon **Toronto Room**

SCIENTIFIC SESSION VI **Ontario Room**

Moderator: JERRY S. SMITH, DDS, Toronto, Canada

9:00 am- **CANADIAN ACADEMY OF ENDODONTICS**
12 Noon

Lasers, intentional apical plugs and other new directions in endodontic instrumentation/obturation
KENNETH L. ZAKARIASEN, DDS, MS, PhD,
Edmonton, Canada

Laser radiation utilizing a fiber optic delivery system and intentional apical plugging offer exciting new directions in endodontics. Improved canal sealability, more favorable apical tissue responses and effective control of obturation materials which may facilitate new obturation techniques are possible. These topics and their potential interactions will be discussed and illustrated in detail.

Composite materials and techniques for endodontically involved teeth
RONALD E. JORDAN, DDS, MSD, London, Canada

The advent of new improved composite materials together with the development of refined techniques has resulted in a conservative approach to the restoration of anterior and posterior teeth.

The statements and opinions expressed at the Annual Session are solely those of the individual speakers. Those statements and opinions do not reflect any endorsement by The American Association of Endodontists.

AAE COMMITTEE MEETINGS

Thursday, April 26, 12:00 N

Education	Territories
Honors and Awards	Library

Friday, April 27, 7:30 am

Dental Care and Clinical Practice	Territories
Editorial Board	Territories
Membership	Territories
Research	York
Study Clubs	Library
International Relations	Library

Saturday, April 28, 7:30 am

Career Counseling	Saskatchewan
Insurance	Saskatchewan
Public and Professional Affairs	Saskatchewan

STUDY CLUBS, ALUMNI & OTHER GROUPS

Thursday, April 26

AADS-Endodontic Section Meeting (5:00-6:00 pm)	Confederation
Air Force Endodontic Luncheon Meeting (12:00-1:30 pm)	York

Friday, April 27

Army Endodontic Reception (6:30-8:30 pm)	Algonquin
Boston University Endodontic Alumni Breakfast (8:00-9:00 am)	Room 3
Boston University Endodontic Alumni Reception (6:00-9:00 pm)	3-132, 3-134, 3-140
Florida Association of Endodontists (4:30-5:30 pm)	Room 4
Harry Healy Endodontic Study Club Breakfast (7:30-9:00 am)	Saskatchewan
Harvard/Forsyth Alumni Cocktails and Banquet (Cocktails 7:30—Banquet 8:30 pm) .	*Wellington Restaurant
Iowa Endodontic Party (6:00-10:00 pm)	Rooms 5 and 6
University of Pennsylvania School of Dental Medicine Reception Honoring Dr. Louis I. Grossman and the Grossman Professorship (7:00-8:30 pm)	Territories
Temple University Alumni Endodontic Cocktail Party (6:30-8:00 pm)	Manitoba

Saturday, April 28

Oklahoma Association of Endodontists (7:30-9:00 am)	New Brunswick
Navy Endodontic Breakfast (7:30-9:00 am)	Upper Canada
Past Presidents' Breakfast (7:30-9:00 am)	Library

*North side of Wellington Street, between Yonge and Bay Street.

FUTURE ANNUAL SESSION SCHEDULE

42nd ANNUAL SESSION
April 24-28, 1985, Town & Country Hotel, San Diego, CA

43rd ANNUAL SESSION
April 16-20, 1986, Boston-Sheraton Hotel, Boston, MA

44th ANNUAL SESSION
April 29-May 3, 1987, Hilton & Hyatt Hotels, San Antonio, TX

PARTICIPANTS INDEX

A

Allemang, Jr., John D., p. 15
Amato, Robert B., p. 13
Antrim, Donald D., p. 12
Arens, Donald E., p. 8
Armandou, Gerard, p. 15
Augsburger, Robert A., p. 15
Aurelio, James A., p. 13
Averbach, Robert E., pp. 12, 16

