

**PERSONAL HISTORY**

**Name:** Jack Liborio Ferracane

**Place of Birth:** Chicago, Illinois

**Office Address:** Department of Oral Rehabilitation and Biosciences  
Oregon Health & Science University  
School of Dentistry  
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**EDUCATION:**

Northwestern University Evanston, Illinois	Doctor of Philosophy	1983	Biological Materials
Northwestern University Evanston, Illinois	Master of Science	1981	Biological Materials
University of Illinois Urbana, Illinois	Bachelor of Science	1978	Biological Sciences

**ACADEMIC, PROFESSIONAL AND ADMINISTRATIVE APPOINTMENTS**

January 2023 – present	Professor and Chair Oral Rehabilitation and Biosciences Oregon Health & Science University School of Dentistry
July 2003 – December 2022	Professor and Chair Restorative Dentistry Director, Division of Biomaterials and Biomechanics Oregon Health & Science University School of Dentistry
December 2006 – present	Honorary Professor School of Dentistry University of Birmingham United Kingdom
July 1999 – present	Adjunct Professor Department of Biomedical Engineering Oregon Health & Science University (Formerly OGI School of Science and Engineering)
July 1995 – June 2003	Oregon Health & Science University Professor and Chair

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IADR Network for Practice-based Research – Member (2015-present)  
 American Association for Dental Research (AADR, now AADOCR) - Member (1979 - present);  
 Fellow 2017; President 2016-2017  
 AADR (Dallas section) - Member (vice-President 1987-1988; President 1988-1989)  
 AADR (Portland section, now Oregon Section) - Member 1991 - present (President 1992-1993)  
 AADR Dental Materials Group Chapter - America (Member 1979 - 2006)  
 American Association of Dental Schools (AADS) - Member (1983 - 2000; ADEA 2005-current)  
 AADS (now ADEA) Biomaterials Section - Member (1988-1999)  
 American Institute of Medical and Biological Engineers (AIMBE Fellow; 2016 – present)  
 American Chemical Society - Polymer Chemistry Division - Affiliate Member (1997-2003)  
 American Society for Composites - Member (1985 - 1986)  
 Society for Biomaterials - Member (1979 - 1986)  
 Omicron Kappa Upsilon, Honorary Member, Delta Chapter (1991 - present)  
 Society for Experimental Mechanics (2001)  
 American Academy of Cariology (2020 – present)

### **HONORS, AWARDS AND RECOGNITIONS**

Attended graduate school on NIH/NIDR Training Grant DE 07042 - Northwestern  
 University - Department of Biological Materials, January 1979 - July 1983  
 First place in Young Investigators Research Award competition AADR - Chicago Section, April -  
 1983  
 Received unsolicited Grant-in-Aid from the 3M Foundation, April 1986 (\$3,500) and April 1993  
 (\$3,000), in recognition of research efforts  
 Elected to Omicron Kappa Upsilon, Honorary Dental Society, Honorary Member, Delta Chapter at  
 OHSU, 1991 (elected vice-President 1995-1996; served as President-elect 1996-1997;  
 President 1997-1998)  
 Nominated for OHSU Faculty Senate Research Award, 1998.  
 Elected Vice-President of the Academy of Dental Materials, 1995-1996; President 1996-1998.  
 OHSU Faculty Senate Award for Outstanding Leadership, June, 2001.  
 Received IADR Distinguished Scientist Award, the Wilmer Souder Award from the Dental  
 Materials Group of the International Association for Dental Research, 2006  
 Honorary Professor, University of Birmingham School of Dentistry, Birmingham, UK, 2006  
 Elected as Honorary Member, Oregon Dental Association, November, 2011  
 Received Founders Award, Academy of Dental Materials, October, 2012  
 OHSU Faculty Senate Research Award, June, 2013  
 Elected as Honorary Member, American College of Dentists, October, 2013  
 Elected Vice-President of the American Association for Dental Research, 2013 (Assumed  
 presidency March 2016)  
 Recipient of the Hollenback Memorial Prize from the Academy of Operative Dentistry, 2016  
 Elected Fellow, American Institute of Medical and Biological Engineers, 2016  
 OHSU Technology and Business Development Business Partnership Award, 2018  
 Named Editor-in-Chief of new ADA/Elsevier journal, JADA Foundational Science, 2020

