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Schedule of Events

All functions will be held in the Acropolis Convention Centre unless otherwise noted.

CC - Convention Centre
MH - Le Meridien Hotel
NH - Negresco Hotel

Monday, June 22
10:00 am - 1:00 pm Host Division Meeting MH - Tourette
2:00 pm - 6:00 pm CED Executive Business Meeting MH - Tourette
6:00 pm - 8:30 pm IADR Division/Section Presidents’ Dinner Meeting MH - Biot
(invitation only)

Tuesday, June 23
9:00 am - 5:30 pm IADR Council Meeting MH - Vallauris
10:00 am - 12 Noon World Health Organization Meeting MH - Tourette
7:00 pm - 10:00 pm IADR Council Dinner (invitation only) MH - Biot

Wednesday, June 24
8:00 am - 4:40 pm IADR Hatton Competition CC - Exhibit Hall
-Post-doctoral Category (Verany - Room 1 & 2)
-Pre-doctoral Category (Verany - Room 3)
9:00 am - 1:00 pm CED Board Meeting CC - Gallieni 4
9:00 am - 2:00 pm Scandinavian Division Board Meeting CC - Gallieni 1
9:30 am - 12 Noon IADR Board of Directors Meeting MH - Tourette
9:30 am - 1:00 pm ICR Fluoride Project MH - Cogolin
10:00 am - 5:00 pm Registration Open CC - Main Lobby
12:30 pm - 2:30 pm Journal of Dentistry Editorial Board Meeting MH - Tourette
1:30 pm - 2:30 pm Middle East Center for Dental Education MH - Cogolin
2:15 pm - 5:00 pm Oral Sessions and Symposia CC - Separate Listing
3:00 pm - 5:00 pm Journal of Dentistry Reception (supported by Elsevier Science, Ltd.) MH - Eze
5:15 pm - 6:00 pm Opening Ceremonies CC - Apollon Auditorium
6:30 pm - 8:00 pm Welcome Reception CC - Agora 2 & 3 & Terrace

Thursday, June 25
7:00 am - 5:00 pm Registration Open
7:00 am - 8:00 am Dental Materials Group Executive Committee Meeting CC - Gallieni 5
7:00 am - 8:30 am Craniofacial Biology Group Executive Committee Meeting CC - Gallieni 1
7:00 am - 8:30 am BS&HSR Executive Committee Meeting CC - Risso 6
7:30 am - 8:30 am Archives of Oral Biology Editorial Board Meeting MH - Tourette
8:30 am - 11:15 am Oral Sessions and Symposia CC - Separate Listing
Hands-on Workshop #1 CC - Gallieni 2
8:45 am - 10:00 am British Dental Journal Editorial Board Meeting CC - Gallieni 5
9:00 am - 4:00 pm IFDEA Council Meeting MH - Cogolin
9:30 am - 2:00 pm Exhibition Open CC - Exhibit Hall
9:30 am - 2:00 pm Poster Viewing Open CC - Exhibit Hall
11:15 am - 12:45 pm Poster Presentations CC - Exhibit Hall
12:00 Noon -2:00 pm Irish Division Annual General Business Meeting Int’l Academy of Periodontology Board Meeting CC - Gallieni 3
12:30 pm - 2:00 pm European Journal of Dental Education Editorial Board Meeting (supported by Munksgaard International Publishers) CC - Gallieni 5
12:45 pm - 2:15 pm Lunch Break Lunch & Learning Session #1 CC - Muses Nord
IADR Committees’ Lunch (invitation only) CC - Euterpe
1:00 pm - 2:00 pm BSDR Junior Colgate Prize CC - Risso 6 & 7
2:15 pm - 5:00 pm Oral Sessions & Symposia Hands-on Workshop #2 CC - Separate Listing
5:00 pm - 6:00 pm Israeli Division Business Meeting CC - Gallieni 2
5:00 pm - 6:00 pm Group Business Meetings CC - Gallieni 5
-Behavioral Sciences & Health Services Research CC - Risso 7
- Cariology CC - Risso 6
- Craniofacial Biology CC - Athena
- Diagnostic Systems CC - C34 Room
- Educational Research CC - Mobile 11
- Experimental Pathology CC - Risso 8
- Implantology CC - Mobile 9
- Microbiology/Immunology CC - Mobile 4
- Mineralized Tissue CC - Clio
- Neuroscience/TMJ CC - Gallieni 3
- Nutrition CC - Gallieni 2
- Oral/Dental Hygiene Research CC - Thalie
- Pharmacology, Therapeutics, & Toxicology CC - Room C12
- Pulp Biology CC - Room A12

5:00 pm - 7:00 pm Scandinavian Division (NOF) General Assembly CC - Mobile 10

6:00 pm -
- Group Receptions
- Behavioral Sciences & Geriatric Oral Research MH - Eze
- Cariology, Mineralized Tissue & Nutrition CC - Euterpe
- Craniofacial Biology CC - Risso 7
- Dental Materials MH - Vallauris
- Diagnostic Systems CC - Room C34
- Educational Research CC - Mobile 11
(supported by Ultradent)
- Experimental Pathology CC - Risso 8
- Neuroscience/PTT MH - Terrace
(supported by Block Drug Co. and Stafford Miller)
- Oral/Dental Hygiene CC - Terrace
(supported by Colgate Oral Pharmaceuticals)

6:30 pm - 8:00 pm IADR/Unilever Travel Award Reception NH Salon Louis XIV (invitation only) Negresco Hotel

8:00 pm - 9:30 pm “Japan Night” Reception (invitation only) MH - Biot

Friday, June 26

7:30 am - 5:00 pm Registration Open CC - Main Lobby
7:30 am - 8:30 am New Member Orientation Breakfast CC - Euterpe
(supported by Colgate-Palmolive)

8:30 am - 11:15 am Oral Sessions and Symposia CC - Separate Listing
9:30 am - 2:00 pm Exhibition Open CC - Exhibit Hall
9:30 am - 2:00 pm Poster Viewing Open CC - Exhibit Hall
11:15 am - 12:45 pm Poster Presentations CC - Exhibit Hall
12:30 pm - 2:00 pm Clinical Oral Implants Research - Editorial Bd Mtg. MH - Tourette
(supported by Munksgaard International Publishers)

12:45 pm - 2:15 pm Lunch Break
12:45 pm - 2:15 pm Academy of Dental Materials Executive Committee Meeting CC - Gallieni 5

1:00 pm - 2:00 pm W. J. Gies Distinguished Speaker Lecture CC - Athena
2:15 pm - 5:00 pm Oral Sessions & Symposia CC - Separate Listing
5:00 pm - 6:30 pm BSDR Annual Business Meeting MH - Biot
5:00 pm - 6:00 pm Group Business Meetings
- Dental Materials CC - Thalie
- Geriatric Oral Research CC - Risso 8
- Oral & Maxillofacial Surgery CC - Erato
- Periodontal Research CC - Mobile 11
- Prosthodontics CC - Room C12
- Salivary Research CC - Room A12

6:00 pm - 7:00 pm CED General Assembly CC - Gallieni 3
6:00 pm - 8:00 pm “Irish Night” Reception (invitation only) MH - Eze
6:00 pm - 8:00 pm Latin America Division/Section Meeting CC - Gallieni 5
6:00 pm - 8:00 pm Brazilian Division Reception (invitation only) CC - Terrace
6:00 pm - Group Receptions
- Microbiology/Immunology & Periodontal Research
  MH - Private Beach Club
(supported by Warner-Lambert Co.)
- Oral & Maxillofacial Surgery
  CC - Erato
- Prosthodontics
  CC - Room C12
6:30 pm - 7:30 pm BSDR Reception (invitation only)
  (supported by the British Dental Association and Unilever)
  MH - Terrace

Saturday, June 27
7:00 am - 8:30 am BS&HSR Executive Committee Meeting
  CC - Risso 7
7:00 am - 9:00 am Dental Materials Editorial Board Meeting (invitation only)
  CC - Gallieni 2
7:00 am - 9:00 am GPC Breakfast Meeting
  CC - Euterpe
7:30 am - 9:00 am Science Editors’ Meeting
7:30 am - 5:00 pm Registration Open
8:30 am - 11:15 am Oral Sessions and Symposia
  CC - Separate Listing
9:30 am - 2:00 pm Exhibition Open
9:30 am - 2:00 pm Poster Viewing Open
11:15 am - 12:45 pm Poster Presentations
12:45 pm - 2:15 pm Lunch Break
  Lunch & Learning Session #2
  CC - Muses Nord
  IADR Past Presidents’ Luncheon
  CC - Euterpe
1:00 pm - 2:00 pm IADR/Colgate “Research in Prevention”
  CC - Gallieni 2
Travel Award Luncheon (sponsored by Colgate-Palmolive Co.)
2:15 pm - 5:00 pm Oral Sessions & Symposia
  CC - Separate Listing
5:00 pm Meeting Adjourns

Poster Presentations

<table>
<thead>
<tr>
<th>Day</th>
<th>Program #s</th>
<th>Poster Viewing</th>
<th>Poster Presentations</th>
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<tbody>
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<td>Thursday</td>
<td>314-1027</td>
<td>9:30 am - 2:00 pm</td>
<td>11:15 am - 12:45 pm</td>
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<tr>
<td>Friday</td>
<td>1349-2036</td>
<td>9:30 am - 2:00 pm</td>
<td>11:15 am - 12:45 pm</td>
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<td>Saturday</td>
<td>2354-3067</td>
<td>9:30 am - 2:00 pm</td>
<td>11:15 am - 12:45 pm</td>
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Poster Set-up and Tear-down Schedule

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<th>Day</th>
<th>Set-up</th>
<th>Tear-down</th>
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<tr>
<td>Thursday</td>
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<td>7:30 am - 9:30 am</td>
<td>2:00 pm - 5:30 pm</td>
</tr>
<tr>
<td>Saturday</td>
<td>7:30 am - 9:30 am</td>
<td>2:00 pm - 2:30 pm</td>
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</table>
### Chronological Listing of Sessions

<table>
<thead>
<tr>
<th>Seq #</th>
<th>Group</th>
<th>Session Title</th>
<th>Room</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>SYM</td>
<td>Competencies of the New Dentist: Impact on Dental Education</td>
<td>Hermes Room</td>
</tr>
<tr>
<td>2</td>
<td>SYM</td>
<td>Intl Collaborative Research Initiative on Orofacial Gangrene (NOMA)</td>
<td>Athena Room</td>
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<tr>
<td>3</td>
<td>SYM</td>
<td>What Types of Information are Needed to Perform “Outcome Studies” of Dental Care and How Can These be Obtained?</td>
<td>Hermes Room</td>
</tr>
<tr>
<td>4</td>
<td>SYM</td>
<td>Improvement in Oral Health in Adults: How Will this Alter our Research Efforts?</td>
<td>Mobile 10</td>
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<tr>
<td>5</td>
<td>CAR</td>
<td>Caries Detection; Lasers; Caries Models</td>
<td>Risso 6</td>
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<tr>
<td>6</td>
<td>CRAN</td>
<td>Craniofacial Development</td>
<td>Room C12</td>
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<tr>
<td>7</td>
<td>DM</td>
<td>Surface Analysis, Adhesive Modification</td>
<td>Room 5</td>
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<tr>
<td>8</td>
<td>DM</td>
<td>Atraumatic Treatment, Primary Tooth Restoration, Sealant, General</td>
<td>Risso 7</td>
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<tr>
<td>9</td>
<td>DM</td>
<td>Caries-affected Dentin, Self-priming Adhesives, Bonding to Alloys and Amalgam</td>
<td>Thalie Room</td>
</tr>
<tr>
<td>10</td>
<td>DM</td>
<td>Composites, Polymers, and Biocompatibility</td>
<td>Erato Room</td>
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<tr>
<td>11</td>
<td>DM</td>
<td>Physical Properties of Resin-based Materials</td>
<td>Room 4</td>
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<tr>
<td>12</td>
<td>EXP</td>
<td>Cell Culture—Carcinoma Models</td>
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<tr>
<td>13</td>
<td>MT</td>
<td>Collagen and Mineralization Factors</td>
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<td>14</td>
<td>M/I</td>
<td>Adhesin/Adhesion</td>
<td>Clio Room</td>
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<tr>
<td>15</td>
<td>NEU</td>
<td>Masticatory Muscles: Physiology and Motor Control Mechanisms</td>
<td>Gallieni 3</td>
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<td>16</td>
<td>PERIO</td>
<td>Host Periodontal Diagnostic Markers and Genetics</td>
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<td>17</td>
<td>PERIO</td>
<td>Genetics and Other Factors Affecting Disease Status</td>
<td>Room C34</td>
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<td>18</td>
<td>PTT</td>
<td>Dentifrices, Antimicrobials, Toxicology, and Fluoride</td>
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<tr>
<td>19</td>
<td>PB</td>
<td>Pulpal Circulation and Pulpal Pain</td>
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<td>20</td>
<td>HOW</td>
<td>Workshop #1 - Systematic Reviews and Meta-analysis in Dentistry: An Introduction</td>
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<td>21</td>
<td>SYM</td>
<td>Global Perspective on Nutritional Component of Oral Health Surveys</td>
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<td>22</td>
<td>SYM</td>
<td>The Digital Dental Office as the Agent of Change</td>
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<td>23</td>
<td>SYM</td>
<td>Periodontal Regeneration - Development and Current Status</td>
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<td>24</td>
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<td>Health Services Research</td>
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<td>Epidemiology—Prevalence, Risk Factors</td>
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<td>26</td>
<td>DM</td>
<td>Ceramics—Physical Properties</td>
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<tr>
<td>27</td>
<td>DM</td>
<td>Experimental Formulations, Bonding to Resins, in vivo Bonding, Microleakage, Wear</td>
<td>Erato Room</td>
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<td>28</td>
<td>DM</td>
<td>Compomers, Resin Ionomers, and Composite Polymerization</td>
<td>Room 4</td>
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<tr>
<td>29</td>
<td>DM</td>
<td>Metals, Bleaching, Color, Analysis</td>
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<td>GOR</td>
<td>Dental Status, Dental Services, and Oral Health Outcomes</td>
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<td>31</td>
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<td>Clinical Studies</td>
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<tr>
<td>32</td>
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<td>33</td>
<td>O/D</td>
<td>Power-assisted Toothbrushes</td>
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<td>34</td>
<td>OMS</td>
<td>Techniques/Procedures in OMS</td>
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<tr>
<td>35</td>
<td>PERIO</td>
<td>Special Populations</td>
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<tr>
<td>36</td>
<td>PTT</td>
<td>Pain Control and Inflammation</td>
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<td>37</td>
<td>PB</td>
<td>Endodontic Restorative Materials and Instrumentation Techniques</td>
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<td>38</td>
<td>SR</td>
<td>Salivary Proteins</td>
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39 PB Pulpal Neural Responses and Microcirculation
40 PB Pulpal and Periapical Immune and Inflammatory Responses
41 PROS Post and Core, Casting Alloy, Investment Materials
42 PROS Overdenture, Resilient Liner, Complete Denture
43 DM Bond to Ceramics, Amalgam, Orthodontics
44 DM Margin Adaptation, Surface Contamination
45 DM Ceramics, Physical Properties
46 DM Filler-Matrix Bonding, Bonding to Dentin
47 DM Composites, Resin Ionomers, and Composite Polymerization
48 DM Composites: Physical Properties and Polymer Systems
49 DM Cements: Physical Properties and Strength
50 DM Biocompatibility
51 DM Physical Properties—Resins
52 DM Miscellaneous
53 DM Endodontics, Orthodontics, General
54 GOR Oral Function and Self-perceived Oral Health in the Elderly
55 BS/HSR Fluorosis
56 BS/HSR Oral Health Risks
57 BS/HSR Oral Health—Special Populations
58 BS/HSR Oral Health Surveys—Children
59 BS/HSR Oral Health Surveys
60 BS/HSR Oral Health—Minority Populations
61 IMP Clinical Studies—Grafting Procedures, Fracture Failures
62 IMP General Clinical Studies
63 CAR Epidemiology, Prevention, Diet
64 CAR Caries Detection; Epidemiology
65 CAR Enamel/Dentin Structure; Root Caries; Methods
66 O/D Power-assisted and Manual Toothbrushes and Interdental Devices
67 NUT Foods, Diets, and Health
68 MT Factors Involved in Formation of Enamel & Dentin
69 MT Bone Resorption, Osteoporosis
70 MT Diseases and Physical Defects of Mineralized Tissues
71 SR Salivary Flow/Chemistry
72 SR Salivary Proteins/Molecules
73 M/I Specific Immunity/Cytokines
74 M/I Molecular Studies of Bacterial Antigens
75 M/I HIV/Viral Infections
76 M/I Antimicrobial
77 OMS Basic Research Topics in OMS
78 PERIO Microbial Assessment of Periodontal Populations
79 PERIO Periodontal Host Factors and Genetics
80 PERIO Hormones/Agents Influencing Periodontal Tissues/Cells
81 PERIO Special Populations/Crevicular Fluid
82 PERIO Grafts, Recession Therapy, Non-antimicrobial Drugs
83 PERIO Antimicrobial Therapy
84 PERIO Root Conditioning, Varnishes
85 PTT Pain Control, Antimicrobials, and General
86 NEU Orofacial Disorders: Evaluation and Treatment
87 NEU Experimental Neuroscience
88 EXP Carcinoma Cell Culture
89 EXP Epithelial
90 CRAN Craniofacial Genetics, CLP, and Cancer
91 CRAN Diagnosis and Treatment Evaluation
92 CRAN Craniofacial Anatomy and Function

Workshop: 2:15 pm - 5:00 pm
93 HOW Workshop #2 - Oral Anaerobes - Collecting, Culturing, Identifying Gallieni 2

Symposia: 2:15 pm - 5:00 pm
94 SYM Antimicrobial Agents Used in Periodontal Therapy:
Evidence-based Efficacy
95 SYM Impact of International Collaborative Studies on Future Oral Health Mobile 10
96 SYM Glass Ionomers and their Modifications Athena Room

Oral Sessions: 2:15 pm - 5:00 pm
97 CRAN PDL Cells, Fibroblasts, Osteoblasts, Chondroblasts, and Hormones Risso 7
98 DM New Ceramics, Color, Techniques Thalie Room
99 DM Polymers—Denture Bases, Prosthetic Polymers, and Impression Materials Room 4
100 DM Dental Alloys Room 5
101 DIA Laser, Mechanical, and Flowmetry Systems Room C34
102 EXP Epithelial Risso 8
103 IMP Animal Studies Mobile 9
104 M/I Bacterial Toxin/Invasions Mobile 4
105 MT Dentinogenesis, Dentin Proteins, and Chondrocytes Clio Room
106 NEU TMD: Pathophysiology and Psychophysiological Assessment Gallieni 3
107 NUT Nutrients, Metabolites, and Oral Health Gallieni 5
108 OMS Basic Science Topics in Oral/Maxillofacial Surgery Erato Room
109 PERIO Bacterial Markers in Periodontal Diseases Risso 6
110 PERIO Guided Bone Regeneration, Grafts Mobile 11
111 PROS Ceramic Crowns and Veneers, CAD-CAM Room C12
112 SR Saliva/Salivary Molecules

Friday, June 26
Symposia: 8:30 am - 11:15 am
113 SYM Understanding Age-related Changes in Muscle and Bone in Relation to Dentistry Athena Room
114 SYM Oral Infections and Systemic Conditions Mobile 9
115 SYM The State of ART (Atraumatic Restorative Treatment) - A Scientific Perspective Hermes Room

Oral Sessions: 8:30 am - 11:15 am
116 BS/HSR HIV Risso 7
117 CAR Cariogenic Micro-organisms; Inhibitory Agents; Root Caries Risso 6
118 CRAN Orthodontic Treatment and Treatment Outcome Room C34
119 DM Cements, Marginal Adaptation, Fluoride Release Room 5
120 DM Compomers, Composite Resin Erato Room
121 DM Hybrid and Glass Ionomers, Compomers, Orthodontic Bonding to Enamel Room 4
122 DM Endodontics, Cellular Attachment Thalie Room
123 EDUC Dental Undergraduate Issues Gallieni 3
124 EXP Carcinoma, Histopathology Risso 8
125 M/I Specific Immunity Mobile 4
126 MT Caries, Erosion, Calculus, Pathology Clio Room
127 PERIO Effects on Micro-organisms Mobile 10
128 PERIO Guided Tissue Regeneration Mobile 11
129 PROS Post and Core, Impression Materials, RPD Room C12
130 PB Pulpal Inflammatory Responses and Microbiology Room A12

Poster Sessions : 11:15 am - 12:45 pm (Viewing Time: 9:30 am - 2:00 pm) Exhibit Hall
131 PB Clinical Studies: Endodontic and Vital Pulp Therapy
132 PROS Ceramic Restorations, CAD-CAM
133 PROS Shade Matching, Burs, Provisional Restorations, Composite Resin
134 PROS Masticatory Function, Resin-bonded FPD
135 DM Microleakage, Adhesive Modifications, Mechanisms, Fissure Sealants
136 DM Surface Analysis, Hybrid Layer
137 DM Novel Cements, Biocompatibility
138 DM Cements, Fluoride Release, Microleakage
139 DM Compomers, Hybrid Ionomers, Bonding to Resins, Wear
140 DM Biocompatibility, Marginal Adaptation, and Crown and Bridge Materials
141 DM Composites and Polymers: General
142 DM Fluoride Release, Laser Effects, Tooth Structure Properties, Color
143 DM Orthodontic Materials, Miscellaneous
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<th>Session</th>
<th>Topic</th>
<th>Location</th>
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<tr>
<td>200 MT</td>
<td>Bone Formation: Osteoblast Activity, Proteins, Osteoclasts</td>
<td>Clio Room</td>
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<tr>
<td>201 SR</td>
<td>Salivary Physiology/Signal Transduction</td>
<td>Room A12</td>
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**Saturday, June 27**

Symposia: 8:30 am - 11:15 am

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<th>Topic</th>
<th>Location</th>
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<td>202 SYM</td>
<td>Smoking and Periodontal Disease - Is the Bone the Target?</td>
<td>Hermes Room</td>
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<tr>
<td>203 SYM</td>
<td>Cysteine Proteases of Porphyromonas gingivalis: Biology and Nomenclature</td>
<td>Room C34</td>
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<tr>
<td>204 SYM</td>
<td>Enamel and Dentin: Matrix Components and Mineralization</td>
<td>Risso 8</td>
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Oral Sessions: 8:30 am - 11:15 am

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<th>Topic</th>
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<tr>
<td>205 BS/HSR</td>
<td>Epidemiological Methods</td>
<td>Risso 7</td>
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<td>206 CRAN</td>
<td>Diagnosis and Orthodontic Treatment of Malocclusion</td>
<td>Room A12</td>
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<tr>
<td>207 CRAN</td>
<td>Craniofacial and Dental Development</td>
<td>Athena Room</td>
</tr>
<tr>
<td>208 DM</td>
<td>Adhesion: Marginal Adaptation, Mechanisms</td>
<td>Room 4</td>
</tr>
<tr>
<td>209 DM</td>
<td>Ceramics, Marginal Adaptation, Surface Treatment</td>
<td>Erato Room</td>
</tr>
<tr>
<td>210 DM</td>
<td>CAD/CAM, Ceramic/Composite Inlays</td>
<td>Room 5</td>
</tr>
<tr>
<td>211 DM</td>
<td>Composites: Physical Properties</td>
<td>Thalie Room</td>
</tr>
<tr>
<td>212 GOR</td>
<td>Oral Health of Institutionalized and Medically Compromised Elderly</td>
<td>Mobile 9</td>
</tr>
<tr>
<td>213 MT</td>
<td>Mineral and Mineralization</td>
<td>Clio Room</td>
</tr>
<tr>
<td>214 M/I</td>
<td>Epidemiology, Typing</td>
<td>Mobile 4</td>
</tr>
<tr>
<td>215 NEU</td>
<td>TMD: Etiology, Evaluation, Management</td>
<td>Risso 6</td>
</tr>
<tr>
<td>216 O/D</td>
<td>Manual Toothbrushes, Floss, Mouthrinses, Gum</td>
<td>Gallieni 3</td>
</tr>
<tr>
<td>217 PERIO</td>
<td>Periodontal Probing and Imaging</td>
<td>Mobile 11</td>
</tr>
<tr>
<td>218 PERIO</td>
<td>Local Drug Delivery, Root Conditioning</td>
<td>Mobile 10</td>
</tr>
<tr>
<td>219 PROS</td>
<td>Resin-bonded FPD, Resin Cement, Casting Alloy</td>
<td>Room C12</td>
</tr>
</tbody>
</table>

Poster Presentations: 11:15 am - 12:45 pm (Viewing Time: 9:30 am - 2:00 pm)

<table>
<thead>
<tr>
<th>Session</th>
<th>Topic</th>
<th>Location</th>
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<tbody>
<tr>
<td>220 HATTON</td>
<td>Odontoblasts, Pulp Capping, and Biocompatibility</td>
<td>Exhibit Hall</td>
</tr>
<tr>
<td>221 PB</td>
<td>RPD (Stress Analysis, Framework Alloy, Design)</td>
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<tr>
<td>222 PROS</td>
<td>Occlusion, Implant Prosthodontics</td>
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<tr>
<td>223 PROS</td>
<td>Denture Adhesive, Stomatitis, Denture Function</td>
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<tr>
<td>224 DM</td>
<td>Microleakage</td>
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<tr>
<td>225 DM</td>
<td>Ceramics, Glass Ionomers, Fluoride Release</td>
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<td>227 DM</td>
<td>New Ceramics, Color, Strength</td>
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<tr>
<td>228 DM</td>
<td>Ceramics, General</td>
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<tr>
<td>229 DM</td>
<td>General, Bond to Metal</td>
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<tr>
<td>230 DM</td>
<td>One-bottle Adhesives, Meta-analysis, Bonding to Dentin</td>
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<tr>
<td>231 DM</td>
<td>Denture Bases and Impression Materials</td>
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<tr>
<td>232 DM</td>
<td>Anti-microbial Effects, Abrasives, Bleaching, New Methods</td>
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<tr>
<td>233 DM</td>
<td>Endodontics</td>
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<tr>
<td>234 DM</td>
<td>Dental Alloys</td>
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<tr>
<td>235 DM</td>
<td>Glass Ionomers, Composite Resin, Bonding, Bonding Resin, Veneers</td>
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<td>236 DM</td>
<td>Sensitivity, Bonded Amalgam, Gold, Hg</td>
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<tr>
<td>237 DM</td>
<td>Prosthodontics, Gemoents, Bleaching</td>
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<tr>
<td>238 DIA</td>
<td>Image Processing; MRI</td>
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<tr>
<td>239 GOR</td>
<td>Salivary Function and Dental Caries</td>
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<tr>
<td>240 BS/HSR</td>
<td>Early Childhood Caries</td>
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<tr>
<td>241 BS/HSR</td>
<td>Dental Practices</td>
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<tr>
<td>242 BS/HSR</td>
<td>Health Services Research</td>
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<tr>
<td>243 BS/HSR</td>
<td>Health Services Care Evaluation</td>
<td></td>
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<tr>
<td>244 IMP</td>
<td>In vitro Cellular and Coating Studies</td>
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<tr>
<td>245 IMP</td>
<td>Implant Cellular, Surface, &amp; Coating Studies</td>
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<tr>
<td>246 IMP</td>
<td>General Animal Studies</td>
<td></td>
</tr>
<tr>
<td>247 CAR</td>
<td>S. mutans; Antimicrobial Agents</td>
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<tr>
<td>248 CAR</td>
<td>Sealants, Caries Removal, Cariostatic Restorative Materials, Prevention</td>
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<tr>
<td>249 O/D</td>
<td>Mouthrinses, Toothpaste, and Chewsticks</td>
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<tr>
<td>250 MT</td>
<td>Bone Formation, Osteoblast Activity</td>
<td></td>
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<tr>
<td>251 MT</td>
<td>Amelogenesis - Enamel Proteins, Enamel</td>
<td></td>
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<tr>
<td>252 MT</td>
<td>Bones, Teeth, Periodontal Ligament</td>
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</tbody>
</table>
253 SR Saliva and Disease
254 SR Saliva and Disease
255 M/I HIV/AIDS/Viral Infections
256 M/I Stomatitis/Nursing Caries/New Agents
257 M/I Microbial Physiology/Antigens
258 M/I Antimicrobials
259 M/I Biofilms/Dental Plaque
260 OMS Trauma/Reconstruction
261 PERIO Epidemiology of Periodontal and Systemic Diseases
262 PERIO Periodontal Probing and Radiographic Assessments
263 PERIO Tissue Destruction: Role of MMPs
264 PERIO Influence of Virulence Factors and Other Agents on Cell Activities
265 PERIO Bacterial Regulation—Cloning, Function, and Models
266 PERIO Cell Culture and Animal Studies
267 PERIO Systemic Drugs and Mouthrinse
268 PTT Fluoride, Toxicology, and Tissue Regeneration
269 NEU TMJ Pathophysiology, Hemodynamics
270 NEU Orofacial Sensory-Motor Systems
271 NEU Orofacial Pain
272 EXP Clinical Oral Pathology
273 EXP Histopathology
274 EXP Clinical Oral Pathology
275 CRAN Periodontal Aspects and Eruption
276 CRAN Miscellaneous Dentofacial Aspects

Symposia: 2:15 pm - 5:00 pm
277 SYM Antiviral Properties of Saliva Hermes Room
278 SYM The Epithelial Basement Membrane: Recent Advances in Biology & Pathology Mobile 10

Oral Sessions: 2:15 pm - 5:00 pm
279 BS/HSR Pain and Fear—Clinical and Lab Studies Risso 7
280 CAR Fluoride; Dentifrices; Slow Release; Diet Risso 8
281 CRAN Craniofacial Morphology and Functional Aspects Athena Room
282 DM Bond to Ceramics, Metals, Orthodontics, General Room 5
283 DM Cements—Physical Properties Erato Room
284 DM Adhesive Resins, Sealants, Caries Prevention Room 4
285 DIA Cephalometry: Other Systems Room C34
286 IMP General Clinical Studies Mobile 9
287 M/I Antimicrobials/Treatments Mobile 4
288 MT Cementogenesis, Cementum, Cartilage, Chondrocytes, Root Resorption Clio Room
289 NEU Mandibular Biomechanics Risso 6
290 PERIO Cell: Bacteria: Adhesion Interactions Room A12
291 PERIO Cell: Factor Interactions and Model Systems Mobile 11
292 PERIO Tobacco and Periodontal Health Thalie Room
293 PROS Articulation, Masticatory Function, Esthetics Room C12
294 PB Pulpal Extracellular Matrix and Growth Factors Gallieni 3

Legend

BS/HSR Behavioral Sciences/Health Services Research
CAR Cariology
CRAN Craniofacial Biology
DIA Diagnostic Systems
DM Dental Materials
EDUC Educational Research
EXP Experimental Pathology
GOR Geriatric Oral Research
HATTON Edward H. Hatton Competition
HOW Hands-on Workshop
IMP Implantology
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M/I</td>
<td>Microbiology/Immunology and Infection Control</td>
</tr>
<tr>
<td>MT</td>
<td>Mineralized Tissue</td>
</tr>
<tr>
<td>NEU</td>
<td>Neuroscience/TMJ</td>
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<tr>
<td>NUT</td>
<td>Nutrition</td>
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<tr>
<td>O/D</td>
<td>Oral/Dental Hygiene</td>
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<tr>
<td>OMS</td>
<td>Oral &amp; Maxillofacial Surgery</td>
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<tr>
<td>PB</td>
<td>Pulp Biology</td>
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<tr>
<td>PERIO</td>
<td>Periodontal Research</td>
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<tr>
<td>PROS</td>
<td>Prosthodontics</td>
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<tr>
<td>PTT</td>
<td>Pharmacology, Therapeutics, &amp; Toxicology</td>
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<tr>
<td>SAL</td>
<td>Salivary Research</td>
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<tr>
<td>SYM</td>
<td>Symposium</td>
</tr>
</tbody>
</table>
General Information

Registration

The IADR Registration Area will be located in the Acropolis Convention Centre. Registration will be open during the following hours:

Wednesday, June 24, 10:00 am - 5:00 pm
Thursday, June 25, 7:00 am - 5:00 pm
Friday, June 26, 7:30 am - 5:00 pm
Saturday, June 27, 7:30 am - 4:00 pm

Accompanying Person(s) (Guests)

Accompanying persons are adult non-dentists, non-researchers, non-IADR/AADR members who may be traveling to Nice with a meeting delegate and have no scientific involvement and will not be honored at any other session during the meeting. Anyone who wishes to attend more than one session will be required to pay the appropriate fee. All accompanying persons may attend the Opening Ceremonies on Wednesday and the W.J. Gies Distinguished Speaker Lecture on Friday.

Badges

Admission to all sessions and all other events during the Meeting will be by badge only. Please wear your badge at all times. Guest badges and special color codes for specific sessions will be available at the sales booth in the registration area, and guest badges are required for all social functions. If you lose your badge, you will be required to show your receipt to obtain a replacement badge.

Directory of Registrants

Voyages Mathez (the official IADR travel agency in Nice) will have a guest hotel locator file to assist you in finding other participants during the meeting. Their booth will be located in the IADR Registration Area.

Photographs & Tape Recordings

Individuals desiring to take photographs or make tape recordings during the session must obtain prior permission from the speakers, as well as from the session chair.
Program and Abstracts

Program

Pre-registrants: copies mailed April and May
Presenters: copies mailed in April and May
On-site Registrants: copy given on site
Replacement/Extra Copies: $20.00 each

Abstracts

Members: copies mailed in April
NOTE: Duplicates will NOT be issued on site.
Non-members: copy given on site
On-site Registrants: copy given on site
Replacement/Extra Copies: $20.00 each

Members who DO NOT ATTEND the meeting WILL NOT RECEIVE the Program. All members (other than students who do not regularly receive the JDR) will receive the meeting Abstracts.

Listing of Presenters and Authors

The Program will list the primary presenter’s name, co-author’s name(s), and their institutions. Abstract numbers of presenters are listed in the Author/Co-author Index in bold-face type. In cases of multiple authorship, the speaker is identified in the abstract by an asterisk (*) following his or her name in both the Program and Abstracts.

The number of each abstract printed in the Abstracts is the same as the corresponding paper in this book. The abstracts are printed exactly as submitted by the authors, without subsequent editing.

Child Access to Sessions

Children are allowed access to the exhibition hall only during poster presentation/exhibition hours. Children are NOT allowed access to the oral session meeting rooms.

Smoking Policy

The IADR meeting is a non-smoking meeting. Ashtrays will be available outside the Nice Convention Centre and in the public areas of the hotels. No smoking is permitted in the meeting rooms at either the Convention Centre or the hotel.

Meeting Rooms

All scientific sessions will be held in the Acropolis Convention Centre. Please check the Schedule of Events for the location of specific meetings and functions. You are encouraged to find rooms in which you plan to present or hear presentations well in advance of the times of the functions.

Coat Check/Luggage Storage

Facilities for coat check and luggage storage will be available at the Convention Centre for the duration of the meeting. Please do not bring your luggage to the meeting rooms.

Food Service

If you would like a cup of coffee, snack, or lunch, a lounge will be set with concession stands in the Exhibit Hall (for specific locations, see the Exhibition Floor Plan, page 12). The concession stands will be open during the Exhibition Hours only. In addition, the restaurant at the Acropolis Convention Centre will be open throughout the meeting (located on level 2).

Job Opportunity Bulletin Service (JOBS)
A Job Opportunity Bulletin Service, located convenient to the sessions, is available to all registrants. Bulletin boards will be available to job recruiters to post job vacancies. If you would like to post an opening available at your university, private organization, and/or within the Government, please make sure a contact name and address are listed on your sheet so that prospective candidates can contact you both on site and/or after the meeting. Please refer to page 12 for the specific location of this service.

**Membership Information**

The IADR/AADR Membership booth will be open throughout the meeting. IADR/AADR staff and members will be on hand to answer your questions about membership services, benefits, and functions. Please refer to page 11 for the specific location of this service.

**Presenter’s Note**

**Presenter’s Obligation**

IADR regulations state that submission of an abstract carries with it the obligation of the author to present the paper in person. Requests to withdraw papers must have been made in writing BY THE PRESENTER (requests from anyone other than the presenter will not be honored) and submitted to the Central Office prior to the meeting. If a presenter finds it impossible to give the paper, the presenter must send written notification with an explanation and the name of a substitute presenter. The substitute should have not already be presenting a paper on the program, and should be a co-author who is listed on the abstract. If an acceptable reason is not given, the presenter will not be allowed to submit a paper for the next annual meeting. NOTE: Lack of travel funds is not an acceptable reason to withdraw an abstract or delegate a substitute presenter.

**Slide Preview Room**

The Slide Preview Room is located in Hermes Foyer (TV Studio Room) at the Acropolis Convention Centre. The Preview Room will be open during the following hours:

**Wednesday, June 24, 10:00 am - 5:30 pm**

**Thursday - Saturday, June 25-27, 7:30 am - 5:30 pm**

Presenters should load their slides into a carousel tray prior to presenting and either return the tray to the Preview Room or leave it on the projector cart. The session co-chair will assist presenters with loading carousels. All scientific session rooms will be equipped with one 35-mm slide projector with remote control, a screen, lectern microphone, aisle microphone (if necessary), and a lighted pointer. If you require additional equipment for your presentation, you will be responsible for the costs involved.

**Hands-on Workshops**

If you are interested in attending either one of the workshops listed below, you must register to attend. There is a registration fee for each workshop, and attendance is limited at each of the workshops. If you registered in advance, your workshop ticket will be included in your registration packet on site. Space permitting, tickets will be sold on site on a first-come, first-served basis.

**Workshop #1: Gallieni 2 Room**

Systemic Reviews and Meta-analysis in Dentistry: An Introduction

**Thursday, June 25, 8:30 am - 11:15 am**

Organizer: John Cornell

Fee: $25.00 per person

**Workshop #2: Gallieni 2 Room**

Oral Anaerobes - Collecting, Culturing, Identifying

**Thursday, June 25, 2:15 pm - 5:00 pm**

Organizer: John Hefferren

Fee: $25.00 per person
IADR Divisional Events

Members of the sponsoring Divisions should note the following events to be held in Nice:

Wednesday, June 24

9:00 am - 1:00 pm  CED Board Meeting  
CC - Gallieni 4

9:00 am - 2:00 pm  ScADR Board Meeting  
CC - Gallieni 1

Thursday, June 25

12 Noon - 2:00 pm  Irish Division Annual General Business Meeting  
CC - Gallieni 3

5:00 pm - 6:00 pm  Israeli Division Business Meeting  
- CC - Gallieni 5

5:00 pm - 7:00 pm  ScADR General Assembly  
CC - Mobile 10

Friday, June 26

5:00 pm - 6:30 pm  BSDR Annual Business Meeting  
- Meridien - Biot

6:00 pm - 7:00 pm  CED General Assembly  
CC - Gallieni 3

6:00 pm - 8:00 pm  “Irish Night” Reception  
Meridien - Eze

6:30 pm - 7:30 pm  BSDR Reception  
Meridien - Terrace

Group Business Meetings & Receptions

Business Meetings - 5:00 pm - 6:00 pm

Thursday, June 25

Behavioral Sciences & HSR  
CC - Risso 7

Cariology  
CC - Risso 6

Craniofacial Biology  
CC - Athena Room

Diagnostic Systems  
CC - C34 Room

Educational Research  
CC - Mobile 11

Experimental Pathology  
CC - Risso 8

Implantology  
CC - Mobile 9

Microbiology/Immunology  
CC - Mobile 4

Mineralized Tissue  
CC - Clio Room

Neuroscience/TMJ  
CC - Gallieni 3

Nutrition  
CC - Gallieni 2

Oral/Dental Hygiene  
CC - Thalie Room

Pharm., & Thera., Tox.  
CC - C12 Room

Pulp Biology  
CC - A12 Room

Friday, June 26

Dental Materials  
CC - Thalie Room

Geriatric Oral Research  
CC - Risso 8

Oral & Maxillofacial Surgery  
CC - Erato Room

Periodontal Research  
CC - Mobile 11

Prosthodontics  
CC - C12 Room

Salivary Research  
CC - A12 Room

NOTE:  All Business Meetings will take place at the Acropolis Convention Centre.

Receptions - 6:00 pm -
Thursday, June 25
Behavioral Sciences/HSR & MH - Eze
   Geriatric Oral Research
Cariology, Mineralized Tissue, CC - Euterpe
   & Nutrition
Craniofacial Biology CC - Risso 7
Dental Materials MH - Vallauris
Diagnostic Systems CC - C34 Room
Educational Research CC - Mobile 11
Experimental Pathology CC - Risso 8
Neuroscience/TMJ & Pharm, Ther., & Tox.
   MH - Tourette/Cogolin
Oral/Dental Hygiene CC - Terrace

Friday, June 26
Microbiology/Immunology & TBD
   Periodontal Research
Oral & Maxillofacial Surgery CC - Erato Room
Prosthodontics CC - C12 Room

CC = Acropolis Convention Centre
MH = Meridien Hotel

O-2  Extracellular Calcium Stimulates Phospholipase C Activity in MC3T3-E1 Osteoblasts. S. GODWIN* and S.P. SOLTOFF (Harvard School of Dental Medicine and Division of Signal Transduction, Beth Israel Deaconess Medical Center, Boston, MA, USA).

O-3  Functional Characterization of Two Cloned Regions of Glucosyltransferase. C. JESPERSGAARD*, T. GREENWAY, D.J. SMITH, G. RAJISHENGALLIS, M.W. RUSSELL, and S. MICHALEK (University of Alabama at Birmingham; and Forsyth Dental Center, Boston, MA, USA).

O-4  Specific Domains of Fibronectin Modulate Proteinase Expression and Induce Apoptosis. Y. KAPILA*, C. DAMSKY, and P. JOHNSON (Department of Stomatology, University of California, San Francisco, USA).

O-5  Role of Annexin II and V in Matrix Vesicle-mediated Biomineralization. K.P. WORCH*, M. PACIFICI, A.M. POLSON, and T. KIRSCH (Departments of Anatomy/Histology and Periodontics, School of Dental Medicine, University of Pennsylvania, Philadelphia, USA).

O-6  ATPase Activity of Salivary Glands’ Subcellular Membrane Fractions. M.A. OSTUNI*, D.A. GONZALEZ, and G.L. ALONSO (Department of Biophysic, Faculty of Dentistry, University of Buenos Aires, Argentina).

O-7  Nutritional Dwarfing: Interrelationship between Growth Deceleration and Bone Metabolism. C.A. GAMBA*, P.M. BOYER, P.N. RODRIGUEZ, M.I. VACAS, C. GUERRERO, M.B. GUGLIELMOTTI, and S.M. FRIEDMAN (Departments of Anatomy, Pathology, Physiology, and Biochemistry, School of Dentistry, University of Buenos Aires, Argentina).

O-8  Identification of Putative Adhesin-binding Motif in Porphyromonas gingivalis Cysteine Proteinase Genes. N. SLAKESKI*, N.M. O’BRIEN-SIMPSON, and E.C. REYNOLDS (School of Dental Science, University of Melbourne, Australia).

O-9  The Role of ABP-280 in Integrin-dependent Mechanoprotection. M. GLOGAUER* and C.A.G. McCULLOCH (MRC Group in Periodontal Physiology, University of Toronto, ON, Canada).

O-10  Effect of a Bioresorbable Foam (Polyfoam®) on Experimental Bone Neoformation. B. WALLKAMM**, J. SCHMID, C.H.F. HÄMMERLE, S. GOGOLEWSKI, and N.P. LANG (University of Berne, Switzerland; and AO/ASIF Research Center, Davos, Switzerland).

O-11  Scanning Electron Microscopical Investigation of Gingival Prostheses and Its Effect on Periodontal Structure. A.A. HASSAN* and F. LÄMPERT (National Institute of Laser Enhanced Science, University of Cairo, Egypt; and Department of Conservative Dentistry and Periodontology, Technical University of Aachen, Germany).

O-12  The Relationship between Serotonin and Semicarbazide-sensitive Amine Oxidase in Human Dental Pulp. M. O’SULLIVAN*, K. TIPTON, F. ALLEN, and W.E. McDEVITT (School of Dental Science, and Department of Biochemistry, Trinity College, Dublin, Ireland).

O-13  Cementum Attachment Protein Identifies Cementoblastic Progenitors in the Adult Human Periodontium. I. B.K. FRIEDMAN*, A.S. NARAYANAN, N. SAVION, and S. PITARU (Department of Oral Biology, Tel Aviv University, Israel; and Department of Pathology, Washington University, St. Louis, MO, USA).
O-14 Identification of Cell Division Genes, ftsQ and ftsA from Porphyromonas gingivalis. T. ANSAI*, S. AKIFUSA, H. TAMURA, and T. TAKEHARA (Department of Preventive Dentistry, Kyushu Dental College, Kitakyushu, Japan).


O-16 TGF-b1 and IFN-g Regulate Myofibroblastic Phenotype of Palatal Fibroblasts. M. YOKOZEKI*, K. MORIYAMA, Y. BABA, H. SHIMOKAWA, and T. KURODA (Department of Orthodontics II, and Department of Biochemistry, Faculty of Dentistry, Tokyo Medical and Dental University, Japan).

O-17 Salivary IgA Production against Actinobacillus actinomycetemcomitans Fimbrial Antigen. K. HONMA*, K. ISHIHARA, T. KATÔ, and K. OKUDA (Oral Health Science Center, and Department of Microbiology, Tokyo Dental College, Chiba, Japan).

O-18 A Novel Insertion Sequence Promotes Expression of Leukotoxin in Actinobacillus actinomycetemcomitans Clinical Isolates. T. HE*, T. NISHIHARA, D.R. DEMUTH, and I. ISHIKAWA (Tokyo Medical and Dental University; NiID, Japan; and University of Pennsylvania, Philadelphia, USA).

O-19 HSV-1 Infection Causes Disappearance of p53 in HaCat Cells. H. MIKOLA*, M. NYKÄNEN, V. HUKKANEN, and S. SYRJÄNEN (Institute of Dentistry, Department of Virology, University of Turku, Finland).


O-21 Immunolocalization of BMPs/OPs in Murine Craniofacial Structures and Periodontal Morphogenesis. G. THOMADAKIS* (Bone Research Laboratory, MRC; and Department of Orthodontics, Faculty of Health Sciences, WITS, Johannesburg, South Africa).


O-23 Coronal Leakage of Obturated Root Canals Using a Polymicrobial Marker. P. CHAILERTVANITKUL*, W.P. SAUNDERS, and D. MacKENZIE (Khon Kaen University, Thailand; and University of Glasgow Dental School, UK).


Wednesday, 8:40 am - 1:40 pm
Exhibit Hall, Verany Room 3 (Level 1)
Pre-doctoral Category

E-1 HSV-1 Release from PC-12 Cells Induced by Heat Stress. R.J. DANAHER, M.D. CHORAK*, R.J. JACOB, and C.S. MILLER (Colleges of Dentistry and Medicine, University of Kentucky, Lexington, USA).

E-2 Genetically-engineered, Implantable, Urease-producing Streptococcus mutans Strains. A. CLANCY* and R.A. BÚRNE (Department of Dental Research, Medical Center, University of Rochester, NY, USA).

E-3 Telomerase, Telomere, and Replicative Senescence of Normal Human Oral Keratinocytes. M.K. KANG* and N.-H. PARK (UCLA Dental Research Institute and School of Dentistry, Los Angeles, CA, USA).
Identification of a DLX3 Gene Mutation Associated with Tricho-Dento-Osseous Syndrome. J.A. PRICE*, D.W. BOWDEN, T.W. WRIGHT, and T.C. HART (Bowman Gray School of Medicine, Winston-Salem, NC; and University of North Carolina, Chapel Hill, USA).


What is ApoE Doing at the Neuromuscular Synapse? A. KLUCZEWSKA* and A. EVERETT (Department of Physiology, School of Oral Health Sciences, University of Western Australia, Perth).

E-cadherin Independent Binding of IeJ-positive Lymphocytes to Oral Keratinocytes. D.W. BROWN* (Department of Oral Pathology, St. Bartholomews and the Royal London School of Medicine and Dentistry, UK).

Strain Relatedness of C. albicans Isolates Recovered from Diabetic Patients. A.M. WILLIS*, W.A. COULTER, and P.-J. LAMEY (School of Clinical Dentistry, The Queen’s University, Belfast, N. Ireland).

The Effects of Fluconazole Treatment on the Oral Mycological Flora in HIV-seropositive Patients. K.D. HUNTER*, J. BAGG, J. GIBSON, and P.B. LOCKHART (Glasgow Dental School, UK; and Carolinas Medical Center, Charlotte, NC, USA).

Signaling by Parathyroid Hormone-derived Peptides in Osteoblastic Cells. H.S. BOBIER* and S.J. DIXON (Division of Oral Biology, School of Physiology; and Department of Physiology, The University of Western Ontario, London, Canada).


Are Compomers Suitable as Core Build-up for All-ceramic Crowns? J. SINDEL*, N. KRÄMER, R. FRANKENBERGER, and S. BISCHOFF (Policlinic for Operative Dentistry and Periodontology, University of Erlangen-Nürnberg, Germany).

Titanium Surface Roughness Effects on Monocyte Adhesion, TNF-a and PGE2 Secretion. S. COHEN*, W.A. SOSKOLNE, L. SENNERBY, A. WANNENBERG, and L. SHAPIRA (The Hebrew University, Hadassah, Israel; and Göteborg University, Sweden).

W.J. Gies Distinguished Speaker Lecture

Friday, June 26
1:00 pm - 2:00 pm
Convention Centre - Athena Room

“Epithelial Cell Plasticity During Ontogenesis”
Jean-Paul Thiery
Directory of the CNRS Research Unit, Institute Curie
Paris, France

Jean Paul Thiery obtained a Master’s degree in physical chemistry and a diploma of engineering in chemistry from the University of Strasbourg in 1968. Under the supervision of Dr. Giorgio Bernardi, he earned his PhD degree from the University of Paris in 1974. He accomplished his post-doctoral training in Professor Gerald Edelman’s laboratory, at The Rockefeller University, New York (1975-1977). During his three-year stay, Dr. Thiery contributed to the discovery of the first cell-to-cell adhesion molecule N-CAM, a prototype member of the immunoglobulin superfamily. On his return to France, Dr. Thiery established a research group at the Institute of Molecular and Cellular Embryology of Nogent s/Marne, headed by Professor Nicole Le Douarin. In Nogent s/Marne, Dr. Thiery studied the molecular mechanisms controlling embryonic cell migrations.
and tissue formation. He pioneered studies showing the morphoregulatory role of cell adhesion molecules.

In 1987, he was appointed as head of the Laboratory of Physiopathology of Development at the Ecole Normale Supérieure in Paris. His laboratory pursued intensive research in the fields of adhesion and morphogenesis as well as initiating new projects on the molecular mechanisms of carcinoma invasion and metastasis.

In 1995, Dr. Thiery became the Director of the CNRS Research Unit “Subcellular Structure and Cellular Dynamics” at the Institut Curie in Paris. His recent contributions include the discovery of important signaling pathways in epithelial-mesenchymal cell transitions in embryos and in tumor models. Dr. Thiery has published over 200 papers and has been invited to numerous international symposia. He has received several prizes, including the Otto Mangold Prize (Distinguished vertebrate embryologist, Berlin, 1986).

The lecture is sponsored by Unilever Research.

**Lunch & Learning**

There will be a $25.00 charge to cover the cost of lunch, and attendance will be limited to nine persons per speaker. You cannot attend the program as just a listener if the table should sell out. If you purchased your Lunch & Learning ticket(s) in advance, it will be included in your registration packet. Space permitting, tickets may be sold on site.

Session #1
Thursday, June 25, 12:45 pm - 2:00 pm
Eruterpe Room (Convention Centre - Level 3)

Table #1) CANCELLED

Table #2) Bone Turnover and Orthodontics
Speaker: Anne-Marie Bollen

Table #3) Atomic Force Microscopy for the Characterization of Mineralized Tooth Structure
Speaker: John Kinney

Table #4) Evaluation and Comparison of Wear Simulators for Dental Materials Research
Speaker: Karl-Heinz Kunzelmann

Table #5) The Role of Computers in Biomaterials and Biomechanics Research
Speaker: Ronald Sakaguchi

Table #6) Evaluating the Effectiveness of Computer-aided Learning Programs
Speaker: Kenneth Eaton

Table #7) Implant Biomechanics: Global/Local Analyses and Relating Mechanics to Biology
Speaker: David Kohn

Table #8) Methods for the Study of Microbial Invasion of Epithelial Cells
Speaker: Paula Fives-Taylor

Table #9) Vitamin D Action on Tooth Development and Biomineralization
Speaker: Ariane Berdal

Table #10) Investigations in the Dynamic Mechanics of the TMJ Disk
Speaker: Jeffrey Nickel

Table #11) Challenges and Opportunities in Clinical Research
Speaker: Bruce Pihlstrom

Table #12) Current Research in Supportive Periodontal Therapy
Speaker: Jean Suvan

Session #2
Saturday, June 27, 12:45 pm - 2:00 pm
Euterpe Room (Convention Centre - Level 3)

Table #13) Teaching Evidence-based Dentistry to First-year Dental Students: Lessons Learned
Speaker: Ana Karina Mascarenhas

Table #14) A Randomized Clinical Trial to Compare Alternative Approaches in the Early Treatment of Class II, Division I, Malocclusion
Speaker: Joseph Ghafari

Table #15) Clinical Research on All-ceramic Restorations
Speaker: John Sorensen

Table #16) In vitro Evaluation of Efficacy and Mechanism of Adhesion of Modern Dentin Bonding Systems
Speaker: Carlo Prati

Table #17) Surface Properties and Modification of Material Surfaces that Influence Biocompatibility
Speaker: Takao Hanawa

Table #18) Interactive Simulations for Education, Continuing Education, and Assessment
Speaker: Lynn Johnson

Table #19) How to Ensure Ease of Development and Use for Computer-assisted Learning Material
Speaker: David Pollard

Table #20) Implant/Soft-tissue Interfaces
Speaker: Ian Mackenzie

Table #21) CANCELLED

Table #22) The Terminology of Product Comparisons: An Introduction to Comparative Attributes
Speaker: Howard Proskin

Table #23) Training and Calibration of Examiners for Clinical Trials of Oral Health Products
Speaker: Helen Whelton

Table #24) Drug-induced Gingival Overgrowth
Speaker: Robin Seymour

Special Events

Wednesday, June 24

Opening Ceremonies and Welcome Reception
5:15 pm - 6:30 pm
Convention Centre - Apollon Auditorium

The Opening Ceremonies will include an awards presentation of the IADR Distinguished Scientist Awards and a celebration of WHO’s and NIDR’s 50-year anniversaries. Classical music, representing the sponsoring Divisions of the IADR, will be played at the beginning of the program (sponsored by 3M Dental, France). After the Opening Ceremonies, all meeting participants are invited to the Welcome Reception from 6:30 pm to 8:00 pm. Refreshments are generously sponsored by Oral-B/Braun.

Wednesday through Friday, June 24-26

Tour of the Local Dental School

The local dental school, located at the St. Jean d’Angely Campus of the Université Nice Sophia Antipolis, will provide guided tours of some of their facilities (research laboratories, library, and theatres). The campus is located approximately 10 minutes from the Acropolis Convention Centre, and
a walking tour will be conducted by a teacher and/or student. If you're interested in attending the tour, please meet at the main entrance of the Acropolis at the designated start time. The tour is complimentary, but attendance is limited to 20 persons per tour. Listed below are the hours of the tours:

Wednesday, June 24 3:00 pm - 4:30 pm  
Thursday, June 25 9:00 am - 10:30 am  
or 3:00 pm - 4:30 pm  
Friday, June 26 9:00 am - 10:30 am  
or 3:00 pm - 4:30 pm

Friday, June 26

New Member Orientation Breakfast  
(supported by Colgate-Palmolive Co.)  
7:30 am - 8:30 am  
Convention Centre - Euterpe Room

If you are interested in becoming more involved in the Association or learn about Collecting, Culturing, Identifying  
Thursday, June 25, 2:15 pm - 5:00 pm  
Organizer: John Hefferren  
Fee: $25.00 per person

**IADR Divisional Events**

Members of the sponsoring Divisions should note the following events to be held in Nice:

Wednesday, June 24,  
9:00 am - 1:00 pm CED Board Meeting  
9:00 am - 2:00 pm ScADR Board Meeting  

Thursday, June 25,  
12 Noon - 2:00 pm Irish Division Annual General Business Meeting  
5:00 pm - 6:00 pm Researchers who train, mentor, and work with women. The goal of the program is to identify strategies that promote the advancement of women and recognize their value in the workforce of the future. For information, contact the AADS at +202-667-9433, FAX +202-667-0642, or by e-mail at women.minority@aads.jhu.edu.

**IADR Institutional Section Members**

- 3M Dental Products  
- Block Drug Co.  
- Borrow Dental Milk Foundation  
- Colgate-Palmolive Co.  
- Dentsply International  
- Eastman Kodak Co.  
- GC International  
- International Dental Manufacturers  
- J. Morita Corp.  
- John O. Butler Co.  
- Lion Corp.  
- Mars, Inc.  
- Oral-B Laboratories  
- Procter & Gamble Co.  
- SmithKline Beecham  
- Unilever Dental Research  
- Warner-Lambert Co.  
- Corporate Sponsorship
Programs and Activities

The IADR is grateful to the following companies for their generous monetary support of the IADR General Session:

**MAJOR SPONSOR:**
Colgate-Palmolive Co.
Procter & Gamble Co.
Unilever Research

**GENERAL SPONSOR:**
Warner-Lambert Co.

In addition, the following companies supported the following events/services:

3M Dental, France - in support of the musical entertainment during the Opening Ceremonies.

Colgate-Palmolive Co. - in support of the IADR Council Reception/Dinner, “Research in Prevention” Travel Award Luncheon, and the New Member Breakfast.

GC International - in support of the “Japan Night” Reception.

NIDR - for providing 50 travel grants to American students to present at the IADR meeting.

Oral-B/Braun - in support of the Welcome Reception.

Procter & Gamble - in support of the IADR President’s Reception.

Unilever Research - for providing the satchels for the meeting delegates and providing funds for the IADR Travel Award and Reception and the W.J. Gies Distinguished Speaker Lecture.

Warner-Lambert Co. - in support of the IADR Past Presidents’ Luncheon

Symposia/Workshops

The IADR acknowledges the following companies for their support of symposia and workshops for this meeting:

Antimicrobial Agents Used in Periodontal Therapy: Evidence-based Efficacy - supported by Procter & Gamble

Competencies of the New Dentist. Impact on Dental Education - supported by Procter & Gamble Co., Unilever Dental Research, and Colgate-Palmolive Co.

Cysteine Proteases of Porphyromonas gingivalis: Biology and Nomenclature - supported by Unilever Dental Research, Peptide Therapeutics Ltd., and Colgate-Palmolive Co.

The Epithelial Basement Membrane: Recent Advances in Biology and Pathology - supported by Unilever Research

Glass Ionomers and their Modifications - supported by GC International, Japan, and ESPE, Germany

IgA and Periodontal Disease - supported by Procter & Gamble Co.

Impact of International Collaborative Studies on Future Oral Health - supported by Procter & Gamble-Dental Products, Europe

Improvement in Oral Health in Adults: How Will This Alter Our Research Efforts? - supported by the International Life Sciences Institute, Unilever Research, and Colgate-Palmolive Co.
Hotel Information

Voyages Mathez (located in Nice, France) will be managing all housing requests. If you still need to make a reservation, please FAX the Hotel Reservation Form (found in your registration brochure) to Voyages Mathez directly (do NOT send the form to the IADR Central Office). Reservations must be received by May 15, for the discounted rates to be secured. The discounted rates are not available directly with the hotels.

Voyages Mathez

Attn: IADR Reservations
7, Rue de Rivoli
06000 Nice, France
Tel: +33-493-826-882 (telephone reservations will NOT be accepted)
FAX: +33-493-879-360
E-mail: matheztravel@compuserve.com

Local Information

Local Bus Transportation

Discount Pass Available! Nice has an extensive network of public buses, and a special rate has been negotiated for the IADR meeting. A pass is available for delegates which is valid on all public buses for 5 days and includes a one-way trip to the airport. The price is 90 French Francs (approximately US $16.00). You may reserve this pass in advance by checking the appropriate box on the Hotel/Tour Reservation Form or by purchasing it on site at the Voyages Mathez Booth located in the IADR Registration Area.

Easy Access

By air: The Nice-Côte d'Azur Airport is a privileged gateway to southern Europe. Forty-five (45) airlines serve more than 100 cities in 35 different countries.

By road: Nice is connected by motorway and national highways to northern and southern Europe. Some hotels have a private car park, but many public paying car parks are available in the city and around the Acropolis Convention Centre. If you plan to drive to the meeting, discount parking passes will be available for purchase at the car park located adjacent to the Acropolis.

By train: France has a good train network and the main train station is called “Nice Ville”. Nice is approximately seven (7) hours from Paris by TGV, Express train.

Weather

The weather is generally fine at the time of the meeting. The average temperature in June is 22°C or 72°F.

Banks
Banks are open Monday through Friday from 9:00 am to 12 Noon and 2:00 pm to 4:30 pm. Foreign currencies can also be exchanged at the hotels.

**Passports and Visas**

Delegates attending the IADR meeting from an EEC country may enter France with an ID card. Delegates from outside an EEC country may require a visa. Please contact the French Embassy or Consulate in your city for further details. US citizens do not require a visa to enter France, but must have a valid US passport.

**Local Tours**

The following tours have been organized during the IADR meeting. If you are interested in registering for the tours, please stop by the Voyages Mathez Booth in the registration area for details. If your purchased your ticket in advance, you will receive a confirmation prior to departing for the meeting.

**Half-day Local Tours**

A. Nice Orientation and Chagall Museum  
   Wednesday, June 24, 9:00 am - 12:30 pm  
   Price: 120 French Francs per person  
   (all entrance fees included)

B. St. Paul de Vence - Vence  
   Wednesday, June 24, 2:30 pm - 6:30 pm  
   Price: 150 French Francs per person

C. Eze - Principality of Monaco  
   Thursday, June 25, 2:00 pm - 6:30 pm  
   Price: 160 French Francs per person  
   (entrance fees to the Casino are not included)

D. Arts and Crafts in Vallauris/Biot  
   Friday, June 26, 2:00 pm - 6:30 pm  
   Price: 200 French Francs per person (all entrance fees included)

**Full-day Tours**

E. Hilltop Villages: Antibes-Cannes-Grasse-St. Paul de Vence  
   Thursday, June 25, 9:30 am - 6:30 pm  
   Price: 480 French Francs per person  
   (lunch and beverage included)

F. Italian Riviera: Ventimiglia and San Remo  
   Friday, June 26, 9:30 am - 6:30 pm  
   Price: 470 French Francs per person  
   (lunch and beverage included)

G. Medieval City of Entrevaux  
   Saturday, June 27, 8:30 am - 6:00 pm  
   Price: 490 French Francs  
   (lunch and beverage included)

**Pre- and Post-Convention Tours**

I. Islands of Corsica  
   Sunday, June 21 to Wednesday, June 24

II. Romantic Venice  
   Sunday, June 28 to Wednesday, July 1

III. Cultural Florence  
   Sunday, June 28 to Wednesday, July 1

**Airline Information**

Official Airline
Air France is the official airline for the IADR General Session. You may arrange your flight to Nice individually or in groups, either through Air France’s extensive network of offices worldwide or through the official travel agents of the IADR, Voyages Mathez in Nice, France, or MacNair Travel Agency in the United States.

If you are flying from the US or are required to fly on a US carrier, please contact Delta Air Lines or MacNair Travel Agency to obtain reduced airfares.

NOTE: Flights to France worldwide will be extremely hard to obtain as we get closer to the meeting dates, because World Cup Soccer is scheduled to take place in various cities in France from June 10 to July 12, 1998. Please book your ticket as soon as possible to ensure your preferred dates of travel and discounted rates.

Voyages Mathez  
(Nice, France)  
NOTE: Address, telephone, FAX numbers are listed under Hotel Information on page xx.

MacNair Travel Agency  
(Alexandria, VA, US)  
Open 8:30 am - 6:00 pm EST, Monday-Friday  
Toll-free: 1-800-833-4382  
Telephone: 703-836-1100  
FAX: 703-836-2078  
E-mail: macnairtvl@aol.com

Awards and Fellowships

The Awards and Fellowships of the Association provide recognition and support for individuals who have made significant contributions to dental research.

DISTINGUISHED SCIENTIST AWARDS, 1998

Basic Research in Biological Mineralization Award, supported by Unilever Dental Research.

Basic Research in Periodontal Disease Award, supported by Colgate-Palmolive Company.

Behavioral Sciences & Health Services Research Award, supported by John O. Butler Company.

Craniofacial Biology Research Award, sponsored by the IADR Craniofacial Biology Group and supported by Oral-B Laboratories.

H. Trendley Dean Memorial Award - supported by Colgate Oral Pharmaceuticals and a bequest from the estate of Frank J. McClure in memory of H. Trendley Dean.

Pulp Biology Research Award, sponsored by the IADR Pulp Biology Group and supported by the L.D. Caulk Division of Dentsply International.

Research in Dental Caries Award, supported by Warner-Lambert Company.

Research in Prosthodontics and Implants Award, given in memory of Willard J Tarbet and supported by Procter & Gamble Denture Care.

Young Investigator Award, supported by the Procter & Gamble Company.

Wilmer Souder Award, supported by the IADR Dental Materials Group and the William T. Sweeney Memorial Fund.

Research in Oral Biology Award, supported by the Church & Dwight Company.

Salivary Research Award, supported by the William Wrigley, Jr. Company.
PTT Research Award, supported by the Block Drug Company.

Experimental Pathology Research Award, supported by the John O. Butler Company.

Geriatric Oral Research Award, supported by Biotene-Oral Balance Oral Care Products.

IADR AWARDS/FELLOWSHIPS

IADR Norton Ross Fellowship: This fellowship is given in memory of the late Norton M. Ross and is fully funded by a generous donation from the Warner-Lambert Company. This Fellowship will be awarded in the IADR Scandinavian Division this year.

IADR E.W. Borrow Memorial Award: This award is intended to recognize and stimulate research in oral health prevention for children. The plaque and cash award are graciously supported by the E.W. Borrow Dental Milk Foundation.

IADR/Borrow Dental Milk Foundation Fellowship: This Fellowship, sponsored by the Borrow Dental Milk Foundation, will be awarded next in March, 1999.

David B. Scott Fellowship: This award is funded by the estate of the late Mrs. Nancy M. Scott in honor of David B. Scott. The 1998 Fellowship will be awarded in the Scandinavian Division.

John A. Gray Fellowship: This award is funded out of donations from members and sponsors in tribute to John A. Gray, Past Executive Director of the IADR. This fellowship will be awarded next in the Brazilian Division in 1999.

IADR Division Travel Award: Established to encourage outstanding young dental scientists to carry out research, attend the IADR General Session, and participate in the IADR Hatton Awards Competition. This award is generously funded through Unilever Research. In 1998, 37 individuals from 16 Divisions will receive funding for travel to the IADR 76th General Session in Nice.

Research in Prevention Award: Established to support students and young investigators doing research in the area of oral disease prevention. The award will be given this year to six individuals through a generous donation from the Colgate-Palmolive Company.

Pindborg Prize: Established in honor of the late Professor Jens J. Pindborg and supported by Munksgaard Publishing. The Award is given for excellence in the field of oral biology and is made bi-annually.

IADR Toshio Nakao Fellowship: Established to allow a young investigator to obtain training and experience in dental materials science at a center of excellence. This Fellowship is supported by GC Corporation.

John J. Clarkson Fellowship: The award is funded out of donations from individual IADR members and the IADR Institutional Section in honor of John J. Clarkson, Past Executive Director of the IADR. The first fellowship will be awarded this year to a worthy recipient who is conducting research in Public Dental Health.

IADR Edward H. Hatton Awards Competition: Awards are made to young investigators selected by each of the IADR Divisions and judged best in presenting meritorious poster presentations on original research at the IADR General Session. The competition is divided into two parts (pre-doctoral and post-doctoral) according to the formal education of the contestants. Two winners may be selected for each category, with each first- and second-place winner receiving a cash award and plaque. The awards are supported by Warner-Lambert Company.

Future Meetings

1998
June 28-July 1
15th International Conference on Oral Biology (ICOB)
"Oral Biology and Dental Implants"
Baveno, Italy

1999
March 10-14
IADR/AADR/CADR General Session & Exhibition
Vancouver, BC, Canada

2000
April 5-9
IADR/AADR/CADR General Session & Exhibition
Washington, DC

2001
March 7-11
AADR/CADR Annual Meeting & Exhibition
Chicago, Illinois

June 27-30
IADR General Session & Exhibition
Makahari Convention Center, Chiba, Japan

2002
March 6-10
IADR/AADR/CADR General Session & Exhibition
San Diego, California

2003
March 12-16
AADR/CADR Annual Meeting
San Antonio, TX

June 30-July 1
IADR General Session
Jerusalem, Israel

Acknowledgments

We wish to thank the following individuals for their time and energy in finalizing the program for the 1998 General Session:

IADR Board of Directors
Per-Olof Glantz President
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Sally Marshall Vice-president
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Alan Carr  
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Thomas Dodson  
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Philip Stashenko  
James Vogel  
Eileen Watson  
Paul Van der Stelt  
Maria Yeung  
Warren Yow  
Domenick Zero

**Lunch & Learning Organizers**
Frances Doherty  
Kenneth Eaton  
Jack Ferracane  
Paula Fives-Taylor  
Luigi Gallo  
John Hefferren
Linda Kaste  
David Kohn  
Mary MacDougall  
John Meechan  
Katherine Dryland Vig

**Symposium Organizers**
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Stephen Challacombe  
Noel Claffey  
Michael Curtis  
C.L. Davidson  
Dan Deutsch  
C.O. Enwonwu  
David Ferguson  
Michel Goldberg  
Robin Heath  
Christopher Holmgren  
Ira Lamster  
M.-H. LeClercq
Anders Linde  
Connie Mobley  
Steven Offenbacher  
Denis O’Mullane  
Nigel Pitts  
Colin Robinson  
Michael Russell  
Mariano Sanz  
Robert Singer  
Donald Tyndall  
Evert van Amerongen  
Angus Walls  
M. Wilson

**Hands-on Workshop Organizers**
John Cornell  
John Hefferren

**Abstracts Reviewers**
Steve Aasen  
Leif Bakland  
Douglas Barnes  
Ross Beirne  
Marcia Boyd  
Michael Buckley  
Margaret Byers  
David Carnes  
Dave Charlton  
David Dean  
Isabelle Denny  
Jeff Ebersole  
Nadeem Karimbux  
Denis Lynch  
Terese Maher  
John Meechan  
Mina Mina  
Paul Moore  
Mark Moss  
Carlos Munoz-Viveros  
Ichiro Nishimura  
Thomas Oates  
Barbara Payne  
Ralph Rawls
The Exhibition

The Exhibition and Poster Sessions will be held at the Acropolis Convention Centre, in the Exhibition Centre (which is NOT the building where the Oral Sessions and Registration will be held).

The exhibit hours are as follows:

- Thursday: 9:30 am - 2:00 pm
- Friday: 9:30 am - 2:00 pm
- Saturday: 9:30 am - 2:00 pm

NEW! denotes first-time exhibitors.
Exhibitor listings are as of March 25, 1998.

Commercial Exhibitors:

NEW!
Atrix Laboratories, Inc., Booth # 7
Fort Collins, CO, USA
Telephone: +970-482-5868
FAX: +970-482-9735
Display and training for the Atrisorb GTR Barrier™.

NEW!
BISICO FRANCE, Booths # 18 and 20
Lancon-de-Provence, France
Telephone: +33-490429292
FAX: +33-490429261
Exclusive representative: Bisico®, Bisco®, Ultradent®, Ribbond®, Danville®, Micerium®, Dental Resources®, GSC®, American Eagle®, Ronvig®. Main products: (impression materials) Bisico, Ultrapack, Astringedent; (adhesives) All Bond 2, One Step, Perma Quick; (bleaching) Opalescence; (instruments) American Eagle; (splints) Ribbond; (micro-etcher composites) Enamel + HFO, Amelogen, Bisfil, Aeliteflo, Choice C+B.

Colgate-Palmolive Company, Island # 21, 22,
Canton, MA, USA 23, and 24
Telephone: +800-2COLGATE
FAX: +617-575-1073
Colgate-Palmolive is the global leader in oral care technology, products, and education. Colgate’s products include technologically advanced toothbrushes, toothpastes, mouthrinses, and floss. Our Colgate Oral Pharmaceuticals subsidiary provides professional fluoride, gingival health, and tooth-whitening products. Colgate’s “Bright Smiles, Bright Futures” program teaches proper oral health to millions of children world-wide.
CollaGenex Pharmaceuticals, Inc.  Booth # 25
Newtown, PA, USA
Telephone: +215-579-7388
FAX: +215-579-7388
CollaGenex Pharmaceuticals is engaged in the development and commercialization of innovative pharmaceutical therapies for the treatment of periodontitis and other diseases that involve degradation of connective tissues. The company hopes to bring its first product for periodontal disease to market in 1998, and currently markets Periocheck® in the US.

Den-Mat Corporation,  Booth # 32
Santa Maria, CA, USA
Telephone: +805-922-8491
FAX: +805-922-6933
Den-Mat is a company focused on providing innovative, clinically proven solutions to improve the quality of dental materials in today’s dental practice. Providing over 150 products that offer esthetic solutions, Den-Mat offers popular brands such as: Core Paste, resin core build-up; Infinity, resin ionomer cement; Geristore®, multi-use resin ionomer restorative; Perfection®, ADA type II microfil composite for anterior restorations; FloRestore®, flowable composite restorative; True Vitality™, universal composite resin; Marathon®, dual-cure posterior composite resin; and the very popular bonding systems Tenure® A & B and Tenure Quik® with Fluoride, as well as Cerinate® porcelain, known for its strength and beauty.

DENTSPLY DeTrey,  Booth # 8
Montigny-Le-Bretonneux, France
Telephone: +33-1-30-14-7718
FAX: +33-1-30-14-7700
DENTSPLY designs, develops, manufactures, and markets a broad range of products for the dental market, such as prophylaxis pastes, dental sealants, restorative materials, endodontic instruments and materials, impression materials, ultrasonic scalers, x-ray equipment, crown and bridge materials, and artificial teeth. At the booth, technical and clinical information on the latest product developments can be obtained. A list of DENTSPLY employees who are present at the IADR General Session is available for you, and we will be glad to establish contact with those persons you wish to meet.

DenX Ltd.,  Booth # 11
Jerusalem, Israel
Telephone: +972-2-6417748
FAX: +972-2-6426901
DenX Ltd. is a virtual reality simulation system designed to enhance the self-learning of practical dentistry. DenX Ltd. is based on an interactive flow of information among the patient simulator, the optic tracking system, and the computer and software which calculates the inputs, displays the procedures, and analyzes the results. DenX Ltd. evaluates the preparation during and after the procedures and gives the student run-time messages during his/her work. It is a customized system and can be adapted to the teaching concepts and demands of each dental school.

Elsevier Science,  Booth # 9
Amsterdam, The Netherlands
Telephone: +31-20-485-3787
FAX: +31-20-485-3809

Fertin A/S,  Booth # 49
Vejle, Denmark
Telephone: +45-75-727170
FAX: +45-75-832592
Fertin A/S specializes in developing and manufacturing dental and medicinal chewing gum. Fertin A/S will exhibit a range of dental and medicinal chewing gums including Carbamide-, Fluoride-, and chlorhexidine chewing gum.
GC BELGIUM N.V., Booths # 35, 37, and 39
Leuven, Belgium
Telephone: +33-1-49-80-37-91
FAX: +33-1-49-80-37-90

GC BELGIUM N.V., European Head Office of GC Corporation, will demonstrate ways to improve the marginal seal of posterior restorations by using the latest developments in glass-ionomer technology, such as Fuji IX GP condensable glass ionomer for posterior restoration, Fuji II LC Improved for aesthetic anterior restoration, Fuji Plus multi-purpose luting cement, and Fuji Bond LC, the first bonding agent which features shock-absorbing properties. A selection of laboratory and other products newly introduced into Europe will also be shown.

IUL, S.A., Booth # 34
Barcelona, Spain
Telephone: +34-932740232
FAX: +34-932740144

Instruments for microbiological testing: Spiral inoculation using a disposable microsyringe to avoid contamination. Automatic colony counter capable of counting all spiral distribution. Its program is based in Windows95™, and it is fully compatible with Excel™, Access™, etc. Diluters and dispensers with easily removed parts to autoclave.

The Journal of Clinical Dentistry, Booth # 13
Yardley, PA, USA
Telephone: +215-493-7400
FAX: +215-493-9804

Now beginning its 10th year of service to the dental research community, The Journal of Clinical Dentistry®, an independent peer-reviewed journal, is dedicated to the rapid publication of laboratory and clinical dental research and reviews. Papers accepted for publication by our Editorial Board will be in print in 16 or fewer weeks.

NEW!
Laboratoires GABA, Booth # 40
Mulhouse, France
Telephone: +41-6138559500 (CH)
FAX: +41-613859501

GABA is a Swiss pharmaceutical laboratory specializing in dental hygiene: toothpaste, mouthwash, toothbrushes... In the home markets, Switzerland and Germany, GABA is a market leader, with elmex® and meridol® products. In France, GABA distributes elmex toothpastes (for adults and children, for sensitive teeth, and menthol-free) in pharmacies exclusively.

Laboratoires STAFFORD-MILLER, Booth # 14
Paris, France
Telephone: +33-1-53-78-22-00
FAX: +33-1-53-78-22-20

Products on display to include: Sensodyne®, Corega®, Sarodontax®, ProAmpi®, Givalex®, Adamount®, Mynol®, Sensodyne F™, Sensodyne Bicarbonate™, Sensodyne “Dents et Gencives” ; Corega Crème “Classic”™, Corega Crème “Fraichen”™, Corega Crème “hypoallergenique”™; (toothbrushes) Sensodyne S.152™, Sensodyne N.178™.

LACLEDE INTERNATIONAL, Booth # 43
Brussels, Belgium
Telephone: +32-2-410-23-63
FAX: +32-2-410-282-86

Laclede presents the dry-mouth oral health care products called Biotène® and Oralbalance®. All of these products contain a patented enzyme system able to inhibit 99% of the bacteria associated with gum disease and tooth decay, and similar to the one normally found in saliva. There are: a no-foaming toothpaste, Biotène®; an alcohol-free mouthwash, Biotène®; and a moisturizing gel, Oralbalance®.

MUNKSGAARD International, Booth # 10
Publishers
Copenhagen, Denmark
Telephone: +45-77333333
Munksgaard presents books in Dentistry including: (Andreasen) Textbook and Color Atlas of Tooth Impactions; (Lindhe) Clinical Periodontology and Implant Research; (Fejerskov) Fluoride in Dentistry. Several journals will be available, including: European Journal of Dental Education, Community Dentistry, Clinical Oral Implants Research, Endodontics & Dental Traumatology, European Journal of Oral Sciences.

NEW!

**OptiMedia Electronic Publishing Solutions**, Booth # 6
Tel Aviv, Israel
Telephone: +972-3-560-7821
FAX: +972-3-560-7823
OptiMedia is a leading electronic publishing company specializing in dental, medical, and scientific publishing. Our dental titles on CD-ROM include: the JADA, JOMI, AJO-DO, JCO, Angle Orthodontist, the Journal of Periodontology, the JPD, and the OOOOE. OptiMedia has enhanced the profession’s methods of literature review, controls of bibliographic data, and overall knowledge management.

**Oral-B Laboratories**, Booths # 27 and 29
Belmont, CA, USA
Telephone: +650-598-5000
FAX: +650-654-0562

**Procter & Gamble**, Booths # 15, 17, and 19
Cincinnati, OH, USA
Telephone: +513-626-6672
FAX: +513-626-6598
Please stop by the Procter & Gamble exhibit for samples of Crest and Crest Complete/Deep Sweep. Information will also be available on the following oral care products: Actisite (Tetracycline Hydrochloride) Periodontal Fiber, Scope Mouthrinse, and Fixodent.

**Quintessence International**, Booth # 28
Paris, France
Telephone: +33-1-43-12-88-11
FAX: +33-1-43-12-88-08
Quintessence Publishing Group® and its French subsidiary Quintessence International® will exhibit books and journals related to world dental literature. Videos, CD, and DVD will also be presented, focused on all clinical issues.

NEW!

**RAMOT of Tel Aviv University**, Booth # 41
Tel Aviv, Israel
Telephone: +972-3-642-8765
FAX: +972-3-642-4865
RAMOT of Tel Aviv University (Maurice and Gabriela Goldschleger School of Dental Medicine). Bi-Phase Mouthwash, TDCP - Orthodontic Device (measuring dental contact-points), Artificial Implants, Novel Osteoblast/Fibroblast Antigens and Recognising Antibodies, Osteoporosis and Metabolic Bone Disease Diagnostics, Books, International Academic Activities; acclaimed Orthodontics course, advanced seminars, conferences, student exchanges.

**Ribbond, Inc.**, Booth # 12
Seattle, WA, USA
Telephone: +206-340-8870
FAX: +206-382-9354
Fiber laminate composite technology and metal-free dentistry is becoming a standard in dentistry. Since 1991, Ribbond® bondable reinforcement ribbon has been used to construct periodontal splints, endodontic posts and cores, bonded bridges, etc. Ribbond’s developer, Dr. David Rudo, will be available at the meeting to discuss this technology and application.
Shofu Dental GmbH, Booths # 31 and 33
Ratingen, Germany
Telephone: +49-2102-8664-0
FAX: +49-2102-866464
SHOFU Dental GmbH will exhibit the complete range of products: HiLite In-Office bleaching, stones for finishing, polishing systems for various materials, diamond instruments for preparation, polishing pastes, bur blocks, Hi Dense silver-reinforced Glaslonomer cement, Glaslonomer Cement CX Plus, cements for luting, VINTAGE and VINTAGE HALO porcelain systems, SOLIDEX light-curing crown and bridge composite, ShadeEye Dental Chroma Meter.

Southern Dental Industries, Inc., Booth # 16
San Francisco, CA, USA
Telephone: +415-975-8060
FAX: +415-975-8065
Southern Dental Industries manufactures dental restorative materials. Among our product line are four different types of amalgam: Permite, Lojic, GS80, and Galloy, a mercury-free alloy. We also manufacture several composites: Glacier, a condensable composite; Wave, a flowable composite; and Freedom, a fluoride-releasing compomer.

Stockton Press, Booth # 5
Basingstoke, Hants, United Kingdom
Telephone: +44-1256-329242
FAX: +44-1256-328339
As part of one of the world’s leading publishers Stockton Press has over 30 leading international journals in the areas of science and medicine. These include the following key dental journals: British Dental Journal, Oral Diseases, and Dentomaxillofacial Radiology. See these journals on display at our booth number 5. For further information, visit our World Wide Web site: http://stockton-press.co.uk.

Unilever Dental Research Island # 1, 2, 3 and 4
Merseyside, United Kingdom
Telephone: +44-151-471-3457
FAX: +44-151-471-1806
Unilever Dental Research provides the scientific support for the company’s broad range of oral care products. We will be presenting examples produced by Unilever companies world-wide. These products are marketed under the brand names of Mentadent, Pepsodent, Signal, and Close-Up. Please come and visit us.

NEW!
VOCO GmbH, Booth # 36
Cuxhaven, Germany
Telephone: +49-4721-719-0
FAX: +49-4721-719-140

Non-commercial Exhibitors:

Borrow Dental Milk Foundation, Atrium
Hampshire, England
Telephone: +44-1705-262222
FAX: +44-1705-241401
The Borrow Dental Milk Foundation is a registered UK charity. Its primary objective is the promotion of and research into the fluoridation of milk for the benefit of children’s oral health. The exhibit details the International Research Program developed by the Foundation in conjunction with the World Health Organization.

Eastman Dental Institute for Oral Health Care Sciences, Booth # 30
London, United Kingdom
Telephone: +44-171-915-1092
FAX: +44-171-915-1274
The Eastman is the leading specialist centre for patient care, postgraduate teaching, and advanced research in the oral healthcare sciences in the United Kingdom. It is the only solely postgraduate dental centre covering all specialties, leading the way in postgraduate teaching, and is ranked in the top band grade (5) for research quality.

**National Institute of Dental Research, Booth # 26**
Bethesda, MD, USA
Telephone: +301-496-4261
FAX: +301-907-8830

The National Institute of Dental Research (NIDR), one of the National Institutes of Health, is primary sponsor of fundamental and translational research related to craniofacial-oral-dental diseases and disorders. NIDR staff will be on hand to answer questions about research funding and training opportunities.
The Program

All Sessions are located at the Acropolis Convention Centre.

Seq#: 1  Wednesday, June 24, 8:30 am -11:15 am
Symposium, Hermes Room

IFDEA and IADR - Competencies of the New Dentist: Impact on Dental Education
[Supported by Procter & Gamble Co., Unilever Dental Research, and Colgate-Palmolive Co.]

Chairpersons: M. Boyd and D. Shanley

0001  8:30  Opening Comments.

  8:35  Competencies of the New Dentist: Definition and Terminology. D. SHANLEY (University of Dublin, Ireland).

  8:55  Competencies of the New Dentist: The Perspective from the European Union. K. MUNK (Danish Dental Association, Copenhagen).


  9:55  Competencies of Dentists in Hong Kong and Southeast Asia. M. COMFORT (University of Hong Kong).

  10:10 Competencies of Dentists in Southern Africa. J. DE VRIES (Medical University of Southern Africa, South Africa).

  10:25 Competencies of Dentists in Latin America. G. NARANJO (University of Antioquia, Medellín, Colombia).

  10:40 Discussion.

Seq#: 2  Wednesday, June 24, 2:15 pm - 5:00 pm
Symposium, Athena Room

Microbiology/Immunology and Experimental Pathology Groups - International Collaborative Research Initiative on Orofacial Gangrene (NOMA)

(WHO and NIDR logos)

Chairpersons: D.E. Barmes and M.H. LeClercq

0002  2:15  Opening Comments.

  2:25 Questions and Answers on Orofacial Gangrene (NOMA). C. ENWONWU (University of Maryland, Baltimore, USA).

  2:50 Microbiological Understandings and Mysteries of NOMA. W.A. FALKLER, Jr. (University of Maryland, Baltimore, USA).

  3:15 Infrastructure in Africa for NOMA Research and Care. E.O. IDIGBE (Nigerian Institute for Medical Research, Lagos, Nigeria).

  3:40 The World Health Organization Initiative on NOMA. D.M. BOURGEOIS (Université Claude Bernard, Lyon, France).
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
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<tbody>
<tr>
<td>4:40</td>
<td>Discussion.</td>
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**Seq#: 3 Wednesday, June 24, 2:15 pm - 5:00 pm**

**Symposium, Hermes Room**

Diagnostic Systems, Cariology, and Behavioral Sciences & Health Services Research Groups - What Types of Information are Needed to Perform “Outcome Studies” of Dental Care and How Can These be Obtained?

**Chairperson: N. Pitts**

<table>
<thead>
<tr>
<th>0003</th>
<th>2:15</th>
<th>Opening Comments.</th>
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<tbody>
<tr>
<td>2:20</td>
<td>Specification for Ideal Caries Information Requirements to Permit Meaningful Assessments of Health Care Delivery Systems. A. ISMAIL (University of Michigan, Ann Arbor, USA).</td>
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<tr>
<td></td>
<td>Cariologists' Views on the Problems and Challenges to be Overcome in Achieving Reliable Diagnostic Information on Caries. A. LUSSI (Universität Bern, Switzerland).</td>
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<td></td>
<td>Possible Approaches to Meeting Information Specifications Now and in the Future Using New Diagnostic Technologies. A. MOL (University of Rochester, NY, USA).</td>
<td></td>
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<tr>
<td></td>
<td>Possible Approaches to Meeting Information Specifications Now and in the Future Using New Diagnostic Technologies. C. LONGBOTTOM (University of Dundee, Scotland).</td>
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<tr>
<td></td>
<td>Cariologists' Views on the Problems and Challenges to be Overcome in Achieving Reliable Diagnostic Information on Caries.  B. NYVAD (University of Aarhus, Denmark).</td>
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<td></td>
<td>Outcome Studies Related to Dental Care and Caries Management. D.A. SHUGARS (University of North Carolina, Chapel Hill, USA).</td>
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<td></td>
<td>Discussion.</td>
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**Seq#: 4 Wednesday, June 24, 2:15 pm - 5:00 pm**

**Symposium, Mobile 10 Room**

Irish Division and Geriatric Oral Research and Salivary Research Groups - Improvement in Oral Health in Adults: How Will this Alter our Research Efforts? [Supported by the International Life Sciences Institute, Unilever Research, and Colgate-Palmolive Co.]

**Chairpersons: D. O’Mullane**

<table>
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<tr>
<th>0004</th>
<th>2:15</th>
<th>Opening Comments.</th>
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</thead>
<tbody>
<tr>
<td>2:20</td>
<td>Changes in Oral Health Status Among Adults World-wide. P.-M. CAHEN (Université Louis Pasteur, Strasbourg, France).</td>
<td></td>
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<tr>
<td>2:50</td>
<td>Increased Retention of Natural Teeth; New Dental Health Problems. H. WHELTON (University Dental School and Hospital, Cork, Ireland).</td>
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</tr>
</tbody>
</table>
3:50 Research Developments in Oral Candidiasis Among Adults. D. COLEMAN (Trinity College, Dublin, Ireland).

4:20 Discussion.

Seq#: 5 Wednesday, June 24, 2:15 pm - 5:00 pm
Oral Session, Risso 6 Room

Cariology - Caries Detection; Lasers; Caries Models

Chairpersons: D. Inaba and H. Duschner

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:15</td>
<td>Clinical Repeatability of Light-induced Fluorescence for Caries Detection.</td>
<td>A.G. FERREIRA ZANDONA, M.H. VAN DER VEEN, G.J. ECKERT, and G.K. STOOKEY* (School of Dentistry, Indiana University, Indianapolis, USA; and ACTA, Amsterdam, Netherlands).</td>
</tr>
<tr>
<td>2:30</td>
<td>Relation between the Autofluorescence and Excavation of Carious Dentin.</td>
<td>A. BANERJEE*, T.F. WATSON, and E.A.M. KIDD (Department of Conservative Dentistry, Guy’s Dental Hospital, London, UK).</td>
</tr>
<tr>
<td>3:00</td>
<td>Effects of CO2 Laser and Organic Matrix on Enamel Demineralization.</td>
<td>C.S. HSU* and J.S. WEFEL (Department of Preventive Dentistry, National University of Singapore; and Dows Institute for Dental Research, College of Dentistry, University of Iowa, USA).</td>
</tr>
<tr>
<td>3:15</td>
<td>Effects of Laser Irradiation on Enamel Lesions.</td>
<td>D. INABA*, H. IKEDA, O. TAKAGI, and J. ARENDS (Preventive Dentistry, Iwate Medical University, Morioka; Maxillofacial Oral Surgery II and Preventive Dentistry, Nagasaki University, Japan; Materia Technica, University of Groningen, The Netherlands).</td>
</tr>
<tr>
<td>3:30</td>
<td>Microleakage Assessment of a Compomer Restoration Following Laser Caries Removal.</td>
<td>G. ANSARI*, S.L. CREANOR, R. STRANG, C.J. WHITTERS, J.S. REID, and W.P. SAUNDERS (Beheshti University, Dental School, Tehran, Iran; and Glasgow University Dental School, UK).</td>
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<tr>
<td>3:45</td>
<td>An in situ Model to Study Demineralization during Fixed Orthodontics.</td>
<td>P.E. BENSON*, N. PENDER, S.M. HIGHAM, and W.M. EDGAR (Department of Clinical Dental Sciences, School of Dentistry, University of Liverpool, UK).</td>
</tr>
<tr>
<td>4:00</td>
<td>Remineralization of in vivo- and in vitro-formed Enamel Lesions.</td>
<td>Y. IIJIMA*, O. TAKAGI, J. RUBEN, and J. ARENDS (Department of Preventive Dentistry, School of Dentistry, Nagasaki University, Japan; and Laboratory for Materia Technica, University of Groningen, The Netherlands).</td>
</tr>
<tr>
<td>4:30</td>
<td>Conduct of an Algorithm in Quantifying Simulated Palatal Erosion.</td>
<td>R.G. CHADWICK* and H.L. MITCHELL (University of Dundee and University of Newcastle, UK).</td>
</tr>
</tbody>
</table>

4:45 Discussion.

Seq#: 6 Wednesday, June 24, 2:15 pm - 5:00 pm
Oral Session, Room C12

Craniofacial Biology - Craniofacial Development
Chairpersons: G.E. Wise and R.M. Shah


0016  2:30  IL-1α and TGF-b1 Enhance MCP-1 Secretion by Dental Follicle Cells. G.E. WISE* and B.G. QUE (Louisiana State University, Baton Rouge, USA).

0017  2:45  Isolation of TGF-b Family Member Receptors Expressed during Zebrafish Development. T.S. ABDULJABBAR*, P. STASHENKO, and P.C. YELICK (Forsyth Dental Center, Boston, MA, USA).

0018  3:00  Expression of TGF b1, b2, and b3 during Mouse Primary Palatogenesis. K.-Y. WANG* (National Taiwan University, Taipei).


0021  3:45  CP27 Craniofacial mRNA Expression and Chromosome Localization. T.G.H. DIEKWISCH* and F. MARCHES (Baylor College of Dentistry, Texas A&M University System, Dallas, USA).