B

Bakland, Leif K., pp. 9, 11
Barnett, Frederic, pp. 10, 13
Bassiouny, M., p. 10
Beatty, Richard G., p. 16
Beck, F. Mike, pp. 11, 13
BeGole, Ellen A., p. 13
Bellizzi, Ralph, p. 12
Benashur, Abdussalam S., p. 9
Benenati, Fred W., p. 10
Berg, Mark S., p. 10
Bernier, William E., pp. 5, 15
Bery, Paul F., p. 13
Biggs, John T., p. 10
Bills, Geraldine Ross, p. 15
Bonds, William D., p. 17
Borsuk, Herb H., pp. 5
Bowers, Gerald M., p. 8
Bramwell, John D., p. 15
Broadfoot, Dave, p. 13
Brothman, Peter, p. 15
Burk, Greg A., p. 13
Burkett, Barry L., p. 15
Burns, F. Bruce, pp. 5, 8
Burns, Josephine, p. 5
Burns, Richard C., p. 5

C

Camp, Joe H., pp. 5, 10
Chapnick, Barry L., p. 5
Chenail, Bruce L., pp. 13, 15
Chivian, Noah, pp. 8, 9
Chohayeb, Aida A., pp. 10, 15
Chubin, Myron, pp. 5, 8
Cohen, B. David, p. 16
Cohen, Stephen, pp. 5, 8
Collinson, Donald M., p. 16
Compton, Duane E., p. 5
Corcoran, John F., pp. 11, 16
Courtney, R. M., p. 11
Cullum, Daniel R., p. 16
Cunningham, Walter T., p. 10
Cwyk, Francine T., p. 11
Cymerman, Diane H., p. 11
Cymerman, Jerome J., p. 11
Czonstkowski, Mario, p. 10

D

Dang, Darrell, p. 16
Dederich, Douglas N., p. 16
DeVitre, Rustam, pp. 9, 13
Dietz, Gerald C., pp. 12, 13
Doblecki, Walter, p. 15

E

Edelson, Joel, p. 5
ElDeeb, Mahmoud E., p. 10

Elfenbein, Leslie R., p. 11
Ellison, Robert L., pp. 11, 16
Evenot, Michel, p. 10

F

Fawzi, Mervat I., p. 11
Feigal, R. J., p. 10
Fernandez, Juan Manuel, pp. 9, 15
Flath, Robert K., p. 15
Flatley, Carl J., p. 10
Fountain, Stuart B., p. 12
Fujiwara, Mutsuo, p. 16
Fuller, Michel W., p. 15
Fuss, Zvi, pp. 13, 15

G

Garnick, Jerry J., p. 17
Germaine, G. R., p. 10
Gerstein, Harold, p. 13
Goldman, Melvin, pp. 5, 9, 11, 13
Goodman, Alan T., p. 13
Goodrich, John L., p. 15
Greenfeld, Raymond S., p. 12
Gutmann, James L., pp. 5, 8

H

Hada, Hiroshi, p. 15
Hankin, Robert A., pp. 11, 13
Hayes, Terrence W., p. 5
Heersche, J. N. M., p. 8
Helfer, Allen R., p. 10
Hirata, Masako, p. 9
Hohenfeldt, Paul, p. 13
Holland, G. Rex, p. 16

I

Iijima, Kuniyoshi, p. 15
Iqbal, Mian Khalid, p. 16

J

Jacobsen, Egill L., pp. 10, 13
Javelet, Jeffrey M., p. 11
Jones, Thomas L., p. 10
Jordan, Ronald E., p. 17

K

Kim, Syngcuk, p. 14
Kleier, Donald J., pp. 5, 15, 16
Kos, William, p. 13
Krakow, Alvin A., pp. 11, 13
Krell, Keith V., p. 15

L

Laosonthorn, Pinit, p. 9
Laurichesse, Jean-Marie, p. 16
Lavagnoli, Giorgio M., p. 12
Laval-Jeantet, A. M., p. 10
Lee, Seung-Jong, p. 16
Lenkinski, Lionel, p. 5
Leon, S. A., p. 13
Levine, Mitchell, p. 10
Ludington, Jr., John R., p. 13