### **COMMITTEE APPOINTMENTS & CONSULTANT POSITIONS**

#### **Oregon Health & Science University Institutional:**

1. School of Dentistry Research Committee; 1991 - present
2. Institutional Affairs - Dental School; 1991-1998 (Chairman 1992-1998); 2002 – 2009.
3. Faculty Senate; 1991 - 1997 (Faculty Welfare Committee; elected to Elections Committee; Chair of Elections Committee, 1994-1995; elected Secretary, 1995)
4. Ad-hoc Committee on Budget Recommendations, School of Dentistry; 1991
5. Academic Rank and Tenure; 1991 - 1994, 1997, 1998-1999 (ex officio); 2000 - present
6. Student Hearing/Dismissal; 1991; 1992; 1994; 1995 (Chaired Hearing); 2000; 2001; 2002 (Chaired Hearing); 2008 (Chair)
7. Accreditation Self-Study for Standard 7 (Research) and Standard 3 (Faculty and Staff - Chairman), 1993 - 1995
8. Research Ferment Reorganization Committee (Chair); 1993 - 2000
9. OHSU University Accreditation Self-Study for Section X. Scholarship and Research, 1994
10. ODA Centennial Professorship Search Committee; 1995
11. Accreditation Goal D Assessment Committee; 1994-1995 (Chair); 1997-1998; 2000
12. OHSU Information Technology; 1997-1998
13. OHSU Faculty Senate Research Committee; 1997-1998
14. OHSU Health Careers Connection; 1998
15. OHSU Information Technology Group Academic/Research Advisory Board; 1998-1999
16. OHSU Information Technology Group PPP committee (student web access); 1998
17. Dental Curriculum Committee; 1997-1999 (ex officio); 2001 - 2013
18. Dental Hygiene Curriculum Committee; 1997-1999 (ex officio)
19. Dental Competency Document Committee; 1998-1999
20. OHSU Vice President for Research Search Committee; 2000, 2001
21. OHSU School of Dentistry Accreditation Self-Study for Standard 2 (Faculty – chair) and Standard 1 (Institutional Effectiveness); 2002
22. Dental Admissions Committee; 2001 – 2003; 2022 - present
23. OGI School of Science and Engineering, Department of Biomedical Engineering Chair Search Committee, OHSU, 2002
24. Electronic Research Administration Steering Committee, OHSU, 2003-2004
25. Dental School Curriculum Task Force (Chair), 2004-2006
26. Dental School Strategic Change Committee (Chair), 2005-2008
27. OHSU Research Strategic Plan Committee, 2006-2007
28. OHSU School of Dentistry Clinic Committee, 2006 - 2015
29. OHSU School of Dentistry; Accreditation Self-Study for Standard 3 (Faculty – chair), 2009
30. OSLER Research Grant Review Committee, 2007, 2008, 2009
31. OCTRI Academy, OHSU, 2006 – 2009
32. OHSU Leadership Team, OHSU, 2007 – 2014
33. OCTRI Pilot Project Grant Review Committee, 2009
34. OHSU School of Dentistry; Accreditation Self-Study for Standard 3 (Faculty – chair), 2009
35. OHSU School of Dentistry Goal D – Scholarship Committee (Chair), 2010
36. OHSU Northwest Commission on Colleges and Universities, Learning Environment Theme Committee, 2011, 2012
37. OHSU CLSB Research Space Stakeholder Group, 2014-2020
38. OHSU Research Oversight Committee, 2014-2020
39. OHSU School of Dentistry Leadership, 2014-present
40. OHSU School of Dentistry Clinic Operations Committee, 2015-2020
41. OHSU School of Dentistry; Accreditation Self-study for Standard 3 (Chair) CODA Accreditation, 2016.

42. OHSU School of Dentistry; Curriculum Initiative Group, 2017-2018
43. OHSU School of Dentistry Search Committee for Chair of Oral and Maxillofacial Surgery (Committee Chair, 2021 – 2022)

### **Baylor College of Dentistry Institutional:**

1. Research Committee; 1988; 1986, 1985, 1984.
2. Ad Hoc Committee on Promotions and Academic Standards; 1986, 1985.
3. Scholarship Committee; 1988; 1987, 1986, 1985, 1984, 1983.
4. Ad Hoc Committee on Research at Baylor College of Dentistry; 1986.
5. Committee on Committees; 1988, 1987.
6. Teaching Committee; 1988, 1987.
7. Awards Committee; 1988.
8. Library Committee; 1988.