0022  4:00  The Role of Pax-6 in Specification of Cranial Somatic Motor Neurons. N. OSUMI and K. ETO* (National Institute of Neuroscience, National Center of Neurology and Psychiatry, Tokyo; and Department of Developmental Biology, Tokyo Medical and Dental University, Japan).

0023  4:15  Pericentric Inversion of Chromosome 4 and Familial Cleft Lip. S. BEIRAGHI*, H. SAAL, C.B. TALMADGE, and J. SUMEGI (University of Nebraska Medical Center, Omaha; and UC, Cincinnati, OH, USA).

0024  4:30  The Induction of Collagenase by Relaxin in Fibrocartilaginous Cells is Mediated by the AP-1 and PEA3 Promoter Sites. S. KAPILA* and Y. XIE (Department of Growth and Development, University of California-San Francisco, USA).

0025  4:45  Relaxin and b-estradiol Induce Collagenase and Stromelysin Expression in Temporomandibular Joint Disc Explants. T. DUONG*, B. HU, M. PARKER, and S. KAPILA (Departments of Growth & Development, University of California-San Francisco, USA).

Dental Materials - Adhesion—Surface Analysis, Adhesive Modification

Chairpersons: N. Nakabayashi and J. Vaidyanathan

0026  2:15  Adhesion to Differently Treated Lateral and Cervical Dentinal Surfaces. P. COLI*, S. ALAEDDIN, and S. KARLSSON (Department of Prosthetic Dentistry, Faculty of Odontology, Göteborg University, Sweden).

0027  2:30  Ultrastructure of Dentin Treated with Primers for Compomers and Resin-modified GICs. S.E. NORTHEAST* and A. DELLA BONA (University of Sheffield, UK; and University of Passo Fundo, Brazil).

0028  2:45  Dimensional Changes of Demineralized Dentin Treated with HEMA. Y. NAKAOKI*, P.N.R. PEREIRA, T. NIKAIDO, S. INOKOSHI, and J. TAGAMI (Tokyo Medical and Dental University, Japan).
0029  3:00  Merit and Demerit of Wet-bonding and Dry-bonding to Dentin. N. NAKABAYASHI* and K. HIRANUMA (Tokyo Medical and Dental University, Japan).

0030  3:15  Raman Microprobe Analysis of Dentin Surfaces at Low Laser Power Excitation. G. ELIADES* and G. PALAGHIAS (Research Center for Biomaterials, Athens, Greece).


0033  4:00  Acid Denaturing of Dentinal Collagen: An AFM Study. T.H. ELLIS*, F. EL FENINAT, S. POULIN, E. SACHER, and I. STANGEL (Biomaterials Interfaces Group, Department of Chemistry, Université de Montréal; and Engineering Physics, Ecole Polytech, Faculty of Dentistry, McGill University, Montreal, Canada).


0035  4:30  Effect of Multiple Primer Applications on Cervical Dentin. M. OGATA*, M. OKUDA, M. NAKAJIMA, H. SANO, and J. TAGAMI (Tokyo Medical and Dental University; and Hokkaido University, Sapporo, Japan).

0036  4:45  Long-term Clinical Prognosis of Pulp Tissue Direct-capped with Adhesive Resins. Y. KATOH*, T. KIMUŘA, and T. INABA (The Nippon Dental University School of Dentistry at Niigata, Japan).

Seq#: 8  Wednesday, June 24, 2:15 pm - 5:00 pm
Oral Session, Risso 7 Room

Dental Materials - Clinical Trials—Atraumatic Treatment, Primary Tooth Restoration, Sealant, General

Chairpersons: R. Welbury and V. Thompson

0037  2:15  Provision of Atraumatic Restorative Treatment (ART) in Western China—One-year Results. E.C.M. LO*, C.J. HOLMGREN, H.C. WAN, and D.Y. HU (Faculty of Dentistry, The University of Hong Kong; and WCUMS, Chengdu, China).

0038  2:30  One-year Evaluation of ART Technique. M.T.C. FRANÇA*, A. BOLINELLI, B.G.M. SEABRA, C.C. RODRIGUES, and M.F.L. NAVARRO (Bauru Dental School, University of São Paulo, Brazil).

0039  2:45  Six Months’ Evaluation of ART Technique Using Fuji IX and Fuji Plus. C.C. RODRIGUES*, A. BOLINELLI, B.G.M. SEABRA, M.T.C. FRANÇA, and M.F.L. NAVARRO (Bauru Dental School, University of São Paulo, Brazil).

0040  3:00  Clinical Trial of ART Technique Restorative GI Cements: Initial Findings. W. GAO, D. PENG, R.J. SMALES, and M.S. GALE* (School of Stomatology, Beijing; Faculty of Dentistry, Hong Kong, China).

3:15  Discussion

0041  3:30  Resin-modified Glass-ionomer and Compomer Restorations in Primary Teeth. Three-year Results. V. QVIST*, L. LAURBERG, A. POUlsen, and P.T. TEGLERs (University of Copenhagen; Værløse and Hillerød Public Dental Health Service, Denmark).
0043  3:45  Clinical Behavior of Glass-ionomer Restorations in Primary Teeth. I. ESPELID*, A.B. TVEIT, K. TORNES, and H. ALVHEIM (Faculty of Odontology, University of Bergen, Norway).


0046  4:30  Retention of Helioseal F on Primary and Permanent Teeth 2 Years after Placement. V. VRBIĆ* (Division of Dental Medicine, Faculty of Medicine, University of Ljubljana, Slovenia).

0047  4:45  Use of GIC (Fuji IX) in Disabled Patients. G. FANI* and R. DE IULIS (Dental School, University of Siena, Italy).

Seq#: 9  Wednesday, June 24, 2:15 pm - 5:00 pm
Oral Session, Thalie Room

Dental Materials - Composite Bond Strength—Caries-affected Dentin, Self-priming Adhesives, Bonding to Alloys and Amalgam

Chairpersons:  R. May and C.H. Driessen

0048  2:15  Sealant Shear Bond Strength to Sound and Carious Radicular Dentin. F.M. BURKE* and E. LYNCH (Department of Restorative Dentistry, University Dental School and Hospital, Cork, Ireland; and Department of Conservative Dentistry, SBRLSMD, QMW, London, UK).

0049  2:30  Tensile Bond Strength to Caries-affected Dentin Using Self-etching Primers. M. NAKAJIMA, H. SANO*, S. UNO, J. TAGAMI, and D.H. PASHLEY (Tokyo Medical and Dental University; Hokkaido University, Sapporo, Japan; and Medical College of Georgia, Augusta, USA).

0050  2:45  Dentin Tensile Bond Strength: Effects of Different Primer Applications. R. MAY* (R&D Department, ESPE Dental-Medizin GmbH & Co. KG, Seefeld, Germany).

0051  3:00  Extrusion Bond Strength to Dentin of New Self-priming Adhesives. A. FRITZENSCHAFT* and B. HALLER (Department of Operative Dentistry, Periodontology & Pedodontics, University of Ulm, Germany).

0052  3:15  Effect of Sodium Hypochlorite Conditioning on Dentin Bond Strength. D. PRISCO*, H. SANO, J. TAGAMI, N. INAI, and S. RENGO (University of Naples, Italy; Hokkaido University, Sapporo; and Tokyo Medical and Dental University, Japan).

0053  3:30  Shear Bond Strength of New “One Bottle” Dentin Adhesives. A. AL-EHEIDEB* and A. SCHULMAN (Graduate School of Arts and Science, New York University, NY, USA).


0055  4:00  Enamel Shear Bond Strength of New Single-bottle Adhesive Systems. W.A. EL-BADRAWY*, M. DABULEANU, and O.M. EL-MOWAFY (Faculty of Dentistry, University of Toronto, Ontario, Canada).

0056  4:15  Tensile Bond Strength of Luted Frame Components under Simulated Intra-oral Conditions. T. HEURICH*, P. WEIGL, and H.-C. LAUER (J.W. Goethe University, Department of Prosthodontics, Frankfurt/Main, Germany).
0057 4:30  Shear Bond Strength of Composite to Set Amalgam by Different Adhesives after Long-term Storage in Saline. R. PILO*, T. BROSH, and H. SHAFIR (School of Dental Medicine, Tel Aviv University, Israel).

4:45  Discussion

Seq#: 10 Wednesday, June 24, 2:15 pm - 5:00 pm
Oral Session, Erato Room

Dental Materials - Polymers—Composites, Polymers, and Biocompatibility

Chairpersons: J. D. Eick and C. Chappelow

0058 2:15  Optically Transparent Composites Containing Tantalum Oxide Nanoparticles. S.T. WELLINGHOFF*, H. DIXON, D. NICOLELLA, M. FAN, and H.R. RAWLS (Southwest Research Institute; and University of Texas Health Science Center, San Antonio, USA).

0059 2:30  Polymerization Contraction Stress of Commercial Composites. J.R. CONDON* and J.L. FERRACANE (Oregon Health Sciences University, Portland, USA).

0060 2:45  Polymerization Shrinkage and Elasticity of Flowable Composites and Filled Adhesives. R. LABELLA*, P. LAMBRECHTS, B. VAN MEERBEEK, G. VANHERLE, B.I. SUH, and R. CRAIGO (Catholic University of Leuven, Belgium; Bisco Inc., Schaumburg, IL, USA).

0061 3:00  Marginal Adaptation of Class II Composite Fillings: Guided Polymerization vs. Reduced Light Intensity. G.M. LOSCHE* and J.-F. ROULET (Department of Operative and Preventive Dentistry, Charité, Humboldt University of Berlin, Germany).


0064 3:45  Cure Monitoring of Bone Cement by Fluorescence Spectroscopy. F.W. WANG* and D.G. SAUDER (NIST, Gaithersburg; and Hood College, Frederick, MD, USA).

0065 4:00  A Repeatable Group Model for Collagen Molecules in Dentin. R.L. BOWEN* (ADAHF, Paffenbarger Research Center at the National Institute of Standards and Technology, Gaithersburg, MD, USA).

0066 4:15  Cell-transforming and Genotoxic Activities of Bisphenol-A. T. TSUTSUI*, Y. TAMURA, E. YAGI, K. HASEGAWA, and J.C. BARRETT (The Nippon Dental University, Tokyo, Japan; and National Institute of Environmental Health Sciences, Research Triangle Park, NC, USA).

0067 4:30  Cyotoxic Effects of Dental Composites and Various Other Dental Materials. A. SCHEDLE*, A. FRANZ, X.H. RAUSCH-FAN, P. SAMORAPOOMPICHIT, R. SLAVICEK, and G. BOLTZ-NITULESCU (School of Dentistry, Institute of General & Experimental Pathology, Institute of Histology, University of Vienna, Austria).

4:45  Discussion

Seq#: 11 Wednesday, June 24, 2:15 pm - 5:00 pm
Oral Session, Room 4

Dental Materials - Physical Properties of Resin-based Materials
**Chairpersons: H. Young and A. Shortall**

0068 2:15 Wear of Composites Used to Restore Dentin Compared with Enamel. H. YOUNG* and S. SUZUKI (Meharry Medical College, Nashville, TN; and University of Alabama, Birmingham, USA).

0069 2:30 Fracture Toughness Comparisons of Compomer and Composites. A.C. SHORTALL*, S.E. FISHER, P.M. MARQUÍS, and S. ÜÇTA¸SLI (School of Dentistry, The University of Birmingham, UK; and The University of Ankara, Turkey).

0070 2:45 Surface Contact Fatigue of Restorative Materials. J.F. McCABE*, Y. WANG, and M.J.A. BRAEM (University of Newcastle, UK; and University of Antwerp, Belgium).

0071 3:00 Mechanical Properties of an Experimental Glass-Silica-Titanium Composite Hybrid. A.M.O. AL-JASSER, K. AL-ATEEQ, R.W. VOWLES, and K.D. JANDT* (Department of Oral and Dental Science, University of Bristol, UK).

0072 3:15 Composite Depth of Cure with Halogen and Blue LED Technology. R.W. MILLS* and K.D. JANDT (Department of Oral and Dental Science, University of Bristol, UK).


0075 4:00 Calcium, Strontium, Aluminum, Sodium, and Fluoride Release from Four Glass-ionomer Cements. H. NGO*, V. MARINO, and G.J. MOUNT (University of Adelaide, Australia).

0076 4:15 pH Influence on Fluoride Release from Compomers. E. SALVOLINI*, G. ALBERGO, E. ACCARISI, and F. SAMPALMIERI (Dental Materials Department and Biochemistry Institute, University of Ancona, Italy).

4:30 Discussion

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**Seq#: 12 Wednesday, June 24, 2:15 pm - 5:00 pm**

**Oral Session, Risso 8 Room**

**Experimental Pathology - Cell Culture—Carcinoma Models**

**Chairpersons: C.-Y. Yang and T. ElAttar**

0077 2:15 The Effect of BNE on PG Synthesis by Carcinoma Cells. C.Y. YANG*, C.L. MENG, C.T. WU, K.L. SHEN, P. VAN DER BIJL, and H.K. LEE (Department of Dentistry, Surgery, and Pharmacol., Tri-Service General Hospital, National Defense Medical Center, Taiwan, ROC; and Department of Oral Medicine & Periodontics, University of Stellenbosch, South Africa).

0078 2:30 The Modulating Effect of Resveratrol and Quercetin on Oral Cancer Cell Proliferation. T. EIATTAR* and A. VIRJI (University of Missouri School of Dentistry, Kansas City, USA).

0079 2:45 Regulation of Matrix Metalloproteinase (MMP) Production by av Integrins in Oral Carcinoma Cell Lines. G.J. THOMAS*, M. LEWIS, and P.M. SPEIGHT (Eastman Dental Institute, University College London, UK).

0080 3:00 Collagen-induced Activation of Metalloproteinases on Squamous Cell Carcinoma Membranes. J.A. ENGLER*, H. DEASON, L.J. WINDSOR, and S. AZNAVOORIAN (Department of Biochemistry and Molecular Genetics, University of Alabama School of Dentistry, Birmingham, USA).
Integrin αvβ6 Mediates Adhesion and Migration of Squamous Carcinoma Cells on Fibronectin. L. KOIVISTO, R. GRENMAN, J. HEINO, and H. LARJAVA* (University of British Columbia, Vancouver, Canada).

Ethanol Induces the Overexpression of p21WAF1/CIP1 and p27 and Abolishes PGA2-induced Apoptosis in RKO Cells. W. GUO, M. BALUDA, and N.-H. PARK* (UCLA School of Dentistry and Dental Research Institute, Los Angeles, CA, USA).

Discussion

The Effects of Hypobaric Hypoxia on Rat Incisor Enamel Organ. R.C. SHORE*, G.M. WHITFORD, J. KIRKHAM, S.J. BROOKES, and C. ROBINSON (Oral Biology, Leeds Dental Institute, UK; and Oral Biology, Medical College of Georgia, Augusta, USA).

Optimized Conditions for Gene Transfection into Human Eosinophils. H. OHYAMA* and D.T.W. WONG (Harvard School of Dental Medicine, Boston, MA, USA).

Neuroimmune-mediated Immune Dysfunction of Anti-tumor Immunity. V. KALINCHENKO, R.L. COHEN, L.H. GRAF, Jr., and D.A. CHAMBERS* (University of Illinois at Chicago, USA).

Chemokine Gene Expression in Healthy Alveolar Mucosa. M. ZEHNDER* and M. BICKEL (Laboratory of Oral Cell Biology, Department of Removable Prosthodontics, University of Bern, Switzerland).

Effect of Modification of Collagen Fibrils on Apatite Induction by Immobilized Phosphoprotein. T. SAITO*, K. MATSUDA, and M.A. CRENSHAW (Health Sciences University of Hokkaido, Tobetsu, Japan; and Dental Research Center, University of North Carolina, Chapel Hill, USA).

Effect of Serum on in vitro Formation of Calcium Phosphate Deposits in Collagenous Matrices. T. VANDENBOS*, H. TSUDA, J. ARENDS, and W. BEERTSEN (Department of Periodontology, Academic Center for Dentistry Amsterdam; and Materia Technica, Groningen, The Netherlands).

Are Iron-generated Hydroxyl Free Radicals Involved in Collagen Mineralization? X.-F. DAI, H. LIMEBACK*, P. OTTENSMEYER, and A.R. TEN CATE (Faculty of Dentistry & Ontario Cancer Institute, University of Toronto, Canada).


Transplantation of Human Marrow Stromal Cells Involved in Biphasic Osteogenesis in vivo. S. SHI*, K. SATOMURA, S.A. KUZNETSOV, M. MANKANI, and P. GEHRON ROBEY (Craniofacial and Skeletal Disease Branch, NIDR/NIH, Bethesda, MD, USA).

The Effects of Insulin on Bone Tissue Formation. S.W. WHITSON* and M. WHITSON (School of Dental Medicine, Southern Illinois University, Alton, USA).
0094  4:00  Lysyl Hydroxylase 1 and 2 Gene Expression during Osteoblastic Differentiation in vitro. K. UZAWA*, W.J. GRZESIK, and M. YAMAUCHI (Dental Research Center, University of North Carolina, Chapel Hill, USA).


0096  4:30  Effect of Dexamethasone (Dex) on Osteoclast Formation, Part 1. E. HOSHIHARA*, N. KURIHARA, T. SHIMOJIMA, K. ICHIMURA, J. TATSUMI, and T. MIYATA (Department of Periodontology, Meikai University School of Dentistry, Saitama, Japan).

0097  4:45  Bone Augmentation by RhBMP-2 and Collagen on Adult Rat Calvaria. M. MURATA*, B.-Z. HUANG, N. NAGAI, T. SHIBATA, and M. ARISUE (Health Science University of Hokkaido and Okayama University, Japan).

Seq#: 14  Wednesday, June 24, 2:15 pm - 5:00 pm  
Oral Session, Clio Room  
Microbiology/Immunology - Adhesin/Adhesion  
Chairpersons:  J. Younson and C.H. Sissons


0099  2:30  Adherence of Streptococcus sanguis to Platelets. A. WRAY*, D. COX, and C.W.I. DOUGLAS (Department of Oral Pathology, University of Sheffield, UK).

0100  2:45  WITHDRAWN

0101  3:00  Adhesion of Vital and Dead Streptococcus sanguis Cells in vitro. R. WEIGER*, E.-M. DECKER, G. KRASTL, and M. BRECX (School of Dental Medicine, University of Tübingen, Germany).

0102  3:15  Effect of Streptococcus crista on Viability of Fusobacterium nucleatum. J.D. RUDNEY* and C.A. STRAIT (University of Minnesota, Minneapolis, USA).

0103  3:30  Vascular Disruption by a 15-kDa Adhesin Domain from Porphyromonas gingivalis. M. PARAMAESVARAN*, D. LAYMAN, D. HARTY, W. RELF, C. RATHSAM, and N. HUNTER (Institute of Dental Research, Sydney, Australia; and Louisiana State University, New Orleans, USA).

0104  3:45  Adherence of Porphyromonas gingivalis to Mono-layers of Pocket Epithelium from Different Periodontal Conditions. W. PAPAIOANNOU*, D. van STEENBERGHE, J.J. CASSIMAN, J. VAN ELDERE, M. PAUWELS, and M. QUIRYNEN (Faculty of Medicine, Research Group for Microbial Adhesions; Department of Periodontology; Center for Human Genetics, Catholic University; and Rega Institute, Leuven, Belgium).

0105  4:00  Interbacterial Adhesion between Helicobacter pylori and Indigenous Oral Bacteria. K. KOMIYAMA* and W.T. MARTIN (College of Dentistry and College of Medicine, University of Saskatchewan, Saskatoon, Canada).

0106  4:15  Dental Plaque Microcosm Biofilm Growth is Affected by Vitamins/Micronutrients. C.H. SISSONS*, L. WONG, and R.J. PALMER, Jr. (Dental Research Group, Pathology, Wellington School of Medicine, Otago University, New Zealand; and Center for Environmental Biotechnology, University of Tennessee, Knoxville, USA).


Electromyographic Activity of Human Lateral Pterygoid Muscle (LP) during Jaw Movements. G.M. MURRAY and I.J. KLINEBERG* (Neurobiology and Orofacial Pain Unit, Westmead Hospital Dental Clinical School, University of Sydney, Australia).

Jaw Muscles’ Force Contribution Patterns to Antagonistic Paired-teeth Clenching. R. MEDINA*, Y. TSUCHIDA, A. SALAZAR, and S. KOHNO (Department of Removable Prosthodontics, School of Dentistry, Niigata University, Japan; and Medical-Dental Division, House of Representatives, Metro Manila, The Philippines).

Measurement of Masseter Muscle Size and Bite Force. Y.Y. SHIAU*, C.C. PENG, and C.W. HSU (School of Dentistry, National Taiwan University, Taipei).


Prerequisites for Estimation of Chewing Force from Elevator Muscle EMG. P. PROESCHEL and J. RAUM* (Department of Prosthodontics, University Dental Clinic, Friedrich-Alexander-Universität, Erlangen, Germany).

Cortical Representation of Oropharyngeal and Orofacial Movement. K.M. MOSIER*, B.R. KOMISARUK, C.C. CRIMINALE, W.C. LIU, and A.J. KALNIN (University of Medicine & Dentistry of New Jersey; and Rutgers University, USA).

Organization of the Brainstem Pattern Generator of Mastication. G. SCOTT*, K.-G. WESTBERG, A. KOLTA, N. VRENTZOS, and J.P. LUND (McGill University; Université de Montréal, Canada; and University of Umeå, Sweden).

Mapping the Corticomotor Representation of the Human Masseter. C. WATSON, A.S. McMILLAN*, and D. WALSHAW (Departments of Restorative Dentistry and Statistics, University of Newcastle upon Tyne, UK).

31P-NMR Spectroscopy Evaluation of Phosphate Metabolism in the Human Masseter Muscle. T. NEGORO*, T. MARCEL, C. McNEILL, S. GOTO, and A.J. MILLER (Aichi-Gakuin University, Japan; and University of California, San Francisco, USA).
Periodontal Research-Diagnosis/Epidemiology - Host Periodontal Diagnostic Markers and Genetics

Chairpersons: I. Lamster and J. Albandar

0118 2:15 b-Glucuronidase Activity and Level of Subgingival Bacteria as Markers of Severity of Early-onset Periodontitis. J.M. ALBANDAR*, A. KINGMAN, and I.B. LAMSTER (NIDR/NIH, Bethesda, MD; and Division of Periodontics, Columbia University, New York, USA).

0119 2:30 Concentration of b-glucuronidase in Saliva from Patients with Periodontitis. I.B. LAMSTER* (Division of Periodontics, Columbia University School of Dental and Oral Surgery, New York, NY, USA).

0120 2:45 Alkaline Phosphatase Levels in Gingival Fluid and the Prediction of Attachment Loss. I. CHAPPLE*, I. GARNER, M. SAXBY, S. DIBART, and J.B. MATTHEWS (The University of Birmingham, UK; and Boston University, MA, USA).


0124 3:45 A Multi-factorial Model for Assessing the Risk for Periodontal Disease. P.N. PAPAPANOU*, A.-M. NEIDERUD, A. PAPADIMITRIOU, J. SANDROS, P.N. MADIANOS, J.G.J. VAN DE WINKEL, and G. DAHLÉN (Department of Oral Microbiology, Faculty of Odontology, Göteborg University, Sweden; and Department of Immunology, University Hospital Utrecht, The Netherlands).

0125 4:00 Relationship of Clinical Parameters and Interleukin-1 Genotype to Tooth Survival. M.E. NUNN* and M. MCGUIRE (Baylor College of Dentistry, Dallas, TX, USA).

0126 4:15 Molecular Genetic Analysis of Adult-type Hypophosphatasia Patient and Her Family. H. WATANABE*, M. UOSHIMA-HASHIMOTO, M. GOSEKI-SONE, and I. ISHIKAWA (Department of Periodontology and Department of Biochemistry, Tokyo Medical and Dental University, Japan).

0127 4:30 Clinical and Genetic Analysis of a Large Family with Early-onset Periodontitis. P.J. HODGE*, P.W. TEAGUE, A. WRIGHT, and D.F. KINANE (University of Glasgow Dental School; and Human Genetics Unit, Medical Research Council, Edinburgh, UK).

0128 4:45 Periodontal Health in an Isolated Population: A Basis for Familial Studies. S.A. DOWSETT*, L. ARCHILA, K.A. VASTOLA, and M.J. KOWOLIK (Department of Oral Biology, Indiana School of Dentistry, Indianapolis, USA; Faculta Odontologia UMG, Guatemala City, Guatemala; and The Procter & Gamble Company, Cincinnati, OH, USA).

Seq#: 17 Wednesday, June 24, 2:15 pm - 5:00 pm
Oral Session, Room C34

Periodontal Research-Pathogenesis - Genetics and Other Factors Affecting Disease Status

Chairpersons: A. Tanner and U. Vander Velden
Fcg Receptor Polymorphisms are Associated with Periodontitis. R.C. VAN SCHIE*, S.G. GROSSI, R. DUNFORD, M.E. WILSON, and R.J. GENCO (Department of Oral Biology, SUNY at Buffalo, NY; and UMDNJ New Jersey Dental School, Newark, USA).

Sequence Analysis of Chemotactic Receptor DNA in LJP. M.R. GWINN*, A. SHARMA, and E. DE NARDIN (Department of Oral Biology, SUNY at Buffalo, NY, USA).

Vitamin D Receptor Gene Polymorphism and Early-onset Periodontal Diseases. B.J.W. HENNIG*, J.M. PARKHILL, I. CHAPPLE, P.A. HEASMAN, and J.J. TAYLOR (Oral Biology and Restorative Dentistry, Dental School, University of Newcastle; and Periodontology, Dental School, University of Birmingham, UK).

Infection and Systemic Host Response in Adults with Initial Periodontitis. A.C.R. TANNER*, M.A. TAUBMAN, R.L. KENT, Jr., M.F.J. MAIDEN, and P.J. MACUCH (Forsyth Dental Center, Boston, MA, USA).


Neutrophil Dysfunction and Periodontal Bacterial Invasion in Chediak-Higashi Syndrome. E. DELCOURT, H. BOUTIGNY, J.P. CHAIRAY, and H. HILDEBRAND* (Lille II University and Paris VII University, France).


Autoantibody against Gingival Fibroblast Antigen in Serum from Patients with Periodontitis. H. YOSHINO*, T. HINO, T. TAKEMOTO, H. SHIBA, and H. KURIHARA (Department of Periodontology and Endodontology, Hiroshima University School of Dentistry, Japan).

Colonization of Young Children and Adult Caregivers by Dental Pathogens. S.A. MOKEEM*, A.C.R. TANNER, C.A. RIEDY, P. WEINSTEIN, J. BRUSS, R.C. PAGE, and P. MILGROM (Forsyth Dental Center, Boston; Harvard School of Dental Medicine, Boston, MA; and University of Washington, Seattle, USA).


Discussion


0141 2:45 Reduction of Calculus Formation in a Chinese Population. J.L. WINSTON, K.A. VASTOLA, C.H. YEH, W. RONG, W. WANG, and J. BIAN* (Procter & Gamble, Cincinnati, OH, USA; and School of Stomatology, Beijing Medical University, China).

0142 3:00 Design, Synthesis, and in vitro Evaluations of New Phenol Antimicrobials for Dental Disease. J. BRAHMS*, O. STRINGER, S. HERLES, S. LUCCHESI, J. AFFLITTO, S. SHAPIRO, B. GUGGENHEIM, and A. GAFFAR (Colgate-Palmolive Company, Piscataway, NJ, USA; and University of Zürich Dental Institute, Switzerland).


0144 3:30 Responses of Cultured Human Oral Fibroblasts to Dental Resin-related Compounds. Y. LIU*, M. BJON HOLM, and J. EKSTRAND (Department of Basic Oral Sciences, School of Dentistry, Karolinska Institutet, Huddinge, Sweden).


0146 4:00 Population Pharmacokinetics and Inorganic Mercury. G. SANDBORGH-ENGLUND*, F. JONSSON, J. EKSTRAND, and G. JOHANSON (Department of Basic Oral Sciences, Karolinska Institutet, Huddinge; National Institute for Working Life, Solna; and Department of Occupational and Environmental Medicine, Uppsala University Hospital, Sweden).


0148 4:30 Dental Fluorosis Risk Relative to Varying Natural Fluoride Levels. D. BROTHWELL* and H. LIMEBACK (Community Department and Preventive Dentistry Department, University of Toronto, Ontario, Canada).

0149 4:45 Analysis of Urine for Fluoride: A Comparison of Analytical Techniques. C.E. KETLEY*, M.A. LENNON, and K.J. TOUMBA (Department of Clinical Dental Sciences, School of Dentistry, The University of Liverpool; and Division of Child Dental Health, Leeds Dental Institute, UK).

Seq#: 19 Wednesday, June 24, 2:15 pm - 5:00 pm
Oral Session, Room A12

Pulp Biology - Pulpal Circulation and Pulpal Pain

Chairpersons: M. Närhi and R. Orchardson


0151 2:30 The Sources of Laser Doppler Bloodflow Signals from Premolar Teeth. S. TONGSUPAN, N. VONGSAVAN*, K. SINGSANSANEESIRI, and S. SOO-AMPON (Department of Operative Dentistry and Physiology & Biochemistry, Mahidol University, Thailand).


0153 3:00 The Effect of Bupivacaine without Vasoconstrictor on Pulpal Pain Perception Threshold Level. P.J.L. BURG, S. RUETTERMANN*, and W.H.-M. RAAB (Department of Operative Dentistry, Heinrich-Heine-University, Duesseldorf, Germany).
0154  3:15  Effect of CGRP Antagonist on Pulpal Blood Flow and Tissue Pressure in Ferrets. E. BERGGREEN* and K.J. HEYERAAS (Department of Physiology, University of Bergen, Norway).

0155  3:30  Functional Properties of Sensory Receptors in Rat Molars. B. MATTHEWS*, F. LI, and S. WANACHANTARARAK (Department of Physiology, University of Bristol, UK).

0156  3:45  Pulp Nerve Fibers Activated by a Somatostatin Antagonist in Inflamed Teeth. M. NÄRHI*, T. HIRVONEN, and G.R. HOLLAND (University of Kuopio, Finland; and University of Michigan, Ann Arbor, USA).

0157  4:00  Comparison of Dentinal Tubule Occlusion—CPP, Resin, and Potassium Oxalate. T. SUGE*, K. ISHIKAWA, A. KAWASAKI, K. SUZUKI, T. MATSUO, and S. EBISU (Tokushima University, Okayama University, and Osaka University, Japan).

0158  4:15  Contents of Tubules in Relation to Spontaneous Water Flow through Human Dentin. F. GHAZALI and M.A. BISHOP* (Anatomy Department, Queen Mary & Westfield College, London, UK).

4:30  Discussion

Seq#: 20  Thursday, June 25, 8:30 am - 11:15 am
Workshop, Gallieni 2 Room

Geriatric Oral Research Group - Systematic Reviews and Meta-analysis in Dentistry: An Introduction
Chairperson:  J.E. Cornell

0159  8:30  Opening Comments.

8:40  Systematic Reviews and Meta-analysis in Dentistry: An Introduction. J.E. CORNELL (University of Texas Health Science Center, San Antonio, USA).

Seq#: 21  Thursday, June 25, 8:30 am - 11:15 am
Symposium, Hermes Room

Nutrition and Educational Research Groups - Global Perspective on Nutritional Component of Oral Health Surveys
Chairpersons:  J. Navia and C. Mobley

0160  8:30  Opening Comments.

8:35  Dietary Intake Profiles of Unique US Populations. C. MOBLEY (University of Texas Health Science Center, San Antonio, USA).

9:00  Food and Consumption Patterns of Middle European Elderly. I. NITSCHKE (Humboldt-Universität, Berlin, Germany).

9:25  Food and Consumption Patterns of Middle European Elderly. P. MOJON (University of Geneva, Switzerland).

9:50  Dietary and Lifestyle Patterns of Southern Europeans. E. CUENCA (University of Barcelona, Spain).

10:15  Dietary and Lifestyle Patterns of Southern Europeans. L. SERRA-MAJEM (University of Barcelona, Spain).
10:40 Foods and Consumption Patterns of Migrant Communities in the UK. R. BEDI (Eastman Dental Institute, London, UK).

11:05 Discussion.

Seq#: 22 Thursday, June 25, 8:30 am - 11:15 am Symposium, Mobile 10 Room

Diagnostic Systems Group - The Digital Dental Office as the Agent of Change

Chairpersons: D. Tyndall and D. Benn

0161 8:30 Opening Comments.

8:40 Digital Imaging Capabilities: Today and in the Future. M. ANALOUI (Indiana University, Indianapolis, USA).


9:30 Teledentistry and the Future of Dental Practice. R. VANDRE (Telemedicine Research Laboratory, Ft. Detrick, MD, USA).

9:55 Decision Support Systems in Dentistry. S. WHITE (University of California, Los Angeles, USA).

10:20 The Future of Dental Imaging: Where Do We Go From Here? R. WEBBER (Wake Forest University, Winston-Salem, NC, USA).

10:40 Discussion.

Seq#: 23 Thursday, June 25, 8:30 am - 11:15 am Symposium, Athena Room

Irish Division - Periodontal Regeneration - Development and Current Status [Supported by Atrix Laboratories]

Chairperson: N. Claffey

0162 8:30 Opening Comments.

8:35 Development of Periodontal Regeneration Techniques. K. SELVIG (University of Bergen, Norway).


9:25 Growth Factors in Periodontal Regeneration. Z. SCHWARTZ (Hebrew University, Jerusalem, Israel).

9:50 Modulation of Inflammatory Response within the Healing Wound. S. AMER (Boston University, MA, USA).


10:40 Discussion.
Behavorial Sciences/Health Services Research - Health Services Research

Chairpersons: B.A. White and J. Crall


0164  8:45  Dentists’ Judgment of Prophylactic Removal: A Comparison over 10 Years. K. KNUTSSON*, L. LYSELL, and M. ROHLIN (Department of Oral Radiology, Faculty of Odontology, Lund University, Malmö, Sweden).

0165  9:00  Development of a Prototype Report Card for Managed Dental Care Plans. J.D. BADER* and D.A. SHUGARS (University of North Carolina, Chapel Hill, USA).


0167  9:30  Treatment Provided over Five Years for Adults. J.E. CLARKSON*, H.V. WORTHINGTON, A.S. BLINKHORN, and R.M. DAVIES (Dental Health Unit, University of Manchester, UK).

0168  9:45  Prediction of Patients Requiring Treatment over 5 Years. H.V. WORTHINGTON*, J.E. CLARKSON, A.S. BLINKHORN, and R.M. DAVIES (Dental Health Unit, University of Manchester, UK).

0169  10:00  The Effect on Toothbrushing Behavior of a Mother and Child Health Center Community Oral Health Program in Jerusalem. H.D. SGAN-COHEN* (Hebrew University-Hadassah School of Dental Medicine, Jerusalem, Israel).


0171  10:30  Dental Utilization and Cost among Diabetics in an HMO. B.A. WHITE* and S.J. LITTLE (Kaiser Permanente Center for Health Resources, Portland, OR, USA).

0172  10:45  Implementation of a Network-wide Quality Improvement Program: Baseline Results. S. BAKER* and J. CRALL (Metropolitan Life, Bridgewater, NJ; and University of Connecticut, Farmington, USA).

0173  11:00  Assessments of Dental Practices Derived from Two Data Sources. J. CRALL* and S. BAKER (University of Connecticut, Farmington; and Metropolitan Life, Bridgewater, NJ, USA).

Cariology - Epidemiology—Prevalence, Risk Factors

Chairpersons: L. Dogon and K. Stephen

0174  8:30  The Prevalence of Dental Caries in Schoolchildren in Sechuan. T. DINES, S. LI, D.Y. HU, and I.L. DOGON* (Harvard School of Dental Medicine, Boston, MA, USA; and West China University of Medical Sciences).

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<th>Time</th>
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<th>Authors/Institutions</th>
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<tr>
<td>0176</td>
<td>9:00 Caries Prevalence of Twelve-year-olds in Puerto Rico.</td>
<td>A. ELÍAS*, K. CRESPO, C. TORO, C. GIERBOLINI, J. GIUSTI, and A.E. ELÍAS</td>
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<td>(School of Dentistry, University of Puerto Rico, San Juan).</td>
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<td>0177</td>
<td>9:15 The Oral Status and Dental Development of Children with</td>
<td>S.E. LAMPITT, M.S. DUGGAL*, and P. HART</td>
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<td></td>
<td>Hemoglobinopathies.</td>
<td>(Department of Paediatric Dentistry, Leeds Dental Institute, UK).</td>
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<td>0178</td>
<td>9:30 Evaluation of Withdrawal of a School-based Fluoride Mouthrinse</td>
<td>D.W. JOHNSTON*, L. TURNER, and N. NEEDHAM</td>
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<td></td>
<td>Program.</td>
<td>(School of Dentistry, University of Western Ontario, Canada).</td>
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<td>(University of Glasgow, Scotland; and Albert-Szent Gyorgyi University, Szeged, Hungary)</td>
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<td>0180</td>
<td>10:00 Microbiological and Chemical Determinants of Caries in Minority</td>
<td>E.O. KUYINU*, H.A.B. LINKE, S.L. BARROW, B. OGUNDARE, O.O. ONIMISI, M.M. IMAM, D.</td>
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<td></td>
<td>Subjects.</td>
<td>STYNER, C. BAUTISTA, C. DEMARTINO, Y. FAN, J.J. DAVIS, J. VAN HOUTE, H.C. MARGOLIS,</td>
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<td></td>
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<td>and R.Z. LeGEROS (New York University College of Dentistry, NY; and Forsyth Dental</td>
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<td>Center, Boston, MA, USA).</td>
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<td>ROBERTSON, and D. BEIGHTON (University of Dundee Dental School, and KCSMD, London, UK)</td>
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<td>0182</td>
<td>10:30 Caries Intensity and Streptococcus mutans Occurrence in</td>
<td>M. KRUSZY´NSKA-ROSADA, M. BORYSEWICZ-LEWICKA, and T. PAWLACZYK-KAMIE´NSKA*</td>
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<td></td>
<td>Mothers and Children.</td>
<td>(Institute of Stomatology, K. Marcinkowski University of Medical Sciences, Pozna´n,</td>
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<td>Poland).</td>
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<td>and Adults.</td>
<td>(Meharry Medical College, Nashville, TN, USA).</td>
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<td>0184</td>
<td>11:00 The Importance of Predisposing Salivary Factors in Children</td>
<td>E.A. O'SULLIVAN* and M.E.J. CURZON</td>
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<td>with Erosion.</td>
<td>(Department of Paediatric Dentistry, Leeds Dental Institute, UK).</td>
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**Seq#: 26 Thursday, June 25, 8:30 am - 11:15 am**

**Oral Session, Thalie Room**

**Dental Materials - Ceramics—Physical Properties**

**Chairpersons: J. Lenz and R. Van Noort**

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<td>0185</td>
<td>8:30 Thermal Stresses in Ceramometallic Crowns Simulating Firing in</td>
<td>M. THIES, J. LENZ*, and K. SCHWEIZERHOF (Institut für Theoretische Mechanik and</td>
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<td></td>
<td>Layers.</td>
<td>Institut für Mechanik, Universität Karlsruhe, Germany).</td>
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<td>0186</td>
<td>8:45 Surface Analysis of Leucite-reinforced Feldspathic Ceramics</td>
<td>T. HOOSMAN, R. DAW, R. VAN NOORT*, and R. SHORT (Centre for Biomaterials and Tissue</td>
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<tr>
<td></td>
<td>Using XPS.</td>
<td>Engineering, University of Sheffield, England).</td>
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<tr>
<td>0187</td>
<td>9:00 Fracture Strength of All-ceramic Crown Systems.</td>
<td>L.C. SOBRINHO, J.C. KNOWLES, and R.H. GLOVER* (Departments of Conservation and</td>
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<td>Biomaterials, Eastman Dental Institute, London, UK).</td>
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<tr>
<td>0188</td>
<td>9:15 Fracture Toughness Determination of Biobond and Biobond-Rexilium</td>
<td>N.D. RUSE* and D. FEDUIK (Biomaterials-OBMS, Faculty of Dentistry, UBC, Vancouver,</td>
</tr>
<tr>
<td></td>
<td>Using the NTP Test.</td>
<td>Canada).</td>
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</table>
Effect of Hydrolysis on Flexural Strength of Low-fusing Ceramics. S. RHIM*, D. NATHANSON, and R. GIORDANO (Boston University, MA, USA).

Flexural Strength of Glass- and Resin-infiltrated Ceramic Matrices. P. KITTIPIBUL* and R. GIORDANO (Boston University Goldman School of Dental Medicine, MA, USA).

The Biaxial Flexural Strength of Two Pressable Ceramic Systems. M.J. CATTELL*, J.C. KNOWLES, and E. LYNCH (Department of Conservative Dentistry, St. Bartholomew's; the Royal London School of Medicine and Dentistry; and Eastman Dental Institute, London, UK).

Isothermal Phase Transformations in a Pressable Leucite-reinforced Dental Ceramic. I.L. DENRY*, L.A. TARR, and J.A. HOLLOWAY (The Ohio State University, Columbus, USA).

Fracture Toughness (KIC) of a Dental Porcelain Determined by Fractographic Analysis. S.S. SCHERRER*, J.R. KELLY, G.D. QUINN, and K. XI (University of Geneva, Switzerland; NIST, Gaithersburg; and Naval Dental School, Bethesda, MD, USA).


discussion

Seq#: 27 Thursday, June 25, 8:30 am - 11:15 am
Oral Session, Erato Room
Dental Materials - Composite Bond Strength—Experimental Formulations, Bonding to Resins, in vivo Bonding, Microleakage, Wear
Chairpersons: S. Suzuki and D. Nathanson

Bonding Is Obtained by High Ca Content and Functional Monomer. A. MANABE*, C. TANI, T. YAMASHITA, K. ITOH, H. HISAMITSU, and S. WAKUMOTO (School of Dentistry, Showa University, Japan).


Surface Analysis and Tensile Bond Strength of Restorative Materials to Resin Luting Cement. A. DELLA BONA* (University of Passo Fundo, RS, Brazil).


Influence of Surface Pre-treatment of Composite Inlays on Bond Strength. E. NILSSON, S. ALAEDDIN*, P. MILLEDING, A. WENNERBERG, and S. KARLSSON (Department of Prosthetic Dentistry, Faculty of Odontology, Göteborg University, Sweden).

Durability of Bond Strengths to Dog Dentin in vivo. M. YOSHIYAMA*, T. MATSUO, and D.H. PASHLEY (Tokushima University, Japan; and Medical College of Georgia, Augusta, USA).

Comparison of a Micro Tensile and Two Shear Dentin Bond Tests. S.H. DICKENS*, N.S. LIAO, and B.B. REED (ADAHF, Paffenbarger Research Center, NIST, Gaithersburg, MD, USA).
0203 10:30 Marginal Microleakage after Cavity Preparation or Modification with the Er:YAG Laser. P. WILDER-SMITH*, S. CHOI, and T. KUROSAKI (Beckman Laser Institute and Medical Clinic, University of California, Irvine, USA).

0204 10:45 In vitro Wear of Indirect Resin Composite Restoratives. S. SUZUKI* (School of Dentistry, University of Alabama at Birmingham, USA).

0205 11:00 Time/Motion Study of a New Experimental Posterior Composite in vitro. D. NATHANSON* and O.S. PAPASOTIRIOU (Goldman School of Dental Medicine, Boston University, MA, USA).

Seq#: 28 Thursday, June 25, 8:30 am - 11:15 am
Oral Session, Room 4
Dental Materials - Polymers—Compomers, Resin Ionomers, and Composite Polymerization
Chairpersons: D.C. Watts and S.B. Mitra


0208 9:00 Microleakage and Fracture Resistance of Compomers and Amalgam. S. HATIBOVIC-KOFMAN*, T. WHITE, and A. ALI (The University of Western Ontario, London, Canada).

0209 9:15 In vivo vs. in vitro Anticariogenic Potential of Aesthetic Restorative Materials. A. KAKABOURA*, L. PAPAGIANNOULIS, and G. ELIADES (Department of Operative Dentistry & Pediatric Dentistry, Faculty of Dentistry, University of Athens, Greece).

0210 9:30 Formulations of Light-curable Glass-ionomer Cements Containing N-Vinylpyrrolidone. B.M. CULBERTSON*, D. XIE, and W.M. JOHNSTON (College of Dentistry, Ohio State University, Columbus, USA).


0212 10:00 Direction of Shrinkage of Light-curing Resin Composites. E. ASMUSSEN* (Department of Dental Materials, School of Dentistry, Faculty of Health Sciences, University of Copenhagen, Denmark).


0214 10:30 The Effect of Curing Tip Sterilization on the Light Intensity Emitted from Two Light-curing Units. J. TZOUTZAS*, A. KAKABOURA, D. PITSINIGOS, and G. VOUGIOUKLAKIS (Department of Operative Dentistry, Faculty of Dentistry, University of Athens, Greece).


0216 11:00 “Soft-start” Photo-polymerization Effects in Resin-composite Restorative. D.C. WATTS* and A. AL-HINDI (University of Manchester Dental School, UK).
Dental Materials - Metals, Bleaching, Color, Analysis

Chairpersons: W. Müller and P. DeHoff

0217  8:30  The Crystallographic Structure of Copper Ni-Ti Orthodontic Arch Wires. L.F. CHEN*, F.C. JANG, and H.H. TSAI (Chung-Shang Medical and Dental College, Taiwan, ROC).

0218  8:45  The Effects of He, Ar, Kr, and Xe on Macroporosity and Hardness of cp Ti Castings. S. ZINELIS* and G. PALAGHIAS (Research Center for Biomaterials, Athens, Greece).

0219  9:00  Phase Formation in cp Ti Castings Due to Surface Contamination from SiO2-based Investment Materials. G. PALAGHIAS*, S. ZINELIS, T. PAPADOPOULOS, and M. VARDAVOULIAS (Research Center for Biomaterials and Cereco, Glyfada, Greece).


0221  9:30  Marginal Fit of CEREC CAD/CIM Anterior Crowns and Crown Cores. S. WINDISCH*, A. BINDL, and W.H. MÖRMANN (Division of Aesthetic and Computer Restorations, Center for Dental and Oral Medicine, University of Zürich, Switzerland).

0222  9:45  Whitening Effect of Bleaching Agents on Rat Teeth Stained by Tetracycline. D.-H. SHIN* and J.B. SUMMITT (Dankook University School of Dentistry, Cheonan, Korea; and University of Texas Health Science Center at San Antonio, TX, USA).

0223  10:00  Clinical Evaluation of Porcelain Veneers Using a Colorimeter. R.R. PATEL*, J.W. WICKENS, and D.J. SETCHELL (Centre for Biomaterials and Tissue Engineering, Department of Oral and Maxillofacial Surgery, School of Clinical Dentistry, Sheffield; and Department of Conservative Dentistry, Eastman Dental Institute, University of London, UK).


0225  10:30  Rationalization of Incisor Shape: Experimental-Numerical Analysis. P. MAGNE*, A. VERSLUIS, and W.H. DOUGLAS (University of Geneva, Switzerland; and MDRCBB, University of Minnesota, Minneapolis, USA).

10:45  Discussion

Geriatric Oral Research - Dental Status, Dental Services, and Oral Health Outcomes

Chairpersons: P. Allison and G. Slade


0228  9:00  Reported Oral Problems and Difficulty in Eating among Older People. A.W.G. WALLS*, J.G. STEELE, A. SHEIHAM, and W. MARCENES (University of Newcastle upon Tyne and University College London, England).


0230  9:30  Dental Status and Health Status in Cancer Patients. P.J. ALLISON*, D. LOCKER, M. BLACK, G. SHENOUDA, and J.S. FEINE (McGill University and Jewish General Hospital, Montreal, PQ; and University of Toronto, ON, Canada).

0231  9:45  Oral Health Status and the Pattern of Dental Treatment among Older Canadians. A. JOKOVIC*, D. LOCKER, and M. CLARKE (Faculty of Dentistry, University of Toronto, Ontario, Canada).

0232  10:00  Geographic Variations in Dental Services Provided to Older Adults. D. LOCKER* and M. CLARKE (Faculty of Dentistry, University of Toronto, Ontario, Canada).

0233  10:15  Quality of Life Outcomes from Dental Care among Older Adults. G.D. SLADE* (Department of Dental Ecology, University of North Carolina, Chapel Hill, USA).

0234  10:30  Determinants of Patients’ Treatment Preferences in a Clinical Trial. M.A. AWAD*, S.H. SHAPIRO, J.P. LUND, and J.S. FEINE (Faculties of Dentistry and Medicine, McGill University, Montreal, Quebec, Canada).

0235  10:45  Patients Who Prefer Implants Accentuate the Positive. M.A. AWAD, J.P. LUND, C.M.L. CLOKIE, E. DUFRESNE, and J.S. FEINE* (McGill University and Université de Montréal, Canada).

11:00  Discussion

Seq#: 31 Thursday, June 25, 8:30 am - 11:15 am
Oral Session, Mobile 9 Room
Implantology - Clinical Studies
Chairpersons: S. Dibart and D. Schwartz-Adar

0236  8:30  The Influence of the Implant’s Contact Surface Area on the Five-year Cumulative Survival Rate. D. SCHWARTZ-ARAD*, G. CHAUSHU, and N. GULYAEV (School of Dental Medicine, Tel Aviv University, Israel).

0237  8:45  Posterior Maxillary Bone Response to Drilling and Implant Installation—A Micro-imaging Study. A. CONSTANTINO* and C. FUKUZAKI (School of Dentistry, Department of Implantology, University São Francisco, São Paulo, Brazil).

0238  9:00  Measurements of Bone Mineral Density with Quantitative Computed Tomography. C. LINDH*, A. PETERSSON, and M. NILSSON (Department of Oral Radiology, Faculty of Odontology, Lund University; and Department of Radiation Physics, University Hospital, Malmö, Sweden).


0240  9:30  A Microbiological Study of Subjects with Failing Implants. M.A.M. SALONEN*, T. TERVONEN, S. ASIKAINEN, and A.M. RAUSTIA (Institute of Dentistry, University of Oulu; and Institute of Dentistry, University of Helsinki, Finland).


Evaluation of Stress Transfer on Fitting and Non-fitting Implant Restorations. M.K. ÜNSAL* (Faculty of Dentistry, Department of Prosthetic Dentistry, University of Ankara, Turkey).

Discussion

Seq#: 32 Thursday, June 25, 8:30 am - 11:15 am
Oral Session, Mobile 4 Room
Microbiology/Immunology - Microbial Physiology, Metabolic Enzymes
Chairpersons: R. Russell and R.E. Marquis


Intracellular Amylase of Streptococcus mutans. C.L. SIMPSON and R.R.B. RUSSELL* (Oral Biology, University of Newcastle, UK).


Analysis of Bacterial Growth Initiation. C. BLOOMQUIST*, W. LILJEMARK, D. TOWNSEND, and C. MERTENSONTO (Department of Oral Science, University of Minnesota School of Dentistry, Minneapolis, USA).

Immunologic Cross-reactivity between Streptococcus sanguis Membrane Proteins and Eukaryotic Oligosaccharyltransferase. P.R. ERICKSON*, S. CHANG, and Z.H. BRUMBACH (Preventive Sciences, University of Minnesota School of Dentistry, Minneapolis, USA).

Analysis of the Role of Urease in Actinomyces naeslundii. E. MROU-BERMUDEZ* and R.A. BURNE (Center for Oral Biology, University of Rochester, NY, USA).

The Effect of Glucose on Treponema denticola Cell Behavior. J.D. RUBY* and N.W. CHARON (Department of Microbiology and Immunology, West Virginia University, Morgantown, USA).


Oral/Dental Hygiene - Power-assisted Toothbrushes

Chairpersons: P.A. Heasman and D.A. Weber


0256 8:45 The Effect on Gingivitis of a Novel Electric Toothbrush. G.A. VAN DER WEIJDEN*, M.F. TIMMERMAN, M. PISCAER, Y. IJZERMAN, and U. VAN DER VELDEN (Department of Periodontology, ACTA, Amsterdam, The Netherlands).

0257 9:00 Plaque Removal Efficacy of Two Counter-rotational Electric Toothbrushes. M. DE JAGER*, W. WIEDEMANN, H. KLINGER, B. MELZER, and D. STURM (Philips Personal Care Institute, Eindhoven, The Netherlands; Department of Cariology and Periodontal Diseases, Dental Hospital and School of Dentistry, University of Würzburg, Germany; and Consumer Test Centre, Klagenfurt, Austria).

0258 9:15 Clinical Plaque-removing Efficacy of a New Power Toothbrush. C.-P. ERNST*, C. NAUTH, and B. WILLERSHAUSEN (Department of Restorative Dentistry and Periodontology, Johannes Gutenberg University, Mainz, Germany).

0259 9:30 Brushing-Time, Load, and Speed of Electric Toothbrushes and Gingiva. T. IMFELD* and B. SENER (Clinic of Preventive Dentistry, Periodontology and Cariology, Dental Institute, University of Zürich, Switzerland).

9:45 Discussion


0261 10:15 Influence of a Controlled Pressure System on Toothbrushing Behavior. P.A. HEASMAN, I. HEYNDERICKX*, D. STURM, and M. DE JAGER (Department of Restorative Dentistry, University of Newcastle upon Tyne, UK; Philips Personal Care Institute, Eindhoven, The Netherlands; and Consumer Test Center, Klagenfurt, Austria).

0262 10:30 Profilometric Evaluation of Dentin Abrasion by Powered Toothbrushes. S. SUZUKI and C. OKABE* (Department of Biomaterials, School of Dentistry, University of Alabama, Birmingham, USA).

0263 10:45 Laboratory Investigation of Cleaning Efficacy of a New Powered Toothbrush. G. DRIESEN*, P.R. WARRÉN, and P. HILFINGER (Braun AG, Kronberg, Germany).

11:00 Discussion

Seq#: 34 Thursday, June 25, 8:30 am - 11:15 am
Oral Session, Gallieni 3 Room

Oral/Maxillofacial Surgery - Techniques/Procedures in OMS

Chairpersons: A.D. Walmsley and C.M. Hill

0264 8:30 Midazolam vs. Midazolam/Ketamine: Double-blind Study in Children. Z. MESSIEHA*, M. BOORIN, P. CRESPI, R.S. BIENKOWSKI, P. LEBOWITZ, and S. BARST (LIJMC, New York, USA).
0265 8:45 The Modified Direct-aspiration Technique for TMJ Synovial Fluid Analysis. T. SHIBATA*, K.-I. MURAKAMI, E. KUBOTA, I. YAMAMORI, and N. YOSHIZAWA (Department of OMS, School of Medicine, Yamagata University; Kyoto University; and Kanagawa Dental College, Japan).


0267 9:15 The Development of an Ultrasonic Chisel for Cutting Bone. B.S. KHAMBAY and A.D. WALMSLEY* (School of Dentistry, The University of Birmingham, St. Chad's Queensway, UK).


0270 10:00 Double Triangle Flap to Install Dental Implants between Mental Holes. J.M. HERRÁEZ*, J. GARGALLO, and C. GAY (Faculty of Dentistry, University of Barcelona, Spain).

0271 10:15 Oral Complications Related to Cancer Therapy and Bone Marrow Transplantation (BMT) among Chinese Children. R.G. NAIR*, G.C.F. CHAN, S.Y. HA, and Y.L. LAU (Department of Paediatrics, Queen Mary Hospital (QMHS), The University of Hong Kong).

0272 10:30 A Longitudinal Study of Disease-free Lower Third Molars. C.M. HILL*, J.P. SHEPHERD, L. EVANS, M.J. EDWARDS, and M.R. BRICKLEY (Departments of Oral Surgery, Medicine & Pathology, University of Wales, Cardiff, UK).

10:45 Discussion

Seq#: 35 Thursday, June 25, 8:30 am - 11:15 am
Oral Session, Room C34
Periodontal Research-Pathogenesis - Special Populations
Chairpersons: E. DeNardin and B.G. Loos


0275 9:00 Heat Shock Protein 60-like Molecule from Bacteroides forsythus and Porphyromonas gingivalis: Molecular Mimicry. H.T. SOJAR*, I. GLURICH, and R.J. GENCO (Departments of Oral Biology and Microbiology, School of Medicine and Biomedical Sciences, State University of New York at Buffalo, USA).


0277 9:30 Inflammation, Periodontal Disease, and Atherogenesis: A Possible Link. I. GLURICH, S.G. GROSSI, A. HO, H. BAUMANN, R.J. GENCO, and E. DÉ NARDIN* (State University of New York at Buffalo, USA).
Immunologic and Genetic Assessment of Papillon-Lefèvre Syndrome among Egyptians. K.A. GHAFFAR*, F.M. ZÄHRAN, H.M. FAHMY, and R.S. BROWN (Faculty of Dentistry, Ain-Shams University, Cairo, Egypt; and Howard and Georgetown Universities, Washington, DC, USA).

Host Factors in a Model of Diabetes-associated Periodontal Disease. E. LALLA*, I.B. LAMSTER, M. FEIT, L. HUANG, and A.M. SCHMIDT (Division of Periodontics, School of Dental and Oral Surgery; and College of Physicians and Surgeons, Columbia University, New York, NY, USA).


Infection Susceptibility and EOP in CD18/ICAM-1-deficient Mice. R. LIU, S. ZAMMITTI, P. STASHERKO, and R. NIEDERMAN* (Harvard School of Dental Medicine and Forsyth Dental Center, Boston, MA, USA).


Occupational Exposure of Dental Personnel to Nitrous Oxide during Relative Analgesia Sedation. N.M. GIRDLER* and S.A. HARGRAVE (School of Dentistry and Department of Anaesthesia, University of Newcastle upon Tyne, UK).

MAPK/Erk Activation at the Wound Front and its Regulation by Fibroblast Growth Factor-2. A. APAZIDIS* and G. SEGHEZZI (New York University, USA).

Topical Application of EMLA® Cream Reduces Discomfort of Intraligamentary Injections. J.G. MEECHAN* and J.M. THOMASON (University of Newcastle upon Tyne, UK).

Use of Diflunisal and Etodolac after Third Molar Surgery. M.B. COMFORT*, A.S.K. TSE, and A.C. TSANG (Faculty of Dentistry, University of Hong Kong, China).

Upside Assay Sensitivity in a Dental Pain Model. E.K. BREIVIK*, H.R. HAANÆS, and P. BARKVOLL (Faculty of Dentistry, University of Oslo, Norway).

Effects of Codeine on Tissue Levels of i-Substance P Following Oral Surgery. J.Q. SWIFT*, M.T. ROSZKOWSKI, M.R. PFEIFER, and K.M. HARGREAVES (School of Dentistry, University of Minnesota, Minneapolis; and UTHSCSA Dental School, San Antonio, TX, USA).


Possible Mechanism for an Anti-inflammatory Effect of Bisphosphonate. W.K. KIM-PARK*, M.A. MOORE, and M.J. KOWOLIK (Indiana University School of Dentistry, Indianapolis, USA).
Effects of Lisofylline on Radiotherapy-induced Mucosal Toxicity in Hamsters. S.T. SONIS, J.W. SINGER, P.M. BÜSSE, G.E. MOSES, C.A. LUCEY*, and L.J. EDWARDS (Brigham and Women’s Hospital and the Harvard School of Dental Medicine, Boston, MA, USA).

**Pulp Biology - Endodontic Restorative Materials and Instrumentation Techniques**

**Chairpersons:** M. Tagger and W.P. Saunders

1. **0293** 8:30 Bacterial Leakage in Obturated Roots Combined with Different Temporary Fillings. C.R. BARTHEL*, A. STROBACH, H. BRIEDIGKEIT, U. GÖBEL, and J.-F. ROULET (Department of Operative Dentistry and Endodontics; and Department of Microbiology and Hygiene, Charité, Humboldt University of Berlin, Germany).

2. **0294** 8:45 Polymicrobial Coronal Leakage of SuperEBA Root-end Fillings Following Two Methods of Root-end Preparation. W.P. SAUNDERS*, P. CHAILERTVANITKUL, and D. MacKENZIE (University of Glasgow, UK; and University of Khon Kaen, Thailand).

3. **0295** 9:00 Histologic Periapical Repair Following Obturation of Infected Root Canals in Dogs. N. KATEBZADEH*, J. HUPP, and M. TROPE (Department of Endodontics, University of North Carolina, Chapel Hill, USA).

4. **0296** 9:15 Studies on the Antimicrobial Activity of Calcium-hydroxide-containing Gutta-percha Points and Ca(OH)$_2$. A.K. LUEDERS* and W.H.-M. RAAB (Department of Operative Dentistry, Heinrich-Heine-University, Duesseldorf, Germany).

5. **0297** 9:30 An Experimental Root Canal Sealer Suppresses Adhesion of E. faecalis. V. PATEL, J.P. SANTERRE, and S. FRIEDMAN* (Endodontics and Biomaterials, Faculty of Dentistry, University of Toronto, ON, Canada).

6. **0298** 9:45 Adhesion of Endodontic Sealers to Gutta-percha. M. TAGGER*, E. TAGGER, A.H.L. TJAN, and L.K. BAKLAND (School of Dental Medicine, Tel Aviv University, Israel; and Loma Linda University School of Dentistry, CA, USA).

7. **0299** 10:00 The Role of the Hybrid Layer to Prevent Bacterial Microleakage. C.F. COX*, A.A. HAFEZ, B. TARIM, N. AKIMOTO, S. IMAZATO, and J.C. MILLS (Dental School, University of Alabama, Birmingham, USA; Istanbul University, Turkey; and Tsurumi and Osaka Universities, Japan).


9. **0301** 10:30 Canal Cleanliness and Sharpness of NiTi and Stainless Steel Files. R. ROSENBERG*, M.N. MITTALL, S.A. GANSKY, and H.E. GOODIS (University of California, San Francisco, USA; and Banaras Hindu University, Varanasi, India).

10. **0302** 10:45 Obturation of Root Canals Using the Non-Instrumentation Technology (NIT). A. LUSSI*, S. IMWINKELRIED, and H. STICH (Department of Operative Dentistry, University of Bern, School of Dental Medicine, Switzerland).

11:00 **Discussion**

1. **0304** 11:00 Discussion

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**Salivary Research - Salivary Proteins**
Chairpersons: P.C. Denny and A. Hand

0303  8:30  Western Blot Analyses of P-4.25, an Anionic Salivary Protein Observed in Patients with Sjögren’s Syndrome. I. AL-HASHIMI* and N. HAGHIGHAT (Department of Periodontics, Baylor College of Dentistry, Texas A&M University System, Dallas, USA).

0304  8:45  Prolactin-inducible Protein (PIP) in Rat Salivary Glands. L. MIRELS, A.R. HAND*, and H.J. BRANIN (University of California, Berkeley and San Diego, CA; and University of Connecticut, Farmington, USA).

0305  9:00  Two Gene Products for b-Galactosidase are Differentially Expressed in the Mouse Salivary Glands. N. NOWROOZI, P.A. DENNY, P.C. DENNY*, and J.H. ZERNIK (USC School of Dentistry, Los Angeles, CA, USA).

0306  9:15  Effects of Protease Inhibitor and Storage Mode on Salivary Proteins. T. NEDERFORS*, B.-Å. JOHANSON, and S. TWETMAN (Central Hospital, Halmstad; and Lund University, Malmö, Sweden).


0308  9:45  Mutational Analysis of the Evolutionary Conserved Regions of Cystatin SA. E. SAITOH*, K. MINAGUCHI, and K. SANADA (Nippon Dental University at Niigata; Tokyo Dental College; and Nippon Dental University at Tokyo, Japan).

0309  10:00  Binding between Pseudomonas aeruginosa Pili and Human Salivary Components. M.S. REDDY* (State University of New York at Buffalo, USA).

0310  10:15  Analysis of Donor-specific Salivary Glycoprotein Profiles by Lectin Blotting. S. RUHL* and G. SCHMALZ (Department of Operative Dentistry and Periodontology, University of Regensburg, Germany).

0311  10:30  Pellicles Formed in Different Areas of the Dentition and of the Tooth Surface. A. CARLÉN*, S. RUDIGER, and J. OLSSON (Department of Cariology, Faculty of Odontology, Göteborg University, Sweden).


0313  11:00  Salivary Pellicle as a Determinant for Site Specificity of Erosion. A. MILOSEVIC*, B.T. AMAECHI, S.M. HIGHAM, and W.M. EDGAR (Department of Clinical Dental Sciences, School of Dentistry, University of Liverpool, UK).

Seq#: 39  Thursday, June 25, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall

Pulp Biology - Pulpal Neural Responses and Microcirculation

0314  11:15  Effects of ATP on Intradental Sensory Receptors in the Cat. F. LI*, B.S. KHAKH, N. VONGSAVAN, and B. MATTHEWS (Department of Physiology and Pharmacology, University of Bristol, UK; and Faculty of Dentistry, Mahidol University, Bangkok, Thailand).


Does Pulpal Ischemia Occur after Dental Local Anesthetic Injection? Y. KANEKO*, Y. HOMMA, T. TANAKA, T. ICHINOHE, and T. ISHIKAWA (Department of Dental Anesthesiology, Department of Conservative Dentistry, and Oral Health Science Center, Tokyo Dental College, Chiba, Japan).

Effect of Elastic Ring and Rubber Dam on Pulpal Bloodflow Signals. S. SOO-AMPON*, N. VONGSAVAN, M. SOO-AMPON, and W. APAI (Department of Physiology & Biochemistry and Hospital Dentistry, Mahidol University, Thailand).

In vivo Evaluation of Plaque Control on Dentin Hypersensitivity. A. KAWASAKI*, K. ISHIKAWA, T. SUGE, K. SUZUKI, T. MATSUO, and S. EBISU (Tokushima University, Okayama University, and Osaka University, Japan).

Root Dentin Sensitivity following Non-surgical Periodontal Therapy. S. TAMMARO*, J. WENNSTRÖM, and G. BERGENHOLTZ (Faculty of Odontology, Göteborg University, Sweden).

Precipitation of Desensitizing Agents in Dog Dentinal Tubules in vivo. S. IKOLA*, M. NÄRHI, V. KONTTURI-NÄRHI, and H. YAMAMOTO (University of Kuopio, Finland; and Tokyo Medical & Dental University, Japan).

Development of Pulp and Dentin Sensitivity in Flap-operated Teeth. U. TAMMINEN*, V. KONTTURI-NÄRHI, and M. NÄRHI (Department of Periodontology and Physiology, University of Kuopio, Finland).

Factors Related to the Occurrence of Pain Symptoms 0.5 to 5 Years after Periodontal Surgery. V. KONTTURI-NÄRHI* and M. NÄRHI (Department of Periodontology and Physiology, University of Kuopio, Finland).

Correlation of Clinical Caries Diagnosis and Histopathological Reactions of the Endodont. A. ZOELLNER*, R. MONTAG, and P. GAENGLER (School of Dental Medicine, University of Witten/Herdecke, Germany; and School of Dental Medicine, University of Jena).

Periradicular Status of Crowned Teeth in an Adult Scottish Subpopulation. E.M. SAUNDERS* and W.P. SAUNDERS (University of Dundee and University of Glasgow, UK).

The Kinetic Study of Interferon-gInduction by Streptococcus mutans. C.-L. HAHN* and A.M. BEST (The Virginia Commonwealth University School of Dentistry, Richmond, USA).

Expression of Class II MHC mRNA by Human Odontoblasts. L.G. LEVIN, A. BLETSA*, H. REISNER, S. CONRAD, and M. TROPE (School of Dentistry, University of North Carolina, Chapel Hill, USA).

Effect of FK-506 on Pulpal and Periapical Tissues in Rats. Y. MAEKAWA, M. YAMASAKI*, Y. FUJIMAKI, M. KATO, A. IWAMA, I. IMAIZUMI, N. SHIBATA, and H. NAKAMURA (Department of Endodontics, School of Dentistry, Aichi-Gakuin University, Nagoya, Japan).


0332  Pathobiological Effects of a-Thrombin on Pulp and Periodontal Ligament Cells. M.C. CHANG* and J.H. JENG (Team of Biomedical Science, Chang-Gung Institute of Nursing, Kwei-Shan, Taoyuan; and School of Dentistry, National Taiwan University, Taipei, Taiwan).

0333  Expression of IL-1 and Adhesion Molecules in Rat Periapical Lesions. A. MATSUMOTO*, H. ANAN, and K. MAEDA (Department of Conservative Dentistry 1, Kyushu University, Fukuoka, Japan).

0334  Immunocyte Distribution in Human Carious Teeth: Evidence for Cellular Immunity. K. SAKURAI*, T. OKIJI, and H. SUDA (Department of Endodontics, Tokyo Medical and Dental University, Japan).


0336  Experimental Periapical Lesion in Non-insulin-dependent Diabetic Rat (GK Rat). A. IWAMA, K. NAKAMURA, I. IMAIZUMI, N. SHIBATA, T. KOHSAKA, M. YAMASAKI, H. NAKAMURA*, and Y. KAMEYAMA (Departments of Endodontics and Pathology, Aichi-Gakuin University, Nagoya, Japan).

0337  Substance P in Gingival Crevicular Fluid from Painful and Healthy Teeth. L. AWAWDEH*, F.T. LUNDY, J.G. KENNEDY, P.-J. LAMEY, and G.J. LINDEN (School of Clinical Dentistry, The Queen’s University of Belfast, N. Ireland).

Seq#: 41 Thursday, June 25, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall
Prosthodontics - Post and Core, Casting Alloy, Investment Materials


0339  Fracture Toughness of Various Core Build-up Materials. G. MARDIROSSIAN*, E. BONILLA, and A.A. CAPUTO (Restorative Dentistry and Biomaterials Science, UCLA School of Dentistry, Los Angeles, CA, USA).

0340  Finite Element Analysis of Post Configuration. R. McANDREW* and P.H. JACOBSEN (Department of Adult Dental Health, UWCM, Cardiff, Wales, UK).

0341  Root Fracture in Teeth Restored with Post and Cores. I. VAN ZYL, H. BOYARSKY*, and C. LEKNIUS (University of the Pacific School of Dentistry, San Francisco, CA, USA).

0342  Flexural Strength of Zirconia and Epoxy/Carbon-fiber Posts. M. PAOLI*, G. BELTRAME, I. ZOLLA, and A. BELTRAME (Department of Clinical Dentistry, University of Padua, Italy).


0344  Carbon Fiber Posts: Effect of Surface Treatment on Core Retention. A.F. QUINTAS*, M.A. ARAUJO, M.A. BOTTINO, and N. SNE LART (Dental Materials and Prosthodontics Department, São Paulo State University; and CTA, São José dos Campos, Brazil).

0345  Effect of Heat Treatment on Surface Hardness of Magnetic Keeper. K. NAKAMURA*, M. KOTAKE, H. MIZUTANI, and M. AI (First Department of Prosthodontics, Tokyo Medical and Dental University, Japan).

0346  Effect of Flexural Bonding Strength of cp Titanium-Ceramic with Different Thicknesses of Metal. C.C. HSU* and C.F. CHENG (Chung Shan Medical & Dental College, Taichung, Taiwan).

Microbial Corrosion of Biomaterials. E.L. PIZZOLITTO*, A.C. PIZZOLITTO, A.C.A. BERNARDI, N. LOCHAGIN, T. SHUHAMA, I.Y. ITO, and A.C. GUAUSTALDÍ (FCF AR; IQAR UNESP; FCF-RP, University of São Paulo, Brazil).


Examination of Crown Margin Reproduction Using an Accelerated Burnout Method. R. BLACKMAN*, R.J. BAEZ, and S. ARIZA (The University of Texas HSC, San Antonio, USA; and Javeriana University, Bogotá, Colombia).


Localization of Fibronectin in Prosthetic Stomatitis. P. LE BARS*, B. GIUMELLI, Y. AMOURIQ, and A. DANIEL (Dental School, Nantes, France).

Prosthodontics - Overdenture, Resilient Liner, Complete Denture

Clinical and SEM Evaluation of the Margins of Root Copings for the Perio-overdenture. R.L. AIROLDI*, M.J. OBERSON, H. LUTHY, and S. PALLA (Center for Dental and Oral Medicine and Maxillo-Facial Surgery, Department of Masticatory Disorders and Complete Dentures, University of Zürich, Switzerland).

Tooth Loss in an Overdenture Population. R.L. ETTINGER* and J.R. JAKOBSEN (Dows Institute for Dental Research and Department of Preventive and Community Dentistry, College of Dentistry, University of Iowa, Iowa City, USA).

A Modified Sampling System for Denture Biofilms Developing in vivo. S.L. AVON*, J.-P. GOULET, N. DESLAURIERS, and E. BUDTZ-JØRGENSEN (Université Laval, Québec, Canada; and Université de Genève, Switzerland).

Transverse Strength of Pour-type Resin Processed with a New Curing Method. S. KITA* and T. NOKUBI (Department of Removable Prosthodontics, Osaka University, Faculty of Dentistry, Osaka, Japan).

Hard-relines Resins—Comparison of Shear Bond Strength and Degree of Porosity. P. NICOLAU*, J.C. RAMOS, and J. PERDIGÃO (University of Coimbra, Portugal; and University of North Carolina at Chapel Hill, USA).


Residual Monomer in Denture Base after Soft-liner Cure Cycles. J.S. SHIM* and D.C. WATTS (University of Manchester Dental School, UK).

Interactions among Candida albicans, Pellicles, and Thermocycled Semipermanent Soft Liners. J. CHEN*, H. NIKAWA, and T. HAMADA (Hiroshima University, Japan).
A Comparison of Commercial Tissue Conditioners Using ISO 10139-1. T. TAKAMATA*, T. DEGUUCHI, S. PARKER, and S. KALACHANDRA (Matsumoto Dental University, Japan; London Hospital Medical School, England; and NSF Center, Virginia Tech, USA).

Intercondylar Width as an Aid in Setting Up Teeth for Complete Dentures. A. KESHVAD* and R. WINSTANLEY (Department of Restorative Dentistry, The University of Sheffield, England).

Effect of Residual Ridge Height on Stress Distribution in Denture-supporting Structures. A. BALATLIOGLU, O. KUTAY, and S. PAMUK* (Department of Prosthodontics, Faculty of Dentistry, University of Istanbul, Turkey).


Long-term Glossectomy Rehabilitation with Augmented Palate Using Static Palatography. H. ITOH, M. OGATA*, M. YAMAZAKI, and A. KANUMA (Department of Prosthetic Dentistry, School of Dentistry, Tohoku University, Sendai, Japan).


Bond Strengths of Luting Composites to IPS Empress after Silica Coating. G. BODENHEIM*, J. SINDEL, R. FRANKENBERGER, N. KRÄMER, and A. PETSCHELT (Polyclinic for Operative Dentistry and Periodontology, University of Erlangen-Nürnberg, Germany).

Tribochemical Silica-coating: Influence of Different Silanes on Bond Strength. F. ABIDEN and B. GANGNUS* (Brunel University, Uxbridge, UK; and ESPE Dental Medizin, Seefeld, Germany).


The Effects of Various Try-in Procedures on the Bond Strength of Etched Ceramic Veneers. B. VONGSALAI*, R. VAN NOORT, and L. DAVIS (Department of Restorative Dentistry, School of Clinical Dentistry, University of Sheffield, UK).

Effect of Supplemental Polymerization on the Bond Strengths of Adhesive Amalgam Restorations. J.C. RAMOS*, J. PERDIGÃO, G. GOMES, and P. NICOLAU (University of Coimbra, Portugal; and University of North Carolina at Chapel Hill, USA).

The Effects of Adhesives on Microleakage of Amalgam Restorations. L. LOPES, M. BERNARDO*, and J. LEITÃO (School of Dentistry, University of Lisbon, Portugal).

Shear Bond Stability of Bonded Gallium Alloy. Z. MACH*, T. RUZICKOVA, M. STANINEC, J.C. SETCOS, and K. MARUSKOVA (Institute for Dental Research, Prague, Czech Republic; University of California, San Francisco, USA; University of Manchester, UK).
Extrusion Shear Bond Strength Test: Evaluation of Five Amalgam Adhesives. L. GRAIFF*, M. CALABRESE, B. PESSOTTO, A. DEL GIUDICE, and P.N. MASON (Department of Restorative Dentistry, Dental School, University of Padova, Italy).

The Effect of Amalgambond Plus on the Fracture Strength and Stiffness of Teeth Restored with Amalgam and Composite. L. LOPES*, M. BERNARDO, and J. LEITÃO (School of Dentistry, University of Lisbon, Portugal).

The Push-out Test to Evaluate Dentin-Amalgam Shear Bond Strength. N. EID* and M. DeGRANGE (GRB University of Paris V, France).

Bond Strength of Orthodontic Brackets Using Different Cements and Different Treatments of the Brackets. A. RÖMEO*, R. OSORIO, M. TOLEDANO, B. HIGUERA, and F. GARCIA-GODOY (University of Barcelona, Spain; University of Granada, Spain; and University of Texas Health Science Center, San Antonio, USA).

The Magnitude and Mechanism of Adhesion of Various Orthodontic Cements. D. REDDY* and E.C. COMBE (School of Dental Medicine, University of Pittsburgh, PA; and MDRCBB, School of Dentistry, University of Minnesota, Minneapolis, USA).


Potential of Fluoride-containing Materials to Form Acid-resistant Layer of Dentin. Y. KOBAYASHI*, H. KOMATSU, H. SANO, and H. SHIMOKOBE (Hokkaido University School of Dentistry, Sapporo; and Meirin Junior College, Niigata, Japan).

Maturation of Glass-ionomer Cements and Shear Bond Strength (SBS). T.F. WATSON*, M. NAASAN, and M. SHERRIFF (UMDS, Guy’s Hospital, London, UK).

An FE-SEM Evaluation of Resin-Dentin Interface with Four One-bottle Adhesive Systems. G. MORI*, M.A. BASSI, G. GORACCI, and M. BALDI (Department of Operative Dentistry, University of Rome "La Sapienza", Rome; and University of L’Aquila, Italy).

Demineralizing Effects of Dental Cements on Human Dentin. Y. SHIMADA*, Y. KONDOU, S. INOKOSHI, J. TAGAMI, and J.M. ANTONUCCI (Tokyo Medical and Dental University, Japan; and National Institute of Standards & Technology, MD, USA).

Marginal Adaptation of a New "Condensable" Posterior Composite. S. STURM*, U. BLUNCK, and J.-F. ROULET (Department of Operative Dentistry, Preventive Dentistry, and Endodontics, Charité, Humboldt University of Berlin, Germany).

Influence of Incorrect Application of Optibond FL on Marginal Adaptation. A. PESCHKE*, U. BLUNCK, and J.-F. ROULET (Department of Operative and Preventive Dentistry, Charité, Humboldt University of Berlin, Germany).

The Influence of Preparation Systems on Marginal Adaptation of Class II Fillings. T.H. SCHÜNEMANN*, G.M. LÖSCH, and J.-F. ROULET (Department of Operative and Preventive Dentistry, Charité, Humboldt University of Berlin, Germany).
Interfacial Integrity of Class II Adhesive Composite Restorations. S. BELLIT*, S. INOKOSHI, F. OZER, M. OGATA, and J. TAGAMI (Department of Operative Dentistry, Faculty of Dentistry, University of Selcuk, Konya, Turkey).


The Potential of Marginal Gap Reduction with a “COMPRIMATOR”. G.V. STRAND* and H.C. OLSEN (Department of Odontology, University of Bergen, Norway).

Sensodyne Dentin Desensitizer and Microleakage of Full Crowns. F. GARCIA-GODOY* (University of Texas HSC at San Antonio, TX, USA).

Effect of Saliva Contamination on the Microleakage of Composite Restoration. R. MEHRA*, J. VAIDYANATHAN, and T. VISWANADHAN (New Jersey Dental School, Newark, USA).

Eugenol Contamination Influence on Dentin Wetting. J.A. HOLGADO*, J.I. ROSALES, R. OSORIO, M.A. CABRERIZO-VILCHEZ, P. MILLSTEIN, and M. TOLEDANO (University of Granada, Spain; and Tufts University, Boston, MA, USA).

Bonding Efficiency of One-bottle Adhesives to Contaminated Dentin Surfaces. A.I. ABDALLAH* and C.L. DAVIDSON (Faculty of Dentistry, University of Tanta, Egypt; and Department of Dental Materials Science, ACTA, The Netherlands).

Fracture Mechanics Analysis of Resin-bonded Bridges Including Tooth Mobility. N. SHINOHARA*, B. ROBINSON, and D.N. FENNER (King’s College, London, UK).

Strength Degradation from Contact Damage in Dental Ceramics. I.M. PETERSON*, Y.-G. JUNG, B.R. LAWN, and A. PAJARES (National Institute of Standards and Technology, Gaithersburg, MD, USA; and Dpto. Fisica, F. Ciencias, UEX, Avda. Elvas S/N Badajoz, Spain).

The Fatigue Properties of Three All-ceramic Crown Systems. L. CORRER SOBRINHO*, M.J. CATTELL, R.H. GLOVER, and J.C. KNOWLES (Department of Biomaterials, Eastman Dental Institute, UK).

Bond Strength of Composite Resin to a New Low-fusing Porcelain. N. BARGHI, T.G. BERRY*, and C.M. PRIMUS (Department of Restorative Dentistry, The University of Texas Health Science Center at San Antonio; and Sarasota, FL, USA).

A Study on the Strengthening of Dental Feldspathic Porcelain. C.W. KIM* and B.S. LIM (Department of Dental Biomaterials, College of Dentistry, Seoul National University, Korea).

Development of Flocky-type Diamond Polishing Tools for Dental Porcelain. N. KAWASHIMA*, K. TERAMOTO, H. SATO, and Y. NAKAMURA (Toin University of Yokohama; Musashi Institute of Technology, Tokyo; and Tsurumi University, Yokohama, Japan).

Internal Compressive Stress Increases Fracture Toughness of Leucite-reinforced Ceramics. S. HOESCHELER*, F. GRELLNER, J. SCHNEIDER, A. STIEGELSCHMITT, J. SINDEL, P. GREIL, and A. PETSCHELT (Dept. of Materials Science (Glass & Ceramics), Univ. of Erlangen-Nürnberg; Institute of Crystallography and Applied Mineralogy, Univ. of Munich; and Polyclinic for Ober. Dentistry and Periodontology, Univ. of Erlangen-Nürnberg, Germany).

Thermal Stress Deformations of Ceramic Metal Copings. A. ZADRO*, G.B. GIRARDELLO, M. VARRESE, and P. PASSI (Dental School, University of Padua, Italy).
0405  Crack Occurrences in Ceramic Copings Bonded with R-M GIC or Resin. L. HERWIG*, N. EWOLDSEN, and D. COVEY (Private Practice, Dallas, TX; and UNMC College of Dentistry, Lincoln, NE, USA).

0406  Crack Propagation of Dental Ceramics under Static and Dynamic Loading Conditions. T.S. BAE*, D.H. WON, S.G. AHN, and C.W. PARK (School of Dentistry, Chonbuk University, Korea).

0407  Tensile Strength between Ceramic and Dentin Cemented with Resin Cements. B.H. CHO* (Department of Conservative Dentistry, School of Dentistry, Seoul National University, Korea).

0408  Effect of Localized Cooling Rate on the Thermal Instability of Dental Porcelain. J.R. MACKERT, Jr., G.W. SHEEN*, and A.L. WILLIAMS (Medical College of Georgia, Augusta, USA).

0409  Regional Bond Strength of Adhesive Systems to MOD Preparations. A.P. MANFIO*, R.M. CARVALHO, B. CIUCCHI, M. YOSHIYAMA, D.H. PASHLEY, and A.C. MONCADA (FOB USP and UFSM, Brazil; and Medical College of Georgia, Augusta, USA).

0410  Thermoacoustic Technique for Investigating Filler/Matrix Interaction in Dental Composites. E.-S. KEH*, S.-Y. LEE, C.-T. LIN, Y.-H. SHIH, and E. YOSHIDA (School of Dentistry, and Wangfang Hospital, Taipei Medical College, Taiwan; and Nagasaki University, Japan).

0411  Influence of Silanization and Filler Fraction on Dental Composites. M.-H. WANG*, E.-S. KEH, S.-Y. LEE, C.-T. LIN, and Y.-H. SHIH (Graduate Institute of Oral Rehabilitation Sciences, and Wangfang Hospital, Taipei Medical College, Taiwan, ROC).

0412  Finite Element Analysis of Thermo-debonding in Dental Composites. S.-Y. LEE*, H.-C. CHIANG, C.-T. LIN, H.-M. HUANG, and K.-H. LIN (Graduate Institute of Oral Rehabilitation Sciences; and Instrumentation Center, Taipei Medical College, Taiwan, ROC).

0413  Bond Strength to Dentin Affected by Bur Design. S. KOMATSU*, C. YOU, and J.M. POWERS (Nippon Dental University School of Dentistry, Niigata, Japan; and Houston Biomaterials Research Center, TX, USA).

0414  Adhesive Restoration of Pulpotomized Primary Molars. I.H. EL-KALLA* and F. GARCIA-GODOY (University of Mansoura, Egypt; and University of Texas at San Antonio, USA).


0416  Microtensile Evaluation of Aged Dentin Bonding Systems. H.-K. LU*, Y.-W. KUO, S.-Y. LEE, C.-T. LIN, and H.-C. CHENG (Graduate Institute of Oral Rehabilitation Sciences; and Dental Department of Taipei Medical College Hospital, Taiwan, ROC).

0417  Effects of Shear Test Configuration on Stress Distributions in Adhesives. R.B. LANCASHIRE*, R.W. WASSELL, and G.R. JOHNSON (Department of Restorative Dentistry and Department of Mechanical, Materials, and Manufacturing Engineering, University of Newcastle-upon-Tyne, UK).

0418  Influence of Eugenol-containing Temporary Cement on Dentin-bonding Agents. A. PEUTZFELDT* (Department of Dental Materials, School of Dentistry, Faculty of Health Sciences, University of Copenhagen, Denmark).
0419  The Effect of Fluoride Application on the Bond Strength of Composite. C. TOSYALI, M. ÖZCAN*, I. NERG'IZ, and W. NIEDERMEIER (School of Dental and Oral Medicine, University at Cologne, Germany).

0420  Photoelastic Determination of Marginal Tensile Forces Due to Composite Shrinkage. R. KÜRSCHNER*, P. KORAN, E. WINTER, and A. BAUER (ESPE Dental-Medizin, Seefeld; and University for Applied Science, Munich, Germany).

0421  In vitro Evaluation of Composite Resin Cytotoxicity. M. PEZZOLI* and P. BALDI (Turin University School of Dentistry, Italy).

Seq#: 47  Thursday, June 25, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall

Dental Materials - Polymers—Compomers, Resin Ionomers, and Composite Polymerization


0426  Dimensional Changes of Resin/Ionomer Restoratives in Aqueous and Neutral Media. B.K. KISUMBI*, G.K. TOWORFE, and D.C. WATTS (University of Manchester Dental School, UK).


0430  Influence of Light-curing Units on the Depth of Cure of Two Shades of Composite Resin. M.C. VERONEZI*, V.P. CURVELO, M.T.A.A. BASTOS, and D.B. LEGRAMANDI (Dental School, University of the Sacred Heart, Bauru, Brazil).

0431  Photoelastic Stress Analysis of Resin Composite Polymerization. K.-H. CHUNG, D.C.N. CHAN, and D. NIJLD* (National Yang-Ming University, Taiwan, ROC; and Department of Restorative Dentistry, UTHSCSA, Texas, USA).

0432  Blue Superbright LEDs as an Alternative to Soft-start Halogen Curing Unit. A. MENIGA*, A. KNEZEVIC, Z. TARLE, J. SUTALO, and G. PICHLER (Zagreb University School of Dentistry and Institute of Physics, Croatia).

0433  Temperature Rise in Composite Samples Cured by Blue Superbright Light Emitting Diodes. Z. TARLE*, A. KNEZEVIC, A. MENIGA, J. SUTALO, and G. PICHLER (School of Dental Medicine and Institute of Physics, University of Zagreb, Croatia).
0434 Interaction between Eugenol-related Compounds and Benzoyl Peroxide (BPO) Radicals. S. FUJISAWA*, Y. KADOMA, T. ÅTSUMI, K. SATOH, H. SAKAGAMI, and I. YOKOE (Meikai University, Sakado; Tokyo Medical and Dental University; Showa University; and Josai University, Japan).


0438 Mechanical Properties of Polylactic Films and Composites. H.-P. HWANG*, S.-Y. LEE, C.-M. YANG, and B.-R. GUO (Graduate Institute of Oral Rehabilitation Sciences, Taipei Medical College; and National Tsing-Hua University, Taiwan, ROC).

0439 Effects of Storage and Time on Dynamic Hardness of Composites. F. AGARIE*, T. MAEDA, T. EGURO, K. TAKAHASHI, and H. TANAKA (Department of Operative Dentistry and Preventive Dentistry, Nippon Dental University, Tokyo, Japan).

0440 Mechanical Properties of Flowable Composite Resin. T. MAEDA*, T. EGURO, K. TAKAHASHI, and H. TANAKA (Department of Operative Dentistry and Preventive Dentistry, Nippon Dental University, Tokyo, Japan).

0441 Degree of Conversion of Composites Determined by DTA and FT-IR. H. TARUMI*, S. IMAZATO, J.F. McCABE, S. KATO, and S. EBISU (Osaka University Faculty of Dentistry, Japan; and University of Newcastle upon Tyne, UK).


0443 Radiopacity of Ta2O5 Nanoparticle-filled Resins. D.C.N. CHAN, K.-H. CHUNG, H.W. TITUS*, H. DIXON, S.T. WELLINGHOFF, and H.R. RAWLS (Department of Restorative Dentistry, University of Texas Health Science Center at San Antonio; and Southwest Research Institute, USA).

0444 Modulus of Resilience Evaluation of Selected Restorative Materials. M. TOLEDANO, B. DE LA HIGUERA*, R. OSORIO, F.J. DE LA TORRE, J.I. ROSALES, and F. GARCIA-GODOY (University of Granada, Spain; and University of Texas Health Science Center, San Antonio, USA).

0445 Fracture-toughness of Resin-based Biomaterials Determined by NTP Methodology. D.C. WATTS, A. IBRAHIM*, and R. RICHTER (University of Manchester Dental School, UK; and ESPE GmbH, Seefeld, Germany).


0447 The Dimensional Stability of Five Light-cured Composite Resin Materials. T.W. RISELEY* and R.L. CLARKE (Conservative Dentistry and Biomaterials in Relation to Dentistry, St. Bartholomew's, and the Royal London School of Medicine and Dentistry, UK).

0449 Fatigue Strength of Composite Resin after 36 Months' Water Storage. M. YAMAMOTO*, K. TONAMI, H. TAKAHASHI, T. NAKAZATO, F. NISHIMURA, and N. KUROSAKI (Tokyo Medical and Dental University, Japan).

0450 Structural Analysis of a Polycarbonate-dimethacrylate-based Composite Resin. A. MASSIMANO*, M. ANDREASI BAŠSI, L. BOTTICELLI, and G. GORACCI (Department of Operative Dentistry, University of Rome “La Sapienza”, Italy).


Seq#: 49 Thursday, June 25, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall
Dental Materials - Cements: Physical Properties and Strength

0452 Wear Resistance of Resin-modified Glass-ionomer Cements. K. GAMOU*, K. HAMA, M. NAGAMINE, M. STANINEC, Y. TORII, M. IRIE, and K. INOUE (Okayama University Dental School, Japan; and UCSF School of Dentistry, San Francisco, CA, USA).

0453 Water Sorption and Mechanical Strength of Resin-modified Glass-ionomer Cements. A. AKASHI*, Y. MATSUYA, and A. AKAMINE (Department of Operative Dentistry and Endodontology, Kyushu University, Fukuoka, Japan).


0455 Surface Hardness Change of Restorative Filling Materials Stored in Saliva. K. OKADA*, S. TOSAKI, K. HIROTA, and W.R. HUME (GC Corporation, Tokyo, Japan; and UCLA School of Dentistry, Los Angeles, CA, USA).


0458 Compressive and Diametral Tensile Strength of Two Restorative Glass-ionomer Cements. M.C.P. NUNES*, D.F.G. CEFALY, L.M.A. TENUTA, J.R.P. LAURIS, and M.F.L. NAVARRO (Maringá School of Dentistry, UEM; and Bauru Dental School, University of São Paulo, Brazil).

0459 Effects of Aging Time on Microhardness of Glass-ionomer Cements. J. ELLACURIA*, R. TRIANA, N. MINGUEZ, E. GUINEA, I. SOLER, and F. GARCIA-GODOY (University of the Basque Country, Spain; and University of San Antonio, TX, USA).

0460 Influence of Storage Time on the Microhardness of Several Compomers. N. MINGUEZ*, R. TRIANA, J. ELLACURIA, C. PRADO, and F. GARCIA-GODOY (University of the Basque Country, Spain; and University of San Antonio, TX, USA).

0461 Strength of Light-cured Glass Ionomer at Different Loading Rates. H. NAKAJIMA* and Y. HIBINO (Meikai University School of Dentistry, Saitama, Japan).

0462 Effects of Water Storage on Dimension of Standardized Luted Interfaces. N. EWOLDSEN* and D. COVEY (UNMC College of Dentistry, Lincoln, NE, USA).

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0463 Correlation between Erosion and Stress Relaxation in Maturing Glass Ionomers. C.C. FRANCE*, M.R. TOWLER, and R.W. BILLINGTON (University of Birmingham; Advanced Healthcare, Kent; and Eastman Dental Institute, London, UK).


Seq#: 50 Thursday, June 25, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall
Dental Materials - Biocompatibility


0467 Vital Microscopic Examination of the Rat Dental Pulp Exposed to Bond Materials. I. IVÁNYI*, I. NYARASDY, A.E. BALOGH, and L. ROSIVALL (Semmelweis University of Medicine, Budapest, Hungary).