M

Maggio, Joseph D., pp. 11, 13
Malagnino, Giampiero, p. 15
Maltz, D. O., p. 9

Marosky, John E., p. 10
Marquez, Maria, p. 9
Marshall, F. James, p. 11
Martin, Howard, pp. 10, 14
Maruhashi, Masaru, p. 15
Melcher, Antony H., p. 8
Melfi, Rudy, p. 13
Mellonig, James T., p. 8
Melzack, Ronald, p. 14
Membrillo, Jose Luis, pp. 9, 15
Messer, Harold H., p. 10
Meyers, William J., pp. 11, 13, 15
Michanowicz, Andrew E., pp. 9, 10, 12
Michanowicz, John P., p. 9
Mills, John C., p. 16
Moawad, Karen, pp. 8, 9
Montgomery, Steve, p. 12
Moore, Kerry D., p. 11
Morela, D., p. 16
Mori, Katsuei, p. 15
Mork, Thomas O., p. 15
Moser, Charles Ray, p. 13
Mundell, Robert D., p. 9
Murphy, Richard A., p. 12
Mykleby, Brian A., p. 15

N

Nagasawa, Hisashi, p. 9
Nahmias, Yosef, p. 13
Nathanson, Dan, p. 9
Nevins, Alan J., pp. 11, 14
Newton, Carl W., p. 13
Nguyen, Nguyen T., pp. 13, 15
Niemczyk, Stephen P., p. 13

O

Oliet, Seymour, p. 9
Osetek, Edward M., p. 8
Osins, Biruta A., p. 5
Otani, Mitsuru, p. 16

P

Passamonti, Gino, p. 9
Patterson, Samuel S., p. 13
Peikoff, Marshall D., p. 12
Pike, Calvin G., p. 5
Pitt Ford, T. R., p. 9
Pockat, Richard J., p. 15
Pomeranz, Howard H., p. 12
Pulver, Wayne H., p. 16

Q

Quinton-Cox, Robert, p. 11

R

Rakusin, Hedley, p. 15
Reader, Alfred W., pp. 11, 13, 15
Reeh, Ernest, p. 16
Remeikis, Nijole A., pp. 10, 12
Ribolow, Ginnine S., p. 15
Rickoff, Bruce D., pp. 13, 15
Roahen, James O., p. 11
Roane, James B., p. 10
Robinson, P. P., p. 16
Rosenthal, Alan B., p. 15
Ross V, John B., p. 15
Rybeck, Jr., S. Arthur, p. 15
Rysz, Thomas J., p. 12

S

Saint-Pierre, Francoise, p. 11
Salamat, Khodabakhsh, p. 15
San Marco, Paul A., p. 12
Sas, George E., p. 5
Schmutz, John, p. 9
Schoeffel, G. John, p. 13
Schulz-Bongert, Joachim, p. 15
Schwartzben, Lyon J., p. 10
Scott, David A., p. 16
Settler, Samuel, p. 9
Serota, Kenneth S., p. 5
Shapshay, Stanley M., p. 10
Shklar, Gerald, p. 11
Sieraski, Steven M., pp. 11, 16
Simon, James H., p. 10
Smith, Jerry S., pp. 5, 17
Spyropoulos, Spyridon T., p. 16
Stamos, Daniel G., p. 15
Stastny, Gordon L., p. 10
Stern, Michael H., p. 14
Suchina, John A., p. 13
Sullivan, David K., p. 16
Swartz, Marjorie L., p. 13

T

Tagger, Michael, p. 17
Taintor, Jerry F., p. 15
Takubo, Masayoshi, p. 15
Tate, James S., p. 12
Tellefson, L., p. 10
Tenca, Joseph I., pp. 9, 13, 14
Torabinejad, Mahmoud, pp. 11, 14
Torneck, Calvin D., p. 11
Tronstad, Leif, pp. 9, 10, 11, 13
Trope, Martin, pp. 9, 11
Trowbridge, Henry O., pp. 9, 11

V

Van Cura, Joseph E., p. 12
Vanek, Paul M., p. 8
Vazquez, Jorge, p. 10
Velvart, Peter, p. 13
Vergara-Kitzenberg, Stella, p. 10
Vignoletti, Gianfranco, p. 12