### **Consultantships/Association Committees:**

1. Member of task group, established by the Council on Dental Materials, Instruments and Equipment and the Accredited Standards Committee MD156 (American Dental Association), to determine the feasibility of developing a standard for posterior composites. Chairman of the subgroup established to rewrite a position paper for the task group (1984 - present)
2. Member of External Review Board for NIH/NIDR PO1 (Program Project) of Dr. J. David Eick, U. of Missouri - Kansas City School of Dentistry. 1991 - 2006.
3. Consultant to the Council on Scientific Affairs of the American Dental Association., 1995-present.
4. Member of External Review Board for NIST Interagency Agreement (Dental Polymers) for Dr. Francis Wong, NIST, Gaithersburg, MD. 1996 - 1999.
5. Member of External Advisory Board for NIH/NIDCR P20 (COBRE Grant) for Dr. Joseph Ferretti, Oklahoma U. Health Science Center. 2004 - 2008.
6. Member of External Advisory Board for NIH/NIDCR T32 Training Grant “Pre and Post Doctoral Training: UMKC School of Dentistry of Dr. J. David Eick. 2006 – present.
7. Review of the Oral Biology Program at the University of Missouri-Kansas City School of Dentistry – External Reviewer, April 2008.
8. ADA Professional Product Review Expert Panel: Posterior Composites, 2005; Flowable Composites, 2009.
9. Member (Chair) of the Academic Program Review of the Herman Ostrow School of Dentistry of the University of Southern California, February 2011.
10. Review of the Graduate Program in Oral and Craniofacial Sciences at the University of California – San Francisco, May, 2011.
11. Chair, Awards Committee, Dental Materials Group of the IADR (2011-2015)
12. Review of the MS in Oral Biology program at the University of Missouri Kansas City, March, 2013.
13. Member of the Annual Sessions Committee for the American Association for Dental Research, 2012-2013.
14. Blue Light Analytics, Scientific and Clinical Advisor, 2014.
15. Cochrane Oral Health Group – Restorative Specialty expert panel for title prioritization, 2014.
16. Member of IADR Search Committee for first Editor-in-Chief of Journal of Dental Research – Clinical and Translational Research, 2015
17. Member of ADA Blue Ribbon Panel to evaluate the Dr. Anthony Volpe Research Center at the

- National Institute of Standards and Technology and make recommendations for the future, 2016.
18. Member of IADR Search Committee for new Editor-in-Chief for Journal of Dental Research, 2019.
  19. Member of the HSDM (Harvard School of Dental Medicine) External Research Review panel, May 4-6, 2021.
  20. Appointed consultant to the Dental Products Panel, Center for Devices and Radiological Health, US Food and Drug Administration, 8-16-20 to 8-15-24.

## **SERVICE**

### **Publication Reviews/Editorial Boards:**

Advances in Dental Research, 1995  
 American Journal of Dentistry; 1991 - present (Editorial Board member 1997-present)  
 British Dental Journal, 1999  
 Dental Materials; 1985 - present (Editorial Board member 1992-present)  
 Dental Materials Journal; 2012 - present  
 Dental Product Shopper; 2007 – 2010  
 European Journal of Oral Sciences, 1997 - present  
 General Dentistry, 1995  
 Inside Dentistry, 2005-present (Research Board member)  
 International Journal of Oral and Maxillofacial Implants; 1986 - 1992 (Editorial Board member).  
 JADA Foundational Science, 2021 – present (Editor-in-Chief)  
 Journal of Adhesive Dentistry, 1999 - present (Editorial Board member)  
 Journal of Applied Oral Sciences; 2008 - present (Editorial Board member)  
 Journal of the Adhesion Society; 1992 - 1994.  
 Journal of the American Dental Association; 1991 - present.  
 Journal of Biomedical Materials Research; 1984, 1992, 2004, 2005 (Editorial Board Member, Part B: Applied Biomaterials, 2005 - present)  
 Journal of Dentistry, 1992 - present.  
 Journal of Dental Research; 1986 - present (Associate Editor 2010-2021; Editorial Board member 1997-2000)  
 Journal of Esthetic and Restorative Dentistry, 1998 - present (Editorial Board member)  
 Journal of Korean Academy of Conservative Dentistry, 2011 – present (Editorial Board member)  
 Journal of Macromolecular Science - Pure and Applied Chemistry, 1999  
 Journal of Materials Science, 1997 - 1998  
 Journal of Prosthetic Dentistry, 2018  
 Odontology, 2000 – 2020 (Associate Editor)  
 Operative Dentistry; 2001-present (Editorial Board member)  
 Plos 1, 2017 - present  
 Quintessence International, 1998 – present  
 Restorative Dentistry and Endodontics; 2011 – present (Editorial Board member)  
 Scanning Electron Microscopy; 1987 - 1993.  
 Science of the Total Environment, 1999