0469 Cytotoxicity of Dental Alloys Initially and After 10 Months. J.C. WATAHA*, P.E. LOCKWOOD, S.K. NELSON, and S. BOUILLAGUET (Medical College of Georgia, Augusta, USA; University of Geneva, Switzerland).


0471 Influence of Temporary Crown Materials on the Growth of Micro-organisms. S. EICK*, W. PFISTER, D. WELKER, M. DIERIG, and E. STRAUBE (Department of Medical Microbiology, and Department of Prosthetic Dentistry, University of Jena, Germany).


0474 Subcutaneous Tissue Reactions to Dental Materials Implanted in Wistar Rats. M. TOLEDANO, J.I. ROSALES, F. SANCHEZ-AGUILERA, M. BARRANQUERO*, M. CROSSA, and E. OSORIO (University of Granada, Spain; University of Pais Vasco, Spain; and University of Córdoba, Argentina).

0475 Cytotoxicity of Titanium Tetrafluoride. R. KAZEMI*, B. SEN, and L. SPÅNGBERG (University of Connecticut Health Center, Farmington, USA; and University of Ege, Ismir, Turkey).

0476 Cytotoxicity of Gutta Percha Cones and Endodontic Sealers. R. VESELSKÁ, Z. HALAˇCKOVÁ*, and M. KUKLETOVÁ (Medical Faculty of MU, Brno, Czech Republic).


Design of Epoxy-based Dental Resins with Reduced Cytotoxicity. E.L. KOSTORYZ*, P.Y. TONG, C.C. CHAPPELOW, J.D. EICK, A.G. GLAROS, and D.M. YOURTEE (University of Missouri-Kansas City; and Midwest Research Institute, Kansas City, MO, USA).

Effects of Composites and Bonding Agents on Human Pulp Cultures and Dogs’ Dental Pulp. L. POSTEK-STEFAŃSKA* and T. LAWNICZEK (Department of Pediatric Dentistry, Department of Pathomorphology, Silesian Medical Academy, Poland).

Time-related Bisphenol A Content and Estrogenic Activity in Saliva Samples Collected in Relation to Placement of Fissure Sealants. D. ARENHOLT-BINDSLEV*, V. BREINHOLT, G. SCHMALZ, and A. PREISS (University of Aarhus, Denmark; Danish Vet. and Food Administration, Søborg; University of Regensburg, and ESPE Company, Seefeld, Germany).

Correlating in vitro Three-body Wear to Mechanical Properties of Compomers. X.J. QIAN* and S. HUTH (Kerr Corporation, Orange, CA, USA).

Wear of a Dental Composite with Different Loading Patterns. X. HU*, A.C. SHORTALL, and P.M. MARQUIS (School of Dentistry, The University of Birmingham, UK).


Augmentation of Composite Resin with Trimodal Filler Particle Distributions to Reduce Wear, Polymerization Shrinkage, and Improved Handling. J.C. SUBELKA* (DENTSPLY/Caulk, Milford, DE, USA).

Flexural Strength Using Specimens with Circular Cross-section. G.B. BLACKWELL* and K.L. UTZ (Dentsply DeTrey, Konstanz, Germany).

Microleakage in Class II Restorations Using a New Posterior Composite. E. HURLEY*, A. ABOUSHALA, R. PERRY, and G. KUGEL (Tufts University School of Dental Medicine, Boston, MA, USA).

Thermogravimetric and Differential Scanning Calorimetry Studies of Resins and Glass Ionomers. M.A. CABRERIZO-VÍLCHEZ*, R. OSORIO, C. PRATI, E. OSORIO, F. GARCIA-GODOY, and M. TOLEDANO (University of Granada, Spain; University of Bologna, Italy; and University of Texas Health Science Center, San Antonio, USA).

The Effect of Delayed Light Exposure on Bond Strength. A. KOMORI*, I. KOJIMA, K. KOBAYASHI, and H. ISHIKAWA (Department of Orthodontics, Nippon Dental University, Tokyo, Japan).

Factors Influencing Shrinkage Stress of Composite Resins and Compomers. S. GOEBEL*, C.-P. ERNST, and B. WILLERSHAUSEN (Department of Restorative Dentistry and Periodontology, Johannes Gutenberg University, Mainz, Germany).

The Determination of Elastic Properties of Dental Materials. F. CHABRIER, C.H. LLOYD, and S.N. SCRIMGEOUR* (University of Angers, France; and University of Dundee, Scotland, UK).

Mechanical Performance of a Composite Resin Polymerized through a Transparent Silicone. M. ANDREASI BASSI*, G. GORACCI, and R. BEDINI (Department of Operative Dentistry, University of Rome “La Sapienza”; and Biomedical Engineering Lab., Superior Health Institute of Rome, Italy).


The Diametral Tensile Strength of Three Commonly Utilized Core Materials: Ti-Core, Composite, Amalgam. M.S. WOLFF, L. COSTA, and E. SCHLISSEL* (State University of New York at Stony Brook, USA).


Influence of Artificial Stress Simulation on Shear Bond Strength. M. ROSENTRITT*, M. BEHR, R. LANG, and G. HANDEL (Department of Prosthetic Dentistry, University of Regensburg, Germany).

Stresses within Periodontally Compromised Teeth with Root Surface Composite Restorations. T. KUROE*, H. ITOH, and A.A. CAPUTO (School of Dentistry, Tohoku University, Sendai, Japan; and School of Dentistry, UCLA, Los Angeles, CA, USA).


Proximal Contacts of Posterior Composite Restorations Achieved with Four Restorative Techniques. B. LEUNG*, W.A. EL-BADRAWY, and O.M. EL-MOWAFY (Faculty of Dentistry, University of Toronto, Ontario, Canada).

Alloy Composition and Surface Topography of Commercial Resin-retained Bridgework. P.P. SHAW* and D.C. WATTS (University of Manchester Dental School, UK).


Stress Analysis in a Pier Retainer of a Resin-bonded Bridge. H.M. ZIADA*, J.F. ORR, and I.C. BENINGTON (Department of Restorative Dentistry, University College Cork, Ireland; Department of Mechanical and Manufacturing Engineering; and Department of Restorative Dentistry, Queens University of Belfast, N. Ireland).

New Preparation Method for Bevels of Class II Cast Metal Inlays. B. HUGO*, A. STASSINAKIS, N. HOFMANN, I. LANGE, and B. KLAIBER (Department of Operative Dentistry, University of Würzburg, Germany; and University of Bern, Switzerland).

Evaluation of Some Rotating Instruments for Class II Cavity Preparation. L. MARIGGIO*, G. VARVARA, C. D’ARCANGELO, F. DI NARDO DI MAIO, and P. DE FAZIO (Dental School, University of Chieti, Italy).

Seq#: 52 Thursday, June 25, 11:15 am - 12:45 pm Poster Session, Exhibit Hall

Dental Materials - Miscellaneous

Stresses within Periodontally Compromised Teeth with Root Surface Composite Restorations. T. KUROE*, H. ITOH, and A.A. CAPUTO (School of Dentistry, Tohoku University, Sendai, Japan; and School of Dentistry, UCLA, Los Angeles, CA, USA).


Proximal Contacts of Posterior Composite Restorations Achieved with Four Restorative Techniques. B. LEUNG*, W.A. EL-BADRAWY, and O.M. EL-MOWAFY (Faculty of Dentistry, University of Toronto, Ontario, Canada).

Alloy Composition and Surface Topography of Commercial Resin-retained Bridgework. P.P. SHAW* and D.C. WATTS (University of Manchester Dental School, UK).


Stress Analysis in a Pier Retainer of a Resin-bonded Bridge. H.M. ZIADA*, J.F. ORR, and I.C. BENINGTON (Department of Restorative Dentistry, University College Cork, Ireland; Department of Mechanical and Manufacturing Engineering; and Department of Restorative Dentistry, Queens University of Belfast, N. Ireland).

New Preparation Method for Bevels of Class II Cast Metal Inlays. B. HUGO*, A. STASSINAKIS, N. HOFMANN, I. LANGE, and B. KLAIBER (Department of Operative Dentistry, University of Würzburg, Germany; and University of Bern, Switzerland).

Evaluation of Some Rotating Instruments for Class II Cavity Preparation. L. MARIGGIO*, G. VARVARA, C. D’ARCANGELO, F. DI NARDO DI MAIO, and P. DE FAZIO (Dental School, University of Chieti, Italy).
0506  The Performance of Aluminum Oxide and Cojet Microetchant Systems. S. DRUKTEINIS*, E. HURLEY, R. PERRY, and G. KUGEL (Tufts University School of Dental Medicine, Boston, MA, USA).

0507  Cutting Efficiency of Air-turbine Burs on Titanium and Dental Alloys. I. WATANABE*, C. OHKUBO, J.P. FORD, M. ATSUTA, and T. OKABE (Baylor College of Dentistry-TAMUS, Dallas, TX, USA; and Nagasaki University, Japan).

0508  Comparative Machinability of Titanium with Dental Alloys. T. OKABE*, C. OHKUBO, I. WATANABE, and J.P. FORD (Baylor College of Dentistry-TAMUS, Dallas, TX, USA).

0509  Setting Characteristics of Elastomeric Impression Materials and Their Clinical Relevance. K. WEGE* and D. WELKER (Dental School, University of Jena, Germany).

0510  Cure Kinetics of Different Shades of a Light-cured Composite; Relation with Microhardness. M. BOLLA*, M. MULLER, M.F. BERTRAND, E. LeFORESTIER, B. MONASSE, and J.-M. HAUDIN (UFRO and ENSMP, Nice, France).

Seq#: 53  Thursday, June 25, 11:15 am - 12:45 pm  
Poster Session, Exhibit Hall

Dental Materials - Clinical Trials—Endodontics, Orthodontics, General

0511  Success Rate on Retreatment Endodontic Therapy. E. MANDEL*, J. AZÉRAD, and M. JANIAN (Endodontics, University of Paris VII, France).

0512  Evaluation of Root-canal Fillings Placed by Dental Students. L. KREMMERS*, C. BENZ, A. SCHEIBENBOGEN, M. KAISER, and R. HICKEL (Department of Restorative Dentistry and Periodontology, University of Munich, Germany).


0516  In vivo Notching on Arches by Ceramic Brackets. R.P. KUSY, L.C. ARTICOLO*, K. KUSY, and C.R. SAUNDERS (Dental Research Center, University of North Carolina, Chapel Hill, USA).

0517  Bonded First Molar Tubes—A Retrospective Analysis of Clinical Performance. D.T. MILLETT*, A. HALLGREN, A.-C. FORNELL, and M. ROBERTSON (Orthodontic Unit, Glasgow Dental School, UK; County Hospital, Halmstad, Sweden; and Robertson Centre for Biostatistics, University of Glasgow, UK).

0518  Do Anti-Spee Arches Affect the Vertical Dimension of the Face? R. KRETSCHMER*, H. LOIDL, D. PAPE-LOIDL, and E.A. HOLTGRAVE (Universität Klinikum Benjamin Franklin, Freie Universität; and Private Practice, Berlin, Germany).

0519  Effects of Powered Toothbrushes on Orthodontic Bracket Adhesion in vivo. E. GHEEWALLA*, R. PERRY, and G. KUGEL (Tufts University School of Dental Medicine, Boston, MA, USA).

0520  Evaluation of Crown Restoration of Fractured Anterior Teeth Using Original Tooth Fragment. V. VIJAYAKUMARAN* (Faculty of Dental Sciences, University of Peradeniya, Sri Lanka).


Clinical Evaluation of Total-etch Composite Restorations in Primary Molars. R.M. PUPPIN-RONTANI*, F. GARCIA-GODOY, C.E. VOELZKE, and M.F. DE GOES (Piracicaba School of Dentistry, Brazil; and University of Texas HSC at San Antonio, USA).
Dental Treatment for Elderly Persons with Disease. M. MORITO*, H. OGUCHI, K. MATSUMOTO, T. SUGA, and K. YAMAMOTO (Department of Geriatric Dentistry, Tsurumi University, Japan).

Oral Health Inequalities in Older Rural Women in Ireland. C. McGRATH* (Eastman Dental Institute, University of London, UK).

Behavioral Sciences/Health Services Research - Fluorosis

Dental Caries and Fluorosis in 5-, 6-, and 12-year-olds in Southern China. M.C.M. WONG*, E. SCHWARZ, E.C.M. LO, and H.C. LIN (Faculty of Dentistry, The University of Hong Kong).


Changes in Prevalence of Sealed Tooth Surfaces Following Defluoridation. D.C. CLARK, G. MAUPOME, and S.M. LEVY* (Faculty of Dentistry, University of British Columbia, Vancouver, Canada; and University of Iowa, Iowa City, USA).

Changes in Prevalence of Dental Fluorosis Following Defluoridation. D.C. CLARK*, G. MAUPOME, and S.M. LEVY (Faculty of Dentistry, University of British Columbia, Vancouver, Canada; and University of Iowa, Iowa City, USA).

Endemic Dental Fluorosis in San Luis Potosí, Mexico. J.P. LOYOLA-RODRIGUEZ*, A.J. POZOS, and S. LOPEZ-MOCTEZUMA (Dental Research Center at San Luis Potosí University, Mexico).


Using the TSIF Index in Populations with Severe Dental Fluorosis. V.A. ROBISON*, K.M. YODER, L. MABELYA, and G.K. STOOKEY (Johns Hopkins School of Public Health; Indiana University School of Dentistry, USA; and University of Dar es Salaam, Tanzania).

Risk of Dental Fluorosis when Exposed to High-fluoride Water at Different Ages. A. BÅRDSEN* and K. BJØRVATN (Laboratory of Dental Research, Faculty of Dentistry, University of Bergen, Norway).

Behavioral Sciences/Health Services Research - Oral Health Risks

0550  Relationship among Socio-economic Determinants, Habits, and Malocclusion in Preschool Children in Bauru, Brazil. N. TOMITA*, A. SHEIHAM, V.T. BJELLA, and L.J. FRANCO (School of Dentistry, USP; Paulista School of Medicine, UNIFESP, Brazil).

0551  Patient Presentation at Medical Practice with Dental Problems. R. ANDERSON*, S. RICHMOND, and D.W. THOMAS (Departments of Oral Surgery, Medicine & Pathology, Dental School, Cardiff; and Department of Dental Health and Development, Dental School, Cardiff, UK).


0553  Dental Care of Children at Risk for Endocarditis. D.B. SILVA*, M.C.A. CUNHA, F.C.N. FREITAS, L.P. BITTENCOURT, and I.P.R. SOUZA (School of Dentistry, Federal University of Rio de Janeiro, Brazil).

0554  Cerebrovascular Ischemia Caused by Dental Infections. C.M. ZIEGLER*, A. GRAU, W. SCHWARZ, and S. HASSFELD (Department of Oral & Maxillofacial Surgery and Department of Neurology, University of Heidelberg, Germany).

0555  Awareness of Hepatitis B Vaccination and Needle Stick Injury among Dental Personnel at Military Hospital, Riyadh. T.R. PAUL*, K. ALMAS, and M.A. MAKTABI (Military Hospital and King Saud University, Riyadh, Saudi Arabia).

0556  Self-reported Oro-facial Pain in the Community. T.V. MACFARLANE*, A.S. BLINKHORN, R.M. DAVIES, J. KINCEY, M.H. THORNHILL, and H.V. WORTHINGTON (Dental School, University of Manchester, UK).

0557  Attitude of French Dental Practitioners Toward Prevention. A. MICHELET* and D. BOURGEOIS (Laboratory of Research in Oral Health Care Systems, Faculté d’Odontologie, Université Lyon I, France).

0558  Parents’ and Guardians’ Knowledge about their Children’s Dental Treatment. V. COLARES*, A. ROSENBLATT, A. AQUINO, and E. SILVA (FOP, UPE, Brazil).


0560  Dental Sealant Awareness and Determinants among Quebec Parents. C. GALARNEAU*, J.-M. BRODEUR, M. BENIGERI, M. OLIVIER, and M. PAYETTE (GRIS, University of Montreal; and Public Health Department of Montreal-Centre, Canada).

Seq#: 57 Thursday, June 25, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall

Behavioral Sciences/Health Services Research - Oral Health—Special Populations

0561  Predictors of 25-year-old Norwegians’ Ability to Cope with Dental Life Events. K.S. KLOCK* and O. HAUHEJORDEN (Department of Odontology-Community Dentistry, University of Bergen, Norway).


Oral Health Service Access among Down’s Syndrome Patients in France. M. HENNEQUIN, D. FAULK*, J.L. VEYRUNE, and P.J. ALLISON (Faculté de Chirurgie Dentaire, Université d’Auvergne, Clermont-Ferrand, France; and Faculty of Dentistry, McGill University, Canada).

A Questionnaire Investigating Oral Health Problems in Down’s Syndrome Patients. P.J. ALLISON, J.L. VEYRUNE*, and M. HENNEQUIN (Dental Faculties, McGill University, Canada, and Université d’Auvergne, Clermont-Ferrand, France).


Eastern Health Board: Outcome of Orthodontic Assessments. C.M. McNAMARA*, D. FIELD, N. CROWLEY, and P.J. FITZPATRICK (Eastern Health Board, Regional Orthodontic Department, St. James’ Hospital, Dublin, Ireland).


Dental Health Knowledge and Attitudes in Haiti: A Comparison after 27 Years. J.R.E. JOSEPH*, O.J. CASIMIR, G.J. LAFONTANT, F. McKEVEN, C.C. NOEL, S.E. PROPHETE, H.L. ST. JEAN, and R.V. KATZ (University of Haiti Dental School; and University of Connecticut School of Dental Medicine, Farmington, USA).

WITHDRAWN

Seq#: 58 Thursday, June 25, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall
Behavioral Sciences/Health Services Research - Oral Health Surveys—Children


A Study of Caries Condition and Related Factors of Pre-school Children in Mid-Taiwan Area. M.H. LIN*, F.-C. TANG, and M.-Y. CHOU (Dental School and Department of Family Medicine of Chung Shan Medical and Dental College, Taichung, Taiwan).


Rates of Surface-specific Incremental Caries in a Non-fluoridated Environment. A.C. CAMPAIN*, G. ADAMS, and M.V. MORGAN (School of Dental Science and Department of Public Health and Community Medicine, University of Melbourne, Australia).

Recent Decline in Filled Teeth among Children in Great Britain. N.B. PITTS* and Z.J. NUGENT (Dental Health Services Research Unit, University of Dundee, Scotland, UK).
0579  Odontologic Attention for Babies: Prevalence of Caries. A. AVILLEZ*, M.I. SOUZA, and U. MEDEIROS (Babies’ Clinic, Pediatric Institute, Department of Social Dentistry, Federal University of Rio de Janeiro, Brazil).


0582  Are the Healthy People 2000 Objectives for Caries and Sealants Complementary? R.A. KUTHY*, A.K. MASCARENHAS, M.D. SIEGAL, and B. CARNAHAN (Ohio State University and Ohio Department of Health, Columbus, USA).

0583  Oral Health Status of 5-7-year-old Children in Tanzania, Uganda, and Mozambique. R. LALLOO* and M.H. HOBDELL (Faculty of Dentistry and WHO Collaborating Centre, University of the Western Cape, South Africa).


0585  Caries Experience and Treatment Response among Groups of Finnish, Russian, and German Children. E. HONKALA*, S. KUUSELA, J. PAVLOVA, C. SPLIETH, E. KUZMINA, and G. MEYER (University of Helsinki, Finland; University of Greifswald, Germany; and Moscow Institute of Stomatology, Russia).


0587  Dental Caries in Quebec Children 11-12 Years Old in 1997. M. PAYETTE*, J.-M. BRODEUR, M. OLIVIER, and M. BENIGERI (Public Health Department of Montreal Centre and GRIS, University of Montreal, Canada).

Seq#: 59  Thursday, June 25, 11:15 am - 12:45 pm  Poster Session, Exhibit Hall

Behavioral Sciences/Health Services Research - Oral Health Surveys

0588  The Oral Health Benefits of Post-secondary Education. T.F. DRURY* and A.M. HOROWITZ (NIDR/NIH, Bethesda, MD, USA).

0589  Evaluation of Caries Index, Visible Plaque Index, and Gum Bleeding Index in Pregnant Subjects. S. MARTINELLI*, M.C. FIGUEIREDO, and A.A. FURTADO (Dental School of the Federal University of Rio Grande do Sul—UFRGS, Porto Alegre, Brazil).


0591  Oral Health in Adults and Elderly in Thuringia, Germany. A. BORUTTA*, A. JESS, and M. BROCKER (Department of Preventive Dentistry, Friedrich Schiller University of Jena, Germany).

0592  Dental Needs Assessment for Patients with Disabilities—Challenges and Opportunities. D.B. JOHNSON* and M.E. MOSS (University of Rochester Eastman Dental Center, NY, USA).


0595 Oral Health Determinants in the Lebanese Population. K. KASSAK*, B. DOUGHAN, D. BOURGEOS, H. DIMASSI, and S. SALEH (Faculty of Health Sciences, American University of Beirut, Lebanon).

0596 Restorative Status and Needs in Saxony/Germany. B. WOLF*, M. WALTER, C. RIEGER, U. SCHÜTTE, and K. BOENING (Department of Prosthodontics Dentistry, Technical University of Dresden, Germany).

0597 Evaluation of a Standard Oral Health Data Collection Method Based on Private Practices in Rhone-Alpes, France. D. BOURGEOS, A. NIHTILA*, and E. SOTTY (Research Laboratory, University of Lyon, France).


Seq#: 60 Thursday, June 25, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall

Behavioral Sciences/Health Services Research - Oral Health—Minority Populations

0601 Study of the Oral Health of Schoolchildren of the Irish Traveller Community. F. GRAHAM*, H. WHELTON, and D. O'MULLANE (University Dental School and Hospital, Cork, Ireland).


0603 Deprivation Indices’ Caries Prediction Ability in Welsh Mixed Demographic Areas. M.Z. MORGAN*, E.T. TREASURE, and A.D. FRENCH (Dental School, University of Wales, College of Medicine, Bro Taf Health Authority, Cardiff, UK).

0604 Evaluation of the Effectiveness of an Oral Health Improvement Program. B.G.M. SEABRA*, M.T.C. FRANÇA, C.C. RODRIGUES, D.B. BARBOSA, and M.F.L. NAVARRO (Bauru Dental School, University of São Paulo, Brazil).

0605 Evaluation of the Current Care Concept in Bauru, SP, Brazil. A. BOLINELLI*, C.C. RODRIGUES, M.T.C. FRANÇA, B.G.M. SEABRA, M.F.L. NAVARRO, and S.N. MARTA (Bauru Dental School, University of São Paulo, Brazil).


0608 Dental Status among Adults in Southern China. H.C. LIN*, M.C.M. WONG, E.C.M. LO, and E. SCHWARZ (Faculty of Dentistry, The University of Hong Kong).
0609 Cross-sectional Surveys of Children Viewed from a Cohort Perspective. J.A. DAVIES* and H.E. FYFFE (Dental Health Services Research Unit, University of Dundee, Scotland, UK).

0610 The Oral Health of Adults from Ethnic Minority Populations in Southern England. P.G. ROBINSON*, S. GELBIER, and D.E. GIBBONS (King’s College School of Medicine and Dentistry, and United Medical and Dental Schools, London, UK).

0611 Study of Preventive Program in Children of Bedouin Immigrants in Saudi Arabia. A. AL-SUWYED* and J. THEILADE (King Fahd National Dental College; and Royal Dental Hospital, Århus, Denmark).

0612 Oral Health Status of 30-49-year-olds in Zanzibar. L. VILSTRUP* and P.E. PETERSEN (Department of Community Dentistry and Graduate Studies, Faculty of Health Sciences, University of Copenhagen, Denmark).

0613 Evaluation of Dental Diseases and Clinic Therapy of Children in 1990 and 1995. H. DENG* and X. CHEN (School of Stomatology, Beijing Medical University, China).


0615 School-based Oral Health Promotion in P.R. China. B.J. TAI* and M.W. FAN (College of Stomatology, Hubei Medical University, Wuhan, China).

Seq#: 61 Thursday, June 25, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall
Implantology - Clinical Studies--Grafting Procedures, Fracture Failures

0616 Retrospective Review of Fractured Implants. S.E. ECKERT* and E. CAL (Mayo Graduate School of Medicine, Rochester, MN, USA).

0617 Crestal Bone Resorption Following Regenerative Sinus Lifting Procedures. G.A.E. SANTARELLI*, G. CARUSI, and F. NANNI (Private Practice, Milan, Ponsacco, and University of Siena, Italy).

0618 Light and Scanning Electron Microscopic Evaluation of Fractured Implants. S. FANALI*, M. PIATTELLI, A. SCARANO, L. DI ALBERTI, and A. PIATTELLI (Dental School, University of Chieti, Italy).

0619 The Relationship of Reduced Bone Density and Failure of Dental Implants. G.-B. SAGULIN*, G. NORHAGEN-E., P.-E. ENGSTRÖM, and J. NORDENSTRÖM (Departments of Prosthetic Dentistry, Periodontology, Clinical Immunology, and Surgery, Karolinska Institute, Huddinge; and Prosthetic Dentistry, Public Dental Service, Södertälje, Sweden).

0619 The Relationship of Reduced Bone Density and Failure of Dental Implants. G.-B. SAGULIN*, G. NORHAGEN-E., P.-E. ENGSTRÖM, and J. NORDENSTRÖM (Departments of Prosthetic Dentistry, Periodontology, Clinical Immunology, and Surgery, Karolinska Institute, Huddinge; and Prosthetic Dentistry, Public Dental Service, Södertälje, Sweden).

0620 Bone Density around Immediate vs. Delayed Loading of Osseointegrated Implants: A CT Tri-dimensional Analysis. S. FERRARIS*, C. DINOI, F. CAMPANARI, E. GERLIONE, and R. CIANCAGLINI (Department of Oral Rehabilitation, IRCCS San Raffaele Hospital, University of Milan, Italy).

0622 Consideration for the Periodontal Tissue in Terms of Dental Implants. T. SATOH* (Tokyo, Japan).


0624 Cross-sectional Examination of Implants with and without Alveolar Reconstruction. S.M. JEONG*, J.H. JEONG, H.S. KWEON, and W. ENGELKE (Department of Prosthodontics, School of Dentistry, Chosun University, Kwangju, Korea; and Department of Oral Surgery, Göttingen University Clinic, Germany).

0625 A Comparison of Dental Implant Loss following Prostodontic Loading between Smokers and Non-smokers. J. JONES*, W. GARDNER, and T. PRIHODA (University of Texas Dental School at San Antonio, USA).


0627 Experience with Autologous Bone Grafting Combined with Dental Implants. K. NAGY*, I. VAJDOVICH, A. FAZEKAS, and A. MARI (Albert Szent-Györgyi Medical University, Szeged; and Csornág County Hospital, Szentes, Hungary).

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Seq#: 62 Thursday, June 25, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall

Implantology - General Clinical Studies

0628 The Effects of Hygiene Procedures on Implant Abutment Surface Roughness. S. DHANASOMBOON and J.A. HOBKIRK* (Eastman Dental Institute, University of London, UK).


0630 Microbial Analysis of Bone Dust Produced during Dental Implant Surgery. P. YOUNG*, M. ABDI, M. KORACHI, D.B. DRUCKER, and H. CARTER (Turner Dental School, Manchester University, UK).

0631 Safety of Electric Toothbrush in Patients with Implant-supported Fixed Prostheses. B. VANDEKERCKHOVE* and D. van STEENBERGHE (Department of Periodontology, Faculty of Medicine, Catholic University of Leuven, Belgium).

0632 A Seven-year Follow-up Study of Threaded Implants. Y.M. WU, C.C. CHEN*, J.C. WANG, J.M. HON, and C.C. TSAI (School of Dentistry, Kaohsiung Medical College, Taiwan).


0634 Cytokine Expression in vivo Comparing Two Implant Modalities. A. MUFTU*, J. ZHANG, S. KASHKET, and R.J. CHAPMAN (School of Dental Medicine, Tufts University; and Forsyth Dental Center, Boston, MA, USA).

0635 3-D in vivo Force Measurements on Three Mandibular Implants Supporting an Overdenture. W. BURGIN*, R. MERICSKE-STERN, and P. RADICS (School of Dental Medicine, University of Bern, Switzerland).
0636 Sustain™ Dental Implant FDA Pre-market Approval Clinical Trial. P.S. OLIN* and J.Q. SWIFT (University of Minnesota, Minneapolis, USA).


0638 Peri-implant Radiographic Bone Loss to 36 Months Post-uncovering. M. MANZ* and H. MORRIS (DVA Dental Research, VA Medical Center and University of Michigan School of Dentistry, Ann Arbor, MI, USA).


0640 Dental Health in 8- and 14-year-old Children in Germany. H. SENKEL*, R. HEINRICH-WELTZIEN, and H. KUHNISCH (Health Department Schwelm, Department of Preventive Dentistry, University of Jena, Germany).

0641 Comparison of Fluoride Varnish and Sealants on First Permanent Molars. C. SPLIETH*, M. FORSTER, and G. MEYER (Dental School, Greifswald University, Germany).

0642 A Caries-preventive Program among Children in a District of Moscow: Outcome after 2.5 Years on Occlusal Caries. I. KUZMINA* and K.R. EKSTRAND (Therapeutic Dentistry Department, Moscow Medical Stomatological Institute, Russia; and Department of Cariology and Endodontics, University of Copenhagen, Denmark).

0643 Caries Experience in Pre-school Children in Abu Dhabi. E. AL-HOSANI and A. RUGG-GUNN* (Department of Child Dental Health, Newcastle University Dental School, UK).

0644 Questionnaire Survey of Risk Factors for Caries in Abu Dhabi. E. AL-HOSANI* and A. RUGG-GUNN (Department of Child Dental Health, Newcastle University Dental School, UK).

0645 Caries Reduction and F-intake in Russian Children Receiving F-milk. E.M. KOUZMINA*, A.G. KOLESNIK, V.I. ZIMINA, and T. NABATOVA (Preventive Dentistry Department, Moscow Medical Stomatological Institute; and Central IDR, Moscow, Russia).

0646 A Comparison of in situ Appliances Fabricated from Bent-wire and Composite Resin. E.L. BOYLE, S.M. HIGHAM, and W.M. EDGAR* (Department of Clinical Dental Sciences, University of Liverpool, UK).


0648 Caries-inhibiting and Remineralizing Effect of Xylitol in vitro. B.T. AMAECHI*, S.M. HIGHAM, and W.M. EDGAR (Cariology Research Group, Department of Clinical Dental Sciences, University of Liverpool, UK).

0649 Children’s Caries Problems and Ecological Influences in the West Region of Ukraine. N. KRUPNYK* and E. BEZVUSHKO (Department of Children’s Dentistry, University of Ukraine, Lviv).
Cariology - Caries Detection; Epidemiology

0650  Comparison of Caries Lesion Detection Using ECM and Clinical Examinations. M. ANDO*, M.D. LAGERWEIJ, R.L. ISAACS, G.J. ECKERT, and G.K. STOOKEY (School of Dentistry, Indiana University, Indianapolis, USA).

0651  Comparison of Caries Lesion Detection Using Radiographic Films and DDR. H. EGGERTSSON*, M. ANALOUI, R.L. ISAACS, G.J. ECKERT, and G.K. STOOKEY (School of Dentistry, Indiana University, Indianapolis, USA).

0652  Comparison of Explorer and Loupes for Caries Exams. R.L. ISAACS*, S.A. KELLY, G.J. ECKERT, and G.K. STOOKEY (Oral Health Research Institute, Indianapolis, IN, USA).


0654  A Comparison of Clinical and Radiographic Caries Diagnoses in Posterior Teeth of 12-year-old Children. V. MACHIULSKIENE*, B. NYVAD, and V. BAELUM (Kaunas Medical Academy, Lithuania; and University of Aarhus, Denmark).

0655  Visual, Radiographic, and Microscopic Analysis of Deciduous Molars’ Oclusal Fissures. O.A. TOLEDO*, D.A.S. PIMENTEL, and A.C.B. BEZERRA (University of Brasilia, Brazil).

0656  Comparison among Different Proximal Caries Diagnosis Methods. R.G. PALMA*, A.L. MENATO, J.S. BOCANGEL, A.O. BELSUZARRI, and E. MATSON (Department of Operative Dentistry, Dental School—University of São Paulo, Brazil).

0657  Polarization of Dental Caries, Past and Present, in Middle-aged Adults. M.M. VEHKALAHTI* (Department of Oral Public Health, Institute of Dentistry, University of Helsinki, Finland).


0659  Caries Attacks on Tooth Surfaces in German Schoolchildren. D. SCHMIDT*, U. SCHLAGENHAUF, R. ROSENDAHL, and J.I. VIRTANEN (School of Dental Medicine, Tübingen, Germany; and Institute of Dentistry, Oulu, Finland).


0662  Dental Caries Development in Young Adolescents in Scotland. Z.J. NUGENT, P.A. SMITH*, J.A. DAVIES, and N.B. PITTS (Dental Health Services Research Unit, University of Dundee, Scotland, UK).


0664  An Overview of Reasons for the Placement and Replacement of Restorations. V. DELIGEORGI*, N.H.F. WILSON, and I.A. MJÖR (University of Manchester, UK; and University of Florida, Gainesville, USA).

Seq#: 65  Thursday, June 25, 11:15 am - 12:45 pm
0665 Demineralization around Enamel Lamellae Registered by Computerized Image Analysis. J. STOPA*, T. MATTHEWS-BRZÓZOWSKA, B. MI’SKÓWIAK, and M. CHMIELNIK (Department of Conservative Dentistry and Periodontology, Institute of Dentistry, Chair and Department of Histology, Karol Marcinkowski University of Medical Sciences, Poznań, Poland).

0666 Surface Characteristics of Polished Dentin. Y. HIROSE*, K. NARIKAWA, M. INOUE, M. UEMURA, and M. KAMBARA (Operative Dentistry, Preventive Dentistry, Osaka Dental University, Japan).

0667 Enamel Defects in Human Deciduous Teeth. S.T. BADEN* and J.W. SIMMELINK (School of Dentistry, Case Western Reserve University, Cleveland, OH, USA).

0668 Heavy Metals and Caries in Primary Teeth from Norwegian Children. H.M. TVINNEREIM* and R. EIDE (Department of Anatomy and Cell Biology and Department of Odontology-Dental Biomaterials, University of Bergen, Norway).

0669 Surface Structure of Deciduous Enamel Observed by Atomic Force Microscopy. M. MOTOYAMA*, M. DAITO, M. UEMURA, and M. KAMBARA (Department of Pediatric Dentistry and Department of Preventive and Community Dentistry, Osaka Dental University, Japan).

0670 Fluoride Supplementation from the Start of Amelogenesis. I. GEDALIA* (Department of Oral Biology-Dental Research, Hadassah School of Dental Medicine, Jerusalem, Israel).

0671 Evaluation of Depth and Size of Various Natural Enamel Lesions. T. MATTHEWS-BRZÓZOWSKA* (Department of Conservative Dentistry and Periodontology, Institute of Dentistry, Chair and Department of Histology, Karol Marcinkowski University of Medical Sciences, Poznań, Poland).

0672 Dentinal Ca/P Ratio Lowering and Caries Inhibition in Rat. M. MARQUET*, A. BERARD, J. MIR, and Ph. NDOBO-EPOY (University Victor Segalen of Bordeaux, France).

0673 Microhardness and Light Microscopic Studies of in situ-induced Caries in Irradiated Dentin. A.M. KIELBASSA*, K.-Th. WRBAS, B. DORNFELD, and E. HELLWIG (Department of Operative Dentistry and Periodontology, University of Freiburg, Germany).

0674 An Image of Enamel with Natural and Artificial Caries Changes in Children and Adults—Laboratory Studies. A. SURDACKA*, T. MATTHEWS-BRZÓZOWSKA, and E. KACZMAREK (Department of Conservative Dentistry and Periodontology, Institute of Dentistry, Department of Informatics and Statistics, Karol Marcinkowski University of Medical Sciences, Poznań, Poland).


0676 Dry vs. Wet Microradiography of Root Surface Lesions. T.H. JORDAN, J.R. HEILMAN*, S. FRAHM, M.M. HOGAN, and J.S. WEFEL (Dows Institute for Dental Research, College of Dentistry, The University of Iowa, Iowa City, USA).

0677 An Acid-resistance Test after Enamel Remineralization in vitro. H. YU*, Y. IIJIMA, K. KAWASAKI, and O. TAKAGI (Department of Preventive Dentistry, School of Dentistry, Nagasaki University, Japan).

0678 In situ Remineralization of Eroded Enamel Lesions by Stimulated Saliva. S.M. HIGHAM*, B.T. AMAECHI, A. MILOSEVIC, and W.M. EDGAR (Cariology Group, Department of Clinical Dental Sciences, University of Liverpool, UK).
Oral/Dental Hygiene - Power-assisted and Manual Toothbrushes and Interdental Devices


0680  Clinical Study on the Effectiveness of Two Sonic Toothbrushes. S. ZIMMER*, M. FOSCA, and J.-F. ROULET (Department of Operative and Preventive Dentistry, Charité, Berlin, Germany).

0681  Comparative Clinical Study of a Sonic Toothbrush and a Manual Toothbrush. R. ROIG* and P. ROUSSEAU (Practice of Periodontics, Marseille, France).

0682  Gingivitis and Plaque Reduction by the Pulse™ Plaque Remover. P.J. ROBINSON*, D. MADDALOZZO, S. BRESLIN, and E. GREENER (Northwestern University, Chicago, IL, USA).


0684  Relative Effects of Powered Toothbrushes on Dentin and Gingiva. T. IMFELD and B. SENER* (Clinic of Preventive Dentistry, Periodontology and Cariology, Dental Institute, University of Zürich, Switzerland).


0686  Association between Toothbrushing Time and Plaque Score with Three Different Toothbrushes. M. EBRAHIMI*, A.C. STØLE, A.M. AASS, and P. GJERMO (Department of Periodontology, University of Oslo, Norway).

0687  A Model to Evaluate the Relative Cleaning Effectiveness of Toothbrushes. D. BEALS*, D. GRAU, and G. LIM (Oral-B Laboratories, Belmont, CA, USA).

0688  Relationship between Laboratory Toothbrush Stiffness and Perceived Mouthfeel. A.W. LEIPHART, T.M. NGO, M. WONG-PAREDES*, and D.A. WEBER (Oral-B Laboratories, Belmont, CA, USA).


0690  Calculus Inhibition by Dental Floss Containing Soluble Pyrophosphate. C.J. KLEBER, J.L. MILLEMAN*, and M.S. PUTT (Health Science Research Center, Indiana University-Purdue University, Fort Wayne, USA).


0692  Comparative Study among Three Different Types of Waxed Dental Floss on Interproximal Plaque. R. VIANNA*, A. MODESTO, A.R. VIEIRA, and E.S. LOPES (WHO Collaborative Center, UFRJ, Brazil).

0693  Laboratory Subgingival Access Efficacy of Three Manual Toothbrushes. S.L. YANKELL, X. SHI, R.C. EMLING*, and M. HARRIS (University of Pennsylvania School of Dental Medicine, Philadelphia; and Johnson & Johnson, Skillman, NJ, USA).
Nutrition - Foods, Diets, and Health


0695  Caffeine Inhibits Adenosine-induced Proliferation of Bone Cells. M. OHTA*, Y. KAMAGATA-KIYOURA, M. YAZDANI, G. CHEUK, and T. NAKAMOTO (LSU School of Dentistry, New Orleans, LA, USA; and Nihon University School of Dentistry at Matsudo, Chiba, Japan).


0697  The in vitro Reduction in Plaque Biomass Following Repeated Exposure to a Toothpaste Containing Green Tea Extract and a Zinc Salt. L. WOLINSKY, P. CAMARGO*, J. CUOMO, and K. QUESADA (UCLA School of Dentistry, Los Angeles, CA; and USANA Inc., Salt Lake City, UT, USA).

0698  Case-Control Study on Recurrent Aphthous Stomatitis and Food Intakes. M. OGURA*, T. YAMAMOTO, M. MORITA, and T. WATANABE (Department of Preventive Dentistry, Okayama University Dental School, Japan).


0701  Oral Health Status and Nutrition in Institutionalized Patients. M. LAMY*, P. MOJON, G.K. KALYKAKIS, R. LEGRAND, and E. BUDTZ-JØRGENSEN (CHU, University of Liège, Belgium; and University of Geneva, Switzerland).

0702  Sugar and Sweetness, an Experimental Approach in Relation to Dental Caries. Y. DELBOS* and A. ROUAS (UFR d’Odontologie, Université de Bordeaux, France).

Mineralized Tissue - Factors Involved in Formation of Enamel & Dentin

0703  Differential Display Analysis of Sequential Gene Expression in Rat Incisor Ameloblasts. H. VERREAULT*, L. DESGROSEILLERS, C.E. SMITH, and A. NANCY (Dentistry and Biochemistry, Université de Montréal; and Dentistry, McGill University, Canada).

0704  Immunoblotting Studies on the Expression and Turnover of Ameloblastin. P. LAVOIE*, W.-Y. CHEN, C.E. SMITH, and A. NANCY (Faculties of Dentistry, Université de Montréal and McGill University, Canada).

0705  Immunolocalization of Apoptosis-related Proteins in the Rat Enamel Organ. P. MOCETTI*, G. SILVESTRINI, A. NANCY, and E. BONUCCI (Exp. Medicine and Pathology, La Sapienza, Rome, Italy; and Faculty of Dentistry, Université de Montréal, Canada).

The Origin and Development of Mammalian Enamel Structures. Y. KOZAWA*, S. TORII, H. MISHIMA, K. SUZUKI, and Y. YAMASHITA (Department of Anatomy, Nihon University School of Dentistry at Matsudo; and Department of Oral Anatomy, Faculty of Dentistry, Tokyo Medical and Dental University, Japan).

Dentin Matrix Protein 1 Gene of Nonplacental Mammals. S. TOYOSAWA*, C. O’HUIGIN, and J. KLEIN (Max-Planck-Institut für Biologie, Abteilung Immunogenetik, Tübingen, Germany; and Department of Microbiology and Immunology, University of Miami School of Medicine, Florida, USA).

Immunolocalization of MMP3 (stromelysin) in Developing Dental Tissues. R.C. HALL*, D. SEPTIER, M. GOLDBERG, G. EMBERY, and R.J. WADDINGTON (Department of Basic Dental Science, Dental School, Cardiff, UK; and Faculté de Chirurgie Dentaire, Montrouge, France).


Expression of Cementum-derived Attachment Protein in Developing Tooth Germ. M. SAITO*, M. IWASE, G. MINAMIDA, O. TAKAHASHI, T. KAWASE, T. TERANAKA, and A.S. NARAYANAN (Kanagawa Dental College, Japan; and University of Washington, Seattle, USA).

Immunolocalization of Lumican and Keratan Sulphate in the Predentin and Dentin of Rat Incisors. D. SEPTIER*, R.C. HALL, G. EMBERY, and M. GOLDBERG (Faculté de Chirurgie Dentaire de Paris V, Montrouge, France; and Basic Dental Science, Cardiff, UK).

Human Periodontal Ligament Fibroblasts Express Syndecan mRNAs. A. SHIMAZU*, M.A.H. BACHCHU, M. MORISHITA, and Y. IWAMOTO (Department of Preventive Dentistry, Hiroshima University School of Dentistry, Japan).


Ultrastructural Features of Human Cementum Tumor Cells Cultured in vitro. H. ARZATE*, M.E. AGUILAR-MENDOZA, A. WESTERHAUS, J. REYES-GASGA, M.A. ALVAREZ-FREGOSO, and M.A. ALVAREZ-PEREZ (Facultad de Odontología UNAM, Hospital 20 de Noviembre ISSSTE, Instituto de Física, Instituto de Investigación en Materiales, and Instituto de Fisiología Celular, UNAM, México).


Mandibular and Metacarpal Bone Densities in Osteoporotic Women. S.D. POŠTIĆ*, M. JEVREMOVIC, and Z. RAKOČEVIĆ (Department of Prosthodontics; Department of Radiology, Faculty of Stomatology; and Clinic of Gynecology and Obstetrics, Faculty of Medicine, University of Belgrade, Serbia, Yugoslavia).

The Use of Animal and Human Model Systems to Study Tooth and Bone Resorption in vitro. A.M. PIERCE*, D.R. HAYNES, M. LORIC, D. FINDLAY, C. DREYER, and B. VERNON-ROBERTS (Departments of Dentistry, Pathology, Orthopaedics & Trauma, University of Adelaide, Australia).

Osteoclast Formation Induced by V. parvula LPS. A. TSUNODA*, N. TANI-ISHII, T. TERANAKA, and T. UMEMOTO (Kanagawa Dental College, Yokosuka, Japan).

Immunohistochemical Distributions of Inflammatory Cytokines during the Internal Resorption of Human Deciduous Teeth. N. SAHARA*, Y. ASHIZAWA, K. NAKAMURA, T. DEGUCHI, and K. SUZUKI (Departments of Oral Histology and Orthodontics, Matsumoto Dental University, Shiojiri, Nagano, Japan).

Ceramide Inhibits Formation of F-actin Ring in and Bone Resorption by Mature Osteoclasts. H. TAKEDA*, K. OZAKI, S. KITANO, and S. HANAZÁWA (Department of Oral Microbiology, Meikai University School of Dentistry, Saitama, Japan).

Intracellular pH Measurements in Isolated Rat Osteoclasts. T. SHIBATA* and K. OHYA (Department of Dental Pharmacology, Faculty of Dentistry, Tokyo Medical and Dental University, Japan).

Role of LFA-1 in Osteoclast Formation. N. TANI-ISHII*, A. TSUNODA, G. MATSUMOTO, T. TERANAKA, and T. UMEMOTO (Kanagawa Dental College, Yokosuka, Japan).


Tetracyclines Promote Osteoclast Apoptosis. A. MCGUIRE, B. MOONGA, and B. RIFKIN* (New York University College of Dentistry, NY; and Veterans Affairs Medical Center, Philadelphia, PA, USA).


Tracking of an Osteoclast-like Cell Line in vivo. J.M. GORTON* and P.V. HAUSCHKA (Harvard School Dental Medicine and Children's Hospital, Boston, MA, USA).

Biochemical and Histological Responses of Tooth Movement in Pregnant Rats. A. HIRASHITA*, Y. SADANAGA, S. MORITA, K. Kaida, T. FUKUI, and Y. KUWAHARA (Department of Orthodontics, School of Dental Medicine, Tsurumi University, Yokohama, Japan).

Human Monocyte/Macrophage ATPase Activity on Biphasic Calcium Ceramics: In vitro Study. M. BENAHMED*, M. COTTREL, J. VALTON, G. PRADAL, and G. DACULSI (Faculté de Chirurgie, Université de Nantes, France).

Periosteum Repair at Interface between Hydroxyapatite and Soft Tissue. F. MAKI*, M. MURATA, K. OOMORI, and M. ARISUE (Oral Surgery, Health Science University of Hokkaido, Japan).

An in vivo Model for Testing Biomaterials during Bone Regeneration and Remodeling. H. BAHAR*, R. ROLL, and I. BINDERMANN (School of Dental Medicine, Tel Aviv University, Israel).

Amelogenesis Imperfecta of the Hypoplastic Type Combined with Dentinal Dysplasia. D. ERDILEK*, F. KORAY, and A. KAYNAR (Department of Conservative Dentistry and Department of Oral Surgery, Faculty of Dentistry, University of Istanbul, Turkey).

0735 Comparative Expression of DMPs and Procollagen mRNAs in Normal and Osteopetrotic Mice. G.V. KULKARNI, M. JEE, S. THOTAKURA, S. MARKS, Jr., A. VEIS, and A. GEORGE* (Division of Oral Biology, Northwestern University Dental School, Chicago, IL, USA).

0736 Deformation of Tooth by Occlusal Force. T. OSHIO*, E. BANDO, S. SHIGEMOTO, T. SATUMA, T. IKEDA, K. NISHIGAWA, and M. NAKANO (School of Dentistry, Tokushima University, Japan).

0737 Type IIA Procollagen is an Early Marker for Osteoarthritic Cartilage. H.-D. NAH*, B. SWOBODA, E. KOYAMÁ, J.-Y. SUH, W. CROLL-HALPERN, and T. KIRSCH (University of Pennsylvania School of Dental Medicine, Philadelphia, USA).

0738 Biochemical Characterization of Proteoglycans from Healthy and Diseased Human Cementum. K.T. ABABNEH*, R.C. HALL, and G. EMBERY (Department of Basic Dental Science, Dental School, UWCM, Cardiff, UK).

0739 Bone Aluminosis Induced by Stephan 580 Carigenic Diet in Rats. Ph. NDOBO-EPOY*, E.E. CREPPY, R. BAKAYOKO-LY, E. BROU, S.H. TOURE, M.G. SEMBENE, and A. BERARD (Lab 902/C/O2 and Toxicology Department, University Victor Segalen, Bordeaux, France; FACOS, Abidjan, Ivory Coast; and IOS, Dakar, Senegal).

0740 Prevalence of Non-fluoride Enamel Opacities among Young People. P. LEOUS* and O. KOZEL (Minsk Medical Institute, Republic of Belarus).

0741 Lactational Exposure to Dioxin Causes Developmental Dental Defects in Rats. A. LEPPÄNIEMI*, S. ALALUUSUA, R. POHJANVIRTA, M. UNKILA, J. TUOMISTO, and P.-L. LUKINMAA (Institute of Dentistry, University of Helsinki; and National Public Health Institute, Finland).


0743 Effects of Polychlorinated Biphenyls on Developmental Defects of Enamel. J. JAN* and V. VRBIČ (Department of Stomatology, Medical Faculty, University of Ljubljana, Slovenia).


0745 Evidence Supporting the Role of Parastatin as a Parathyroid Autocrine Inhibitor. B.H. FASCIOTTO*, J.C. DENNY, and D.V. COHN (School of Dentistry, University of Louisville, KY, USA).

0746 The Expression of Tissue Inhibitor of Metalloproteinase during the Healing of Endochondral and Intramembranous Bone Grafts. A. TWITTY*, A.M. RABIE, and D.K.Y. SHUM (Department of Orthodontics, Faculty of Dentistry; and Department of Biochemistry, Faculty of Medicine, The University of Hong Kong).

Seq#: 71 Thursday, June 25, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall

Salivary Research - Salivary Flow/Chemistry

0747 Changes in Saliva and Blood Flow with Growth and Aging. T. UEHA* and K. SUGITA (Meikai University, Sakado, Japan).

Effect of Parotid Saliva on Clearance in the Upper Posterior Buccal Region. A. SUZUKI, M. MINAMI, and S. WATANABE* (Meikai University, Saitama, Japan).

Correlation between Xerostomia and Salivary Flow Alterations in Patients Undergoing Allogenic and Autologous Bone Marrow Transplantation. C. BEZ*, L. RIMONDINI, F. DEMAROSI, A. SARDELLA, and A. CARRASSI (Department of Oral Pathology and Medicine, School of Dentistry, University of Milan, Italy).


Changes in Saliva during Pregnancy. A. DABANO-GLU*, Y. GÜVEN, F. KORAY, R. HAS, M. TOPCUBA¸SI, ¸S. CAN, and N. TURAN (Department of Conservative Dentistry, Department of Biochemistry, Department of Obstetrics and Gynecology, and Department of Biostatistics, Faculty of Medicine, University of Istanbul, Turkey).

Salivary pH Increase in Altitude. Ph. NDOBO-EPOY, T. PAGE*, M. ZMIROU, N. MEYER, and J. PACCALIN (Université Victor Segalen, Bordeaux, France).

Influence of Sex on the Anti-oxidant Capacity of Saliva. C. LITTARRU*, G. ALBERGO, F.M. FILANNINO, F. SAMPALMIERI, and M. PROCACCINI (Dental Materials Department and Oral Pathology Department, University of Ancona, Italy).

Evaluation of Changes in Salivary Cortisol Level during Simple Dental Restorative Treatments. H. ERTEN CAN, M. CAN, M.B. ÜÇTA¸SLI*, and H. ÖMÜRLÜ (Faculty of Dentistry, University of Gazi; and Department of Biochemistry, Mevki Military Hospital, Turkey).


Immunological Analysis of Amylase and PSP in Mouse Salivary Glands. S. MATSUURA*, K. SUZUKI, and A.R. HAND (Matsumoto Dental University, Shiojiri, Nagano, Japan; and University of Connecticut, Farmington, USA).

Changes in Parotid Isoamylase Levels in Serum and in Parotid Tissue during Stimulation and Diurnal Cycle. Á. NAGY*, P. TÓTH, G. VARGA, and T. ZELLES (Department of Oral Biology, Semmelweis Medical University, Budapest, Hungary).

Parotid Amylase and Gastric Osmolality in Rats Fed Liquid Diet. M. KURAHASHI* and K. INOMATA (Health Sciences University of Hokkaido, Japan).

Protein N-glycosylation and Salivary Cell Polarity. M.A. KUKURUZINSKA* and K. LENNON (Division of Oral Biology, Boston University School of Dental Medicine, MA, USA).

Glycosylation of Salivary Glycoproteins in Elderly Patients. A. MOVSESIJAN*, Z. BOJIC, and L.J. JANKOVIC (Clinic for Periodontology and Oral Medicine, Faculty of Stomatology, University of Belgrade; Institute for the Application of Nuclear Energy-INEP, Zemun, Yugoslavia).

Evaluation of b1,4-galactosyltransferase as a Salivary Gland Morphogen. G.E. OXFORD* and M.G. HUMPHREYS-BEHAR (Department of Oral Biology, College of Dentistry, University of Florida, Gainesville, USA).
0763  Salivary Leucine Aminopeptidase and Periodontal Diseases. U. KACZMAREK* and E. SOLTAN (Department of Conservative Dentistry, Wroclaw University of Medicine, Poland).

0764  Characteristics and mRNA Expression of Monkey Submandibular Gland Proteoglycans. A. KAMADA*, J. OKAZAKI, K. KAKUDO, I. SHIOJI, and T. SAKAKI (Osaka Dental University, Japan).


0766  Laminin Expression and Proliferation of Interferon-g-stimulated Salivary Gland Cells. P.J. DANIELS* and C.P. McARTHUR (UMKC School of Dentistry, Kansas City, MO, USA).


0768  Atomic Force Microscope Analysis of the Microroughness of Salivary Pellicles on PMMA. J.A. BANDERAS*, J.G. BANUELOS, M. GONZALEZ, A. BECERRIL, and J. SANIGER (Dental Research Center, School of Dentistry, UAEM, Toluca; and Laboratory of Materials, CIUNAM, & ININ, Mexico).

0769  Candidacidal Activity and a-helical Conformation of Histatin-5 Variants. H. SITU and L.A. BOBEK* (Department of Oral Biology, SUNY at Buffalo, NY, USA).


Seq#: 73  Thursday, June 25, 11:15 am - 12:45 pm  
Microbiology/Immunology - Specific Immunity/Cytokines

0772  Interleukin-8 and Its Autoantibodies in Serum of Lichen Planus Patients. M.M. BAYOUMI* (Faculty of Dental Medicine, Al-Azhar University, Cairo, Egypt).

0773  Escherichia coli Chaperonin 60 Binds to and Stimulates Human Leukocytes. S. KHAN*, M. PREUSS, P. TABONA, S. POOLE, A. MILLER, and B. HENDERSON (Department of Maxillofacial Surgery, Eastman Dental Institute, London; and Department of Chemistry, Imperial College, London, UK).

0774  Pathogenicity of an Oral Bacterium Streptococcus intermedius in Liver Disease. K. MURAKAMI*, K. HIROTA, K. NEMOTO, T. ONO, T. MATSUO, and Y. MIYAKE (School of Dentistry, Tokushima University, Japan).

0775  Oral Candidosis Related to Levels of Secretory IgA in Diabetics. W.A. COULTER*, A.M. WILLIS, and P.-J. LAMEY (School of Clinical Dentistry and Department of Microbiology, The Queen’s University, Belfast, N. Ireland).

0776  Induction of Specific IgA-producing Cells in Rabbit Salivary Glands. H. INOUE*, T. FUKUIZUMI, T. TSUJISAWA, and C. UCHIYAMA (Department of Oral Bacteriology, Kyushu Dental College, Kitakyushu, Japan).

0777  Protective Effects of Various Calmodulin Kinase Activators on C57BL/6 Mice against Endotoxic Lipid A-induced Lethal Toxicity. Y. ASAI* and T. OGAWA (Department of Oral Microbiology, Asahi
The Mechanisms of IL-6 Production in Human Peripheral Blood Monocytes Stimulated with Porphyromonas gingivalis Fimbriae. H. UCHIDA* and T. OGAWA (Department of Oral Microbiology, Asahi University School of Dentistry, Motosu, Gifu; and Department of Oral Maxillofacial Surgery II, Osaka University Faculty of Dentistry, Suita, Japan).

Differential Effect of IL-1a and IL-1b on IgG2 Production. Y. ISHIHARA*, J.B. ZHANG, S.E. BARBOUR, H.A. SCHENKEIN, and J.G. TEW (CRCPD, Virginia Commonwealth University, Richmond, USA).

Hyporesponsiveness of Human Gingival Fibroblasts Isolated from Inflamed Gingival Tissues against Cell Surface Components of Porphyromonas gingivalis. T. OGAWA*, T. UMEMOTO, S. ASAI, H. UCHIDA, Y. ASAI, and H. SHIMAUCHI (Department of Oral Microbiology, Asahi University School of Dentistry, Gifu; and Department of Oral Maxillofacial Surgery II and Periodontology, Osaka University Faculty of Dentistry, Japan).


Streptococcus sanguis Feeding Stimulates Mesenteric Lymphocytes in DBA/1 Mice. M.J. SZUREK*, M. COSTALONGA, and M.C. HERZBERG (Department of Preventive Sciences, School of Dentistry, University of Minnesota, Minneapolis, USA).

The Role of Neutrophil Myeloperoxidase/Hydrogen Peroxide/Chloride System in Killing of Porphyromonas gingivalis. H. LIU*, F. DiMEO, and R. ARNOLD (School of Dentistry, UNC-Chapel Hill, NC, USA).

Plasma Cells Containing Russell's Bodies in Human Periapical Lesions: II. Immunohistochemical Evaluation. L. GIARDINO*, D. LA FORNARA, L. CAPEZZUOLI, and L. FONZI (Department of Biomedical Sciences, University of Siena, Italy).

Disruption of adh-like DNA Affects Streptococcus gordonii Glucosyltransferase Activity. M.M. VICKERMAN*, N.M. MATHER, P.E. MINICK, and D.B. CLEWELL (University of Michigan, Ann Arbor, USA).

Recombinants of Streptococcus gordonii Express Functional Domains of Porphyromonas gingivalis Fimbriillin. A. SHARMA*, H.T. SOJAR, D.E. HRUBY, H.K. KURAMITSU, R.T. EVANS, and R.J. GENCO (Department of Oral Biology, SUNY at Buffalo, NY; and Department of Microbiology, Oregon Health Sciences University, Portland, USA).

Sequence Analysis of the Dextranase Gene of Streptococcus downei. T. IGARASHI*, A. YAMAMOTO, and N. GOTO (Department of Oral Microbiology, Showa University School of Dentistry, Tokyo, Japan).

Complete Nucleotide Sequence of a Neuraminidase Gene from Streptococcus oralis. C.V. HUGHES*, A.G. ALMEIDA, and S.J. KOH (Pediatric Dentistry, Boston University, MA, USA).

Partial Sequence Information on the Amylase-binding Protein Gene of Strep. mitis. J.E. BERGMANN* (Department for Conservative and Preventive Dentistry, Dental School, University of Hamburg, Germany).
Isolation of Part of a Putative Mucin-sulphatase Gene in Oral Streptococci. H.-J. JANSEN*, J.R. SAUNDERS, C.A. HART, J.M. RHODES, and J.W. SMALLEY (Clinical Dental Sciences, Biological Sciences, Medical Microbiology, and Medicine, University of Liverpool, UK).

Genes Involved in Serotype b Antigen Synthesis in Actinobacillus actinomycetemcomitans. Y. YOSHIDA*, Y. NAKANO, Y. YAMASHITA, and T. KOGA (Department of Preventive Dentistry, Kyushu University, Fukuoka, Japan).

Actinomyces naeslundii Fructosyltransferase. L. BERGERON* and R.A. BURNE (University of Rochester, NY, USA).

Analysis of the Actinomyces naeslundii T14V Type 2 Fimbrial Gene Cluster. M.K. YEUNG* and P.A. RAGSDALE (University of Texas Health Science Center at San Antonio, USA).


Heterogeneity in Campylobacter rectus Surface Antigens. T. MIURA*, H. IHARA, S. YAMADA, K. ISHIHARA, T. KATO, and K. OKUDA (Department of Microbiology and Department of Periodontics, Oral Health Science Center, Tokyo Dental College, Chiba, Japan).


Role of HIV-tat in Salivary Gland Immunopathogenesis. C.P. McARTHUR*, Y. WANG, D. HERUTH, P. ROTHBERG, D. BAMBERGER, and D. PALMER (UMKC School of Dentistry, William Jewell College, Liberty, MO; Children’s Mercy Hospital, Kansas City, MO; and UMKC School of Medicine, Kansas City, MO, USA).


Prevalence of HIV-associated Oral Lesions in an HIV-dedicated Dental Clinic. C. FLAITZ, M. NICHOLS, P. CORBY*, A.J. MORETTI, K. ALLEN, and W.A. BRETZ (University of Texas Houston Dental Branch; and Bering Dental Clinic, Houston, TX, USA).


The Microbiology of Papillon-Lefèvre Syndrome. K.L. ROBERTSON*, D.B. DRUCKER, J.A. JAMES, A.S. BLINKHÖRN, and S. HAMLET (School of Biological Sciences and Turner Dental School, Manchester University, UK; and University of Queensland, Australia).

0805 Linear Gingival Erythema in a South African Cohort of HIV/AIDS Patients. E. BLIGNAUT* and R. SENEKAL (Faculty of Dentistry, MEDUNSA; and University of Pretoria, South Africa).


0808 Hepatitis G Virus and Oral Lichen Planus. G. LODI, K. HARRIS, S.R. PORTER, M. CARROZZO, A. PIATTELLI, C.G. TEO, and C. SCULLY* (Eastman Dental Institute, University of London, UK; Central Public Health Laboratory, Colindale, UK; School of Dentistry, Turin, Italy; and School of Dentistry, Chieti, Italy).

Seq#: 76 Thursday, June 25, 11:15 am - 12:45 pm Poster Session, Exhibit Hall Microbiology/Immunology - Antimicrobial

0809 Antimicrobial Susceptibility of Bacteria from Periodontal Disease and Odontogenous Abscesses. W. PFISTER*, S. EICK, G. KLINGER, U. MAEGDEFESSEL-SCHMUTZER, and E. STRAUBE (Department of Microbiology, Department of Periodontology, and Department of Oral & Maxillofacial Surgery, University of Jena, Germany).

0810 Prevalence of β-lactamase-producing Strains among Anaerobic Gram-negative Rods Isolated from Periodontal Pockets. T. FOSSE*, C. HÎTZIG, and Y. CHARBIT (Medical and Dental Schools, University of Nice, France).

0811 β-lactamase-producing Gram-negative Anaerobes in Infant’s Mouth as Related to Previous Antimicrobial Therapy. S. NYFORS*, E. KÖNÖNEN, A. TAKALA, and H. JOUSIMIES-SOMER (National Public Health Institute and University of Helsinki, Finland; and University of Aarhus, Denmark).

0812 Microbiological Evaluation of Different Chlorhexidine Solutions Used as Canal Irrigants. D. PILLA*, G. VARVARA, F. DI NARDO DI MAIO, P. DE FAZIO, and C. D’ARCANGELO (Dental School, University of Chieti, Italy).

0813 Antimicrobial Strength of Benzalkonium Chloride in Health-Dent Desensitizer. J.S. RIZZA* and C.M. HABIB (Tufts University School of Dental Medicine, Boston, MA, USA).


0815 Effect of Chlorhexidine on the Antibiotic Susceptibility of Streptococcus mutans. M. PIRIE* (Department of Medical Microbiology and The Dental School, University of Dundee, Scotland, UK).


0817 Effect of Sub-MIC of Antibiotics on Cell Surface Characteristics of Porphyromonas gingivalis. Y.J. KIM, S.Y. LEE, and S.J. CHOE* (Department of Oral Microbiology, Seoul National University; and Department of Oral Microbiology, Kangnung National University, Korea).
0818 Immunological Features of a Novel Histidine-containing Peptide Associated with GTF Catalytic Activity. D.J. SMITH*, R.L. HESCHEL, and M.A. TAUBMAN (Department of Immunology, Forsyth Dental Center, Boston, MA, USA).

0819 Susceptibility of “Streptococcus milleri group” Strains to Antimicrobial Peptides. K.L. BARTIE*, M.J. WILSON, D. DEVINE, and M.A.O. LEWIS (Dental School, University of Wales, College of Medicine, Cardiff; and Leeds Dental Institute, Leeds, UK).

0820 Antimicrobial Susceptibility of Periodontopathic Bacteria Associated with Adult Periodontitis. E. CARRASCO* (Faculty of Dentistry, University of Concepción, Chile).

0821 Study of Minimum Inhibitory Concentrations of Three Different Dentifrices on Components of the Oral Microflora. C. TAVARES*, M. UZEDA, and R. VIANNA (WHO Collaborative Center, UFRJ, Brazil).

0822 In vitro Antibacterial Activity of Toothpastes to Cariogenic Bacteria. P.D. SCHULLER*, K. KOMIYAMA, T. TAERUM, and G.W. THOMPSON (University of Alberta, Edmonton; and University of Saskatchewan, Saskatoon, Canada).

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Poster Session, Exhibit Hall

Oral/Maxillofacial Surgery - Basic Research Topics in OMS

0823 Cytotoxicity Assessment of Bone-grafting Materials. W.-J. CHANG*, C.-H. WU, C.-Y. WANG, S.-Y. LEE, and C.-T. LIN (Graduate Institute of Oral Rehabilitation Sciences and School of Dentistry, Department of Microbiology and Immunology, Taipei Medical College, Taiwan, ROC).

0824 Immunological Studies of Tooth Allografts in Mice. Y.-H. CHU*, C.C. HSIEH, Y.-C. TUNG, and M.-Y. CHOU (Chung-Shan Medical & Dental College, Taiwan, ROC; and Hubei Medical University, Wuhan, PRC).

0825 Ampicillin Concentration in Infected Oral Floor in Rats. M. IKEDA*, H. OMATA, Y. AKIMOTO, A. FUJII, and T. NAKAMURA (Nihon University School of Dentistry at Matsudo, Chiba, Japan).

0826 Early Diagnosis and Treatment Monitoring Roles of Tumor Markers in Oral Squamous Cell Carcinoma. R.M. NAGLER, M. BARAK*, and D. LAUFER (Department of Oral and Maxillofacial Surgery, Rambam Medical Center, Haifa, Israel).

0827 Overexpression of p53 Protein in Odontogenic Cysts. F. Di CARLO*, M. QUARANTA, C. RUBINI, M. FIORONI, and A. PIATTELLI (Dental Schools of Rome, Ancona, and Chieti, Italy).

0828 Expression of Bcl-2 Immunoreactivity in Odontogenic Cysts. A. SCRASCIA*, M. QUARANTA, C. RUBINI, M. FIORONI, and A. PIATTELLI (Dental Schools of Rome, Ancona, and Chieti, Italy).

0829 Studies on Reactive Oxygen Species in Experimentally Induced Arthritis of Temporomandibular Joint in Rats. Y. KAWAI*, M. LEE, E. OKABE, and E. KUBOTA (Second Department of Oral and Maxillofacial Surgery and Department of Pharmacology, Kanagawa Dental College, Yokosuka, Japan).

0830 Von-Mises Yield Strength and Strain Energy after SSRO. O.-B. YOON* and Y.-G. KIM (Department of Oral and Maxillofacial Surgery, College of Dentistry, Kyung Hee University, Seoul, Korea).


0832 Setting Behavior of Hydroxyapatite Putty in Serum. K. SUZUKI*, K. ISHIKAWA, Y. MIYAMOTO, and M. NAGAYAMA (Okayama University Dental School and School of Dentistry, Tokushima University, Japan).
0833 Prevalence of Subgingival Periodontopathic Bacteria and Herpesviruses in a Remote Native Brazilian Population. R.F.M. LOTUFO*, L. IDE, A. CONTRERAS, O. BERGAMASHI, and J. SLOTS (Universidade de São Paulo, Brazil; and University of Southern California, Los Angeles, USA).

0834 Relationship between Periodontal Pathogens and Clinical Parameters. T. YASUGE*, T. YAEGASHI, N. ENDOH, A. FUJIMOTO, A. SATOH, A. KUMAGAI, and K. UYENO (Department of Periodontology, Iwate Medical University, Japan).

0835 Detection of Porphyromonas gingivalis in Gingivae of Periodontal Patients. A. FUJIMOTO*, T. YAEGASHI, N. ENDOH, A. SATOH, T. YASUGE, and K. UYENO (Department of Periodontology, Iwate Medical University, Japan).

0836 The Subgingival Microflora in Egyptians with Diabetes Mellitus. P.S. HULL*, M. FARID, and H.V. WORTHINGTON (Turner Dental School, Manchester, UK).

0837 Epidemiology of A. actinomycetemcomitans on a Japanese Sibling. M. FUJISAWA*, H. KONOBU, H. NAKĀYA, and K. KAMOI (Department of Periodontology, Nippon Dental University, Tokyo, Japan).

0838 Rapid Antibiotics Screening Method for Micro-organism with Oxygen Electrode System. K. TEZUKA*, M. INADA, M. EZURE, T. OGAWA, H. KAMÔI, H. ITO, J. ARAI, H. ISHIKAWA, and K. KAMOI (Department of Periodontology and Medicine, School of Dentistry, The Nippon Dental University; Lab. of M.E.C., Daikin Indus. Ltd.; and Department of Anatomy (II), The Jikei University School of Medicine, Japan).

0839 Natural Variations in the Subgingival Microflora over Three Years. M. CULLINAN*, S. HAMLET, B. WESTERMAN, J. PALMER, M. FADDY, and G.J. SEYMOUR (The University of Queensland, Brisbane, Australia).

0840 Frequent Detection of Suspected Periodontopathogens in Untreated, Middle-aged Periodontitis-resistant Adults. B. von TROIL-LINDÉN*, S. ALALUUSUA, H. JOUSIMIES-SOMER, and S. ASIKAINEN (Institute of Dentistry, University of Helsinki and National Public Health Institute, Finland).
ISHIKAWA, and K. KAMOI (Department of Periodontology, Nippon Dental University, Tokyo; and Department of Periodontology, Tokyo Medical and Dental University, Japan).

0845  Correlation of Alveolar Bone Loss by the Presence of Bone Collagen Cross-links in Gingival Crevicular Fluid. B.J. CRAIG*, D. EYRE, and C.M. OVERALL (University of British Columbia, Vancouver, Canada; and University of Washington, Seattle, USA).


0847  Laboratory Markers to Evaluate Therapy in Early-onset Periodontitis Patients. G. EMINGIL*, I.B. LAMSTER, M. HERRERA-ABREU, R. CELENTI, and J. GRBIC (Columbia University, New York, NY, USA; and Ege University, Turkey).

0848  Relationship of Periodontopathogens to GCF IL-8, Granulocyte Elastase, and PGE2. L.J. JIN*, W.K. LEUNG, E.F. CORBET, L.P. SAMARANAYAKE, W.I.R. DAVIES, and P.-Ö. SÖDER (The University of Hong Kong; and Karolinska Institute, Stockholm, Sweden).

0849  Mouthrinse Elastase Levels in Relation to Clinical Periodontal Parameters. K. KARJALAINEN*, T. TERVONEN, E. KOLEHMAINEN, and M.L.E. KNUUTTILA (Institute of Dentistry, University of Oulu, Finland).

0850  Electrophoretic Study of a 35-kDa Protein in Human Whole Saliva. K. TAKANO*, K. KURAMOTO, W. QIU, and T. BABA (Nagasaki University School of Dentistry, Japan).

0851  Low Prevalence of IL-1a and IL-1b Polymorphisms in a Chinese Population. Y. WU*, H.-Y. WANG, F. Di GIOVINE, and G.C. ARMITAGE (West China University of Medical Sciences; University of Sheffield, UK; and University of California, San Francisco, USA).

0852  Demographic Analysis of Early Onset Periodontitis (EOP). A. MAYERS, S. VAUGHAN*, R. MANNING, and G.S. GRIFFITHS (Eastman Dental Institute, University of London, UK).

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Poster Session, Exhibit Hall

**Periodontal Research-Pathogenesis - Hormones/Agents Influencing Periodontal Tissues/Cells**

0853  PDGF Receptor Expression in Drug-induced Gingival Hyperplasia. M. DE PAULA EDUARDO*, L. KURU, M.H. PARKAR, H.N. NEWMAN, and I. OLSEN (Department of Periodontology, Eastman Dental Institute, UK; and Marmara University, Turkey).

0854  FK506 and CsA Have a Differential Influence on Human Keratinocyte. H. KATSURAGI* and K. SAITO (Department of Oral Microbiology, School of Dentistry at Niigata, The Nippon Dental University, Japan).

0855  Cyclosporin A Decreases Collagen and Collagenase mRNAs in Rat Gingiva. M. KATAOKA*, H. SHIMIZU, K. KUNIKIYO, Y. ASAHARA, M. NINOMIYA, J. KIDO, and T. NAGATA (Department of Periodontology and Endodontology, School of Dentistry, University of Tokushima, Japan).

0856  Pathophysiological Role of Cathepsin G in Nifedipine-induced Gingival Overgrowth. K. KUNIMATSU*, Y. OZÅKI, Y. HARA, Y. AOKI, K. YAMAMOTO, and I. KATO (Dept. of Periodontology, Nagasaki University School of Dentistry; Dept. of Food and Health Sciences, Jissen Women’s University Faculty of Life Sciences, Hino; and Dept. of Pharmacology, Kyushu University Faculty of Dentistry, Fukuoka, Japan).

0857  Cyclosporin Differentially Regulates IL-6 and IL-1b Production by Peripheral Blood Mononuclear Cells. T.T. MYRILLAS* and C.R. IRWIN (Queen’s University, Belfast, N. Ireland).
0858  CyA-induced Gingival Overgrowth: Role of Inflammation, Monocyte Transdifferentiation, T4-cell Impairment. A. ARYS*, N. VANMUYLENDER, N. DOUROV, L. LAGNEAUX, A. DELFORGE, C. PHILIPPART, F. WELLENS, H. VAN DEN EYNDE, and M.-L. LABAT (Laboratoire Physiopathologie Osseuse, Centre de Recherches Biomédicales des Cordeliers, Paris, France; Université Libre de Bruxelles, Belgique; and Onze Lieve Vrouw Ziekenhuis, Aalst, Belgïe).

0859  Cytokine Genotypes of Renal Transplant Patients Taking Cyclosporin A. J.A. JAMES*, C. PERREY, P. SINNOTT, P. DYER, N. THAKKER, and P.S. HULL (Department of Dental Medicine and Surgery, University of Manchester; and Tissue Typing Laboratory, St. Mary's Hospital, Manchester, UK).

0860  Effects of Calcium Blocker on Human Gingival Fibroblast. M. EZURE*, M. INADA, K. TEZUKA, H. KAMOI, S. SATO, H. KAWAMURA, H. HASHIMOTO, H. ISHIKAWA, and K. KAMOI (Department of Periodontology and Medicine, School of Dentistry, The Nippon Dental University; Department of Anatomy (II), The Jikei University School of Medicine, Japan).

0861  Effects of Arecoline on Human Gingival Fibroblasts in vitro. Y.-C. CHANG*, S.-S. LIN, and M.-Y. CHOU (School of Dentistry, Chung Shan Medical & Dental College, Taichung, Taiwan).

0862  Pathobiological Effects of Areca Nut Extract on Human Gingival Fibroblasts. J.H. JENG* and M.C. CHANG (School of Dentistry, National Taiwan University, Taipei; and Team of Biomedical Science, Chang-Gung Institute of Nursing, Kwei-Shan, Taoyuan, Taiwan).

0863  Betal Quid Alkaloids and Nicotine Effects on Neutrophil F-actin Formation. K.-Y. HO*, C.C. TSAI, and Y.H. YANG (Kaohsiung Medical College, Taiwan, ROC).

0864  Susceptibility of Oral Bacteria to Silver, Copper, and Zinc Salts. P. SPACCIAPOLI*, E. NELSON, F.D. ROBERTS, and P.M. FRIDEN (Periodontix, Inc., Watertown, MA, USA).

0865  Experimental Study on Influence of Female Hormone upon Gingival Healing. T. KIKUCHI*, K. UYENO, A. KUMAGAI, and Y. KAMEDA (Department of Periodontology, Iwate Medical University, Morioka, Japan).

0866  IL-6 Expression by Gingival Fibroblasts is Regulated by Androgen. M.H. PARKAR*, H.N. NEWMAN, and I. OLSEN (Eastman Dental Institute, London, UK).

0867  Androgen Metabolism by Fibroblasts in Response to Estradiol-17b and Progesterone. A. TILAKARATNE* and M. SOORY (Department of Periodontology, Faculty of Dental Science, University of Peradeniya, Sri Lanka; and King's College School of Medicine and Dentistry, London, UK).

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Periodontal Research-Pathogenesis - Special Populations/Crevicular Fluid

0868  The Association between Plaque and Salivary Calcium Levels. L.A. SEWÓN*, P. KERTÉSZ, S.M. KARJALAINEN, J. NEMES, and E. SÖDERLING (Institute of Dentistry, University of Turku, Finland; and Semmelweis University of Medicine, Budapest, Hungary).

0869  CF Lymphocyte Subsets of Patients with Early-onset Periodontitis. B. SIGUSCH*, A. WUTZLER, G. KLINGER, and E. GLOCKMANN (Department of Periodontology, University of Jena, Germany).

0870  Matrix Metalloproteinase-8 and Prostaglandin E2 in GCF from Subjects with Refractory Periodontitis. P.-O. SÖDER* and B. SÖDER (Department of Odontology, Karolinska Institute, Stockholm, Sweden).


Activity and Inhibition of Elastase in GCF. C.M.S. FIGUEREDO* and A. GUSTAFSSON (Department of Periodontology, Karolinska Institute, Huddinge, Sweden).

Phagocytic Function of GCF PMNs from Patients with Adult Periodontitis. T. OHSAKI*, K. KIYONOBU, and K. KAMOI (Department of Periodontology, Nippon Dental University, Tokyo, Japan).


Increased Levels of sFcgRIII in Gingival Fluid from Periodontal Lesions. Z.N. YUAN*, K. SCHENCK, K. HELGELAND, and K. TOLO (Department of Oral Biology and Department of Periodontology, Faculty of Dentistry, University of Oslo, Norway).


Distribution of Peripheral Blood Lymphocytes in Host Response in Localized Juvenile and Rapidly Progressive Periodontitis. A. KANTARCI*, I. CEBECİ, G. DENİZ, M. ARASLI, T. YILMAZ, Ö. TUNCER, and E. FIRATLI (Department of Periodontology, School of Dentistry, Department of Immunology, Institute of Experimental Medical Research, University of Istanbul, Turkey).

Microbiological Findings of Papillon-Lefèvre Syndrome. E. FIRATLI*, P. BRAHAM, I. CEBECİ, A. WEINBERG, A. EFEOGLU, and R.C. PAGE (Department of Periodontology, School of Dentistry, University of Istanbul; RCOB, University of Washington; and Department of Periodontics, School of Dentistry, University of Washington, Seattle, USA).

Periodontal Parameters and BANA Test in Patients with Chronic Renal Failure in Hemodialysis. S.A. TORRES*, O.P.S. ROSA, M. FUJIMAKI, M.C.M. GUIMARÃES, R.M. HAYACIBARA, and W.A. BRETZ (Faculty of Dentistry, Bauru-USP and State University, Maringá, Brazil; and University of Texas, USA).

The Effect of Ovariectomy on Experimental Periodontitis in Rats. T. NOGUCHI*, H. KAWASE, N. YOSHINARI, M. MATUOKA, K. INAGAKI, and T. TAKADA (School of Dentistry, Aichi-Gakuin University, Nagoya, Japan).

Evaluation of Osteoinductive and Osteoconductive Potential of Human- and Bovine-derived Freeze-dried Bone in Rats. H.M. SAWAF*, M. FEGHALI-ASSALY, C. de POLLACK, and J.P. OUIAYOUN (LRO URA CNRS, Université Paris VII, France).

Experimental Study on the Effect of Direct Microcurrent to Periodontal Regeneration in Class III Furcation Defects. Y.J. KIM* and H.J. CHUNG (Department of Periodontology, College of Dentistry, Chonnam National University, Kwang Ju, South Korea).


Periodontal Bone Regeneration with Application of rhBMP-2 in Monkeys. O. HONGO*, Y. ITO, K. YAMAJI, T. ODAJIMA, and H. KATO (Department of Periodontology and Endodontology, School of Dentistry, Hokkaido University, Sapporo, Japan).

Local Delivery of Alendronate Reduces Alveolar Bone Resorption. A. YAFFE* and I. BINDERMAN (Hadassah School of Dental Medicine, Hebrew University, Jerusalem; and School of Dental Medicine, Tel Aviv University, Israel).

Bisphosphonate Inhibits Alveolar Bone Resorption in Experimental Periodontitis in Dogs. T. SHIBUTANI*, A. INUZUKA, Y. KAWABATA, N. ASANO, I. HORIKI, and Y. IWAYAMA (Department of Periodontology, Asahi University, Gifu, Japan).

Treatment of Intrabony Defects with an Enamel Matrix Protein (Emdogain®). P. WINDISCH*, A. SCULEAN, I. GERA, and E. REICH (Department of Periodontology, Semmelweis University of Medicine, Budapest, Hungary; and Department of Periodontology and Conservative Dentistry, University of the Saarland, Homburg, Germany).

Surgical Treatment of Localized Gingival Recessions with a Growth Factor. K. CIVELEK* and G. GLUCK (Division of Comprehensive Care and Applied Practice Administration, College of Dentistry, New York University, New York, USA).


Factors Influencing Surgical Root Coverage Employing a Modified Envelope Technique. A. SCHORB*, T. EGER, and H.P. MÜLLER (Department of Operative Dentistry, University of Heidelberg; and Department of Periodontology, German Armed Forces Central Hospital, Koblenz, Germany).

Recession Treatment: Guided Tissue Regeneration vs. Subpedicle Connective Tissue Graft. D.N. TATAKIS* and L. TROMBELLI (Loma Linda University, CA, USA; and University of Ferrara, Italy).

Bacterial Colonization of Three Different Sutures: Electron Microscopic Study. L. BARBRY*, C. HITZIG, Y. CHARBIT, and L. HANNOUN (Dentistry School, Nice, France).

Comparison between Subgingival Scaling and Metronidazole Gel Plus Subgingival Scaling. G.S. GRIFFITHS*, G.J. SMART, and H.N. NEWMAN (Eastman Dental Institute, London; and RAF Halton, Aylesbury, UK).

Metronidazole Release from a Liniment Gelifying in Gingival Crevice. P. MAJERUS*, D. FANARA, M. DELEERS, P. GROGNET, and M. POURTOIS (Université Libre de Bruxelles, Brussels, Belgium).

Effect of Metronidazole Gel in Untreated Advanced Adult Periodontitis. A. NIEMINEN*, B. von TROIL-LINDÉN, H. LARJAVA, and S. ASIKAINEN (University of Helsinki, Finland; and University of British Columbia, Vancouver, Canada).
0899  Local Metronidazole Application Combined with Scaling and Root Planing. J. ZHANG* (College of Stomatology, West China University of Medical Sciences, Chengdu, Sichuan, China).

0900  Combination of Systemic and Topical Use of Antibiotics in RPP Patients. Clinical Results. T. HOFFMANN*, G. PLEIER, and E. GRUHSER (Department of Periodontology, Medical Faculty of Technical University of Dresden, Germany).

0901  Combination of Systemic and Topical Use of Antibiotics and RPP Patients. Paraclinical Results. G. PLEIER*, E. GRUHSER, and T. HOFFMANN (Department of Periodontology, Medical Faculty of Technical University of Dresden, Germany).

0902  Predominant Doxycycline-resistance Bacteria Associated with Adult Periodontitis. C. WALKER, J. LENNON*, S. NANGÓ, J. THOMAS, and L. BORDEN (University of Florida-PDRC, Gainesville; West Virginia University, Morgantown; and Hill Top Research, West Palm Beach, FL, USA).


0904  Complex Treatment of Patients with Advanced Periodontitis. M. CHOMYSZYN-GAJEWSKA* (Collegium Medicum, Jagiellonian University, Cracow, Poland).


0906  In vitro Bacterial Growth Inhibition around Scaled and Planed Roots. L. LIIMA*, M.R. SILVA, A.C. BOMBANA, G. ROMITO, F.E. PUSTIGLIONI, and J.H. TODESCAN (University of São Paulo, Brazil).

0907  Tetracycline Fibers and Nifedipine-induced Gingival Overgrowth. Pilot Study. D. SAKELLARI*, E. ARISTODIMOU, I. VOUROS, T. HATZIPANTELIS, and A. KONSTANTINIDIS (Department of Periodontology, University of Thessaloniki, Greece).

0908  Repeated Subgingival Minocycline and Periodontitis. H.N. NEWMAN*, M. WILSON, J. MATTHEWS, D. van STEENBERGHE, R.G. LANDRY, B. ROSLING, P.-Ö. SÖDER, and U. VAN DER VELDEN (EDI, London, UK; University of Leuven, Belgium; Laval University, Montreal, PQ, Canada; University of Gothenburg, Sweden; University of Stockholm, Sweden; and ACTA, Amsterdam, The Netherlands).

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Poster Session, Exhibit Hall

Periodontal Research - Therapy - Root Conditioning, Varnishes


0910  Root Surface Potential for Clot Adhesion after Tetracycline-Hydrochloride Conditioning. R.F. GERLACH*, F.M.C. DELAZARI, J.C. JOLY, and A.F.M. LIIMA (Dental School of Piracicaba, The University of Campinas, Brazil).

0911  Effects of Conditioning to Adherence of Porphyromonas gingivalis on Root Surfaces. A. KUMA*, M. TANAKA, R. OSADA, K. KOBYASHI, T. NOMURA, and T. ARAI (Tsurumi University School of Dental Medicine, Yokohama, Japan).

0912  Inflammatory Response to Dental Root after Scaling and Tetracycline Treatment. F.A.S. SARTORATO and E. SABA-CHUJFI* (Camilo Castelo Branco University, São Paulo, Brazil).

Effectiveness of Cervitec® and FluorProtector® in Patients with Dentin Hypersensitivity. A. RUDHART*, E. ROMPOLA, W. HOPFENMÜLLER, and J.-P. BERNIMOULIN (Department of Periodontology, Humboldt University, Charité, Berlin, Germany).


Thermal Probe Evaluation of Sensitive and Non-sensitive Teeth. G.J. SMART, M. RICHES, K. YOUNG*, D.G. GILLAM, J.S. BULMAN, and H.N. NEWMAN (Eastman Dental Institute, University of London; and RAF Halton, UK).

Post-op Effects of Children Undergoing General Anesthesia and I.V. Sedation. O. LOWE* (Whittier, CA, USA).

Comparison of Different Techniques in Mentally Retarded Dental Patients. C.S. LO*, Y.T. YANG, and Y.C. LIN (Department of Pediatric Dentistry, Chung-Shan Medical & Dental College, Taichung, Taiwan).

Cardiovascular Changes Induced by Propofol Used for Induction of Anesthesia. K. TAKANO*, I. NOGUCHI, M. SASAO, and Y. AMEMIYA (Tsurumi University, Yokohama, Japan).

CSF Dynamics during Lidocaine-induced Seizures in Rabbits. Y. MOMOTA*, A.A. ARTRU, J. KOTANI, and Y. UEDA (Department of Anesthesiology, Osaka Dental University, Japan; and University of Washington, School of Medicine, Seattle, USA).

Alterations in the Catecholamine Turnover Rate in Specific Regions of Rat Brain Following Acute Exposure to Nitrous Oxide. G. KUGEL*, A. KARURI, and M.S.A. KUMAR (School of Veterinary Medicine, Tufts University, Grafton; and Tufts University School of Dental Medicine, Boston, MA, USA).


Systemic Corticosteroid in the Treatment of Oral Vesiculoerosive Diseases. M. CARBONE*, S. CASTELLANO, M. CARROZZO, and S. GANDOLFO (Department of Oral Medicine, School of Dentistry, University of Turin, Italy).


CMT-3, a Non-antimicrobial Tetracycline (TC), Inhibits MT1-MMP Activity: Relevance to Cancer. H.M. LEE*, L.M. GOLUB, C. CAO, T. SORSÄ, O. TERONEN, M. LAITINEN, T. SALO, and S. ZUCKER (SUNY, Stony Brook; VA Hospital, USA; and University of Helsinki, Finland).

0928 Possibility of bFGF Secretion from Human Gingival Fibroblasts. H. MATSUMOTO*, Y. AKIMOTO, and A. FUJII (Nihon University School of Dentistry at Matsudo, Chiba, Japan).

0929 Hydraulic Conductance in vitro of Human Dentin after Application of Tartrate Solutions. R. MONGIORGI, C. PRATI, S. CHERSONI, M.L. TEDALDI*, and A. LUCCHESI (University of Bologna, and Department of Pedodontics, University Sacro Cuore, Rome, Italy).

0930 Use of “Pala-nate” in Prevention of Palatal Grooves in Premature Infants. S. FADAVI*, I.C. PUNWANI, and D. VIDYASAGAR (University of Illinois at Chicago, USA).

0931 Penetration Resistance of Disposable Gloves Exposed to (Di)methacrylate-based Dental Materials. E. OESTERGAARD* and D. ARENHOLT-BINDSLEV (Faculty of Health Sciences, Dental School, University of Aarhus, Denmark).

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Poster Session, Exhibit Hall  
Neuroscience/TMJ - Orofacial Disorders: Evaluation and Treatment

0932 The MMPI,2 in the Evaluation of Patients with Craniofacial Pain. C. NEGRO*, F. IBERTIS, and F. MONGINI (Unit for Headache and Facial Pain, Turin University, Italy).

0933 Awareness of TMD and Subjective Treatment Need. Y. LE BELL*, P. ALANEN, M. KUTTILA, and S. KUTTILA (Institute of Dentistry, University of Turku, Finland).

0934 Video as a Cognitive Technique to Reduce Pain Intensity and Unpleasantness. B. BENTSEN*, P. SVENSSON, and A. WENZEL (Department of Oral Radiology and Department of Prosthetic Dentistry and Stomatognathic Physiology, Royal Dental College, University of Aarhus; and Center for Sensory-Motor Interaction, University of Aalborg, Denmark).

0935 Comparison of Treatment Outcomes for TMJ Disk Displacement without Reduction. H. MINAKUCHI*, W. SONOYAMA, M. KAMISAKA, H. FUKUDA, K. MAEKAWA, Y. MATSUKA, T. KUBOKI, H. YATANI, and A. YAMASHITA (Okayama University Dental School, Japan).


0937 Inclination of the Occlusal Plane of TMD Patients in Frontal View. H. AKIYAMA*, H. SHIGA, and Y. KOBAYASHI (The Nippon Dental University, Tokyo, Japan).

0938 Relationship between Dental Occlusion and Visual Focusing. R. SHARIFI MILANI*, D. DEVILLE de PERIERE, and L. POURREYRON (Laboratory of Physiology, University of Odontology, Montpellier, France).

0939 Combinations of Occlusal Factors Differentiating Patients with Temporomandibular Disorders. M. JOHN*, A. ZWIJNENBURG, T. REIBER, and J. HAERTING (Department of Prosthodontics and Department of Epidemiology, University Halle; and Department of Prosthodontics, University Leipzig, Germany).

0940 The McGill Pain Questionnaire in Patients with Different Types of Headache and Facial Pain. F. IBERTIS*, C. NEGRO, and F. MONGINI (Unit for Headache and Facial Pain, Department of Pathophysiology, University of Turin, Italy).

0942  Effects of Low-level Laser Therapy in Facial Muscular Pain. B. WENNEBERG* and A. WENNEBERG (Department of Stomatognathic Physiology, Faculty of Odontology, Göteborg, Sweden).


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Poster Session, Exhibit Hall  
Neuroscience/TMJ - Experimental Neuroscience

0944  Effect of Orthodontic Tooth Re-alignments on Responses from Periodontal Mechanoreceptors. Y. NODERA*, T. KAMADA, T. IMAI, T. AKAIKE, and S. NAKAMURA (Department of Orthodontics and Department of Oral Physiology, School of Dentistry, Hokkaido University, Sapporo, Japan).

0945  Increase of Galanin in the Periodontal Ligament during Experimental Tooth Movement. T. DEGUCHI*, Y. FUJIYOSHI, and T. TAKANO-YAMAMOTO (Department of Orthodontics, Okayama University School of Dentistry, Japan).

0946  Neurotrophin and Glial Cell-line-derived Neurotrophic Factor mRNAs are Expressed in Developing Human Teeth. C.A. NOSRAT*, I.V. NOSRAT, A. SEIGER, and L. OLSON (Departments of Neuroscience and Clinical Neuroscience, and Family Medicine, Karolinska Institute, Stockholm, Sweden).

0947  Functional Coupling between Odontoblasts and Nerves in the Cat? J. USHIYAMA*, S. WANACHANTARARAK, F. LI, and B. MATTHEWS (Department of Physiology, University of Bristol, UK).