W

Walters, James, p. 11
Walton, Richard E., p. 17
Watson, Ian D., p. 5
Webber, Raymond T., p. 12
Weisenseel, Jr., John A., p. 15
Weisman, Manuel I., p. 10
Weiss, Leon A., p. 9
Werbitt, Marvin, p. 12
White, Robert R., p. 9
Wiessman, Robert V., p. 15
Williams, Joseph J., p. 12
Williams, Scott A. D., p. 9

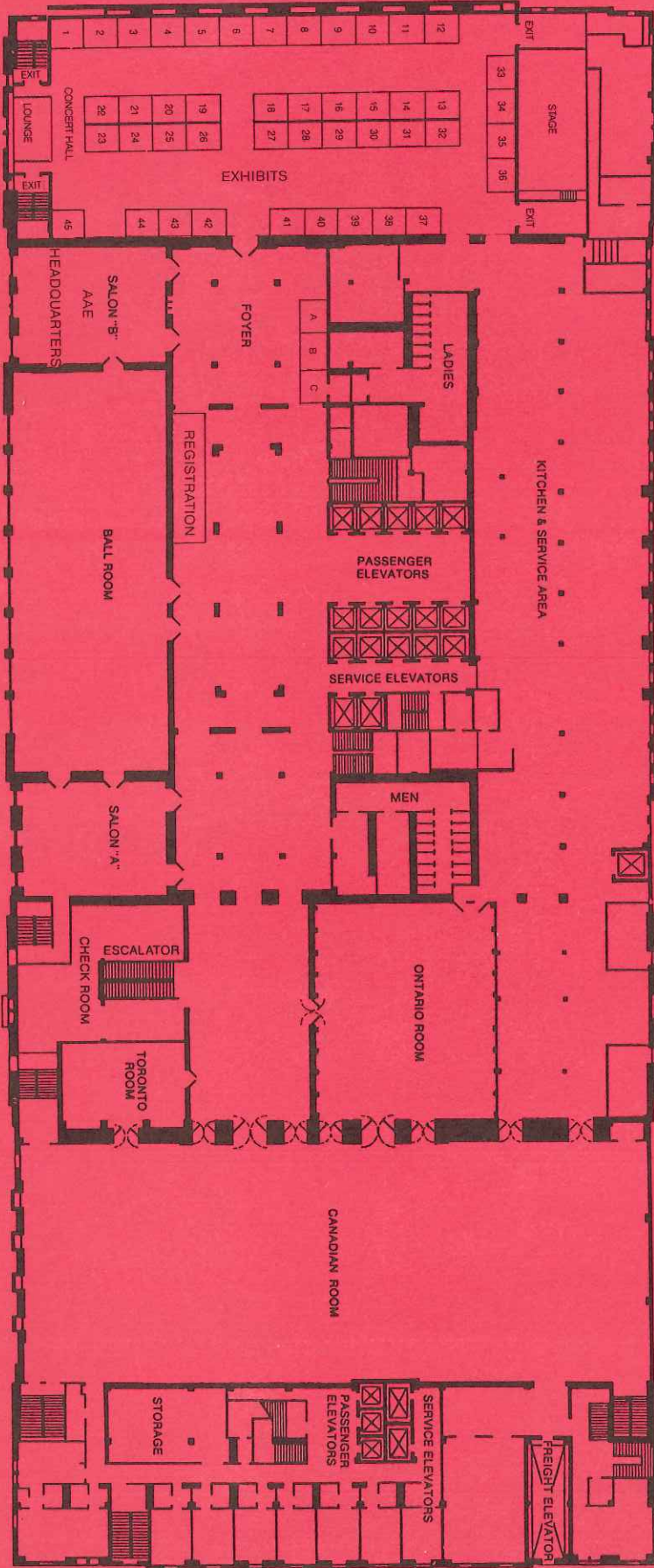
Y

Yee, Fulton S., p. 13
Yee, Randall D. J., p. 13

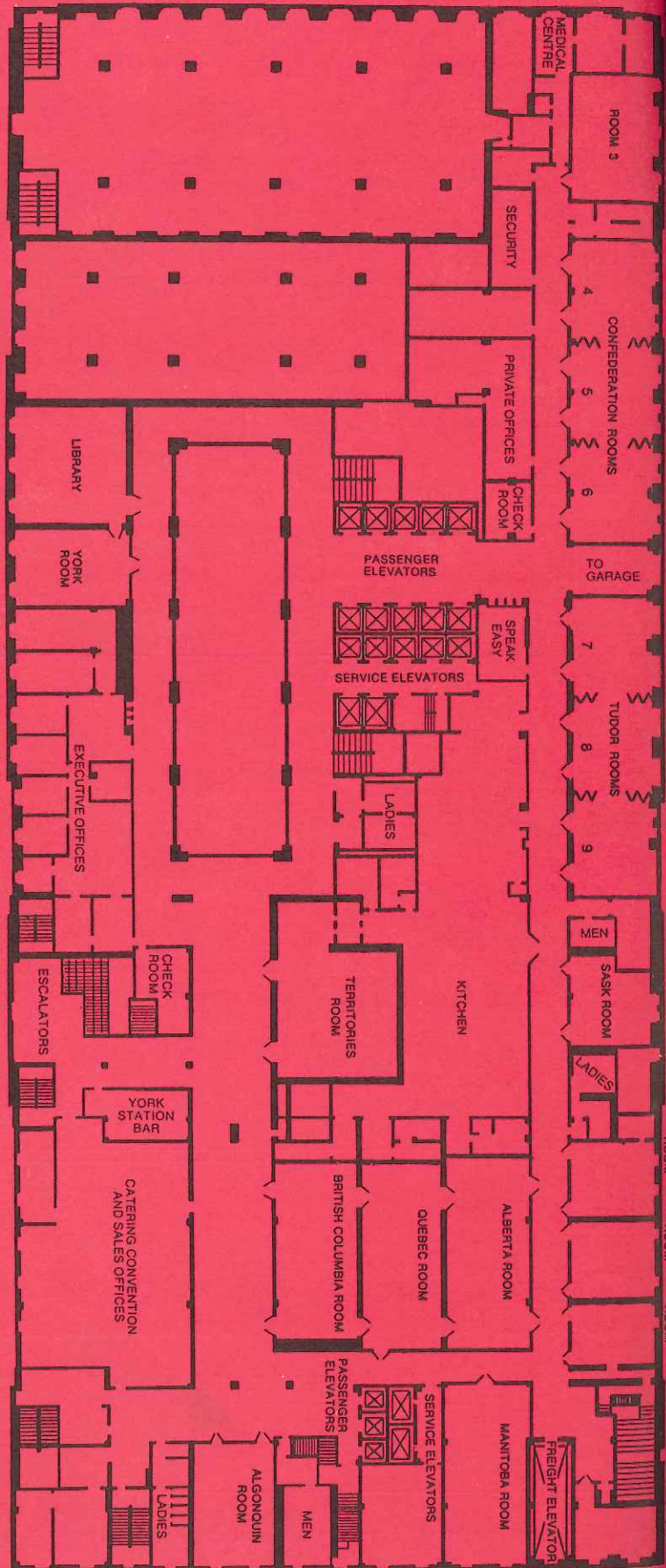
Z

Zakariasen, Kenneth L., p. 17
Zelikow, Robert, p. 12
Zucker, Kenneth J., p. 10

CONVENTION LEVEL



MEZZANINE LEVEL



TECHNICAL EXHIBITORS

Ada Products, Inc. (Booth #42)
P.O. Box 17709
Milwaukee, WI 53217

Amadent/American Medical & Dental Corp.
(Booth #26)
P.O. Box 733
Cherry Hill, NJ 08003

Analytic Technology Corp. (Booth #29)
3301 - 181st Place NE
Redmond, WA 98052

L.D. Caulk/Dentsply Canada Ltd.
(Booth #13/14)
1100 Lodestar Road, Unit #8
Downsview, ON, Canada M3J 2Z4

R. Chige Inc. (Booth #36)
71A West Merrick Road
Valley Stream, NY 11580

Columbus Dental (Booth #44)
1000 Chouteau Avenue, P.O. Box 620
St. Louis, MO 63188

Denco, Division of Sybron Canada Ltd.
(Booth #3)
260 Yorkland Boulevard
Willowdale, ON, Canada M2J 1R7