**Grant Reviews:**

1. NIH/NIDR Oral Medicine and Biology Study Section; assisted Dr. T. Okabe on review of three RO1 grant applications, 1984.
2. NIH/NIDR Postdoctoral Fellowship Award, September, 1986.
3. NIH/NIDR Oral Biology and Medicine Study Section 2. Reviewed two grants for Dr. T. Okabe, study section member, June, 1987.
4. NIH/NIDR Small Grant, August, 1987.
5. NIH/NIDR Special Study Section, Program Project Site Visit, November, 1987.
6. NIH/NIDR Special Ad Hoc Study Section Member, RO1 Grant Review, November, 1988.
7. NIH/NIDR Special Review Committee for Specialized Materials Science Research Center, May-June, 1989.
8. NIH/NIDR Special Study Section, Program Project Site Visit, February, 1990.
9. U. of Illinois School of Dentistry, Intramural Grant Application, 1991.
10. NIH/NIDR Special Grants Review Study Section, Adhoc 1986-1990; Member 11/90 - 6/94.
11. MRC - Dental Sciences (Canada), Ad Hoc grant review, 12/94; 5/95; 6/98; 11/98
12. NIH/NIDR Small Business Innovation Research Study Section, Adhoc November, 1995.
13. NIH/NIDR ZRG-4 GMA-1 (3) Special Emphasis Panel, March, 1996.
14. NIH/OMSD Study Section, April, 1997.
15. NIH/NIDR ARG4 GRM(05)M Special Study Section, July, 1997.
16. NIH/NIDR Oral Biology and Medicine Study Section 1; Washington DC, October, 1997.
17. NIH/NIDR Oral Biology and Medicine Study Section 2; Washington DC, February, 1998; October 1998; February 1999
18. NIH/NIDR Small Grant, February, 1998.
19. NIH/NIDCR Review of N.I.S.T. Interagency Agreement; Gaithersburg, MD, 9/99
20. Medical Research Council of Canada, Individual Grant Reviews, 1996, 1997, 2000, 2001, 2002
21. NIH/NIDCR Special Study Section, Program Project Reverse Site Visit (Rawls); August, 2001
22. NIH/NIDCR Review of Program Project Application, 8/01
23. NIH/NIDCR Special Grants Review Study Section, Adhoc member 2001, 2002, 2003, 2005, 2006
24. Natural Sciences and Engineering Research Council of Canada, Discovery Grant review, December 2005.
25. NIH/NIDCR Oral, Dental and Craniofacial Sciences Study Section, February, 2007 (ad hoc).
26. Medical College of Georgia, Intramural Grants Program, proposal review, June, 2007.
27. NIH/NIDCR Review of R25 Oral Health Research Education Grants, September 2007.
28. NSERC (Canada), Faculty Support Program grant review, January, 2008
29. NIH/NIDCR Review Loan Repayment Applications, April, 2008
30. NIH/NIDCR Oral, Dental and Craniofacial Sciences Study Section, June, 2008 (ad hoc).
31. NIH/NIDCR Oral, Dental and Craniofacial Sciences Study Section, September, 2008 (ad hoc).
32. NIH/NIDCR Special Grants Review Study Section, 2009
33. NIH/NIDCR Special Emphasis Panel, Conference Grants, 2010
34. NIH/NIDCR Oral, Dental and Craniofacial Sciences Study Section, January, 2011 (ad hoc)
35. NIH/NIDCR Oral, Dental and Craniofacial Sciences Study Section, January, 2012 (ad hoc)
36. NIH/NIDCR Oral, Dental and Craniofacial Sciences Study Section, January, 2013 (ad hoc)
37. NIH/NIDCR Oral, Dental and Craniofacial Sciences Study Section, January, 2014 (ad hoc)
38. NIH/NIDCR Oral, Dental and Craniofacial Sciences Initial Review Group, Member, October 2015 – June 2019