0948  A Novel Method to Assess Orofacial Pain in the Rat. E. ELIAV*, U. HERZBERG, R. GRACELY, R. BENOLIEL, R. CAUDLE, O. NAHLIELI, and D. KENSHALO (NAB/NIDR/NIH, Bethesda, MD, USA; Oral Medicine Service, Maxillofacial Surgery Department, Barzilai Medical Center, Ashkelon; and Oral Diagnosis Department, Hadassah School of Dental Medicine, Jerusalem, Israel).

0949  Increased Striatal Dopamine Synthesis after Acute Tail Pinch in Rats. F. GOMEZ, M.T. GIRALT*, M. PRIETO, B. SAINZ, and C. INFANTE (Departments of Stomatology and Pharmacology, Faculty of Medicine and Odontology, University of the Basque Country, Bilbao, Spain).

0950  Non-functional Masticatory Activity Attenuates Striatal Dopaminergic Turnover Induced by Tail Pinch. F. GOMEZ*, M.T. GIRALT, A. ARRUE, B. SAINZ, and C. INFANTE (Department of Stomatology and Pharmacology, Faculty of Medicine and Odontology, University of the Basque Country, Spain).

0951  Clonidine-induced Inhibition of Jaw-opening Reflex Remains Unchanged after DSP-4 Treatment. P. GARCIA-VALLEJO*, C. INFANTE, F. GOMEZ, M.T. GIRALT, and A. ARRUE (Department of Stomatology and Pharmacology, Faculty of Medicine and Odontology, University of the Basque Country, Bilbao, Spain).

0952  Addictive Qualities of Nicotine are Mediated by Central Dopaminergic Activity. T.E. MADDEN* and S.W. JOHNSON (Oregon Health Sciences University, Portland, USA).

0953  Lack of Orotopic Reorganization in the Adult NST Following Neonatal Chorda Tympani Transection. M.E. DINKINS*, I. BERNSTEIN, M. ROITMAN, and S.P. TRAVERS (The Ohio State University, Columbus, USA).

0954  Relationship between Inspiratory and NMDA-induced Sucking-like Activities in Isolated Brainstem from Rats. N. KATAKURA*, M. NAKAJIMA, and Y. NAKAMURA (Tokyo Medical and Dental University, Japan).
0955  Comparison of Extraction Methods for Neuropeptides from Oral and Peri-oral Tissues. N. SINANAN*, F.T. LUNDY, and P.-J. LAMEY (School of Clinical Dentistry, Queen’s University of Belfast, Northern Ireland, Northern Ireland).

Seq#: 88  Thursday, June 25, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall
Experimental Pathology - Carcinoma Cell Culture

0956  Effects of Scatter Factor on E-cadherin and Catenin Expression in Oral Squamous Cell Carcinoma Cell Lines. J. FURNESS* and P.M. SPEIGHT (Department of Oral Pathology, Eastman Dental Institute, University College London, UK).

0957  The Effect of Scatter Factor on the Epithelial Adhesion Complex in Organotypic Culture. S. POOMSAWAT*, J. FURNESS, D. HUDSON, and P.M. SPEIGHT (Eastman Dental Institute, University College London, UK).

0958  Studies on Methyl Methacrylate Carcinogenicity in Hamster Cheek Pouch. F.-M. HUANG*, Y.-C. CHANG, T. CHIANG, and M.-Y. CHOU (School of Dentistry, Chung Shan Medical & Dental College, Taichung, Taiwan).

0959  Fibronectin and avb6 Mediate Oral Squamous Cell Carcinoma Cell Motility. H. LIU*, B.L. CHEN, and D.M. RAMOS (School of Dentistry, Chung Shan Medical University, China; and University of California, San Francisco, USA).

0960  Mechanism of Natural Killer Cell Functional Inactivation against Oral Cancer. A. JEWETT*, S. BERG, and D.V. MESSADI (Dental Research Institute, School of Dentistry, UCLA, USA).


0963  Cell Surface Carbohydrates in Organotypic Cultures of Oral Mucosa and Skin. B. GRØN*, S. DABELSTEEN, and E. DABELSTEEN (Dental School, University of Copenhagen, Denmark).

0964  Pathobiological Effects of Arecoline on Human Oral Mucosa Fibroblasts. M.-Y. CHOU*, Y.-C. CHANG, K.-W. TÁI, and S.-S. LIN (School of Dentistry, Chung Shan Medical & Dental College, Taichung, Taiwan).

0965  Induction of Heat Shock Protein Expression by Repeated Alkaline Exposure in Organotypic Cell Culture. M. MERNE* and S. SYRJÄNEN (Department of Oral Pathology, Institute of Dentistry, Faculty of Medicine, University of Turku, Finland).

0966  Hsp47 and ER Chaperones in Hereditary Gingival Fibromatosis. L.R. FERREIRA*, R.D. COLLETA, O.P. ALMEID, H. MARTELLI, and J.J. SAUK (University of Campinas-UNICAMP, Brazil; and University of Maryland, Baltimore, USA).

0967  The Role of b-Carotene in Oral Epithelial Oxidative DNA Damage. A. MARQUARDSON*, S. EWASKOW, S. LEE, and D. ODA (University of Washington and Fred Hutchinson Cancer Research Center, Seattle, USA).

0968  Interaction of Cyclosporin (CsA) and Nifedipine (Nif) Induces Gingival Overgrowth in Rats (Morphometric and Stereometric Analysis). L.C. SPOLIDORIO*, D.M.P. SPOLIDORIO, M.R.B. OLIVEIRA, and C.B. NETO (FO Araraquara, UNESP, Brazil).
Monoclonal Antibodies against Human NK Cells. K. UOBE*, N. SASAKI, Y. FUKASE, K. KAWAHARA, K. MASUNO, L.J. LI, Y.M. WEN, and A. TANAKA (Osaka Dental University, Japan; and Western China University of Medical Sciences, China).
0982 Cranial Base Shape Changes Using Fourier Descriptors: A Longitudinal Twin Study. P.E. LESTREL* and R.G. STEVENSON (Sections of Oral Biology and Restorative Dentistry, UCLA School of Dentistry, Los Angeles, CA, USA).

0983 Longitudinal Maxillary Shape Changes in MZ and DZ Twins: Fourier Descriptors. C.B. TOROK*, P.E. LESTREL, and D.S. TANIHARA (Section of Oral Biology, UCLA School of Dentistry, Los Angeles, CA, USA).

0984 Expression of Carabelli Trait in Both Dentitions of Australian Twins. S. PINKERTON, G. TOWNSEND, L. RICHARDS*, W. SCHWERDT, and P. DEMPSEY (Department of Dentistry, University of Adelaide, Australia).

0985 Post-natal Craniofacial and Body Weight Change in MZ Twin Mice. Y. WATANABE*, K. NONAKA, and M. NAKATA (Department of Pediatric Dentistry, Kyushu University Faculty of Dentistry, Fukuoka, Japan).

0986 Post-surgical Scar Tissue Distribution in Isolated Cleft Palates. H. ISHIKAWA*, H. IWASAKI, S. NAKAMURA, S. YOSHIDA, and H. FUKUDA (School of Dentistry, Hokkaido University, Sapporo, Japan).

0987 Comparison of Muscle Activity between Skeletal Class III and Normal Occlusion. S. OMICHI*, S. INUZUKA, K. YOROZU, and S. HIOKI (School of Dentistry, Department of Orthodontics, Asahi University, Japan).

0988 Bond Strengths of Two Resin-reinforced Glass-ionomer Orthodontic Cements. S.M. COHEN*, R. MARULLI, R. BINDER, and T.K. VAIDYANATHAN (UMDNJ-New Jersey Dental School, Newark, USA).

0989 Cleft Palate Maxillary Shape Changes: Fourier Descriptors. O. TAKAHASHI*, P.E. LESTREL, and S. BERKOWITZ (UCLA, Los Angeles, CA, USA; Nihon University (Matsudo) Schools of Dentistry, Japan; and University of Miami School of Medicine, FL, USA).


0991 Effects of Debanding on Patients’ Perceptions after Orthognathic Surgery. M.M. WIEBER*, J.P. HATCH, B.A. SCOTT, S.M. RIVERA, and J.D. RUGH (The University of Texas Health Science Center, San Antonio, USA).


0993 Adverse Effects on Dental and Mandibular Development after Anti-leukemic Therapy. E.A. HOLTGRAVE*, F. HEINZE, and G. HENZE (Universität Klinikum Benjamin Franklin, Freie Universität Berlin, Germany).

0994 Esthetic and Functional Evaluation of Stellate-ganglion Block in Bell’s Palsy. Y.R. FANG*, Y. UEDA, F. SUWA, C.S. TANG, and K.L. YU (Department of Anesthesia, Department of Anatomy, Osaka Dental University, Japan; and Department of Anesthesia, Kaohsiung Medical College, Taiwan).

0995 Clinicopathological Study of Ameloblastomas of the Jaws. Y. KAMEYAMA*, H. MAEDA, Y. SUZUMURA, H. TANÅKA, S. KONISHI, and E. SATO (School of Dentistry, Aichi-Gakuin University, Nagoya, Japan).
0996 Research on the Correlation among Seven Cephalometric Indices for Evaluation of the Maxillomandibular Sagittal Relationship. L. WANG* (Dental School, Nanjing Medical University, PRC).

0997 Inferring Landmark Displacements from Changes in Cephalometric Angles. T.-M. XU*, S. BAUMRIND, and J. GHAFARI (Beijing Medical University, China; University of the Pacific, San Francisco, CA; University of Medicine and Dentistry of New Jersey; and University of Pennsylvania, USA).

0998 Palatally Impacted Canine within Three First-degree Relatives Indicated Genetic Control. E. SAVOLDI*, L. VISCONTI, M.G. MARINONE, and S. SALGARELLO (Dental School, University of Brescia, Italy).

0999 Effects of Different Orthodontic Treatment Modalities on Third Molar Occlusion. C. GOSSETT*, P.K. SINHA, and J. GHOSH (University of Oklahoma, Oklahoma City, USA).

1000 Patient Characteristics Predictive of Maxillary Canine Impactions. B.J. BOREN*, P.K. SINHA, and R.S. NANDA (College of Dentistry, University of Oklahoma, Oklahoma City, USA).


1002 Effects of Bite-opening on the Functional Properties and Contractile Proteins in Rat Masseter Muscle. K. KAWASAKI*, A. YAMANE, Y. SAEKI, Y. OHNUKI, K. YANAGISAWA, and Y. KUWAHARA (Tsurumi University School of Dental Medicine, Yokohama, Japan).

1003 Chronic Local Administration of PTH Accelerates Orthodontic Tooth Movement. S. SOMA*, M. IWAMOTO, S. MATSUMOTO, Y. HIGUCHI, and K. KURISU (Department of Orthodontics and Department of Oral Anatomy and Developmental Biology, Osaka University; and Chugai Pharmaceutical Co., Tokyo, Japan).

1004 In vivo Measurement of Center of Rotation of the Tooth. N. YOSHIDA*, P.-G. JOST-BRINKMANN, Y. KOGA, R. ABE, and K. KOBAYASHI (Nagasaki University, Japan; and Humboldt University of Berlin, Germany).

1005 Outcome and Long-term Stability of Orthodontic Treatment. A. GALE*, P. KILPELÄINEN, I.-L. NOTKOLA, P. UTRIAINE, and H. KEROSUO (University of Kuopio; Health Center of Seinäjoki; and University of Helsinki, Finland).

1006 Prevalence and Characteristics of Anterior Crowding in the Primary Dentition. V.M. SOVIERO*, E.P.S. BASTOS, I.P.R. SOUZA, and F.V.G. ABREU (School of Dentistry, UFRJ/UNIG, Rio de Janeiro, Brazil).

1007 Evaluation of the Overjet Relapse: The Influence of Orthodontic Treatment. V.C.V. SIQUEIRA* and M.R. FREITAS (Faculdade de Odontologia de Piracicaba UNICAMP; and FOB-USP, Brazil).

1008 Influence of Breast Feeding on Maxillary Growth in Venezuelan Indian Children. M.E. GUERRA* and C. MUJICA (Departments of Pediatric and Sanitary Dentistry, Universidad Central de Venezuela, Caracas).


1010 The Curve of Spee in Japanese Normal Occlusions. K. ARAI, M. KOBAYASHI*, S. UZUKA, C. NAKAGAWA, and H. ISHIKAWA (Department of Orthodontics, Nippon Dental University, Tokyo, Japan).
Craniofacial Biology - Craniofacial Anatomy and Function

1011  Effects of Expanding Midpalatal Suture on Strain of Craniofacial Bones. R. KAPUR*, M. TASSICK, R.A. COOPER, M.P. MOONEY, and J.J. MAO (Departments of Orthodontics and Dentofacial Orthopedics, Human Engineering, and Anatomy, University of Pittsburgh, PA, USA).

1012  Stereo-structural Studies on the Lingual Papillae of the Koala. K. KOBAYASHI*, M. KUMAKURA, K. YOSHIMURA, and M. HENNEBERG (Department of Anatomy, The Nippon Dental University at Niigata, Japan; and Department of Anatomy and Histology, The University of Adelaide, Australia).

1013  Three-dimensional Reconstruction of Innervation in the Rat Lingual Papillae. K. YOSHIMURA*, M. KUMAKURA, and K. KOBAYASHI (Department of Anatomy, The Nippon Dental University at Niigata, Japan).

1014  Cranial Base Morphology in Adults with Class III Malocclusion. H.-P. CHANG* (Department of Orthodontics, School of Dentistry, and Graduate Institute of Dental Science, Kaohsiung Medical College, Taiwan).


1017  Proportional Differences in the Adolescent Profile between Two Ethnic Groups. D.K. GORDON*, M.T. LAINE-ALAVA, E.P. HICKS, and C.L. WOOD (Orthodontic Graduate Program, University of Kentucky, Lexington, USA).

1018  A Follow-up of Nasal Airway Size from 8 to 12 Years of Age. U.K. MINKKINEN*, M.T. LAINE-ALAVA, and D.W. WARREN (Department of Physiology and Orthodontics Graduate Program, University of Kentucky, Lexington; and UNC Craniofacial Center, University of North Carolina, Chapel Hill, USA).

1019  Effect of Nasal Obstruction on Relationship between Mastication and Respiration. N. SAKAGUCHI*, I. OOTA, M. ASAKA, M. SUGAWARA, S. IGARASHI, and K. INOMATA (Department of Pediatric Dentistry and Department of Oral Physiology, Health Sciences University of Hokkaido, Japan).

1020  Mandibular Posture during Sleep in Patients with Obstructive Sleep Apnea. K. MIYAMOTO*, M.M. ÖZBEK, A.A. LOWE, T.T. SJÖHOLM, L.L. LOVE, J.A. FLEETHAM, and C.F. RYAN (Hiroshima University, Japan; and University of British Columbia, Vancouver, Canada).

1021  Relationship between Bucco-lingual Inclination and Attrition Rate of Mandibular Teeth. K. KASAI*, E. KANAZAWA, A. KAWAMURA, and L. RICHARDS (Nihon University School of Dentistry at Matsudo, Japan; and University of Adelaide, Australia).

1022  Difference in Reactions of Lips between Maxillary and Bimaxillary Protrusion. I. SAITO*, I. KAWAHARA, K. WATANABE, and K. HANADA (Department of Orthodontics, Niigata University, Japan).

1023  Contribution to the Anatomical Study of the Carotico-Tympanic Arteries. J.C. ANDREO*, J.A.C. NAVARRO, J.L. TOLEDO, Jr., and J.C. ARAUJO (Bauru Dental School, University of São Paulo; and State University of Londrina, Brazil).
Quantification of Profiles of Young Australian Twins. K. TANGCHAITRONG, D. THOMAS, L.B. MESSER*, and G. TOWNSEND (School of Dental Science, University of Melbourne; and School of Dentistry, University of Adelaide, Australia).

Using Multilevel Statistics to Assess Variation in Cranial Material Properties. J. PETERSON* and P.C. DECHOW (Baylor College of Dentistry, Texas A&M University System, Dallas, USA).

Immunohistochemical Study of a2-macroglobulin in Rabbit with Unilateral Masticatory Function. R. DELI*, F. PANTANALI, C. GRIPPAUDO, L. FUMAGALLI, and G. DE RENZIS (Dental Department, Catholic University; Department of Cardiovascular Science, University “La Sapienza”; and Department of Human Anatomy, Catholic University, Rome, Italy).

Surgical Anatomy of Pterygoid Hamulus and Palatine Muscles. R.L. NAVARRO*, J.A.C. NAVARRO, and J.C. ANDREO (Bauru Dental School, University of São Paulo, Brazil).

### Workshop, Gallieni 2 Room
Microbiology/Immunology and Nutritional Groups - Oral Anaerobes - Collecting, Culturing, Identifying

**Chairperson:** J. Hefferren

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<th>Time</th>
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<tr>
<td>2:15</td>
<td><strong>Opening Comments.</strong></td>
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<tr>
<td>2:20</td>
<td>What Characterizes an Obligate Anaerobe? M.E. GOLDSCHMIDT (University of Texas Health Science Center, Houston, TX, USA).</td>
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<tr>
<td>2:35</td>
<td>Collection and Culture of Anaerobes. M. COX (Anaerobe Systems, San Jose, CA, USA).</td>
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<td>3:00</td>
<td>Identification and Susceptibility Methods. J. MANGELS (VA Medical Center, Palo Alto, CA, USA).</td>
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<td>3:50</td>
<td><strong>Break</strong></td>
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<td>4:05</td>
<td>Anatomical and Metabolic Characteristics of Microbial Pathogens. H. JOUSIMIES-SOMER (National Public Health Institute, Helsinki, Finland).</td>
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### Symposium, Hermes Room
Continental European Division - Antimicrobial Agents Used in Periodontal Therapy: Evidence-based Efficacy [Supported by Procter & Gamble]

**Chairpersons:** M. Sanz and D. Kinane

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<tr>
<td>2:15</td>
<td><strong>Opening Comments.</strong></td>
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<td>3:30</td>
<td>Antimicrobial Agents in the Prevention and Treatment of Gingivitis: Other Formulations, Indications, and Clinical Studies. M. BRECX (Centre Dentaire, Brussels, Belgium).</td>
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</tbody>
</table>
4:05 Antimicrobial Agents Used in the Treatment of Periodontitis: Local Delivery Formulations, Indications, and Clinical Studies. D. KINANE (University of Glasgow, Scotland).

4:40 Discussion.

Seq#: 95 Thursday, June 25, 2:15 pm - 5:00 pm
Symposium, Mobile 10 Room

Behavioral Sciences & Health Services Research and Experimental Pathology Groups - Impact of International Collaborative Studies on Future Oral Health [Supported by Procter & Gamble-Dental Products, Europe]

(WHO and NIDR logos)

Chairpersons: L. Cohen and P. Colombet

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<tr>
<td>2:15</td>
<td>Opening Comments.</td>
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<td>2:45</td>
<td>The Importance of Quality of Life Measurement to Improved Oral Health. M.-S. CHEN (University of Chicago, IL, USA).</td>
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<td>4:15</td>
<td>Assessment of Oral Care Systems in Developing Countries: Validation and Testing. H. TAPSOBA (Ecole de Santé Publique de Nancy, France).</td>
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<td>4:45</td>
<td>Discussion.</td>
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Seq#: 96 Thursday, June 25, 2:15 pm - 5:00 pm
Symposium, Athena Room

Continental European Division - Glass Ionomers and their Modifications [Supported by GC International, Japan, and ESPE, Germany]

Chairpersons: C.L. Davidson and M.Y. Degrange

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<tr>
<td>2:15</td>
<td>Opening Comments.</td>
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<tr>
<td>2:25</td>
<td>Composition and Structure. H. SCHUH (ESPE, Seefeld, Germany).</td>
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<td>2:50</td>
<td>Structural Integrity and Mechanical Properties. A. DE GEE (ACTA, Amsterdam, The Netherlands).</td>
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<tr>
<td>3:15</td>
<td>Mechanisms of Bonding to Dental Hard Tissues. T.F. WATSON (Guy’s Hospital, London, UK).</td>
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<td>3:40</td>
<td>Clinical Handling of Glass Ionomers. M. FERRARI (Research Center for Dentistry, Livorno, Italy).</td>
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<tr>
<td>4:05</td>
<td>Clinical Results with Glass Ionomers, Hybrid Ionomers, and Compomers. R. HICKEL (Ludwig Maximilians University, Munich, Germany).</td>
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<tr>
<td>4:40</td>
<td>Discussion.</td>
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Craniofacial Biology - PDL Cells, Fibroblasts, Osteoblasts, Chondroblasts, and Hormones

Chairpersons: R.A. Murdock and O. Tuncay


1034 2:45  Differential Response of the Mandibular Condylar Cartilage to PTHrP Deficiency. N. SUDA*, S. SHIBATA, K. YAMAZAKI, T. KURODA, V. HAMMOND, P. SENIOR, and F. BECK (Tokyo Medical and Dental University, Japan; and Howard Florey Institute of Experimental Physiology and Medicine, Melbourne, Australia).

1035 3:00  Angiogenic Growth Factors in Human Pulp Following Orthodontic Tooth Movement. K.A. DERRINGER* and R.W.A. LINDEN (King’s College, London, UK).

1036 3:15  Gene Expression in Osteoblasts and Gingival Fibroblasts Subjected to Ultrasound Perturbation. O. TUNCAY*, A. HUSAIN, B. VINSON, Q. HAMID, and D. TEWARI (Department of Orthodontics, Temple University, Philadelphia, PA, USA).

1037 3:30  Detection of S100A4 mRNA and Protein in the Periodontal Ligament. W.R. DUARTE*, S. KASUGAI, T. IIMURA, S. OIDA, K. OHYA, and I. ISHIKAWA (Departments of Periodontology, Pharmacology, Developmental Biology, and Biochemistry, Faculty of Dentistry, Tokyo Medical and Dental University; and Chiba Cancer Center Research Institute, Japan).

1038 3:45  Short Stature of Prenatal Origin: Craniofacial Growth and Dental Maturation. R. VAN ERUM*, G. MULIER, C. CARELS, and F. de ZEGHER (Department of Orthodontics and Pediatrics, Catholic University of Leuven, Belgium).

1039 4:00  Testosterone Replacement Changing Craniofacial Growth in Neonatally Castrated Rats. A. VERDONCK*, L. DE RIDDER, E. KÜHN, V. DARRAS, C. CARRELS, and F. de ZEGHER (Department of Orthodontics and Biology, Catholic University of Leuven, Belgium).


1041 4:30  Deficiency of Phagocytosis by Cultured Fibroblasts from Oral Submucous Fibrosis Tissues. C.C. TSAI*, R.H. MA, and T.Y. SHIEH (School of Dentistry, Kaohsiung Medical College, Taiwan).

2:15 Effect of Investment Temperature on Biaxial Flexural Strength of Castable Glass Ceramics. A. JOHNSON*, M.Y. SHAREEF, J.M. WALSH, P.V. HATTON, and R. VAN NOORT (Department of Restorative Dentistry, University of Sheffield, UK).

2:30 The Effect of Operator Factors on the Castability of Canasite Glass Ceramic. G. CANNAVINA*, A. JOHNSON, R. VAN NOORT, and M. HAYS (Department of Restorative Dentistry, University of Sheffield, UK).

2:45 High Reliable Zirconia Bridges by Direct Ceramic Machining Process (DCM). H. LÜTHY*, F. FILSER, L. GAUCKLER, and P. SCHÄRER (University of Zürich; and Swiss Federal Institute of Technology, Zürich, Switzerland).

3:00 All-ceramic Restorations by New Direct Ceramic Machining Process (DCM). F. FILSER*, H. LÜTHY, P. SCHÄRER, and L. GAUCKLER (Swiss Federal Institute of Technology, Zürich; and University of Zürich, Switzerland).


3:30 The Influence of Substrates and Cement on the Color of Full-ceramic Restorations. A. VICHI*, M. FERRARI, and C.L. DAVIDSON (University of Siena, Italy; and ACTA, University of Amsterdam, The Netherlands).

3:45 Influence of Alumina Content on the Viscosity of Heat-pressed Glass-Ceramics. C. GORMAN* and R.G. HILL (School of Dental Science, Trinity College, Dublin; and Department of Materials Science, University of Limerick, Ireland).

4:00 The Role of Fluorine in Ionomer Glass-Ceramics. K. STANTON* and R.G. HILL (University of Limerick, Ireland).


4:45 Discussion
3:00 Characterization of Denture Soft Lining Material based upon Butyl Elastomers/Methacrylate Monomer Formulations. S.N. NAZHAT*, S. PARKER, P. RIGGS, and M. BRADEN (IRC in Biomedical Materials, QMW, University of London, UK).

3:15 The Optimal Configuration of Thermoplastic Copolymer for Sports Mouthguard Construction. Y.R. BULSARA* and I.R. MATTHEW (School of Clinical Dentistry, University of Sheffield; School of Dentistry, University of Birmingham, St. Chad's Queensway, UK).

3:30 Microwave Silicone Polymerization in Maxillofacial Rehabilitation. Tensile Strength Analysis. H. HERNANDEZ*, M. SAAVEDRA, and F. BARCELO (Dental Materials Lab., Division de Investigación, Fac. de Odontología, UNAM, México).

3:45 Effect of Water Storage on the Flexural Properties of E-glass and Silica Fiber Acrylic Resin Composite. P.K. VALLITTU*, I.E. RUYTER, and K. EKSTRAND (Institute of Dentistry and Biomaterials Project, University of Turku, Finland; NIOM-Scandinavian Institute of Dental Materials, Haslum, Norway; and Uppsala County Council, Department of Prosthodontics, Sweden).

4:00 Mechanical Properties of Three Materials Indicated for Alginate-type Impressions. P.G. DORAY*, R. DOSCH, D. VAUGHN, and J.M. POWERS (Houston Dental Branch, University of Texas, USA).

4:15 Properties of DCP Condensation Silicone Impression Material. G.A. ALIAN* and J.M. POWERS (Faculty of Dentistry, Ain Shams University, Cairo, Egypt; and University of Texas, Houston Health Science Center, USA).

4:30 Properties of Elastomeric Impression Materials Using Automix Technique. M. WILDENHAIN*, P. POSPIECH, P. RAMMELSBERG, and W. GERNET (Department of Prosthodontics, University of Munich, Germany).

4:45 Discussion

**Dental Materials - Dental Alloys**

Chairpersons: J. von Fraunhofer and R. Mitchell

2:15 Mercury Release during Setting and after Abrasion of In-containing Amalgams. J.L. FERRACANE*, J. ADEY, K. WILT BANK, H. NAKAJIMA, and T. OKABE (Oregon Health Sciences University, Portland, USA; Meikai University of Saitama, Japan; and Baylor College of Dentistry, Dallas, TX, USA).


2:45 Passivation of Dental Amalgams and the Effect on Mercury Release. L. JOSKA* and M. MAREK (Institute of Chemical Technology, Prague, Czech Republic; and Georgia Institute of Technology, Atlanta, USA).

3:00 Effect of Bonding Agents on the Corrosion of Dental Amalgam. J.A. von FRAUNHOFER*, S.C. SIEGEL, S. FELDMAN, and V.P. THOMPSON (Dental School, University of Maryland, Baltimore, USA).

3:15 Strain Rate and Crack Paths in High-copper Amalgams. R.J. MITCHELL* and A.R. CLARK (University of Kentucky College of Dentistry, Lexington, USA).
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<tr>
<td>3:30</td>
<td>Determination of Gold Released from Dental Alloys in Saliva.</td>
<td>L. BJÖRKMAN*, J. EKSTRAND, and B. LIND (Department of Dental Toxicology and Institute of</td>
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<td>Environmental Medicine, Karolinska Institutet, Stockholm, Sweden).</td>
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<td>4:00</td>
<td>Surface Degradation of Ga Alloys during Toothbrushing in vitro.</td>
<td>J. GEISGERSTORFER* and S.-H. LEE (University of Tübingen, Germany; and Kyung Hee University</td>
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<td>of Seoul, Korea).</td>
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<td>4:15</td>
<td>Electrochemistry of Sulfide Tarnishing of Dental Alloys.</td>
<td>M. MAREK* and N. HORASAWA (Georgia Institute of Technology, Atlanta, USA; and Matsumoto</td>
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<td>Dental College, Shiojiri, Japan).</td>
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<tr>
<td>4:30</td>
<td>Electrochemical Test of Susceptibility of Dental Alloys to Sulfide</td>
<td>N. HORASAWA*, S. TAKAHASHI, and M. MAREK (Matsumoto Dental College, Shiojiri, Japan; and</td>
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<td>Tarnishing.</td>
<td>Georgia Institute of Technology, Atlanta, USA).</td>
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<td>4:45</td>
<td>Discussion</td>
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**Diagnostic Systems - Laser, Mechanical, and Flowmetry Systems**

**Chairpersons:** C. Longbottom and D.R. Willmot

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<th>Time</th>
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<tr>
<td>2:15</td>
<td>Quantitative Measurement by Image Analysis of White Enamel Demineralization.</td>
<td>D.R. WILLMOT* and P.E. BENSON (University of Sheffield and University of Liverpool, UK).</td>
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<td>2:30</td>
<td>In vitro Validity of a New Laser-based Caries Detection Device.</td>
<td>C. LONGBOTTOM*, N.B. PITTS, A. LUSSI, and E. REICH (University of Dundee, Scotland, UK;</td>
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<td>University of Bern, Switzerland; and University of Saarlandes, Germany).</td>
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<td>A. BAB, L. AHARONOV, and Y. SHARAV (Faculty of Dental Medicine, The Hebrew University of</td>
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<td>Jerusalem; Novadent Research Laboratories, Novadent Ltd., Jerusalem; Macabbi Dental</td>
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<td>Administration, Tel Aviv; and The Chaim Sheba Medical Center, Tel Hashomer, Israel).</td>
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<td>3:00</td>
<td>An Improved Instrument to Quantify Subgingival Calculus: Validation and Calibration.</td>
<td>R.L. JEFFCOAT*, I.-C. WANG, K. PALCANIS, and M.K. JEFFCOAT (UAB School of Dentistry,</td>
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<td>Birmingham, AL, USA).</td>
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<td>3:15</td>
<td>Tightness of Contact Points during Orthodontic Treatment Using a TDCP Device.</td>
<td>T. BROSH*, A.D. VARDIMON, T. GAZIT-RAPPAPORT, and M. GIARETTA (School of Dental Medicine,</td>
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<td>Tel Aviv University, Israel).</td>
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<td>3:30</td>
<td>M-mode Ultrasound Imaging of Tongue Movement during Swallowing.</td>
<td>C.-L. PENG*, C.-T. LIN, and W.-C. YEH (School of Dentistry and Institute of Oral</td>
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<td>Rehabilitation, Taipei Medical College, Taiwan, ROC).</td>
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<td>3:45</td>
<td>Vitality Testing of Maxillary Anterior Teeth with Laser Doppler Flowmetry.</td>
<td>H.H. LIU, P.L. LOH*, N.N. CHEN, C.P. SUM, and S.Y. LING (Faculty of Dentistry, National</td>
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<td>University of Singapore).</td>
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<td>4:00</td>
<td>Human Gingival Blood Flow as Measured by Laser Doppler Flowmetry.</td>
<td>J. VÁG*, F. CSEMPESZ, B. KERÉMI, A. GYÖRFI, and Á. FAZEKAS (Semmelweis University of</td>
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<td>Medicine, Clinic of Conservative Dentistry, Budapest, Hungary).</td>
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</table>
Reliability of Laser Doppler Flowmetry in a Two-probe Assessment. H.J.J. ROEYKENS*,
G.O.G. VAN MAELE, R.J.G. DE MOOR, and L.C. MARTENS (Departments of Operative Dentistry,
Endodontology, and Medical Informatics, University of Ghent, Belgium).

Effects of Four Variables on the Reliability of Laser Doppler Flowmetry. E.M.
ROEBUCK*, D.J. EVANS, D.R. STIRRUPS, and R. STRANG (University of Glasgow and University of
Dundee, UK).

Discussion

Penetration of Human Vaginal and Buccal Mucosa by FITC-labeled Dextrans. P. VAN
DER BIJL*, A.D. VAN EYK, and I.O.C. THOMPSON (Faculty of Dentistry, University of Stellenbosch,
Tygerberg, South Africa).

Increased ICAM-1 Expression on Transformed Human Oral Epithelial Cells Mediates
Lymphocyte Adhesion and Cytotoxicity. G.T.-J. HUANG*, W.L. HSU, and N.-H. PARK (UCLA School of
Dentistry & Dental Research Institute, Los Angeles, CA, USA).

Phenotypic Variation in HGF Production and Bioactivity between Oral and Skin
Fibroblasts. D.W. THOMAS*, S. HISCOX, P. STEPHENS, and W. JIANG (Departments of Oral
Surgery, Medicine & Pathology and Surgery, UWCM, Cardiff, UK).

Matrix Metalloproteinase Involvement in Differential in vitro Extracellular Matrix
Reorganization. P. STEPHENS*, N. OCCLESTON, P.T. KHAW, and D.W. THOMAS (Departments of
Oral Surgery, Medicine & Pathology, Dental School, Cardiff; and Wound Healing Research Group,
Institute of Ophthalmology, Moorfields Eye Hospital, London, UK).

Penetration of Carcinogen across Oral Mucosa after Brief Ethanol Exposure. X. DU,
C.A. SQUIER*, M. KREMER, and P.W. WERTZ (Dows Institute, University of Iowa, Iowa City, USA).

Levels of O6-Methylguanine DNA Repair Activity in Human Gingival Tissue. S.I.
HUSSAIN and J.B. GUTTENPLAN* (Division of Basic Sciences, New York University College of
Dentistry; and Department of Environmental Medicine, New York University Medical School, USA).

Laminin-5 Makes the Internal Basal Lamina a Preferential Adhesion Site for Epithelial
Cells on Tooth Surfaces. L.M. MULLEN, D.W. RICHARDS*, J. FALK-MARZILLIER, and V.
QUARANTA (The Scripps Research Institute, La Jolla, CA; and University of California, San Francisco,
USA).

Steroids and cAMP Regulate Plasminogen Activation in Cultured Murine Keratinocytes.
J.M. BATOR, R.L. COHEN*, and D.A. CHAMBERS (University of Illinois at Chicago, USA).

Effect of an Alcohol-containing Mouthwash on Mucosal Permeability. Y.
BHAGEERUTTY, A.T. CRUCHLEY*, and D.M. WILLIAMS (Oral Diseases Research Centre, St.
Bartholomew's and the Royal London School of Medicine and Dentistry, UK).

Permeation of 17b-estradiol through Human Vaginal and Buccal Mucosa. A.D. VAN
EYK*, P. VAN DER BIJL, and I.O.C. THOMPSON (Faculty of Dentistry, University of Stellenbosch,
Tygerberg, South Africa).

Discussion
Implantology - Animal Studies
Chairpersons: K.B. Lee and S.H. Park

1093  2:15  Effect of Heat Treatment of Titanium to Osseointegration. K.B. LEE* and S.A. CHO (Department of Prosthodontics, Kyungpook National University, Dae-Gu, Korea).

1094  2:30  The Combined Use of Bioreabsorbable Membranes and Xenografts or Autografts in the Treatment of Bone Defects around Implants. A Study in Beagle Dogs. T. HOCKERS*, D. ABENSUR, P. VALENTINI, R. LEGRAND, and C.H.F. HAMMERLE (University of Liége, Belgium; University of Corsica, France; and University of Berne, Switzerland).


3:00  Discussion


1098  3:30  Effects of Water Pyrolysis Method of Titanium to Bonding with Bone. S.H. PARK* and S.A. CHO (Department of Prosthodontics, Kyung-Book National University, Dae-Gu, Korea).

1099  3:45  Bone Growth around Ti6AlV4, Hydroxyapatite-coated, and Ion-beam-implanted Alloys. C. TARDIEU*, W.J. PERTOT, J. DEJOU, and J.P. PROUST (Université de la Méditerranée, UFR d’Odontologie, Lab. IMB, Marseille, France).

1100  4:00  Early Signs of Marginal Bone Loss around Non-axially-loaded Implants. L. BARBIER* and E. SCHEPERS (Catholic University of Leuven, Belgium).


1102  4:30  Comparison of Peri-implant Defect Regeneration—Use of Alendronate Sodium. S.J. MERAW* and C.M. REEVE (Mayo Clinic, Rochester, MN, USA).

1103  4:45  Bone Healing Capacity of Titanium- and Hydroxylapatite Plasma-sprayed Coated Oral Implants. S. VERCAIGNE*, I. NAERT, J.G.C. WOLKE, and J.A. JANSSEN (Department of Biomaterials, Dental School, University of Nijmegen, The Netherlands; and Department of Prosthetic Dentistry, BIOMAT Research Group, University of Leuven, Belgium).

Microbiology/Immunology - Bacterial Toxin/Invasions
Chairpersons: E. Lally and C. Champagne

1104  2:15  Absence of Especially Toxic Clone of A. actinomycetemcomitans in Army Recruits. A. MACHELEIDT*, H.P. MÜLLER, T. EGER, M. PUTZKER, and L. ZÖLLER (Ernst-Rodenwaldt Institute, Koblenz; and Department of Operative Dentistry & Periodontology, University of Heidelberg, Germany).

1105  2:30  Variable Expression of Phosphorylcholine in Different Strains of Actinobacillus actinomycetemcomitans. C. CHAMPAGNE*, J.N. WEISER, and B.J. GORDON (Boston University...
School of Dental Medicine, MA; and Children’s Hospital, University of Pennsylvania, Philadelphia, USA).


1107  3:00  Cytolethal Distending Toxin (CDT) of Actinobacillus actinomycetemcomitans. M.P.A. MAYER*, L.C. BUENO, and J.M. DIrienzo (Department of Microbiology, School of Dental Medicine, University of Pennsylvania, Philadelphia, USA).


1109  3:30  Bacterial Degradation of Actinobacillus actinomycetemcomitans Leukotoxin. A. JOHANSSON*, L. HANSTROM, and S. KALFAS (Oral Biology, School of Dentistry, Umeå University, Sweden).

1110  3:45  Identification of a Region in RTX Toxins Specific for Hemolytic Activity Utilizing Actinobacillus actinomycetemcomitans Leukotoxin (Ltx) and E. coli a-hemolysin (HlyA) Hybrids. I.R. KIEBA* and E.T. LALLY (University of Pennsylvania, Philadelphia, USA).

1111  4:00  DNA Fragments of Actinobacillus actinomycetemcomitans Involved in Invasion of KB Cells. L.P. LAING GIBBARD*, G. LEPINE, and R.P. ELLEN (Faculty of Dentistry, University of Toronto, Ontario, Canada).

1112  4:15  Invasion of Human Coronary Artery Cells by Porphyromonas gingivalis. B.R. DORN* and A. PROGULSKE-FOX (University of Florida, Gainesville, USA).

1113  4:30  Identification of Platelet-binding Proteins for Streptococcus sanguis. K. GONG* and M.C. HERZBERG (University of Minnesota, Minneapolis, USA).

1114  4:45  Dominantly Produced Antibodies Cross-reactive with Diverse Oral Bacteria Detect Phosphorylcholine. R. GMÜR*, T. THURNHEER, and B. GUGGENHEIM (University of Zürich, Switzerland).

Seq#: 105  Thursday, June 25, 2:15 pm - 5:00 pm
Oral Session, Clio Room

Mineralized Tissue - Dentinogenesis, Dentin Proteins, and Chondrocytes

Chairpersons:  M. MacDougall and D. Lyaruu

1115  2:15  Establishment and Characterization of Stable Mouse Dental Pulp Cell Lines Representing the Odontoblast Cell Lineage. M. MacDOUGALL*, A. RAFIE, and J. NYDEgger (Department of Pediatric Dentistry, University of Texas Health Science Center at San Antonio, USA).


1117  2:45  Isolation and Characterization of Bovine and Rat Dentin Sialophosphoprotein cDNAs. J. WALLACE*, X. LUAN, J. FENG, M.J. DIXON, S. SHI, Y. YAMADA, M. MacDOUGALL, and M.F. YOUNG (University of Texas at San Antonio, USA; University of Manchester, UK; and NIDR/NIH, Bethesda, MD, USA).

1118  3:00  1,25(OH)2D3-stimulated Calcium Extrusion Measured in Acutely Isolated Rat Incisor Odontoblasts Using the Droplet Technique. H.E. REED and P.M. SMITH* (Department of Clinical Dental Sciences, The University of Liverpool, UK).
Characterization of Enamel Gene Expression by Mouse Dental Pulp and Odontoblast Cell Lines. T.B. BOZEMAN*, A. RAFIE, J.P. SIMMER, C.C. HÚ, and M. MacDOUGALL (University of Texas HSC at San Antonio, USA).

Regulation of Vimentin by Vitamin D in Rat Incisor Dental Mesenchyme. C. TEILHAUD*, A. BERDAL, M. MÉSBAH, D. HOTTON, and N. FOREST (Laboratoire Biologie-Odontologie, Université Paris VII, France).

Inorganic Phosphate (Pi) Regulates Apoptosis in Epiphyseal Chondrocytes. K. MANSFIELD*, R. RAJPUROHIT, C.M. TEIXEIRA, and I.M. SHAPIRO (School of Dental Medicine, University of Pennsylvania, Philadelphia, USA).

Regulation of Type II Collagen in Growth Plate Chondrocytes by Chemically-Modified Tetracyclines. M. GROSSMAN*, E. TAKEUCHI, L.M. GOLUB, B. RIFKIN, and R. LANDESBERG (New York University and SUNY, Stony Brook, NY, USA).

Identification of Membrane Receptor for 1,25-Dihydroxy Vitamin D3 which Mediates Rapid Activation of PKC. H. PEDROZO*, Z. SCHWARTZ, I. NEMERE, V.L. SYLVIA, D.D. DEAN, and B.D. BOYAN (University of Texas Health Science Center, San Antonio, TX, USA; Hebrew University, Jerusalem, Israel; and Utah State University, Logan, USA).


Diurnal Fluctuations of Myofascial Pain of the Masticatory Muscles. T.T.T. DAO*, K. KNIGHT, and V. TON-THAT (Faculty of Dentistry, Mount Sinai Hospital; and Department of Statistics, University of Toronto, Ontario, Canada).

Diurnal Patterns of Facial Pain in Fibromyalgia and Myofascial Pain Patients. K. KNIGHT*, V. TON-THAT, and T.T.T. DAO (Faculty of Dentistry, Mount Sinai Hospital; and Department of Statistics, University of Toronto, Ontario, Canada).

Melatonin Secretion in Temporomandibular Disorders, Fibromyalgia, and Chronic Fatigue Syndrome. A. KORSZUN*, E. PAPADOPOULOS, L. LUNDEEN, C. ENGLEBERG, M. DEMITRACK, E. HAUS, and L. CROFFORD (University of Michigan, Ann Arbor; and University of Minnesota, Minneapolis, USA).


1132 3:45 Relation between Stress and Craniomandibular Disorders in Adolescents. M. SIEBER*, E. GRUBENMANN, G. RUGGIA, and S. PALLA (Clinic for Masticatory Disorders and Complete Dentures, Center for Dental and Oral Medicine, University of Zürich, Switzerland).


1135 4:30 Sleep Bruxism in Patients with Obstructive Sleep Apnea. T.T. SJÖHOLM*, A.A. LOWE, K. MIYAMOTO, F. RYAN, and J.A. FLEETHAM (Department of Oral Health Sciences, Department of Medicine, University of British Columbia, Vancouver, Canada).

4:45 Discussion

Seq#: 107 Thursday, June 25, 2:15 pm - 5:00 pm
Oral Session, Gallieni 5 Room
Nutrition - Nutrients, Metabolites, and Oral Health
Chairpersons: T. Grenby and P.J. Moynihan

1136 2:15 Relative Concentrations of Anti-oxidants in Plasma and Oral Mucosa. E.I. CALWELL*, D. McKILLOP, I.S. YOUNG, P.-J. LAMEY, and C.G. COWAN (Schools of Clinical Dentistry and Clinical Medicine, the Queen’s University of Belfast, N. Ireland).


1139 3:00 Short-chain Carboxylic Acids Elevate IL-8 in Healthy Gingiva. S. KASHKET* and J. ZHANG (Forsyth Dental Center, Boston, MA, USA).

1140 3:15 Changes in Plaque Calcium Concentration when Consuming Meals Containing Cheese. P.J. MOYNIHAN*, G.N. JENKINS, S. FERRIER, and G. WOODS (The Dental School, University of Newcastle, Newcastle upon Tyne, UK).

1141 3:30 Effect of Ascorbate Deficiency on Muscarinic-cholinergic and b-adrenergic Receptor Densities in Guinea Pig Submandibular Gland. C.O. ENWONWU* and P.G. SAWIRIS (University of Maryland, Baltimore, USA).

1142 3:45 Food Intake, Weights, and Caries in Rats on Glucose Polymer Diets. T.H. GRENBY* and M. MISTRY (Department of Oral Medicine & Pathology, UMDS, Guy’s Hospital, London, UK).

4:00 Discussion
Oral Session, Erato Room

Oral/Maxillofacial Surgery - Basic Science Topics in Oral/Maxillofacial Surgery

Chairpersons: M. Sharawy and R. Gassner


1145 2:45  Aprotinin (Trasylol) and Vitamin-K1 (Phylloquinone) Reduce Tenderness in Healing Bone. B. ÇADIR*, S. MEGHJI, S. HODGES, and M. HARRIS (The Eastman Dental Institute, London, UK; Süleyman Demirel University, Turkey; University of Sheffield, UK).

1146 3:00  In vivo Study of Metal Released from Miniplates and Screws. I.R. MATTHEW* and J.W. FRAME (School of Dentistry, University of Birmingham, UK).

1147 3:15  Effects of Mechanical Strain on Nitric Oxide Production in Chondrocytes. R.J. GASSNER*, M.J. BUCKLEY, L. MACINTYRE, and S. AGARWAL (University of Pittsburgh, PA, USA).

1148 3:30  Ultrasound Induces Angiogenesis through the Production of IL-8, bFG, F & VEGF. P. REHER*, N. DOAN, S. MEGHJI, and M. HARRIS (Department of Morphology, UFMG, Brazil; and Department of Oral & Maxillofacial Surgery, EDI & UCL, London, UK).


1150 4:00  Skin Resurfacing with a Laser-powered Hydrokinetic System: Histologic Responses in Minipigs. J.P. SAPP*, G.M. EVERSOLE, and L.R. EVERSOLE (UCLA, Los Angeles, CA; and Path Consultants of New Mexico, USA).

1151 4:15  Calvarial Bone and Suture Regeneration by GTR and DBM and Its Impact on Growth of the Calvarium. N. MARDAS*, L. KOSTOPoulos, and T. KARRING (Department of Periodontology, and Department of Maxillofacial Surgery, University of Aarhus, Denmark).

1152 4:30  Cranial Suture Neogenesis by GTR and Its Impact on Growth of the Cranial Vault. L. KOSTOPoulos*, T. KARRING, and S. SINDET-PEDERSEN (Department of Periodontology, and Department of Maxillofacial Surgery, University of Aarhus, Denmark).

1153 4:45  Regulation of VEGF Receptor Expression by Hypoxia. A. LE*, G.T.-J. HUANG, D.V. MESSADI, and C.N. BERTOLAMI (School of Dentistry, University of California at Los Angeles and San Francisco, USA).

Oral Session, Risso 6 Room

Periodontal Research-Diagnosis/Epidemiology - Bacterial Markers in Periodontal Diseases

Chairpersons: S. Machtei and M. Levine
Bacterial Colonization Patterns and Incident Attachment Loss in Older Adults. J. ELTER*, J.D. BECK, G.D. SLADE, S. OFFENBACHER, B.H. KAPLAN, and G. KOCH (UNC Chapel Hill, NC, USA).


Tooth Loss and Periodontal Changes in Subjects with Mild to Moderate Periodontal Disease. E.E. MACHTEI*, E. HAUSMANN, R. DUNFORD, S.G. GROSSI, J.J. ZAMBON, and R.J. GENCO (Periodontal Disease Research Center, School of Dental Medicine, SUNY, Buffalo, NY, USA; and Periodontal Unit-Department of Oral Surgery, Rambam-Technion School of Medicine, Haifa, Israel).

Distribution of A. actinomycetemcomitans Serotypes in a Greek Population with Early-onset Periodontitis. J.J. KAMMA*, R. GMÜR, A. GEINOZ, and P.C. BAEHNI (Private Practice, Athens, Greece; University of Zürich; and University of Geneva, Switzerland).

Periodontal Marker Bacteria vs. Treatment Status and Pocket Depth. F.-M. EGGERT*, M.H. McLEOD, E.W. McIntyre, and G. FLOWERDEW (University of Alberta, Edmonton; and Dalhousie University, Halifax, Nova Scotia, Canada).

Antibody to Actinomyces and Oral Hygiene. M. LEVINE*, R.L. BRUMLEY, K.T. AVERY, W.L. OWEN, and N. KOMORI (University of Oklahoma Health Sciences Center, Oklahoma City, USA).


Black-pigmented Bacteroides on Root and Permucosal Implant Surfaces. T.F. WALSH* and G. RICCARDI (School of Clinical Dentistry, University of Sheffield, UK).

Correlation between Automatic Image Analysis of Dental Plaque Formation and Plaque Percent Index. M. MORADI SABZEVAR*, P.A. ADRIAENS, P.-Ö. SÖDER, and B. SÖDER (Department of Periodontology, University of Brussels, Belgium; ICPOI, Belgium; and Department of Periodontology, Karolinska Institute, Sweden).

Discussion

The Significance of Periosteum as Natural Barrier in GBR Procedures. M.B. HÜRZELER, D. WENG*, C.R. QUINONES, A. OHLMS, and R.G. CAFFESSE (University of Texas at Houston, USA; and Albert-Ludwigs-University, Freiburg, Germany).

Alveolar Bone Protection of Extraction Sites with a Resorbable Bilayer GBR Membrane. P.A. ADRIAENS* and N. VAN DER STEDE (International Center for Periodontology and Oral Implants, Brussels, Belgium).

Efficacy of Bovine Bone Mineral in Vertical Osseous Defects. M. WIESEN*, R.J. ORINGER, S.E. LYNCH, and V.J. IACONO (State University of New York at Stony Brook, USA).


3:30 Addition of BMP-2 to Inactive DFDBA Results in an Osteoinductive Composite Biomaterial. A. SOMERS*, Z. SCHWARTZ, D.L. CARNES, Jr., D.D. DEAN, J.T. MELLONIG, D.L. COCHRAN, and B.D. BOYAN (University of Texas Health Science Center, San Antonio, TX, USA; and Hebrew University, Jerusalem, Israel).

3:45 Periodontal Tissue Engineering with a Collagen Analogue Offers Alternatives to Guided Tissue Regeneration. R.S. BHATNAGAR*, A. WEDRYCHOWSKA, J.J. QIAN, and N. SMITH (School of Dentistry, University of California, San Francisco, USA).

4:00 Discussion

Seq#: 111 Thursday, June 25, 2:15 pm - 5:00 pm
Oral Session, Room C12

Prosthodontics - Ceramic Crowns and Veneers, CAD-CAM

Chairpersons: J.R. Kelly and J.A. Holloway

2:15 Fracture Strength of Different All-ceramic Crown Systems after Simulation in the Artificial Mouth. J.R. STRUB* and S.M. BESCHNIDT (Department of Prosthodontics, Albert-Ludwigs-University, Freiburg, Germany).

2:30 Effect of Core Material on Fracture Stress of All-ceramic Crowns. S.S. AZER*, J.L. DRUMMOND, M.S. BAPNA, and S.D. CAMPBELL (Department of Restorative Dentistry, University of Illinois at Chicago, USA).

2:45 Influence of Design and Mode of Loading on the Fracture Strength of All-ceramic Resin-bonded FPDs. S.O. KOUTAYAS*, M. KERN, F. FERRARESSO, and J.R. STRUB (Department of Prosthodontics, University of Freiburg; and Department of Prosthodontics, University of Kiel, Germany).

3:00 Chairside Computer-generated Ceramic Crowns: Process Time and Clinical Quality. A. BINDL* and W.H. MORRMANN (Division of Aesthetic and Computer Restorations, Center for Dental and Oral Medicine, University of Zurich, Switzerland).

3:15 Simulating Clinical Failure during in vitro Testing of All-ceramic Crowns. J.R. KELLY*, B.V. HUNTER, M.R. BRENYO, and I.M. PETERSON (NIST, Gaithersburg; and Naval Dental School, Bethesda, MD, USA).

3:30 Clinical Performance of In-Ceram Crowns in a Private Practice. E.A. McLAREN* and S.N. WHITE (CCMB, University of Southern California, Los Angeles; and Private Practice, Monarch Beach, CA, USA).

3:45 Effect of Fiber Reinforcement on the Breaking Strength of Crowns. C.A. MUNOZ-VIVEROS*, J. TORRES, A. KOBASHIGAWA, and E. SHELLARD (Loma Linda University School of Dentistry, CA; and Kerr Corporation, CA, USA).

4:00 Clinical Assessment of Adhesively Placed Ceramic Veneers after Nine Years. D.C. VAN GOGSWAARDT*, W. VAN THOOR, and F. LAMPERT (Friedrich-Schiller-Universität, Jena; and RWTH Klinikum, Aachen, Germany).

4:15 Three-body Wear of Human Enamel Against Dental Ceramics. A.S. AL-HIYASAT*, W.P. SAUNDERS, S.W. SHARKEY, and G. SMITH (Faculty of Dentistry, Jordan University of Science and Technology, Irbid, Jordan; and University of Glasgow Dental School, UK).
4:30 Mechanism for Strengthening in Dual Ion-exchange of Leucite-reinforced Ceramic. J.A. HOLLOWAY*, I.L. DENRY, and S.F. ROSENSTIEL (The Ohio State University, Columbus, USA).

4:45 Discussion

Seq#: 112 Thursday, June 25, 2:15 pm - 5:00 pm
Oral Session, Room A12
Salivary Research - Saliva/Salivary Molecules
Chairpersons: E. Lynch and A. Triantafyllou

2:15 Correlation between Saliva Flow Rates and Stimulation of Circulation. V. BRANDIES*, P. HERMANUTZ, and W. NIEDERMEIER (School of Dental and Oral Medicine, University at Cologne, Germany).

2:30 Concentration Dependence of Adsorption from Whole Saliva at Solid/Liquid Interfaces. L. LINDH*, T. ARNEBRANT, and P.-O. GLANTZ (Department of Prosthetic Dentistry, Faculty of Odontology, Lund University, Malmö, Sweden).

2:45 Effect of Pregnancy on Fluidity of Parotid Saliva: An Electron Spin Resonance Study. F. SEVERCAN and S. GÖKALP* (Department of Biology, METU, and School of Dentistry, Hacettepe University, Ankara, Turkey).

3:00 Immunohistochemical Localization of Manganese Superoxide Dismutase in Human Submandibular Glands. M.-T. LAI, H.H. CHOU*, Y. TSURUSAKO, H. FUKUSHIMA, N. NISHIZAKI, H.-K. LU, and Y. MASUDA (Department of Otolaryngology and School of Dentistry, Taipei Medical College, Taiwan; and Department of Otolaryngology, Okayama University Medical School, Japan).


3:30 Salivary Composition of Subjects with Primary, Mixed, or Permanent Dentition. A. CALLAWAY*, B. WILLERSHAUSEN, and P. COLLET (Department of Restorative Dentistry, Johannes Gutenberg University, Mainz, Germany).

3:45 Therapeutic Salivary Oxidizing Activity of a Novel Anti-bacterial Ozone-generating Device. E. LYNCH*, A. BAYSAN, C.J. SILWOOD, and M. GROOTVELD (St. Bartholomew’s and The Royal London School of Medicine and Dentistry, QMW, UK).

4:00 Preproinsulin I and II mRNA Expression on Adult Rat Salivary Glands. J.C. EGEA*, D. DEVILLE de PERIÊRE, S. ROUX, E. TRZASKAWKA, R. GROSS, and G. RIBES (UMR-CNRS, Faculté de Pharmacie, Montpellier, France).

4:15 Fluoride Concentration in Saliva after Intake of Fluoridated Milk. S. TWETMAN*, T. NEDERFORS, and L.G. PETERSSON (Medical and Dental Health Center, Halmstad; and Faculty of Odontology, Lund University, Sweden).

4:30 Effects of Membrane Components on Phosphate-ion-selective Electrode Function. C.M. CAREY* and N.A. SHORE (ADAHF, Paffenbarger Research Center, NIST, Gaithersburg, MD, USA).

4:45 Quantitative Protein Analyses of Human Whole Salivary Micelle-like Globules. A. YOUNG*, M. RYKKE, and G. RØLLE (Faculty of Dentistry, University of Oslo, Norway).

Seq#: 113 Friday, June 26, 8:30 am - 11:15 am
Symposium, Athena Room
Geriatric Oral Research, Implantology, Neuroscience/TMJ, Nutrition, and Prosthodontics Groups - Understanding Age-related Changes in Muscle and Bone in Relation to Dentistry [Supported by Unilever Dental Research]
**Chairperson: M.R. Heath**

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<tr>
<td>8:30</td>
<td>Opening Comments.</td>
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<tr>
<td>8:35</td>
<td>Aging and the Neuromuscular System. A. McCOMAS (McMaster University, Hamilton, ON, Canada).</td>
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<tr>
<td>9:15</td>
<td>Effect of Nutrition and Exercise on the Aging of the Musculo-Skeletal System. B. EVANS (University of Arkansas for Medical Sciences, Little Rock, USA).</td>
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<tr>
<td>10:00</td>
<td>Combating Age-induced Osteopenia with Low-magnitude Mechanical Stimuli: The Clinical Exploitation of Bone Tissue's Sensitivity to Biophysical Information. C. RUBEN (State University of New York, Stony Brook, USA).</td>
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<td>10:40</td>
<td>Mechanical Factors that Influence Gene Expression in the Maintenance of Muscle Function. G. GOLDSPIKNK (University of London, UK).</td>
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<td>11:00</td>
<td>Discussion.</td>
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**Seq#: 114 Friday, June 26, 8:30 am - 11:15 am**

**Symposium, Mobile 9 Room**

**Periodontal Research Group - Oral Infections and Systemic Conditions**

[Supported by Sunstar, Optiva Inc., and Colgate Oral Pharmaceuticals]

**Chairpersons: S. Offenbacher and J.D. Beck**

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<tr>
<td>8:30</td>
<td>Opening Comments.</td>
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<tr>
<td>8:35</td>
<td>Infection and Spontaneous Preterm Birth. D. ESCHENBACH (University of Washington, Seattle, USA).</td>
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<td>9:05</td>
<td>Cytokines and Preterm Delivery. R. ROMERO (Wayne State University, Detroit, MI, USA).</td>
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<td>9:35</td>
<td>Periodontal Disease and Pregnancy Complications. S. OFFENBACHER (University of North Carolina, Chapel Hill, USA).</td>
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<td>9:45</td>
<td>New Manifestations of Vascular Disease: Mechanisms of Plaque Destabilization. J.R. CROUSE (Wake Forest University, Winston-Salem, NC, USA).</td>
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<td>10:15</td>
<td>Type 2 Diabetes: Inflammation and Infection. M.I. SCHMIDT (University of North Carolina, Chapel Hill, USA).</td>
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<tr>
<td>10:45</td>
<td>Cardiovascular Disease and Periodontitis. J.D. BECK (University of North Carolina, Chapel Hill, USA).</td>
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<tr>
<td>10:55</td>
<td>Discussion.</td>
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**Seq#: 115 Friday, June 26, 8:30 am - 11:15 am**

**Symposium, Hermes Room**

**Behavioral Sciences & Health Services Research and Cariology Research Groups and the World Health Organization - The State of ART (Atraumatic Restorative Treatment) - A Scientific Perspective**

[Supported by Ash/Densply]

**Chairpersons: A. Horowitz and T. Pilot**
8:30 Opening Comments.


10:05 Does ART Have a Role in Preservative Dentistry? K. ANUSAVICE (University of Florida, Gainesville, USA).

10:30 Painting the Future for ART. C. HOLMGREN (Indre, France).

10:50 Discussion.

Seq#: 116 Friday, June 26, 8:30 am - 11:15 am
Oral Session, Risso 7 Room

Behavioral Sciences/Health Services Research - HIV

Chairpersons: J.M. Zakrzewska and M. Marcus

1195 8:30 Gender Difference in Willingness to Treat HIV+ Patients. D. SADOWSKY* and C. KUNZEL (Columbia University Dental School, New York, NY, USA).


1199 9:30 Prevalence of Oral Lesions in HIV-infected Minority Children. A. BARASCH*, R.V. KATZ, M.M. SAFFORD, E. VARAGIANNIS, and R. LOPEZ (University of Medicine and Dentistry of New Jersey, Newark; and University of Connecticut School of Dental Medicine, Farmington, USA).

1200 9:45 Does Discrimination Exist in Dental Management of HIV-infected Patients? G. McGAVIN*, C. SKIFFINGTON, M. GLICK, and J. GIBSON (University of Glasgow Dental Hospital and School, UK; and University of Pennsylvania, Philadelphia, USA).

1201 10:00 Perceived Barriers to Dental Treatment among Caregivers of HIV+ Children. H.L. BRODER*, S. RUSSELL, and E. VARAGIANNIS (UMDNJ-NJ Dental School, Newark, USA).

1202 10:15 Willingness to Treat HIV+/AIDS Patients among Quebec Private Dentists. J.-M. BRODEUR*, H. NACCAFE, G. GODIN, and M. ALARY (GRIS, University of Montreal; Public Health Department of Quebec; and Research Group on Psychosocial Aspects of Health Related Behaviors, Laval University, Canada).
1203 10:30 Analysis of Binary Time-dependent Covariates via the Cox Regression Model. J.F. HILTON* (University of California, San Francisco, USA).


11:00 Discussion

Seq#: 117 Friday, June 26, 8:30 am - 11:15 am
Oral Session, Risso 6 Room

Cariology - Cariogenic Micro-organisms; Inhibitory Agents; Root Caries

Chairpersons: P. Lingström and E.R. Nalbantoglu

1205 8:30 Relationship between Plaque Microflora and Initial Enamel Caries. F. VAN RUYVEN, P. LINGSTRÖM*, J. VAN HOUTE, and R.L. KENT, Jr. (Forsyth Dental Center, Boston, MA, USA; and Göteborg University, Sweden).

1206 8:45 In situ Model for Studies of Plaque Microbiota and Enamel Demineralization. E. GIERTSEN*, B. GUGGENHEIM, P. SCHÜPBACH, and R. GMÜR (University of Bergen, Norway; and University of Zürich, Switzerland).

1207 9:00 Development of Early Caries Lesions on Natural Enamel Surfaces. C. GONZALEZ-CABEZAS*, M. FONTANA, M.E. WILSON, and G.K. STOOKEY (School of Dentistry, Indiana University, Indianapolis, USA).


1210 9:45 Ultrastructure of Adherence of Streptococcus mutans Glucosyltransferase Mutant. Z. BIAN*, M.W. FAN, C.Z. LI, and H. HE (College of Stomatlogy, Hubei Medical University, Wuhan, PRC).

1211 10:00 The Effect of NaF on Intracellular Polysaccharide (IPS) Production in L. salivarius. E.R. NALBANTOGLU*, R. COLES, B. MACEDO, S. VON HAGEN, R. FEINBERG, and G. ROSIVACK (Department of Pediatric Dentistry, UMDNJ—NJ Dental School, Newark, USA).


1213 10:30 Ozone Effect on Microflora from Primary Root Caries ex vivo. A. BAYSAN*, R. WHILEY, and E. LYNCH (St. Bartholomew’s and The Royal London School of Medicine and Dentistry, UK).

1214 10:45 Mineral Distribution in Root Lesions after Remineralization—Part II. T.H. JORDAN*, S. FRAHM, M.M. HOGAN, and J.S. WEFEL (Dows Institute for Dental Research, College of Dentistry, University of Iowa, Iowa City; and Cornell College, Mt. Vernon, IA, USA).

11:00 Discussion

Seq#: 118 Friday, June 26, 8:30 am - 11:15 am
Oral Session, Room C34
### Craniofacial Biology - Orthodontic Treatment and Treatment Outcome

**Chairpersons:** S. Baumrind and J. Ghafari

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>1217</td>
<td>9:00 Dental Electrical Thresholds and Cold Sensitivity during Orthodontic Therapy. M. DALILI*, M. NÄRHI, M.T. LAINÉ-ALAVA, and R. MYLLYKANGAS (University of Kuopio, Finland; and University of Kentucky, Lexington, USA).</td>
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<td>1219</td>
<td>9:30 Roles of GAD67 in Secondary Palate Development. S. ISEKI*, M. ISHII-SUZUKI, K. MARUYAMA, T. KURODA, K. OBATA, and K. ETO (Department of Developmental Biology and Second Department of Orthodontics, Tokyo Medical and Dental University; and Laboratory of Neurochemistry, National Institute for Physiological Sciences, Japan).</td>
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<tr>
<td>1221</td>
<td>10:00 The Contribution of Midbrain Crest Cells to Maxillary Molar Tooth Development in Rat Embryos. K. AOTO*, G.H. IMAI, and K. ETO (Developmental Biology, Tokyo Medical and Dental University, Japan).</td>
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<tr>
<td>1222</td>
<td>10:15 The Contribution of Foregut Endoderm to Tooth Initiation of Mandibular Incisor in Rat Embryos. G.H. IMAI*, K. AOTO, and K. ETO (Developmental Biology, Tokyo Medical and Dental University, Japan).</td>
</tr>
<tr>
<td>1223</td>
<td>10:30 A Systematic Review of Orthodontic Treatments for Posterior Crossbites. J.E. HARRISON* and D. ASHBY (Department of Clinical Dental Sciences, School of Dentistry, Liverpool University; and St. Bartholomew’s and The Royal London School of Medicine and Dentistry, UK).</td>
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<tr>
<td>1224</td>
<td>10:45 Objective Correlates of Orthodontists’ Subjective Preferences for Treatment Outcome. S. BAUMRIND*, J.B. DUCLOS, and R. HERRMANN (University of Medicine and Dentistry of New Jersey; University of the Pacific, and University of California at San Francisco, USA).</td>
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<td>1225</td>
<td>11:00 Growth Observations of Isolated Neonatal Mandibular Condyles. L. BAILEY*, W.E. KOCH, W. PROFFIT, and W. AMBROSE (University of North Carolina at Chapel Hill, NC, USA).</td>
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### Dental Materials - Cements, Marginal Adaptation, Fluoride Release

**Chairpersons:** C.H. Lloyd and R.M.H. Verbeeck

<table>
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<th>Time</th>
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Distribution of Fluoride in Glass-ionomer Cement Determined Using SIMS. P. HADLEY*, E. MILELLA, C. GERARDI, R.G. HILL, and R.W. BILLINGTON (Eastman Dental Institute, London, UK; CNRSM, Brindisi, Italy; and University of Limerick, Ireland).


Polymerization Types and Fluoride Release from Two Glass-ionomeric Cements. L. BALDUCCI*, G. ALBERGO, M. CIUFFREDA, and F. SAMPALMIERI (Dental Materials Department, University of Ancona, Italy).


ART Technique: Comparison among Three Glass-ionomeric Cements. G. ALBERGO*, E. ACCARISI, M. CIUFFREDA, and F. SAMPALMIERI (Dental Materials Department, University of Ancona; and WHO Collaborating Centre of Rome, Italy).


Marginal Adaptation of Three Class II Composite Restorative Techniques in vitro. A. PAPATHANASIOU*, P. LALICATA, J. KAIM, and D. BARDWELL (Tufts University School of Dental Medicine, Boston, MA; and New York University, USA).


A Clinical Evaluation of a New Compomer Restorative at 6 Months. N. MARTIN*, N.M. JEDYNAKIEWICZ, and J.M. FLETCHER (Department of Clinical Dental Services, The University of Liverpool, UK).

A Clinical Evaluation of a Posterior Compomer Restorative at 6 Months. N.M. JEDYNAKIEWICZ*, N. MARTIN, and J.M. FLETCHER (Department of Clinical Dental Services, The University of Liverpool, UK).

Extensive Class II Open Sandwich Restorations Performed with a Resin-modified GIC. J.W.V. van DIJKEN*, C. KIERI, M. CARLÉN, and U. FOLKESSON (Department of Cariology, Dental School, Public Dental Health Center, Umeå, Sweden).


Clinical Performance of Three Posterior Composites and Two Amalgams—12-year Results. L.H. MAIR* (Department of Clinical Dental Sciences, University of Liverpool, UK).
9:45  Class II Composite Resin Restorations: A Five-year Clinical Evaluation of Two Materials. B. KÖHLER*, C.G. RASMUSSON, and P. ÖDMAN (Public Dental Health Service and Faculty of Odontology, Göteborg, Sweden).


10:30 Clinical Trial for Different Filling Techniques in Transcanine Region. B. SIMONCIC*, R. HICKEl, and K.-H. KUNZELMANN (Department of Operative Dentistry, Ludwig-Maximilians-University of Munich, Germany).

10:45 Five-year Failure and Cost-effectiveness of Box-only Composite Restorations. C. KREULEN*, H. TOBI, E. VAN AMERONGEN, H. AKERBOOM, and P. BORGMEIJER (Division CEP, Academic Centre for Dentistry, Amsterdam, The Netherlands).

11:00 Treatment Times for Class II Posterior Composite Resin Restorations Placed in vivo. N.J.M. OPDAM* and F.J.M. ROETERS (University of Nijmegen, The Netherlands).

8:30 Bonding of Compomers to Deep Dentin under Various Surface Conditions. J. MANHART*, D.F. LI, J.M. POWERS, and R. HICKEl (Houston Biomaterials Research Center, TX, USA; and Department of Restorative Dentistry, LMU, Munich, Germany).

8:45 Bond Strength of Composite Resin, Compomer, and Resin-modified GIC to Dentin. N. HOFMANN*, R. STEIGERWALD, B. HUGO, and B. KLAIBER (Department of Operative Dentistry and Periodontology, University of Würzburg, Germany).

9:00 Bond Strength of Glass Ionomers to Dentin of Primary and Permanent Teeth. B.Y.Y. MOK*, H.P.Y. THEAN, and C.L. CHEW (National University of Singapore).


9:30 Shear Bond Strength of a Resin-reinforced Glass-ionomer Cement. C.-H. CHUNG*, P.T. CUOZZO, and F.K. MANTE (School of Dental Medicine, University of Pennsylvania, Philadelphia, USA).

9:45 Shear Bracket Bond Strength to Composite Resins. L. JARDIM*, P. MARQUES, L. LOPES, and J. LEITÃO (School of Dentistry, University of Lisbon, Portugal).

10:00 Relation between Porcelain Surface Preparation and Orthodontic Bracket Bond Strength. W.P. ROCK* and B. BOURKE (School of Dentistry, The University of Birmingham, UK).

1254  10:30  Moist Bonding: Effect on Composite Bond Strength to Enamel. K. MOLL*, T. GARTNER, and B. HALLER (Department of Operative Dentistry, Periodontology & Pedodontics, University of Ulm, Germany).

1255  10:45  Improved Method for Testing Shear Bond Strength to Enamel in vivo. A. VOSS* and K.P. SCHMIDT (Dental School, University of Erlangen-Nürnberg, Germany).

11:00  Discussion

Seq#: 122 Friday, June 26, 8:30 am - 11:15 am
Oral Session, Thalie Room
Dental Materials - Endodontics, Cellular Attachment
Chairpersons:  B. Briseño Marroquin and M. Markovic

1256  8:30  In vitro Retention Evaluation of Endodontic Dowels Cemented with New Resin Cements. O.S. PAPASOTIRIOU*, N. ASHAYERI, and D. NATHANSON (Goldman School of Dental Medicine, Boston University, MA, USA).

1257  8:45  Difference in Root Zx Accuracy Using Ni-Ti or Stainless Steel Instruments. A. CERNAZ*, R. DI LENARDA, and M. CADENARO (Institute of Odontology and Stomatolgy, University of Trieste, Italy).

1258  9:00  An in vitro Comparison of Three Ni-Ti Endodontic Instruments to Prepare Curved Simulated Canals. E. MEDIONI*, J.M. COSTINI, M.F. BERTRAND, and M. MULLER (Department of Conservative Dentistry-Endodontics, Dental Biomaterials and Experimental Odontology Laboratory, Nice-Sophia Antipolis University, France).

1259  9:15  Relation between the Location of Various Calcium Hydroxide Preparations and Root Dentin pH. F. PEREZ*, M. FRANCHI, and J.F. PELI (LORFAC, Bordeaux, France).


1261  9:45  Calcium Phosphate Cement with Incorporated Mannitol Crystals. M. MARKOVIC*, S. TAKAGI, and L.C. CHOW (ADAHF, Paffenbarger Research Center, NIST, Gaithersburg, MD, USA).

1262  10:00  Bactericidal Effect of Antibacterial Primer on Bacteria in Carious Dentin. S. IMAZATO*, Y. TORII, N. EBI, and S. EBISU (Osaka University Faculty of Dentistry; and Dental School, Okayama University, Japan).


1264  10:30  Binding of Salivary Proteins and Bacteria to GPA and Composite Resin. J. OLSSON*, A. CARLÉN, A. WENNERBERG, and K. HOLMBERG (Department of Cariology, Faculty of Odontolgy, Göteborg University, Sweden).

10:45  Discussion

Seq#: 123 Friday, June 26, 8:30 am - 11:15 am
Oral Session, Gallieni 3 Room
Educational Research - Dental Undergraduate Issues
Chairpersons:  R. Bedi and J. Holtzman
8:30 Ethnic and Gender Variations in Applicants to Medicine and Dentistry. R. BEDI* and M.S. GILTHORPE (Eastman Dental Institute, University of London, UK).


9:00 Community-oriented Dental Education: 2nd Year of Full Implementation for Senior Dental Students. C.A. FELDMAN*, J. DeCASTRO, D.C.L. STEWART, M. FITZPATRICK, G. SENG, J. YORK, A. YOUNGBLOOD, W. CINOTTI, R.A. SAPORITO, and P. DESJARDINS (UMDNJ-New Jersey Dental School, Newark, USA).

9:15 Changes in Dental Education in France: Student’s Reaction to Curriculum Modification. P. FARGE*, J. DOURY, and J. VIRIEUX (Faculty of Odontology, Lyon, France).

9:30 Student Perception of the Objective Structured Clinical Examination (OSCE). P.A. MOSSEY* and J.P. NEWTON (The Dental School, University of Dundee, Scotland, UK).

9:45 Acceptance of Electronic Course Information Teaching Medicine to Dental Students. A.J. CRIGHTON* and M.E. SMITH (Unit of Oral Medicine & Surgery, Dental Hospital and School, University of Dundee, Scotland, UK).

10:00 Acceptance of New Facilities in Academic Education with Three-dimensional Multimedia Applications. J. GRAMSCH* and W.H.-M. RAAB (Department of Operative Dentistry, Heinrich-Heine-University, Duesseldorf, Germany).

10:15 A Comparison of Undergraduate Endodontic Teaching Programs. A.J.E. QUALTROUGH*, J. WHITWORTH, and P.M.H. DUMMER (University of Manchester; University of Newcastle upon Tyne; and University of Cardiff, UK).

10:30 Cost of Endodontic Procedures in a French Dental School. F. RILLIARD*, S. BAREK, and F. ROTH (Dental School, Université Paris VII, France).

10:45 Enrichment Program for Part-time Faculty: Qualitative Assessment of Needs. F.R. SUSI* (Tufts Dental School, Boston, MA, USA).

11:00 An Evaluation of Eight Years of Continuing Dental Education in South of Ireland. L.A. BUCKLEY* and J. GLOSTER (University Dental School, Cork; and Postgraduate Medical and Dental Board, Ireland).

Seq#: 124 Friday, June 26, 8:30 am - 11:15 am
Oral Session, Risso 8 Room

Experimental Pathology - Carcinoma, Histopathology

Chairpersons: J.M. Thomason and M. Tavassoli

8:30 Cell Cycle Analysis in Oral Epithelial Dysplasia. R.J. OLIVER* and D.G. MACDONALD (Oral Pathology Unit, Glasgow Dental Hospital, Scotland, UK).

8:45 p53 Expression Differs in Experimental Oral and Tongue Carcinomas. G. SHKLAR*, J.L. SCHWARTZ, and A. BAPTISTE (Harvard School of Dental Medicine, Boston, MA; and Howard University College of Dentistry, Washington, DC, USA).

9:00 Prevalence of Dysplasia and Malignant Lip Lesions in Transplant Patients. J.M. THOMASON*, N.M. GIRDLER, A. NOLAN, P.J. KELLY, K. BOOTH, and R.A. SEYMOUR (Dental School, University of Newcastle upon Tyne; and University of Teeside, UK).

1280 9:30  Evaluation of Nuclear DNA Content and Ki-67 as Markers of Radiosensitivity in Head and Neck Squamous Cell Carcinoma (HNSCC). H. RAYBAUD*, A. FORTIN, R. MORENCY, B. TETU, and R.A. MONTEIL (Laboratoire de Pathologie, CHU, Hôtel-Dieu, Québec, Canada; and Laboratoire de Pathobiologie Orale, Université de Nice, France).


1282 10:00  Inducible Wild-type p53 in Oral Squamous Cell Carcinoma (OSCC). M. SARTOR*, M. TAVASSOLI, F. FARZENEH, and N.W. JOHNSON (RCS Dental Sciences, King’s College, London, UK).


1286 11:00  E-cadherin Protein Expression is Dramatically Downregulated in Human Oral Carcinomas. B.C. SORKIN*, R.L. KENT, Jr., and S.-B. WOO (Forsyth Dental Center, Boston; and Brigham and Women’s Hospital, Boston, MA, USA).

Microbiology/Immunology - Specific Immunity

**Chairpersons:** M.A. Taubman and A. Weinberg

1287 8:30  Protein-Polysaccharide Conjugates as Potential Caries Vaccines. M.A. TAUBMAN*, D.J. SMITH, C.J. HOLMBERG, B.-Y. MA, D. SHAFER, and A. LEES (Department of Immunology, Forsyth Dental Center, Boston, MA; and Virion Systems, Rockville, MD, USA).

1288 8:45  Immunogenicity of a Proline-rich Sequence of Streptococcal Antigen I/II. A.S. CARRARA* and C.G. KELLY (Department of Oral Medicine, UMDS, Guy’s Hospital, London, UK).

1289 9:00  Effect of Pre-existing Immunity on Salmonella Expressing Porphyromonas gingivalis Hemagglutinin. J.J. KOHLER*, L.B. PATHANGEY, A. PROGULSKE-FOX, and T.A. BROWN (Department of Oral Biology, University of Florida, Gainesville, USA).


1291 9:30  Antibody Response to a 110-kDa Protein of Actinobacillus actinomycetemcomitans after Periodontal Therapy. T. BEIKLER*, H. KARCH, B. KLAIBER, and T.F. FLEMMIG (Periodontology and Microbiology, JMU, Würzburg, Germany).

1293 10:00 Longitudinal Study of Microbial and Immunoglobulin Changes Following Radiation-induced Xerostomia. J.S. CHIA* and J.Y. CHEN (Department of Bacteriology and Graduate Institute of Oral Biology, National Taiwan University, Taipei, ROC).


1295 10:30 Immunization against Oro-pharyngeal Candidiasis. C.S. FARAH*, R.B. ASHMAN, and T. GOTJAMANOS (Department of Pathology, University of Western Australia, Perth).

1296 10:45 Orally Administered Streptococcus sanguis Modulates Autoimmune Arthritis in Mice. M. COSTALONGA*, J. HODGES, and M.C. HERZBERG (University of Minnesota School of Dentistry, Minneapolis, USA).

11:00 Discussion

Seq#: 126 Friday, June 26, 8:30 am - 11:15 am
Oral Session, Clio Room

Mineralized Tissue - Caries, Erosion, Calculus, Pathology

Chairpersons: T. Attin and D. White

1297 8:30 Microhardness of Carious, Transparent, and Sound Deciduous Dentin. Y. HOSOYA*, S.J. MARSHALL, L.G. WATANABE, and G.W. MARSHALL (Nagasaki University, Japan; and University of California, San Francisco, USA).

1298 8:45 Effect of Human Saliva on Dental Erosion Progression in vitro. C. GANSS*, M. SCHWEITZER, M. JUNG, and J. KLIMEK (Dental Clinic, Justus-Liebig-University, Giessen, Germany).

1299 9:00 Dental Fluorosis in Ugandans Related to Fluoride in Drinking Water and Altitude. M.C. RWENYONYI*, J.M. BIRKELAND, K. BJORVATN, and O. HAUJEJORDEÑ (School of Dentistry, University of Bergen, Norway).


1301 9:30 A New Technique for Characterizing Artificially Induced Caries Lesions. H. UCHTMANN* and D. WILKIE (Institute of Physical Chemistry, Philipps-University, Marburg, Germany).

1302 9:45 Toxicity of Dioxins and PCBs to Developing Teeth of Children. S. ALALUUSUA*, P.-L. LUKINMAA, T. VARTIAINEN, J. TORPPA, and J. TUOMISTO (Institute of Dentistry, University of Helsinki; and National Public Health Institute, Finland).

1303 10:00 Erosion of Enamel: Compared with Black Currant and Orange Drinks. J.A. HUGHES*, N.X. WEST, D.M. PARKER, R.G. NEWCOMBE, and M. ADDY (Department of Restorative Dentistry, Bristol; SmithKline Beecham Consumer Healthcare, Gloucestershire; and Department of Medical Computing and Statistics, Cardiff, UK).

1304 10:15 Development of a Low-erosive Drink: Compared with Orange Juice. N.X. WEST*, J.A. HUGHES, D.M. PARKER, R.G. NEWCOMBE, and M. ADDY (Department of Restorative Dentistry, Bristol; SmithKline Beecham Consumer Healthcare, Gloucestershire; and Department of Medical Computing and Statistics, Cardiff, UK).


11:00 Tartar Control Efficacy of Chinese Herbal/Triclosan/Pyrophosphate “Multicare” Dentifrice. E.R. COX* and D.J. WHITE (Procter & Gamble, Mason, OH, USA).

Seq#: 127 Friday, June 26, 8:30 am - 11:15 am Oral Session, Mobile 10 Room

Periodontal Research - Therapy - Effects on Micro-organisms

Chairpersons: E.G. Winkel and C. Walker

8:30 Persistence Patterns of P. gingivalis (PG), P. intermedia (PI), and A. actinomycetemcomitans (AA) after Mechanical Therapy of Periodontal Disease. A. MOMBELLI*, B. SCHMID, and N.P. LANG (School of Dental Medicine, University of Bern, Switzerland).

8:45 Additional Clinical and Microbiological Effects of Amoxicillin and Metronidazole after Initial Periodontal Therapy. E.G. WINKEL*, A.J. van WINKELHOFF, and U. VAN DER VELDEN (Clinic of Periodontology and Academic Centre for Dentistry, Amsterdam, The Netherlands).

9:00 Systemic Amoxicillin and Metronidazole for Periodontitis. 2. Microbiological Effects. S.V. SPRAGUE*, J. ROONEY, M. ADDY, R.G. NEWCOMBE, and W.G. WADE (University of Bristol; UWCM, Cardiff; and UMDS, Guy’s Hospital, London, UK).


9:30 Effect of Sub-antimicrobial-dose Doxycycline on Periodontal Microbial Resistance. J. THOMAS*, C. WALKER, R. CROUT, R. METHENY, J. KARAKIOZIS, J. WETZEL, C. POWALA, and M. BRADSHAW (West Virginia University, Morgantown; UF-PDRC, Gainesville, FL; and CollaGenex, Newtown, PA, USA).

9:45 Increasing Resistance of Actinobacillus actinomycetemcomitans (Aa) to Commonly Used Antibiotics. C.-H. LAI* and M.A. LISTGARTEN (University of Pennsylvania School of Dental Medicine, Philadelphia, USA).

10:00 Occurrence of Subgingival Bacteria Resistant to Antibiotics Commonly Used in Spain. D. HERRERA*, I. GONZALEZ, A. O’CONNOR, S. ROLDAN, C. JEREZ, A. CASAS, and M. SANZ (Faculty of Odontology, University Complutense, Madrid, Spain).

10:15 Antimicrobial Effects of Dental Ultrasound on Periodontitis-associated Bacteria. S. JEPSEN*, S. KIRCHBERGER, K. JEPSEN, H.R. GRIESINGER, and S. SCHUBERT (Dental School, University of Kiel; and Institute for Microbiology, Germany).

10:30 Efficacy of Orasan™ Mouthwash on Periodontitis and Malodor. S. NACHNANI* and D. ANSON (UCLA School of Dentistry, Los Angeles, CA, USA).

10:45 Effect of Subgingival Povidone-Iodine Irrigation on Periodontal Pockets. S. PEI, M. GEVELIS*, D. MADDALOZZO, P.J. ROBINSON, and L. SIMONSON (Northwestern University, Chicago, IL; and Naval Dental Research Institute, Great Lakes, IL, USA).

11:00 Ofloxacin as Adjunct to Conventional Therapy in A. actinomycetemcomitans-associated Periodontitis. J.W. KLEINFELDER*, R.F. MÜLLER, and D.E. LANGE (University of Münster, Germany; and University of Basel, Switzerland).
Seq#: 128  Friday, June 26, 8:30 am - 11:15 am
Oral Session, Mobile 11 Room

Periodontal Research - Therapy - Guided Tissue Regeneration

Chairpersons:  T. Karring and S. Karatzas

1319  8:30  Influence of the Clinical Defect Angle on Treatment Outcomes in GTR with Bioreabsorbable Membranes. C. WEIGEL*, C.H.F. HÄMMERLE, and N.P. LANG (School of Dental Medicine, University of Berne, Switzerland).

1320  8:45  Root Configuration and Defect Morphology Predict Regenerative Outcome of Mandibular Class II Furcations. G.M. BOWERS, R.G. SCHALLHORN, P.K. McCLAIN, G.M. MORRISON, R. MORGAN, A. SALAMA, and M.A. REYNOLDS* (University of Maryland Dental School, Baltimore; and Aurora, CO, USA).

1321  9:00  GTR in Intrabony Defects Using a New Bioreabsorbable Polydioxanon Membrane. M. CHRISTGAU*, N. BADER, G. SCHMALZ, K.-A. HILLER, and A. WENZEL (Dental School, University of Regensburg, Germany; Department of Stomatology/Periodontics, University of Texas-Houston, USA; and Royal Dental College, University of Aarhus, Denmark).

1322  9:15  Histological Evaluation of the Treatments of Intrabony Defects with a Bioreabsorbable Membrane in Humans. A. SCULEAN, N. DONOS, P. WINDISCH, E. REICH, and T. KARRING* (Department of Periodontology, University of Saarland, Germany; Department of Periodontology, University of Aarhus, Denmark; and Semmelweis University of Medicine, Hungary).

1323  9:30  Proximal Human Bony Defect Response to GTR with Absorbable Collagen Membrane. C.N. YUKNA* and R.A. YUKNA (Creative Dental Concepts and Louisiana State University School of Dentistry, New Orleans, USA).

1324  9:45  Digital Image Analysis in the Evaluation of Tissue Changes during Guided Tissue Regeneration (GTR). I. FOURMOUSIS*, E. PEPELASSI, A. DIAMANTÍ-KIPIOTÍ, U. BRÄGGER, and N.P. LANG (School of Dental Medicine, University of Berne, Switzerland).

1325  10:00  Evaluation of a New Biodegradable Barrier for Recession Therapy. K. JEPSEN*, B. HEINZ, M. ARJOMAND, and S. JEPSEN (School of Dentistry, University of Kiel, Germany).

1326  10:15  GTR with Bioabsorbable Membrane in the Treatment of Human Gingival Recession Defects. L. TROMBEGLI*, A. SCABBIA, D.N. TATAKIS, and G. CALURA (University of Ferrara, Italy; and Loma Linda University, CA, USA).

1327  10:30  The Effects of Titanium-reinforced GTR Barriers on Periodontal Wound Healing. S. KARATZAS*, L. GANDINI, A.I. ZAVRAS, S. HASSETT, P. RAGUSA, and J. CATON (Eastman Dental Center, Rochester, NY; and Boston University, MA, USA).

10:45  Discussion

Seq#: 129  Friday, June 26, 8:30 am - 11:15 am
Oral Session, Room C12

Prosthodontics - Post and Core, Impression Materials, RPD

Chairpersons:  S. Rinke and S. Pamuk

1329 8:45 Fracture Resistance of Crowned Teeth in Relation to Post Length and Ferrule Length. F. ISIDOR*, K. BRØNDUM, and G. RAVNHOLT (Department of Prosthetic Dentistry and Stomatognathic Physiology, Royal Dental College, University of Aarhus, Denmark).


1331 9:15 Retention of Cemented Prefabricated Posts with and without Thermocycling. J.D. UTTER*, B.H. MILLER, B. WONG, and J.P. FORD (Baylor College of Dentistry-TAMUS, Dallas, TX, USA).

1332 9:30 The Shear Bond Strength of Various Core Materials with Panavia and Dentin Pins. D. ŞEN, E. PAMUK*, and S. PAMUK (Faculty of Dentistry, University of Istanbul, Turkey).


1334 10:00 Teaching How to Take Alginate Impressions. A Neglected Subject. R. SPARENBURG, C. de BAAT*, and J.F.A. VAN ELSWIJK (University of Nijmegen, The Netherlands).

1335 10:15 Accuracy of Impressions Attainable in vivo. B. WÖSTMANN*, A. KRAFT, and P. FERGER (Department of Prosthodontics, Dental Clinic, Justus-Liebig-University, Giessen, Germany).

1336 10:30 Effect of Moisture on the Quality of Crown and Bridge Impressions. G.H. JOHNSON*, X. LEPE, and J.C. BERG (Restorative Dentistry and Chemical Engineering, University of Washington, Seattle, USA).

1337 10:45 Study of the Quality of Ni-Ti Removable Partial Dentures. J. SABRIA, O. RUSTULLET, and D. LLOMBART* (Faculty of Odontology, University of Barcelona, Spain).

1338 11:00 Changes of Surface Roughness and Attractive Force of Magnetic Attachment. H. MIZUTANI*, N. OKANO, K. NAKAMURĂ, and M. AI (Department of Prosthodontics, Tokyo Medical and Dental University, Japan).

Seq#: 130 Friday, June 26, 8:30 am - 11:15 am
Oral Session, Room A12

Pulp Biology - Pulpal Inflammatory Responses and Microbiology

Chairpersons: G.R. Holland and L.G. Levin

1339 8:30 Neural and Inflammatory Changes in the Injured Dog Dental Pulp. G.R. HOLLAND*, S.M. AL-HADLAQ, M. NÄRHI, and P. LANDRY (University of Michigan, Ann Arbor, USA; and University of Kuopio, Finland).


1341 9:00 In vivo Detection of Immunoreactive Bradykinin in Rat Dental Pulp. H.E. GOODIS*, W.R. BOWLES, and K.M. HARGREAVES (University of California, San Francisco; University of Minnesota, MN; and University of Texas HSCSA, San Antonio, USA).

1342 9:15 Modulation of Dental Pulp Adhesion Molecule Expression in Organ Culture. L.J. WALSH*, Z. PUJIC, N.W. SAVAGE, and P.M. BARTOLD (School of Dentistry, The University of Queensland, Brisbane, Australia).

1343 9:30 Increased Periapical Bone Destruction in P- and E-selectin-deficient Mice. N. KAWASHIMA*, R. NIEDERMAN, R.O. HYNES, and P. STASHENKO (Department of Cytokine Biology, Forsyth Dental Center; and Department of Biology, MIT, USA).
Expression of HSF1 and HSF2 by Human Odontoblasts Exposed to LPS. L.G. LEVIN*, S. CONRAD, and M. TROPE (School of Dentistry, University of North Carolina, Chapel Hill, USA).

Immunocompetent Cells in Rat Molar Teeth Restored with 4META/MMA-TBB Resin. A.M.M. KAMAL*, T. OKIJI, and H. SUDA (Department of Endodontics, Tokyo Medical & Dental University, Japan).


Whole Genomic DNA Probe for Detection of Porphyromonas endodontalis. R. NISSAN*, S.R. MAKKAR, M.N. SELA, and R. STEVENS (Department of Endodontics, Temple University, Philadelphia, PA, USA; and Department of Oral Biology, Hadassah School of Dentistry, Hebrew University, Jerusalem, Israel).

Clonality of Porphyromonas gingivalis or Prevotella nigrescens Isolated from Endodontic Infections and Subgingival Plaque. R.B. GONÇALVES* and C. MOUTON (Université Laval, Québec, Canada; and FOP/UNICAMP, Brazil).

Deciduous Teeth Pulp-capping—Three-year Study. M. HADZI-MIHAILOVIC* and D. MARKOVIC (University of Stomatology, Belgrade, Yugoslavia).

Pulp Responses of Direct Capped Exposures at 6 and 7 Months in Monkeys. B. TARIM*, A.A. HAFEZ, N. AKIMOTO, S. IMAZATO, and C.F. COX (Dental School, University of Alabama, Birmingham, USA; Istanbul University, Turkey; and Tsurumi and Osaka Universities, Japan).

Pulpotomy Reconsidered: Regional Cell Alteration in Exposed Pulps. J.C. MILLS*, A.A. HAFEZ, B. TARIM, N. AKIMOTO, S. IMAZATO, and C.F. COX (School of Dentistry, University of Alabama, Birmingham, USA; Istanbul University, Turkey; and Tsurumi & Osaka Universities, Japan).

Ferric Sulfate, Glutaraldehyde, and Formocresol Pulpotomies in Primary Teeth. O. AKTÖREN* (Faculty of Dentistry, University of Istanbul, Turkey).