Encyclopaedia Britannica (Booth #24)
175 Holiday Drive
Cambridge, ON, Canada N3C 3N4

Healthco, Inc. (Booth #17)
25 Stuart Street
Boston, MA 02116

Hu-Friedy Mfg. Co., Inc. (Booth #23)
3232 North Rockwell Street
Chicago, IL 60618

Hygenic Corporation, The (Booth #19/20)
1245 Home Avenue
Akron, OH 44310

Inter-Dent (Booth #6)
391 Steelcase Road West, #16
Markham, ON, Canada L3R 3V9

Kelly Systems, Inc. (Booth #9/10)
6735 Telegraph Road, Suite 205
Birmingham, MI 48010

Kerr Division of Sybron Corp. (Booth #32)
28200 Wick Road, P.O. Box 455
Romulus, MI 48174

Kilgore International, Inc. (Booth #4)
36 West Pearl Street, P.O. Box 98
Coldwater, MI 49036

Lea & Febiger (Booth #8)
600 South Washington Square
Philadelphia, PA 19106

Lee Pharmaceuticals (Booth #43)
1444 Santa Anita Avenue
South El Monte, CA 91733

Medidenta International, Inc. (Booth #22)
39-23 62nd Street, P.O. Box 409
Woodside, NY 11377

Microcopy (Booth #30)
1174 Tourmaline Drive
Newbury Park, CA 91320

Neupro Products (Booth #15)
P.O. Box 37
West Dundee, IL 60118

Penn-Med Tech (Booth #34)
Balligomingo Road West
Conshohocken, PA 19428

Premier Dental (Canada), Inc. (Booth #37)
3781 Victoria Park Avenue, Unit #12
Scarborough, ON, Canada M1W 3K5

Pulpdent Corp. of America (Booth #31)
75 Boylston Street
Brookline, MA 02147

Quality Aspirators (Booth #25)
1002 Dove Creek
Duncanville, TX 75116

Quintessence Publishing Co., Inc.
(Booth #21)
8 South Michigan Avenue, Suite 2301
Chicago, IL 60603

RJP & Associates (Booth #45)
2724 South Peck Road
Monrovia, CA 91016

Sandoz Pharmaceuticals (Booth #35)
59 Route 10
East Hanover, NJ 07936

Saunders Company, W.B. (Booth #33)
West Washington Square
Philadelphia, PA 19105

Schwed Co. Inc., Charles B. (Booth #18)
138 Audley Street
Kew Gardens, NY 11418

Star Dental/Syntex Dental Products, Inc.
(Booth #7)
P.O. Box 896
Valley Forge, PA 19482

Sultan Chemists Inc. (Booth #5)
185 West Forest Avenue
Englewood, NJ 07631

Treolar & Heisel Inc.
(A Foyer, Concert Hall)
402 First Federal Plaza
New Castle, PA 16101

Union Broach/A Health-Chem Co.
(Booth #27/28)
1107 Broadway
New York, NY 10010

Unitek Corporation (Booth #39/40/41)
2724 South Peck Road
Monrovia, CA 91016

Whitehall Laboratories (Booth #16)
685 Third Avenue
New York, NY 10017

Williams & Wilkins (Booth #38)
428 East Preston Street
Baltimore, MD 21202

Xerox Medical Systems (Booth #11/12)
125 North Vinedo Avenue
Pasadena, CA 91107

Non-Technical Exhibits

AAE Career Counseling (Booth #1)

AAE Endowment and Memorial Foundation
(B Foyer, Concert Hall)

American Audio Association
(C Foyer, Concert Hall)
Cassette tapes of scientific sessions

DIRECTORS

AMERICAN BOARD OF ENDODONTICS

1984

I.B. Bender
John W. Harrison
James H. Simon, president

1985

Joseph I. Tenca, secy-treas.
Richard E. Walton
William H. Clem

1986

Harold Gerstein
Raymond G. Luebke
Frank B. Trice

TRUSTEES

AAE ENDOWMENT AND MEMORIAL FOUNDATION

1984

Myron Chubin
Joel L. Dunsky
James L. Gutmann
Joseph M. Leavitt

1985

Duane Compton, secy-treas.
Maurice J. Friedman
Howard Martin
Manuel I. Weisman, vice-pres.