39. NFRFE-2019 – New Frontiers in Research Fund, Canada, January 2020
40. NIH/NIDCR, ZDE1 NB (21) Fellowship Application Review Meeting, March, 2020 (ad hoc)
41. NIH/NIDCR ZRG1 MOSS-Q 02M Review Meeting, March 29, 2022 (ad hoc)

### **Extramural Committees:**

1. AADS Biomaterials Section - Secretary 1988-1989; Chairman-elect 1989-1990; Chairman 1990-1991
2. Group Program Chair for the Dental Materials Group of the IADR for the 1991 meeting in Acapulco, Mexico, and 2006 meeting in Orlando, FL.
3. Elected and served as President-elect (1991-1992), President (1992 - 1993) and Immediate Past President (1993-1994) of the Dental Materials Group - Chapter American of the IADR, and President and past-President of the Dental Materials Group of the IADR (2006-2009).
4. Academy of Dental Materials - Member of Executive Board as DMG liaison, Elected to Member at Large 1994; Vice-President, 1995-1996; President 1996-1998; Secretary 2001
5. Member of the Hatton Awards Committee of the American Association for Dental Research (1992 - 1995). Chair of the committee from 1994-1995.
6. Dental Materials Group of the IADR, Abstract review committee, 1993; 1999, 2006, 2009, 2019, 2021.
7. Member of Journal of Dental Materials Associate Editor Search Committee – Biomaterials and Bioengineering section – 2005.
8. Dental Materials Group of the IADR, Symposia organizer and moderator (two symposia), 2010
9. Requested to serve as external evaluator for the Dental Materials Research Professorship – Eminent Scholars honor at the University of West Virginia School of Dentistry, 2015.
10. ADA Norton M. Ross Award selection committee, 2016.
11. Advocacy Day on Capitol Hill, representing AADR, Washington, DC, February 2016, 2017
12. ADA Collaboration, National Roundtable, AADR representative, Chicago, IL, November 2017, 2018
13. IADR Joint Publication Committee, 2020
14. AADOCR (formally AADR) Distinguished Scientist Award Committee and Irwin Mandel Committee, 2018-2022
15. AADR Mind the Future, Mentoring program inaugural year, Faculty mentor to Dr. Susana Salazar Marocho, University of Mississippi Medical Center, School of Dentistry, 2020-2021.
16. IADR Symposium organizer, 2021
17. AADOCR Symposium organizer, 2023
18. Served as external evaluator of the PhD dissertations of about twelve students in various countries (Australia , Brazil, Germany, Hong Kong, Netherlands, Singapore)
19. Served as external evaluator for the initial faculty appointment, promotion, application for tenure, or other job-related review for over 70 individuals at other academic institutions.

### **Community Activities**

Lector for St. Cecilia Catholic Church, Beaverton, OR (1989 - present)  
 St. Cecilia Catholic Church Men's Club, Beaverton, OR (1990 – present)  
 Sunday Offering Counting Team, St. Cecilia Catholic Church, Beaverton, OR (2001 – 2020; Captain)  
 St. Cecilia Catholic Church Facilities Review committee, Beaverton, OR (2006 – 2009)



St. Cecilia Catholic Church Pastoral Council, Beaverton, OR (2013-current)  
 St. Cecilia Catholic Church Caring Ministry co-chair, Beaverton, OR (2018-present)  
 Coach - Tualatin Hills Park District Boys Basketball, Beaverton, OR (1992-1994)  
 Coach - Tualatin Hills Park District Boys Soccer, Beaverton, OR (1993-1997)  
     current status = "E" license  
 Coach - Murrayhill Baseball Little League, Beaverton, OR (1992-1997)  
 Mentor for Minority High School Students Research Apprentice Program (1991; 1993; 1997)  
 Moderator for Apprenticeships in Science and Engineering Research Day, Portland State University, August, 1999  
 Coach – Tualatin Hills Park District Soccer, Beaverton, OR (2002)  
 Mentor for High School Student Research Project, Emma Jeffries, Columbia River High School, Vancouver, WA (2005-2006)  
 Volunteer, Mission of Mercy, Portland, OR, November 2010, 2011, 2013  
 Volunteer, Oregon Special Olympics, Newberg, OR, 2014