Pulp Reactions to Restoration of Crown Fractures Using Either Dentin Bonding and the Original Fragment or Restoration with a Composite Resin. Experimental Study in Monkeys. A. ROBERTSON*, F.M. ANDREASEN, G. BERGENHOLTZ, J.O. ANDREASEN, and C. MUNKSGAARD (Faculty of Odontology, Göteborg University, Sweden; and University Hospital (Rigshospitalet) and Dental School, Copenhagen, Denmark).

In vitro Evaluation of Antimicrobial Effectiveness of Intracanal Dressings. C. ESTRELA, F.C. PIMENTA, I.Y. ITO, and L.L. BAMMANN* (UFG Goiânia, GO; USP, Ribeirão Preto, SP; and UFPEL, Pelotas, RS, Brazil).

Canal Cleaning Using Files of Greater Taper. P.J. LUMLEY* (School of Dentistry, The University of Birmingham, St. Chad's Queensway, UK).

Sealing Ability of Root Canal Retrograde Filling Materials. J.R. HENRY, C.Q. LEE*, and C.M. COBB (School of Dentistry, University of Missouri-Kansas City, MO, USA).

SEM of Hand vs. Non-instrumentation Using Two Root Cleansing Solutions. A.A. HAFEZ*, J. KAMBURIS, A.H. HAFEZ, B. TARIM, J.C. MILLS, and C.F. COX (School of Dentistry, University of Alabama, Birmingham, USA; Jordan University, Amman; and Istanbul University, Turkey).

Laser Tomography of the Extracted Human Teeth Using the Laser Light Sources. H. ISHIHATA*, M. ENÔMOTO, T. SUZUKI, H. ENDO, B. DEVARÂJ, M. USA, H. INABA, and H. HORIUCHI (Tohoku University School of Dentistry, Sendai; Tohoku Institute of Technology; and Biophotonics Information Labs., Japan).

Endodontic Morphology of Mandibular First Molars in Malay People. N.A. SOHARI and K. FOX* (Division of Restorative Dentistry, Leeds Dental Institute, Leeds University, UK).


Aging in the Pulpo-Dentinal Complex in Dog Teeth. D.G. BEARD* and D.K. WHITTAKER (Department of Basic Dental Science, Dental School, Cardiff, UK).


Marginal Fitting of CEREC II Crowns and Frameworks. H.-J. FROBENIUS*, H. CLAAS, S. RINKE, and A. HÜLS (Department of Prosthodontics, University of Göttingen, Germany).

Effects of Burs with Guide Bar on the Hard Tissue. K. BOENING*, K. KAESTNER, and M. WALTER (Department of Prosthetic Dentistry, Technical University of Dresden, Germany).

Basic Crown Models Used in the CAD System for Prosthetic Restorations. H. AITA*, Y. UEDA, K. HIKITA, T. YORIMOTO, and N. OHATA (Department of Crown & Bridge Prosthodontics, Hokkaido University, Sapporo, Japan).

Tensile Bond Strength of Four Porcelain Systems Luted to Dentin. O. EFSTRATOPOULOU*, P. YAMAN, M.E. RAZZOOG, and J.B. DENNISON (School of Dentistry, University of Michigan, Ann Arbor, MI).

Seven-year Results of Leucite-reinforced Glass-Ceramic Crowns. C. LEHNER*, S. STUDER, and P. SCHÄRER (Centers for Dental Medicine, Universities of Basel and Zürich, Switzerland).

Marginal Fidelity of Copy-milled and CAD-CAM All-ceramic Crowns. C. WOLF*, H. CLAAS, A. HULS, S.M. JEONG, and S. RINKE (University of Göttingen, Germany; and Chosun University, Kwang-ju, Korea).

Marginal Accuracy of Different All-ceramic Crown Systems after Simulation in the Artificial Mouth. S.M. BESCHNIDT* and J.R. STRUB (Department of Prosthodontics, Albert-Ludwigs-University, Freiburg, Germany).

Effect of Processing Temperature on the Flexural Strength of a Pressable Dental Ceramic. L.A. TARR*, I.L. DENRY, J.A. HOLLOWAY, and A.G. GEGAUFF (The Ohio State University, Columbus, USA).

Bonded Posterior Etched Porcelain Onlays: Two-year Clinical Evaluation. N. BARGHI*, T.G. BERRY, and D.C.N. CHAN (Department of Restorative Dentistry, The University of Texas Health Science Center at San Antonio, USA).
Fracture Strength and Failure Mode for Different Ceramic Veneer Designs. J. CASTELNUOVO*, A.H.L. TJAN, K. PHILLIPS, J.I. NICHOLLS, and J.C. KOIS (University of Washington School of Dentistry, Seattle; and Loma Linda University School of Dentistry, CA, USA).

Clinical Performance of Porcelain Inlays and Partial Veneer Crowns. T. GHARAIBEH*, M.D. RUSSELL, and R. STRANG (School of Clinical Dentistry, Queen's University of Belfast; and University of Glasgow, UK).

Seven-year Results of Leucite-reinforced Glass-Ceramic Inlays and Onlays. S. STUDER, C. LEHNER, and P. SCHÄRER* (Centers for Dental Medicine, Universities of Basel and Zürich, Switzerland).

Fracture Behavior of All-composite and Composite-veneered Ceramic Crowns. S. INO*, A. MEHL, R. HICKEL, D. KIKUTA, and T. FUJITA (Department of Cr&Br Prosthetic Dentistry, KDC, Yokosuka, Japan; and Department of Operative Dentistry, LMU, Munich, Germany).


Visual Detection of Color Differences between Composite Resin Materials. J.C. RAGAIN, W.M. JOHNSTON, and M. RAJ* (The Ohio State University College of Dentistry, Columbus, USA).


Transformation of Color Parameters during an Imaging Procedure. E.A. TASHKANDI* and W.J. O’BRIEN (University of Michigan School of Dentistry, Ann Arbor, USA).


Shade Matching with the Use of the Intra-oral Camera. E. KOUKOPOULOU*, P. YAMAN, J.B. DENNISON, and M.E. RAZZOOG (School of Dentistry, University of Michigan, Ann Arbor, USA).


Effect of Improved Crystal Bonding on Cutting Efficiency of Diamond Burs. S.C. MASCELLANI*, P. BALDISSARA, and R. SCOTTI (Department of Prosthodontics, University of Bologna, Italy).

SEM Evaluation of Diamond Particle Distribution on Different Burs. M.F. LAND*, S.R. SCHLUETER, C.C. THOMAS, and J.C. MARKT (School of Dental Medicine, Southern Illinois University, Alton, USA).

An Assessment of Finishing Methods on the Cavosurface Margins. M. COUTINHO*, E.B. FRANCO, A. ISHIKIRIAMA, and M.F.L. NAVARRO (Bauru Dental School, University of São Paulo, Brazil).

Marginal Adaptation of Temporary Crowns in Different Polymerizing Conditions. M. TANAKA*, T. OGAWA, S. AIZAWA, K. SUMIYOSHI, and K. KOYANO (Department of Removable Prosthodontics, Kyushu University, Fukuoka, Japan).
Clinically Adjusted Occlusal Height and Patients' Bite Feelings. S. AIZAWA*, T. OGAWA, M. TANAKA, and K. KOYANO (Department of Removable Prosthodontics, Kyushu University, Fukuoka, Japan).

Antibacterial Activity of a Resin: A Qualitative Study. M. CAPPELLI*, G. ALBERGO, L. CASOLARI, F. SAMPALMÆRI, and G. FURORE (Dental Materials Department, University of Ancona, Italy).

Relationships between Luminosity and Thickness of Impression Material. A. SHINYA*, J. OSAWA, T. SUGANUMA, R. FURUYA, and T. KAWAWA (Department of Fixed Prosthodontics, Showa University School of Dentistry, Tokyo, Japan).

Dentin Bond Strengths of Disinfected/Sterilized Teeth Aged Dry. J.P. DeWALD* and H. NAKAJIMA (Baylor College of Dentistry, Dallas, TX, USA; and School of Dentistry, Meikai University, Sakado, Saitama, Japan).

Tooth Movement Following Composite Resin Restoration at Increased Vertical Dimension. S.J. WATKINS*, K.W. HEMMINGS, and D.J. SETCHELL (Eastman Dental Institute and Hospital, London, UK).

Change of Intercondylar Distance during Clenching. T. SUGANUMA*, A. SHINYA, R. FURUYA, T. KAWAWA, T. SANO, and T. OKANO (Fixed Prosthodontics and Oral Radiology, Showa University School of Dentistry, Tokyo, Japan).

Studies on Accuracy of Mandibular Movement Measuring System “CONDYLOCOMP LR3”. H. AIZAWA*, T. MOTOKI, S. MIYAMAE, Y. TANAKA, and K. HIRÅNUMA (The First Department of Prosthodontics, Aichi-Gakuin University, Nagoya, Japan).

Influence of the Occlusal Position on Habitual Closure. K. FUEKI*, M. AI, and K. BABA (First Department of Prosthodontics, Faculty of Dentistry, Tokyo Medical and Dental University, Japan).

Diazepam’s Effect on the Reproducibility of Mandibular Border Movements. C. LEKNIUS and I. VAN ZYL* (University of the Pacific School of Dentistry, San Francisco, CA, USA).

TMJ Vibration Transmission in Various Jaw Positions. K. HASHIMOTO* and G.T. CLARK (Aichi-Gakuin University School of Dentistry, Nagoya, Japan; and UCLA School of Dentistry, Los Angeles, CA, USA).

Changes of EEG Topography by Cranio-mandibular Function. K. RYUMON*, O. YAMAMURA, M. MIYAO, T. NAGASAWA, and T. FUJII (Tsuyama Central Hospital, Okayama; and Asahi University, Gifu, Japan).

Relationship between Condylar Movement and Gothic Arch Tracing Path. H. SHIGA*, J. INABA, and Y. KOBAYASHI (The Nippon Dental University, Tokyo, Japan).

Study of Mandibular Arch Width Changes during Mandibular Movement. Y. ONO*, K. HARA, K. HASEGAWA, and Y. GONDA (First Department of Prosthodontics, Osaka Dental University, Japan).

Comparison of Mandibular Condyle Movement between Chewing and Border Movement. T. ASANO*, O. KOMIYAMA, M. KAWARA, M. ARAI, and K. KOBAYASHI (Nihon University School of Dentistry at Matsudo, Chiba, Japan).

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<td>Influence of Occlusal Support and Muscle Activity on Condyle Displacement during Clenching.</td>
<td>M. ARAI*, O. KOMIYAMA, M. KAWARA, and K. KOBUYASHI (Niño University School of Dentistry at Matsudo, Chiba, Japan).</td>
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<td>1405</td>
<td>Influence of Preparation Measures on Resin-bonded Bridge Survival—A Bi-center Study.</td>
<td>B. PRÖBSTER and L. PRÖBSTER* (University of Mainz and University of Tübingen, Germany).</td>
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<td>M.A. GEORGESCU* (NYU Kriser Dental Center, New York, NY, USA).</td>
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<td>Microleakage of Inlays Fixed with Three Different Luting Agents.</td>
<td>R.F. PINHEIRO*, M.H.S. SOUZA, Jr., W.C. LIMA, and E.M. SOUZA (Bauru Dental School, University of São Paulo; and Gama Filho University School of Dentistry, Brazil).</td>
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<td>In vitro Assessment of Microleakage for Two Orthodontic Band Cements.</td>
<td>T.J. GILLGRASS*, D.T. MILLETT, and S.L. CREANOR (University of Glasgow Dental School, UK).</td>
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Marginal Leakage of Class V Compomer Overlaid with Composite Resin. G.M. VALENCIA-RAVE*, A.H.L. TJAN, and C.A. MUNOZ-VIVEROS (Loma Linda University School of Dentistry, CA, USA).


Newly Designed Self-etching Sealant with Improved Performance for Clinical Usage. K. MATSUNAGA*, M. TANAKA, and Y. KADOMA (Tokyo Medical and Dental University, Japan).

Effect of Acid-etching and Collagen Removal on Dentin Wettability and Roughness. M. TOLEDANO*, R. OSORIO, J. PERDIGÁO, J.I. ROSALES, M.A. CABRERIZO, and J.Y. THOMPSON (University of Granada, Spain; and University of North Carolina, Chapel Hill, USA).

An AFM/SEM Study of Acid-etched and Deproteinized Dentin in Function of Depth. J. PERDIGÁO, J.Y. THOMPSON, R. OSORIO*, M. TOLEDANO, J.I. ROSALES, and M.A. CABRERIZO (University of North Carolina, Chapel Hill, USA; and University of Granada, Spain).


Dentin Surface Structure Investigated with Tapping Mode Atomic Force Microscopy. N. SILIKAS*, D.C. WATTS, K.E.R. ENGLAND, and K.D. JANDT (University of Manchester Dental School and University of Bristol, UK).

Surface Roughness of Enamel and Dentin Surfaces Prepared with Different Dental Burs. W.M. Al-OMARI*, C.A. MITCHELL, and J.L. CUNNINGHAM (Department of Restorative Dentistry, School of Clinical Dentistry, The Queen’s University of Belfast, Northern Ireland).

Relation of Acid Concentrations and Application Times on Dentin Surface Morphology. K.-W. LEE* and H. SON (Department of Conservative Dentistry, Chonbuk National University; and Seoul National University, Korea).

Influence of Surface Treatment on the Adhesive/Dentin Interface Studied with Raman Spectroscopy. R. LEMOR*, D.M. WIELICZKA, P. SPENCER, and M.B. KRUGER (UMKC Physics Department and School of Dentistry, Kansas City, MO, USA).

The Influence of the Hybrid Layer Formation and Dentin Desiccation on the Bond Strength of a Fourth-generation Dentin Adhesive. J.S. BOCANGEL*, A.R. SILVA, A. BOZZO, and E. MATSON (São Paulo Dental School, University of São Paulo, Dept. of Operative Dentistry, Brazil).

Smear Layer and Adhesion of Compomer Bonding Systems. C. PRATI, S. CHERSONI*, M. TOLEDANO, G. GORACCI, F. GARCIA-GODOY, and R. MONGIORGI (Universities of Bologna and Rome, Italy; University of Granada, Spain; and University of Texas, San Antonio, USA).

SEM Observation of Hybrid Layer in Deciduous and Permanent Teeth with Two One-bottle Adhesives. A. DEL GIUDICE*, D. BRAIT, M. CALABRESE, G. VANIN, and P.N. MASON (Department of Restorative Dentistry, Dental School, University of Padova, Italy).

In vivo Nano-indentation Evaluation through the Resin-Dentin Bonded Interface. N. AKIMOTO*, G. YOKOYAMA, K. OHMORI, A. KOHNO, S. SUZUKI, and C.F. COX (Tsurumi University, Yokohama, Japan; and University of Alabama-Birmingham, USA).

Observation of the Resin-Dentin Interface Using CLSM. T. MASEKI*, S. SUDA, C. OKUYAMA, Y. NARA, H. TANAKA, and I.L. DOGON (Nippon Dental University, Tokyo, Japan; and Forsyth Dental Center, Harvard School of Dental Medicine, Boston, MA, USA).

Interfacial Observation between Resin and Caries-affected Dentin. J. SUGIZAKI* and T. YAMADA (Toranomon Hospital Dental Clinic, Tokyo Medical and Dental University, Japan).


Effects of Varnish on Biocompatibility of Resin-modified Glass-ionomer Cements. Y. HASHIMOTO* and M. NAKAMURA (Department of Biomaterials, Osaka Dental University, Japan).

Assessment of Application of Bis-eugenol to a ZOE Cement. Y. KASHIWAGI*, T. ATSUMI, I. KAMIYANAGI, T. UEHA, and S. FUJISAWA (Meikai University School of Dentistry, Sakado, Saitama, Japan).


Cytotoxicity of Resin-modified Glass-ionomer Cements. R.C.S. CHEN*, L.R. CHIOU, and K.H. CHEN (Department of Dentistry, China Medical College, Taichung; and Chang Gung Hospital, Taipei, Taiwan, ROC).

Experimental Glass-ionomer Cements Based on the Bioactive Glass. S. MATSUYA*, Y. MATSUYA, and M. OHTA (Faculty of Dentistry, Kyushu University, Fukuoka, Japan).


Calcium Phosphate Cement Made from Tricalcium Phosphate and Phytic Acid. Y. HIBINO*, Y. AKAIWA, and H. NAKAJIMA (School of Dentistry, Meikai University, Sakado, Saitama, Japan).

A Hydroxyapatite-forming Polymeric Calcium Phosphate Cement. Y. MATSUYA*, S. MATSUYA, J.M. ANTONUCCI, S. TAKAGI, L.C. CHOW, and A. AKAMINE (Faculty of Dentistry, Kyushu University, Fukuoka, Japan; NIST, Gaithersburg, MD; and ADAHF, PRC, Gaithersburg, MD, USA).

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1448 Comparison of Fluoride Release from Five Conventional Glass-ionomer Cements. N. Koutsouri*, A. Gilmour, S. Bryant, and P.M.H. Dummer (Department of Adult Dental Health, University of Wales College of Medicine, Cardiff, UK).

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1450 Fluoride Release and Recharge from a Novel Polymorphonate (Ionomer) Cement. N. Koutsouri, A. Gilmour, A. Akinmade, S. Bryant*, and P.M.H. Dummer (Department of Adult Dental Health, University of Wales College of Medicine, Cardiff, UK).

1451 Correlation between Fluoride Content and Release in Glass-ionomer Cements. N. Koutsouri, A. Gilmour*, A. Akinmade, S. Bryant, and P.M.H. Dummer (Department of Adult Dental Health, University of Wales College of Medicine, Cardiff, UK).

1452 Marginal Adaptation of High-viscosity Glass Ionomers in Enamel Margins. M. Irie*, T. Yamada, and H. Nakai (Okayama University; Toranomon Hospital, Tokyo; and Okayama, Japan).

1453 Microleakage of Ceramic Inlays Using Different Types of Luting Materials. R. Lang*, A. Leibrock, M. Behr, M. Roentritt, and G. Handel (Department of Prosthetic Dentistry, University of Regensburg, Germany).

1454 The Seating Discrepancy of a Post and Core Using 5 Luting Agents. D.A. Blackwell, A. McDonald*, G. Robertson, and D.J. Setchell (Eastman Dental Hospital and Institute, London, UK).


1458 Fluoride Release from Restorative Materials Treated with Topical Fluorides. E. Glockmann*, B. Sigusch, K. Triemer, and C. Gehroldt (Department of Conservative Dentistry, University of Jena, Germany).

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1459 Influence of the Adhered and Free Surface and the Temperature on the Prediction of the Polymerization Contraction Stress of a Composite Resin. J.C. de la Macorra* and A. Miguel (Department of Restorative Dentistry, Complutense University, Madrid, Spain).
1460  Bond Strength of Compomer to Contaminated Dentin. L.B. ROEDER*, C. YOU, and J.M. POWERS (Houston Biomaterials Research Center, UT-Houston Dental Branch, TX, USA).

1461  Dentin Bond Strength of Compomers. C. PRADO*, I. SOLER, R. TRIANA, N. MINGUEZ, J. ELLACURIA, and F. GARcía-GODoy (U. del Pais Vasco, Bilbao, Spain; and University of Texas HSC at San Antonio, USA).

1462  Shear Bond Strength of Restorative Materials to Deciduous and Permanent Dentin. R. SChILKE, S. BORNEMANN*, J.A. LISSON, and W. GUERTSEN (Departments of Conservative Dentistry & Periodontology, and Orofacial Orthopedics, Medical University, Hannover, Germany).


1464  Effect of Hybrid Glass Ionomer on Polymerization Shrinkage of Composites. K. TOLIDIS, A. NOBECOURT*, and R.C. RANDALL (University of Thessaloniki, Greece; and Laboratoires 3M Santé, France).

1465  The Effect of Surface Treatment of Ionomer Cements on Shear Bond Strength to Composite Resin. M.T.A.A. BASTOS* and R.O. FOLKIS (University of the Sacred Heart, Bauru; and Hospital of Research and Rehabilitation of Cleft Palate, University of São Paulo, Brazil).

1466  Surface Treatment Effects on Bond Strength of Vitremer to Z-100. S.L. SANTIAGO*, R.M. CARVALHO, and D.H. PASHLEY (UF Ceará and FOB USP, Brazil; and Medical College of Georgia, Augusta, USA).


1470  Bond Strength of Resin Cement to Polyglass and Ceramic Materials. K.L. O’KEEFE*, D.F. LI, K. NOAMAN, and J.M. POWERS (Houston Biomaterials Research Center, TX, USA).

1471  Effect of Metal Surface Treatments on Bonding to Resin. Y.J. CHANG*, H.J. LEE, M.J. KIM, Y.H. WOO, D.M. KIM, B.S. LIM, and C.W. KIM (College of Dentistry, Seoul National University, Korea; School of Dentistry, Tufts University, Boston, MA; and School of Dentistry, University of Maryland, Baltimore, USA).

1472  Tensile Strength of Metal to New Crown and Bridge Composites. O. LOEFFEL*, H. LÜTHY, and P. SCHÄRER (Center for Dental and Oral Medicine, University of Zürich, Switzerland).

1473  Pin-on-Disc Abrasion—Results from Composites and Compomers. A. PETSCHELT*, J. SINDEL, and M. PELKA (Policlinic for Operative Dentistry, University of Erlangen-Nürnberg, Germany).

1474  The Bonding Strength Study of Composite Bracket Bonded to Porcelain Surface. C.T. KAO*, T.H. HUANG, and M.-Y. CHOU (Orthodontic Department, Chung Shan Medical and Dental College, Taichung, Taiwan, ROC).

1475  Effect of Silane Treatment on the Shear Bond Strength of Composite Resin and Dental Casting Alloys. D.Y. CHO*, B.S. LIM, and C.W. KIM (Department of Dental Biomaterials, College of Dentistry, Seoul National University, Korea).
**Evaluation of Bonding Enamel/Composite with Fresh and Old TiF4 Solutions.** A.P. MORAIS*, L.P. BITTENCOURT, L.M. CHEVITARESE, D.S. VAITSMAN, I.P.R. SOUZA, and O. CHEVITARESÉ (School of Dentistry, IQ-UFRJ, Rio de Janeiro, Brazil).

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**Dental Materials - Polymers—Biocompatibility, Marginal Adaptation, and Crown and Bridge Materials**

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Compositional Drift during the Copolymerization of Dental Resins. J.W. STANSBURY*, S.H. DICKENS, and C.A. KHATRI (NIST, Gaithersburg, MD; and American Dental Association Health Foundation/Paffenbarger Research Center at NIST, USA).

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A Homogeneous Microfill Composite with Superior Properties. C. ANGELETAKIS* and E. SHELLARD (Kerr Corporation, Orange, CA, USA).

Ceramic Whisker Reinforcement of Dental Composite Resins. H.H.K. XU, F.C. EICHMILLER*, J.M. ANTONUCCI, and G.E. SCHUMACHER (ADAHF, Paffenbarger Research Center; and NIST, Gaithersburg, MD, USA).

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Effects of Polyacids on Fluoride Release from Glass-ionomer Cements. H. ULUKAPI, Y. BENDERLI*, M. SOYMAN, and P. HATTON (Istanbul University, Faculty of Dentistry, Department of Conservative Dentistry, Turkey).

Influence of Brushing on Fluoride Release of Polyacid-modified Composites. S. PLOGMANN*, T. ATTIN, K. AMELING, and E. HELWIG (Department of Operative Dentistry and Periodontology, University of Freiburg, Germany).

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New Fluoride-ion-releasing Composite Resin. H. YARIMIZU*, H. SATO, S. AKAHANE, and K. HIROTA (R&D Department, GC Corporation, Tokyo, Japan).

Er:YAG Laser Irradiation Effect on Acid Resistance of Human Enamel. A. SUZAKI*, N. ARIMOTO, M. IRINODA, K. SAKUMA, A. GOMI, and A. SENDA (Department of Operative Dentistry, School of Dentistry, Aichi-Gakuin University, Nagoya, Japan).

Temperature Elevation during Er:YAG Laser Ablation of Dentin. V. ARMENGOL*, A. JEAN, P. WEISS, and D. MARION (Faculté de Chirurgie Dentaire, Nantes, France).

Characteristic Changes of Human Dentin Relative to Heat Energy. N. ARIMOTO*, A. SUZAKI, and A. SENDA (Department of Operative Dentistry, School of Dentistry, Aichi-Gakuin University, Nagoya, Japan).


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Fluorescence of Different Dental Materials in a Laser Diagnostic System. E. REICH*, F. AL MARRAWI, C. LONGBOTTOM, and A. LUSSI (University of the Saarland, Homburg, Germany; University of Dundee, UK; and University of Berne, Switzerland).
Comparative Study of the Corrosion Behavior of Orthodontic NiTi Wires. R. VANDENKERCKHOVE*, E. TEMMERMAN, and R.M.H. VERBEECK (Department of Analytical Chemistry and Department of Dental Materials Science, University of Ghent, Belgium).


Shear Bond Strength of Orthodontic Brackets to Porcelain. L. JARDIM, P. MARQUES*, L. LOPES, and J. LEITÃO (School of Dentistry, University of Lisbon, Portugal).

Biomechanics of the Multiloop Edgewise Archwire for Open Bite Case. S. MATSUI*, A.A. CAPUTO, S. HAYASHI, K. KATAYAMA, and H. KIYOMURA (School of Dentistry, Meikai University, Saitama, Japan; and School of Dentistry, UCLA, Los Angeles, CA, USA).

Utility of Shape Memory Orthodontic Wire. M. FURUYA*, K. YAMADA, H. KAKIGAWA, and Y. KOZONO (Kyushu Dental College, Kitakyushu, Japan).

Setting Characteristics of Silicone Rubber Impression Materials by Experimental Automixer. K. ARAI*, T. SUZUKI, and H. HISAMITSU (Meikai University, Saitama; and Showa University, Tokyo, Japan).

Retention Force of Perforated Metal Trays to Alginate Impression Materials. H. UCHIDA* and H. HABU (Nihon University School of Dentistry, Tokyo, Japan).

Effects of ROTOMIX on the Shear Punch Strength of Glass-ionomer Cements. G.J. MOUNT, H. NGO, and R. RICHTER* (Department of Dentistry, University of Adelaide, Australia; and Clinical Research, ESPE, Germany).

Porosity Reduction in Encapsulated Glass-ionomer and Composite Resin Materials. A. JAEGER*, C.-P. ERNST, and B. WILLERSHAUSEN (Department of Restorative Dentistry and Periodontology, Johannes Gutenberg University, Mainz, Germany).

A New Method to Mix Encapsulated Dental Materials. O. SCHÄFER*, R. RICHTER, and E. WINTER (ESPE Dental-Medizin, Seefeld, Germany).


Effect of Microwave Drying on the Strength of Gypsum Materials. N. HERSEK, Ç. CANAY, Y. ÇIFTÇİ, and K. AKÇA* (Department of Prosthodontics, Hacettepe University Faculty of Dentistry, Ankara, Turkey).


Effects of 3% Hydrogen Peroxide Solution on Human Enamel and Restorative Materials. T. TOKO*, Y. SAITO, N. KAMIYAMA, R. KIYOSUZUKI, and H. HISAMITSU (Department of Operative Dentistry, Showa University, Tokyo, Japan).

National Reporting of Adverse Reactions to Dental Materials. The Norwegian Registry. N.R. GJERDET* and E. ASKEVOLD (Dental Biomaterials Adverse Reaction Unit, University of Bergen, Norway).

Biocompatibility Testing of Two Alginate Impression Materials. S. PONSE*, M.A. ARAIZA, C. ROMAN, and G. JIMÉNEZ (Fac. de Odontología, UNAM, Mexico).

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Bisphenol A Content of Resin Monomers and Degradation Products. G. SCHMALZ, A. PREISS*, and D. ARENHOLT-BINDSLEV (University of Regensburg and ESPE Company, Seefeld, Germany; and University of Aarhus, Denmark).


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Biocompatibility of Orthodontic Wires—In vitro Assessment by MTT Test and Corrosion Test. E. ROSE*, I. JONAS, and H.F. KAPPERT (Department of Orthodontics and Department of Experimental Dentistry, School of Dental Medicine, University of Freiburg, Germany).

Optical Coherence Tomography: A Novel Assessment of Coronal Restorations. L.L. OTIS*, M.J. EVERETT, and B.W. COLSTON (University of Connecticut School of Dental Medicine, Farmington; and Lawrence Livermore National Laboratory, CA, USA).

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Automatic Thresholding in Plaque Assessment. M.R. PINTADO*, C.C. KO, and W.H. DOUGLAS (Minnesota Dental Research Center for Biomaterials and Biomechanics, Department of Oral Science, University of Minnesota School of Dentistry, Minneapolis, USA).

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Predicting Cavitated or Filled Occlusal Lesions Using the Electronic Caries Monitor. P.F. ASHLEY*, A.S. BLINKHORN, R.P. ELLWOOD, and R.M. DAVIES (Dental Health Unit, University of Manchester, UK).

Application of Strain Gauge for Bruxism Detection. K. BABA*, K. FUEKI, S. AKISHIGE, T. HAKETA, M. AI, and G.T. CLARK (The First Department of Prosthodontics, Tokyo Medical and Dental University, Japan; and Diagnostic Sciences and Orofacial Pain, UCLA School of Dentistry, Los Angeles, CA, USA).


New in situ Zymography for Matrix Metalloproteinase. I. HASEGAWA*, T. TACHIKAWA, T. TAMURA, Y. TAMURA, J. NISHIGAKI, and K. HASEGAWA (Department of Periodontics and Oral Pathology, Showa University Dental School, Tokyo; and Ashigara Research Lab., Fuji Photo Film Co., Ltd., Kanagawa, Japan).

Three-dimensional Measuring of the Dental Study Cast. K. USUI*, S. MATAKI, and N. KUROSAKI (Department of Oral Diagnosis and General Dentistry, Tokyo Medical and Dental University, Japan).


Dentists’ Practices Regarding Oral Cancer Prevention and Early Detection. A.M. HOROWITZ*, H.S. GOODMAN, J.A. YELLOWITZ, and T.F. DRURY (NIDR/NIH, Bethesda, MD; and University of Maryland Dental School, Baltimore, USA).

Treatment Costs for Oral and Pharyngeal Cancer in VA Hospitals. R. ADELSON*, D.J. FEDELE, and C.W. DOUGLASS (Department of Veterans Affairs, Minneapolis, MN, and Perry Point, MD; and Harvard School of Dental Medicine, Boston, MA, USA).

Development of a Polish Patient Information Leaflet on Oral Cancer. A. RACZKOWSKA*, B. POGORZELSKA-STRONCZAK, T. CIESLIK, and J.M. ZAKRZEWSKA (Department of Max-Fac. Surgery, Silesian Medical Academy, Zabrze, Poland; and Department of Oral Medicine, St. Bartholomew’s and Royal London School of Medicine and Dentistry, UK).

Dental Hygienists’ Knowledge, Opinions, and Practices Related to Oral Cancer. J.L. FORREST*, A.M. HOROWITZ, and Y. SHMUELY (Thomas Jefferson University, Philadelphia, PA; and NIDR/NIH, Bethesda, MD, USA).
1560 Veterans Oral Cancer Knowledge, Risky Behaviors, and Dental Services Utilization. M.T. CANTO*, A.M. HOROWITZ, H.S. GOODMAN, M.R. WATSON, L.A. COHEN, and D.J. FEDELE (VAMHCS, Perry Point; NIDR/NIH, Bethesda; DHMH, Baltimore; UM Baltimore College of Dental Surgery; and VAMHCS, Perry Point, MD, USA).


1562 Oral Mucosa in Workers Exposed to Harmful Factors in Working Environment. A. KURHA´NSKA-FLISYKOWSKA*, M. BORYSEWICZ-LEWICKA, and M. KOBYLA´NSKA (Department of Conservative Dentistry and Periodontology, and Department of Pediatric Dentistry, University of Medical Science, Pozna´n, Poland).

1563 Lifestyle Risk Factors of Oral Cancer in a Low-incidence Country. A.I. ZAVRAS*, C.W. DOUGLASS, and S.R. DIEHL (School of Public Health, Harvard University, Boston, MA; and NIDR, NIH, Bethesda, MD, USA).


1565 Association of Oral Lichen Planus with Systemic Disorders. P.K. DAYAL* and S. PATIL (Department of Oral Medicine, College of Dental Surgery, MAHE-Deemed University, Mangalore, India).

1566 Reported Optimism in Patients with Oral Lichen Planus. N.W. BURKHART*, E.J. BURKER, E.J. BURKES, and L.A. WOLFE (Baylor College of Dentistry, TX; and School of Dentistry, University of North Carolina School of Medicine, USA).

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1569 The Relationship between Anxiety, Expectation of Pain, and Memory of Pain in a Perio-surgical Treatment. H. SIMON*, I. ELI, A. KOZLOVSKY, and R. BAHT (School of Dental Medicine, Tel Aviv University, Israel).

1570 Comparison of Dental Anxiety Following Halothane or Sevoflurane Anaesthesia. G.T.R. LEE*, P. PHINAINITISATRA, and G.M. HUMPHRIS (Departments of Clinical Dental Sciences and Clinical Psychology, University of Liverpool, UK).

1571 Can Anxiety Justify General Anesthesia for Orthodontic Extractions? A. WASIAK* (Unit of Dental and Oral Health, University of Dundee Dental School, UK).


1573 Dental Pain and Dental Sensitivity: Patterns of Temporal Change and Dental Care Use. R.P. DUNCAN*, G.H. GILBERT, C.W. PEEK, and M.W. HEFT (Claude Pepper CROHA, University of Florida, Gainesville, USA).
Anxiety in Adolescents with a Childhood History of Dental Sedation. L.D. KOROLUK* (College of Dentistry, University of Saskatchewan, Saskatoon, Canada).

Characteristics of Patients Treated under General Anesthesia in a Pediatric University Hospital. C. DUBE-BARIL*, M. AGHA-AMIRI, and H. BUIUTHIEU (Faculty of Dentistry and St.-Justine Hospital for Children, Université de Montréal, Québec, Canada).

Dental Fear among University Students: Implications for Pharmacologic Research. T. KAAKKO*, P. MILGROM, S.E. COLDWELL, T. GETZ, P. WEINSTEIN, and D.S. RAMSAY (Dental Public Health Services, University of Washington, Seattle, USA).

Different Aspects Related to Dentists’ Attitudes when Seeing Pediatric Patients. M.J. TAVARES*, A. MODESTO, M.A. TOSTES, P. RÉDUA, and R. VIANNA (School of Dentistry, Federal University of Rio de Janeiro, Brazil).

Parents’ View of Their Presence in the Dental Operatory with Their Children. B. PERETZ* and D. ZADIK (Hebrew University Hadassah Faculty of Dental Medicine, Jerusalem, Israel).

The Legal Status of a Child’s Consent to Treatment. C.D. CANNAVINA*, G. CANNAVINA, and D. LONGLEY (Departments of Restorative Dentistry and Law, University of Sheffield, UK).

Influence of Social Environment on Child Dental Anxiety. M. MAJSTOROVIĆ*, I. BAGIĆ, and I. SKRINJARIĆ (School of Dental Medicine, University of Zagreb, Croatia).


Perceived Risks of Oral Cancer when Smokers Imagine They Quit. L.C. GRAY and H.K. HERRIN* (University of Texas Medical School and Dental Branch, Houston, USA).

Tobacco Education in Mississippi. M. PERRY*, K. CREWS, E. MEYDRECH, S. SILBERMAN, and J. COLEMAN (UMMC School of Dentistry, Jackson, MS, USA).


Cigarette Smoking and Periodontitis among US Adults. S.L. TOMAR* and S.E. MARCUS (University of California, San Francisco; and NIDR/NIH, Bethesda, MD, USA).

Alveolar Bone Loss and Tooth Loss among Cigar and Pipe Smokers. E.A. KRALL* and R.I. GARCIA (Boston University Goldman School of Dental Medicine; and VA Outpatient Clinic, Boston, MA, USA).

Promoting Non-smoking by Cooperation between Oral Health Professionals and Schools. S. LAHTI* and T. PALIN-PALOKAS (Department of Community Dentistry, College of Oulu, Finland).

Background Factors Associated with the Use of Smokeless Tobacco. S. RYHÄNEN*, T. KAAKKO, and A. TOKOLA (Departments of Periodontology and Preventive Dentistry and Cariology, Kuopio, Finland).

Smoking Cessation and Oral Diseases. K. LIEDE*, J. HAUCCA, J. HIETANEN, and T. SORSA (Institute of Dentistry, University of Helsinki; and National Public Health Institute, Helsinki, Finland).
Perceived Oral Health Risk among Women in Different Cultures. A.N. ÅSTRØM* and A.K. AWADIA (Center for International Health, Department of Odontology, Faculty of Dentistry, University of Bergen, Norway).

Dental Health Knowledge of United Kingdom Resident Japanese Parents. Y. MIKAMI*, R. CROUCHER, and M. HECTOR (Tokyo Medical and Dental University, Japan; and SBRLSMD, London, UK).

Comparing Immigrant Hispanic Groups by Using the OHSI. V.W. SPOLSKY*, M. MARCUS, I. COULTER, and K. ATCHISON (University of California Los Angeles School of Dentistry; and Drew Minority Oral Health Research Center, Los Angeles, CA, USA).

Dentists' Selection of Measures for Assessment of Oral Health Risks. S.E. HELMINEN*, M.M. VEHKALAHTI, and H. MURTOMAA (Institute of Dentistry, Department of Oral Public Health, University of Helsinki, Finland).

Application of the CPITN in a Group of 35-65-year-old Belgian Employees. Comparison with Different Parameters. P. BERCY*, J.B. MEURISSE, M.L. LAMBERT, and R. TONGLET (Department of Periodontology and Department of Epidemiology, Catholic University of Louvain, Belgium).

Socio-economic Variables and Prevalence of Periodontal Disease in South Africa. T.S. GUGUSHE* (Medical University of Southern Africa, South Africa).


Evaluation of Two Computer-assisted Learning Programs for Dental Nurses. P.A. GRIGG*, C.D. STEPHENS, and K.A. EATON (University Dental School, Bristol; and Eastman Dental Institute, London, UK).

A Comparison of Conventional and Computer-based Learning Materials. D.J. LAMB* and J. GODFREY (Department of Restorative Dentistry and Staff Development, University of Sheffield, UK).

Outcomes of Adelaide Dental Course: Perceptions of Staff and Students. J. WETHERELL*, G. MULLINS, and G. TOWNSEND (Department of Dentistry, The University of Adelaide, Australia).

Students’ Attitudes to Basic Science in a PBL Dental Curriculum. J. FUSS* and G. TOWNSEND (Department of Dentistry, University of Adelaide, Australia).


The Impact of a Distance Learning Residency on Referral Patterns. T. RAYBOULD* and T. SMITH (University of Kentucky, Lexington, USA).

Computerization of Dental and Dental Hygiene Programs—Survey Results. V.C. VICK*, N.S. RICHTER, and L.P. MILLER (Procter & Gamble Company, Cincinnati, OH, USA).

Confidence Levels and Attitudes to Performing Basic Life Support. J.M. FLETCHER* and N.M. JEDYNAKIEWICZ (Department of Clinical Dental Services, The University of Liverpool, UK).

### Educational Research - Post-graduate Dental Education and Other Issues

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Ethnic Variations among Women Choosing Medical and Dental Schools. M.S. GILTHORPE, R. BEDI, and M. ALSARHEED* (Eastman Dental Institute, London, UK).

Dental Specialties in the UK: Gender Balance. F.M.J. STEWART, J.R. DRUMMOND*, and L. CARSON (University of Dundee and University of St. Andrews, Scotland, UK).

Attitudes of First-year Dental Students Regarding Blood-borne Pathogens. F.S. PANAGAKOS*, J.M. HOLTZMAN, M. SANDERS, M. GINIGER, and P. DESJARDINS (UMDNJ-New Jersey Dental School, Newark, USA).

Value of a Knowledge Questionnaire in Course Evaluation and Design. K.S. LAST*, J. APPLETON, and D.B. FERGUSON (Dental Schools, Universities of Manchester & Liverpool, UK).

Training on Oral Disease for UK Medical Students and Doctors. M.P. SWEENEY* and J. BAGG (Renfrewshire Healthcare NHS Trust and Glasgow Dental Hospital & School, Scotland, UK).

Reliability and Validity of Entrance Tests in Operative Dentistry. J. ROTGANS* and F. LAMPERT (Department of Operative Dentistry, RWTH Aachen, Witten, Germany).

Inquiry Learning and Traditional Teaching in a Clinical Dental Hygiene Course, A Comparison. T.E. O’HEHIR* and M.H. FALES (Flagstaff, AZ; University of Washington, Seattle, USA).


Assessment of Student and Graduate Competency to Begin Dental Practice. E. ROMBERG* and W.M. MORGANSTEIN (Dental School, University of Maryland, Baltimore, USA).

Characteristics of Vocational Preference in Dental Students. T. ISHIKAWA* and N. NAGASAKA (Department of Pediatric Dentistry, Hiroshima University School of Dentistry, Japan).


A Survey of Statistical Methods Used in Dental Literature. J.R. JAKOBSEN* (University of Iowa, Iowa City, USA).

Teaching of All-ceramic Restorations in Japanese Dental Schools. M. FUKUSHIMA, M. IWAKU, J.C. SETCOS, N.H.F. WILSON*, and I.A. MJÖR (Niigata University, Japan; University of Manchester, UK; and University of Florida, Gainesville, USA).


Correlation between Clinical Experience and Three Different Student Assessment Methods. S.I. MORGANSTEIN*, C.E. MARSHALL, S.E.P. DOWKER, and D.S. OSBORNE (St. Bartholomew’s, and the Royal London School of Medicine and Dentistry, London, UK).

Dental Patients’ Database in Patient Management and Clinical Instruction & Evaluation. N.A. SIX*, W. KAEOSONIT, S. SURIYOTAI, P. PRUITIKANEE, and K. WANGRANGSIMAKUL (Faculty of Dentistry, Prince of Songkla University, Thailand).

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Poster Session, Exhibit Hall

Implantology - Implant Biomechanics, Bone Mineral Density, and General Factors
Numerical Analysis of a Dental Implant System Pre-tensioned with a Washer. A. VERSLUIS*, A.C. CARDOSO, and T.W.P. KORIOTH (Minnesota Dental Research Center for Biomaterials and Biomechanics, University of Minnesota, USA; and Department of Stomatology, Federal University of Santa Catarina, Brazil).


Effect of the Order in Tightening Screws of Implant Bridge. F. WATANABE*, I. UNO, Y. HATA, and A. KIRSCH (The Nippon Dental University, Niigata, Japan; and Stuttgart, Germany).

Stress Analysis of Unilateral Cantilever Loading of Implant Frameworks. K.B. TAN* and J.I. NICHOLLS (National University of Singapore; and University of Washington, Seattle, USA).

Load Transfer in Bone by Off-set Loading of an Implant. S. HECKMANN* and W. WINTER (Departments of Prosthodontics and Mechanical Engineering, University of Erlangen-Nürnberg, Germany).

Increasing Abutment Screw Rotation by Applying a Thin-gold Coating. T.T. ROBB* and S.S. PORTER (3i-Implant Innovations, Palm Beach Gardens, FL, USA).

Increasing Implant-abutment Preload by Thin-gold-coating Abutment Screws. S.S. PORTER* and T.T. ROBB (3i-Implant Innovations, Palm Beach Gardens, FL, USA).

Distribution of Bone Mineral Density in Edentulous Mandible. S. TAKAOKA*, K. KOBAYASHI, K. KATOH, M. NAGAO, and T. SASAKI (Department of Geriatric Dentistry, Tokyo Medical and Dental University, Japan).

Minimum Contact Fraction of Bone-Implant Interface. K.S. JANG* and Y.S. KIM (Department of Prosthodontics and Implantology, College of Dentistry, Kangnung National University, and Seoul National University, Korea).


Histomorphometric Examinations of the Bone Structure of Atrophic Maxillae. C. ULM*, A. SCHEDLE, P. SOLAR, M. KNEISSEL, and G. WATZEK (Department of Oral Surgery, School of Dentistry, University of Vienna, Austria).


Tooth Intrusion in Implant Tooth-supported Dentures. E. HACHMEISTER* and W. NIEDERMEIER (School of Dental and Oral Medicine, University at Cologne, Germany).

Comparative Study on Retention of Newer-generation Implant Overdenture Attachments. V. PETROPOULOS*, F.K. MANTE, and W. SMITH (University of Pennsylvania School of Dental Medicine, Philadelphia, USA).


Comparisons of the Nature of Periodontal Cell Attachment on Different Commercial Implant Materials. C.-C. SHIH*, F. FENG, K.-C. WANG, and L.-T. HOU (Department of Dentistry, The 803
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<td>Efficient Microscopy to Survey Bone Healing around Dental Implants. A. BOYDE*, L.A. WOLFE, P.G.T. HOWELL, K. WONG, S.J. JONES, and G.L. GREENBERG (Anatomy; Eastman Dental Institute, University College; SBRLSMD, London, UK; and Edge Scientific, Santa Monica, CA, USA).</td>
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The Role of Bioglass Elements in Osteogenesis at Implant Interface in vivo. S. AL-BAZIE*, R. GIORDANO, D. COTTRELL, D. NATHANSON, and L. CHOU (Departments of Biomaterials and OMFS, Boston University Medical Center, MA, USA).

Calcified Tissues around Dental Implants: An Experimental Study. M.I. CALERO*, J.M. MONTESDEOCA, I. SERRA, and M.C. MANZANARES (Anatomy Unit, Campus Bellvitge, University of Barcelona, Spain).


Assessment of Variables Related to the Acquisition/Establishment of the Mutans Streptococci in Young Children. B.N. PACKER*, P.H. VALENTE, and W. BRETZ (Universidade São Francisco, Bragança Paulista, São Paulo, Brazil).


A Longitudinal Study of Approximal Caries and Caries-risk Factors in 3 Icelandic Communities. I.B. ÁRNADÓTTIR*, H. SIGURJÓNS, S.R. SÆMUNDSSON, and W.P. HOLBROOK (Faculty of Odontology, University of Iceland, Reykjavik).

Mutans Streptococci and Caries Development in 1-2.5-year-old Children: A Longitudinal Study. R.O. MATTOS-GRÄNER*, F. ZELANTE, M.S.N.P. CORRÊA, and M.P.A. MAYER (University of São Paulo, Brazil).

Dietary Factors, Mutans Streptococci, and Lactobacilli in Icelandic Patients with Root Caries. H. SIGURJÓNS*, M.O. MAGNUSDÓTTIR, and W.P. HOLBROOK (Faculty of Odontology, University of Iceland, Reykjavik).

Caries Risk and Caries Experience within the Family. A. SEHMAN* and S. BJARNASON (Göteborg University College of Health Sciences and Göteborg University, Sweden).

Microbiologic Effect in Schoolchildren Using Fluoride Mouthrinse. A. YOSHIHARA*, S. SAKUMA, S. KOBAYASHI, and H. MIYAZAKI (Department of Preventive Dentistry, School of Dentistry, Niigata University, Japan).


Trace Elements in Polish Soils and Caries Prevalence. A. MAJEWSKA* and A. KREFFT (Department of Conservative Dentistry, University of Medicine, Wroclaw, Poland).
1678 Peculiarities of Teeth Caries Pathogenesis of Schoolchildren during Their Adaptation to Living Conditions in the Far North of Russia. N.V. ALIMOVA* and V.M. ELIZAROVA (Moscow Medical Stomatological Institute, Russia).

1679 Studies on Early Childhood Caries Characteristics. M. KUKLETOVÁ*, M. SVOBODOVÁ, J. KUKLOVÁ, and I. SEDLAČEK (Medical Faculty and Faculty of Sciences, MU, Brno, Czech Republic).


1681 Influence of Theophylline on the Development of Dental Caries. A.P.D.B. RUENIS, P.L. ROSALEN*, M.C. VOLPÁTO, and F.C. GROPPO (Dentistry School of Piracicaba, UNICAMP, Brazil).

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Cariology - Fluoride; Dentifrices; Antimicrobials; Remineralizing Agents

1682 Salivary Fluoride Levels after Rinsing with Liposome-encapsulated Sodium Fluoride. J. MARTÍNEZ-GOMIS*, A. FERNÁNDEZ, F. BINIMELIS, M.E. PLANAS, and S. SÁNCHEZ (Department of Pharmacology, School of Dentistry, University of Barcelona, Spain).

1683 Cariostatic Effect of Liposome-encapsulated Sodium Fluoride in Hyposalivated Rats. A. FERNÁNDEZ*, J. MARTÍNEZ-GOMIS, J. OLIVÉ, S. SÁNCHEZ, and M.E. PLANAS (Department of Pharmacology, School of Dentistry, University of Barcelona, Spain).


1685 Relationship between Caries Experience and Reported Brushing Behavior. D.C. ATTRILL*, P.F. ASHLEY, H.V. WORTHINGTON, R.P. ELLWOOD, A.S. BLINKHORN, and R.M. DAVIES (Dental Health Unit, University of Manchester, UK).

1686 Intra-oral Plaque Fluoride Variations in Low- and High-fluoride Water Areas. F.C. SAMPAIO* and P. ARNEBERG (Federal University of Paraiba, Brazil; and University of Oslo, Norway).

1687 Surface Alterations of Enamel Subsurface Lesion Treated with Fluoride. M. UEMURA* and M. KAMBARA (Department of Preventive and Community Dentistry, Osaka Dental University, Japan).

1688 Structure of Artificial Enamel Lesions after Treating with Different Fluoride Dentifrices. A. ITTHAGARUN*, S.H.Y. WEI, and J.S. WEFEL (Faculty of Dentistry, University of Hong Kong, ROC; and Dows Institute for Dental Research, The University of Iowa, Iowa City, USA).

1689 Anti-caries Efficacy of a Novel Dual-component Toothpaste Containing Sodium Fluoride. G. CALABRESE*, L. PAROTTI, and F. SCHÄFER (Elida Gibbs—Dental Innovation Centre, Milan, Italy).


1691 Remineralization of Incipient Enamel Caries in Microbial and Chemical Model. S.J. HONG*, K.K. PARK, S.D. LEE, and S.S. JEONG (School of Dentistry, Chonnam University; and School of Dentistry, Dankook University, Korea).

1692 Effect of Remineralizing Dentifrice on Orthodontic White Spots after 3 Months. C.J. KLEBER*, J.L. MILLEMAN, K.R. DAVIDSON, M.S. PUTT, C.W. TRIOL, and A.E. WINSTON (Indiana-Purdue University, Fort Wayne; and Enamelon, East Brunswick, NJ, USA).


Effects of Concentrated Fluorides on Healthy and Fluorotic Enamel Surfaces. A. ARGENTIERI*, A. CAPURRO, O. PULGAR, and N. BORDONI (Preventive and Community Dentistry, School of Dentistry, University of Buenos Aires, Argentina).

Oral Health in Children with Treated Chronic Renal Failure. N. BORDONI*, A.S. PISTOCHINI, M.L. RAFFO, M. SOUZA, and M.G. CALETTI (Department of Preventive and Community Dentistry, School of Dentistry, University of Buenos Aires; and Garrahan Hospital, Buenos Aires, Argentina).


Evaluation Study on Schoolteacher Participation in Programs to Promote Oral Health. A. RAMOS*, M. MAGNANINI, L. PRIMO, and L. SOUZA (WHO Collaborative Center, UFRJ, Brazil).


Prevalence of Substance Use by Dutch Dental Students: Preliminary Findings. A. PLASSCHAERT*, J. HOOGSTRATEN, D. WEBSTER, and R. CLAYTON (College of Dental Science, University of Nijmegen; ACTA Amsterdam, The Netherlands; and University of Kentucky, USA).


Substance Loss Caused by Scaling with Different Sonic Scaler Inserts—An in vitro Study. S. RÜBESAMEN*, R. LITZ, and T. KOCHER (Periodontology, University of Greifswald, Germany).

Effect of Silver Zeolite on Plaque Formation. M. MORISHITA*, M. MIYAGI, Y. YAMASAKI, K. TSURUDA, K. KAWAHARA, and Y. IWAMOTO (Department of Preventive Dentistry, Hiroshima University School of Dentistry, Japan).

The Effect upon Plaque and Gingivitis of One Manual and Two Electrical Toothbrushes. Z. RASHID*, M. KLEIVMYR, A.M. AASS, and P. GJERMO (Department of Periodontology, University of Oslo, Norway).
Mineralized Tissue - Tooth Erosion, Effects of Acidic Foods

1707  Dental Erosion Caused by Wine. M. VESTERINEN*, E. HONKALA, and J.H. MEURMAN (Institute of Dentistry, University of Helsinki, Finland).


1709  Buffering Capacity of Acidic Food Products Linked to Dental Erosion. P.P. GRAGG* and M.V. MARSHALL (The University of Texas Health Science Center at San Antonio Dental School, USA).

1710  Low-erosive-potential Fruit Drinks: Comparison with Conventional Products. M. ADDY*, J.A. HUGHES, N.X. WEST, L. BLOHM, and D.M. PARKER (Department of Restorative Dentistry, Bristol; and SmithKline Beecham Consumer Healthcare, Coleford, Gloucestershire, UK).

1711  Visual and Microscopic Assessment of Erosion in Primary Teeth. M. AL-MALIK*, R.D. HOLT, R. BEDI, and P.M. SPEIGHT (Eastman Dental Institute, University of London, UK).

1712  A Profile of the Oral Health Status of Winemakers. S. NAIDOO-BRESSELSCHMIDT and U.M.E. CHIKTE* (Community Dentistry, University of Stellenbosch, South Africa).


1714  Influence of Acidified Fluoride Gel on Abrasion Resistance of Eroded Dentin. C. ZIRKEL*, T. ATTIN, and E. HELLWIG (Department of Operative Dentistry and Periodontology, University of Freiburg, Germany).

1715  Evaluation of the Effects of Acid Etching on Dentin Proteoglycans. A. OYARZÚN*, H. RATHKAMP, A. CONSUEGRA, and E. DREYER (Faculty of Odontology, University of Chile, Santiago).

1716  Surface Potential Energy between Hydroxyapatite and Bacteria. T. MIYAKE*, N. OKUMURA, and M. KAMBARA (Department of Preventive and Community Dentistry, Osaka Dental University, Japan).

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Mineralized Tissue - Age, Physical Factors Affecting Teeth

1717  The Impact of Age on Tooth Color. L.L. ODIOSO and E.A. RENO* (Procter & Gamble, Cincinnati, OH, USA).

1718  Age-dependent Changes in Collagen Cross-links of Rat Bones. A. WOJTOWICZ*, A. DZIEDZIC-GOCLAWSKA, K. OSTROWSKI, and M. YAMAUCHI (Dental Research Center, University of North Carolina, Chapel Hill, USA; Department of Transplantology, Medical University, Warsaw, Poland).

1719  Age-related Changes on Bone Regeneration in Mid-palatal Suture in Rat. M. KANEKAWA* and N. SHIMIZU (Department of Orthodontics, Nihon University School of Dentistry at Matsudo, Chiba, Japan).

1720  Permeation of Lidocaine through the Dentin Facilitated by Iontophoresis. C.D. NAGY*, A. BOGDÁN, S. PÓTI, J. POSTA, G. SOMOGYI, and G. SZABÓ (Schools of Dentistry, Forensic Medicine, and Internal Medicine, University of Medicine, Debrecen, Hungary).
Number and Diameter of Dentinal Tubules in Human and Bovine Dentin. R. SCHILKE*, O. BAUSS, J.A. LISSON, M. SCHUCKAR, and W. GEURTSEN (Departments of Conservative Dentistry & Periodontology and Orofacial Orthopedics, Medical University, Hannover, Germany).

Particle-induced X-ray Emission and Scanning Electron Microscope Analysis of CO2 Laser on Dentinal Tubules. M. GONZALEZ*, J.A. BANDERAS, V. RODRIGUEZ, and V. CASTANO (Dental Research Center, School of Dentistry, UAEM, Toluca; ININ, Salazar, Edn. de Mexico; Physics Institute, UNAM, Mexico).

Effect of Tubule Orientation on Some Mechanical Properties of Dentin. S. POOLTHONG, M.V. SWAIN, T. SUMII*, and T. MORI (Biomaterials Science Research Unit, The University of Sydney, Australia).


Validation of Dentinary Transparency Measure Using Discontinuous Variables. A. BERARD*, J.L. MIQUEL, S.H. TOURE, M. MARQUET, and Ph. NDOBO-EPOY (University Victor Segalen of Bordeaux, France; and FACOS, Abidjan, Ivory Coast).

The Density of Human Teeth after Immersion in Saline Water. C. JOHN* (School of Dental Medicine, University of Tübingen, Germany).

Topography of Different Types of Cementum of Guinea Pig Molars. A. BLANC*, M. SJÖSTRÖM, A. SÖDERSTRÖM, and L. HAMMARSTRÖM (Université Paris V, France; and Center for Oral Biology, Karolinska Institutet, Stockholm, Sweden).

True Bone Ceramics (TBC) Graft for Restoration of the Artificial Bone Defect. M.H. DIAU*, R.T. ROAN, W.J. ROU, and F. SUWA (School of Dentistry, Kaohsiung Medical College, Taiwan; and Department of Anatomy, Osaka Dental University, Japan).

Mineralized Tissue - Studies on the Mineral Phase, Apatite

Regularly Seeded Calcium Phosphate Crystal Growth on Lyophilized Amelogenin Matrices. C. ARUMAGHAM* and T.G.H. DIEKWISCH (Baylor College of Dentistry, Texas A&M University System, Dallas, USA).

Effect of Dephosphorylation of Immobilized Phosphoprotein on Interfacial Tension for Apatite Induction. S. ITO*, T. SAITO, K. MATSUDA, and M.A. CRENSHAW (Health Sciences University of Hokkaido, Tobetsu, Japan; and Dental Research Center, University of North Carolina, Chapel Hill, USA).

Behavior of Carbonate and Magnesium Ions during Hydroxyapatite Development. M. KAKEI*, M. KUMEGAWA, N. TAMURA, and M. YOSHIKAWA (Department of Oral Anatomy, Department of Chemistry, Department of Orthodontics, School of Dentistry, Meikai University, Japan).

TEM Comparison of Enamel Prism Border Crystals vs. Body Crystals. J.W. SIMMELINK* and S.T. BADEN (School of Dentistry, Case Western Reserve University, Cleveland, OH, USA).

Thermal Analysis (TG, DTG, DTA) of Human Sound Enamel and Dentin. R. MONGIORGI*, V. MINGUZZI, F. DOLCI, G. VALDRÈ, and C. PRATI (University of Bologna, Italy).

Crystalline Structure Alteration of Human Enamel by Nd:YAG Laser Irradiation. F. HIROTA* and K. FURUMOTO (Dental Research Institute, Nippon Dental University, Tokyo, Japan).
The Laser-Raman Spectroscopic Analysis on the Er:YAG Laser-irradiated Enamel. T. EGURO*, T. MAEDA, M. OGAWA, and H. TANAKA (Department of Operative Dentistry; and Dental Research Institute, Nippon Dental University, Tokyo, Japan).

Effect of Tetracalcium Phosphate Particle Size Distribution on Cement Hardening. S. TAKAGI*, M. MARKOVIC, and L.C. CHOW (ADAHF, Paffenbarger Research Center, NIST, Gaithersburg, MD, USA).


Incongruent Dissolution of Fluorapatite in Dilute Phosphoric Acid Solutions. S.V. DOROZHKIN* (Research Institute of Fertilizers, Moscow, Russia).


The Cemento-enamel Junction: Microscopic Analysis and Relationship with the External Cervical Resorption. L.R. NEUVALD* and A. CONSOLARO (School of Dentistry, PUCRS; and Bauru School of Dentistry, University of São Paulo, Brazil).

Intracellular Calcium Signaling in Mouse Submandibular Acinar Cells Co-cultured with Activated Splenic Lymphocytes. L.J. DAWSON* and P.M. SMITH (Department of Clinical Dental Sciences, The University of Liverpool, UK).

Cloning and Expression of Salivary Secretory Leukocyte Protease Inhibitor (SLPI). C.-C. TSENG, C.-P. TSENG, J. LUPOVICI*, J.YIP, and J. CHOU (New York University; UTX Southwestern Medical Center, Dallas, USA).

Swelling-induced Increase of Intracellular Calcium in Salivary Gland Acinar Cells. J.H. LEE*, J.S. KIM, and K. PARK (Department of Physiology and Oral Biology, College of Dentistry, Seoul National University, Korea).

Regulation of Membrane-bound Guanylate Cyclase in Rat Parotid. T. NASHIDA*, A. IMAI, and H. SHIMOMURA (The Nippon Dental University, Niigata, Japan).

Comparative Study of Phosphodiesterase Isozymes in Rodent Parotid Glands. A. IMAI*, T. NASHIDA, and H. SHIMOMURA (The Nippon Dental University, Niigata, Japan).

Role of Protein Kinase C in Sealing Mechanism of Tight Junctions. K. UCHIHASHI*, N. TAKAI, K. HIGUCHI, and Y. YOSHIDA (Department of Physiology, Osaka Dental University, Japan).


Translocation of Arf1 to the Parotid Secretory Granules. Y. DOHKE*, M. HARA-YOKOYAMA, J. FUJITA-YOSHIGAKI, H. SUGIYA, and S. FURUYAMA (Department of Physiology, Nihon University School of Dentistry at Matsudo, Chiba, Japan).

Roles of Syntaxin 4 and SNAP-23 in Parotid Exocytosis. T. TAKUMA* and T. ICHIDA (Health Sciences University of Hokkaido, Tobetsu, Japan).

Mitochondrion-Secretory Granule Complexes (MSGC) in Parotid Acinar Cells in Rats. J. BLAZSEK* (Department of Oral Biology, Semmelweis Medical University, Budapest, Hungary).

Opened and Closed States of Tight Junctions in Rat Submandibular Acini. N. TAKAI*, K. UCHIHASHI, K. HIGUCHI, S. ATUMI, and Y. YOSHIDA (Department of Physiology, Osaka Dental University, Japan).

Change of the Location of the Parotid Duct Opening with Growth. A. SUZUKI* and S. WATANABE (Meikai University, Saitama, Japan).


Influence of Pacifiers’ Cleaning Protocol on Adherence of Candida albicans. H. BUITHIEU*, A. LORANGER, M.-C. DUBÉ, E. FAUCHER, J. BARBEAU, and P. ROPRÉ (Faculty of Dentistry, Université de Montréal, Québec, Canada).

Efficacy of Citric Acid on Dental Treatment Water and Waterline Biofilms. R. PUTTAIAH, M.B. WAGGONER, L.E. SHERMAN, P.J. KIM*, R.A. CEDERBERG, and W.L. BRYAN (Diagnostic Sciences, Baylor College of Dentistry, TAMUS, Dallas, TX, USA).

Institutional Compliance with a Dental Water Maintenance Protocol. R.I. KARPAY*, W.W. DODGE, and S.E. MILLS (University of Texas at San Antonio; and Robins Air Force Base, USA).

Results of a Dental Infection Control Needs Assessment Survey among Indian Dentists. R. PUTTAIAH*, K.S. SHETTY, and R. BEDI (Baylor College of Dentistry, TAMUS, TX, USA; BEA Dental College, India; and Eastman Dental Institute and Hospital, UK).

Microbial Contamination in Dental Unit Airlines in Private Practice Settings. J.R. WASKOW*, I.C. PUNWANI, R.A. MURPHY, and C.H. MILLER (University of Illinois, Chicago; and Indiana University, Indianapolis, USA).

Disinfection of Dental Impressions by Ultraviolet Radiation. N.-E. FIEHN*, T. LARSEN, A. PEUTZFELDT, and B. ØWALL (Institute of Odontology, Faculty of Health Sciences, University of Copenhagen, Denmark).

Occupational Exposures in a Teaching Dental Environment: Results of a Ten-year Surveillance System. F.S. YOUNAI* and D.C. MURPHY (College of Dentistry, New York University, NY, USA).

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Poster Session, Exhibit Hall

Microbiology/Immunology - Infection Controls


1768 Knowledge and Attitudes to Cross-infection among Dental Clinicians in Uganda. C. SSALI*, S.A. WILLIAMS, and S.Y.L. KWAN (Community Dental Health, Leeds Dental Institute, UK).

1769 Clinical and Waterlines Pseudomonas aeruginosa Isolates: Genotypic and Phenotypic Relatedness. C. NADEAU*, C. MOUTON, P. PAYMENT, and J. BARBEAU (Université de Montréal, Québec, Canada).

1770 Effect of Frequent Flushing on Microflora in Dental Unit Waterlines. S. ROSEN*, R. SCHEID, F.M. BECK, D. DESKINS-KNEBEL, and S. VAZIRANI (Infection Control Services, Inc., Hilliard, OH; and The Ohio State University, Columbus, USA).


1773 Stability of the Salt Sterilizer. A.J. HADDAD*, M. JEAN, R.G. LANDRY, and M. VALOIS (GREP, Faculty of Dentistry, Université Laval, Québec, Canada).

1774 Use of Pressure Cookers for Sterilization of Clinical Instruments. R.J. BAEZ* and X.L. BAEZ (Dental School, University of Texas Health Center, San Antonio, USA).

1775 Perceptions and Attitudes Toward Infection Control among Dental Patients in Taipei. H.-C. CHENG*, C.-T. LIN, S.-Y. LEE, and C.-L. HONG (Department of Dentistry, Taipei Medical College Hospital, Taipei Medical College, Taiwan, ROC).


1777 A Microbiologic Evaluation of Orthodontic Patients Using Two Types of Toothbrushes. H. KILIÇO GLU*, M. YILDIRIM, G. KULEKÇ I, and A. GOKBUGET (Faculty of Dentistry, Departments of Orthodontics, Microbiology, and Periodontology, Istanbul University, Turkey).

1778 Endodontic LSTR Treatment of Root-absorbing Deciduous Teeth. T. TAKUSHIGE* and E. HOSHINO (Department of Oral Microbiology, Niigata University School of Dentistry, Japan).
1779  PCR Detection of Periodontal/Endodontic Pathogens Associated with Abscess Formation. A. ASHIMOTO, T. TANAKA*, K. RYOKE, and C. CHEN (OMFS, Faculty of Medicine, Tottori University, Yonago, Japan; and Periodontology, USC School of Dentistry, Los Angeles, CA, USA).

1780  Quantitative PCR of Three Periodontopathogens in Adult Periodontitis. S. DOUNG-UDOMDACHA*, C.W.I. DOUGLAS, and A. RAWLINSON (Department of Oral Pathology and Department of Restorative Dentistry, University of Sheffield, UK).

1781  Contamination of mtDNA in Laboratory Disposables and PCR Reaction Components. H.R. PREUS*, D. LILLEHAUG, and V. KJÆRERHEIM (Dental Faculty, University of Oslo; and Norwegian Food Research Institute, Ås, Norway).

1782  Conventional vs. Immunoassay Enumeration of Mutans Streptococci and Lactobacilli. S.A. MUNDORFF-SHRESTHA*, H.M. PROSKIN, R.J. BILLINGS, G. CORNELL, and L. SIMONSON (University of Rochester, Eastman Department of Dentistry, New York; and Naval Dental Research Institute, Great Lakes, IL, USA).

1783  A Statistical Approach to the Ecology of Some Oral, Gram-negative, Facultatively Anaerobic Bacteria. H.P. MÜLLER*, A. HEINECKE, and M. BORNEFF (Department of Operative Dentistry, University of Heidelberg; University of Münster; and University of Halle-Wittenberg, Germany).

1784  Pseudopodia-like Attachment Structures of Lactobacillus paracasei Cultured in Biofilms on Teeth. F.S. BOTHA*, S.J. BOTHA, and B.J.P. DE WET (Centre for Stomatological Research, Faculty of Dentistry, University of Pretoria, South Africa).

1785  Elution of Proteins by Anionic Surfactants at a Solid/Liquid Interface. F. POUMIER*, M. ZEMBALA, P. SCHAAF, and J.-C. VOEGEL (Institute C. Sadron, Strasbourg, France; Institute of Cat. and Surface Chemistry, Cracow, Poland).


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Poster Session, Exhibit Hall

Microbiology/Immunology - Molecular Studies of Bacterial Antigens


1788  Characterization of Non-hemagglutinating Mutants of Porphyromonas gingivalis. D. HINODE*, S. TANABE, M. YOSHIOKA, and R. NAKAMURÂ (Department of Preventive Dentistry, School of Dentistry, The University of Tokushima, Japan).


1791  Non-fimbrial Element of Porphyromonas gingivalis Mediates Coaggregation with Actinomyces viscosus T14V. K. WATANABE*, N. HAMADA, Y. TÅKAHASHI, and T. UMEMOTO (Department of Oral Microbiology, Kanagawa Dental College, Yokosuka, Japan).

1793  Heterogeneous fimA Gene Expression in Porphyromonas gingivalis. Y. TAKAHASHI*, D. KATO, N. HAMADA, H. YOSHIMOTO, and T. UMEMOTO (Kanagawa Dental College, Yokosuka, Japan).

1794  Genetic Characterization of Fluoride Resistance in Streptococcus mutans Strain TH16. M.V. MOTTA-MISSAKA*, R.L. GREGORY, and D.J. LeBLANC (University Braz Cubas, São Paulo, Brazil; and Indiana University, Indianapolis, USA).

1795  Comparative Analysis of Stress Proteins Induced by Streptococcus mutans. G. SVENSÄTER*, B. SVENSSON, and I.R. HAMILTON (Oral Microbiology, University of Lund, Malmö, Sweden; and Oral Biology, University of Manitoba, Winnipeg, Canada).

1796  Transcriptional Regulation of Lantibiotic Production by Streptococcus mutans JH1140. L. WOJCIECHOWSKI* and J.D. HILLMAN (Department of Oral Biology, University of Florida, Gainesville, USA).

1797  Homology Model of a Glucosyltransferase from Mutans Streptococcus. G. MOOSER* and K. DEVULAPALLE (School of Dentistry, University of Southern California, Los Angeles, USA).

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Poster Session, Exhibit Hall
Microbiology/Immunology - Typing/Epidemiology

1798  Genomic Diversity of the “Streptococcus milleri” group. M.J. WILSON*, K.L. BARTIE, and M.A.O. LEWIS (Oral Surgery, Medicine and Pathology, Dental School, University of Wales, College of Medicine, Cardiff, UK).

1799  Clonal Diversity of Mutans Streptococci from Children Determined by AP-PCR Analysis. L. GRONROOS* and S. ALALUUSUA (Institute of Dentistry, University of Helsinki, Finland).

1800  Consistency of Mutans Streptococci Prevalence in Swedish Families over Four Years. I.-M. REDMO EMANUELSSON* and E. THORNQVIST (Department of Cariology, Lund University, Malmö, Sweden).


1802  Characterization of Actinobacillus actinomycetemcomitans Isolates from Non-oral Infections. S. PAJU*, P. CARLSON, and S. ASIKAINEN (University of Helsinki and Helsinki University Central Hospital Diagnostics, Finland).

1803  Antigenic Heterogeneity of Actinobacillus actinomycetemcomitans Serotype b LPS. A. YAMANAKA*, T. KATO, and K. OKUDA (Oral Health Science Center and Department of Microbiology, Tokyo Dental College, Chiba, Japan).

1804  Distribution, Biotypes, and Genetic Diversity of Actinobacillus actinomycetemcomitans Serotype e. B. DOGAN*, M. SAARELA, H. JOUSIMIES-SOMER, S. ALALUUSUA, and S. ASIKAINEN (University of Helsinki and National Public Health Institute, Finland).

1805  apaH Polymorphism in Clinical Actinobacillus actinomycetemcomitans Isolates. M. SAARELA*, S. ASIKAINEN, S. ALALUUSUA, and P. FIVES-TAYLOR (University of Helsinki, Finland; and University of Vermont, Burlington, USA).

1806  Molecular Fingerprinting of Porphyromonas gingivalis. R. TEANPAISAN* and C.W.I. DOUGLAS (Department of Stomatology, University of Songkl, Thailand; and Department of Oral Pathology, University of Sheffield, UK).
Detection of Prevotella Species in Pus by Amplification of 16S rDNA. S. STUBBS, P.A. BISHOP*, S.F. PARK, and M.A.O. LEWIS (Dental School, University of Wales, College of Medicine, Cardiff; and Institute of Food Research, Reading, UK).

Immunocytochemical Detection of Candida albicans in Archive Material. D.W. WILLIAMS, H.S. JONES, R.T. ALLISON, and M.A.O. LEWIS* (Oral Surgery, Medicine and Pathology, Dental School, University of Wales, College of Medicine, Cardiff, UK).


Detection of Mycoplasma fermentans in Saliva from Children by PCR. M. KUDO*, K. SHIBATA, T. WATANABE, M. KAGA, and H. OGUCHI (Hokkaido University School of Dentistry, Sapporo, Japan).

Rapid Identification of Lactobacilli Using Restriction Endonuclease Analysis of 16SrDNA. T. HASHIMOTO*, Y. TORII, I. TANIMOTO, M. INOUE, H. OHTA, K. FUKUI, and K. INOUE (Departments of Operative Dentistry and Microbiology, Okayama University Dental School; and Department of Bioresource Sci., Ibaraki University School of Agriculture, Okayama City, Japan).

Influence of Porphyromonas gingivalis on Cultured Human Gingival Fibroblasts. M. YOSHIOKA*, O. MIKI, D. HINODE, and R. NAKAMURA (Department of Preventive Dentistry, School of Dentistry, The University of Tokushima, Japan).

Cytokine Differences in Mature and Immature Human Macrophage Cell Lines. J.L. MORGAN* and R.E. SINGER (Procter & Gamble, HCRC, Cincinnati, OH, USA).

Isolation and Partial Characterization of CD26 from Human Platelets. K. GONG and M.C. HERZBERG* (University of Minnesota, Minneapolis, USA).


The Interaction of Bacteria with Polymorphonuclear Cells Attached to an Experimental Dental Biofilm. P. TEPPER*, D. STEINBERG, and L. SHAPIRA (Faculty of Dental Medicine, Hebrew University-Hadassah, Jerusalem, Israel).


Anti-S. mutans Immunoglobulin Levels in Human Milk and Saliva. E. MORAES*, C.S. UNTERKIRCHER, and F.S. SILVA (São José dos Campos Dental School, UNESP, Brasil).

Bovine Immune Colostrum Affects the Saliva-induced Agglutination of S. mutans. V. LOIMARANTA* and J. TENOVUO (Institute of Dentistry, University of Turku, Finland).

Tonsillar Application of Streptococcus sobrinus Induces Related Group-specific Antibody. T. FUKUIZUMI*, H. INOUE, T. TSUJISAWA, and C. UCHIYAMA (Department of Oral Bacteriology, Kyushu Dental College, Kitakyushu, Japan).
1822 Relationships between Host Response Factors and Periodontal Clinical/Bacterial Parameters. E.D. PEDERSON*, L. SIMONSON, and D.W. TURNER (Naval Dental Research Institute, Great Lakes, IL, USA).

1823 Histologic Response to Implants of Calcium Carbonate Prepared from the Echinoderm’s Skeleton. M.A. ARAIZA*, S. PONCE, M. GARCÍA-GARDUÑO, and V. CASTANO (Facultad de Odontología, UNAM; and Instituto de Física, UNAM, México).

1824 Role of AP-1 in Porphyromonas gingivalis Fimbria-stimulated Bone Resorption via IL-1b. S. HANAZAWA*, K. NAGANUMA, S. AMANO, and S. KITANO (Department of Oral Microbiology, Meikai University School of Dentistry, Saitama, Japan).

1825 Salivary and Serum IgA Subclass Antibody Responses to Tetanus Toxoid. P.-E. ENGSTRÖM*, R. GUSTAFSON, and G. NORHAGEN-E. (Division of Clinical Immunology and Department of Periodontology, Karolinska Institute, Huddinge, Sweden).

1826 Periodontal Condition and Salivary Immunoglobulins in Individuals with Down Syndrome. M. BARR-AGHOLME, G. DAHLLOF, T. MODEER, P.-E. ENGSTRÖM, and G. NORHAGEN-E.* (Departments of Pediatric Dentistry, Periodontology, and Division of Clinical Immunology, Karolinska Institute, Huddinge, Sweden).

1827 Severe Palatal Necrosis in Cocaine Abusers. A. MAJORANA, F. FACCHETTI, G. GREGORINI*, M.L. MORASSI, P. GIGOLA, M. TRIMARCHI, and P.L. SAPELLI (Department of Odontostomatología, Department of Pathology, Division of Nephrology, and Department of Otolaryngology, University of Brescia, Italy).

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Poster Session, Exhibit Hall

Oral/Maxillofacial Surgery - Clinical Research Topics in OMS

1828 Effects of Orthognathic Surgery on Temporomandibular Signs and Symptoms. R.C.M. RODRIGUES GARCIA*, D.Z. NEMETH, J.P. HATCH, B.D. TINER, S. SAKAI, J.E. VAN SICKELS, R.A. BAYS, G. CLARK, and J.D. RUGH (UTHSCSA, Texas; and Emory University, Atlanta, GA, USA).


1830 Transverse Alterations after Cheiloplasty and Palatoplasty in CLP Patients. J.A. LISSON*, R. SCHILKE, and J. TRANKMANN (Department of Orthodontics, Hannover Medical School, Germany).

1831 New Aspects of Indication for Surgical Treatment of Intra-articular and High-luxated Articular Fractures. A. KOLK*, O. BERNHARDT, and A. NEFF (School of Dentistry, University of Greifswald, Germany).

1832 Cervicofacial Cellulitis of Dental Origin: Therapeutic Management. L. BERREZOUGA*, H. KOCHTALI, M.S. BELKHIR, and A. BAKIR (Operative Dentistry and Oral & Maxillofacial Surgery, Faculty of Dental Medicine, Monastir, Tunisia).

1833 Intentionally Ankylosed Primary Canines as Anchorage for Maxillary Protrusion. N. SCHMIDT-ROGGE*, P.-G. JOST-BRINKMANN, and R.-R. MIETHKE (Department of Orthodontics and Dentofacial Orthopaedics, University Hospital Charité, Humboldt University, Berlin, Germany).

1834 Relationship between Mandibular Opening and Arthrographic Findings of TMJ Adhesion. S. KAI*, H. KAI, Y. TATEISHI, O. TABATA, E. NAKAYAMA, Y. SHIRATSUCHI, and M. OHISHI (First Department of Oral and Maxillofacial Surgery, Department of Oral and Maxillofacial Radiology, Kyushu University, Fukuoka, Japan).
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<tr>
<td>1835</td>
<td>Cancer of the Tongue: Demographic, Clinical, Disease, and Therapeutic Characteristics.</td>
<td>R.M. NAGLER*, M. PELED, and D. LAUFER (Department of Oral and Maxillofacial Surgery, Rambam Medical Center, Haifa, Israel).</td>
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<td>1836</td>
<td>Comparison of Patients’ vs. Orthodontists’ Reasons for Orthognathic Surgery.</td>
<td>S.M. RIVERA, J.P. HATCH, J.D. RUGH*, R.A. BAYS, and C. DOLCE (UTHSC-San Antonio, TX; Emory University, Atlanta, GA; and University of Florida, Gainesville, USA).</td>
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<td>1837</td>
<td>Root Resorption of Mandibular Second Molars Related to Impacted Molars.</td>
<td>S.-P. LEE*, Y.-J. DONG, and Y.-C. CHANG (Tri-Service General Hospital, Taipei, Taiwan, ROC).</td>
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<td>1838</td>
<td>Hormone Replacement Therapy and Oral Symptoms in Menopausal Women.</td>
<td>L. TARKKILA*, A. TIITINEN, C. LINDOQVIST, H. MURTOMAA, and J.H. MEURMAN (Institute of Dentistry, Laboratoire d’Etudes des Interfaces en Odontologie—Faculté d’Odontologie, Lyon, France; University of Helsinki and University Central Hospital, Finland).</td>
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<td>1839</td>
<td>Reversal of Midazolam-induced Sedation and Ventilatory Depression by the Selective Antagonist—Flumazenil.</td>
<td>C. FLOEGEL* and D. WARD (Departments of Anesthesiology, UCLA Medical Center, Los Angeles, CA, and University of Rochester, NY, USA).</td>
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<td>1840</td>
<td>The Post-extraction Sites: The Use of Titanium Membranes.</td>
<td>L. MALCHIODI*, M. QUARANTA, F. DI FELICE, A. DI FELICE, and A. SCRASCIA (Dental School, University of Chieti; Dental School, La Sapienza University of Rome; and Lanciano Hospital, Italy).</td>
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<td>1842</td>
<td>Post-operative Evaluation in Patients with Third Molar Surgery Indicated. Experience in Venezuela.</td>
<td>A. LAMURA de GARRIGA*, M.C. de PALMERO, A. de SEIR, G. LAMURA, and E.A. GARRIGA (Central University of Venezuela; and Faculty of Dentistry, University of Michigan, Ann Arbor, USA).</td>
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<tr>
<td>1844</td>
<td>Changes in Articulation of Skeletal Open Bite Cases Before and After Orthognathic Treatment.</td>
<td>Y. ONIKI*, H. ONIKI, T. ITOH, and M. MATSUMOTO (Department of Orthodontics, Fukuoka Dental College, Japan).</td>
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<td>1845</td>
<td>Postural Change of the Hyoid Bone Following Sagittal Split Osteotomy.</td>
<td>Y. KUBO*, H. NAKANO, N. YOSHINARI, M. ISHIKAWA, Y. SEINO, K. OKADA, M. YOKOTA, T. KAMEGAI, and F. ISHIKAWA (School of Dentistry, Iwate Medical University, Moriga, Japan).</td>
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<td>1846</td>
<td>Detection of Lymph Node Metastasis of Oral Cancer with 18FDG-PET.</td>
<td>M. SHOZUSHIMA*, J. ODA, Y. SHIRAKURA, S. SHOJI, and K. SAKAMAKI (Dental Radiology, School of Dentistry, Iwate Medical University, Morioka, Japan).</td>
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<td>1847</td>
<td>Cutting Efficiency of Oral Surgery Burs.</td>
<td>S.C. SIEGEL* and J.A. von FRAUNHOFER (Dental School, University of Maryland, Baltimore, USA).</td>
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<td>1848</td>
<td>Intra-articular Pressure of Human TMJ during Mandibular Movements.</td>
<td>K. KAKUDO*, J. KOTANI, and K. KIM (Departments of Oral and Maxillofacial Surgery and of Anesthesiology, Osaka Dental University, Japan).</td>
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1849  Intracellular Particle Size of Breakdown Silicone TMJ Interpositional Implants. I. YAMAMORI*, T. SHIBATA, and N. YOSHIZAWA (Department of OMS, School of Medicine, Yamagata University, Japan).

1850  Development of “Fukuoka TMJ Total Prosthesis”. T. SHIMODA*, S. TSUTSUMI, Y. TAKAYAMA, S. UKON, and T. HONDA (Department of Oral & Maxillofacial Surgery, Fukuoka Dental College; Research Center for Biomedical Engineering, Kyoto University, Japan).

1851  Changes in Material Properties of Human Mandibular Bone Following Edentulation. C.L. SCHWARTZ-DABNEY* and P.C. DECHOW (Baylor College of Dentistry, Texas A&M University System, Dallas, USA).


1855  Computer-assisted Manufacturing of Space Keepers for GBR. R. CIANCAGLINI*, C. DINOI, S. FERRARIS, A. DEL MASCHIO, and R. BROGGI (Department of Oral Rehabilitation, University of Milan; and Department of Diagnostic Radiology, IRCCS, S. Raffaele Hospital, Italy).

1856  Alveolar Bone Augmentation Using Dura Mater. F. SUWA*, I. TODA, H. IKE, and A. TAKEMURA (Department of Anatomy, Osaka Dental University, Japan).


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Poster Session, Exhibit Hall  
Periodontal Research-Diagnosis/Epidemiology - Periodontal Disease Status of Populations

1858  Periodontal Status in a Substance Abusing Inner-city Population. A. KHOCHT*, S. LAFARGE, S. KELLER, and S. SCHLEIFER (Dental School, UMDNJ, and New Jersey Medical School, Newark, USA).

1859  Periodontitis Prevalence and Progression in Male Adolescents over Three Years. S. DUFFY*, G.S. GRIFFITHS, M.S. GILTHORPE, N.W. JOHNSON, and K.A. EATON (Eastman Dental Institute and King’s College School of Medicine and Dentistry, London, UK).

1860  Self-reporting of Periodontal Disease. A.D. GILBERT and N.M. NUTTALL* (Unit of Restorative Dental Care; and Dental Health Services Research Unit, Dundee Dental Hospital and School, University of Dundee, Scotland, UK).


1862  Cohort Study on Recurrence of Periodontal Disease and Oral Hygiene. A. KUMAGAI*, K. ABE, M. AONUMA, T. KIKUCHI, T. YAEAGASHI, and K. UYENO (Department of Periodontology, School of Dentistry, Iwate Medical University, Japan).
1863 Gingival Inflammation and Early-onset Periodontitis in Moroccan Patients. N. KHLIL*, A. EL GENDI, and A. DANIEL (Casablanca Dental School, Morocco; and Nantes Dental School, France).

1864 Dental Caries and Tooth Loss in Moroccan Early-onset Periodontitis. N. KHLIL, A. EL GENDI*, and A. DANIEL (Casablanca Dental School, Morocco; and Nantes Dental School, France).

1865 Radiographic Evaluation of Early-onset Periodontitis in Moroccan Patients. N. KHLIL, S. HAMDANI, I. EL HERICHI*, S. KAMILY, and A. DANIEL (Casablanca Dental School, Morocco; and Nantes Dental School, France).

1866 Supernumerary Teeth and Early-onset Periodontitis. N. KHLIL, A. EL GENDI, and A. DANIEL* (Casablanca Dental School, Morocco; and Nantes Dental School, France).


1869 Origin of Oral Malodor in Periodontal Disease. K. YAEGAKI* and A.J.M. COIL (Breath Testing Clinic, University of British Columbia Faculty of Dentistry, Vancouver, Canada).


1871 Periodontal Treatment Provision in the General Dental Service in Scotland. A.D. GILBERT* and J.A. DAVIES (University of Dundee Dental School, Scotland, UK).

1872 Periodontal Treatment Needs in a Brazilian Population. V. GONÇALVES*, M.S. MAGALHÃES, F. ALMEIDA, S. KAHN, and R.G. FISCHER (Gama Filho University; City Health Foundation of Niteroi; and Rio de Janeiro State University, Brazil).

Seq#: 171 Friday, June 26, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall
Periodontal Research-Pathogenesis - Conditions/Agents Promoting Cell Activity in vitro

1873 High Glucose Stimulates Production of PGE2 in Human Periodontal Ligament Cells and Human Gingival Fibroblasts. S.-J. KIM*, J.-H. CHUNG, J.-B. PARK, and Y.-H. KWON (Department of Pharmacology and Department of Periodontology, School of Dentistry, Kyung Hee University, Seoul, Korea).

1874 IL-6 Activates Fibroblasts in the Presence of Soluble IL-6 Receptor. K. NARUISHI*, S. TAKASHIBA, M. TAKIGAWA, F. NISHIMURA, H. ARAI, and Y. MURAYAMA (Department of Periodontology & Endodontology, Okayama University Dental School, Japan).


1876 Effects of Prostaglandin E2 on LPS-induced Production of IL-8 by Human Gingival Fibroblasts in vitro. T. FUJII*, A. GEINOZ, M. OIDO, Y. KOWASHI, and P.C. BAEHNI (Division of Preventive Dentistry, University of Geneva, Switzerland; and Department of Periodontology, Health Sciences University at Hokkaido, Japan).

1877 Cytokine Release from Human Periodontal Cells in vitro. J. DESCHNER*, B. ZIMMERMANN, N. ULBRICH, A. KAGE, V. KANITZ, B. ARNOLD, P. MERTENS, and J.-P. BERNIMOULIN (Department of Periodontology, Humboldt University, Berlin; Institute of Anatomy, Free University of...
Berlin; German Rheumatism Research Center, Berlin; and Institute of Chemistry and Biochemistry, Humboldt University, Berlin, Germany).

1878 Tyrosine Kinase Regulates IL-1β-induced PGE2 Production in Human Gingival Fibroblasts. S. NAKAO*, Y. OGATA, S. FURUYAMA, and H. SUGIYA (Nihon University School of Dentistry at Matsudo, Chiba, Japan).

1879 Periodontium Cells’ Proliferation and Differentiation on Various GTR Membranes. T. TAKATA*, H.-L. WANG, and M. MIYAUCHI (Hiroshima University School of Dentistry, Japan; and School of Dentistry, University of Michigan, Ann Arbor, USA).

1880 Effects of Substance P on the Cell Proliferation and IL-2 Production of T Lymphocyte. H.-S. KIM* and J.-K. MOON (Department of Periodontology, College of Dentistry, Chon Buk National University, Chon Ju, Korea).

1881 The Influence of Transient and Strong Load on the Periodontium. C.-H. WU, C.-Y. SU, Y.-L. WU*, W.-J. CHANG, K.-D. HSU, S.-Y. LEE, and C.-T. LIN (Graduate Institute of Oral Rehabilitation Sciences, Taipei Medical College; and Institute of Clinical Dentistry, Yang-Ming University, Taiwan, ROC).

1882 Induction of COX-2 Expression by Tension-force in Human PDL Cells. N. SHIMIZU*, T. GOSEKI, Y. OZAWA, M. YAMAGUCHI, and Y. ABIKO (Departments of Orthodontics and Biochemistry, Nihon University School of Dentistry at Matsudo, Chiba, Japan).

1883 Effect of Epidermal Growth Factor on Cyclooxygenase-2 mRNA Level in Gingival Fibroblasts Challenged with Interleukin-1β. T. YUCEL-LINDBERG* and T. MODEER (Department of Pediatric Dentistry, Faculty of Odontology, Huddinge, Sweden).


1885 The Effects of Bacterial Surface Antigens on Human Epithelial Cells. M.T. PÖLLÄNEN* and J.I. SALONEN (Institute of Dentistry, University of Turku, Finland).

1886 Calcium Measurement in Acute Cultured Cells from Gingival Tissue. I. GALLARDO, P. BULLÓN, and J. RIBAS* (Departamento de Estomatología and Departamento de Fisiología Médica y Biofísica, Facultad de Odontología, Universidad de Sevilla, Spain).

Seq#: 172 Friday, June 26, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall

Periodontal Research-Pathogenesis - Regulators of Apoptosis

1887 Inhibition of Polymorphonuclear Neutrophil Apoptosis by P. gingivalis LPS. M. HIROI*, T. SHIMOJIMA, M. KASHIMATA, M. TAJIMA, T. MIYATA, and H. SAKAGAMI (Department of Dental Pharmacology and Department of Periodontology, Meikai University School of Dentistry, Sakado, Saitama, Japan).

1888 Induction of Fas-mediated Apoptosis in Lymphocytes from Periodontal Lesion. T. SAWA*, F. NISHIMURA, H. OHYAMA, K. TAKAHASHI, S. TAKASHIBA, and Y. MURAYAMA (Department of Periodontology and Endodontology, Okayama University Dental School, Japan).


1890 DNA Damage in Periodontitis Fibroblasts Does Not Cause Apoptosis. S. NAZAR*, P. GHANI, C. HAYASHI, B. ENRIQUEZ, and Z. HUSSAIN (University of California, San Francisco, USA).

P. gingivalis LPS Suppress PMN Apoptosis by Interfering with Fas Pathway. T. SHIMOJIMA*, M. HIROI, T. MIYATA, M. KASHIMATA, and H. SAKAGAMI (Department of Periodontology and Department of Dental Pharmacology, Meikai University School of Dentistry, Sakado, Saitama, Japan).


Mechanisms Involved in the Induction of PMN Apoptosis by Alkaline Conditions. B. LEBLEBICIOGLU*, F. ZHANG, and J. WALTERS (Department of Oral Biology, The Ohio State University, Columbus, USA).

Studies of Lymphocyte Apoptosis Induced by Porphyromonas gingivalis. D.R. GEATCH, J.I. HARRIS, P.A. HEASMAN, and J.J. TAYLOR* (Oral Biology and Restorative Dentistry, Dental School, University of Newcastle, UK).


Periodontal Regeneration of Intrabony Defects with a Resorbable Membrane. G. LOMBARDO*, E. SANTI, R. BERNINI, and G. URBANI (School of Dentistry, Verona University, Italy).

Radiographic and Clinical Comparisons of the Tissue Changes Encountered Following Two Different Regenerative Procedures. F. NIELSEN-MIROT*, R. DETIÈVILLE, W. BÜRGIN, S. HÄNNI, N.P. LANG, and U. BRÄGGER (School of Dental Medicine, University of Berne, Switzerland).

Maintenance of Attachment Gain through GTR Using a Biodegradable Polymer Membrane: One- to Five-year Results. D. BLASE* and P. BERCY (School of Dentistry, Department of Periodontology, Catholic University of Louvain, Brussels, Belgium).

Bone Fill in Human Class II Furcation Defects. A.F.M. LIMA* (Dental School of Piracicaba, University of Campinas, Brazil).


Evaluation of Bone Regeneration by 25% Doxycycline-loaded Biodegradable GTR Membrane. C.Y. CHANG* and S. YAMADA (Department of Periodontics, Tokyo Dental College, Chiba, Japan).

Healing of Class II Defects Using Two Bioresorbable Membranes. M.C. TREDENICK*, L.F. MOTA, and R.G. CAFFESSE (The University of Texas HSC at Houston, USA).
GTR with Non-resorbable and Biodegradable Barriers. III. 2 Years’ Results: Furcation Lesions. P. EICKHOLZ*, T.-S. KIM, and R. HOLLE (Department of Operative Dentistry and Periodontology, and Department of Medical Biometry, University of Heidelberg, Germany).