1986

Raleigh R. Cummings
Bernard J. Grothaus
W. Paul Radman, president
Richard E. Schmidt

Ex-officio: Michael A. Heuer

AMERICAN ASSOCIATION OF ENDODONTISTS

PAST PRESIDENTS

* W. Clyde Davis	.....	'43-44
* Ralph F. Sommer	.....	'44-45
Robert G. Kesel	.....	'45-46
* E.G. Van Valey	.....	'46-47
Maynard K. Hine	.....	'47-48
Louis I. Grossman	.....	'48-49
* Elmer A. Jasper	.....	'49-50
* Raymond L. Girardot	.....	'50-51
* George G. Sharp	.....	'51-52
F. Darl Ostrander	.....	'52-53
Laurence A. Lucas	.....	'53-54
* N. Weir Burkman	.....	'54-55
* Harry J. Healey	.....	'55-56
John R. Pear	.....	'56-57
George C. Hare	.....	'57-58
George G. Stewart	.....	'58-59
* J. Henry Kaiser	.....	'59-60
* Paul P. Sherwood	.....	'60-61
* Glenn R. Brooks	.....	'61-62
Vincent B. Milas	.....	'62-63
James H. Sherard, Jr.	.....	'63-64
Jacob B. Freedland	.....	'64-65
Henry S. Schmidt	.....	'65-66
John I. Ingle	.....	'66-67
Edwin C. Van Valey	.....	'67-68
Samuel S. Patterson	.....	'68-69
Warren J. Hedman	.....	'69-70
John F. Bucher	.....	'70-71
Dudley H. Glick	.....	'71-72
I.B. Bender	.....	'72-73
Charles A. Scott, Jr.	.....	'73-74
Alfred L. Frank	.....	'74-75
Robert A. Uchin	.....	'75-76
Frank B. Trice	.....	'76-77
George A. Zurkow	.....	'77-78
Harry Blechman	.....	'78-79
Paul E. Zeigler	.....	'79-80
Edward M. Osetek	.....	'80-81
Henry J. Van Hassel	.....	'81-82
Noah Chivian	.....	'82-83

* Deceased

AWARD RECIPIENTS

Edgar D. Coolidge Award

Bertram L. Wolfsohn	.....	'74
Vincent B. Milas	.....	'75
Worth B. Gregory	.....	'78
Jacob B. Freedland	.....	'80
Alfred L. Frank	.....	'81
George G. Stewart	.....	'82
F. Darl Ostrander	.....	'83
Maynard K. Hine	.....	'83
George C. Hare	.....	'84

Louis I. Grossman Award

Louis I. Grossman	.....	'73
I.B. Bender	.....	'78
Samuel Seltzer	.....	'80
Harold R. Stanley	.....	'81
Kaare Langeland	.....	'82
Henry J. Van Hassel	.....	'84

Ralph F. Sommer Award

Calvin D. Torneck	'84
-------------------	-------	-----

HONORARY MEMBERS

Mary C. Crowley
Louis I. Grossman
Maynard K. Hine
Oscar A. Maisto
Maury Massler
Harold R. Stanley

AAE AUXILIARY

Helen Mills (Mrs. John) President
Carol Kloss (Mrs. James) President-elect
Lesley Mehlman (Mrs. Edwin) Vice-president
Sydney Tinkelman (Mrs. Carl) Secretary
Sharlene Yamanaka (Mrs. Richard) Treasurer
Judie Widerman (Mrs. Fred) Parliamentarian

The AAE Auxiliary will maintain a hospitality suite in the Toronto Room for all registered spouses.