GTR with Non-resorbable and Biodegradable Barriers. IV. 2 Years’ Results: Vertical Defects. T.-S. KIM*, P. EICKHOLZ, R. HOLLE, and H.J. STAEHLE (Department of Operative Dentistry and Periodontology; and Department of Medical Biometry, University of Heidelberg, Germany).

Four-year Stability of Root Coverage Following GTR. A. SCABBIA*, L. TROMBELLI, and G. CALURA (University of Ferrara, Italy).

Effect of Sulfate-reducing Bacteria on the Degradation of Resorbable GTR Membranes. W.-D. GRIMM*, K. GRIMM, J.S. v.d. HOEVEN, P.S. LANGENDIJK, and I. SCHMITZ (Department of Periodontology, University of Witten, Germany; Laboratory of Oral Microbiology, University of Nijmegen, The Netherlands; and Institute of Pathology, University of Bochum, Germany).


Cementum Removal with Different Debridement Instruments on in vivo-debrided Teeth. J. FANGHANEL*, T. KOCHER, and H. PLAGMANN (Periodontology, Dental School, Greifswald and Kiel, Germany).

Root Surface Debridement and Endotoxin Removal. U.I. ZIMMERMANN*, J.G. CADOSCH, and U.E. ZAPPA (Department of Periodontology, Endodontology, and Cariology, School of Dental Medicine, University of Basel, Switzerland).

Comparison of Two Methods of Curet Sharpening. T. BASARAB*, R.M. EBER, W.P. SORENSEN, Y. SHYR, and H.-L. WANG (Department of Periodontics/Prevention/Geriatrics, School of Dentistry, University of Michigan, Ann Arbor, USA).


Periodontal Pocket Penetration by Micro-ultrasonic Tips. L.R. CLIFFORD*, I.G. NEEDLEMAN, and Y.K. CHAN (Clinical Practice, Sydney, Australia; and Department of Periodontology, Eastman Dental Institute, London, UK).


Initial Therapy in Patients with Chronic Adult Periodontitis or RPP. R. MANNING*, S. KOO, G.S. GRIFFITHS, and H.N. NEWMAN (Eastman Dental Institute, University of London, UK).

The Effect of the Control of Diabetes Mellitus on Periodontal Therapy. E. FIRATLI and C. UYGUR* (Department of Periodontology, School of Dentistry, University of Istanbul, Turkey).

Evaluation of Four Modalities of Supportive Periodontal Treatment. F. ZANGARI*, I. LORENZETTI, C. NASTRUZZI, S. CATAPANO, and L. TROMBELLI (University of Ferrara, Italy).

Periodontal Characteristics of Compliant and Non-compliant Patients with Periodontitis. J. KONIG*, N. LANGENFELD, H. PLAGMANN, and T. KOCHER (Department of Periodontology, University of Kiel; and Department of Periodontology, University of Greifswald, Germany).
Effect of Periodontal Therapy in Matched Pairs of Smokers/Non-smokers. V. CLEREHUGH* and A.G. LINDEN (Department of Periodontology, Leeds Dental Institute, UK).

PST™ Genotypes in a Periodontally Healthy Population Treated for Mucogingival Surgery. R.G. CAFFESSE*, M. de LA ROSA R., and M. de LA ROSA G. (Dental Branch, Houston Health Science Center, University of Texas, USA; and University of Nuevo Leon, Monterrey, Mexico).

PST™ Genotypes in a Well-maintained Periodontal Patient Population. M. de LA ROSA R.*, R.G. CAFFESSE, and M. de LA ROSA G. (Dental Branch, Houston Health Science Center, University of Texas, USA; and University of Nuevo Leon, Monterrey, Mexico).

Vaccine Effects of Scaling and Root Planing. Clinical, Microbiological, and Radiographic Outcomes. A. PAWLOWSKI, A. CHEN, C. SPEAKEMAN, and R.C. PAGE* (Regional Clinical Dental Research Center and Department of Periodontics, School of Dentistry, University of Washington, Seattle, USA).

The Evaluation of Periodontal Destruction Associated with Mesially Inclined Teeth. M. MATSUE*, H. ENDO, M. MEMEZAWA, and I. MATSUE (Department of Periodontology, Nihon University School of Dentistry at Matsudo, Japan).

Evaluation of Treatment of Periodontal Pockets with Laser. N. LIOUNABINA*, J. JENSEN, and T. KARRING (Royal Dental College, University of Aarhus, Denmark).

The Effects of Nd:YAG Laser Radiation in Periodontal Pocket Therapy. M. FRENTZEN* and K. KORNER (Department of Operative Dentistry and Periodontology, Bonn, Germany).

Root Surface Alterations after Nd:YAG Laser Treatment—An in vivo Study. M. STELZEL*, F. NIEMANN, and L. FLORES-DE-JACOBY (Department of Periodontology, Philipps University, Marburg, Germany).


Supragingival Irrigation in Experimental Gingivitis. H.-K. ALBERS*, S. LÖHNERT, and S. JEPSEN (Dental School, University of Kiel, Germany).


Effect of Nutritive Storage Medium on Intentional Replanted Teeth—A Prospective Clinical Trial. P. WEIGL*, H.-C. LAUER, and J. BROMMER (Department of Prosthodontics, J.W. Goethe University, Frankfurt/Main, Germany).
1934  Treatment Effects of Developmental Mucogingival Anomalies in Children. B. VOJINOVI´C* and B. DIMITRIJEVI´C (Faculty of Stomatology, University of Belgrade, Yugoslavia).

1935  A Cutting Efficiency of Root Canal Wall with Mechanical Equipment. T. AKASHI*, T. MIKAMI, R. SUZUKI, and T. SAITO (Department of Endodontics, Nihon University School of Dentistry, Tokyo, Japan).

Seq#: 176  Friday, June 26, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall

Pharmacology, Therapeutics & Toxicology - Mouthwashes, Dentifrices, and Anti-plaque Agents

1936  Chemistry and Decomposition of Peroxy Acids in Acidic Solutions with Chloride Ion. S. MAJETI*, C.S. FOOTE, and Q.J. NIU (The Procter & Gamble Company, Cincinnati, OH; and Department of Chemistry and Biochemistry, University of California, Los Angeles, USA).


1938  The Anti-oxidant Properties of Mouthrinses Depend on Their Ethanol Content. M. BATTINO*, M.S. FERREIRO, G. MACHUCA, and P. BULLÓN (Institute of Biochemistry, University of Ancona, Italy; and Department of Periodontology, University of Sevilla, Spain).


1941  Tooth Whitener Ingestion and Early Embryo Growth in Rats. A.F. REDMOND*, A. LEUNDA, Y.D. WUU, I. VANDERHÉYDEN, S. PAMPFER, C. MARCHAND, and R. DE HERTOGH (SIU School of Dental Medicine, Alton, IL, USA; and UCL Medical School, Brussels, Belgium).

1942  The Cleaning Effectiveness of an Experimental, Multiple-benefit Triclosan Dentifrice. K.A. VASTOLA* and J.L. WINSTON (Procter & Gamble, HCRC, Cincinnati, OH, USA).

1943  Cytotoxicity and Mutagenicity of a Non-peroxide-based Tooth-whitening Gel. Y. LI, W. ZHANG*, and J. YANG (Loma Linda University School of Dentistry, CA, USA).

1944  In vivo Safety Evaluation of an H2O2-based Tooth-whitening Gel. Y. LI*, W. ZHANG, J. YANG, and A. AGUILAR (Loma Linda University School of Dentistry, CA, USA).


1949 Thiocyanate Levels in Miswak Aqueous Extracts Assessed by Diffuse Reflectance Infrared Spectrometry. I.A. DAROUT*, A.A. CHRISTY, R.W. ALI, and N. SKÅUG (School of Dentistry, and Department of Chemistry, University of Bergen, Norway).

1950 The Importance of a Verified Reference Material for Testing Dentifrice Functionality. B.R. SCHEMEHORN, M. SAIKI*, C.C.C. ZOPPE, and J.J. HEFFERREÑ (Indiana University, Indianapolis; IPEN, University of São Paulo, Brazil; and University of Kansas, Lawrence, USA).

Seq#: 177 Friday, June 26, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall
Neuroscience/TMJ - Masticatory Muscle Function

1951 Development of Post-exercise Muscle Soreness after Experimental Grinding. T. ARIMA*, P. SVENSSON, and L. ARENDT-NIELSEN (Orofacial Pain Laboratory, Center for Sensory-Motor Interaction, Aalborg University; Royal Dental College, University of Aarhus, Denmark).


1953 Effect of Food Texture on Masticatory Movement in Children. S. NAKATA*, H. HAYASAKI, and M. NAKATA (Department of Pediatric Dentistry, Faculty of Dentistry, Kyushu University, Fukuoka, Japan).

1954 Electromyographic Activity Evaluation of Masticatory Muscles in Deciduous Dentition. M.B.D. GAVIÃO* and F.G. CARMAGNANI (Department of Pediatric Dentistry, Dental School of Piracicaba, São Paulo, and University of Campinas, Brazil).


1956 Working/Balancing-side Masseter Muscle EMG Coordination during Nocturnal Bruxism. Y. AKAMATSU*, S. MINAGI, T. MATSUNAGA, and T. SATO (Department of Removable Prosthodontics, Okayama University Dental School, Japan).

1957 Escharr Appliance Activates the Masticatory and Tongue Muscles during Sleep. K. YOSHIDA* and T. IIZUKA (Department of Oral and Maxillofacial Surgery, Kyoto University, Japan).

1958 Reliability of Prescale in Measuring Occlusal Force. Y. KOBAYASHI*, H. SHIGA, and J. MIYAZAKI (The Nippon Dental University, Tokyo, Japan).

1959 Masticatory Muscle Activity during Head Movements in Normal and TMD Young Adult Subjects. F. FORNERO*, M. TESTA, C. DINOI, G. RADAELLI, and R. CIANCAGLINI (Department of Oral Rehabilitation, IRCCS San Raffaele Hospital, University of Milan, Italy).

1960 In vivo and Modeled Muscle Forces during Molar Biting in Humans. L.R. IWASAKI*, J.C. NICKEL, K.R. MCLACHLAN, and W.D. MCCALL, Jr. (UNMC College of Dentistry, Lincoln, NE, USA; University of Manitoba Faculty of Engineering, Winnipeg, Canada; and SUNY School of Dentistry, Buffalo, NY, USA).

1961 Single Human Masseter Fibers Contain Unique Combinations of Myofibrillar Proteins. P. STÅL*, F. YU, L.-E. THORNELL, and L. LARSSON (Department of Anatomy, Umeå University, Sweden; and Noll Laboratory, Pennsylvania State University, University Park, USA).

1962 Regionalization of Muscle Fiber Type and Myosin Compositions of the Human Tongue. S. MARKLUND*, P.-O. ERIKSSON, R. DE PAUL, and P. STÅL (Department of Anatomy and Clinical Oral Physiology, Umeå University, Sweden; and Waisman Center, University of Wisconsin-Madison, USA).
1963  Timing of Masticatory Force Control in the Rabbit. A. KOMURO*, O. HIDAKA, Y. MASUDA, T. KATO, and T. MORIMOTO (Department of Oral Physiology, Faculty of Dentistry, Osaka University, Japan).


1966  Functional Balancing Factor (FBF) as a Reference Point to Better Understand the Occlusal Mechanisms. G. FRISARDI*, A. PIATTELLI, and F. FESTA (Dental School, University of Chieti, Italy).

1967  Electromyographical Activity in Masticatory Muscles under Different Commanded Head Postures. M. TESTA*, F. FORNERO, F. CAMPANARI, R. CIANCAGLINI, and G. RADAELLI (Department of Oral Rehabilitation, IRCCS San Raffaele Hospital, University of Milan, Italy).

Seq#: 178  Friday, June 26, 11:15 am - 12:45 pm  Poster Session, Exhibit Hall

Neuroscience/TMJ - Orofacial Disorders: Signs and Symptoms

1968  Self-reported Symptoms of Temporo-mandibular Disorders in the Population of Ferrara, Italy. S. CATAPANO, G. DEGLI ESPOSTI*, P. BALDISSARA, and F. DE SISTI (University of Ferrara, Italy).


1970  Prevalence of Disorders of the Temporomandibular Joint in a Rural Population. A. ZAZUETA*, G. JIMÉNEZ, F. HERRERA, and A. BORGES (Faculty of Dentistry, Autonomous University of Campeche; and National Autonomous University of México).

1971  Psychosocial Components of Pain Conditions Related to Temporomandibular Disorders: Expectations and Knowledge in a Sample of French Dentists. P. PIONCHON* (Dental School, University of Auvergne, France).


1973  Five-year Progression of Axis-I RDC Criteria for Myofascial Pain. J.-P. GOULET*, S.F. DWORINK, L. LERESCHE, and L.A. MANCL (Université Laval, Québec, Canada; and University of Washington, Seattle, USA).


1975  Relation between Sleep Quality and Clinical Characteristics in TMD Patients. H. YATANI*, J. STUDTS, M. CORDOVA, C.R. CARLSON, and J.P. OKESEN (Department of Fixed Prosthodontics, Okayama University Dental School, Japan; and Orofacial Pain Center, University of Kentucky, Lexington, USA).

1976  Elevated Levels of Protein in TMJ with MR Joint Effusion. T. TAKAHASHI*, H. SEKI, H. NAGAI, T. OHNUKI, and M. FUKUDA (Division of Dentistry and Oral Surgery, Akita University School of Medicine, Japan).

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<td>1978</td>
<td>Enamelysin (MMP-20) Is Expressed in Oral Squamous Cell Carcinoma Cells. T. SALO*, H. PALOSAARI, T. SORSA, and C. LÓPEZ-OTÍN (University of Oulu, Finland; University of Helsinki, Finland; and University of Oviedo, Spain).</td>
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<td>1979</td>
<td>PTHrP Expression and Bone Invasion by Oral Squamous Cell Carcinoma. A. KAMETA*, M. TSUCHIMOCHI, R. SATO, M. HARADA, Y. OKADA, and M. KATAGIRI (Department of Oral &amp; Maxillofacial Radiology, Department of Oral &amp; Maxillofacial Surgery II, and Department of Oral Pathology, The Nippon Dental University, School of Dentistry at Niigata, Japan).</td>
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<td>1980</td>
<td>Expression of Cytokeratin and Parathyroid-hormone-related Protein in Oral Carcinoma. M. TSUCHIMOCHI*, M. KATAGIRI, R. SATO, and M. HARADA (Department of Oral &amp; Maxillofacial Radiology and Department of Oral Pathology, The Nippon Dental University, School of Dentistry at Niigata, Japan).</td>
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<td>1981</td>
<td>Expression of CD44s, CD44v5, CD44v6, and CD44v7-8 in Oral Squamous Cell Carcinomas in Taiwan. M.Y.P. KUO*, S.J. CHENG, and C.P. CHIANG (National Taiwan University, Taipei, Taiwan).</td>
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<td>1982</td>
<td>The Analysis of Saliva Exfoliative Cell’s DNA in Oral Squamous Cell Carcinoma Patients. P.H. LIAO*, M.F. HUANG, Y.-C. CHANG, and M.-Y. CHOU (Chung Shan Medical &amp; Dental College, Taichung, Taiwan).</td>
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<td>1984</td>
<td>The Expression of Procollagen Type IIA in Oral Squamous Cell Carcinoma. S.L. McKOWN*, P. SLOAN, S. AYAD, J.F. NEWALL, and D.H. CARTER (Manchester Dental School and Department of Biochemistry, University of Manchester, UK).</td>
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<td>1987</td>
<td>Screening Study of Tumor Markers in Oral and Maxillofacial Cancer. J. WALTER* (Division of Maxillofacial Surgery, Department of Stomatology, Faculty Hospital, Pilsen, Czech Republic).</td>
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<th>Year</th>
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Cytotoxic T-cell Clones in Lichen Planus. P.B. SUGERMAN* and M. BIGBY (Harvard Medical School; and Massachusetts General Hospital Cutaneous Biology Research Center, Charlestown, MA, USA).

Correlation between Oral Cancer and Amount of Tobacco Consumed. K. BIONDI, S. BELLONI, F. FEMOPASE, S. LOPEZ de BLANC, and H. LANFRANCHI* (Department of Stomatology, Facial Dentistry, Universities of Buenos Aires and Córdoba, Argentina).

bcl-2, p53, and Mib-1 Expression in Oral Lichen Planus. G. IEZZI*, C. RUBINI, M. FIORONI, A. SCARANO, M. PIATTELLI, and A. PIATTELLI (Dental School, University of Chieti; and University of Ancona, Italy).

Frequency of Epithelial Dysplasia in Oral Lesions among Venezuelans. H. RIVERA*, Y. MORET, and M. SANTOS (Institute for Dental Research, Faculty of Dentistry, Caracas, Venezuela).

Effect of Cyclosporine A on the Growing Rat Mandibular Condyle. S. KONISHI*, N. SHIMOZATO, M. KISHIMOTO, Y. TANAKA, H. MAEDA, and Y. KAMEYAMA (School of Dentistry, Aichi-Gakuin University, Nagoya, Japan).

Effect of Dietary Calcium on Bone Dynamics in Osteoporosis. T. HARA*, T. SATO, Y. MARUO, S. MORI, H. SHIRAI, and S. MINAGI (Department of Removable Prosthodontics, Okayama University Dental School, Japan).

Diabetes Affects Threshold for Bone Resorption Induced by Mechanical Pressure. H. SHIRAI*, T. SATO, T. HARA, S. MORI, Y. MARUO, and S. MINAGI (Department of Removable Prosthodontics, Okayama University Dental School, Japan).

Histology and Time Course of Temporomandibular Joint (TMJ) Synovitis in Rats Induced by Condylar Hypermobility. J. KAWAKAMI* and T. MUTO (Oral Surgery, Health Sciences University of Hokkaido, Japan).


Masseter Muscle and Mandibular Deformity in PTHrP-deficient Mice. S. SHIBATA*, N. SUDA, K. YAMAZAKI, T. KURODA, V. HAMMOND, P. SENIOR, and F. BECK (Tokyo Medical & Dental University, Japan; and Howard Florey Institute of Experimental Physiology and Medicine, Melbourne, Australia).

Changes in Occlusal Force Distribution of Primary Dentition: Pilot Study. H. KARIBE*, K. OGATA, and K. OGIHARA (Nippon Dental University, Tokyo, Japan).

Do Early Factors Predict Development of CMD in Adolescence? R.H. PAHKALA* and M.T. LAINE-ALAVA (University of Kuopio, Finland; and University of Kentucky, Lexington, USA).

The Study of Masticatory Efficiency by The Manly Method. M. ASAKA*, I. OOTA, M. SUGAWARA, N. SAKAGUCHI, S. IGARASHI, and K. INOMATA (Department of Pediatric Dentistry and Department of Oral Physiology, Health Sciences University of Hokkaido, Japan).

Metabolism of Masseter Muscle by Using 31P Magnetic Resonance Spectroscopy. K. SATOH*, H. NAKANO, H. OIKAWA, T. MASUDA, K. OGASAWARA, Y. TAMAKAWA, and F. ISHIKAWA (Orthodontics and Radiology, Iwate Medical University, Morioka, Japan).

2005  Anterior Disc Displacement in Rabbit Temporomandibular Joint: A New Model. M.V. BERTERETCHE*, J.M. FOUCART, and P. CARPENTIER (Faculty of Dentistry, Orthopedic Research Laboratory, University Paris VII, France).

2006  Chewing Rhythm in Class II Molar Finished Cases after Orthodontic Treatment. T. NAKAMURA*, N. IMAMURA, and H. ISHIKAWA (Nippon Dental University, Tokyo, Japan).

2007  Changes of Rhythm after Orthognathic Surgery in Skeletal Class III Cases. H. ISHIKAWA*, N. TUBURA, and T. NAKAMURA (Department of Orthodontics, Nippon Dental University, Tokyo, Japan).

2008  The Masticatory Muscle Activity during Chewing in Patients with Unilateral Cleft Lip and Palate. C.-H. TSAI* (Graduate Institute of Oral Rehabilitation Sciences, Taipei Medical College, Taiwan, ROC).

2009  Effect of Hypofunction on the Microvasculature in Rat Periodontal Ligament. A. TANAKA*, J. IIDA, and K. SOMA (First Department of Orthodontics, Faculty of Dentistry, Tokyo Medical and Dental University, Japan).


2011  The Size and Orientation of the Masseter and Medial Pterygoid Muscles. C.C. PENG*, C.W. HSU, and Y.Y. SHIAU (School of Dentistry, National Taiwan University, Taipei).


Seq#: 182 Friday, June 26, 11:15 am - 12:45 pm  
Poster Session, Exhibit Hall

Craniofacial Biology - Craniofacial and Dental Development and Genetics


2014  Expression of OASIS Gene in Mouse Tooth Germs. J. KATO*, Y. HONMA, T. SHIBAGUCHI, M. IWAMOTO, A. WANAKA, and K. KURISU (Osaka University Faculty of Dentistry and Fukushima Medical College, Japan).

2015  Immunohistochemistry of Connexin Expression in Bone Following Antisense Oligodeoxynucleotide Blockade. R. MINKOFF*, E.S. BALES, and W.E. STRUSS (Department of Orthodontics, Dental Branch, University of Texas-Houston Health Science Center, USA).

2016  Relationship between Retinoic Acid and sonic hedgehog in Craniofacial Morphogenesis. M.A. FEINBERG*, D. HU, N. OSUMI, and J.A. HELMS (University of California at San Francisco, USA; and National Institute of Neuroscience, Tokyo, Japan).

2017  Cleft Palate in EphB2/B3 Double-mutant Mice. P. GAKUNGA*, M. HENKEMEYER, and J.-P. MBIENE (Department of Biomedical Sciences, Baylor College of Dentistry, Texas A&M University System; and Center for Developmental Biology, Southwestern Medical Center, University of Texas, USA).

2019 Characterization of Semaphorin cDNAs in Xenopus during Craniofacial Development. L.J. JACOBS* and T.E. LALLIER (Louisiana State University School of Dentistry, New Orleans, USA).


2021 Dental Findings in Carrier Detection for Hypohydrotic Ectodermal Dysplasia. I. ´SKRINJARI´C* and D. GLAVINA (School of Dental Medicine, University of Zagreb, Croatia).


2023 The Role of FGFs in Calvarial Bone Formation. A. FAKHRY*, W.-T. KIM, Y.-S. KIM, A.M. POLSON, M. PACIFICI, and H.-D. NAH (School of Dental Medicine, University of Pennsylvania, Philadelphia, USA).

2024 Cartilage Characteristic Gene Expressions in the Mouse Embryonic Mandibular Condyle. K. FUKADA*, S. SHIBATA, S. SUZUKI, K. OHYA, and T. KURODA (Faculty of Dentistry, Tokyo Medical and Dental University, Japan).


2026 Mapping of the Van der Woude Syndrome Critical Region. L.M. BRENTZELL*, B. SCHUTTE, J.C. MURRAY, and M.J. DIXON (School of Biological Sciences, University of Manchester, UK; and Department of Pediatrics, University of Iowa, USA).

2027 Palatal Tissue Levels of Activin-A Decrease during Palatal Shelf Union. J.P. MANSELL, J.T. McGUI, and J.R. SANDY (Division of Child Dental Health, University of Bristol, UK).

2028 Morphological Study on the Genesis of the Mouse Vestibulum Oris. Y. IWAI-LIAO*, Y. HIGASHI, and S. KUMABE (Department of Oral Anatomy, Osaka Dental University, Japan).

Seq#: 183 Friday, June 26, 11:15 am - 12:45 pm Poster Session, Exhibit Hall

Craniofacial Biology - Tooth Movement and Tooth Eruption

2029 Trigeminal Communications into the Pterygopalatine Fossa. J.A.C. NAVARRO*, J.C. ANDREO, and P.L. NAVARRO (Anatomy Department, Bauru Dental School, University of São Paulo, Brazil).

2030 Relationship between Orthodontic Tooth Movement and Physiological Drift of Teeth. Y. ASHIZAWA*, K. NAKAMURA, S. KURIHARA, N. SAHARA, K. SUZUKI, and T. DEGUCHI (Departments of Orthodontics, Institute for Dental Science, and Oral Histology, Matsumoto Dental University, Shiojiri, Nagano, Japan).

2031 Epidemiologic Survey on Time and Eruption Order of Permanent Teeth. M. MOSLEMI* (Faculty of Dentistry, Shahid Beheshty University, Evin, Tehran, Iran).

2032 Human Front Teeth and Sexual Subjective Criteria. F. UNGER*, A. HOORNAERT, and P. PICQ (Dental Faculty of Nantes and Collège de France, Paris, France).
In situ Detection of Gelatinolytic Activity in Oral Developmental Tissues. Y. ABIKO*, M. KUTSUZAWA, I. HASEGAWA, Y. KOWASHI, T. KAKU, and T. TACHIKAWA (Oral Pathology, Periodontology, Health Sciences University of Hokkaido, and Showa University, Japan).

Intranasal Changes Following Rapid Maxillary Expansion. D.L. CROSS* and J.P. McDONALD (Orthodontic Department, Victoria Hospital, Kirkcaldy, Fife, Scotland).


The Effect of Using the Pendulum on Orthodontic Tooth Movement. L. STOJANOVIĆ* and B. MILEUSNIĆ (Department of Orthodontics, University of Belgrade; and Military Hospital, Department of Orthodontics, Belgrade, Yugoslavia).

**Microbiology/Immunology and Periodontal Research Groups - IgA and Periodontal Disease [Supported by Procter & Gamble Co.]**

Chairpersons: R.E. Singer and I.B. Lamster

Opening Comments.

IgA as an Anti-inflammatory Regulator of Immunity. M.W. RUSSELL (University of Alabama, Birmingham, USA).

Fcγ Receptors and IgA-mediated Suppression of Inflammatory Cytokines. H. GULLE (University of Vienna, Austria).

Interference with IgA by Subgingival Bacteria. E.V.G. FRANDSEN (University of Aarhus, Denmark).

IgA Antibody Response to Periodontal Pathogens in Non-human Primates. J.L. EBERSOLE (University of Texas Health Science Center, San Antonio, USA).

The Role of Salivary IgA Antibody Against Periodontopathic Bacteria. T. NAGASAWA (Tokyo Medical and Dental University, Japan).

Clinical Relevance of Gingival IgA to Periodontal Disease. J.T. GRBIC (Columbia University, New York, NY, USA).

Discussion.

Summary. I.B. LAMSTER (Columbia University, New York, NY, USA).

**Microbiology/Immunology and Periodontal Research Groups and the British Society for Dental Research - The Host Response to the Normal Microflora**

Chairpersons: R. Burne and M. Wilson

Opening Comments.

2:50 The Immune Response in the Regulation of the Normal Microflora. S. CHALLACOMBE (Guy’s Hospital, London, UK).

3:20 Subversion of IgA-mediated Immunity by Bacterial IgA1 Proteases. M. KILIAN (University of Aarhus, Denmark).

3:50 Control of Cytokine Networks by the Normal Microflora. B. HENDERSON (Eastman Dental Institute, London, UK).


4:50 Discussion.

Seq#: 186 Friday, June 26, 2:15 pm - 5:00 pm
Symposium, Mobile 10 Room

Geriatric Oral Research Group - Root Caries, Current Dilemmas

Chairpersons: A.W.G. Walls and F.J.T. Burke

2039 2:15 Opening Comments.

2:20 The Epidemiological Assessment of Root Caries. A.W.G. WALLS (University of Newcastle upon Tyne, UK).

2:40 Relationships Between Microbial Flora and Caries Activity in Primary Root Caries Lesions. E. LYNCH (Queen Mary and Westfield College, London, UK).

3:05 The Role of Dietary Sugar in Caries Activity in an Older Population Group. J.G. STEELE (University of Newcastle upon Tyne, UK).

3:30 Longitudinal Assessment of Root Caries Risk. G.D. SLADE (University of North Carolina, Chapel Hill, USA).

3:55 Preventive Strategies for the High-risk Patient. J. JONES (Edith Nurse Rogers Memorial Veterans Hospital, Bedford, MA, USÄ).

4:20 New Management Techniques for Root Caries Lesions. F.M. BURKE (University of Cork, Ireland).

4:45 Discussion.

Seq#: 187 Friday, June 26, 2:15 pm - 5:00 pm
Oral Session, Risso 7 Room

Behavioral Sciences/Health Services Research - Fear and Anxiety

Chairpersons: J.E. Stewart and T. Smith


2041 2:30 Self-esteem for Predicting Oral Health Behavior and Dental Self-efficacy. A.-M. SYRJÄLA*, M.C. KNECKT, and M.L.E. KNUUTTILA (Institute of Dentistry, University of Oulu, Finland).

2042 2:45 The Relationship among Mood, Self-efficacy, and Oral Hygiene. J.E. STEWART*, S. STRACK, and P. GRAVES (DVA Outpatient Clinic, Los Angeles, CA, USA).

3:15 The Relation between Mood and Reported Dental Fear and Attendance. T. SMITH* and M. THOMAS (University of Kentucky, Lexington, USA).

3:30 Dental Avoidance in the Age Group 12-18 Years. E. SKARET*, M. RAADAL, E. BERG, and G. KVALE (Center for Odontophobia, University of Bergen, Norway).

3:45 Temperamental Factors in Relation to Dental Fear in Children. G. KLINGBERG* and A.G. BROBERG (Faculty of Odontology and Department of Psychology, Göteborg University, Sweden).

4:00 Dentist’s Behavior and the Child’s Fear during Dental Treatment. J.S.J. VEERKAMP* and M. TEN BERGE (Academic Centre for Dentistry Amsterdam, The Netherlands).

4:15 Changes in Dental Anxiety Following General Anesthesia in 5-8-year-old Children. G.M. HUMPHRIS*, P. PHINAINITSATRA, and G.T.R. LEE (The Departments of Clinical Psychology and Dental Clinical Science, University of Liverpool, UK).

4:30 Patient Satisfaction with Dental Care in Seven EU Countries. M.A.J. EIJKMAN*, D. O’MULLANE, G.J. TRUIN, and F.C. VAN GINKEL (Academic Centre for Dentistry Amsterdam; University of Nijmegen, The Netherlands; and University Dental School, Cork, Ireland).

4:45 Dental Care for Six-year-old High-caries Patients by Their Co-operation. S. VARSIO*, M.M. VEHKALAHTI, and H. MURTOMAA (Department of Oral Public Health, Institute of Dentistry, University of Helsinki, Finland).


2:30 Carbamide Chewing Gum and Prevention of Dental Caries of Schoolchildren in Madagascar. P.E. PETERSEN* and N. RAZANAMIHAJA (University of Copenhagen, Denmark; and University of Majunga, Madagascar).

2:45 Topical Antimicrobial Therapy in Prevention of Early Childhood Caries. L. LOPEZ*, R. BERKOWITZ, H. ZLOTNIK, M.E. MOSS, and P. WEINSTEIN (University of Puerto Rico; University of Rochester, NY; and University of Washington, Seattle, USA).

3:00 Anti-microbial Proteins in Infant Formulas Relate to Development of BBTD. S. CHANG* and P.R. ERICKSON (Preventive Sciences, University of Minnesota School of Dentistry, Minneapolis, USA).

3:15 Effect of Full-mouth Rehabilitation on the Amount of S. mutans in Children with Nursing Caries. G. LITSAS*, A. TSAMTSOURIS, and C.M. HABIB (Tufts University School of Dental Medicine, Boston, MA, USA).

3:30 Virulence of Different Mutans Streptococci Strains Identified by Artificial Caries Experiment. T.A. AL-SHALAN*, P.R. ERICKSON, and N. HO (Department of Preventive Sciences, School of Dentistry, University of Minnesota, Minneapolis, USA).
3:45 Effect of Rinse with Calcium-rich Mineral Water on Plaque Fluid. M. TANAKA*, K. MATSUNAGA, J.K.D.J.A.U. JAYAWARDENA, and Y. KADOMA (Tokyo Medical and Dental University, Japan).

4:00 Effects of Different Formulations of Soft Drinks on Plaque pH. M.E.J. CURZON*, K.J. TOUMBA, and M.S. DUGGAL (Department of Paediatric Dentistry, Leeds Dental Institute, UK).


4:30 Discussion

Seq#: 189 Friday, June 26, 2:15 pm - 5:00 pm
Oral Session, Athena Room
Craniofacial Biology - Craniofacial Development and Anomalies and Their Therapy
Chairpersons: I. Kjaer and J. Mao

2:15 Oral Clefts: What is the Appropriate Case Definition? C. HAYES*, M. WERLER, and A. MITCHELL (Tufts University School of Dental Medicine; and Boston University School of Public Health, MA, USA).


2:45 Mechanical Stress on Craniofacial Bones upon Orthopedic Headgear Loading. M. OBERHEIM, M. TASSICK, R.A. COOPER, and J.J. MAO* (Departments of Orthodontics and Dentofacial Orthopedics and Human Engineering Laboratories, University of Pittsburgh, PA, USA).

3:00 Orthodontic Tooth Movement into Distraction Osteogenesis. E.J.-W. LIOU*, J.W. POLLEY, and A.A. FIGUEROA (The Craniofacial Center, University of Illinois at Chicago, USA).


3:30 Leopard Syndrome and Dental and Craniofacial Anomalies. A.A. YAM*, A. KANE, M. FAYE, F. DIOP, D. BA, A. BA, N. MBAYE, and I. BA (Dental Institute, University Cheikh Anta DIOP, Dakar, Senegal).

3:45 Cranial Base in Patients with Cri-du-Chat Syndrome. I. KJÆR* and E. NIEBUHR (Department of Orthodontics & Department of Medical Genetics, Faculty of Health Sciences, University of Copenhagen, Denmark).

4:00 Has the Human Chin a Functional Significance? P. PICQ* and A. HOORNAERT (Collège de France, Paris; and Faculté de Chirurgie Dentaire, Nantes, France).

4:15 Temporomandibular Joint Phonography in Infants and Young Children. E. KÖRPERICH*, E.A. HOLTGRAVE, and S. MEYER-VENTER (Department for Orthodontics and Paediatric Dentistry, Free University, Berlin, Germany).

4:30 Congenital Dental Anomalies in Cleft Lip and Palate. I. Missing Premolars. Y. SHAPIRA*, E. LUBÍT, and M.M. KUFTINEC (Department of Orthodontics, School of Dental Medicine, Tel Aviv University, Israel; and College of Dentistry, New York, USA).

Seq#: 190 Friday, June 26, 2:15 pm - 5:00 pm
Oral Session, Thalie Room

Dental Materials - Adhesion—Microleakage

Chairpersons: J. Dunn and H. Mohammed


2073 2:45 Correlation between Bond Strengths and Nanoleakage. P.N.R. PEREIRA*, M. OKUDA, M. NAKAJIMA, H. SANO, J. TAGAMI, and D.H. PASHLEY (Tokyo Medical and Dental University; Hokkaido University, Japan; and Medical College of Georgia, Augusta, USA).

2074 3:00 Microleakage of Base, Bonded, and Sandwich Class II Restorations. T. DIETRICH*, G.M. LÖSCHE, A.C. LÖSCHE, and J.-F. ROULET (Department of Periodontology and Synoptic Dentistry; and Department of Operative and Preventive Dentistry and Endodontics, Charité, Humboldt University of Berlin, Germany).


2077 3:45 Microleakage of Class II Inlays Bonded with Different Types of Adhesive Agents. S. ÜÇTA¸SLI, K. BÖKE, and U. HASANREISOGLU* (Faculty of Dentistry, University of Ankara, Turkey).

2078 4:00 Quantitative Microleakage: Amalgam vs. Glass-ionomer Restorations. H. MOHAMMED*, A.R. AL-SHAMMERY, and M.E. ABDULLAH (King Saud University, Riyadh, Saudi Arabia).


4:30 Discussion

Seq#: 191 Friday, June 26, 2:15 pm - 5:00 pm
Oral Session, Room 5

Dental Materials - Adhesion—Surface Contamination, Hybrid Layer, Fissure Sealant

Chairpersons: U. Fritz and M. Burrow

2080 2:15 Saliva Contamination during Resin Bonding with a One-bottle Adhesive. U.B. FRITZ*, W.J. FINGER, and H. STEAN (University of Cologne, Germany; University of Aachen, Germany; and ADAPT, London, England).
Effect of Potassium Nitrate Treatment on Bonding to Dentin. N. Barghi and J.A. Morgan* (Department of Restorative Dentistry, The University of Texas Health Science Center at San Antonio; and Sandy, UT, USA).

Gingival Fluid Contamination: Effect on Enamel Margins of Class II Composites. A. Spaahr*, F. Schöen, and B. Haller (Department of Operative Dentistry, Periodontology & Pedodontics, University of Ulm, Germany).

Effect of Gingival Fluid on Dentin Margins of Class II Composites. B. Haller* and J.R. Buckenhofer (Department of Operative Dentistry, Periodontology & Pedodontics, University of Ulm, Germany).

Retention of Posts Luted with Different Materials after Root Filling with Eugenol-containing Sealer. E.C. Kostka* and J.-F. Roulet (Department of Operative Dentistry, Endodontics and Preventive Dentistry, Charité, Humboldt-University, Berlin, Germany).

Hybridization Effectiveness Examined by TEM and AFM. Y. Yoshida*, B. Van Meerbeek, J. Snaauwaert, L. Hellemans, P. Lambrechts, G. Vanherle, K. Wakasa, and D.H. Pashley (Hiroshima University, Japan; Catholic University of Leuven, Belgium; and Medical College of Georgia, Augusta, USA).

Hybrid Layer Morphology of Three Dentin Adhesive Systems. P. Passi*, A. Zadro, G.B. Girardello, and F. Sampalieri (Dental School, University of Padua; and Dental School, University of Ancona, Italy).

The Influence of Etching Time on Hybrid Layer Formation and Tensile Bond Strengths. T. Piocch*, H. Duschner, and H.J. Staehle (Poliklinik für Zahnerhaltungskunde, University of Heidelberg, Germany).

The Influence of Hybrid Layer Modification on Bond Strengths to Bovine Dentin. S. Phrukkanon, M.F. Burrow*, M.J. Tyas, and P.G. Hartley (School of Dental Science and School of Chemistry, The University of Melbourne, Australia).

Sealant Leakage and Penetration to Wet and Dry Enamel. J. Donaldson*, J. Gallo, X. Xu, and J.O. Burgess (School of Dentistry, LSUMC, New Orleans, LA, USA).


3:00 Accuracy of Two Radiographic Photodensitometry Methods in Clinical Bone Loss Assessment. P.V. NUMMIKOSKI*, E.D. KUHL, and W.D. McDAVID (University of Texas Health Science Center at San Antonio, USA).


3:30 Nonlinear Detector Effects on Image Quality Using Tuned-aperture Computed Tomography. R. WEBBER* (Wake Forest University School of Medicine, Winston-Salem, NC, USA).

3:45 Diagnostic Information Obtained from Tuned-aperture Computed Tomography and Conventional Radiographs. R. WEBBER, J. MESSURA*, and T. HART (School of Medicine, Wake Forest University, Winston-Salem, NC, USA).


4:30 Efficacy of Computed Tomography in Detecting Vertical Root Fractures. T. BERNHART*, S. YOUSSEFZADEH, A. GAHLEITNER, and R. DORFFNER (Department of Oral Surgery, Dental School, University of Vienna, Austria).

4:45 Discussion

Seq#: 193 Friday, June 26, 2:15 pm - 5:00 pm
Oral Session, Risso 8 Room

Experimental Pathology - Oral Medicine—HIV

Chairpersons: M. Thornhill and D. Greenspan

2:15 Clinical Trial of Sulphamethoxypyridazine in the Treatment of Pemphigoid. M.H. THORNHILL*, M. PEMBERTON, and E. THEAKER (Unit of Oral Medicine, University Dental Hospital of Manchester, England).

2:30 An Animal Model for Mucositis Induced by Fractionated Radiation Exposure. S.T. SONIS, J.D. HALEY, P.M. BUSSE, G.E. MOSES*, C.A. LUCEY, and L.J. EDWARDS (Brigham and Women’s Hospital and Harvard School of Dental Medicine, Boston, MA, USA).


3:00 Oral Candidiasis, Oral Hygiene, and HIV Serostatus in WIHS Women. L. MacPHAIL*, E. KOMAROFF, M. ALVES, M. NAVAZESH, J. PHELAN, and M. REDFORD (University of California, San Francisco; NERI, Boston, MA; University of Illinois, Chicago; USC, Los Angeles, CA; New York, NY; and NIDR/NIH, Bethesda, MD, USA).

2106  3:30  Orofacial Manifestations and Implications in Perinatally HIV-infected Children. F.J. RAMOS-GOMEZ*, A. PETRU, J.F. HILTON, A.J. CANCHOLA, D. WARÁ, and J.S. GREENSPAN (University of California, San Francisco; and Children’s Hospital, Oakland, CA, USA).

2107  3:45  Effect of Multiplicity of Infection on HSV-1 Reactivation in vitro. R.J. DANAHER, J. XIE, R.J. JACOB, and C.S. MILLER* (College of Dentistry and Medicine, University of Kentucky, Lexington, USA).


2109  4:15  Prevalence of Food and Environmental Allergy in Oral Mucosal Disease. S. REES, J. GIBSON, A. FORSYTH, and D. WRAY* (Glasgow Dental Hospital and School and Glasgow Royal Infirmary, UK).

2110  4:30  Technetium-99m-HMPAO Leucocyte Labeling in OFG and Intestinal Crohn’s Disease. J. GIBSON, A. WRAY*, B. NEILLY, J. EVANS, R. MACKENZIE, and J. McKILLOP (Glasgow Dental School; Glasgow Royal Infirmary; and Yorkhill Hospital, Glasgow, UK).

  4:45  Discussion

Seq#: 194  Friday, June 26, 2:15 pm - 5:00 pm
Oral Session, Mobile 9
Neuroscience/TMJ - Trigeminal Sensory Systems

Chairpersons:  A. Woda and N. Capra

2111  2:15  Responses of Caudalis Neurones to Mustard Oil Injection into TMJ. C.M. TSAI*, C.Y. CHIANG, C.L. KWAN, J.W. HU, and B.J. SESSLE (Faculty of Dentistry, University of Toronto, ON, Canada; and Craniofacial Center, Chang Gung Memorial Hospital, Taiwan).

2112  2:30  NMDA Involvement in Pulp-induced Neuroplasticity in Trigeminal Subnucleus Oralis. S.J. PARK, C.Y. CHIANG, H. KISHIMOTO, J.W. HU, and B.J. SESSLE* (Faculty of Dentistry, University of Toronto, ON, Canada).

2113  2:45  Peptide Expression in the Trigeminal Ganglion after Nerve Injury. C. ELCOCK*, F.M. BOISSONADE, and P.P. ROBINSON (Department of Oral and Maxillofacial Surgery, University of Sheffield, UK).


2116  3:30  Fentanyl Suppresses Trigeminal Fos Expression Following Preferential Pulpal C-Fibers Stimulation. S. CHAISIN*, A.R. LIGHT, M. NARHI, and W. MAIXNER (Dental Research Center, Department of Physiology, UNC, Chapel Hill, NC, USA; and Department of Physiology, University of Kuopio, Finland).


2118  4:00  Trigeminal vs. Peripheral Somatosensory Evoked Potentials in Man. K. VAN LOVEN*, A. SWINNEN, D. van STEENBERGHE, and R. JACOBS (Laboratory of Oral Physiology, Department of Periodontology, Catholic University of Leuven, Belgium).
Peripheral Modulation of an Inhibitory Jaw Reflex in Man. R.M. JONES* (The Dental School, University of Dundee, Scotland, UK).


Discussion

Seq#: 195 Friday, June 26, 2:15 pm - 5:00 pm  
Oral Session, Gallieni 3 Room

Oral/Dental Hygiene - Toothpaste, Malodor, General

Chairpersons: B. Schemehorn and D. O'Mullane


Bad Breath in Children: An Initial Study. E. AMIR*, R. SHIMONOV, and M. ROSENBERG (Maurice and Gabriela Goldschleger School of Dental Medicine, Tel Aviv University, Israel).

Onset and Duration of a New Non-injection Anesthetic for Scaling/Root Planing. J. FRISKOPP* (Department of Periodontology, Public Dental Services, Kista, Sweden).

Toothbrushing Behavior and Its Changes in a Group of Brazilian Adults (City of Porto Alegre). C. ABEGG* (Departamento de Saúde Pública, Universidade Federal de Santa Catarina, SC, Brazil).

Discussion

Seq#: 196 Friday, June 26, 2:15 pm - 5:00 pm  
Oral Session, Erato Room

Oral/Maxillofacial Surgery - Trauma/Reconstruction

Chairpersons: V. Shetty and H.A. Kiyak

Social Relationships and Habitual Alcohol Use among Orofacial Trauma Patients. K.A. ELLIOTT BROWN, V. SHETTY, E. BLACK*, K. ATCHISON, and D. FORNEY (UCLA School of Public Policy and Social Research; UCLA School of Dentistry; and Charles Drew University, Los Angeles, CA, USA).
2130  2:30  Sociodemographic and Health-related Correlates of Missed Appointments among Inner-city Trauma Patients. K.A. ELLIOTT BROWN*, V. SHETTY, R. LEATHERS, S. DELRAHIM, and T. BELIN (UCLA School of Public Policy and Social Research; UCLA School of Dentistry; and UCLA Neuropsychiatric Institute, Los Angeles, CA, USA).

2131  2:45  Lifetime Trauma and PTSD Prevalence in Inner-city, Orofacial Trauma Victims. S.M. GLYNN, J.R. ASARNOW, R. ASARNOW, V. SHETTY*, and D. FORNEY (UCLA Neuropsychiatric Institute and UCLA School of Dentistry, Los Angeles, CA, USA).

2132  3:00  Quality of Life as a Treatment Target in Traumatology. T.M. PRÄGER*, B. KLESPER, M. SIESSEGGER, and J.E. ZÖLLER (Department of Oral and Maxillofacial Surgery, University of Cologne, Germany).


2135  3:45  Technical Factors Accounting for Stability of a BSSO Advancement. J.E. VAN SICKELS*, C. DOLCE, B.D. TINER, R.A. BAYS, J.D. RUGH, and G. CLARK (University of Texas Health Science Center, San Antonio; University of Florida, Gainesville; Emory University, Atlanta, GA, USA).

2136  4:00  Typologies of Patients Seeking Orthognathic Surgery. H.A. KIYAK*, C. PHILLIPS, and M.E. BENNETT (University of Washington, Seattle; and University of North Carolina at Chapel Hill, USA).

2137  4:15  The Effects of Orthognathic Surgery on the Appearance and Age of Female Patients. T.P. TSAY*, M.A. DEMPSEY, and O.J. OYEN (Division of Orthodontics, Northwestern University Dental School, Chicago, IL, USA).


4:45  Discussion

Seq#: 197  Friday, June 26, 2:15 pm - 5:00 pm
Oral Session, Mobile 11 Room

Periodontal Research-Diagnosis/Epidemiology - Periodontal and Systemic Diseases: Epidemiology

Chairpersons:  S. Grossi and O. Zuabi


2140  2:30  Skeletal Osteopenia Increases the Risk for Periodontal Disease. S.G. GROSSI*, M. NISHIDA, J. WACTAWSKI-WENDE, R. DUNFORD, A. HO, M. TREVISAN, and R.J. GENCO (Department of Oral Biology, School of Dental Medicine; and Departments of Social and Preventive Medicine and Gynecology and Obstetrics, School of Medicine and Biomedical Sciences, SUNY at Buffalo, NY, USA).

2141  2:45  Nutrition and Risk for Periodontal Disease: I. Calcium. M. NISHIDA*, S.G. GROSSI, R. DUNFORD, A. HO, M. TREVISAN, and R.J. GENCO (Department of Oral Biology, School of Dental Medicine; and Department of Social and Preventive Medicine, School of Medicine and Biomedical Sciences, SUNY at Buffalo, NY, USA).
Nutrition and Risk for Periodontal Disease: II. Vitamin C. M. NISHIDA, S.G. GROSSI, R. DUNFORD, A. HO, M. TREVISAN, and R.J. GENCO* (Department of Oral Biology, School of Dental Medicine; and Department of Social and Preventive Medicine, School of Medicine and Biomedical Sciences, SUNY at Buffalo, NY, USA).


The Effect of Smoking on Salivary Composition in Established Periodontitis Patients. O. ZUABI*, H. BEN-ARYEH, E.E. MACHTEI, L. ARDEKIAN, M. PELED, and D. LAUFER (Periodontal Unit, Oral Biology Lab, Department of Maxillofacial Surgery, Rambam Medical Center and Technion Faculty of Medicine, Haifa; and Department of Periodontology, Hadassah Faculty of Dentistry, Jerusalem, Israel).

Periodontal Status of Patients with Symptomatic HIV. J.-A. TRIAY*, P. GIBERT, and F. JAME (Department of Parodontologie, Grand'Place D'Aragon, Lattes, Montpellier, France).


Four-year Observation of Attachment Loss in a Chinese Rural Population. R. SUDA*, M. SUZUKI, R. SASA, C.F. CAO, and K. HASEGAWA (Department of Periodontics and Pedodontics, Showa University Dental School, Tokyo, Japan; and Department of Periodontology, Beijing Medical University, China).

Profile of Periodontal Status among Elderly Residents in Singapore. L.P. LIM*, J. KHOO, R.K.K. OW, J. NEO, and T. LOH (Faculty of Dentistry, National University of Singapore).

Periodontal Condition of Indigenous People in the Amazon Rainforest. M. RONDEROS*, J. HODGES, and B. PIHLSTROM (University of Minnesota Clinical Oral Health Research Center, Minneapolis, USA).

A Pilot Clinical Study on the ArtGlass System. T.E. DEPEW and J.A. SORENSEN* (Department of Fixed Prosthodontics, Oregon Health Sciences University, School of Dentistry, Portland, USA).

Tooth Wear Treated with Composite Restorations at Increased Vertical Dimension. K.W. HEMMINGS* and U.R. DARBAR (Department of Conservative Dentistry, Eastman Dental Institute, London, UK).

Bond Strengths of Polymer-glass Composite to Primed Cast Ti. K. KURTZ*, I. WATANABE, C. OHKUBO, D. SILKEN, and T. OKABE (Baylor College of Dentistry-TAMUS, Dallas, TX, USA).


Wear of Composite Resin Veneering Materials in a Newly Developed Chewing Simulator. M. KERN*, J.R. STRUB, and X.-Y. LU (Department of Prosthodontics, University of Freiburg; and Department of Prosthodontics and Dental Materials, University of Kiel, Germany).
2155  3:30  Thermocycling: An Unrealistic Technique for Simulating Clinical Conditions? C.W. BARCLAY* (School of Dentistry, The University of Birmingham, St. Chad’s Queensway, UK).

2156  3:45  Fracture Strength of Resin-bonded Porcelain to Enamel and Dentin. M. TUNTIPRAWON* and M. ARKSORNNUKIT (Faculty of Dentistry, Chulalongkorn University, Bangkok, Thailand).

2157  4:00  Effects of Rigid and Semi-rigid Tooth-Implant Connections on Load Transfer. R. NISHIMURA, K.T. OCHIAI*, A.A. CAPUTO, and C.M. JEONG (School of Dentistry, University of California, Los Angeles, USA; and School of Dentistry, Pusan National University, Korea).

2158  4:15  Marginal Fit of Cemented and Screw-retained Crowns Incorporated onto the ITI® Dental Implant System. U. BRÄGGER*, N. TOSCHES, K. FLURY, and N.P. LANG (School of Dental Medicine, University of Berne, Switzerland).

2159  4:30  Follow-up Study of the Effect of Hard Tissue Replacement on Bone Resorption. A. BOLOURI*, N. FREDERIKSEN, and N. HAGHIGHAT (Baylor College of Dentistry, Texas A&M University System, Dallas, USA).


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Seq#: 199 Friday, June 26, 2:15 pm - 5:00 pm

Oral Session, Mobile 4 Room

Microbiology/Immunology - Cytokines/Prostaglandins

Chairpersons: J.F. Tew and P. Madianos

2161  2:15  Human T- & B-cell Epitopes of the P. gingivalis R1 b-domain. V. BOOTH*, C.G. KELLY, S.M. TODRYK, and T. LEHNER (UMDS, Guy’s Dental School, University of London, UK).

2162  2:30  Influence of IL-1b, IL-6, and IL-12 on IgG2 Production. J.B. ZHANG*, Y. ISHIHARA, S.E. BARBOUR, H.A. SCHENKEIN, and J.G. TEW (CRCPD, Virginia Commonwealth University, Richmond, USA).

2163  2:45  Influence of PGE2 and Platelet Activating Factor on IgG2 Production. J.G. TEW*, J.B. ZHANG, Y. ISHIHARA, S.E. BARBOUR, and H.A. SCHENKEIN (Medical College of Virginia, Virginia Commonwealth University, Richmond, USA).

2164  3:00  Production of IFN-g by PBMC Stimulated with Periodontopathic Bacteria. H. KOBAYASHI*, T. NAGASAWA, M. ARAMAKI, R. MAHANONDA, and I. ISHIKAWA (Department of Periodontology, Tokyo Medical and Dental University, Japan; and Department of Periodontology, Faculty of Dentistry, Chulalongkorn University, Thailand).

2165  3:15  Gingival Crevicular Fluid Levels of Pro-inflammatory Cytokines Following Application of Mechanical Forces. L.P. LEITE*, L.I. KUPP, C.S. BEEMAN, E.P. HICKS, and C. SHIPMAN (Medical University of South Carolina, Charleston; Ohio State University, Columbus; and University of Kentucky, Lexington, USA).

2166  3:30  Discussion

2167  3:45  Role of C3 Fragments in Platelet Aggregation by Streptococcus sanguis. D.G.C. REES*, C.W.I. DOUGLAS, and F.E. PRESTON (Department of Oral Pathology and Department of Haematology, University of Sheffield, UK).
Stimulation of Bacterial Invasion by Molecules Internalized via Receptor-mediated Endocytosis. P.N. MADIANOS*, P.N. PAPAPANOU, and J. SANDROS (Faculty of Odontology, Göteborg University, Sweden).

An Autoregulatory Effect of Interleukin (IL)-10 Produced by Porphyromonas gingivalis LPS-tolerized Human Monocytes. H. SHIMAUCHI*, T. OGAWA, K. OKUDA, Y. KUSUMOTO, and H. OKADA (Department of Periodontology, Osaka University Faculty of Dentistry; and Department of Oral Microbiology, Asah University School of Dentistry, Gifu, Japan).

Stimulation of Cytokine Production in Epithelial Cells by Eikenella corrodens. H. YUMOTO*, H. NAKAE, K. FUJINAKA, S. EBISU, and T. MATSUO (Tokushima University and Osaka University Faculty of Dentistry, Japan).

Variation in Crevicular Fluid Interleukin-1b in Treated and Untreated Periodontitis. F.A. ROBERTS*, T. OSWALD, A. PAWLOWSKI, A. CHEN, and R.C. PAGE (University of Washington, Seattle, USA).

Effects of Altering the cAMP Pathway on Osteoblast Differentiation and Mineralization in vitro. A.J. KOH and L.K. McCÀULEY* (School of Dentistry, University of Michigan, Ann Arbor, USA).

Transcriptional Events Following Bone Morphogenic Protein-induced Osteoblastic Commitment. W. TURNER*, I.J. McKAY, and F.J. HUGHES (Department of Periodontology, St. Bartholomew’s and the Royal London School of Medicine and Dentistry, UK).

Site-specific Differences of Osteoclastic Bone Degradation. V. EVERTS*, W. KORPER, A.J.P. DOCHERTY, and W. BEERTSEN (Department of Cell Biology and Department of Periodontology, AMC and ACTA, Amsterdam, The Netherlands; and Celltech, Slough, UK).

Melatonin Upregulates Extracellular Matrix Formation and Osteoblast Differentiation. B.-K. KIM, J.A. ROTH, and M.-I. CHO* (Departments of Oral Biology, and Pharmacology and Toxicology, SUNY at Buffalo, NY, USA).

Hsp27 as a Determinant of Osteoblast Cell Fate. H. HAMANO* and L.F. COOPER (Department of Prosthodontics II, Tokyo Medical and Dental University, Japan; and Department of Prosthodontics, Dental Research Center, University of North Carolina, Chapel Hill, USA).

Rat BSP Promoter Regulated by Dexamethasone in Transgenic Cell Cultures. H. JIANG, H.F. THOMAS, and J. CHEN* (Department of Pediatric Dentistry, University of Texas Health Science Center at San Antonio, USA).

Multiple Factors Potentially Control Human Bone Sialoprotein Expression. B. SOMMER*, S.A. KUZNETSOV, A. MAJOLAGBE, K. SATOMURA, and M.F. YOUNG (CSDB, NIDR/NIH, Bethesda, MD, USA).


2181 4:45  Fluoride Content, Mechanical Properties, and Hardness of Human Cancellous Bone. D. CHACHRA*, H. LIMEBACK, A.E. GROSS, C. HUTCHISON, and M.D. GRYNPAS (University of Toronto, and Mount Sinai Hospital, Ontario, Canada).

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<tr>
<th>Seq#</th>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>201</td>
<td>Friday</td>
<td>Oral Session, Room A12</td>
<td>Salivary Research - Salivary Physiology/Signal Transduction</td>
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<tr>
<td>2182</td>
<td>2:30</td>
<td>The Role of IL-6 and its Receptor in Sjögren’s Syndrome</td>
<td>G. GANNOT*, M.M. GRISIUS, and P.C. FOX (GTBB, NIDR/NIH, Bethesda, MD, USA).</td>
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<td>2183</td>
<td>2:45</td>
<td>Secretory Cyclic AMP Receptor Protein Isoforms in Saliva</td>
<td>M. MEDNIEKS*, S. GENUTIS, A. THAKKER, T. CROSBY, K. TAKANO, and A.R. HAND (University of Illinois, Chicago, USA; University of Nagasaki, Japan; and University of Connecticut, Farmington, USA).</td>
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<td>2184</td>
<td>3:00</td>
<td>Cellular Phosphorylation of Human Acidic Proline-rich Protein (PRP1)</td>
<td>L. DRZYMALA, A. CASTLE, and A. BENNICK* (University of Toronto, ON, Canada; and University of Virginia, Charlottesville, USA).</td>
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<tr>
<td>2185</td>
<td>3:15</td>
<td>Nitric Oxide and Calcium Entry in Mouse Parotid Acini</td>
<td>E. WATSON*, J. SINGH, K. JACOBSON, and S. OTT (Department of Oral Biology, University of Washington, Seattle, USA).</td>
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<td>2186</td>
<td>3:30</td>
<td>Serous and Mucous Granule Exocytosis Visualized in Living Salivary Glands</td>
<td>A. SEGAWA* (Department of Anatomy, School of Medicine, Kitasato University, Sagamihara, Kanagawa, Japan).</td>
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<td>2187</td>
<td>3:45</td>
<td>Immunohistochemical Localization of TGF-b Receptor in Developing Rat Salivary Glands</td>
<td>S. YAMAMOTO* and K. ANBE (Ohu University Second Department of Oral Anatomy, Koriyama, Japan).</td>
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<td>2188</td>
<td>4:00</td>
<td>Effect of Short-term Soya Feeding on Rat Parotid Gland Secretion</td>
<td>V. GRESZ*, J. BRAYER, Á. NAGY, and T. ZELLES (Department of Oral Biology, Semmelweis University of Budapest, Hungary; Department of Oral Biology, University of Florida, Gainesville, USA).</td>
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<td>2189</td>
<td>4:15</td>
<td>Submandibular Gland Cells and Intracellular pH: HEPES, Simple Buffer, or Stimulant?</td>
<td>E. TRZASKAWKA*, J. VIGO, J.C. EGEA, D. DEVILLE de PERIERE, M.C. GOLDSMITH, and J.M. SALMON (Faculty of Odontology, Lab. of Physiology, Université Montpellier I; and Lab. of Physico-chemical Biology of Integrated Systems, Université Perpignan, France).</td>
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4:45 Discussion

Seq#: 202 Saturday, June 27, 8:30 am - 11:15 am Symposium, Hermes Room
Periodontal Research Group - Smoking and Periodontal Disease - Is the Bone the Target? [Supported by McNeil Consumer Products]

Chairpersons: J. Bergström and R. Genco

2192  8:30  Opening Comments.

8:45  The Smoking Epidemic in Europe. A. LOPEZ (World Health Organization, Geneva, Switzerland).

9:15  Cytopathological Effects of Tobacco Use - A Mechanistic Perspective. R. GRAFSTRÖM (Karolinska Institute, Stockholm, Sweden).

9:45  The Bone Reaction in Periodontal Disease. R. GENCO (State University of New York, Buffalo, USA).

10:15  Nicotine - Estrogen - Bone. R. DZIAK (State University of New York, Buffalo, USA).

10:45  Discussion.

Seq#: 203 Saturday, June 27, 8:30 am - 11:15 am
Symposium, Room C34

Microbiology/Immunology and Periodontal Research Groups - Cysteine Proteases of Porphyromonas gingivalis: Biology and Nomenclature [Supported by Unilever Dental Research, Peptide Therapeutics Ltd., and Colgate-Palmolive Co.]

Chairpersons: M.A. Curtis and F.L. Macrina

2193  8:30  Opening Comments.

8:35  Pro-inflammatory Mechanisms of P. gingivalis Proteases in Periodontal Diseases. J. POTEMPA (University of Georgia, Athens, USA).

9:00  Cysteine Proteases and a Hemoglobin Receptor Protein of P. gingivalis. K. NAKAYAMA (Kyushu University, Fukuoka, Japan).


9:50  Relationship of Cell Bound to Extracellular Proteases of P. gingivalis. E. REYNOLDS (University of Melbourne, Australia).

10:15  Regulation of Protease Expression in P. gingivalis. H. KURAMITSU (State University of New York, Buffalo, USA).


11:00  Discussion.

Seq#: 204 Saturday, June 27, 8:30 am - 11:15 am
Symposium, Risso 8 Room

Continental European, British, Scandinavian, and Israeli Divisions, and Mineralized Tissue Group - Enamel and Dentin: Matrix Components and Mineralization

Chairpersons: C. Robinson and M. Goldberg
8:30 Opening Comments.

8:35 Enamel—Amelogenins: A Review. C. ROBINSON (University of Leeds, UK).


9:15 Tuftelin. D. DEUTSCH (Hebrew University, Jerusalem, Israel).

9:35 Dentin—Matrix Protein Overview. A. LINDE (Göteborg University, Sweden).

9:55 Dentin - Proteoglycans/GAGs. G. EMBERY (University of Wales, Cardiff, UK).


10:35 Discussion.

Seq#: 205 Saturday, June 27, 8:30 am - 11:15 am
Oral Session, Risso 7 Room
Behavioral Sciences/Health Services Research - Epidemiological Methods
Chairpersons: K. Atchison and K.J. Joshipura

2194 8:30 Permutation Tests: Fisher’s (1925) Test of a Wider Hypothesis. L.L. LASTER* (Epidemiology Section, University of Pennsylvania, Philadelphia, USA).

2195 8:45 Caries Risk Prediction, Using Artificial Neural Networks. S.R. SÆMUNDSSON*, J.D. BECK, G.D. SLADE, W.F. VANN, Y. TRUONG, and B.H. KAPLAN (University of Iceland, Reykjavik; and University of North Carolina, Chapel Hill, USA).

2196 9:00 Merging Data from Two Epidemiological Examinations of Adolescents: Problems Explored. Z.J. NUGENT*, N.B. PITTS, and J.A. DAVIES (Dental Health Services Research Unit, University of Dundee, Scotland, UK).

2197 9:15 Information Bias in the Estimation of the Exposure-Disease Association. M. GORNITSKY*, P. PHILIPPE, and A.M. VELLY (McGill University, Jewish General Hospital, and Université de Montréal, Québec, Canada).

2198 9:30 The Influence of Berkson Bias in Estimation of TMD Risk. A.M. VELLY*, M. GORNITSKY, and P. PHILIPPE (McGill University; Jewish General Hospital; and Université de Montréal, Québec, Canada).


2200 10:00 Variation in Radiographic Diagnosis of Mandibular Fractures. K. ATCHISON, R. LEATHERS*, V. SHETTY, and E. BLACK (University of California Los Angeles School of Dentistry; and Drew University of Medicine and Science, Los Angeles, CA, USA).


Using GIS to Illustrate Treatment Patterns for Cleft Lip Children. D. WHITE* and M.M. GRAY (School of Dentistry, The University of Birmingham, St. Chad’s Queensway, UK).

11:00  Discussion

Seq#: 206  Saturday, June 27, 8:30 am - 11:15 am
Oral Session, Room A12

Craniofacial Biology - Diagnosis and Orthodontic Treatment of Malocclusion

Chairpersons:  R.S. Nanda and B. Solow

Early Treatment of Class II1 Malocclusion with Cervical Orthopedic Headgear. S. LAHTINEN, P. KILPELAINEN*, and R.H. PAHKALA (University of Kuopio, Finland).

8:45  Tooth Size in Subjects with Supernumerary Teeth Compared with Controls. A.H. BROOK*, R. PAREKH, G. DAVIS, and J.M. FEARNE (Department of Child Dental Health, Sheffield University; and Department of Child Dental Health, Queen Mary College, London, UK).

9:00  Association among Spinal Deviations, Head Posture, and Craniofacial Morphology. I. ZEPA*, K. HURMERINTA, O. KÖVERO, M. NISSINEN, and J. HUGGARE (Karolinska Institutet, Huddinge, Sweden; Institute of Dentistry, University of Helsinki; and Laakso Hospital, Finland).


9:45  Morphometry of Soft Tissues in Subjects with Class III Malocclusions. G.D. SINGH*, J.A. McNAMARA, Jr., and S. LOZANOFF (University of Dundee, UK; University of Michigan and University of Hawaii, USA).

10:00  Head Posture and Malocclusion. B. SOLOW* and A.L. SONNESEN (Department of Orthodontics, School of Dentistry, University of Copenhagen, Denmark).

10:15  Relationship between Attrition of Lower and Upper Incisors in Rats. R.A. BURN-MURDOCH* (Physiology Division, St. Thomas’ Hospital, London, UK).

10:30  Comparison of Three Computerized Methods of Identifying Cephalometric Landmarks. B.H. JOO*, F.M. BECK, and K.W.L. VIG (Section of Orthodontics, College of Dentistry, The Ohio State University, Columbus, USA).

10:45  Remote Video Surveillance for Assessing Lip Incompetence. A Pilot Study. F. LUTHER* and N. ZAMZAM (Division of Child Dental Health (Orthodontics), Leeds Dental Institute, UK).

11:00  Craniofacial Morphology in Danish Infants with Cleft Lip and Palate. N. HERMANN*, B.L. JENSEN, E. DAHL, and S. KREIBORG (Department of Pediatric Dentistry, School of Dentistry, University of Copenhagen, Denmark).

Seq#: 207  Saturday, June 27, 8:30 pm - 11:15 am
Oral Session, Athena Room

Craniofacial Biology - Craniofacial and Dental Development

Chairpersons:  S. Kapila and M. Bei

8:30  WITHDRAWN
2217 8:45 Localization of E-Cadherin and b-Catenin in Ameloblasts of Rat Incisors. M. WANG*, B.C. SORKIN, J.M. DOBECK, and Z. SKOBE (Harvard School of Dental Medicine and Forsyth Dental Center, Boston, MA, USA).

2218 9:00 FGFs and BMP4 Induce Distinct Msx1-dependent Signaling Pathways in Early Tooth Development. M. BEI* and R. MAAS (Division of Genetics, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA, USA).


2220 9:30 Ameloblastin Expression in Odontogenic Tumors and Craniopharyngioma. S.K. LEE*, E.C. KIM, P.H. CHUNG, Y.M. KIM, and J.G. CHI (Department of Oral Pathology, College of Dentistry, Kangnung National University, Seoul, Korea).

2221 9:45 TGF-b Type II Receptor Regulates Mandibular Morphogenesis. Y. CHAI*, J. ZHAO, D. WARBURTON, and H.C. SLAVKIN (CCMB, School of Dentistry, University of Southern California, Los Angeles; and NIDR, NIH, Bethesda, MD, USA).

2222 10:00 Adenomatous Polyposis Coli Protein (APC) is Localized on Ameloblast Membranes. Z. SKOBE*, M. WANG, J.M. DOBECK, and B.C. SORKIN (Forsyth Dental Center and Harvard School of Dental Medicine, Boston, MA, USA).

2223 10:15 Expression of DXL-5 Gene during Human Tooth Development. J.L. DAVIDEAU*, A. BERDAL, P. DEMRI, M. MacDOUGALL, and N. FOREST (Laboratoire Biologie-Odontologie, Université Paris VII, France; and Department of Pediatric Dentistry, UTxHSC, San Antonio, TX, USA).

2224 10:30 NEL-2 Expressed in Unilateral Prematurely Fusing and Fused Coronal Sutures. K. TING*, X. Xiang, H. DO, C. SOO, E. KWONG, C.N. BERTOLAMI, and S. KURODA (UCLA, Los Angeles, CA; UCSF, San Francisco, CA, USA; and Biosignal Research Center, Kobe University, Japan).

2225 10:45 Expression and Potential Role of Ets-2 in Tooth and Craniofacial Development. G.V. KULKARNI, B. LEE, C. VARY, I. KOLA, and A. SETH* (MRC Group in Periodontal Physiology, University of Toronto; Maine Medical Cancer Research Institute, S. Portland, ME, USA; Monash University, Australia; and Dept. of Laboratory Medicine and Pathobiology, University of Toronto, ON, Canada).

2226 11:00 The Role of Sonic hedgehog in Craniofacial Morphogenesis. J.A. HELMS* and D. HU (University of California at San Francisco, USA).

Seq#: 208 Saturday, June 27, 8:30 am - 11:15 am
Oral Session, Room 4

Dental Materials - Adhesion—Marginal Adaptation, Mechanisms

Chairpersons: C. Prati and I. Stangel

2227 8:30 Cavity Adaptation of Resin Composite in Canine in vivo. C. TANI*, K. TADA, M. OHBA, A. MANABE, K. ITOH, H. HISAMITSU, and S. WAKUMOTO (School of Dentistry, Showa University, Tokyo, Japan).

2228 8:45 Marginal Adaptation of Ultrasonic- and Sonic-prepared Small Proximal Cavities. T. WINDELER* and I. KREJCI (Clinic for Preventive Dentistry, Periodontology, Cariology, University of Zürich, Switzerland).
9:00 SEM Evaluation for Interfacial Gap of Fluoride-containing Bonding Resin. K. SHINKAI*, Y. KATOH, and S. SUZUKI (The Nippon Dental University at Niigata, Japan; and University of Alabama at Birmingham, USA).

9:15 Marginal Smear Hybrid Layer along Dentin-Compomer Interfaces. C. PRATI*, S. CHERSONI, G. MONTANARI, and R. MONGIORGI (School of Dentistry and Department of GeoEnvironmental Sciences, University of Bologna, Italy).

9:30 Effect of One-bottle Adhesives on the Marginal Adaptation of Composite Resins and Compomers in Class V Cavities in vitro. U. BLUNCK* and J.-F. ROULET (Department of Operative Dentistry, Endodontics, and Preventive Dentistry, Charité, Humboldt University of Berlin, Germany).

9:45 Confocal Microscope and SEM Evaluation of Carbon Fiber Posts Restorations. F. MANNOCCI*, A. VICHI, M. FERRARI, and T.F. WATSON (Siena University, Italy; and Department of Conservative Dentistry, Guy’s Hospital, London, UK).

10:00 Infrared Spectroscopy at the Adhesive/Dentin Interface. D.M. WIELICZKA*, P. SPENCER, and R. LEMOR (UMKC Physics Department and School of Dentistry, Kansas City, MO, USA).

10:15 Ultrasonic Investigation of Dentin Adhesion. L.J. HENDERSON* (City Beach, Western Australia).

10:30 Adhesion of PENTA to Dentin: Etching and Water Aging Effects. M. YAVARI, J. XU, T.H. ELLIS, E. SACHER, and I. STANGEL* (Biomaterials Interfaces Group, Faculty of Dentistry, McGill University; and Department of Chemistry, Université de Montréal; and Engineering Physics, Ecole Polytechnique, Montreal, Canada).

10:45 Mechanisms of Bonding of a Resin-modified Glass-ionomer Adhesive to Dentin. B. VAN MEERBEEK*, Y. YOSHIDA, P. LAMBRECHTS, G. VANHERLE, K. WAKASA, and Y. NAKAYAMA (Catholic University of Leuven, Belgium; and Hiroshima University and Toray Research Center, Japan).

11:00 Dentin Bonding Mechanism of MMA-TBB Resin Studied by FT-Raman Spectroscopy. Y. IMAI* and Y. HOUGA (Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, Japan).

Seq#: 209 Saturday, June 27, 8:30 am - 11:15 am
Oral Session, Erato Room
Dental Materials - Ceramics, Marginal Adaptation, Surface Treatment
Chairpersons: P. Marquis and P. Pospiech

8:30 Effect of Surface Treatment on the Bond Strength of Luting Cement to In-Ceram. H.N. ALKUMRU, M. ÖZCAN, E. NERGİZ, D. GEMALMAZ*, and A. AKKAYA (Marmara University, Faculty of Dentistry, Istanbul, Turkey; and Medical and Dental School of Köln, Germany).

8:45 Light Curing of Resin under Ceramic and Composite CEREC CAD/CIM Inlays. M.J. BESEK*, D. ZANGGER, W.H. MOERMANN, and F. LUTZ (Preventive Dental Medicine, Periodontology & Cariology, Zürich University, Switzerland).

9:00 Enamel Treatment Effects on the Marginal Adaptation of Ceramic Inlays. P. HAHN*, H.G. SCHALLER, and E. HELLLWIG (Department of Operative Dentistry and Periodontology, University of Freiburg, Germany).

9:30  Effect of Different Acid Treatments on Porcelain Surface Etching. S. CANAY, N. HERSEK, and A. ERTAN* (Department of Prosthodontics, Hacettepe University Faculty of Dentistry, Ankara, Turkey).

9:45  The Impact of Zinc Phosphate Mixing Ratio on the Strength of Dental Porcelains. G.P. FLEMMING, A.C. SHORTALL, and P.M. MARQUIS* (School of Dentistry, The University of Birmingham, UK).

10:00 Shear Bond Strength of Cement to a Resin-Interpenetrating Ceramic. C. SABROSA*, M. GOREN, R. POBER, A. CHIN, and R. GIORDANO (Boston University, MA, USA).


10:30 The Influence of Surface Treatment on the Flexural Strength of Veneer Porcelains. P. POSPIECH*, R. VANGEROW, P. RAMMELSBERG, and W. GERNET (Department of Prosthodontics, Ludwig-Maximilians-University of Munich, Germany).

10:45 Influence of Precuring Dentin Adhesives when Seating Inlays. J. SCHUG*, M.J. BESEK, and F. LUTZ (Preventive Dental Medicine, Periodontology & Cariology, Zürich University, Switzerland).

11:00 Influence of Different Margin Substrates on Leakage of Class II Indirect Restorations. M. FERRARI, P.N. MASON, A. FABIANELLI*, G. KUGEL, and C.L. DAVIDSON (University of Siena, Italy; University of Padua, Italy; Tufts University, Boston, MA, USA; and ACTA, University of Amsterdam, The Netherlands).

Seq#: 210 Saturday, June 27, 8:30 am - 11:15 am
Oral Session, Room 5
Dental Materials - Clinical Trials—CAD/CAM, Ceramic/Composite Inlays
Chairpersons: A. Cerutti and D. Sarrett

8:30  Seven-year Clinical Evaluation of 109 CAD/CAM Inlays. A. CERUTTI*, G. VENTURI, and P.L. SAPELLI (Dental School, University of Brescia, Italy).


9:00  A One-year Clinical Evaluation of Milled Ceramic Inlays. J. NEO*, A. YAP, and C.L. CHEW (National University of Singapore).

9:15  A Five-year Clinical Evaluation of Three Ceramic Inlay Systems. M. MOLIN* and S. KARLSSON (Department of Prosthetic Dentistry, University of Umeå; and Department of Prosthetic Dentistry, University of Göteborg, Sweden).

9:30  Clinical and SEM Findings in 3-5-year-old IPS-Empress® Ceramic Inlays. A. SCHULTE*, J. DOMMES, K. PIEPER, and V. STACHNISS (Department of Operative Dentistry, University of Heidelberg; and University of Marburg, Germany).


10:00 A Five-year Clinical Study of Tooth-colored Inlays. M. THORDRUP*, F. ISIDOR, and P. HÖRSTED-BINDSLEV (Royal Dental College, University of Aarhus, Denmark).
10:15 Two-year Clinical Evaluation of Composite and Ceramic Inlays in Posterior Teeth. A. SCHEIBENBOGEN*, J. MANHART, and R. HICKEL (Department of Restorative Dentistry and Periodontology, University of Munich, Germany).

10:30 Clinical Evaluation of Resin Fillings and Inlays: Eight-year Report. U. PALLESEN* and V. QVIST (School of Dentistry, Faculty of Health Sciences, University of Copenhagen, Denmark).

10:45 Clinical Evaluation of Indirect Composite Inlays. P. PFEIFFER*, R. CREMER, and O. DESCH (School of Dental and Oral Medicine, University at Cologne, Germany).

11:00 Discussion

Seq#: 211 Saturday, June 27, 8:30 am - 11:15 am
Oral Session, Thalie Room
Dental Materials - Polymers—Composites: Physical Properties
Chairpersons: G. Baran and S. Paul

8:30 Effect of Water on Tensile Properties of HEMA. S. PAUL*, M. LEACH, F. RUEGGEBERG, and D.H. PASHLEY (UCLA, Los Angeles, CA; and Medical College of Georgia, Augusta, USA).

8:45 Wear of Prosthetic Composites Dependent on Mechanical Matrix Properties. S. REICH*, J. SINDEL, and T. MORNEBURG (Polyclinic for Prosthetic Dentistry; and Polyclinic for Operative Dentistry, University of Erlangen-Nürnberg, Germany).

9:00 Prediction of Elastic Modulus of Resin Matrix Composites Using Micromechanics. R.L. SAKAGUCHI* and J.L. FERRACANE (Oregon Health Sciences University, Portland, USA).


9:30 Correlation of Elastic Modulus between Noncontact and Strain-gauge Measurements. H. TAKAHASHI*, K. TONAMI, F. NAKANO, F. NISHIMURA, N. NAKAMURA, and I. NISHIKAWA (Tokyo Medical and Dental University and Osaka University, Japan).

9:45 Cyclic Load Test of Five Metal Polymer Compound Systems. E. EICHHORN*, W.-D. MÜLLER, K.-P. LANGE, and S. AECHTNER (Dental School Medical Faculty, Charité, Humboldt-University of Berlin, Germany).


10:30 Physical Properties of Flowable Composites. T. CHADWICK, W.R. GLACE*, and L. YAU (Den-Mat Corporation, Santa Maria, CA; and School of Dental Medicine, Tufts University, Boston, MA, USA).

10:45 Flexural Creep and Stress Relaxation in Different Types of Composites. T.K. VAIDYANATHAN*, J. VAIDYANATHAN, and T. VISWANADHAN (New Jersey Dental School, University of Medicine and Dentistry of New Jersey, Newark, USA).

11:00 Abrasion Parameters of Solitaire®. M. PELKA*, J. SINDEL, R. FRANKENBERGER, and A. PETSCHELT (Polyclinic for Operative Dentistry and Periodontology, University of Erlangen-Nürnberg, Germany).
### Seq#: 212  Saturday, June 27, 8:30 am - 11:15 am  
**Oral Session, Mobile 9 Room**

**Geriatric Oral Research - Oral Health of Institutionalized and Medically Compromised Elderly**

**Chairpersons:** C. Benz and R. Berg

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<thead>
<tr>
<th>Session</th>
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<th>Presenters</th>
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<tr>
<td>2272</td>
<td>9:00 Multidisciplinary Perspectives on Oral Health in Long-term Care Facilities. M.I. MacENTEE*, S. THORNE, and A. KAZANJIAN (University of British Columbia, Vancouver, Canada).</td>
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<tr>
<td>2275</td>
<td>9:45 Planned Treatments and Realized Treatments among Institutionalized Elderly Patients. C. SABEV*, P. MOJON, and E. BUDTZ-JØRGENSEN (University of Geneva, Switzerland).</td>
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<tr>
<td>2276</td>
<td>10:00 The Effects of Different Preventive Regimens on Dentate Elderly. C. BENZ*, L. KREMERS, C. STREIT, A. BÜHNER, and R. HICKEL (Department of Restorative Dentistry and Periodontology, University of Munich, Germany).</td>
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<tr>
<td>2278</td>
<td>10:30 Prescription Analysis of Prolonged Oral Clearance (POC) Medicines. W. BAQIR* and A. MAGUIRE (Dental School, University of Newcastle upon Tyne, UK).</td>
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<tr>
<td>2279</td>
<td>10:45 Use of Prolonged Oral Clearance (POC) Medicines in the Elderly. A. MAGUIRE* and W. BAQIR (Dental School, University of Newcastle upon Tyne, UK).</td>
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**Discussion**

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### Seq#: 213  Saturday, June 27, 8:30 am - 11:15 am  
**Oral Session, Clio Room**

**Mineralized Tissue - Mineral and Mineralization**

**Chairpersons:** R.Z. LeGeros and G. Nancollas

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<tr>
<th>Session</th>
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<tr>
<td>2281</td>
<td>8:45 Contribution to the Study of Biomineral by Raman Microspectrometry. G. PENEL*, G. LEROY, H. PETITE, N. GUILLEMIN, and E. BRÈS (UFR d’Odontologie, Lille; INSERM, Lille; URA CNRS 1432, Paris; and USTL Villeneuve d’Ascq, France).</td>
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</table>
2282  9:00  Kinetics of Demineralization and Remineralization of Enamel Surfaces Following Laser Irradiation. A.H. MANGOOD, A. HINA, J.D.B. FEATHERSTONE, D. FRIED, and G.H. NANCOLLAS* (Department of Chemistry, SUNY at Buffalo; and University of California at San Francisco, USA).


2284  9:30  Electro-mechanical Properties of Mineralized Tissues at High Resolution. J.L. KATZ*, M. TABIB-AZAR, S. BUMRERRAJ, and P.S. PARTHAK (Case Western Reserve University, Cleveland, OH, USA).

2285  9:45  Dipolar Reorientations in Dental Enamel and Cortical Bone. A. LAMURE, M. FOIS, and C. LACABANNE* (Laboratoire de Physique des Polymères, Paul Sabatier University, Toulouse, France).

2286  10:00  In situ Investigation of Heterogeneous Nucleation of Hydroxyapatite Studied by S.A.R. P.A. NGANKAM, P. SCHAAF, J.-C. VOEGEL, and F.J.G. CUISINIER* (Institut Charles Sadron, Strasbourg, France).


2289  10:45  Optical Characterizations of Human Dentin and Enamel. J.C. RAGAIN and W.M. JOHNSTON* (The Ohio State University College of Dentistry, Columbus, USA).

2290  11:00  Dix-2 and Post-natal Mineralization in Mouse Incisors. A. BERDAL*, F. LEZOT, B. THOMAS, P.T. SHARPE, and N. FOREST (Laboratoire Biologie-Odontologie, Université Paris VII, France; UMDS, Guy’s St. Thomas Medical Dental School, London, UK).

Seq#: 214  Saturday, June 27, 8:30 am - 11:15 am
Oral Session, Mobile 4 Room
Microbiology/Immunology - Epidemiology, Typing

Chairpersons:  W.G. Wade and A.M. Tavana

2291  8:30  An Evaluation of Biotyping Techniques for Mutans Streptococci in Children. C.S. TOI* and P. CLEATON-JONES (MRC/University of the Witwatersrand, Dental Research Institute, Johannesburg, South Africa).


2293  9:00  Phospholipid Analogue Profiles of Some Black-pigmented Oral Anaerobes. A.M. TAVANA, D.B. DRUCKER*, and V. BOOTE (Turner Dental School and Chemistry Department, Manchester University, UK).

2294  9:15  Genotyping of Black-pigmented Anaerobes Isolated from Periodontal Sites of HIV-positive Subjects. R. TEANPAISAN, W. NITTAYANANTA, and C.W.I. DOUGLAS* (Departments of Stomatology and Periodontology, University of Songkla, Thailand; and Department of Oral Pathology, University of Sheffield, UK).
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<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>9:30</td>
<td>Distribution of Fusobacterium nucleatum Ribotypes in Healthy Families.</td>
<td>G. SUCHETT-KAYE*, D. DECORET, and O. BARSOTTI (Laboratoire d’Etude des Interfaces en Odontologie, UFR d’Odontologie, Lyon, France).</td>
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<tr>
<td>9:45</td>
<td>Associations between “Not-yet-cultivable” Bacterial Phylotypes with</td>
<td>W.G. WADE*, R. HARPER-OWEN, D. DYMOCK, and A.J. WEIGHTMAN (UMDS, Guy’s Hospital, London; University of Bristol; and University of Wales, Cardiff, UK).</td>
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<tr>
<td>10:00</td>
<td>Helicobacter pylori in Subgingival Plaque of Adult Periodontitis Patients.</td>
<td>M.P. RIGGIO* and A. LENNON (Infection Research Group, Glasgow Dental School, Scotland, UK).</td>
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<tr>
<td>10:15</td>
<td>Helicobacter pylori May Be a Transient Micro-organism in the Human Oral Cavity.</td>
<td>K. OKUDA*, T. MIURA, K. ISHIHARA, and Y. EBIHARA (Departments of Microbiology and Internal Medicine, Oral Health Science Center, Tokyo Dental College, Chiba, Japan).</td>
</tr>
<tr>
<td>10:30</td>
<td>Prevalence of Actinobacillus actinomycetemcomitans Isolates in a Rural Population of Southern Thailand.</td>
<td>F. WIDAR, Z. RISTEVSKI, P.N. PAPAPANOU, R. TEANPAISAN, V. BAEUM, O. FEJERSKOV, and G. DAHLEN* (Faculty of Odontology, Göteborg University, Sweden; Prince of Songkhla University, Thailand; and Royal Dental College, University of Aarhus, Denmark).</td>
</tr>
<tr>
<td>11:00</td>
<td>In vivo Expression of Secreted Aspartyl Proteases by Candida albicans.</td>
<td>J.R. NAGLIK*, S.P. SWEET, S.J. CHALLACOMBE, J.S. GREENSPAN, D. GREENSPAN, and N. AGABIAN (Oral AIDS Research Centre, Department of Oral Medicine &amp; Pathology, UMDS Guy’s Hospital, London, UK; and Department of Stomatology, University of California San Francisco, USA).</td>
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**Neuroscience/TMJ - TMD: Etiology, Evaluation, Management**

**Chairpersons:** M. Bakke and M.E. Hsu

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<th>Time</th>
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<th>Authors</th>
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<tr>
<td>8:30</td>
<td>Signs and Symptoms of Temporomandibular Disorders (TMD) in Adult Twins.</td>
<td>B. PIHLSTROM*, B. MICHALÓWICZ, J. HODGES, and B. SPARKS (Oral Health Clinical Research Center, University of Minnesota, USA).</td>
</tr>
<tr>
<td>8:45</td>
<td>Genetic and Environmental Influences on Signs and Symptoms of TMD.</td>
<td>B. MICHALÓWICZ, B. PIHLSTROM, J. HODGES*, and T. BOUCHARD, Jr. (Oral Health Clinical Research Center, University of Minnesota, USA).</td>
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<tr>
<td>9:00</td>
<td>Patients’ Explanations of Temporo-mandibular Pain.</td>
<td>J.C. TÜRP*, A.C. OSTERMANN, T. COWLEY, and C.S. STOHLER (Department of Biologic and Materials Sciences and Program in Linguistics, University of Michigan, Ann Arbor; and The TMJ Association, Milwaukee, WI, USA).</td>
</tr>
<tr>
<td>9:30</td>
<td>Conservative Splint Therapy of Anterior Disk Displacement without Reduction.</td>
<td>M. ZAHRAH* and P. RAMMELSBERG (Faculty of Dentistry, University of Alexandria, Egypt; and Prosthetic Dentistry, University of Munich, Germany).</td>
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<td>9:45</td>
<td>Appliance Therapy in Patients with Temporomandibular Disorders and Condyle Position.</td>
<td>M. NILNER*, E.C. EKBÉRG, M. ESKAFI, and A. PETERSSON (Centre for Oral Health Sciences, Lund University, Malmö, Sweden).</td>
</tr>
</tbody>
</table>
2308 10:00  Clinical Features Independent of Gender and Age in Patients with Facial Pain or TMJ Disorders. F. MONGINI*, G. CICCONE, F. IBERTIS, C. NEGRO, and M. POMA (Headache & Facial Pain Section, Cancer Epidemiology Unit, Turin University, Italy).

2309 10:15  Validation of a New Algometer and Short-term Reproducibility of PPTs. H. ISSELEE*, A. DE LAAT, K. BOGAERTS, and R. LYSENS (Catholic University Leuven and St.-Jan Hospital, Bruges, Belgium).

2310 10:30  CliF—A Mobile System for Recording Examination Data of TMD Patients. M. LANGE* and T. KIRSTE (Department for Prosthodontics, Dental School, Rostock University; and Fraunhofer Institute for Computer Graphics, Department of Mobile Multimedia Tech., Rostock, Germany).

2311 10:45  Bruxing Patterns in Children Assessed with Dental Models, Electromyography, and Incisor Jaw Tracking. A.J. MILLER*, T. NEGORO, J. BRIGGS, O. PLESHE, I.I. NIELSEN, and C. McNEILL (University of California, San Francisco, USA; and Aichi-Gakuin University, Japan).

2312 11:00  Pathogenic Mechanism of Headache in Patient with Sleep Bruxism. A. SHEIKHOLESLAM* and K. HOLMGREN (Department of Clinical Research, Karolinska Institutet, Stockholm, Sweden).

Seq#: 216 Saturday, June 27, 8:30 am - 11:15 am
Oral Session, Gallieni 3 Room

Oral/Dental Hygiene - Manual Toothbrushes, Floss, Mouthrinses, Gum

Chairpersons: B. MacKay and D. Fine

2313 8:30  Histological and Immunohistochemical Study of Gingival Stimulation by Toothbrushing. T. YAMAMOTO*, M. HORIUCHI, D. MORIKI, A. ISHIKAWA, and T. WATANABE (Department of Preventive Dentistry, Okayama University Dental School, Japan).


9:30  Discussion

2317 9:45  Effect of a Polyhexanide Mouthrinse on Bacterial Counts and Plaque. M. ROSIN*, M. RUHNAU, T. KOCHER, A. WELK, P. RUDOLPH, and A. KRAMER (Department of Operative Dentistry and Periodontology, and Institute of Hygiene and Environmental Medicine, University of Greifswald, Germany).

2318 10:00  A Four-day Plaque Regrowth Study Comparing Two Commercial Mouthrinses. B. RIEP* and J.-P. BERNIMOULIN (Department of Periodontology, Humboldt University, Charité, Berlin, Germany).


2320 10:30  The Effects of an Antiseptic Mouthrinse on Subclinical Gingivitis in IL-1 Genotype-positive and -negative Humans. R. JOTWANI, R. AVILA, B.O. KIM, A.M. IACOPINO, and C.W.
CUTLER* (Baylor College of Dentistry, Texas A&M University System, Dallas, USA; and Chosun University, Kwanju, South Korea).


11:00 Discussion

Seq#: 217 Saturday, June 27, 8:30 am - 11:15 am
Oral Session, Mobile 11 Room

Periodontal Research-Diagnosis/Epidemiology - Periodontal Probing and Imaging

Chairpersons:  M. Reddy and N. Lang


2324 9:00 Periodontitis Prevalence in Adolescents: Partial Compared with Full-mouth Recordings. S. DUFFY, K.A. EATON*, G.S. GRIFFITHS, M.S. GILTHORPE, and N.W. JOHNSON (Eastman Dental Institute, London; and Kings College School of Medicine and Dentistry, London, UK).

2325 9:15 Evaluation of a New Integrated System for Use in the Clinical Detection, Diagnosis, and Treatment of Periodontal Diseases. F.M. HUNTER*, K.A. HUNTER, N.D. MARTIN, and P.D. BARNARD (Faculty of Dentistry, University of Sydney, Australia).

2326 9:30 Assessment of Repeatability of an Examiner for the Löe-Silness Gingival Index. B. WALLKAMM, J.L. WINSTON, J.C. HAMLIN, J.L. PRATT, S.F. McCLANAHAN, and N.P. LANG* (University of Berne, Switzerland; and The Procter & Gamble Company, Cincinnati, OH, USA).


2328 10:00 Modeling the PDL as a Non-linear, Hyper-elastic Material; a Review. C.J. RICHARDSON*, R. VAN NOORT, I.C. HOWARD, M.C.R. PETERS, and S. HOLLISTER (Department of Restorative Dentistry, University of Sheffield, UK; and University of Michigan, Ann Arbor, USA).


2331 10:45 Mandibular BMD in Periodontally Healthy and Edentulous Post-menopausal Women. K. BANDO*, H. NITTA, M. MATSUBARA, E. HONDA, T. SASAKI, M. NAGAO, and I. ISHIKAWA (Departments of Periodontology, Orthopedic Surgery, Dental Radiology, and Geriatric Dentistry, Tokyo Medical and Dental University, Japan).

2332 11:00 Periodontal Disease Severity and Maxillary Sinus Changes. S.A. BHATTI*, N.A. DRAGE, J.E. BROWN, and F.P. ASHLEY (UMDS, Guy’s Hospital, London, UK).
Periodontal Research - Therapy - Local Drug Delivery, Root Conditioning

Chairpersons: M. Stoller and A. Sculean

2333  8:30  Periodontal Pocket Clearance by Gamma Scintigraphy. I.G. NEEDLEMAN*, G.P. MARTIN, S.J. MATHER, and R. SOBNACK (Department of Periodontology, Eastman Dental Institute; Department of Pharmacy, King's College; and Department of Nuclear Medicine, St. Bartholomew's Hospital, London, UK).