WEDNESDAY, APRIL 25

3:30 pm- PRESIDENT'S WELCOME TEA
5:00 pm Toronto Room

THURSDAY, APRIL 26

8-10 am AUXILIARY HOSPITALITY OPEN
and Toronto Room
2-4 pm

7:30 am- AUXILIARY BOARD MEETING
9:00 am Library Room

FRIDAY, APRIL 27

8-10 am AUXILIARY HOSPITALITY OPEN
and Toronto Room
2-4 pm

SATURDAY, APRIL 28

12:00 Nn- AUXILIARY HOSPITALITY OPEN
4:00 pm Toronto Room

9:00 am- AUXILIARY BUSINESS BREAKFAST
11:00 am Confederation Rooms

A TRAVEL WARDROBE BY PATRICIA WHITE
Attendees will enjoy a Canadian Buffet Breakfast and the presentation of a travel wardrobe by Patricia White Shoppes, commentated by Audrey Hozack. Informal modeling will be provided by dentists' wives.

11:00 am- AUXILIARY BOARD MEETING
2:00 pm Library Room

TOURS

THURSDAY, APRIL 26

9:00 am- Toronto City Highlights
10:30 am

9:30 am- McMichael Gallery
4:00 pm

6:30 pm- Dinner Theater
11:30 pm

FRIDAY, APRIL 27

8:30 am- Niagara Falls
4:00 pm

9:30 am- Think Mink
1:00 pm

CONDENSED PROGRAM

TUESDAY, APRIL 24

		Room(s)
E&M Foundation Board Meeting	9 am-4:30 pm	Saskatchewan
ABE Board Meeting	5-9 pm	3-132

WEDNESDAY, APRIL 25

ABE Oral Exams	8 am-6 pm	3-110, 3-132, 3-134, 3-140
AAE Board of Directors Meeting	9 am-5 pm	Saskatchewan
Continuing Education Course	8:30 am-5 pm	Ballroom
Registration	11 am-8 pm	Convention Level
Welcome Reception	7:30-10 pm	Canadian

THURSDAY, APRIL 26

ABE Oral Exams	8 am-6 pm	3-110, 3-132, 3-134, 3-140
ABE Board Meeting	6-9 pm	3-140
Exhibits	8 am-5 pm	Concert Hall
Registration	8 am-6 pm	Convention Level
Opening Session Breakfast	8-10 am	Canadian
Business Session I	10:15 am-Nn	Ballroom
Scientific Session I	10:15 am-Nn	Ontario
Research Seminars I	10:15 am-Nn	Confederation
Business Session II	1:30-5 pm	Ballroom
Scientific Session II	1:30-5 pm	Ontario
Research Seminars II	1:30-5 pm	Confederation
Roundtable Seminars	1:30 pm & 3:15 pm	See Program
AADS Endodontic Section Meeting	5-6 pm	Confederation
Dinner Theater	6:30 pm	See Program

FRIDAY, APRIL 27

Fun Run	7:00 am	See Program
Continental Breakfast	8-9 am	Canadian
Exhibits	8 am-5 pm	Concert Hall
Registration	8 am-5 pm	Convention Level
Business Session III	9 am-Nn	Ballroom
Scientific Session III	9 am-Nn	Ontario
Research Seminars III	9 am-Nn	Confederation
Computer Workshop	9 am & 1:30 pm	Tudor
Roundtable Seminars	8:45 am & 10:30 am	See Program
Luncheon	Noon	Canadian
Business Session IV	1:30-5 pm	Ballroom
Scientific Session IV	1:30-5 pm	Ontario
Research Seminars IV	1:30-5 pm	Confederation

SATURDAY, APRIL 28

Continental Breakfast	8-9 am	Canadian
Exhibits Open	8 am-Nn	Concert Hall
Research Seminars V	9 am-Nn	Ontario
Scientific Session V	9 am-Nn	Ballroom
Table Clinics/Poster Clinics	9 am-Nn	Alberta, British Columbia, Quebec, Manitoba
E.D. Coolidge Luncheon	Nn-1:45 pm	Canadian
General Assembly Meeting	2:30-4:30 pm	Ontario
Past Presidents' Reception	6:30-7:30 pm	Ontario
Canada Sea-to-Sea Banquet	7:30 pm-Midnite	Canadian

SUNDAY, APRIL 29

Continental Breakfast	8-9 am	Ballroom
AAE Board of Directors Meeting	9 am-Nn	Toronto
Scientific Session VI	9 am-Nn	Ontario