2334  8:45  The Pharmacokinetic Profile of Locally and Systemically Delivered Doxycycline Hyclate. N. STOLLER*, L.R. JOHNSON, S. TRAPNELL, C.Q. HARROLD, and S. GARRETT (University of Colorado, Denver; and Atrix Laboratories Inc., Colorado, USA).

2335  9:00  Statistical Analysis of Tetracycline Fiber Therapy from an SQL Database Model for Periodontal Disease Monitoring. J.M. GOODSON*, R. OPPENHEIM, D. HANSON, and D. DOUCETTE (Forsyth Dental Center, Boston; and Systems Engineering, Inc., Waltham, MA, USA).

2336  9:15  The Influence of Subgingival Calculus Levels on Outcomes Following Local Treatment of Periodontitis with Subgingivally Delivered Doxycycline or Scaling and Root Planing. S. GARRETT*, L.R. JOHNSON, and N. STOLLER (Atrix Laboratories, Inc., Fort Collins; and University of Colorado, USA).

2337  9:30  Clinical Evaluation of Emdogain® and Resolut® in the Treatment of Degree III Mandibular Furcation Involvements. N. DONOS, L. GLAVIND*, T. KARRING, and A. SCULEAN (Department of Periodontology, University of Aarhus, Denmark; Department of Periodontology, University of Saarland, Germany).

2338  9:45  Treatment of Mandibular Degree III Furcation Involvements with a Bioresorbable Membrane and Emdogain® in Monkeys. N. DONOS*, A. SCULEAN, L. GLAVIND, E. REICH, and T. KARRING (Department of Periodontology, University of Aarhus, Denmark; and Department of Periodontology, University of Saarland, Germany).

2339  10:00  Treatment of One-wall Intrabony Periodontal Defects with GTR and Enamel Matrix Proteins (Emdogain®). An Experimental Study in Monkeys. A. SCULEAN*, N. DONOS, E. REICH, M. BRECX, and T. KARRING (Department of Periodontology, University of the Saarland, Germany; and Department of Periodontology, University of Aarhus, Denmark).

2340  10:15  Enamel Matrix Proteins (Emdogain®) and Guided Tissue Regeneration in the Treatment of Intrabony Periodontal Defects. A Split-mouth Clinical Study. A. SCULEAN, N. DONOS, A. BLAES, E. REICH, and M. BRECX* (Department of Periodontology, University of the Saarland, Germany; and Department of Periodontology, University of Aarhus, Denmark).

2341  10:30  Enamel Matrix Proteins Modulate the Behavior of Cells from Periodontal Ligament and Gingiva. M.T. VAN DER PAUW*, T. VANDENBOS, V. EVERTS, and W. BEERTSEN (Department of Periodontology, Academic Center for Dentistry Amsterdam, The Netherlands).


11:00  Discussion

Prosthodontics - Resin-bonded FPD, Resin Cement, Casting Alloy
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<td>2343</td>
<td>8:30</td>
<td>Retention of a Posterior Acid-etch Fixed Partial Denture with a Modified Design. O.M. EL-MOWAFY*, M.H.M. RUBO, and P. WATSON (Faculty of Dentistry, University of Toronto, Ontario, Canada).</td>
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<td>2344</td>
<td>8:45</td>
<td>Clinical Performance of Adhesive Fixed Partial Dentures with CoCr and Titanium Framework. P. RAMMELSBERG*, P. POSPIECH, and W. GERNET (Department of Prosthodontics, University of Munich, Germany).</td>
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<tr>
<td>2345</td>
<td>9:00</td>
<td>Nineteen-year Follow-up of Resin-bonded Fixed Partial Dentures. A. APONTE* and R. APONTE (University of the Andes, Mérida, Venezuela; and University of Alabama at Birmingham, USA).</td>
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<td>2346</td>
<td>9:15</td>
<td>Restoration of the Shortened Lower Dental Arch—Patient Satisfaction. N.J. JEPSON*, J.M. THOMASON, P.J. MOYNIHAN, G.W. WATSON, and P.J. KELLY (Dental School, University of Newcastle upon Tyne; and University of Teeside, UK).</td>
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<td>2347</td>
<td>9:30</td>
<td>The Effect of Resin and Resin-ionomer Cements on Crown Seating. K. TAN*, C.C. LIM, and Y.M. CHAN (National Dental Centre; and Department of Restorative Dentistry and Department of Mathematics, National University of Singapore).</td>
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<td>2348</td>
<td>9:45</td>
<td>Repeated Cementation Effects on the Force Necessary to Dislodge Crowns. I.K. MAUSNER*, S. CAMPBELL, G.R. GOLDSTEIN, and M.A. GEORGESCU (NYU, New York, NY; and UIC, Chicago, IL, USA).</td>
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<td>2350</td>
<td>10:15</td>
<td>Retention and Wear of Precision Attachments. M. WICHMANN* and W. KUNTZE (Department of Prosthodontics, Medical University of Hannover, Germany).</td>
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<td>2352</td>
<td>10:45</td>
<td>Comparison Retention of Complete Crowns Using Alternative Casting Alloys. M.F. AYAD, Y.M. EL-BAGHDADY*, and S.F. ROSENSTIEL (University of Tanta, Egypt; and The Ohio State University, Columbus, USA).</td>
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<td>2353</td>
<td>11:00</td>
<td>Assessment of Failure Pattern for Cemented Cast Crowns. M.F. AYAD* and S.F. ROSENSTIEL (University of Tanta, Egypt; and The Ohio State University, Columbus, OH, USA).</td>
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Extracellular Calcium Stimulates Phospholipase C Activity in MC3T3-E1 Osteoblasts. S. GODWIN* and S.P. SOLTOFF (Harvard School of Dental Medicine and Division of Signal Transduction, Beth Israel Deaconess Medical Center, Boston, MA, USA).

Functional Characterization of Two Cloned Regions of Glucosyltransferase. C. JESPERSGAARD*, T. GREENWAY, D.J. SMITH, G. HAJISHENGALLIS, M.W. RUSSELL, and S. MICHALEK (University of Alabama at Birmingham; and Forsyth Dental Center, Boston, MA, USA).

Telomerase, Telomere, and Replicative Senescence of Normal Human Oral Keratinocytes. M.K. KANG* and N.-H. PARK (UCLA Dental Research Institute and School of Dentistry, Los Angeles, CA, USA).

Specific Domains of Fibronectin Modulate Proteinase Expression and Induce Apoptosis. Y. KAPILA*, C. DAMSKY, and P. JOHNSON (Department of Stomatology, University of California, San Francisco, USA).

Identification of a DLX3 Gene Mutation Associated with Tricho-Dento-Osseous Syndrome. J.A. PRICE*, D.W. BOWDEN, T.W. WRIGHT, and T.C. HART (Bowman Gray School of Medicine, Winston-Salem, NC; and University of North Carolina, Chapel Hill, USA).


Role of Annexin II and V in Matrix Vesicle-mediated Biomineralization. K.P. WORCH*, M. PACIFICI, A.M. POLSON, and T. KIRSCH (Departments of Anatomy/Histology and Periodontics, School of Dental Medicine, University of Pennsylvania, Philadelphia, USA).

ATPase Activity of Salivary Glands’ Subcellular Membrane Fractions. M.A. OSTUNI*, D.A. GONZALEZ, and G.L. ALONSO (Department of Biophysics, Faculty of Dentistry, University of Buenos Aires, Argentina).

Nutritional Dwarfing: Interrelationship between Growth Deceleration and Bone Metabolism. C.A. GAMBA*, P.M. BOYER, P.N. RODRIGUEZ, M.I. VACAS, C. GUERRERO, M.B. GUGLIELMOTTI, and S.M. FRIEDMAN (Departments of Anatomy, Pathology, Physiology, and Biochemistry, School of Dentistry, University of Buenos Aires, Argentina).

What is ApoE Doing at the Neuromuscular Synapse? A. KLUCZEWSKA* and A. EVERETT (Department of Physiology, School of Oral Health Sciences, University of Western Australia, Perth).

Identification of Putative Adhesin-binding Motif in Porphyromonas gingivalis Cysteine Proteinase Genes. N. SLAKESKI*, N.M. O’BRIEN-SIMPSON, and E.C. REYNOLDS (School of Dental Science, University of Melbourne, Australia).


E-cadherin Independent Binding of aeb7-positive Lymphocytes to Oral Keratinocytes. D.W. BROWN* (Department of Oral Pathology, St. Bartholomews and the Royal London School of Medicine and Dentistry, UK).

Strain Relatedness of C. albicans Isolates Recovered from Diabetic Patients. A.M. WILLIS*, W.A. COULTER, and P.-J. LAMEY (School of Clinical Dentistry, The Queen’s University, Belfast, N. Ireland).

The Effects of Fluconazole Treatment on the Oral Mycological Flora in HIV-seropositive Patients. K.D. HUNTER*, J. BAGG, J. GIBSON, and P.B. LOCKHART (Glasgow Dental School, UK; and Carolinas Medical Center, Charlotte, NC, USA).
2372 Signaling by Parathyroid Hormone-derived Peptides in Osteoblastic Cells. H.S. BOBIER* and S.J. DIXON (Division of Oral Biology, School of Dentistry; and Department of Physiology, The University of Western Ontario, London, Canada).

2373 The Role of ABP-280 in Integrin-dependent Mechanoprotection. M. GLOGAUER* and C.A.G. McCULLOCH (MRC Group in Periodontal Physiology, University of Toronto, ON, Canada).


2375 Are Compomers Suitable as Core Build-up for All-ceramic Crowns? J. SINDEL*, N. KRÄMER, R. FRANKENBERGER, and S. BISCHOFF (Policlinic for Operative Dentistry and Periodontology, University of Erlangen-Nürnberg, Germany).

2376 Effect of a Biodegradable Foam (Polyfoam®) on Experimental Bone Neoformation. B. WALLKAMM*, J. SCHMID, C.H.F. HÄMMERLE, S. GOGOLEWSKI, and N.P. LANG (University of Berne, Switzerland; and AO/ASIF Research Center, Davos, Switzerland).

2377 Scanning Electron Microscopical Investigation of Gingival Prostheses and Its Effect on Periodontal Structure. A.A. HASSAN* and F. LAMPERT (National Institute of Laser Enhanced Science, University of Cairo, Egypt; and Department of Conservative Dentistry and Periodontology, Technical University of Aachen, Germany).

2378 The Relationship between Serotonin and Semicarbazide-sensitive Amine Oxidase in Human Dental Pulp. M. O’SULLIVAN*, K. TIPTON, F. ALLEN, and W.E. McDEVITT (School of Dental Science, and Department of Biochemistry, Trinity College, Dublin, Ireland).

2379 Cementum Attachment Protein Identifies Cementoblastic Progenitors in the Adult Human Periodontium. I.B.K. FRIEDMAN*, A.S. NARAYANAN, N. SAVION, and S. PITARU (Department of Oral Biology, Tel Aviv University, Israel; and Department of Pathology, Washington University, St. Louis, MO, USA).

2380 Titanium Surface Roughness Effects on Monocyte Adhesion, TNF-a and PGE2 Secretion. S. COHEN*, W.A. SOSKOLNE, L. SENNERBY, A. WANNENBERG, and L. SHAPIRA (The Hebrew University, Hadassah, Israel; and Göteborg University, Sweden).

2381 Identification of Cell Division Genes, ftsQ and ftsA from Porphyromonas gingivalis. T. ANSAI*, S. AKIFUSA, H. TAMURA, and T. TAKEHARA (Department of Preventive Dentistry, Kyushu Dental College, Kitakyushu, Japan).

2382 Anabolic Effect of Parathyroid Hormone (PTH) on Bone Formation in vitro. H. KONDO*, S. KASUGAI, H. MUKOYAMA, I. KIKUKAWA, S. KURODA, K. OHYA, and T. OHYAMA (Tokyo Medical and Dental University, Japan).

2383 TGF-b1 and IFN-g Regulate Myofibroblastic Phenotype of Palatal Fibroblasts. M. YOKOZEKI*, K. MORIYAMA, Y. BABA, H. SHIMOKAWA, and T. KURODA (Department of Orthodontics II, and Department of Biochemistry, Faculty of Dentistry, Tokyo Medical and Dental University, Japan).

2384 Salivary IgA Production against Actinobacillus actinomycetemcomitans Fimbrial Antigen. K. HONMA*, K. ISHIHARA, T. KATO, and K. OKUDA (Oral Health Science Center, and Department of Microbiology, Tokyo Dental College, Chiba, Japan).

2385 A Novel Insertion Sequence Promotes Expression of Leukotoxin in Actinobacillus actinomycetemcomitans Clinical Isolates. T. HE*, T. NISHIHARA, D.R. DEMUTH, and I. ISHIKAWA (Tokyo Medical and Dental University; NiID, Japan; and University of Pennsylvania, Philadelphia, USA).
2386  HSV-1 Infection Causes Disappearance of p53 in HaCat Cells. H. MIKOLA*, M. NYKÄNEN, V. HUKKANEN, and S. SYRJÄNEN (Institute of Dentistry, Department of Virology, University of Turku, Finland).


2388  Immunolocalization of BMPs/OPs in Murine Craniofacial Structures and Periodontal Morphogenesis. G. THOMADAKIS* (Bone Research Laboratory, MRC; and Department of Orthodontics, Faculty of Health Sciences, WITS, Johannesburg, South Africa).


2390  Coronal Leakage of Obturated Root Canals Using a Polymicrobial Marker. P. CHAILERTVANITKUL*, W.P. SAUNDERS, and D. MacKENZIE (Khon Kaen University, Thailand; and University of Glasgow Dental School, UK).

Seq#: 221 Saturday, June 27, 11:15 am - 12:45 pm Poster Session, Exhibit Hall

Pulp Biology - Odontoblasts, Pulp Capping, and Biocompatibility


2392  Dye-coupling between Odontoblasts and Other Pulpal Cells. H. IKEDA*, M. GOTOH, H. SUDA, and B. MATTHEWS (Department of Endodontics, Tokyo Medical and Dental University, Japan; and Department of Physiology, University of Bristol, UK).


2395  WITHDRAWN

2396  Expression of bcl-2, Mib-1, and p53 in Human Adult Dental Pulp. L. CIAVARELLI*, C. RUBINI, M. FIORONI, P. DE FAZIO, and A. PIATTELLI (Dental School, University of Chieti; and University of Ancona, Italy).

2397  S-100 Protein in Human Dental Pulp. C. D’ARCANGELO*, L. CIAVARELLI, C. RUBINI, M. FIORONI, P. DE FAZIO, and A. PIATTELLI (Dental School, University of Chieti; and University of Ancona, Italy).

2398  Gene Expression of Mineralized-tissue-specific Proteins in Primary Bovine Pulp-derived Cells. B. THONEMANN*, G. SCHMALZ, and H. SCHWEIKL (Dental School, University of Regensburg, Germany).

2399  Receptor Tyrosine Kinase Expression in Human Dental Papilla-derived Cells. E. HAYASHI*, K. SATOMURA, E. KITAOKA, T. HOTEIYA, and M. NAGAYAMA (First Department of Oral and Maxillofacial Surgery, School of Dentistry, Tokushima University, Japan).

2400  The Rat Molar as an Experimental Model for Pulp Capping. H. LOEV SCHALL*, K. JOSEPHSEN, and O. FEJERSKOV (Royal Dental College, University of Aarhus, Denmark).

2402 Testing of Biological Tolerance of GIC and Compomers—An Animal Test. A. PALJM* and D. MARKOVIC (University of Stomatology, Belgrade, Yugoslavia).

2403 Histological Effects of 4-META as a Direct Pulp Capping Agent during KCP. G. GOTO*, M. YOSHIDA, L.M. CARDENAS, and Y. ZHANG (School of Dentistry, Department of Pediatric Dentistry, Nagasaki University, Japan).

2404 Effects of Dental Cements on Proliferation of Rat Pulp Cells. K. ARAKI*, N. SAWADA, and H. SUDA (Faculty of Dentistry, Tokyo Medical and Dental University, Japan).

2405 Long-term Cytotoxicity of HEMA on THP-1 Macrophages in vitro. S. BOUILLAGUET*, J.C. WATAHA, L. GONZALEZ, M. VIRGILLITO, and J.-M. MEYER (University of Geneva, Switzerland; and Medical College of Georgia, Augusta, USA).

2406 Biomechanics of Kratochvil and Krol I-bar Proximal Plate Systems for Compromised Periodontia. H. NAKAHARA*, A.A. CAPUTO, H. ITOH, and T. BERG (Miyagi National Hospital, Japan; Schools of Dentistry, Tohoku University, Sendai, Japan, and UCLA, USA).

2407 Splinting with Distal Extension I-bar RPDs for Diminished Periodontal Support. H. ITOH*, A.A. CAPUTO, H. NAKAHARA, and T. BERG (Miyagi National Hospital, Japan; School of Dentistry, Tohoku University, Sendai, Japan; and School of Dentistry, UCLA, Los Angeles, CA, USA).

2408 Study on the Movement of Abutment Tooth of Removable Denture. Y. IMAMURA*, H. KIDO, and M. MORIKAWA (The Department of Removable Prosthodontics, Kyushu Dental College, Kitakyushu, Japan).

2409 Splinting in Unilateral Distal Extension I-bar RPD with Periodontally Involved Abutments. T. SASAKI*, H. ITOH, T. TAIRA, and S. MURAYAMA (Department of Prosthetic Dentistry, School of Dentistry, Tohoku University, Sendai, Japan).

2410 Effect of Vertical Load Position on Stress Distribution of Removable Mandibular Dentures. A. BALATLIOGLU and Ö. KUTAY* (Department of Prosthodontics, Faculty of Dentistry, University of Istanbul, Turkey).

2411 Retention of Ni-Ti Removable Partial Dentures vs. Co-Cr. O. RUSTULLET*, J. SABRIA, and D. LLOMBART (Faculty of Odontology, University of Barcelona, Spain).

2412 Bond Strengths of Composites and Noble Alloy after Thermal Cycling. J.C. CHANG*, S.H. KOH, J.M. POWERS, and J.H. DUONG (Houston Biomaterials Research Center, University of Texas Dental Branch, Houston, USA).

2413 Relationship between Tooth Clenching Level and Intercuspal Contact Area. W. GURDSAPSRI*, K. BABA, K. FUEKI, and M. AI (First Department of Prosthodontics, Faculty of Dentistry, Tokyo Medical and Dental University, Japan).

2414 The Influence of Polishing on Cast Clasp Deflection. J.L. CUNNINGHAM* and H. MAGUIRE (Department of Restorative Dentistry, Queen's University of Belfast, Northern Ireland).

2415 Rotary Instruments Used for Machining of Cobalt-Chromium Alloy. D.R. RADFORD* and G. XENODIMITROPOULOU (Department of Prosthetic Dentistry, UMDS, Guy's Dental Hospital, London, UK).
Improvement of Polishing Efficiency by Centrifugal Shooting-type Polishing System. K. ISHIKAWA*, T. NOKUBI, and S. YASUI (Department of Removable Prosthodontics, Osaka University Faculty of Dentistry, Japan).

Changing in Gingival Sulcus Covered with Dentures. K. ICHIKAWA*, K. KOBAYASHI, T. WATANABE, W. SOEDA, K. KOBAYASHI, and M. NAGAO (Department of Geriatric Dentistry, Tokyo Medical and Dental University, Japan).

Bonding of Denture-base Resin to Cast Ti and Ti-6Al-4V Frameworks. C. OHKUBO*, I. WATANABE, M. HOTTIIA, T. HOSOI, and T. OKABE (Baylor College of Dentistry-TAMUS, Dallas, TX, USA; Asahi University and Tsurumi University, Japan).

WITHDRAWN

Bending Properties and Proportional Limit of Titanium-Nickel Alloy Cast Clasps. M. KOTAKE*, N. WAKABAYASHI, and M. AI (First Department of Prosthodontics, Faculty of Dentistry, Tokyo Medical and Dental University, Japan).

The Spatiostructural Analysis of Peri-oral Soft Tissue Movements on Mastication. K. SAKAGUCHI*, T. KAWASAKI, M. TODA, T. KAWASHIMA, T. YAMADA, Y. TAKAYAMA, and Y. AOKI (School of Dentistry and Faculty of Engineering, Hokkaido University, Sapporo, Japan).


Evaluation of the Effect of Interocclusal Records on Inclination of the Condylar Path. J. ANGYAL*, G. TOVÁRI, A. KUKI, and G. KESZTHELYI (Dental School, Medical University of Debrecen; and Lajos Kossuth University, Debrecen, Hungary).

Vertical Position of Molars without Antagonists. I. LYKA*, G.E. CARLSSON, and S. KILIARIDIS (Departments of Orthodontics and Prosthodontics, Göteborg University, Sweden).

Relationship between Oral Function and Occlusal Support in Denture Wearers. S. YAMASHITA*, S. SAKAI, J.P. HATCH, and J.D. RUGH (The University of Texas Health Science Center at San Antonio, USA).

Post-insertion Care of Mandibular Overdentures Retained by Four Implants. A. DEN DUNNEN*, A. SLAGTER, C. de BAAT, and W. KALK (Department of Removable and Maxillofacial Prosthodontics, College of Dental Science, University of Nijmegen, The Netherlands).

Mechanical Fatigue Study of Three Implant Overdenture Stud-type Attachments. O. FROMENTIN*, B. PICARD, and B. TAVERNIER (Biomaterial Laboratory, School of Dentistry, University Denis Diderot, Paris, France).

Anteroposterior Implant Spread, Interimplant Distance, and Cantilever Length: A Retrospective Evaluation. K. MAY* and E. BILLY (University of Michigan School of Dentistry, Ann Arbor, USA).

Occlusal Contacts of Edentulous Patients with Mandibular Hybrid Dentures. T. SUZUKI*, H. KUMAGAI, N. YOSHIHOTOMI, and E.A. MGCLUMPHY (The Ohio State University, Columbus, USA; Tokyo Medical & Dental University; and Hiroshima University, Japan).

Masticatory Efficiency and Occlusal Contact Area with Shortened Dental Arch. F. AL-ALI*, M.R. HEATH, and P.S. WRIGHT (St. Bartholomew’s and the Royal London School of Medicine and Dentistry, University of London, UK).
2431  Load Transfer by Prosthesis on Implants in Partially Edentulous Models. H. KOSHINO*, A.A. CAPUTO, T. HIRAI, T. ISHIJIMA, T. KAWAKAMI, and H. HATTORI (Schools of Dentistry, Health Sciences University of Hokkaido, Japan; and University of California, Los Angeles, USA).

2432  Biological and Technical Failures with Fixed Partial Dentures (FPD) on Implants and Teeth after 5 Years of Function. S. AESCHLIMANN*, C.H.F. HÄMMERLE, N.P. LANG, W. BÜRGIN, and U. BRÄGGER (School of Dental Medicine, University of Berne, Switzerland).

2433  A Comparison of Maxillary and Mandibular Bone Mineral Densities. H. DEVLIN*, K. HORNER, and D. LEDGERTON (University Dental Hospital of Manchester, England).

2434  Marginal Fit and Strength of Porcelain Crowns on Brånemark Implants. S. KERSTEN* and J.R. STRUB (University of Zürich, Switzerland; and Albert-Ludwigs-University of Freiburg, Germany).

2435  Clinical Trial of Itraconazole in Treatment of Denture Stomatitis. L.J. CROSS*, J. BAGG, and T. AITCHISON (Dental School and Department of Statistics, University of Glasgow, UK).

2436  Investigation of the Palate-Denture Interface in Denture Stomatitis Patients. J. WILSON* and J.M.A. WILTON (University of Wales College of Medicine, UK).

2437  Effect of Denture Adhesive on Improving Chewing Function. J. RENDELL, T. GAY*, J. GRASSO, R. BAKER, J. FINKELDEY, S. KNIPPLEBERG, and J.L. WINSTON (School of Dental Medicine, University of Connecticut Health Center, Farmington, CT; and Procter & Gamble, Cincinnati, OH, USA).

2438  Denture Adhesive and Denture Retention during Chewing and Biting. J. GRASSO*, J. RENDELL, T. GAY, R. BAKER, J. FINKELDEY, S. KNIPPLEBERG, and J.L. WINSTON (School of Dental Medicine, University of Connecticut Health Center, Farmington; and Procter & Gamble, Cincinnati, OH, USA).

2439  Gender Comparisons of Masticatory Performance in Dentates and Denture Wearers. N. GARRETT*, K. KAPUR, D. JOCHEN, T. CHEN, and R. MCFARLAND (UCLA, Los Angeles, CA; and West LA DVA Medical Center, Los Angeles, CA, USA).

2440  Oral Clearance and Stereognostic Ability in Dentates and Denture Wearers. K. KAPUR*, N. GARRETT, D. JOCHEN, T. CHEN, and R. MCFARLAND (UCLA, Los Angeles, CA; and West LA DVA Medical Center, Los Angeles, CA, USA).


2442  Overdenture Retention of Four Resilient Liners over an Implant Bar. S. KIAT-AMNUAY*, Z. KHAN, and L. GETTLEMAN (School of Dentistry, University of Louisville, KY, USA).

2443  Relationship between Complete Denture Quality and Patient Use of Dentures. M.R. FENLON*, M. SHERRIFF, and J.D. WALTER (United Medical & Dental School of Guy’s and St. Thomas’ Hospitals, London, UK).

2444  Alteration of Velopharyngeal Function in Association with Speech Appliance Placement. T. TACHIMURA*, H. HARA, K. NOHARA, and T. WADA (Division for Oral-Facial Disorders, Faculty of Dentistry, Osaka University, Suita, Japan).
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<td>2445</td>
<td>Effect of Thermocycling on Microleakage of Class V Restorations with Two Dentin Bonding Agents.</td>
<td>A. RASKIN*, W. D’HOORE, and J. VREVEN (Catholic University of Louvain, Brussels, Belgium).</td>
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<td>2446</td>
<td>Comparison of Various Methods in Apical Third Filling Evaluation.</td>
<td>D. ILIC* (Endodontics Department, Faculty of Stomatology, Belgrade, Yugoslavia).</td>
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<td>2448</td>
<td>Effect of Removal of Smear Layer on Apical Microleakage.</td>
<td>S. TIMPAWAT* and N. VONGSAVAN (Department of Operative Dentistry and Physiology &amp; Biochemistry, Mahidol University, Thailand).</td>
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<td>2449</td>
<td>Water Storage and Pulpal Pressure Influence on Microleakage of 3 Restorative Materials.</td>
<td>Á.E. BALOGH*, D. BOUTER, A. FAZEKAS, and M. DeGRANGE (Semmelweis University of Medicine, Budapest, Hungary; and GRB University of Paris V, France).</td>
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<td>2450</td>
<td>Comparison of Microleakage at Coronal and Gingival Enamel Margins.</td>
<td>K. TOLIDIS* (University of Thessaloniki, Greece).</td>
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<td>2451</td>
<td>Microleakage of Low Thermal Expansion Indirect Composite Resin Restorations.</td>
<td>A.I. KOBASHIGAWA* and E. SHELLARD (Kerr Corp., Orange, CA, USA).</td>
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<td>2454</td>
<td>Microleakage of Glass-ionomer, Compomer, and Resin Composite Restorations.</td>
<td>Y. MOMOI*, S. YAMAMOTO, K. KIDA, and A. KOHNO (Tsurumi University School of Dental Medicine, Yokohama, Japan).</td>
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<td>2455</td>
<td>Beveled and Butt Enamel Margin Sealing by Self-etching Primer.</td>
<td>A. SYREK* and R.C. RANDALL (3M Dental, Borken, Germany; and Laboratoires 3M Santé, France).</td>
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<td>2458</td>
<td>Simple Evaluation of Microleakage with a New Method.</td>
<td>P. SIMEON*, J. PEVALEK, M. SLAJ, I. SMOJVER, I. ANIĆ, J. SUTALO, and D. PLANCAK (Department of Restorative Dentistry, School of Dental Medicine, Zagreb, Croatia).</td>
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<td>2459</td>
<td>Bond Strength and Microleakage of New Enamel/Dentin Bonding System.</td>
<td>K. YAMAMOTO*, M. SHIRAISHI, K. NAŘIKAWA, and M. INOUE (Operative Dentistry, Osaka Dental University, Japan).</td>
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**Seq#: 226** | **Saturday, June 27, 11:15 am - 12:45 pm** |
| **Poster Session, Exhibit Hall** | |
Dental Materials - Ceramics, Glass Ionomers, Fluoride Release

2460 Assessment of Fluoride Release from Two Glass-ionomer Cements. A. RENDA*, E. SALVOLINI, G. FURORE, and F. SAMPALMIERI (Dental Materials Department and Biochemistry Institute, University of Ancona, Italy).

2461 Effect of Surface Polishing on Fracture Resistance of Vita Porcelain for Cerec 1 CAD/CAM Restorations. A.L. DAVID*, S.B. DAVID, and L. GETTLEMAN (School of Dentistry, University of Louisville, KY, USA).

2462 Relative Castability of Novel Dental Glass Ceramics. J.M. WALSH*, A. JOHNSON, R.G. HILL, and P.V. HATTON (Restorative Dentistry, University of Sheffield, UK; and Materials Science, University of Limerick, Ireland).

2463 Water Sensitivity of the Fluoride Release of Modified Glass Ionomers. L.A.M. MARKS* and R.M.H. VERBEECK (Departments of Dental Materials Science and Paediatric Dentistry, University of Ghent, Belgium).

2464 Effect of Encapsulation on the Fluoride Release from Conventional Glass Ionomers. R.J.G. DE MOOR* and R.M.H. VERBEECK (Departments of Operative Dentistry & Endodontology and Dental Materials Science, University of Ghent, Belgium).


2466 Fluoride Release in the Absence of Acid Dissolution from GIC Powders. M. CIUFFREDA*, G. ALBERGO, E. ACCARISI, and F. SAMPALMIERI (Dental Materials Department, University of Ancona, Italy).

Seq#: 227 Saturday, June 27, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall

Dental Materials - New Ceramics, Color, Strength

2467 The Strength of a Canasite Glass-Ceramic Using Dental Laboratory Procedures. M.Y. SHAREEF*, A. JOHNSON, and R. VAN NOORT (Department of Restorative Dentistry, University of Sheffield, UK).

2468 The Effects of Try-in Materials on Color Match of Porcelain Laminate Veneers. B. VONGSALAI, R. VAN NOORT, and L. DAVIS* (Department of Restorative Dentistry, School of Clinical Dentistry, University of Sheffield, UK).

2469 Simplified Fabrication Method of Porcelain Inlay Using Cold Isostatic Press. C. KAWAMOTO*, F. WATARI, M. UO, H. KOMATSU, and H. SANO (School of Dentistry, Hokkaido University, Sapporo, Japan).

2470 Effect of High-fusing-glass Particles on Strength of Glass-only Porcelain. M. KON*, W.J. O’BRIEN, and S.T. RASMUSSEN (School of Dentistry, University of Michigan, Ann Arbor, USA).

2471 Color Mixing in Dental Porcelain. Y. ICHIMURA*, Y. OTAKE, and T. KATAYAMA (Department of Operative Dentistry, Meikai University School of Dentistry, Saitama, Japan).

2472 Color Stability of Core Porcelains. J. CHAI, J. ESQUIVEL*, S. SANSANO, and D. SHONBERG (Northwestern University, Chicago, IL; and University of Florida, Gainesville, USA).

2473 Comparison of Fracture Resistance of All-ceramic Crowns with Heat-pressed Ceramic Copings with Cicero All-ceramic CAD/CAM Restorations. J.M. van der ZEL* and C.L. DAVIDSON (Department of Dental Materials Science, Academic Centre for Dentistry, Amsterdam; and Elephant Dental bv, Hoorn, The Netherlands).
Bond Strength of Low-fusing Ceramics to Cast Titanium. I. ASCHL*, P. RAMMELSBERG, P. POSPIECH, and W. GERNET (Department of Prosthodontics, University of Munich, Germany).

Factors Influencing Adhesion to Al2O3 and ZrO2 Ceramics. K. VOGEL* and U. SALZ (Ivoclar/Vivadent, Schaan, Liechtenstein).


Marginal Adaptability and Internal Fit of Fired Ceramic Inlays. M. HAYASHI*, M. MIURA, N. NISHIMURA, and S. EBISU (Osaka University Faculty of Dentistry, Japan).

Influence of Brushing on Knoop Hardness and Roughness of Esthetic Materials. A.S. CARVALHO*, L. CORRER SOBRINHO, and S. CONSANI (Department of Biomaterials, Dental School of Piracicaba, University of Campinas, São Paulo, Brazil).

Effect of Surface Roughness on the Flexure Strength of Low-fusion Porcelain. Y. NAKAMURA*, H. SATO, N. KAWASHIMA, H. NIIOKA, N. SHIRAKI, and S. AMMI (Tsurumi University, Yokohama; Musashi Institute of Technology; and Toin University of Yokohama, Japan).


Structural and Surface Analyses, Tensile Bond Strength of In-Ceram to Resin Cement. A. DELLA BONA, R. HEINECK*, and J.A.A. HOOD (University of Passo Fundo, RS, Brazil; and University of Otago, New Zealand).


The Influence of a Simplified Application Technique of Ceramic Inlays on Margin Quality. S. CLOTTEN*, U. BLUNCK, and J.-F. ROULET (Department of Operative Dentistry, Preventive Dentistry, and Endodontics, Charité, Humboldt University of Berlin, Germany).

Finishing and Polishing a Hybrid Composite and a Heat-pressed Glass-Ceramic Material. M. JUNG*, G. GANSS, and C. KÖCKÄPAN (Dental Clinic, Justus-Liebig-University, Giessen, Germany).
2488  Wettability of Four Adhesive Resins on Superficial and Deep Dentin. J.I. ROSALES*, M. TOLEDOANO, M.A. CABRERIZO-VILCHEZ, J.A. HOLGADO, C. PRATI, and R. OSORIO (University of Granada, Spain; and University of Bologna, Italy).


2490  Laser-induced Acoustic Emission in Aged Dentin Bonding Systems. C.-T. LIN*, S.-Y. LEE, Y.-W. KUO, H.-K. LU, and H.-C. CHENG (Graduate Institute of Oral Rehabilitation Sciences; and Dental Department of Taipei Medical College Hospital, Taiwan, ROC).

2491  Retentive Strength of New Resin Cements. V. LETHEN*, C.-P. ERNST, E. STENDER, and B. WILLERSHAUSEN (Department of Restorative Dentistry and Institute for Dental Materials and Technology, Johannes Gutenberg University, Mainz, Germany).

2492  Evidence on the Chemical Bond of 4-META with Metals. H. OHNO*, K. ENDO, and K. HARAGUCHI (School of Dentistry, Health Sciences University of Hokkaido, Ishikari-Tobetsu, Japan).

2493  Effects of Gold Alloy Treatments on Resin Cements’ Adhesion. D. RE*, A. CADAMURO, and F. DAMIANI (Department of Restorative Dentistry, University of Milan, Italy).

2494  The Effect of Time on Retention of Cast Posts Cemented. E. RUSSO*, E.M.A. RUSSO, R.C.R. CARVALHO, M.G. SANTOS, and R.C. BURGER (School of Dentistry, University City of São Paulo, Brazil).

2495  Raman Spectroscopic Study on Adsorption Structures of Precious Metal Primers. M. SUZUKI*, A. FUJISHIMA, T. MIYAZAKI, H. HISAMITSU, K. KOJIMA, and Y. KADOMA (Showa University, Tokyo; and Tokyo Medical & Dental University, Japan).


2498  Impact Shear Resistance of Veneering Composites Bonded to Precious Alloys. Y. SAIMI*, N. HONDA, M. TUCHIKAWA, and S. SUZUKI (Sun Medical Co., LTD, Shiga, Japan; University of Alabama, Birmingham, USA).

2499  The Effectiveness of Tin Plating and Acid Metal Primers on Intra-oral Repair of Metal-Ceramic Restorations. K. KIATSIRIROTE* and R. VAN NOORT (Department of Restorative Dentistry, School of Clinical Dentistry, University of Sheffield, UK).

Seq#: 230  Saturday, June 27, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall

Dental Materials - Composite Bond Strength—One-bottle Adhesives, Meta-analysis, Bonding to Dentin

2500  In vivo and in vitro Bond Strengths of Two Adhesive Systems to Cervical Abrasion. Y. NARA*, C. ISHIZAKA, Y. NAGAKURA, H. TANAKA, and I.L. DOGON (Nippon Dental University, Tokyo, Japan; and Forsyth Dental Center, Harvard School of Dental Medicine, Boston, MA, USA).

2501  Bond Strength of Dentin Adhesives after Compression of the Composite. H.G. SCHALLER*, P. HAHN, A.M. KIELBASSA, T. WALLERIUS, and E. HELLWIG (Department of Operative Dentistry and Periodontology, University of Freiburg, Germany).

2502  Shear Bond Strengths of “One-bottle” Adhesives to Moist Enamel. A.V. RITTER*, E.J. SWIFT, Jr., J. PERDIGAO, and H.O. HEYMANN (Department of Operative Dentistry, University of North Carolina at Chapel Hill, USA).

Meta-analytic Review of Factors Involved in Dentin Adherence. G. LELOUP*, W. D’HOORE, D. BOUTER, M. DeGRANGE, and J. VREVEN (Catholic University, Louvain, Brussels, Belgium; and University of Paris V, France).

Meta-analytic Weighting and Adjustment of DBS Values from Dental Literature. D. BOUTER*, G. LELOUP, W. D’HOORE, J. VREVEN, and M. DeGRANGE (University of Paris V, France; and Catholic University of Louvain, Brussels, Belgium).

Immediate Shear Bond Strengths of a New 3M Resin Cement. P.D. ARIO* (3M Dental Products Division, St. Paul, MN, USA).

Shear Bond Strength of Adhesive Luting Systems to Dental Tissues. M.H. ISSA* and D.C. WATTS (University of Manchester Dental School, UK).


Shear Bond Strength of 5th Generation Dentin Bonding Agents. D.E. NICOLAU and E. PISANESCHI* (Campinas Dental School-PUC-University Campinas, Brazil).

Bond Strength to Dentin of Six One-bottle Adhesive Systems. L. BOSCHIAN*, M. GAGLIANI, V. BONVINI, and M. BELLUZ (Department of Restorative Dentistry, Ist. Scienze Biomed. H. San Paolo, Milano, Italy).

Shear Strength of Metal and Ceramic Brackets with Different Adhesive Systems. M. CALABRESE*, L. GRAIFF, P.N. MASON, D. BRAIT, and G. AZZANO (Department of Restorative Dentistry, Dental School, University of Padova, Italy).

Effect of Bonding Layer Thickness on Tensile Bond Strength. K. MATSUNAE*, S. AKAHANE, and K. HIROTA (R&D Department, GC Corporation, Tokyo, Japan).


Fracture Toughness of Expandable Microsphere-filled Denture Base Resin. S. KONDO*, S. OHKAWA, T. UO, T. SUGAWARA, and F. WATARI (Hokkaido University School of Dentistry, Sapporo, Japan).

Dynamic Viscoelastic Properties and the Age Changes of Soft Liners. H. MURATA*, N. TAGUCHI, T. HAMADA, and J.F. McCABE (Department of Prosthetic Dentistry, Hiroshima University, Japan; and Dental Materials Science, University of Newcastle, UK).


Adherence of Candida albicans to Polymethylmethacrylate—E-glass Fiber Composite Used in Dentures. T. WALTIMO*, P.K. VALLITTU, and M. HAAPASALO (NIOM-Scandinavian Institute of}
Dental Materials, Haslum, Norway; Institute of Dentistry, University of Turku, Finland; and Dental Faculty, University of Oslo, Norway).

2519 Color and Hardness Changes of Soft Lining Materials. S. CANAY*, N. HERSEK, I. TULUNO-GLU, and G. UZUN (Department of Prosthodontics, Hacettepe University Faculty of Dentistry, Ankara, Turkey).

2520 Fatigue Resistance and Stiffness of Polymer/Glass-fiber Composite and Cobalt-Chromium Alloy. K.K. NARVA*, L.V.J. LASSILA, and P.K. VALLITTU (Institute of Dentistry & Biomaterials Project, University of Turku; and Institute of Oral and Dental Diseases, University of Kuopio, Finland).

2521 Adherence of Streptococcus mutans to Polymethylmethacrylate-E-glass Fiber Composite Used in Dentures. J. TANNER*, P.K. VALLITTU, and E. SÖDERLING (Institute of Dentistry & Biomaterials Project, University of Turku, Finland).


2523 A New Method to Reinforce Fixed Interim Partial Dentures. A. ARCIDIACONO*, P. BALDISSARA, and R. SCOTTI (Department of Prosthodontics, University of Bologna, Italy).

2524 Fracture Resistance of Kevlar-Epoxy-reinforced Fixed Interim Partial Dentures. P. BALDISSARA*, S. CATAPANO, and R. SCOTTI (Department of Prosthodontics, University of Bologna, Italy).

2525 Accuracy of Partial Dentures Processed with Different Techniques. S.T. KATZ*, M.M. EL-SHEIKH, and J.M. POWERS (University of Texas Dental Branch, Houston, USA; and Faculty of Dentistry, University of Tanta, Egypt).

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**Seq#: 232 Saturday, June 27, 11:15 am - 12:45 pm**
**Poster Session, Exhibit Hall**

**Dental Materials - Anti-microbial Effects, Abrasives, Bleaching, New Methods**

2526 Antimicrobics and Cytotoxicity of Thymol-modified Calcium Phosphate Cement. Y. INOKUCHI*, S. HIGASHI, H. INOUE, K. KUROKI, C. UCHIYAMA, and M. TERASHITA (Department of Operative Dentistry, Dental Pharmacology, and Oral Bacteriology, Kyushu Dental College, Kitakyushu, Japan).

2527 Antimicrobial Efficiency of Different Concentrations of Sodium Hypochlorite Solutions. G. VARVARA*, C. D’ARCANGELO, F. DI NARDO DI MAIO, and P. DE FAZIO (Dental School, University of Chieti, Italy).

2528 Contamination through Finger Contact in DNA Analysis Using Dental Materials. Y. HANAOKA*, M. INOUE, and K. MINAGUCHI (Department of Forensic Odontology, Tokyo Dental College, Chiba, Japan).


Effect of Polishing Procedures on Surface Characteristics of Tooth-colored Restoratives. C. DÖRTER*, Y. GÖMEÇ, B.G. EFES, and E. YILDIZ (Department of Conservative Dentistry, Faculty of Dentistry, University of Istanbul, Turkey).

Surface Characteristics of Tooth-colored Restoratives after Toothbrushing. Y. GÖMEÇ*, C. DÖRTER, E. YILDIZ, and B.G. EFES (Department of Conservative Dentistry, Faculty of Dentistry, University of Istanbul, Turkey).

Modification of Self-activating Bleaching Agent to Vital Teeth. H. MATSUBA*, R. KIM, T. TOKO, T. SUZUKI, and H. HISAMITSU (Department of Operative Dentistry, Showa University, Tokyo, Japan).


Modification of Self-activating Bleaching Agent to Vital Teeth. H. MATSUBA*, R. KIM, T. TOKO, T. SUZUKI, and H. HISAMITSU (Department of Operative Dentistry, Showa University, Tokyo, Japan).

Evaluation in vitro of a Reproducible Preparation of Standardized Class II Cavities. B. PELLISSIER*, C. GRILL, and M. TEJEDO (UFR d’Odontologie de Montpellier I; Laboratoire Microscopie Electronique Montpellier II; Laboratoire de Lames Minces-Géologie Montpellier II, France).

Wavelets as a Tool to Evaluate Tooth Surfaces. I. BANDLOW, Ch. SCHWAHN*, and T. KOCHER (Department of Mathematics and Informatics, Computing Centre, and Department of Dentistry, University of Greifswald, Germany).

A Finite Element Stress Analysis of Different Complete Denture Materials. S. MONTAL* and D. VEYRET (UFR Odontologie, Montpellier, France).

The Use of Atomic Force Microscopy to Abrade Dental Materials. R.W. VOWLES* and K.D. JANET (Department of Oral and Dental Science, University of Bristol, UK).

Development of a Bench to Test Machining Instruments under Reproducible Conditions. R. LITZ* and T. KOCHER (Periodontology, University of Greifswald, Germany).

Effects of Intracanal Medicaments on Mechanical Properties of Bovine Dentin. F. NAKANO*, K. TONAMI, H. TAKAHASHI, and F. NISHIMURA (Department of Dental Technology 1, Faculty of Dentistry, Tokyo Medical and Dental University, Japan).

Bacterial Penetration in Coronally Unsealed Teeth after Endodontic Treatment. A. CERUTTI, A. AZZINI*, and A. PUTIGNANO (School of Dentistry, University of Brescia, and University of Ancona, Italy).


Mutagenicity of the Root Canal Sealer AHPlus in the Ames Test. G. SCHMALZ, M. FEDERLIN*, K. RACKEBRANDT, and H. SCHWEIKEL (Department of Operative Dentistry and Periodontology, University of Regensburg, Germany).

A Long-term Study on Self-setting Apatite as Retrograde Root Canal Filling Material. K. KAWAGUCHI*, J. SATO, K. NAKAOKA, and K. SETO (First Department of Oral & Maxillofacial Surgery, School of Dental Medicine, Tsurumi University, Yokohama, Japan).

Tissue Responses to Four Root Canal Sealers. A. WATTS*, E.C. MUNKSGAARD, J.O. ANDREASEN, and R.C. PATTERSON (Clinical Dental Sciences, University of Liverpool, UK; and Copenhagen University, Denmark).

2548  The Effects of Engine-driven NiTi Instrumentation on Root Canal Configuration. M.F. BERTRAND*, E. MEDIONI, X. COLLET, and C. AUGROS (Laboratory of Dental Biomaterials and Experimental Odontology, University of Nice-Sophia Antipolis, France).


2551  Condensation Technique and Porosity in Conservative Class II Amalgam Restorations. F. WASTI*, T.V. MACFARLANE, and N.H.F. WILSON (University Dental Hospital of Manchester, UK).

2552  Marginal Accuracy of a Three-unit Bridge after Being Joined by Laser Welding. C.H. HO* and T.I. CHAI (School of Dentistry, National Taiwan University, Taipei).

2553  Metals in Saliva from Subjects with Symptoms Associated with Amalgam. G.B. LYGRE*, P.J. HOL, R. EIDE, R. ISRENN, and N.R. GJERDET (Dental Biomaterials Adverse Reaction Unit, Department of Odontology—Dental Biomaterials, and Department of Biochemistry and Molecular Biology, University of Bergen, Norway).

2554  Urinary Mercury Concentrations after Replacement of Amalgam Fillings. V. STACHNISS*, A. SCHULTE, and U. UFFELMANN (Department of Operative Dentistry, University of Marburg; and University of Heidelberg, Germany).

2555  Reduced Mercury Vapor Emission from Amalgam Condensed against Various Metals. W.J. O'BRIEN, C.L. GROH*, and C.R. BURNS (University of Michigan School of Dentistry, Ann Arbor, USA).

2556  Expansion of Contaminated Dental Amalgams Assessed by Photoelastic Resin. J.W. OSBORNE* (University of Colorado Health Science Center, Denver, USA).

2557  Amalgam Matrix Composite: Compression Strength, Creep, and Corrosion. R.Y. BALLESTER* and S. KENSHIMA (FOUSP, University of São Paulo, Brazil).


2559  Surface Treatment of Mercury-free Alloys. S.B. GEIGER*, D. GURBATOV, M. RATZKER, M.P. DARIEL, F.C. EICHMILLER, and R. LIBERMAN (School of Dental Medicine, University of Tel Aviv; Ben Gurion University, Beer Sheva, Israel; and ADAHF-PRC, NIST, Gaithersburg, MD, USA).


Corrosion Behavior of Titanium Alloys in Fluoride-containing Solutions. M. NAKAGAWA*, S. MATSUYA, T. SHIRAISHI, and M. OHTA (Department of Dental Materials Engineering, Faculty of Dentistry, Kyushu University, Fukuoka, Japan).

Corrosion Resistance and Galvanic Corrosion of Various Dental Alloys and New Ti Alloys without A1 and V. H. NAKADA*, Y. OKAZAKA, K. KOBAYASHI, and T. TATEISHI (School of Dentistry at Matsudo, Nihon University, Chiba; Mechanical Engineering Laboratory; and National Institute for Advanced Interdisciplinary Research, Tsukuba, Ibaraki, Japan).

Effect of Recasting on the Oxidation Layer of Two Pd-Ag Ceramic Alloys. J.M. HONG*, J.C. WANG, Y. KOSHIHARA, F. SAITO, and D.A. STARRETT (School of Dentistry, Kaohsiung Medical College, Taiwan, ROC; Tokyo Dental College, Chiba, Japan; and Biology Department, Southeast Missouri State University, USA).

Effect of Heating Times on Joint Strengths of Titanium. S. OHKAWA*, K. ISHII, S. KONDO, M. UO, T. SUGAWARA, and F. WATARI (School of Dentistry, Faculty of Engineering, Hokkaido University, Sapporo, Japan).

Effect of Cu and Zn Fracture Characteristics of Dental Ag-Pd-Cu-Au Type Alloy. H. FUKUI*, S. TAKAHASHI, M. NIINOMI, J. HASEGAWA, and T. KOBAYASHI (Department of Dental Materials, Aichi-Gakuin University, Nagoya; and Toyohashi University of Technology, Japan).

Experimental Study of Double-coated Sprayed Hydroxyapatite. M. KINOSHITA*, H. OGUCHI, and K. SETO (Tsurumi University, Yokohama, Japan).


Ag-Pd-Au-Cu Alloy for Ultra-low Fusing Ceramic—Combined Addition of Sn, In, and Ga. S. GOTO*, Y. MIYAGAWA, and H. OGURA (Department of Dental Materials Science, School of Dentistry at Niigata, The Nippon Dental University, Japan).

Longitudinal Clinical 10-year Results of Posterior GIC/Composite Restorations. R. MONTAG*, I. HOYER, and P. GAENGLER (University of Jena and University of Witten/Herdecke, Germany).

Clinical Study of Molar Composite and “Open Sandwich” Restorations. V. VILKINIS*, P. HÖRSTED-BINDSLEV, and V. BAELUM (Kaunas Medical Academy, Lithuania; and Royal Dental College, University of Aarhus, Denmark).

A 42-month Clinical Evaluation of Dyract Glass Ionomer. M. CADENARO*, R. DI LENARDA, and A. CERNAZ (Institute of Odontology and Stomatology, University of Trieste, Italy).

Resin-ionomer Restoration of Molar Furcations in Humans. A. ABOUSHALA*, G. KUGEL, R. PERRY, and C. LEONE (Tufts University School of Dental Medicine, Boston, MA, USA).

Influence of Glass-ionomer Cement Fillings on Urinary Fluoride Content. L.M. CHEVITARESE*, D.S. VAITSMAN, P.B. DUTRA, and O. CHEVITARESE (School of Dentistry and Chemistry Institute, UFRJ, Rio de Janeiro, Brazil).

One-year Clinical Evaluation of Two Composite Resins. F.C. SÁ*, E.B. FRANCO, J.B. SOUZA, and M.F.L. NAVARRO (Bauru Dental School, University of São Paulo, Brazil).
Clinical Performance of a New Polyglass Material for Posterior Teeth: Six-month Results. B. WILLERSHAUSEN*, C.-P. ERNST, and M. MARTIN (Department of Restorative Dentistry and Periodontology, Johannes Gutenberg University, Mainz, Germany).


Clinical Evaluation of Vitremer in Cervical Abrasions and Root Caries. E.S. DUKE, J.W. ROBBINS, J.B. SUMMITT, R.S. SCHWARTZ, and D.F. TREVINO* (University of Texas Health Science Center, San Antonio, USA).

In vivo and in vitro Bond Strength of Compomers to Cervical Abrasion. T. KIMISHIMA*, H. ENOMOTO, N. SHIBAOKA, Y. NARA, H. TANAKA, and I.L. DOGON (Nippon Dental University, Tokyo, Japan; and Forsy Dental Center and Harvard School of Dental Medicine, Boston, MA, USA).


One-year Clinical Evaluation of Class V Restorations Using the Gluma CPS Bonding System. B. SIEGEL*, U. BLUNCK, and J.-F. ROULET (Department of Operative Dentistry, Endodontics, and Preventive Dentistry, Charité, Humboldt University of Berlin, Germany).

Clinical Evaluation of the Prime & Bond 2.1 Adhesive System. M.A. LATTA*, W.T. CAVEL, R.J. BLANKENAU, P.T. TRIOLO, and W.W. BARKMEIER (Creighton University School of Dentistry, Omaha, NE, USA).


Ceramic Veneers—A Clinical Study up to Six Years. A. AICHHORN*, P. FOSSDAL, J. MÜLLER, C. BENZ, A. MEHL, M. FOLWACZNY, and R. HICKEL (Department of Operative Dentistry, Ludwig-Maximilians-Universität, Munich; Private Practice, Kempten, Germany).


Clinical Evaluation of SB1 Root Desensitization with/without Acid Etching. M. FERRARI*, M.C. CAGIDIACO, G. KUGEL, and C.L. DAVIDSON (University of Siena, Italy; Tufts University, Boston, MA, USA; and ACTA, University of Amsterdam, The Netherlands).


Clinical Evaluation of Two Desensitizing Agents for Silver Amalgam Restorations. R.S. SCHWARTZ* and L.J. CONN (University of Texas Health Science Center at San Antonio, USA).

Clinical Evaluation of Bonded Amalgam Restorations over Two Years. J.C. SETCOS*, M. STANINEC, and N.H.F. WILSON (University of Manchester, UK; and University of California, San Francisco, USA).

Clinical Evaluation of a Dual-cure Adhesive with Amalgam Restorations. D.L. GEORGE* and D.M. BARNES (University of Maryland Dental School, Baltimore, USA).

2592  Clinical Investigation of Gold Slot Inlays. F. SCHÄFERS* and J. SCHÄFERS (Private Dental Office, Hattorf, Germany).

2593  Survival and Qualitative Analysis of Direct Gold Restorations after Seven Years. W. KAMANN*, I. SCHMITZ, P. GAENGLER, and K.-M. MUELLER (School of Dental Medicine, University of Witten/Herdecke; and Department of Pathology, University of Bochum, Germany).

2594  Casa Pia Study of the Health Effects of Dental Amalgam. T. DeROUEN*, M. MARTIN, J. WOODS, B. TOWNES, B.G. LEROUX, H. SARNAT, J. LEITÃO, C. CALDAS, and N. BRAVEMAN (University of Washington, Seattle, USA; University of Lisbon, Portugal; and NIDR/NIH, Bethesda, MD, USA).

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Poster Session, Exhibit Hall
Dental Materials - Clinical Trials—Prosthodontics, Cements, Bleaching

2595  Longitudinal Survival Rates of Resin-bonded Fixed Restorations. A. YAMASHITA*, K. TSUJI, T. KUBOKI, and H. YATANI (Department of Fixed Prosthodontics, Okayama University Dental School, Japan).

2596  Comparison of Resin-ionomer and Composite Resin Cement for Bonded Prostheses. R.F. BARNES* and D. SARRETT (Virginia Commonwealth University School of Dentistry, Richmond, USA).


2598  Clinical Evaluation of Dyract AP and Fuji IX to Build Up Abutments for Porcelain Crowns. M. FERRARI, F. MANNOCCI, M. İNNOCENTI*, G. KUGEL, and C.L. DAVIDSON (University of Siena, Italy; Tufts University, Boston, MA, USA; and ACTA, University of Amsterdam, The Netherlands).


2600  Comparison of Provisional Posterior Coronal Restorations in an HIV-dedicated Dental Clinic. M. NICHOLS*, G. GOVIN, C. FLAITZ, K. ALLEN, and J. HICKS (Bering Dental Clinic, University of Texas-Houston Health Science Center, Baylor College of Medicine, USA).


2603  Clinical Investigation of a Composor Luting Cement in Comparison with a Zinc-phosphate Cement. P. POSPIECH, S. KISTLER*, P. RAMMELSBERG, and W. GERNET (Department of Prosthodontics, Ludwig-Maximilians-University of Munich, Germany).

2604  Combined In-office and At-home Bleaching Systems: An Evaluation. S. KASTALI*, G. KUGEL, R. PERRY, and A. PAPATHANASIOU (Tufts University School of Dental Medicine, Boston, MA, USA).

2605  Evaluation of a Non-hydrogen-peroxide At-home Bleaching System. R. PERRY*, G. KUGEL, and S. KASTALI (Tufts University School of Dental Medicine, Boston, MA, USA).


Reliability of the Density Measurement Function in the DIGORA Digital Imaging System. J.C. WANG*, J.M. HONG, M.L. LEE, and D.A. STARRETT (School of Dentistry, Kaohsiung Medical College, Taiwan, ROC; and Biology Department, Southeast Missouri State University, USA).


Safety of Patients with Metallic Devices during MRI. B.P. CHAUVEL* and G. CATHELINEAU (Laboratoire de Biomatériaux en Site Osseux, Rennes, France).

Anatomical Factors Affecting the TMJ Coronal MRI. Y.-J. CHEN*, L.M. GALLO, and S. PALLA (Center for Dental and Oral Medicine, Maxillofacial Surgery, University of Zürich, Switzerland).

Intra- and Interobserver Variability in Reporting TMJ MR Imaging. R.F. RIBEIRO*, R. TALLENTS, R. KATZBERG, W.C. MOSS, O. TAVANO, K.C.A. PEREIRA, A.C.G. LIMA, and N.B.U. SPINELLI (School of Dentistry, Universidade Federal de Goiás, Brazil; and Eastman Dental Center, University of Rochester, NY, USA).

Measurement of Velocity of Condyle Movements Using a New Method. B. SCHWAHN*, B. KORDASS, and W. BARTELS (Department of Prosthodontics and Biomaterials, Dental School, University of Greifswald, Germany).

Statistical Study of the Validity of Fukuda-Unterberger’s Postural Test. A. HOORNAERT, M. PERRAUD*, J.Y. VIENNE, F. UNGER, and J.L. MAINETTI (Dental Faculty of Nantes, France).

Phosphoryl Transfer Is Enhanced in Working Rat Skeletal Muscle after Training. X. RAVALEC* and E. Le RUMEUR (Laboratoire de RMN en Biologie et Médecine, Rennes, France).

Geriatric Oral Research - Salivary Function and Dental Caries
2619  Long-term Parotid Gland Compensatory Function in Post-radiotherapy Patients. J.A. SHIP*, A. EISBRUCH, B. HENSON, E. D’HONDT, and A. MADHAVA (University of Michigan School of Dentistry, Department of Radiation Oncology, Ann Arbor, USA).

2620  Salivary Albumin in Hospitalized and Non-hospitalized Elderly. J.H. MEURMAN*, H. PAJUKOSKI, and R. SULKAVA (Institute of Dentistry, University of Helsinki; and Department of Community Health and General Practice, University of Kuopio, Finland).

2621  The Prevalence of Dental Caries in a Medication-induced Xerostomic Population. D.A. RUSSELL* and A. PAPAS (Tufts University School of Dental Medicine, Boston, MA, USA).

2622  Caries Prevalence in Two Xerostomic Female Populations. R. SMOLYAR*, A. PAPAS, D.A. RUSSELL, D. HARRINGTON, and M. SINGH (Tufts University, School of Dental Medicine, Boston, MA, USA).

2623  Root Caries and Salivary Factors in the Elderly—A Five-year Longitudinal Study. T.O. NÄRHI*, N. KURKI, and A. AINAMO (University of Nijmegen, The Netherlands; and University of Helsinki, Finland).

2624  Prevalence and Risk Factors of Root Caries in Japanese Older Adults. N. SUGIHARA*, Y. MAKI, and Y. TAKAESU (Department of Hygiene and Community Dentistry, Tokyo Dental College, Japan).


2627  Treatment of Burning Mouth Syndrome with Benzhydramine HCl: A Case-Control Study. A. SARDELLA*, A. CARRERA, F. DEMAROSI, C. BEZ, and A. CARRASSI (Department of Oral Pathology and Medicine, School of Dentistry, University of Milan, Italy).


2629  Mandibular Condyle Morphology in Relation to Temporomandibular Disorder in Elderly. K. OKIMOTO*, H. ITO, M. SAITO, O. TABATA, and Y. TERADA (Faculty of Dentistry, Kyushu University, Fukuoka, Japan).

2630  Age-related Secondary Dentin Deposition in Human Premolars. D. RANLY*, J. TANG, and P.V. NUMMIKOSKI (University of Texas Health Science Center at San Antonio, USA).

Seq#: 240  Saturday, June 27, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall

Behavioral Sciences/Health Services Research - Early Childhood Caries

2631  Taste Preference for Sweetness in Pre-school Children in Bauru, Brazil. N. TOMITA, P. NADANOVSKY, A.L.F. VIEIRA*, and E.S. LOPES (School of Dentistry of Bauru, USP; and Institute of Social Medicine, UFRJ, Brazil).

2632  Affordable Toothpaste as a Component in Primary Oral Health Care. A. ADYATMAKA, U. SUTOPO, P. CARLSSON, G. PAKHOMOV, and D. BRATTHALL* (Lund University, Malmö, Sweden; and WHO, MOH, Indonesia).

2633  Dental Survey in Preschool Children in China. T. MORIKAWA*, M. NISHINO, K. ARITA, Y. DU, L. ZHAO, and H. CAI (University of Tokushima School of Dentistry, Japan; and Nantong Medical College, China).
2634 WITHDRAWN

2635 Assessment of a Dental Education Program for Mothers with Babies. F.A. HAMILTON* (University of Manchester, UK).

2636 Reported vs. Actual Snacking Behaviors: A Note on Methodology. G. BUNTING and R. FREEMAN* (The Dental Public Health Research Group, School of Clinical Dentistry, Queen’s University of Belfast, Northern Ireland).

2637 An Ethnographic Study of Dental Values and Normative Parenting Practices. P. WEINSTEIN*, C.A. RIEDY, L. MANIBUSAN, and P. MILGROM (Dental Public Health Sciences, University of Washington, Seattle, USA; and Department of Public Health, Saipan, CNMI).


Seq#: 241 Saturday, June 27, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall

Behavioral Sciences/Health Services Research - Dental Practices


2642 Local Anesthesia Use by Colorado Dental Hygienists—A Pilot Study. G.N. CROSS-POLINE*, D.B. ASTROTH, and D.J. STACH (University of Colorado, Denver, USA).


2644 How Parents Support their Children during Orthodontic Treatment. P. PRATELLI* and S. GELBIER (King’s College, London, UK).

2645 Psychological Predictors of Pain Following Fixed Appliance Orthodontic Treatment. P.M. McGOLDRICK*, T.A. SPENCER, M. POWER, P.M. MOSSEY, and D.R. STIRRUPS (Unit of Dental and Oral Health, University of Dundee Dental School; and Psychology Department, University of Edinburgh, Scotland, UK).

2646 Infection Control in General Dental Practice in Ireland. F.J.T. BURKE*, H. KEARNS, and S.-W. CHEUNG (University of Glasgow; Eastern Health Board, Dublin; and University of Manchester, UK).

2647 Rotating Instruments’ Deafening Noise and Students’ Ears Protection in Dentistry. E.F. LOUBELO*, Ph. NDOBO-EPOY, E.C. MANSILLA-ABOUATTIER, N.D.Y. GNAGNE-AGNERO, N.M. ASSOUMOU, and J. ADOU AKPE (University of Bordeaux, France; and FACOS, Abidjan, Ivory Coast).

Seq#: 242 Saturday, June 27, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall

Behavioral Sciences/Health Services Research - Health Services Research
A Two-center Comparative Epidemiological Investigation of Adult Orthodontic Referrals. M. DEWAR*, J. ARNOT, E. McDOWELL, D.T. MILLETT, and W. SAMPSON (University of Glasgow Dental School, UK; and University of Adelaide Dental School, Australia).

Oral Health Systems in Europe. R. ANDERSON, E.T. TREASURE*, and N.H. WHITEHOUSE (Dental Public Health Unit, University of Wales College of Medicine, Cardiff, UK).

Estimated Dentist Productivity Using Mobile Equipment in a Developing Country. J.D. ASTROTH*, R. BERG, and D. BERKEY (University of Colorado Health Sciences Center, Denver, USA).

Dentists’ Judgment in the Treatment of Partially Dentate Patients. M. ROHLIN*, B. BREHMER, and K. RANDOW (Faculty of Odontology, Lund University, Malmö; and Department of Psychology, University of Uppsala, Sweden).

Oral Cleft Research: Response Agreement for Quantitative Data. L.C.M. LOFFREDO*, J.M.P. SOUZA, J.A.S. FREITAS, and A.L. RODRIGUES, Jr. (School of Dentistry-UNESP; School of Public Health-USP; and HPRLLP-USP, Brazil).

Addressing Reviewer Bias in Systematic Reviews of Dental Diagnostic Systems. G.V.A. TOPPING* (Dental Health Services Research Unit, University of Dundee, Scotland, UK).

Tooth Alignment and Alveolar Bone Level Changes in Untreated BESs. D.A. SHUGARS*, J.D. BADER, B.A. WHITE, S.W. PHILLIPS, C.F. BRANTLEY, and M.S. SCURRIA (University of North Carolina, Chapel Hill; and Kaiser Permanente Center for Health Research, USA).

Preventive Resin Restoration (PRR) Usage in General Dental Practice in the United Kingdom. D. HASSALL* and A.C. MELLOR (Leeds Dental Institute, England; and University Dental Hospital of Manchester, England).

Variation in Periodontal Referral in Two Regions in the United Kingdom. G.J. LINDEN* and F.J.T. BURKE (School of Clinical Dentistry, Queen’s University of Belfast, Northern Ireland; and University of Glasgow Dental School, Scotland, UK).


Adult Orthodontic Treatment—A Two-center Comparison. E. McDOWELL*, J. ARNOT, M. DEWAR, D.T. MILLETT, and W. SAMPSON (University of Glasgow Dental School, UK; and University of Adelaide Dental School, Australia).


Ultrasonic Emission and Risk of Harmful Effects of Dental Turbines. S. BAREK*, O. ADAM, and J.F. MOTSCH (Laboratoire de Physiologie de la Manduction, Université Paris VII, France).
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<td>2663</td>
<td>Forecasting Dental Treatment Workload of Active Duty US Military Personnel.</td>
<td>M.C. CHISICK* (US Army Center for Health Promotion and Preventive Medicine, Aberdeen Proving Ground, MD, USA).</td>
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<td>2665</td>
<td>A Comparison of the Comprehensiveness of Patient Care in the UK and USA.</td>
<td>A.C. MELLOR* and P. MILGROM (Turner Dental School, Manchester, UK; and School of Dentistry, University of Washington, Seattle, USA).</td>
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<td>2666</td>
<td>Longitudinal Changes in Periodontal Services for the Alberta Elderly.</td>
<td>P.D. SCHULLER and G.W. THOMPSON* (University of Alberta, Edmonton, Canada).</td>
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<td>2667</td>
<td>Clinical Evaluation of the Atraumatic Restorative Treatment (ART) in Primary Teeth.</td>
<td>R.S.S. TERADA*, E.M. SOUZA, C.C. RODRIGUES, B.G.M. SEABRA, and M.F.L. NAVARRO (Maringá Dental School, UEM; Federal University of Parana; and Bauru Dental School, University of São Paulo, Brazil).</td>
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<td>2668</td>
<td>Gender Differences in Illness Behavior in Two Groups of Special Dental Care Patients.</td>
<td>M.J. v.d. MEULEN*, M. NAEIJE, and T.Y. TJOOK (ACTA, Department of Oral Function, Center for Special Dental Care, Amsterdam, The Netherlands).</td>
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<td>2669</td>
<td>Are Dentists in Great Britain Prepared to Manage Medical Emergencies?</td>
<td>G.J. ATHERTON*, J.A. McCaul, and S.A. WILLIAMS (University Dental Hospital of Manchester; Department of Surgery, Western Infirmary, Glasgow; and Leeds Dental Institute, UK).</td>
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<tr>
<td>2674</td>
<td>The Effect of Community Dental Service on Tooth Loss.</td>
<td>Y. IIJIMA* and T. YASUI (Meikai University School of Dentistry, Saitama, Japan).</td>
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**Implantology - In vitro Cellular and Coating Studies**

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<tr>
<th>Seq#</th>
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<td>2675</td>
<td>In vitro Response of Human Gingival Epithelial Cells to Biomaterials.</td>
<td>H. OGUCHI*, K. NAKAYAMA, Y. KARUBE, M. KATO, I. FURUTA, M. MORITO, and G. EGUCHI (Department of Geriatric Dentistry, Tsurumi University; Department of Oral and Maxillofacial Surgery, Toyama Medical Pharm. University; and Kumamoto University, Yokohama, Japan).</td>
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<tr>
<td>2676</td>
<td>Biocompatibility Testing Using Endosteal Osteoblasts from Human Maxilla and Mandible.</td>
<td>P. DOGLIOLO and G. SCORTECCl* (Centre de Formation aux Biotechnologies, Cannes; and University Nice-Sophia-Antipolis, UFR Odontologie, Nice Cedex, France).</td>
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Cell Type and Maturation State Determine Cell Response to Surface Roughness and Composition. J. LINCKS*, B.D. BOYAN, D.L. COCHRAN, Y. LIU, C. BLANCHARD, D.D. DEAN, and Z. SCHWARTZ (University of Texas Health Science Center, WHMC, and SWRI, San Antonio, USA; and Hebrew University, Jerusalem, Israel).


IR Spectroscopy of HA-coated Implants Following Thermal-Chemical Treatment. P.L. GLICK* (Aurora, CO, USA).

Effect of cw-CO2 Laser Irradiation on the Viability of Two Pathogenic Bacteria Covering Titanium Implants. P. PURUCKER*, G.E. ROMANOS, J.-P. BERNIMOULIN, and G.-H. NENTWIG (Department of Periodontology, Charité, Humboldt University of Berlin; and Department of Oral Surgery, Dental School, Frankfurt, Germany).


Realization of an Electrochemical in vitro Model for Implanted TA6V. Y.L. TURPIN*, R. TARDIVEL, G. CATHLINEAU, and A. TALLEC (Laboratoire de Biomatiériaux en Site Osseux; and Laboratoire d’électrochimie UMR CNRS, Université de Rennes I, France).

Biological Responses of the Hydroxylapatite Mixture Paste. N. TEODOROVIC* and A. MINIC (Department of Conservative Dentistry, Dent/Endodont; Department of Pathology, Faculty of Stomatology, Belgrade University, Yugoslavia).


Chondroitin Sulfate and Early Adhesion Events of Rat Calvarial Cells. C.M. STANFORD*, M. SOLURSH, and J.C. KELLER (Dows Institute for Dental Research; and Department of Biological Sciences, University of Iowa, Iowa City, USA).

Effects of HA-coating Crystallinity on Biosolubility, Cell Attachment Efficiency, and Proliferation in vitro. B. MAREK*, W.R. WAGNER, and L. CHOU (Loma Linda University, CA; Sulzer Calcitek, CA; and Boston University, MA, USA).

Titanium and Metalloproteinases Production by Human Osteoblasts. A. ZARRINPOUR*, Z. OUM HAMED, Y. JOSSET, P. JEANNESSON, and D. LAURENT-MAQUIN (IDB-EA; and IFR, Reims, France).

Human Osteoblast Cell Cultures' Response to Zirconia and Alumina. Y. JOSSET*, Z. OUM HAMED, A. ZARRINPOUR, S. BOUTHORS, and D. LAURENT-MAQUIN (IDB; IFR; and UFR Odontologie, Reims, France).

Experimental Study on an Adsorption of Salivary Protein to Titanium. A. UEDA*, J. OKAZAKI, A. KAMADA, Y. HIGUCHI, M. MURAOKA, T. SAKAKI, and Y. GONDA (First Department of Prosthodontics and Department of Biochemistry, Osaka Dental University, Japan).
2691 Real-time Monitoring of Cell Behavior on Metal Films with QCM. K. ENDO*, Y. ABIKO, H. OHNO, and T. KAKU (School of Dentistry, Health Sciences University of Hokkaido, Ishikari-Tobetsu, Japan).


2693 Crystallinity Measurements in Plasma-sprayed Hydroxyapatite Deposits. E. GIRARDIN, P. MILLET*, and A. LODINI (Université de Reims Champagne, Ardenne, France).

2694 An Auger Spectroscopic Analysis of Dental Implant Surface Contaminants. K. STATHIS*, B.R. LANG, M.E. RAZZOOG, and W.C. WAGNER (School of Dentistry, University of Michigan, Ann Arbor, USA).

2695 Surface Topography and Chemical Composition of Five Dental Implant Abutments. T. SAWASE*, A. WENNERBERG, C. HALLGREN, T. ALBREKTSSON, and K. BABA (Department of Biomaterials/Handicap Research, Göteborg University, Sweden).

2696 Immobilization of Bisphosphonate to Surface-modified Titanium. M. YOSHINARI*, Y. ODA, H. UEKI, and S. YOKOSE (Tokyo Dental College, Chiba; Hakusui Trading Co., Ltd., Osaka; and Meikai University School of Dentistry, Sakado, Japan).

2697 In vitro Model to Investigate the Re-use of Transgingival Abutments. J.C. KELLER*, P.J. VEZEAU, J.P. WIGHTMAN, and R. ZAHARIAS (Dows Institute for Dental Research, Department of Oral Surgery, University of Iowa, Iowa City; and Virginia Polytechnic & State Institute, Blacksburg, USA).

2698 Properties of Modified Titanium Surfaces. H.E. PLACKO*, W. PERRY, S. MISHRA, J.J. WEIMER, and L.C. LUCAS (Department of Biomedical Engineering, University of Alabama at Birmingham; and Department of Materials Science, University of Alabama at Huntsville, USA).

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Poster Session, Exhibit Hall

Implantology - General Animal Studies

2699 “Dental” Implants in the Rabbit Tibia. L.A. WOLFE* and A. BOYDE (Anatomy Department, University College London; Department of Prosthetic Dentistry, St. Bartholomews & The Royal London Medical and Dental School, London, UK).

2700 Comparison of Coral and Calcite after Implantation in Bone. J.C. FRICAIN*, M. ROUDIER, B. BASSE-CATHALINAT, and B. DUPUY (INSERM U. 443, Université Victor Segalen, Bordeaux, France).

2701 Immunolocalization of Non-collagenous Proteins around Titanium Implant in Rat. C. MEDARD*, C. RIBAUX, A. JOFFRE, and C. CHAVRIER (Laboratoire de Pathologie des Tissus Parodontaux, Université Claude Bernard, Lyon, France).

2702 Healing Process of Bone Defects in the Osteoporotic Mandible. Y. KURACHI*, H. MORI, M. NAGANO, Y. CHIN, K. MIYAOKA, and M. NAGUMO (Second Department of Oral and Maxillofacial Surgery, School of Dentistry, Showa University, Tokyo, Japan).

2703 Bone Reactions to Immediately Loaded Single Dental Implants in Monkeys. A. SCARANO*, M. CORIGLIANO, M. PIATTELLI, L. DI ALBERTI, and A. PIATTELLI (Dental School, University of Chieti, Italy).

2704 Delayed Healing after the Implantation of Polytetrafluoroethylene Discs in the Sheep Mandible. W.J. DUNCAN*, A.R.C. PACK, and T.B. KARDOS (Faculty of Dentistry, University of Otago, Dunedin, New Zealand).
**Poster Session, Exhibit Hall**

**Cariology - S. mutans; Antimicrobial Agents**

2708 Differences in Adherence of Strains of Strept. mutans to Hydroxyapatite. W.P. HOLBROOK* and M.O. MAGNÚSDÓTTIR (Faculty of Odontoology, University of Iceland, Reykjavik).

2709 Effects of Shellac on Adherence of Streptococcus mutans to Enamel. Y. SHOJI*, H. ISHIKAWA, R. TANAKA, N. MAEDA, and T. ARAI (Tsurumi University School of Dental Medicine, Yokohama, Japan).


2711 Adhesive Properties of Streptococcus mutans Strains Isolated from Xylitol Consumers. E. SÖDERLING* (Institute of Dentistry, University of Turku, Finland).

2712 A Modified Mitis Salivarius Medium for a Caries Diagnostic Test. S. KNEIST*, L. LAURISCH, R. HEINRICH-WELTZIEN, and L. STÖSSER (Department of Preventive Dentistry, Friedrich Schiller University of Jena; Dental Practice, Korschenbroich, Germany).


2714 Bactericidal Effect of Microwave Irradiation against Oral Bacterium. K. KAWAI*, N. HOSHI, Y. NIKAWA, and S. EBISU (Osaka University Faculty of Dentistry; and School of Electrical Engineering, National Defense Academy, Yokosuka, Japan).

2715 Effects of Sucrose Frequency on Recovery of Streptococcus Mutans after Chlorhexidine Varnish Treatment. J.S. VAN DER HOEVEN* (Oral Microbiology, Universität Wittenh, Herdecke, Germany).

2716 Effect of Propolis on Caries Development in Desalivated Rats. H. KOO*, P.L. ROSALEN, Y.K. PARK, and J.A. CURY (Faculty of Dentistry of Piracicaba, UNICAMP, Brazil).

2717 Standardization of Experimentally Induced Bacterial Caries Lesions in Human Enamel. W.H. ARNOLD*, D. STEINBERG, K. SAVOV, P. GAENGLER, and I. GEDALIA (University of Witten/Herdecke, Germany; and Hebrew University, Jerusalem, Israel).

**Cariology - Sealants, Caries Removal, Cariostatic Restorative Materials, Prevention**

**Poster Session, Exhibit Hall**

**Cariology - Sealants, Caries Removal, Cariostatic Restorative Materials, Prevention**

2718 Resin-composite Bonding to Tooth Enamel. L. HALLING*, S. HALLING, and S. GUSTAFSSON (Stockholm Dental Institute, Sweden).

2719 Effect of Remineralizing Agents on Caries Progression. C. JIANG*, M. DING, and Q. HU (Department of Preventive Dentistry, Ministry of Health, China).

2720 Bicarbamide Effect on Caries Progression. T. TSUKAMOTO*, Y. NARIMOTO, Y. SEKIZUKA, and K. SAGAYAMA (Sapporo Dental College, Sapporo, Japan).

2721 Effect of Glycerol on the Caries Progression. H. CHEN*, J. ZHANG, and X. ZHAO (School of Dentistry, Southwest Medical University, Yunnan, China).

2722 Adhesive Properties of Sealants. C. HU*, M. WU, and C. LIU (School of Stomatology, Southwest Medical University, Sichuan, China).

2723 A Modified Mitis Salivarius Medium for a Caries Diagnostic Test. S. KNEIST*, L. LAURISCH, R. HEINRICH-WELTZIEN, and L. STÖSSER (Department of Preventive Dentistry, Friedrich Schiller University of Jena; Dental Practice, Korschenbroich, Germany).

2724 Bactericidal Effect of Microwave Irradiation against Oral Bacterium. K. KAWAI*, N. HOSHI, Y. NIKAWA, and S. EBISU (Osaka University Faculty of Dentistry; and School of Electrical Engineering, National Defense Academy, Yokosuka, Japan).

2725 Effects of Sucrose Frequency on Recovery of Streptococcus Mutans after Chlorhexidine Varnish Treatment. J.S. VAN DER HOEVEN* (Oral Microbiology, Universität Wittenh, Herdecke, Germany).

2726 Effect of Propolis on Caries Development in Desalivated Rats. H. KOO*, P.L. ROSALEN, Y.K. PARK, and J.A. CURY (Faculty of Dentistry of Piracicaba, UNICAMP, Brazil).

2727 Standardization of Experimentally Induced Bacterial Caries Lesions in Human Enamel. W.H. ARNOLD*, D. STEINBERG, K. SAVOV, P. GAENGLER, and I. GEDALIA (University of Witten/Herdecke, Germany; and Hebrew University, Jerusalem, Israel).
A 4-year Follow-up of Caries and Sealant Prevalences in Children. R. HEINRICH-WELTZIEN*, T. FISCHER, and L. STÖSSER (Department of Preventive Dentistry, Friedrich Schiller University of Jena, Germany).

Sealant Retention on Occlusal Surfaces of First Permanent Molars among Children in Moscow. T. SMIRNOVA*, E.M. KOUZMINA, S. VASINA, and E. PETRINA (Preventive Dentistry Department, Moscow Medical Stomatological Institute, Russia).

A Two-year Clinical Trial Comparing Two Sealants in First Permanent Molars. S. POULSEN*, N. BEIRUTI, and N. SADAT (Royal Dental College, Aarhus, Denmark; and WHO Center for Oral Health, Damascus, Syria).

Survival of ART Sealant in Three-year Community Field Trial. P. PHANTUMVANIT*, Y. SONGPAISAN, J.E. FRENCKEN, and T. PILOT (Thammasat University, Patumthani; Mahidol University, Bangkok, Thailand; and University of Groningen, The Netherlands).

Influence of Ultraconservative Restorations on the Microflora of Carious Dentin. D.S. WAMBIER*, A.C. GUEDES-PINTO, and M.R.L. SIMIONATO (Department Microbiology, Institute of Biomedical Sciences, USP, Brazil).

The Influence of Carisolv™ on Enamel and Dentin Surface Topography. A. WENNERBERG* and T. SAWASE (Department of Biomaterials/Handicap Research; and Department of Prosthetic Dentistry, Göteborg University, Sweden).

Pronase™ Digestion of Carious Dentin. R.E. BELTZ, R.C. HERRMANN, and H. NORDBØ* (Loma Linda University, CA, USA; and University of Oslo, Norway).

Dentists’ Preference of Preparation Technique and Filling Materials for Approximal Caries. A.B. TVEIT* and I. ESPELID (Faculty of Dentistry, University of Bergen, Norway).

Fluoride Deposition on Interproximal Tooth Surfaces by a Wedge Treatment. K. ROSE*, S. TAKAGI, M. MARKOVIC, B. SIECK, and L.C. CHOW (ADAHF Paffenbarger Research Center, NIST, Gaithersburg, MD, USA).

Effects of Fluoride Release from Glass Ionomers on Bovine Enamel. K. TAKAHASHI*, M. ITOH, M. OGAWA, and T. MAEDA (The Nippon Dental University, Tokyo, Japan).

Fluoride Uptake around Cavity Wall Using EPMA-WDX Method. H. YAMAMOTO*, Y. IWAMI, and S. EBISU (Department of Conservative Dentistry, Osaka University Faculty of Dentistry, Japan).

Fluoride Release from Six Fissure Sealants. F. DELILLE*, J.C. RAMOS, J. REIS, and N. CRUZ (Coimbra Medical and Dental School, University of Coimbra, Portugal).


Xylitol Candies Compared with Xylitol Chewing Gum in Caries Prevention. P. ALANEN*, P.J. ISOKANGAS, V. VISNAPUU, and K. GUTMANN (Institute of Dentistry, University of Turku, Finland).

Methods of Prevention of Dental Caries Used by Dentists on Their Children in the City of Recife. S.M.C. VIEIRA and A. ROSENBLATT* (Faculty of Dentistry, Pernambuco State University, Brazil).

Abrasivity of Dentifrices on Resin-based Fissure Sealants. S. ÜÇTA¸SLI* and A.R. VOLPE (Faculty of Dentistry, University of Ankara, Turkey; and Colgate-Palmolive Company, Piscataway, NJ, USA).
Oral/Dental Hygiene - Mouthrinses, Toothpaste, and Chewsticks


2736 Decreased Dental Plaque Formation Using a Sunflower Oil Mouthwash. C. VON OHLE*, L. NETUSCHIL, G. SANTALUCIA, E. REICH, and M. BRECX (Department of Periodontology and Conservative Dentistry, Dental School, Homburg/Saarland, Germany).

2737 X-ray, SEM, and Chemical Analysis of Salvadora persica. D.C.N. CHAN*, K.-H. CHUNG, A.U. DOGAN, M. DOGAN, D.R. FLANAGAN, and D.E. WURSTER (University of Texas Health Science Center at San Antonio, USA; Ankara University, Turkey; and University of Iowa, USA).

2738 Antimicrobial Compounds in Namibian Chewing Sticks (Muthala: Diospyros lycioides). L. CAI, X.C. LI, P. VAN DER BIJL, and C.D. WU* (Periodontics Department, College of Dentistry, University of Illinois at Chicago, USA; and University of Stellenbosch, South Africa).


2742 Effect of a Betaine-containing Toothpaste and Lozenge on Oral Health of Adults. A.-M. LE BELL*, E. SÖDERLING, and J. TENOVUO (Institute of Dentistry, University of Turku, Finland).


2744 WITHDRAWN


Seq#: 250 Saturday, June 27, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall

Mineralized Tissue - Bone Formation, Osteoblast Activity
2748  Modulation of G-Proteins by Estrogen in Mouse Osteoblasts Stimulated with IL-6. S. PAPAIOANNOU*, A.M.T. TUMBER, M.C. MEIKLE, and F. McDONALD (Bone Research Unit, Department of Orthodontics, UMDS, University of London, UK).

2749  The Time Course of Osteocalcin Gene Induction by Mechanical Stress in Osteoblasts. J. GLUHAK*, L. RAMIREZ, S.E. URIAS, and D. PAVLIN (University of Texas Health Science Center, San Antonio, USA).

2750  Changes of Levels and Binding Activities of CREB during Osteoblast Development. M. KOBAYASHI-SAKAMOTO*, K. SUZUKI, S. TAKIYA, Y. YOSHIMURA, T. IMAI, A. MATSUMOTO, and S. NAKAMURA (Department of Orthodontics, Department of Dental Pharmacology, School of Dentistry, and Research Center for Molecular Genetics, Hokkaido University, Sapporo, Japan).

2751  Differentiation of Osteoblasts Isolated from Rat Calvariae. Y. WADA*, Y. SHIBASAKI, and A. YAMAGUCHI (Department of Orthodontics and Oral Pathology, Showa University Dental School, Tokyo, Japan).

2752  An Experimental Study on the Effects of Cytoskeletal Changes on Osteoblastic Cell Activities. J.H. LEE* and D.S. NAHM (Department of Orthodontics, Dental College, Seoul National University, Korea).

2753  Effect of Basic Fibroblast Growth Factor on Bone Formation in an Organ Culture Model. F. TAMBORRINO and T. LEUNG* (Department of Prosthetic Dentistry, Eastman Dental Institute, London, UK).

2754  Fluoride-induced Changes in Matrix Metalloproteinase Expression by Bone Cells. M.S. LANGLEY* and R.J. WADDINGTON (Department of Basic Dental Science, University of Wales, College of Medicine, Cardiff, UK).


2757  MAP Kinase Stimulation by Activation of Voltage-activated Calcium Channels. E. STEPHAN* and R. DZIAK (Departments of Restorative Dentistry and Oral Biology, SUNYAB School of Dental Medicine, Buffalo, NY, USA).

2758  Molecular Characterization of Calcium Channels Expressed in Rat Osteoblasts. J. LOZA*, P. BRADFORD, and R. DZIAK (Departments of Oral Biology and Pharmacology, SUNY at Buffalo, NY, USA).

2759  Effects of Laddec® on the Formation of Calcified Bone Matrix in Rat Calvariae Cells Culture. M. SIDQUI*, S. HOFMAN, P. MISSIKA, and N. FOREST (Laboratoire de Biologie-Odontologie, Université Paris VII, France; and Département de Biologie et Matières Fondamentales, Casablanca, Maroc).

2760  Phosphoprotein-coated Microspheres in Bone. A.J. SCULLY*, J.E. AARON, R.M. DAVIES, and D.H. CARTER (Manchester Dental School, University of Manchester; and University of Leeds, UK).

2761  Cultivation of Human Osteoblast-like Cells on Natural Bone Mineral. Y. AÇIL*, S. JEPSEN, H. TERHEYDEN, and B. FLEINER (School of Dentistry, University of Kiel, Germany).

2762  b1 Integrins in a Transplanted Cartilaginous Tumor and Cultured Cells. M. FUKUDA*, K. YAGAMI, H. SAKAMAKI, S. KAKUTA, and M. NAGUMO (Second Department of Oral and Maxillo-facial Surgery, School of Dentistry, Showa University, Tokyo, Japan).

2763  Carbonated Apatite Substrate Stimulates in vitro Bone Formation and Allows Contact Osteogenesis. C. LOTY*, J.M. SAUTIER, T. KOKUBO, and N. FOREST (Laboratoire de Biologie-Odontologie, Université Paris VII, France; and Faculty of Engineering, Kyoto University, Japan).
Mineralized Tissue - Amelogenesis - Enamel Proteins, Enamel

2764  Identification of Membrane-Type 1 Matrix Metalloproteinase in the Developing Tooth. C. CARON*, J. XUE, H.C. MARGOLIS, and J.D. BARTLETT (Harvard School of Dental Medicine, Boston; and Forsyth Dental Center, Boston, MA, USA).

2765  Surgical Model for the Experimental Manipulation of the Odontogenic Organ in the Rat. D.-D. VU, N.G. DANIEL, and A. NANJI* (Faculty of Dentistry, Université de Montréal, Québec, Canada).

2766  Dual Immunolocalization of Ameloblastin and Amelogenin in Secretory-stage Ameloblasts. S. ZALZAL* and A. NANJI (Faculty of Dentistry, Université de Montréal, Québec, Canada).

2767  Immunohistochemical Localization of Bcl-2 and Bax during Amelogenesis. S. TANASE*, S. KONDO, W. OTSUJI, and S. YOSHIDA (Department of Pediatric Dentistry, Asahi University School of Dentistry, Gifu, Japan).

2768  Amelogenin Gene Point Mutation Causes Enamel Composition and Structural Changes. J.T. WRIGHT*, E.R. FLEMING, D.B. RAVASSIPOUR, and C.W. GIBSON (School of Dentistry, University of North Carolina, Chapel Hill; and School of Dentistry, University of Pennsylvania, Philadelphia, USA).

2769  Amelin: Extracellular Processing and Tissue Compartmentalization during Amelogenesis. S.J. BROOKES*, J. KIRKHAM, C.B. MOINICHE, I. SLABY, R.C. SHORE, and C. ROBINSON (Oral Biology, University of Leeds, UK; Oral Biology, University of Oslo, Norway; and Karolinska Institute, Sweden).

2770  Degradation of Dansylated Recombinant Amelogenin by Rat Enamel Proteinases. W.-Y. CHEN*, A. FAZEL, J.P. SIMMER, and C.E. SMITH (Faculty of Dentistry and Department of Anatomy and Cell Biology, McGill University, Montreal, Canada; and University of Texas Health Science Center at San Antonio, USA).

2771  SIMS Analysis of Hypomineralized Enamel in Permanent First Molars. B. JALEVIK*, H. ODELIUS, and J.G. NOREN (Faculty of Odontology, Göteborg University, Sweden).

2772  Laser Ablation ICPMS of Human Dental Enamel. J. APPLETON* and K.M. LEE (Oral Biology Unit, School of Dentistry, Liverpool, UK).

2773  Ultrastructural Changes in the Murine Tooth Germ. H. OHSHIMA* and I. THESLEFF (University of Helsinki, Finland; and Niigata University, Japan).

Mineralized Tissue - Bones, Teeth, Periodontal Ligament

2774  Wettability of Proteins Adsorbed on Hydroxyapatite. K. KAWASAKI*, T. MIYAKE, M. KAMBARA, and H. MATSUMURA (Preventive and Community Dentistry, Osaka Dental University; and Supermolecular Division, Electrotechnical Laboratory, AIST, MITI, Japan).

2775  Occupational Hazards of Winemaking: A Comparative Study. S. NAIIDO-BRESSELSCHEIDT* and U.M.E. CHIKTE (Community Dentistry, University of Stellenbosch, South Africa).

2776  Fluoride Supplementation and F Serum Levels in Adults. W.D. GLENN*, F.B. GLENN, and G.A. MACONES (Children's Dental Research Society, Miami, FL; and University of Pennsylvania School of Medicine, Philadelphia, USA).
2777  In vivo Acid-etch Patterns on Buccal Surfaces of Teeth. R.S. HOBSON and C.R. MATTICK* (Department of Child Dental Health, University of Newcastle upon Tyne, England).

2778  Micromorphopathological Study of Dentinogenesis Imperfecta (DI). F. KORAY* and B.C. YAMAN (Department of Conservative Dentistry, Faculty of Dentistry, University of Istanbul, Turkey).

2779  Comparison of Plaque and Gingival Status of Three Groups of Saliva Hypofunction Patients. K.M. STACK*, A. PAPAS, and D. HARRINGTON (Tufts University School of Dental Medicine, Boston, MA, USA).

2780  Pilocarpine Hydrochloride Relieves Xerostomia in Chronic Graft vs. Host Disease Patients. R.M. NAGLER, D. LAUFER, and A. NAGLER* (Department of Oral and Maxillofacial Surgery, Rambam Medical Center, Haifa, Israel).

2781  The Use of Pilocarpine HCl in Patients with Post-radiation Xerostomia—Report of a Pilot Study. D. MacCARTHY*, M. MORIARTY, and D. WALDRON (School of Dental Science, Trinity College, Dublin; St. Lukes Institute of Cancer Research, Dublin; and Department of Psychology, Royal College of Surgeons in Ireland).

2782  Salivary Cortisol Levels in Patients with Erosive Oral Lichen Planus. P.-O. RÖDSTRÖM*, M. JONTELL, M. HAKEBERG, and U. BERGGREN (Department of Endodontology & Oral Diagnosis, Faculty of Odontology, Göteborg University, Sweden).


2784  Human Sjögren’s Syndrome IgG Induces Secretory Changes in NOD.Igmnull Mouse Model. J. BRAYER*, C.P. ROBINSON, S. YAMACHIKA, and M.G. HUMPHREYS-BEHER (Department of Oral Biology, University of Florida, Gainesville, USA).

2785  Oral Glucose Clearance in Xerostomics Compared with Normal Adults. E.L. BOYLE*, S.M. HIGHAM, and W.M. EDGAR (Department of Clinical Dental Sciences, University of Liverpool, UK).

2786  Salivary Changes in Patients with Coeliac Disease (CD). M. LENANDER-LUMIKARI* and H. LÄHTEENOJA (Institute of Dentistry, University of Turku, Finland).

2787  Gastroesophageal Reflux Disease and Oral Changes. M.A.G.S. SILVA*, J.H. DAMANTE, A.C.M. STIPP, M.M. TOLENTINO, and P.R. CARLOTTO (Bauru Dental School, University of São Paulo, Brazil).

2788  Primary Sjögren’s Syndrome: Salivary Gland Foci, Salivary and Oral Findings. A.M. PEDERSEN*, B. NÄUNTOFTE, J. REIBEL, H. NORDGARDEN, H.O. BERGEM, and J.L. JENSEN (School of Dentistry, Copenhagen, Denmark; and School of Dentistry, Oslo, Norway).

Sjögren’s Patients—Improvement in Salivary Flow and Symptoms of Oral Dryness. Z. KHAN*, M. TRIVEDI, and S. GALLAGHER (School of Dentistry, University of Louisville, KY; and MGI Pharma, Inc., Minneapolis, MN, USA).

SLE: Sicca Symptoms and Findings as Related to Disease Activity. J.L. JENSEN*, H.O. BERGEM, I.-M. GILBOE, G. HUSBYE, and T. AXELL (Faculty of Dentistry, University of Oslo; and Diakonhjemmet Hospital, Rikshospitalet, Oslo, Norway).

Salivary Cytokines in Sjögren’s Syndrome. M.M. GRISIUS and P.C. FOX* (GTTB, NIDR, NIH, Bethesda, MD, USA).

Transfer of Human Serum IgG to NOD.Igmnull Mice Reveals a Role for Autoantibodies in Sjögren’s Syndrome. M.G. HUMPHREYS-BEHÉR*, J. BRAYER, T.R. ESCH, A.B. PECK, R. JONSSON, and C.P. ROBINSON (University of Florida, Gainesville; Forsyth Dental Center, Boston, MA, USA; and University of Bergen, Norway).

Creation of Primary Murine Models for Sjögren’s Syndrome by Replacement of NOD MHC. C.P. ROBINSON*, M. SUNDERLAND, R. HOLMDAHL, R. JONSSON, A.B. PECK, and M.G. HUMPHREYS-BEHÉR (Departments of Oral Biology and Pathology, University of Florida, Gainesville, USA; Department of Immunology, University of Lund, Sweden; and Broegelmann Research Laboratory, University of Bergen, Norway).

Sonic Toothbrushing Increases Saliva Flow Rate in Sjögren’s Syndrome Patients. A. PAPAS*, K.M. STACK, and D. SPODAK (Tufts University School of Dental Medicine, Boston, MA, USA).

Anti-oxidant Enzymes in Normal and Tumor Tissue of Parotid Glands. S. HEJAZI-NEYAK*, G.E. PETERS, B. RAHEMTULLA, and F. RAHEMTULLA (University of Alabama School of Dentistry and Medicine, Birmingham, USA).

Xerostomia and Caries. M.M. POJARITSKAIA* (The Moscow Medical Stomatology Institute, Russia).

Comparative Study of Dental Caries Index and Saliva Composition in Healthy and ESRD Children. C.C. LÓPEZ*, S. PONCE, M. MEDEIROS, and G. JIMÉNEZ (Hospital Infantil de México, Fac. de Odontología, UNAM, México).

Oral Ulcers in AIDS Patients Frequently Associated with Cytomegalovirus (CMV) and Epstein-Barr Virus (EBV) Infections. S. SYRJÄNEN*, R. LEIMOLA-VIRTANEN, A. SCHMIDT-WESTHAUSEN, and P.A. REICHART (Institute of Dentistry, University of Turku, Finland; and Medizinische Fakultät der Humboldt-Universität zu Berlin, Zentrum für Zahnmedizin, Germany).

Association between Oro-facial Lesions and Lymphocyte Subsets among HIV-infected Tanzanians. F. SCHEUTZ*, M.I. MATEE, and J. MOSHY (Royal Dental College, Aarhus, Denmark; and University College of Health Sciences, Dar-es-Salaam, Tanzania).

IgA Antibodies to Escherichia coli in Saliva from Patient with HIV Infection. L.A. ESCALONA*, N.A. WARNER, M. TORO, and R.L. GREGORY (Central University of Venezuela, Caracas; and Indiana University, Indianapolis, USA).

Human Papillomavirus (HPV) and Risk of Oral Cancer. E.M. SMITH*, K.S. SUMMERSGILL, H.L. KIRCHNER, H.H. HOFFMAN, J. RICKS, T.H. HAUGEN, and L.P. TUREK (University of Iowa, Iowa City; and Veterans Affairs Medical Center, Iowa City, IA, USA).
2803 Human Papillomavirus in the Oral Cavity of Children and Adolescents. B.T. LEVY*, E.M. SMITH, J. ALLEN, K.S. SUMMERSGILL, T.H. HAUGEN, and L.P. TUREK (University of Iowa, Iowa City; and Veterans Affairs Medical Center, Iowa City, IA, USA).

2804 Predominance of the Th1-derived Cytokine in Periapical Lesions. A. LUKIĆ*, D. POPADIĆ, Z. RAMIĆ, and M. MOSTARICA-STOJKOVIC† (Conservative Dentistry and Endodontics, Faculty of Stomatology, Institute of Microbiology and Immunology, School of Medicine, University of Belgrade, Yugoslavia).

2805 Interleukin-1β, Interleukin-6, and Cortisol in the Blood Serum of Periodontal Patients and the Influence of Indirect Stress and Tobacco Consumption. R. MENGEL*, R. ERFEZZINGER, C. HASSE, and L. FLORES-DE-JACOBY (Philips-University, Marburg, Germany).

2806 The Cytokine Responses of T-cells to Periodontal Pathogens Follow Circadian Rhythms: Possible Role of Cortisol and β-Endorphin. S. TANAVOLI*, G.J. WOOD, S. BUGHI, and H.H. ZADEH (University of Southern California, Los Angeles, USA).

2807 Apoptosis and Regulatory Molecule Expression in Oral Lichen Planus. A. MAJORANA, F. FACCHETTI*, M.L. MORASSI, F. PROCACCI, and P.L. SAPPELLI (Department of Odontostomatology, Department of Pathology, University of Brescia, Italy).

2808 Regulation of the Lymphocyte Apoptotic Cell Death by Oral Bacteria. A. JEWETT, Y.W. HAN, and W. SHI* (UCLA, School of Dentistry, Dental Research Institute, Los Angeles, CA, USA).

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Microbiology/Immunology - Stomatitis/Nursing Caries/New Agents

2809 Pathogenicity of Abiotrophia Isolated from Oral Cavity. Y. OHARA-NEMOTO*, S. TAJIKA, M. SASAKI, and M. KANEKO (Department of Microbiology, School of Microbiology, Iwate Medical University, Morioka, Japan).

2810 Sulfate-reducing Bacteria in Periodontal Pockets and Healthy Oral Sites. P.S. LANGENDIJK*, E.M. KULIK, J. MEYER, and J.S. VAN DER HOEVEN (Preventive Dentistry, University of Nijmegen; Explore, Nijmegen, The Netherlands; and University of Basel, Switzerland).


2812 A Predominant Colony Phenotype for Candida albicans in Denture Stomatitis. N. DESLAURIERS*, L. TRUDEL, P. MOJON, and E. BUDTZ-JØRGENSEN (Université Laval, Québec, Canada; and Université de Genève, Switzerland).


2814 Denture Stomatitis—Clinical and Microbiological Study. B. DOROCKA-BOBKOWSKA*, J. OTULAKOWSKA, and H. BYKS (Department of Prosthetic Dentistry, K. Marcinkowski University of Medical Sciences, Poznań, Poland).

2815 Microbial Analysis of Primary Tooth Dentin Expressing Nursing Caries. M.M. LANDRU*, T. ROCHD, C. ROQUES, and G. MICHEL (Faculté de Chirurgie Dentaire, Paris V; and UFR Sciences Pharmaceutiques, Toulouse, France).

2816 Pre-school Children with Rampant Caries: Microbial Load and Risk Factors. S. GIZANI*, D. DECLERCK, F. VINCKIER, and M. QUIRYNEN (Faculty of Medicine, Department of Operative
Dentistry; Research Group for Microbial Adhesions; Department of Periodontology, Catholic University Leuven, Belgium).

2817 Age-related Acquisition of Oral Yeast Species and Stability of Colonization in Young Children. J. HANNULA*, M. SAARELA, H. JOUSIMIES-SOMER, A. TAKALA, R. SYRJÄNEN, and S. ASIKAINEN (University of Helsinki and National Public Health Institute, Finland).

2818 Salivary Flow Rate, pH, and Lysozyme Levels in HIV-infected Individuals in Hong Kong. C.S. TSANG and L.P. SAMARANAYAKE* (Faculty of Dentistry, University of Hong Kong, China).

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2819 The Effect of Urea-containing Chewing Gum on Plaque Acidogenicity. C. SMITH* and J. VERRAN (Department of Biological Sciences, Manchester Metropolitan University, UK).

2820 Acid Tolerance of Microflora from Caries and Healthy Tooth Sites. S. EDWARDSSON*, G. SVENSÅTER, M. BORGSTRÖM, and I.R. HAMILTON (Oral Microbiology, University of Lund, Malmö, Sweden; and Oral Biology, University of Manitoba, Winnipeg, Canada).

2821 Growth Phase and the Acid Tolerance Response by Streptococcus mutans. I.R. HAMILTON* and G. SVENSÅTER (Oral Biology, University of Manitoba, Winnipeg, Canada; and Oral Microbiology, University of Lund, Malmö, Sweden).

2822 Turnover of GTFs of S. mutans Growing at Stationary Phase. T. OGAWA* (Department of Dental Hygiene, Saitama College of Health, Japan).

2823 Nitrate and Nitrite Reduction by Some Strains of Oral Streptococci. J.D. RUDNEY and R.M. DeCAMP* (Department of Oral Science, School of Dentistry, University of Minnesota, Minneapolis, USA).

2824 Cell Vitality of Streptococcus sanguis in Growth Cultures. E.-M. DECKER* and R. WEIGER (School of Dental Medicine, University of Tübingen, Germany).

2825 In vitro Study of the Metabolism of Two Polyols by Wild Strains of Lactobacilli. M.C. BADET* and B. RICHARD (Laboratoire Odontologique de Recherche, Bordeaux, France).

2826 Hydrolysis of the Extracellular Matrix Proteins—Fibronectin, Fibrinogen, and Collagen IV—by a Protease of Porphyromonas endodontalis. M. SHOSHANI*, G. ROSEN, R. NAOR, and M.N. SELA (Hadassah School of Dental Medicine, Hebrew University, Jerusalem, Israel).

2827 Protease Activity in Peptostreptococci. R. DUGUID* and B. SENIOR (Dental School and Department of Medical Microbiology, University of Dundee, Scotland, UK).

2828 Ultrastructure and Localization of the GroEL-like Protein of Actinobacillus actinomycetemcomitans. F. GOULHEN*, D. MAYRAND, and D. GRENIER (Groupe de Recherche en Ecologie Buccale, Université Laval, Québec, Canada).


2830 Hemoglobin Binding Protein of Actinobacillus actinomycetemcomitans. R. KIMIZUKA*, T. MIURA, T. KÀTO, K. ISHIHARA, and K. OKUDA (Oral Health Science Center and Department of Microbiology, Tokyo Dental College, Chiba, Japan).
2831 Purification of the Glycoprotein on Streptococci that Aggregate Eikenella corrodens. H. NAKAE*, H. YUMOTO, S. EBISU, and T. MATSUO (Tokushima University and Osaka University, Japan).


2835 Post-antifungal Effect Elicited by Five Antifungal Agents in Oral Candida albicans. A.N.B. ELLEPOLA* and L.P. SAMARANAYAKE (Faculty of Dentistry, University of Hong Kong, China).

2836 Anti-candidal Activity of Human Gingival Keratinocyte Cytosol. K.F. ROSS* and M.C. HERZBERG (School of Dentistry, University of Minnesota, Minneapolis, USA).

2837 Efficacy of Two Prophylactic Procedures Assessed by Dentocult SM Method. H. JURIĆ*, I. SKRINJARIĆ, and Z. VERZAK (School of Dental Medicine, University of Zagreb, Croatia).

2838 Photoinactivation of Prevotella nigrescens. L. MADDOCKS*, P. GOLDING, D.B. DRUCKER, T. KING, and A.S. BLINKHORN (Dental School and Physics Department, University of Manchester, UK).

2839 Effects of Three Antimicrobial Mouthwashes on Bacterial Adhesion to Restoratives. B.G. EFES*, C. DÖRTER, H. ERSEV, G. KÜLEKÇİ, and S. BÜYÜKGÖKÇESU (Department of Conservative Dentistry, Department of Endodontics, and Department of Microbiology, Faculty of Dentistry, University of Istanbul, Turkey).

2840 In vivo Antibacterial Activity of High-fluoride Toothpaste on Dental Plaque Bacteria. M. SIXOU*, C. FINIDORI, G. PALOUDIER, and J.P. LODTER (Dental School, Université Paul Sabatier, Toulouse, France).


2844 Susceptibility of Porphyromonas gingivalis to Hypothiocyanite Produced by Lactoperoxidase. M. FADEL* and P. COURTOIS (Lab. of Stomatology, Free University of Brussels, Belgium).

2845 Uptake of Fluoroquinolone Antimicrobials by Polymorphonuclear Leukocytes. J. WALTERS* and F. ZHANG (College of Dentistry, The Ohio State University, Columbus, USA).
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<td>2848</td>
<td>In vitro Growth Competition between Streptococcus mutans, Lactobacillus paracasei, and Candida albicans in Biofilms.</td>
<td>S.J. BOTHA* and F.S. BOTHA (Centre for Stomatological Research, Faculty of Dentistry, University of Pretoria, South Africa).</td>
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<td>2850</td>
<td>Resistance of Porphyromonas gingivalis in Biofilms to Doxycycline and Metronidazole.</td>
<td>T. LARSEN* and B. GIWERCMAN (Institute of Odontology, Faculty of Health Sciences, University of Copenhagen, Denmark).</td>
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<td>2851</td>
<td>Community Structure and Enzyme Activity in Microcosm Dental Plaques.</td>
<td>R.J. PALMER, Jr.*, L. WONG, and C.H. SISSONS (University of Tennessee, Knoxville, USA; Dental Research Group, Wellington School of Medicine, Otago University, Wellington South, New Zealand).</td>
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<td>2853</td>
<td>Artificial Bacterial Biofilms and the Confocal Laser Scanning Microscopic Analysis.</td>
<td>S. TAKENAKA*, M. IWAKU, and E. HOSHINO (Operative Dentistry and Endodontics and Oral Microbiology, Niigata University School of Dentistry, Japan).</td>
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<td>2855</td>
<td>Effects of Endogenous Proteins on Candida Biofilm Formation on Acrylic.</td>
<td>H. YAMASHIRO*, H. NIKAWA, T. HAMADA, H. NISHIMURA, and L.P. SAMARANAYAKE (Hiroshima University, Japan; and Hong Kong University, China).</td>
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<td>2856</td>
<td>Factors Involved in Candida Biofilm Formation on Acrylic Surfaces.</td>
<td>H. NIKAWA*, T. HAMADA, H. YAMASHIRO, and L.P. SAMARANAYAKE (Hiroshima University, Japan; and Hong Kong University, China).</td>
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<td>2858</td>
<td>Oral Microflora in Immunocompromised Children: The Role of Fusobacterium nucleatum.</td>
<td>A. MAJORANA*, M. DUSE, A.G. UGAZIO, and P.L. SAPELLI (Department of Odontostomatological, School of Dentistry, Department of Paediatrics, University of Brescia, Italy).</td>
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<td>2859</td>
<td>Capnocytophaga in the Dental Plaque of Children with Leukemia.</td>
<td>J.L. SIXOU*, A. AUBRY, V. GANDEMÉR, and M. BONNAURE-MALLET (Equipe de Biologie Buccale, UFR d'Odontologie, Rennes; Université de Rennes 1, France; and Department of Paediatric Oncology, CHR, Rennes, France).</td>
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Oral/Maxillofacial Surgery - Trauma/Reconstruction

2860  Functional Mandibular Reconstruction: Immediate Placement of Osseointegrated Implants into Vascularized Iliac Bone Grafts. Y.L. HUANG*, C.P. ZHANG, and K. XUE (School of Stomatology, Shanghai Second Medical University, China).

2861  Ridge Augmentation with Chin Block Grafts and Resorbable Pins. G. URBANI*, G. LOMBARDO, E. SANTI, and F. BENETTI (School of Dentistry, Verona University, Italy).


2863  WITHDRAWN


2865  Regeneration of Large Alveolar Bone Defects Utilizing a Bioabsorbable Membrane. J. RUSKIN*, J. MALMOQUIST, R. SCHENK, and D. BUSER (University of Florida College of Dentistry, Gainesville, USA; and UB School of Dentistry, Bern, Switzerland).


2867  Surgical Management for Trismus Patient with Mandibular Coronoid and Angle Hyperplasia. K.-I. MURAKAMI*, S. YASUDA, Y. TSUBOI, S. FUJITA, and T. IIZUKA (Department of OMS, Kyoto University, Japan).

2868  Outcome of Mandibular Distraction in Patients Using a Tooth-borne Device. T. EL-BIALY*, C. EVANS, S. DESSNER, and Y. RAZDOLSKY (College of Dentistry, University of Illinois at Chicago, USA).


2870  Variability in Surgical Protocols in Cleft Lip and Palate Management. K.W.C. FOONG* and A. SANDHAM (Faculty of Dentistry, National University of Singapore).

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Periodontal Research-Diagnosis/Epidemiology - Epidemiology of Periodontal and Systemic Diseases


Periodontitis as a Potential Risk Factor for Coronary Heart Disease. S. GEERTS*, V. LEGRAND, and E.H. ROMPEN (Departments of Dentistry and of Cardiology, University of Liège, Belgium).

Relation between Obesity and Periodontitis. T. SAITO*, Y. SHIMAZAKI, M. TSUZUKI, M. SAKAMOTO, and T. KOGA (Department of Preventive Dentistry, Kyushu University Faculty of Dentistry, Fukuoka; and Fukuoka Health Promotion Foundation, Japan).

Ten-year Longitudinal Study Comparing Periodontal Status in Chinese Smokers/Non-smokers. X. CHEN and L.F. WOLFF* (School of Dentistry, University of Minnesota, Minneapolis, USA).


Diabetes May Be a Risk Factor for Periodontal Disease. M. ALBRECHT*, G.Y. TAMÁS, and E. DIINYA (Department of Conservative Dentistry, Department of First Internal Medicine, and EGIS Pharmaceutical Ltd., Budapest, Hungary).

Oral Manifestations in Patients with Diabetes Mellitus Type I. D. RADIONOV, I. BAGIĆ*, O. LULIĆ-DUKIĆ, H. JURIĆ, and Z. VERZAK (School of Dental Medicine, University of Zagreb, Croatia).

Incidence of Periodontal Disease and AIDS. H.P. LAWRENCE*, L.L. PATTON, and R.G. McKAIG (University of North Carolina, Chapel Hill, USA).

Local Host Immune Responses and Periodontal Disease among an HIV-1-infected Cohort. C.W. CHANDLER*, J.D. SPERATI, L.L. PATTON, R.G. McKAIG, D. PÂQUETTE, and D.C. SHUGARS (University of North Carolina School of Dentistry, Chapel Hill, USA).

Periodontal Status in Non-AIDS HIV-seropositive and AIDS Individuals. A.J. MORETTI*, R.G. CAFFESSE, C.M. NICHOLS, W.A. BRETZ, P. CORBY, and M.C. TREDENICK (Dental Branch, Houston Health Science Center, University of Texas; and Bering Dental Clinic, Houston, TX, USA).


Betel Quid Chewing as an Additional Risk for Periodontal Diseases Measured by CPITN. Y.M. WU*, Y.H. YANG, and C.C. TSAI (School of Dentistry, Kaohsiung Medical College, Taiwan).
2888  In vitro Assessment of Reproducibility and Accuracy of Probing Depth Measurements. K. PATEL*, G.S. GRIFFITHS, and D.G. GILLAM (Eastman Dental Hospital and Institute, University of London, UK).


2890  Examiner Reproducibility Using a New Periodontal Probe. S. POLLOCK, B. PIHLSTROM, P. LENTON*, and J. HODGES (University of Mississippi; and Oral Health Clinical Research Center, University of Minnesota, USA).

2891  Is the CPITN a Reliable Index for Assessment of Periodontal Disease? S. KAHN*, R.C. SOUZA, and R.G. FISCHER (Gama Filho University; City Health Foundation of Niteroi; and Rio de Janeiro State University, Brazil).


2893  Relationship between Root Trunk Type and Periodontal Attachment Loss in Molars. G.L. HOU*, T.Y. SHIEH, C.C. TSAI, Y.H. YANG, and J.S. HUANG (Graduate Institute of Dental Sciences, Kaohsiung Medical College, Taiwan).

2894  In vivo and in vitro Natural Frequency Analysis of Periodontal Conditions. C.-Y. LIN*, H.-M. HUANG, and S.-Y. LEE (Graduate Institute of Oral Rehabilitation Sciences, and Instrumentation Center, Taipei Medical College, Taiwan, ROC).

2895  Gingival Microcirculation in Acute and Chronic Gingivitis. C. GLEISSNER*, H. GLATZEL, O. KEMPFSKI, and B. WILLERSHAUSEN (Department of Restorative Dentistry, University of Mainz, Germany).

2896  Relationship of Bone Loss to Clinical Measurements of Defect Depth. Y. MATSUDA*, N.C. GEURS, M.S. REDDY, T. OKANO, and M.K. JEFFCOAT (University of Alabama at Birmingham School of Dentistry, USA; and Showa University School of Dentistry, Tokyo, Japan).

2897  Influence of Central Beam Angulation on Radiographic Alveolar Crest Measurement. K.U. BECKER, V. BORMANN, T. EGGER*, and H.P. MÜLLER (Department of Operative Dentistry, University of Heidelberg; and Department of Periodontology, GAF Central Hospital, Koblenz, Germany).

2898  Monitoring of Alveolar Bone Level from Standardized Bitewing Radiographs. K. ALMAS* (Department of Preventive Dental Sciences, College of Dentistry, King Saud University, Riyadh, Kingdom of Saudi Arabia).

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Periodontal Research-Pathogenesis - Tissue Destruction: Role of MMPs

2899  Expression of MMPs and TIMPs in Healthy and Diseased Gingiva. B. NAWROCKI, M. DAHAN, R. ELKAIM, M. SOELL, P. BIREMBAUT, and H. TENENBAUM* (Unités, INSERM and Parogène, Reims and Strasbourg, France).


2901  In vitro Effect of A.a on MMPs, TIMPs, and b1-integrin of Different Cells. R. ELKAIM, M. SOELL*, and H. TENENBAUM (Parogène and Unité, INSERM, Strasbourg, France).

Role of Membrane-type Matrix Metalloproteinase (MT-MMP) in IL-1-induced Bone Resorption. M. INADA*, C. MIYaura, A. OKADA, M. SEIKI, T. SUDA, and K. KAMOI (Department of Periodontology, School of Dentistry, Nippon Dental University; Department of Biochemistry, School of Dentistry, Showa University; and Department of Cancer Cell Research, Institute of Medical Science, University of Tokyo, Japan).


Collagens Modulate MMP Production of Periodontal Ligament and Gingival Fibroblasts. E.H. KERKVLIET*, W. BEERTSEN, and V. EVERTS (Department of Periodontology, ACTA; and Department of Cell Biology and Histology, AMC, Amsterdam, The Netherlands).

Cytokine Regulation on Nitric Oxide Production in Periapical Periodontitis. O. TAKEICHI*, M. HAYASHI, T. TSURUMACHI, S. MEZAWA, and T. SAITO (Department of Endodontics, Nihon University School of Dentistry, Tokyo, Japan).

Nitric Oxide Synthesis is Increased in Periodontal Disease. M. MATEJKA*, C. ULM, P. SOLAR, J. PARTYKA, and H. SINZINGER (Department of Oral Surgery, Dental School; and Department of Nuclear Medicine, University of Vienna, Austria).

Degradation of Proteoglycans by Polymorphonuclear Leukocytes and Reactive Oxygen Species. R.J. WADDINGTON, T. KANDIAH, R. MOSELEY, and G. EMBERY* (Department of Basic Dental Science and Unit of Nephrology, University of Wales College of Medicine, Cardiff, UK).

Formation of Nitric Oxide and Peroxynitrite in Rat Experimental and Human Periodontitis. Z. LOHINAI*, A. SZÉKELY, E. FEHER, T. KEGLEVICH, P. WINDISCH, and C. SZABO (Experimental Research Dept. and Second Institute of Physiology; Department of Periodontology, Semmelweis University Medical School, Budapest, Hungary; and Division of Critical Care, Children’s Hospital Medical Center, Cincinnati, OH, USA).

Identification of Tooth-facing Cells in Human Junctional Epithelium by Basal Cell Markers. M. HORMIA* and K. OWARIBE (Institute of Dentistry, University of Turku, Finland; and Nagoya University, Japan).
Identification of an Epithelial Cell Membrane Receptor for Porphyromonas gingivalis ATCC 33277. L. DU, P. PELLEN-MUSSI*, S. TRICOT-DOLEUX, and M. BONNAURE-MÅLLET (Equipe de Biologie Buccale, UFR d'Odontologie, Rennes, France).


Increased Adherence of Neutrophils from LJP Patients. H. HURTTIA*, K. SAARINEN, and L. LEINO (Institute of Dentistry and Medical Faculty, University of Turku, Finland; and University College London, UK).

Novel Pathway of Lymphocyte Adhesion to Gingival Fibroblasts via CD44. H. HIRANO*, S. MURAKAMI, D. KASÁI, T. SAHO, F. HIRANO, and H. OKADA (Department of Periodontology and Endodontology, Osaka University Faculty of Dentistry, Japan).

MCP-1 Expression and Monocyte Infiltration in RPP Gingival Tissues. H.X. MENG* and X.L. ZHU (School of Stomatology, Beijing Medical University, PRC).

Type XII Collagen Expression in Normal and Fibrotic Tissue. R.W. TAYLOR*, T. BRIDGES, J.S. TRUPIN, J.D. RUSSELL, and S.B. RUSSELL (University of Alabama at Birmingham; and Meharry Medical College, Nashville, TN, USA).

Comparison of Collagen Types between Healthy and Inflamed Periodontal Tissues. C.Z. LI* and M.W. FAN (College of Stomatology, Hubei Medical University, Wuhan, China).

Identification of Biofilms Forming Bacteria in the Plaque-free Zone. Y. NOIRI* and S. EBISU (Department of Conservative Dentistry, Osaka University Faculty of Dentistry, Japan).

Detection of Telomerase Activity in Periapical Periodontitis. M. HAYASHI*, O. TAKEICHI, T. TSURUMACHI, S. MEZAWA, K. KUSAMA, I. MORO, and T. SAITO (Departments of Endodontics and Pathology, Nihon University School of Dentistry, Tokyo, Japan).

Label-retaining Connective Tissue Cells in the Interdental Gingival Septum. N. PENDER* and T.G. HEANEY (Clinical Dental Sciences, University of Liverpool, UK).


Promoter Arrangement of the P. gingivalis fimA Gene. H. XIE* and R.J. LAMONT (Department of Oral Biology, University of Washington, Seattle, USA).

Cloning and Sequencing of Hemin Binding Protein Encoding Gene from Prevotella intermedia. M. OKAMOTO*, S.-W. LEE, N. MAEDA, H. FUJITA, and K.-P. LEUNG (University of Florida, Gainesville, USA; and Tsurumi University, Yokohama, Japan).

T-cell Cytokines in a Murine Model of Porphyromonas gingivalis Infection. E. GEMMELL, T.A. WINNING*, P.S. BIRD, and G.J. SEYMOUR (Immunopathology Laboratory, School of Dentistry, The University of Queensland, Australia).

Characterization of the Cathepsin-like Cysteine Proteinases in Trichomonas tenax. A. YAMAMOTO*, E. ASAGA, T. IGARASHI, and N. GOTO (Department of Oral Microbiology, Showa University School of Dentistry, Tokyo, Japan).
Cytokine Profiles in Human Porphyromonas gingivalis-specific T-cell Lines. E. GEMMELL*, D.A. GRIECO, and G.J. SEYMOUR (Immunopathology Laboratory, School of Dentistry, The University of Queensland, Australia).

Porphyromonas gingivalis Fimbriae Stimulate Monocyte Adhesion to Endothelial Cells. K. HIROSE*, E. ISOGAI, and I. UEDA (Health Sciences University of Hokkaido, Japan).

Prevalence of Periodontal Pathogens in Relation to Pocket Depth. P. STÄDTLER*, M. MARESCH, and A. BOGIATZIS (Division for Hospital Hygiene, University Dental Clinic, KFUG Graz, Austria).


Western Blot Analysis of IgG Binding Patterns of B. forsythus Clinical Isolates. T.J. SIMS*, L.A. MANCL, P. BRAHAM, and R.C. PAGE (University of Washington, Seattle, USA).


Immunohistochemistry of Bacteria in the Pulp of Periodontally Diseased Human Teeth. M.L. WARBINGTON*, S. DIBART, T. VAN DYKE, J.M. DOBECK, and Z. SKOBE (Boston University School of Dental Medicine and Forsyth Dental Center, Boston, MA, USA).

Anti-proliferative Capsular-like Polysaccharide from Actinobacillus actinomycetemcomitans Induces Apoptotic Cell Death in MC3T3-E1 Cells. S. YAMAMOTO*, M. MOGI, R. KINPARA, A. KONDO, M. ARAI, Y. ISHIHARA, N. UEDA, T. NOGUCHI, and A. TOGARI (Departments of Periodontology and Pharmacology, School of Dentistry, Aichi-Gakuin University, Nagoya, Japan).

The Effects of Acoustic Energy on Human Gingival Fibroblast Proliferation in vitro. H. JONES*, D. RUMPF, and A. MARIOTTI (College of Dentistry, The Ohio State University, Columbus, OH, USA).

Viability of Periodontal Ligament Cells after Cryomicroscopy. I. LAMBRICHTS*, J. CREEMERS, C. POLITIS, S. SCHEPERS, F. VANDENABEELE, and L. VRIELINCK (Department of Histology, University Centre Limburg; and Department of Maxillofacial Surgery, Gent, Belgium).

Comparison of Regeneration-associated Cells and Fibroblasts from the Same Patients. R.C. WAKABAYASHI*, H.L. LÂNCERO, and P.W. JOHNSON (Department of Stomatology, School of Dentistry, University of California, San Francisco, CA, USA).

Expression of Extracellular Matrix Macromolecule mRNA by Cells Involved in Periodontal Regeneration. S. IVANOVSKI, H.H. HAASE, and P.M. BARTOLD* (University of Queensland, Brisbane, Australia).

Integrin- b1 Expression on Periodontal Ligament Fibroblasts Attached to Root Surfaces. A. OSANAI*, N. ASAKI, H. NAKAYA, and K. KAMÔI (Department of Periodontology, The Nippon Dental University, Tokyo, Japan).

Expression of Growth Factors and Their Receptors by Regenerated Periodontal Tissue. L. KURU*, G.S. GRIFFITHS, M.H. PARKAR, H.N. NEWMAN, and I. OLSEN (Department of Periodontology, Marmara University, Turkey; and Eastman Dental Institute, UK).
In vitro Dexamethasone or rh BMP2 Induction of Osteoblastic Differentiation on Cells from Human Extra-medullary Adipose Tissue. L. LECOEUR* and J.P. OUHAYOUN (LRO URA CNRS, Université Paris VII, France).

Permeability Evaluation of Membranes for Guided Tissue Regeneration Membranes in vitro. W.-J. CHANG, C.-H. WU*, C.-Y. WANG, I.-L. CHIU, S.-Y. LEE, and C.-T. LIN (School of Dentistry and Graduate Institute of Oral Rehabilitation Sciences; and Department of Microbiology and Immunology, Taipei Medical College, Taiwan).

In vitro Modulation of Human Gingival Keratinocyte Migration by Minocycline-HCl. A. VANHEUSDEN*, B. NUSGENS, C.M. LAPIERE, and E.H. ROMPEN (Laboratory of Connective Tissue Biology, and Institute of Dentistry, University of Liège, Belgium).


Labeling of Rat Gingival Fibroblasts by Using a Fluorescent Marker. F. SIMAIN*, J. LAHMOUZI, M.P. DEFRESNE, and R. LEGRAND (Laboratory of Histology & Cell Culture, Department of Oral Surgery, Implantology, and Periodontology, University of Liège, Belgium).

Two Phenotypically Distinctive Subpopulations of Periodontal Ligament Cells. M.W. BRAITHWAITE* (Cardinal Bernadin Cancer Center, Stritch School of Medicine, Loyola University of Chicago, IL; and Edward Hines, Jr. VA Hospital, USA).

Enhancement of Bone Formation with Combined Resorbable Membrane and Calcium Carbonate, in Rat Calvaria Model. J.P. OUHAYOUN*, M.H. SAWAF, and C. de POLLACK (Université Paris VII, France).

Characteristics of Bone Formation Following Guided Bone Regeneration in Dogs. Y. SHIBUKAWA* and S. YAMADA (Department of Periodontics, Tokyo Dental College, Chiba, Japan).


Modulation of Crevicular Fluid Prostaglandin E2 Concentrations with Ketorolac Mouthrinse. P.M. PRESHAW*, P.A. HEASMAN, B. LAUFFART, P. BROWN, and E. ZAK (University of Newcastle upon Tyne; Procter & Gamble, Staines, UK).


The Effect of Antimicrobial Treatment of Subsequent Levels of Alveolar Bone. J.R. GIORDANO*, C.F. HILDEBOLT, T.K. PILGRAM, and W.J. LOESCHE (University of Detroit Mercy; Washington University Medical Center, St. Louis, MO; and University of Michigan, USA).

Comparison of Different Systemic Antibiotic Therapies for RPP Patients. V. FISCHER*, B.-M. KLEBER, H. BRIEDIGKEIT, and U. GÖBEL (Department of Periodontology, Institute of Microbiology, Humboldt University, Berlin, Germany).

Adjunctive Use of Subantimicrobial Doxycycline Therapy for Periodontitis. J. CATON*, S.G. CIANCIO, R. CROUT, A. HEFTI, and A. POLSON (Eastman Dental Center, SUNY, Buffalo, NY; West Virginia University; University of Florida; and University of Pennsylvania, USA).


Proline-rich Fragments of Salivary Mucin with Broad-spectrum Antimicrobial Activity. K.J. ANTONYRAJ, T. KARUNAKARAN, and P.A. RAJ* (Department of Toxicology, MIT, Cambridge, MA; and Department of Oral Biology and Periodontal Disease Research Center, SUNY, Buffalo, USA).

Inhibition of Tooth Loss and Mortality by Chemically Modified Tetracyclines in Type II Diabetes. M.E. RYAN*, N.S. RAMAMURTHY, K. LAMBROU, M. IOANNOU, and L.M. GOLUB (SUNY, Stony Brook, USA).


Baseline Fluoride Concentration in Urine of Venezuelan Children. F. ROJAS-SANCHEZ*, A. SAN VICENTE, C. MUJICA, and A.M. ACEVEDO (Universidad Central de Venezuela, Caracas).

Potential of 4% Silver Fluoride to Induce Fluorosis in Rats: Clinical Implications. T. GOTJAMANOS* and P. MA (Department of Pathology, The University of Western Australia, Perth).

How Fluoride Affected Human Bone Development in Burlington, Canada. A. BRAGANZA* and H. LIMEBACK (Faculty of Dentistry, University of Toronto, ON, Canada).

DNA Binding Activity of NF-κB in MC3T3-E1 Cells under Low-calcium Environment. M. OKITSU*, Y. DEYAMA, A. MATSUMOTO, A. DEYAMA, Y. YOSHIMURA, and K. SUZUKI (Departments of Dental Pharmacology and Oral Surgery II, School of Dentistry, Hokkaido University, Sapporo, Japan).

Mercury Vapor Exposure of Rats: Kidney Cortex and CNS. R. EIDE* (Department of Odontology—Dental Biomaterials, University of Bergen, Norway).

Methyl Methacrylate-induced Neurotoxicity in Human Primary Neocortical Cell Cultures. M.-S. CHEN*, D.-M. LIU, S.-Y. LEE, and C.-T. LIN (Dental Department of Taipei Medical College Hospital, Institute of Biomedical Science, Taiwan, ROC).

The Genotoxicity of Root Canal Sealer. T.H. HUANG*, C.T. KAO, H.-M. LEE, and M.-Y. CHOU (Endodontic Department, Chung Shan Medical and Dental College, Taichung, Taiwan, ROC).

Induction of Apoptosis in the Salivary Gland by PCB. G. KAWASAKI*, S. YANAMOTO, H. TSURUTA, and A. MIZUNO (First Department of Oral and Maxillofacial Surgery, Nagasaki University School of Dentistry, Japan).


Cyclosporin A-induced Gingival Overgrowth in Wistar Rats. B. JOVANOVIĆ*, D. BOŠKOVIĆ, G. KUBUROVIĆ, M. KOZETINA, and D. STOJIĆ (Department of Pharmacology, and Department of Histology, Faculty of Stomatology, Institute Plant Protect. Environ., Belgrade, Yugoslavia).

Inhibition of MMP-2 Activation by Clodronate in Osteosarcoma MG63 and U-2OS Cells. M. LAITINEN*, T. SORSÅ, T. SALO, Y.T. KONTTINEN, C. LINDQVIST, and O. TERONEN (Institute of Dentistry, University of Helsinki, Finland; and Universities of Oulu and Tampere, Finland).

Use of an Oxidizing Agent to Destroy Amino Acids to Prevent their Use as Building Blocks for Protein. P. RATCLIFF* (University of California, San Francisco, USA).

NPY Expression in Neurons Innervating Inflamed and Normal Temporomandibular Joint. J.P. DAMICO, C.A. CASATTI, and J.A. BAUER* (Biomedical Science Institute, University of São Paulo, Brazil).

Nerve Growth Factor in Acute and Chronic Stages of Temporomandibular Joint Inflammation. J.-P. MBIENÉ*, R.P. HARPER, and F. MARCHES (Baylor College of Dentistry, Texas A&M University System, Dallas, USA).


MMPs and TIMPs in Synovial Fluids of TMJ Osteoarthritis Patients. M. KANYAMA*, S. KOJIMA, T. FUJISAWA, T. KUBOKI, H. YATANI, and A. YAMASHITA (Okayama University Dental School, Japan).

Synovial Membrane Responses to Adjuvant Arthritis of the Rat TMJ. K. NOZAWA*, R. TAKAGI, Y. OHASHI, and T. MAEDA (Niigata University, Japan).

Relation between Inflammatory Markers and Matrix-degrading Enzymes in TMJ Disease. Y. IJIMA*, E. KUBOTA, M. KOBAYASHI, K. SUZUKI, T. SHIBATA, and K.-I. MURAKAMI (Second Department of Oral and Maxillofacial Surgery, Kanagawa Dental College; Department of Dentistry and Oral Surgery, School of Medicine, Yamagata University; and Department of Oral Surgery, Faculty of Medicine, Kyoto University, Japan).

Effect of Cyclic Mechanical Stress on Chondrocyte Metabolism. T. FUJISAWA*, T. HATTORI, T. KUBOKI, A. YAMASHITA, and M. TAKIGAWA (Okayama University Dental School, Japan).

Characterization of Matrix-degrading Proteinases in Synovial Fluid and their Possible Role in TMJ Disease. E. KUBOTA*, Y. IJIMA, M. KOBAYASHI, T. SAITO, T. SHIBATA, and K.-I. MURAKAMI (Second Department of Oral and Maxillofacial Surgery, Kanagawa Dental College; Department of Dentistry and Oral Surgery, School of Medicine, Yamagata University; and Department of Oral Surgery, Faculty of Medicine, Kyoto University, Japan).


Effects of Alpha-adrenergic Blocker Infusion on Resting Masseter Muscle Hemodynamics. K. MAEKAWA*, T. KUBOKI, T. MIYAWAKI, M. SHINODA, H. YATANI, A. YAMASHITA, and G.T. CLARK (Okayama University Dental School, Japan; and UCLA School of Dentistry, Los Angeles, CA, USA).
2985  Effects of Beta-adrenergic Blocker Infusion on Resting Masseter Muscle Hemodynamics. T. KUBOKI*, K. MAEKAWA, M. SHINODA, H. YATANI, A. YAMASHITA, M. SHIMADA, and G.T. CLARK (Okayama University Dental School, Japan; and UCLA School of Dentistry, Los Angeles, CA, USA).

2986  Role of Human Masseter Hemodynamics in Pain during Mouth Opening. A. MISAWA*, M. SUGISAKI, A. IKAI, Y.S. KIM, and H. TANABE (Jikei University School of Medicine, Tokyo, Japan).

2987  Effect of Cold Stimulation on Facial Skin Hemodynamics. M. OKUBO*, Y. NAKABAYASHI, T. KISHI, N. NARITA, H. FUJII, and T. MATSUMOTO (Nihon University School of Dentistry at Matsudo, Chiba; and Kyushu Institute of Technology, Fukuoka, Japan).

Seq#: 270  Saturday, June 27, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall

Neuroscience/TMJ - Orofacial Sensory-Motor Systems

2988  Separate Oscillators for NMDA-induced VII and XII Activities in Isolated Rat Brainstem. M. NAKAJIMA*, N. KATAKURA, and Y. NAKAMURA (Tokyo Medical and Dental University, Japan).

2989  Neuronal Activity for Rat Rhythmic Jaw Movement. M. OHTA*, K. SASAMOTO, N. KURAOKA, and K. NISHIMUTA (Faculty of Dentistry, Department of Physiology, Kyushu University, Fukuoka, Japan).

2990  The Effect of Intramuscular Injections of Algesic Chemicals on Jaw-movement-related Neurons. K.D. PARK and N.F. CAPRA* (OCBS, University of Maryland Dental School, Baltimore, USA).

2991  Experimental Muscle Pain Changes Exteroceptive Suppression Periods in Human Masseter Muscles. K. WANG*, P. SVENSSON, and L. ARENDT-NIELSEN (Center for Sensory-Motor Interaction, Orofacial Pain Laboratory, Aalborg University; and Royal Dental College, University of Aarhus, Denmark).

2992  Effect of Bite Force on Heteronymous H-reflexes in Human Temporals Muscle. T. GRAVEN-NIELSEN*, P. SVENSSON, A. DE LAAT, and L. ARENDT-NIELSEN (Orofacial Pain Laboratory, Center for Sensory-Motor Interaction, Aalborg University; Royal Dental College, University of Aarhus, Denmark; and Catholic University of Leuven, Belgium).

2993  Spatial Considerations in the Peripheral Control of a Jaw Reflex. A.G. MASON*, J.P. NEWTON, and S.W. CADDEN (The Dental School, University of Dundee, Scotland, UK).

2994  Dissociation of Jaw Reflex Modulation and Pain from Thermal Stimuli. J.P. NEWTON* and S.W. CADDEN (The Dental School, University of Dundee, Scotland, UK).


2996  Visually Evoked Potentials in Migraine Patients. A Comparative Study. F. MONGINI, S. VIGHETTI, L. BERGAMASCO, L. GAVEGLIO*, and M. MATTIUZZI (Section for Headache and Facial Pain, and Institute of Neurology, University of Turin, Italy).

2997  Possible Role of Glial Processes in Periodontal Ruffini Endings. T. MAEDA*, K. OCHI, and K. NOZAWA (Niigata University, Japan).

2998  Brief Access to NaCl Solutions Yields Taste Preference Differences between 2 Rat Strains. M.D. BROT*, C. WATSON, and I.L. BERNSTEIN (Departments of Psychology and Orthodontics, University of Washington, Seattle, USA).

Behavior to Liquid Diet and Pellets in the Telemetry Rats. T. FUJISE*, R. WATANABE, K. OKA, and M. NAKATA (Faculty of Dentistry, Department of Pediatric Dentistry, Kyushu University, Japan).

**Neuroscience/TMJ - Orofacial Pain**

**3001** Eugenol Inhibits Voltage-dependent Calcium Currents in Trigeminal Ganglion Cells. J.S. KIM*, S.B. OH, K. PARK, and J.H. LEE (Department of Physiology and Oral Biology, College of Dentistry, Seoul National University, Korea).

**3002** NMDA Antagonist MK-801 Modulates Cervical Spinal Cord Neuronal Responsiveness. M. SUNAKAWA*, Y. MATSUI, H. YAMAMOTO, and H. SUDA (Department of Endodontics, Faculty of Dentistry, Tokyo Medical and Dental University, Japan).

**3003** Morphine-reduced Fos-IR Neurons in Lower Brainstem Following Tooth Movement. Y. AIHARA*, T. MAEDA, and K. HANADA (Niigata University, Japan).

**3004** Neuropeptide Expression in the Inferior Alveolar Nerve Following Transection Injury. E. BIRD*, F.M. BOISSONADE, and P.P. ROBINSON (Department of Oral and Maxillofacial Surgery, University of Sheffield, UK).

**3005** Morphine Injection into TMJ Reduces TMJ-evoked Muscle Responses. M. BAKKE*, J.W. HU, and B.J. SESSLE (School of Dentistry, University of Copenhagen, Denmark; and Faculty of Dentistry, University of Toronto, Ontario, Canada).

**3006** Possible Role of CRF in Experimentally Induced Myositis in Rat Masseter Muscle. J. CARLESON*, I. BILEVICIUTE, A. KREICBERGS, M. AHMED, S. KOPP, B. APPELGREN, and T. LUNDEBERG (Departments of Physiology and Pharmacology, Center for Clinical Oral Science, Surgery and Rehabilitation, Orthopedics, Karolinska Institutet, Stockholm, Sweden).

**3007** Painful Conditioning of Motor-unit Reflex Behavior in Human Masseter Muscle. P. SVENSSON*, A.S. Mc MILLAN, T. GRAVEN-NIELSEN, K. WANG, and L. ARENDT-NIELSEN (Center for Sensory-Motor Interaction, Orofacial Pain Laboratory, Aalborg University; Royal Dental College, Aarhus University, Denmark; and University of Newcastle, UK).

**3008** Temporomandibular Joint Hyperalgesia in Relation to Systemic Neuropeptide Y, Serotonin, and Interleukin-1β in Rheumatoid Arthritis. P. ALSTERGREN*, M. ERNBERG, S. KOPP, A. SANDA, and T. LUNDEBERG (Department of Clinical Oral Physiology, and Department of Physiology and Pharmacology, Karolinska Institutet, Stockholm, Sweden).

**3009** External Validity of a Pain-related Disability Index in Chronic Orofacial Pain Patients. S.W. HARKINS, F.M. BUSH*, and W.G. HARRINGTON (TMJ-Orofacial Pain Center, Virginia Commonwealth University, Richmond, USA).

**3010** Character of Headache in Patients with Sleep Bruxism. A. SHEIKHOLESLAM and K. HOLMGREN* (Department of Clinical Research, Karolinska Institutet, Stockholm, Sweden).

**3011** Appearance of Painful or Non-painful Phantom Tooth after Tooth Extraction. R. JACOBS*, C. DE GEYSELEER, K. VAN LOVEN, A. DE LAAT, P. LAMBRECHTS, and D. van STEENBERGHE (Laboratory of Oral Physiology, Faculty of Medicine, Catholic University of Leuven, Belgium).

3013  Effects of Cyclosporin A on Growth and Differentiation of Rat Periosteum-derived Cells in vitro. T.-L. LEE*, L.-C. YANG, M.-D. HSU, and M.-Y. CHOU (Institute of Stomatology, Chung Shan Medical & Dental College, Taichung, Taiwan, ROC).

3014  Oral Lichen Planus, Hepatitis C Virus Infection, and Autoimmunity. D. CONROTTO*, M. CARROZZO, S. GANDOLFO, G. LODI, M. CARBONE, and S.R. PORTER (Department of Oral Medicine, University of Turin, Italy; and Eastman Dental Institute, University of London, UK).


3018  Pre- and Post-treatment Outcome Measures in Patients with Orofacial Granulomatosis. J. GIBSON*, A. FORSYTH, and D. WRAY (Glasgow Dental School and Glasgow Royal Infirmary, UK).

3019  Identifying Markers of Systemic Disease in Patients with Orofacial Granulomatosis. J. GIBSON, G. SMITH*, D. WRAY, and A. FORSYTH (University of Glasgow Dental Hospital and School and Glasgow Royal Infirmary, UK).

3020  The Study of Lymphocyte Subsets in Patients with Oral Tumors. Y. HU* and S.N. ZHANG (The Stomatology Hospital of Guang Dong Province, Guang Zhou, People’s Republic of China).

Seq#: 273  Saturday, June 27, 11:15 am - 12:45 pm
Poster Session, Exhibit Hall
Experimental Pathology - Histopathology

3021  An Immunopathological Study of Lymphoid Malignancies in Waldeyer’s Ring. E.J.G. NORVAL* and I.O.C. THOMPSON (Dental Faculty, University of Stellenbosch, South Africa).

3022  Type XVIII Collagen in Oral Lichen Planus and Squamous Cell Carcinoma. T. KAINULAINEN*, T. SALO, T. PIHLAJANIELMI, and M. REHN (Oral and Maxillofacial Surgery, and Medical Biochemistry, University of Oulu, Finland).

3023  Langerhans Cells in OLP and GVH Express CD80 and CD86. B. HASSÉUS*, U.I. DAHLGREN, P. JOHANSSON, and M. JONTELL (Departments of Endodontology/Oral Diagnosis and Clinical Immunology, Göteborg University, Sweden).

3024  The Immunohistochemical Localization of Lysyl Oxidase in Oral Submucous Fibrosis and Squamous Cell Carcinoma. C. TRIVEDY*, S. WARNĀKULASURIYA, P. SOMMER, V.K. HAZAREY, and N.W. JOHNSON (Department of Oral Medicine & Pathology, King’s College School of Medicine and Dentistry, London, UK; Unite de Pathologies des Fibres, Institut Pasteur De Lyon, France; and Department of Oral Pathology, Nagpur Dental School, India).

3025  Retroviral Transduction to Study Interactions between Normal and Malignant Oral Keratinocytes. I.C. MACKENZIE* (School of Dentistry, University of Michigan, Ann Arbor, USA).
Role of Apoptosis-associated Genes in Keloid Formation. D.V. MESSADI*, A. JEWETT, A. LE, S. BERG, and C.N. BERTOLAMI (University of California, Los Angeles and San Francisco Schools of Dentistry, USA).

Temporomandibular Joint Cells Mediate Matrix Metalloproteinase Activation. L.J. WINDSOR*, M.D. WILSON, H.Q. TRUMMELL, and G.J. HARBER (Department of Biochemistry and Molecular Genetics, University of Alabama at Birmingham, USA).

Generation of Transgenic Mice Coding a Mutagenic Peptide of HSV-1. V.A. MURRAH* and E.P. GILCHRIST (Emory University School of Medicine, Atlanta, GA, USA).


Ossifying Fibroma and Juvenile Ossifying Fibroma: Expression of PCNA and AgNOR. S.B.C. TARQUINIO*, M.G. DOMINGUES, A.L.L. COSTA, E. SANTOS, and V.C. ARAUJO (São Paulo Dental School, University of São Paulo, Brazil).

Immunohistochemical Localization of Parathyroid-hormone-related Protein in Oral Leukoplakia. M. KATAGIRI*, M. TSUCHIMOCHI, and A. KAMETÁ (Department of Oral Pathology and Department of Oral & Maxillofacial Radiology, The Nippon Dental University, School of Dentistry at Niigata, Japan).

Pathogenicity of Venezuelan Smokeless Tobacco. P. JARPA*, P.W. WERTZ, and D. DRAKE (Centro de Investigaciones Odontológicas, Facultad de Odontología, ULA, Mérida, Venezuela; and Dows Institute for Dental Research, College of Dentistry, University of Iowa, USA).

Effect of Heat during Paraffin Wax Processing on Subsequent Immunocytochemistry. B. GIDDINGS*, R.T. ALLISON, and A.J.C. POTTS (Department of Oral Surgery, Medicine & Pathology, University of Wales College of Medicine, Cardiff, UK).


Residual Reaction to Silver Amalgam in Human Teeth Periapical Tissues. H.M. CAPISTRANO* and A.A. GARROCHO (Faculdade de Odontologia, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil).

Fibronectin (Fn) and Laminin (Lm) Expression in Salivary Pleomorphic Adenoma (SPA). M. LUO* and B. ZHONG (Shanghai Tiedao University School of Stomatology, China).

Immunohistochemical Study of the Masseter Muscle of mdx Mice. S. ABE*, K. GOJYO, H. WATANABE, Y. IDE, and Y. SHIMADA (Oral Health Science Center, Department of Anatomy, and Ultrastructural Science, Tokyo Dental College; and Department of Anatomy, Chiba University School of Medicine, Japan).

Proliferating Cell Nuclear Antigen in Ameloblastomas and Odontogenic Cysts. G. PETRONE*, M. PIATTELLI, C. RUBINI, M. FIORONI, A. SCARANO, and A. PIATTELLI (Dental School, University of Chieti; and Dental School, University of Ancona, Italy).

Immunohistochemical Expression of Laminin in Ameloblastomas. S. TETÉ*, A. SCARANO, C. RUBINI, M. FIORONI, M. PIATTELLI, and A. PIATTELLI (Dental School, University of Chieti; and Dental School, University of Ancona, Italy).
Overexpression of bcl-2 Protein in Ameloblastoma. L. PITASSO*, M. PIATTELLI, M. FIORONI, C. RUBINI, A. SCARANO, and A. PIATTELLI (Dental School, University of Chieti; and University of Ancona, Italy).

Three-dimensional Reconstruction of the Rat Incisor Periodontal Space Vascular Systems. M.A. EL-AGROUDI*, N.J. SELLISETH, and K.A. SELVIG (Departments of Dental Research and Orthodontics and Facial Orthopedics, Faculty of Dentistry, University of Bergen, Norway).


Ascorbic Acid Enhances Collagenase Expression in Human Periodontal Ligament Cells. M. SHIGA*, Y.L. KAPILA, and S. KAPILA (Departments of Growth & Development and Stomatology, University of California-San Francisco, USA).

Eruption of Permanent Teeth in Schoolchildren in East London, UK. A.H. BROOK, J.M. SMITH, and R.N. SMITH* (Department of Child Dental Health, Sheffield University; and Department of Child Dental Health, Queen Mary College, London, UK).


Effect of cAMP on Mitotic Activity of Alveolar Bone in Tissue Culture. A. TUHKANEN* and E. LEIBUR (Department of Stomatology, University of Tartu, Estonia).


Destruction of Developing Tooth Germs in PTHrP-Gene-deficient Mice. Y. KITAHARA*, Y. TAKANO, N. SUDA, T. KURODA, V. HAMMOND, P. SENIOR, and F. BECK (Tokyo Medical & Dental University, Japan; and Howard Florey Institute of Experimental Physiology and Medicine, Melbourne, Australia).

Etiology of Delayed Eruption of a First Permanent Molar. T. OOSHIMA*, K. NAKANO, and S. SOBUE (Department of Pedodontics, Osaka University Faculty of Dentistry, Japan).

Effect of Mechanical Stress on Matrix Metalloproteinases Expression in Synovial Fibroblast. S. OHYAMA*, T. USHIDA, T. TATEISHI, and K. KOBAYASHI (Nihon University School of Dentistry at Matsudo, Chiba, Japan; and Institute of Medical Research, Graduate School of Medicine, University of Tsukuba, Ibaraki, Japan).

The Thickness Perception of a Single Pair of Teeth. M. UCHIDA*, M. OIZUMI, T. SUZUKI, and S. ENOMOTO (Tokyo Medical and Dental University; and Enomoto Dental Office, Tokyo, Japan).

The Permeability of Rat Sublingual Mucosa to Lanthanum Nitrate. B. KÖNIG, Jr., T.S. MASUKO*, and I. WATANABE (Department of Anatomy, ICB; and Department of Morphology, School of Dentistry, SJC, University of São Paulo, Brazil).
Longitudinal Post-eruptive Mandibular Tooth Movements of Males and Females. E. WATANABE*, A. DEMIRJIAN, and P.H. BUSCHANG (Nagasaki University, Japan; Université de Montréal, Québec, Canada; and Baylor College of Dentistry-TAMUS, Dallas, TX, USA).


Tooth Movement to the Newly Generated Bone Induced by rhBMP-2. T. KAWAMOTO*, N. MOTOHASHI, M. OGAWA, A. NUNOTA, T. FUKAYA, K. MORIYAMA, Y. BABA, S. SUZUKI, and T. KURODA (Tokyo Medical and Dental University and Tokushima University, Japan).

Prevalence of the Palatally Displaced Canine in 47,XXY Males. Z. KAI´C*, A. ABULWEFA, J. STEFANAC-PAPI´C, H. BRKI´C, and Z. POJE (School of Dental Medicine, University of Zagreb, Croatia).


Speech and Language in CLP Children with Late Palatoplasty. R. SCHÖNWEILER*, J.A. LISSON, B. SCHÖNWEILER, and A. ECKARDT (Departments of Communication Disorders, Orthodontics, and Maxillofacial Surgery, Hannover Medical School, Germany).

The Post-extraction Sides: The Use of Titanium Membranes. M. QUARANTA*, L. MALCHIODI, F. DI FELICE, A. DI FELICE, and A. SCRASCIA (Dental School, La Sapienza, University of Rome; Dental School, University of Chieti; Lanciano Hospital, Italy).

Some Effects on the Jaws of the Yakushima Makaques (Macaca fuscata yakui) in Man-made Environment. M. ABE*, K. TOYA, T. TAKIZAWA, S. KOBAYASHI, H. TAKEMOTO, and N. SHIGEHARA (Department of Orthodontics, Nihon University School of Dentistry at Matsudo; Japan Monkey Centre and Primate Research Institute, Kyoto University, Japan).

The Influence of Orthodontic Treatment on Functional Status of the Stomatognathic System. O. BERNHARDT*, N. SIDAL, A. KOLK, and G. MEYER (School of Dentistry, University of Greifswald, Germany).

Early Syndrome Detection in Cleft Palate by Dermatoglyphic Patterns. C. PAGANELLI*, S. BONETTI, L. VISCONTI, and V. MERULLA (Dental Clinic, University of Brescia, Italy).


Tongue Movement and Genioglossus Muscle Activity during Swallowing in Anterior Open Bite. T. ONO*, S. HIYAMA, S. TSUIKI, F. NAKAGAWA, K. IGARASHI, Y. ISHIWATA, and T. KURODA (Tokyo Medical and Dental University, Japan).

Characteristics and Immunolocalization of Proteoglycans in Rat Mandibular Condylar Cartilage. N. SASAKI*, K. KAKUDO, A. KAMADA, and R. SHIRASU (First Department of Oral and Maxillofacial Surgery, Second Department of Oral and Maxillofacial Surgery, and Department of Biochemistry, Osaka Dental University, Japan).
Seq#: 277  Saturday, June 27, 2:15 pm - 5:00 pm
Symposium, Hermes Room

Salivary Research and Microbiology/Immunology  Groups - Antiviral Properties of Saliva

Chairpersons:  D.B. Ferguson and J.A. Beeley

3068  2:15  Opening Comments.

2:20  Proteins of Saliva - An Overview. J.A. BEELEY (Glasgow Dental Hospital, Scotland).

2:40  Antimicrobial Proteins of Saliva. G.B. PROCTOR (King’s College, London, UK).

3:00  HIV-1-Saliva Interactions. M.R. ROBINOVITCH (University of Washington, Seattle, USA).

3:30  Endogenous Salivary Inhibitors of HIV. D. SHUGARS (University of North Carolina, Chapel Hill, USA).

4:00  Antiviral Activity in Saliva. S.P. SWEET (Guy’s Hospital, London, UK).

4:30  Discussion.

Seq#: 278  Saturday, June 27, 2:15 pm - 5:00 pm
Symposium, Mobile 10 Room

Experimental Pathology Group - The Epithelial Basement Membrane: Recent Advances in Biology and Pathology
[Supported by Unilever Research]

Chairpersons:  S.J. Challacombe and D.M. Williams

3069  2:15  Opening Comments.

2:20  Basement Membranes in Relation to Oral Disease. L.R. EVERSOLE (University of California, Los Angeles, USA).


3:20  Recent Advances in Mucous Membrane Pemphigoid. J. SETTERFIELD (Guy’s Hospital, London, UK).

3:50  The Putative Role of Basement Membranes in Solid Tumors. T. KAINULAINEN (Oulu University Hospital, Finland).

4:20  Discussion.

Seq#: 279  Saturday, June 27, 2:15 pm - 5:00 pm
Oral Session, Risso 7 Room

Behavioral Sciences/Health Services Research - Pain and Fear—Clinical and Lab Studies

Chairpersons:  L. Touyz and S. Coldwell
2:15 Relationship between Stress/Pain Levels and Neuroendocrine/Immune Function. H. LOGAN*, S. LUTGENDORF, D. LUBAROFF, S. VINCENT, and E. RIVERA (University of Iowa, Iowa City, USA).


2:45 One-year Follow-up Study of Patients Treated for Dental Fear. T. WILLUMSEN* and O. VASSEND (University of Oslo, Norway).

3:00 A Longitudinal Study of Dental Anxiety among Women in Göteborg, Sweden. C. HÄGGLIN*, M. HAKEBERG, and U. BERGGREN (Department of Endodontology and Oral Diagnosis, Göteborg University, Sweden).

3:15 Psychophysiology of Dental Phobic Patients with Different Etiologies. U. BERGGREN*, J. LUNDGREN, and S.G. CARLSSON (Department of Endodontology & Oral Diagnosis, Faculty of Odontology, and Department of Psychology, Göteborg University, Sweden).

3:30 The CFSS-DS: A Factor Analytic Study in The Netherlands. M. TEN BERGE*, J.S.J. VEERKAMP, J. HOOGSTRATEN, and P. PRINS (Academic Centre for Dentistry Amsterdam; Centre for Special Dental Care; and Faculty of Psychology, Amsterdam, The Netherlands).


4:00 Pain Reduction by Post-operative Telephone Calls. L.Z.G. TOUYZ* and S. MARCHAND (Faculty of Dentistry, McGill University, Montreal; and Université de Québec à Temeschemi, Rouyn, QC, Canada).

4:15 Effects of Three Treatment Modes for Highly Anxious Dental Patients. I.H.A. AARTMAN*, A. DE JONGH, and P.C. MAKKES (Academic Centre for Dentistry and Centre for Special Dental Care, Amsterdam, The Netherlands).

4:30 The Effect of Dental Anxiety and Perception Control on Pain Experience during Diagnostic Tooth Pulp Stimulation. R. MILLER*, Y. BAR-TAL, and I. ELI (School of Dental Medicine and School of Health Professions, Tel Aviv University, Israel).

4:45 Discussion

Seq#: 280 Saturday, June 27, 2:15 pm - 5:00 pm
Oral Session, Risso 8 Room
Cariology - Fluoride; Dentifrices; Slow Release; Diet
Chairpersons: K. Sjögren and K. Toumba


3083 3:00  In situ Comparison of Conventional Fluoride and “Remineralizing” Toothpastes. R.V. FALLER*, S.L. EVERSOLÉ, S.A. KELLY, L.L. LUKANTSOVA, and A.J. DUNIPACE (Procter and Gamble Company, Cincinnati, OH; and OHRI, Indianapolis, IN, USA).


3086 3:45  Tooth-bound Fluoride’s Effect on Enamel Demineralization in vitro. L.C. CHOW*, S. TAKAGI, and H. LIAO (Paffenbarger Research Center, NIST, Gaithersburg, MD, USA).

3087 4:00  The Effect of Tea Drinking in a Chinese Way on Fluoride in Plaque and Saliva. X.J. GAO*, L. YUE, Y.M. DONG, and R.M. DUCKWORTH (School of Stomatology, Beijing Medical University, China, ROC; and Unilever Dental Research, Bebington, UK).

3088 4:15  A New Method to Determine Total Fluorine in the Diet. A.J. LOUW* and S.R. GROBLER (Department of Community Dentistry and Oral and Dental Research Institute, University of Stellenbosch, Tygerberg, South Africa).

3089 4:30  Fluoride Supplementation and Monitoring through Urine Analysis, Kuwait. G. GILLESPIE*, R.E. MORRIS, S.K. SUKATHAN, M. CONDON, M. DESOUKY, S. NAJADA, N. MAJED, S. MUTAWA, B. MAHMEED, and J. HARDISON (Ministry of Health and Faculty of Medicine, Kuwait University; University of Kent, Lexington, USA).

3090 4:45  Initial Evidence of Intervertebral Fluoride Retention after Sonic or Manual Toothbrushing. K. SJÖGREN* (Department of Cariology, Faculty of Odontology, Göteborg University, Sweden).

Seq#: 281 Saturday, June 27, 2:15 pm - 5:00 pm
Oral Session, Athena Room

Craniofacial Biology - Craniofacial Morphology and Functional Aspects

Chairpersons: H. Slavkin and E. Richardson

3091 2:15  Muscular Underdevelopment in Relation to Bony Hypoplasia in Hemifacial Microsomia. C.E. FISCHER*, F.W. ZONNEVELD, J.M. VAANDRAGER, and B. PRAHL-ANDERSEN (ACTA, Department of Orthodontics; University Hospital Rotterdam, Department of Radiology; Sophia Children's Hospital, Rotterdam, Department of Plastic and Reconstructive Surgery, The Netherlands).


3093 2:45  Dental Strain During Trumpet Performance. B. LAPATKI*, I. JONAS, and H.F. KAPPERT (Department of Orthodontics and Department of Experimental Dentistry, School of Dental Medicine, University of Freiburg i. Br., Germany).

3094 3:00  Intensive Chewing and Chewing Training on Masseter Muscle Thickness. I. GEORGIASKAKI* and S. KILIARIDIS (Departments of Orthodontics, Göteborg University, Sweden; and Prosthetic Dentistry, Aristotle University of Thessaloniki, Greece).

3096 3:30 Fine Motor Control, Occlusion, and Speech from 7 to 15 Years of Age. M.T. LAINE-ALAVA* and R.H. PAHKALA (Orthodontics Graduate Program and Department of Physiology, University of Kentucky, Lexington, USA; and Department of Orthodontics, University of Kuopio, Finland).


3098 4:00 Excursive Condylar Kinematics of Unilateral Posterior Crossbite Patients. P.H. BUSCHANG*, A. SANTOS-PINTO, G.S. THROCKMORTON, and H. HAYASAKI (Baylor College of Dentistry, The Texas A&M University System, Dallas, USA).


3100 4:30 Condylar Position and EMG Activity during Clenching in Children with Posterior Cross-bite. C. MARTIN*, J.A. ALARCON, M.G. ORSINI, T. KUBOKI, and J.C. PALMA (Faculty of Odontology, University Complutense, Madrid, Spain; and Okayama University Dental School, Japan).

3101 4:45 Anterior Cranial Base Compared with Height in Females and Males. E.R. RICHARDSON* and S.K. MALHOTRA (Meharry Medical College, Nashville, TN, USA).

Seq#: 282 Saturday, June 27, 2:15 pm - 5:00 pm
Oral Session, Room 5

Dental Materials - Adhesion—Bond to Ceramics, Metals, Orthodontics, General

Chairpersons: S. Hatibovic-Kofman and L. Casa de'Martinis

3102 2:15 Efficacy of Acid or Sodium Salt Forms of N-arylglycines on Dentin Bonding. T. NIKAIDO*, J.M. ANTONUCCI, J.E. CODE, G.E. SCHUMACHER, and J. TAGAMI (Tokyo Medical and Dental University, Japan; NIST and ADAHF/PRC, Gaithersburg, MD; and USMMA, Kings Point, NY, USA).


3105 3:00 Sheer Bond Strength of a Resin Cement to Surface-treated Alloys. C.T. BOTHA*, I.C. du PREEZ, and M.R. FERREIRA (Medical University of Southern Africa, Pretoria, RSA).

3106 3:15 Bonded Amalgam Restorations: Three-year Clinical Results. Z. MACH, T. RUZICKOVA, M. STANINEC*, and J.C. SETCOS (Institute for Dental Research, Prague, Czech Republic; University of California, San Francisco, USA; and University of Manchester, UK).

3:30 Discussion

3108 3:45 Bond Strength of Orthodontic Brackets Using a New Self-etching Bonding System. I. GRAF*, B. KAHL-NIEKE, and C.W. SCHWARZE (Dental School, University of Cologne, Germany).

3109 4:00 Bond Strength: Comparison between Mesh and Laser-sculpted Bases. O. SOREL*, R. ALAM, and G. CATHELINEAU (Laboratoire de Biomatériaux en Site Osseux, Rennes, France).

3110 4:15 Effects of Dentin Primers on Fluid Flow of Human Serum through Dentin. L. CASA dé MARTINI*, M. BAZZUCCHI, G. MORI, and G. GORACCI (Department of Operative Dentistry, University of Rome "La Sapienza", Italy).
3111  4:30  Retention of Adhesive Cement on Root Surface Following Crown Cementation. C.A. MITCHELL*, M.R. PINTADO, and W.H. DOUGLAS (School of Dentistry at The Queen’s University of Belfast, Northern Ireland; and University of Minnesota, USA).

3112  4:45  Stress Relief Effects of the Thickness of Adhesive Layer on Composite. K. NARIKAWA*, K. TSUTANI, K. YOSHIKAWA, and M. INOUE (Operative Dentistry, Osaka Dental University, Japan).

Seq#: 283  Saturday, June 27, 2:15 pm - 5:00 pm
Oral Session, Erato Room

Dental Materials - Cements—Physical Properties

Chairperson:  M. Wolff

3113  2:15  Leaching Process of Aluminosilicate Glasses Used in Glass-ionomer Cements. E.A.P. DE MAEYER* and R.M.H. VERBEECK (Department of Dental Materials Science, University Hospital, University of Ghent, Belgium).

3114  2:30  A Study of Setting Mechanisms of Glass-ionomer Materials. K.-H. CHUNG*, D.C.N. CHAN, and T.G. BERRY (Faculty of Dentistry, National Yang-ming University, Taiwan, ROC; and Department of Restorative Dentistry, Dental School, UTHSCSA, TX, USA).

3115  2:45  A Laboratory Investigation of Black Copper Cement. J. FOLEY*, D.J. EVANS, and C.H. LLOYD (Dundee Dental Hospital, University of Dundee, UK).


3118  3:30  Influence of Polyacid Concentration on the Fracture of Polyalkenoate Cements. E. de BARRA* and R.G. HILL (University of Limerick, Ireland).


3120  4:00  Fracture and Failure of Glass Poly(vinylphosphonate) Cements. B. FENNELL*, R.G. HILL, and A. AKINMADE (University of Limerick, Ireland; and Kemdent, Swindon, UK).

3121  4:15  Brushing Abrasion of Luting Cements under Neutral and Acidic Conditions. W. BUCHALLA*, T. ATTIN, and E. HELLWIG (Department of Operative Dentistry and Periodontology, University of Freiburg, Germany).

3122  4:30  Determination of the Effect of Carbamide Peroxide Bleach on the Surface Roughness of Fixed Prosthodontic Cements. M.S. WOLFF* and J. JOSEPH (State University of New York at Stony Brook, USA).

4:45  Discussion

Seq#: 284  Saturday, June 27, 2:15 pm - 5:00 pm
Oral Session, Room 4

Dental Materials - Clinical Trials—Adhesive Resins, Sealants, Caries Prevention

Chairpersons:  A. Boghosian and R.S. Vieira
Clinical Evaluation of a Filled Dentin Adhesive System: Five-year Results. A. BOGHOSIAN*, J. RICKER, and R. McCOY (Northwestern University Dental School, Chicago, IL, USA).

Clinical Evaluation of a “Simplified” Dentin Adhesive. M.F. BURROW and M.J. TYAS* (School of Dental Science, University of Melbourne, Australia).

Clinical Performance of Two Different Resin Sealants. E. YILDIZ*, C. DÖRTER, B.G. EFES, and F. KORAY (Department of Conservative Dentistry, Faculty of Dentistry, University of Istanbul, Turkey).


Evaluation of Caries Following Treatment with a Fluoride-releasing Sealant. J.S. TURPIN-MAIR* and D.M. GARDINER (School of Dentistry, Louisiana State University, New Orleans, USA).

Retention of Pit and Fissure Sealants: One-year Clinical Trial. F. FORNIELES, C. PEREZ-PONS*, A. GIU, M. TOLEDANO, and F. GARCIA-GODOY (University of Granada, Spain; and University of Texas at San Antonio, USA).

Retention of Fluoride-releasing Resins as Pit and Fissure Sealants: Six-month Clinical Trial. F. FORNIELES*, M. TOLEDANO, R. OSORIO, and F. GARCIA-GODOY (University of Granada, Spain; and University of Texas at San Antonio, USA).

Retention of Compomer Fissure Sealant: Evaluation after Twelve Months. D. GLAVINA*, M. MAJSTOROVIĆ, and I. ŠKRINJARIĆ (School of Dental Medicine, University of Zagreb, Croatia).

The Clinical Effects of Tea Polyphenol Varnish on Caries Prevention. X.P. FENG*, L.Y. LIU, and C.B. SHU (School of Stomatology, Shanghai Second Medical University, China).


An ROC Investigation into the Use of Fractal Image Compression. R.J. McCORMICK*, M. SHERRIFF, and N. MEREDITH (University of Bristol; and UMDS, London, UK).

Trei’s Cephalometric Analysis: A Statistical Approach. C. MADRID*, F. BOUCAYS, J. CASTEIGT, P. BORIANNE, and M. JAEGGER (Unity of Biometry Lab. of Biomaterials, University of Toulouse; and Unity of Modelization, CIRAD, Montpellier, France).
3136  3:00  Spatial Concordance of a 3-D Cephalometric Analysis of 29 Subjects. F. BOUCAYS*, R. LAFOSSE, C. MADRID, and J. TREIL (Unity of Biometry Laboratory of Biomaterials; Laboratory of Probabilities and Statistics, University of Toulouse; and Pasteur Clinic, Toulouse, France).

3137  3:15  PAR Index: A New Weighting System for Individual Malocclusion Classes. A.M. HAMDAN* and W.P. ROCK (University of Jordan, Amman; and University of Birmingham, UK).

3138  3:30  Correlation between Various Investigation Methods of Stomatognathic System Dysfunction. E. ANTONESCU* (Faculty of Stomatology, Department of Complete Denture, University of Medicine and Pharmacy, Iasi, Romania).


3140  4:00  Trial of Toluidine Blue as an Oral Cancer Diagnostic Aid. R.S. FELDMAN*, J.W. MOONEY, J. EPSTEIN, T.C. BAINBRIDGE, and N. ALLAIRE (VAMC, School of Dental Medicine, University of Pennsylvania, Philadelphia; Promedica Int., Newport Beach, CA, USA; and British Columbia Cancer Agency and Vancouver Hospital, Canada).

4:15  Discussion

Seq#: 286  Saturday, June 27, 2:15 pm - 5:00 pm
Oral Session, Mobile 9 Room
Implantology - General Clinical Studies
Chairpersons:  N. Meredith and I. Naert

3141  2:15  The Influence of Prosthesis Material on Implant Loading. An in vivo Study. J. DUYCK, I. NAERT*, H. VAN OOSTERWYCK, J. VANDER SLOTEN, M. DECOOMAN, and B. PUERS (Department of Prosthetic Dentistry, BIOMAT Research Group; Division of Biomechanics and Engineering Design; and Department of Electrotechnics, Division ESAT-MICAS, Catholic University, Leuven, Belgium).

3142  2:30  Peri-implant Findings of Non-axially vs. Axially Loaded Dental Implants. W. NIEDERMEIER* (School of Dental and Oral Medicine, University at Cologne, Germany).


3:00  Discussion

3144  3:15  Stability Measurements of Cranio-facial Implants Using Resonance Frequency Analysis. N. MEREDITH*, S.J. HEO, and L. SENNERBY (Oral and Dental Science Department, Bristol University, UK; and Biomaterials Department, Gothenburg University, Sweden).

3145  3:30  3-D Force Measurements in vivo on Maxillary Implants: Comparison of a Fixed Prosthesis and a Bar-retained Overdenture. R. MERICSKE-STERN*, F. FAHRLÄNDER, E. VENETZ, A.H. GEERING, and W. BÜRGIN (School of Dental Medicine, University of Bern, Switzerland).


3147  4:00  Prospective Clinical Evaluation of Telescope-attached Implant-supported Dentures. A. SCHULZ* and W. NIEDERMEIER (Department of Prosthetic Dentistry, University at Cologne, Germany).

4:15  Discussion


**Microbiology/Immunology - Antimicrobials/Treatments**

**Chairpersons: J. Klimek and M. Quirynen**

3148 2:15  *β*-lactamase Production and Antimicrobial Susceptibility of Oral Heterogeneous *Fusobacterium nucleatum* Populations from Young Children. E. KÖNÖNEN*, A. KANÉRVO, and H. JOUSIMIES-SOMER (National Public Health Institute, Helsinki, Finland; and University of Aarhus, Denmark).

3149 2:30  Cotransfer of ermF and tetQ Antibiotic Genes in Oral Bacteria. W.O. CHUNG*, K. YOUNG, Z. LENG, and M.C. ROBERTS (Department of Pathology, University of Washington, Seattle, USA).

3150 2:45  Exposure of *Candida albicans* to Sub-MIC of Chlorhexidine (0.12%) Oral Rinse Reduces Colonization of Porcine Oral Buccal Mucosa. A.L. CAIRO* and R.W. ROWLAND (University of Detroit Mercy, MI, USA).

3151 3:00  Factors Affecting *Streptococcus sanguis* Susceptibility to Amine and Inorganic Fluorides. J.V. EMBLETON*, H.N. NEWMAN, and M. WILSON (Department of Microbiology, Eastman Dental Institute, University of London, UK).


3154 3:45  C-terminal Peptide from Cathepsin G—Alpha Helical and Microbicidal. K.T. MIYASAKI*, A.J. WARING, and R.I. LEHRER (UCLA Dentistry and Medicine; and the Dental Research Institute, Los Angeles, CA, USA).


3157 4:30  Clinical and Microbiological Benefits of a One-stage Full-mouth Disinfection in Comparison with the Standard Treatment Strategy for Early-onset and Chronic Adult Periodontitis Patients. M. QUIRYNEN*, C. MONGARDINI, M. PAUWELS, J. VAN ELDERE, and D. van STEENBERGHE (Faculty of Medicine, Department of Operative Dentistry; Research Group for Microbial Adhesions, Catholic University, Leuven; and Department of Periodontology, Rega Institute, Belgium).

Mineralized Tissue - Cementogenesis, Cementum, Cartilage, Chondrocytes, Root Resorption

Chairpersons: H. Thomas and M. McKee

3159  2:15  Developmental Expression Pattern of Dentin Matrix Protein 1 during Cementogenesis. H.F. THOMAS*, R. RAYMOND, H. JIANG, J. CHEN, and M. MacDOUGALL (University of Texas Health Science Center at San Antonio, USA).

3160  2:30  Detection of Dentin Matrix Protein 1 and Dentin Phosphophoryn in Gingival Crevicular Fluid. R. SRINIVASAN, C. EVANS*, and A. GEORGE (Division of Oral Biology, Northwestern University Dental School; and Department of Orthodontics, University of Illinois at Chicago, USA).

3161  2:45  Quantitative Analysis of Osteopontin and Bone Sialoprotein in Cement Lines. M.D. McKEE*, T.T.T. NGUYEN, E. STOLLAR, and C.E. SMITH (Université de Montréal; and McGill University, Montréal, Québec, Canada).

3162  3:00  Presence of Enamel Proteins in the Developing Periodontal Ligament. D.D. BOSSHARDT* and A. NANCI (Center for Dental Medicine Basel, Department of PEK, Switzerland; and Faculty of Dentistry, Université de Montréal, Canada).

3163  3:15  Primary Human and Bovine Cementum-derived Cells in vitro. W.J. GRZESIK*, K. UZAWA, K. MITCHELL, and M. YAMAUCHI (Dental Research Center, University of North Carolina, Chapel Hill, USA).

3164  3:30  Inhibition of Acellular Cementum Formation in Mice Lacking the T-ALP Gene. W. BEERTSEN*, T. VANDENBOS, and V. EVERTS (Department of Periodontology, Academic Center for Dentistry Amsterdam, The Netherlands).

3165  3:45  Molecular Signaling Events Induced in Periodontal Cells by Cementum Components. A.S. NARAYANAN*, T. YOKOKOJI, K. IKEZAWA, and M. SAITO (Department of Pathology, University of Washington, Seattle, USA).

3166  4:00  The Sequence of Induction of Bone Marker Genes in Mechanically Stressed Periodontium. D. PAVLIN*, L. RAMIREZ, S.E. URIAS, and J. GLUHAK (University of Texas Health Science Center, San Antonio, USA).


3168  4:30  Ultrastructural Analysis of the Effects of Acid Etching on Cementum Surfaces. E. DREYER*, F. ALARCÓN, S. SÁNCHEZ, and A. OYARZÚN (Faculty of Odontology, University of Chile, Santiago).


Seq#: 289  Saturday, June 27, 2:15 pm - 5:00 pm
Oral Session, Risso 6 Room

Neuroscience/TMJ - Mandibular Biomechanics

Chairpersons: L.M. Gallo and M. Naeije

3170  2:15  Location of Four Mandibular Movement Reference Points. M. NAEJE, A. CATIC*, J.J.R. HUDDLESTON SLATER, and H. VERHEY (Department of Oral Function, ACTA, Amsterdam, The Netherlands; and Department of Fixed Prosthodontics, School of Dental Medicine, University of Zagreb, Croatia).
2:30 The Intra-individual Variation in Mandibular Condyle Kinematic Center Movement Traces. M. NAEIJE* and J.J.R. HUDDLESTON SLATER (Department of Oral Function, ACTA, Amsterdam, The Netherlands).


3:00 Incisal Chewing Patterns Characterized by Movement Coordination of Bilateral Condyles. K. SUMIYOSHI*, T. OGAWA, H. MASUDA, and K. KOYANO (Department of Removable Prosthodontics, Kyushu University, Fukuoka City, Japan).

3:15 Reduction of the Condyle-Fossa Distance during Isometric Biting. L.M. GALLO* and S. PALLA (Center for Dental and Oral Medicine and Maxillofacial Surgery, University of Zürich, Switzerland).

3:30 FEM Simulation of TMJ Disc Deformation. P.S. DONZELLI, R.M. O'BARA, R.L. SPIILKER*, L.M. GALLO, H.F. BAUMANN, and S. PALLA (Rensselaer Polytech. Institute, Troy, NY, USA; and University of Zürich, Switzerland).


4:00 The Reproducibility of Electronic Jaw Recordings. A. HUGGER*, S. VOGT, U. BERNTIEN, and U. STUTTGEN (Department of Prosthodontics, Westdeutsche Kieferklinik, and Institut für Experimentalphysik, Heinrich-Heine-University, Düsseldorf, Germany).

4:15 Orofacial Kinematics during Production of Consonants in Dysarthric Patients. Y.-H.P. CHUN*, W. ENGELKE, T. BRUNS, and P.W. SCHÖNLE (Department of Operative Dentistry, Charité, Humboldt University of Berlin; and Department of Oral Surgery, University of Göttingen; Schmieder Clinics, Allensbach, Germany).

4:30 Prediction of Masticatory Biomechanics in the Pig. G.E.J. LANGENBACH*, S. TENG, F. ZHANG, K. RAFFERTY, A.G. HANNAM, and S.W. HERRING (The University of British Columbia, Vancouver, Canada; and University of Washington, Seattle, USA).

4:45 Discussion
3184  3:15  Aberrant Shedding of L-selectin Detected in Early-onset Periodontitis. K. KATSURAGI*, S. TAKASHIBA, S. KOGOE, F. NISHIMURA, H. ARAI, and Y. MURAYAMA (Department of Periodontology and Endodontology, Okayama University Dental School, Japan).

3185  3:30  Connexin Expression in the Cells from Malassez' Epithelial Rest in vitro. T. INOUE*, H. HAMANO, S. HASHIMOTO, and M. SHIMONO (Department of Pathology, Tokyo Dental College, Chiba, Japan).


3187  4:00  Cytokine Response of Oral Epithelial Cells to Porphyromonas gingivalis Infection. J. SANDROS*, D.F. LAPPIN, P.N. MADIANOS, D.F. KINANE, and P.N. PAPAPANOU (Faculty of Odontology, Göteborg University, Sweden; and Dental School, University of Glasgow, UK).


3189  4:30  Altered Maturation of Proteases in an Avirulent Mutant of P. gingivalis. L.M. COLLINSON*, M. RANGARAJAN, and M.A. CURTIS (MRC Molecular Pathogenesis Group, Department of Oral Microbiology, SBRLSMD, UK).

Seq#: 291 Saturday, June 27, 2:15 pm - 5:00 pm
Oral Session, Mobile 11 Room

Periodontal Research-Pathogenesis - Cell:Factor Interactions and Model Systems

Chairpersons: N.Y. Karimbux and U. Skaleric


3191  2:30  Modulation of the Local Inflammatory Response to P. gingivalis in Subcutaneous Chambers by Immunization. Y. HOURI-HADDAD*, W.A. SOSKOLNE, A. HALABI, and L. SHAPIRA (Hebrew University-Hadassah, Dental Medicine, Israel).

3192  2:45  Free Radical Generation in Patients with Periodontal Disease. S. AL-MUBARAK*, S.G. CIANCIO, A. AL-SUWYED, W. HAMOUDA, and P. DANDONA (SUNY at Buffalo, NY; and Millard Fillmore Hospital at Buffalo, NY, USA).

3193  3:00  Relation among Dental Plaque, Salivary Nitrites, and Oral Nitric Oxide. S. CAROSSA, C. BUCCA*, P. COLAGRANDE, P. DOGLIO, G. RÖLLA, F. BASSI, P. PERA, and G. PRETI (Prosthodontic Department, Universities of Torino, Genova, and Bari; and Clinical Pathophysiology Department, University of Torino, Italy).

3194  3:15  In vivo Exposure to P. gingivalis Up-regulates Nitric Oxide but Suppresses TNFα Production by Cultured Macrophages. I. FROLOV, Y. HOURI-HADDAD, W.A. SOSKOLNE, and L. SHAPIRA* (Hebrew University-Hadassah School of Dental Medicine, Jerusalem, Israel).

3195  3:30  Molecular Cloning, Sequencing, Characterization, and Chromosomal Assignment of a Novel LPS-induced Responsive Element Regulating TNF-a Gene Expression. S. AMAR*, F. MYOKAI, S. TAKASHIBA, R. LEBO, and T. VAN DYKE (School of Dental Medicine, Boston University, MA, USA).

3196  3:45  Restraint Stress Modulates the Experimental Periodontitis in Rats. U. SKALERI et al. (Center for Dental Research, Faculty of Medicine, University of Ljubljana, Slovenia).
3197  4:00  Interactions between Periodontal Bacteria and Human Gingival Epithelial Cells. Y.W. HAN*, G.T.-J. HUANG, F.K. NGOK, S.K. HAAKE, P. CAMARGO, N.-H. PARK, and W. SHI (UCLA School of Dentistry and Dental Research Institute, Los Angeles, CA; Department of Oral Biology, School of Dental Medicine, SUNY at Buffalo, NY, USA).


3199  4:30  Biological Effects of Adenosine on Gingival Fibroblasts. S. MURAKAMI*, T. HASHIKAWA, T. NOZAKI, T. SAHO, Y. SHIMABUKURO, and H. OKADA (Department of Periodontology and Endodontology, Osaka University Faculty of Dentistry, Japan).

4:45  Discussion

Seq#: 292  Saturday, June 27, 2:15 pm - 5:00 pm
Oral Session, Thalie Room

Periodontal Research-Pathogenesis - Tobacco and Periodontal Health

Chairpersons: A.J. Van Winkelhoff and J. Shiloah

3200  2:15  The Incidence of Pathogenic Periodontal Microflora in Young Healthy Adult Smokers. M.B. WARING, J. SHILOAH*, and M.R. PATTERS (Department of Dental Hygiene and Department of Periodontology, University of Tennessee, Memphis, USA).

3201  2:30  Differences in Periodontal Microbiota between Smokers and Non-smokers. A.J. van WINKELHOFF* and E.G. WINKEL (Academic Centre for Dentistry, Amsterdam, The Netherlands).


3203  3:00  The Effect of Smoking on Supragingival Plaque. H. KAWAMURA*, H. ITO, N. ASAKI, Y. SAITO, and K. KAMOI (Department of Periodontology, Nippon Dental University, Tokyo, Japan).


3205  3:30  Effect of Nicotine Solution on Rat Gingival Tissue. J. LAHMOUZI*, F. SIMAIN, M.P. DEFRESNE, and R. LEGRAND (Laboratory of Histology & Cell Culture, Department of Oral Surgery, Implantology, and Periodontology, University of Liège, Belgium).


4:15  Discussion

Seq#: 293  Saturday, June 27, 2:15 pm - 5:00 pm
Oral Session, Room C12

Prosthodontics - Articulation, Masticatory Function, Esthetics
Chairpersons: Y. Maeda and K. May

3208  2:15  Rise of Occlusal Interferences Resulting from Mean Setting of Articulators. P. PROESCHEL* and T. MORNEBURG (Department of Prosthodontics, University Dental Clinic, Friedrich-Alexander-Universität, Erlangen, Germany).

3209  2:30  To Evaluate the Three Face-bows’ Transfer Accuracy in a Chinese Population. C.H. HSU*, M.F. HUANG, C.T. KAO, and T. CHIANG (Chung Shan Medical & Dental College, Taichung, Taiwan).

3210  2:45  A Proposal for Evaluating Occlusal Contact Patterns during Lateral Excursion. T. OGAWA*, T. OGIMOTO, and K. KOYANO (Department of Removable Prosthodontics, Kyushu University, Japan).

3211  3:00  Prosthodontic Relationship of Po-N-ANS and FH-OP Angle in Ethnic Chinese. S.B. KENG* and K.W.C. FOONG (Faculty of Dentistry, National University of Singapore).


3213  3:30  Mandibular Incisor Position for English Consonant Sounds. C.A. BURNETT* and T.J. CLIFFORD (School of Dentistry, The Queen’s University of Belfast, Northern Ireland).

3214  3:45  Effect of Lip Muscle Training on Lip Muscle Strength. Y. MAEDA*, M. SOGO, Y. YONEHATA, and K. ISHII (Osaka University, Japan).

3215  4:00  Quantitation of Esthetic Guidelines for the Mucogingival Region. S. STUDER*, L. LIMPANAPA, P. SCHÄRER, and U.E. ZAPPA (Centers for Dental Medicine, Universities of Basel and Zürich, Switzerland).


4:30  Discussion

Seq#: 294  Saturday, June 27, 2:15 pm - 5:00 pm
Oral Session, Gallieni 3 Room

Pulp Biology - Pulpal Extracellular Matrix and Growth Factors

Chairpersons: C.T. Hanks and J. Moiseiwitsch

3217  2:15  Characterization of Small Proteoglycans in Bovine Dental Pulp. S. YAMAUCHI*, H. CHENG, and M. YAMAUCHI (Department of Endodontics, Periodontology, Dental Research Center, University of North Carolina at Chapel Hill, USA).

3218  2:30  Regulation of Osteocalcin Expression in Human Pulp Cells. H. SHIBA*, T. FUJITA, N. DOI, M. SAKATA, Y. KATO, and H. KURIHARA (Department of Endodontology & Periodontology and Department of Biochemistry, Hiroshima University School of Dentistry, Japan).

3219  2:45  Stability Analysis of Dentin Phosphoprotein. H. HE*, M.W. FAN, L.Y. CHEN, and Z. BIAN (College of Stomatology, Hubei Medical University, Wuhan, PRC).

3220  3:00  Induction of Reactionary Dentinogenesis in Rabbit by Dentin Non-collagenous Proteins. M.W. FAN*, H. HE, Z. BIAN, C.Z. LI, and Q. ZHANG (College of Stomatology, Hubei Medical University, Wuhan, PRC).
3221 3:15 ECM Components Up-regulate DSP, OCN, and OPN in MDPC-23 Cells. C.T. HANKS*, D. FANG, Z. SUN, C. BEGUE-KIRN, and W.T. BUTLER (University of Michigan, Ann Arbor; and M.D. Anderson Cancer Center and University of Texas HSC, Houston, USA).

3222 3:30 Fibroblast-like Cell Line Produced from the Dental Pulp Appears to be a Pericyte. J.R.D. MOISEIWITSCH* (School of Dentistry, University of North Carolina, Chapel Hill, USA).


3224 4:00 Solubilization of TGF-b1 by Dentin Conditioning Agents. A.J. SMITH* and G. SMITH (School of Dentistry, The University of Birmingham, UK).


3226 4:30 Organ Culture to Assess Pulpal Responses to Dental Restorative Materials. P.E. MURRAY*, P.J. LUMLEY, and A.J. SMITH (School of Dentistry, The University of Birmingham, UK).

4:45 Discussion
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