## **PRESENTATIONS**

### **Papers and Presentations - International:**

1. Ferracane, J.L. and Greener, E.H.: Comparative Study of the Rheology of Acrylic Bone Cements. Presented at the 33rd Annual Conference on Engineering in Medicine and Biology, Washington, D.C., October 1980. Abstract #83
2. Ferracane, J.L.; Newman, S. and Greener, E.H.: Correlation of Strength and Degree of Polymerization of Unfilled Bis- GMA. Presented at the International Association for Dental Research meeting, New Orleans, LA, March 1982. Abstract #832.
3. Greener, E.H. and Ferracane, J.L.: Anodic Polarization of Amalgams in Artificial Saliva - Film Formation. Presented at the International Association for Dental Research meeting, New Orleans, LA, March 1982. Abstract #635.
4. Ferracane, J.L. and Greener, E.H.: Correlation Between Mechanical Properties and Conversion in Unfilled Bis-GMA Resins. Presented at the International Association for Dental Research meeting, Dallas, TX, March 1984. Abstract #544.
5. Ferracane, J.L.: Correlation Between Hardness and Degree of Conversion During the Setting Reaction of Unfilled Restorative Resins. Presented at the Second World Congress on Biomaterials, Washington, D.C., May 1984. Abstract #138.
6. Ferracane, J.L.; Matsumoto, H. and Okabe, T.: Time- Dependent Deformation of Composite Resins - Compositional Considerations. Presented at the International Association for Dental Research meeting, Las Vegas, NV, March 1985. Abstract #484.
7. Ferracane, J.L.; Antonio, R.C. and Mathis, R.S.: Effect of Conversion and Solvents on Yield and Fracture of Composites. Presented at the International Association for Dental Research meeting, Chicago, IL, March 1987. Abstract #1112.
8. Ferracane, J.L.: Crack Resistance and Propagation Mode in Dental Composites Determined by Indentation and SEM. Presented at the Materials Research Society Fall Meeting, Boston, MA, December 1987. Abstract #M12.6.
9. Ferracane, J.L. and Antonio, R.C.: Fracture Toughness and Compressive Yield of Aged Experimental Dental Composites. Presented at the International Association for Dental Research meeting, Montreal, Canada, March 1988. Abstract #1183.
10. Ferracane, J.L.: Fracture Toughness of Experimental Dental Composites. Presented at the Third World Biomaterials Congress, Kyoto, Japan, April 1988. Abstract #4B1-22.

11. Ferracane, J.L.; Marker, V.A. and Nelson, P.N.: Solvent Degradation and Reduced Fracture Toughness in Aged Composites. Presented at the International Association for Dental Research meeting, Dublin, Ireland, June 1989. Abstract #333.
12. Ferracane, J.L. and Condon, J.R.: Rate of Elution of Uncured Components from Composite Resins. Presented at the International Congress on Dental Materials, Honolulu, Hawaii, November 1989. Abstract #O44.
13. Ferracane, J.L.; Condon, J.R.; and Mitchem, J.C.: Measurement of Subsurface Defects Created During the Finishing of Composites. Presented at the International Association for Dental Research meeting, Cincinnati, Ohio, March 1990. Abstract #1230.
14. Ferracane, J.L. and Condon, J.R.: Degradation of Composites Caused by Accelerated Aging. Presented at the International Association for Dental Research meeting, Acapulco, Mexico, April, 1991. Abstract #1716.
15. Ferracane, J.L.; Condon, J.R.; and Suh, B.: Effect of Filler on Degree of Cure of Resin. Presented at the International Association for Dental Research meeting, Glasgow, Scotland, July 1992, Abstract #658.
16. Ferracane, J.L.; Hopkin, J.K.; and Condon, J.R.: The Properties of Heat-treated Composites After Aging. Presented at the International Association for Dental Research meeting, Chicago, IL, March 1993. Abstract #256.
17. Ferracane, J.L.; and Berge, H.X.: Fracture Toughness of Experimental Dental Composites After Aging in Ethanol. Presented at the Second International Conference on Dental Materials, Honolulu, HA, 1993, Abstract P-022.
18. Ferracane, J.L.; Condon, J.R.; and Suh, B.: Effect of Silane Functionality on Cure and  $K_{Ic}$  of Microfill Composites. Presented at the International Association for Dental Research meeting, Seattle, WA, March 1994. Abstract #1003.
19. Ferracane, J.L. and Berge, H.X.: Crack Propagation in Heat-treated Composites Using Double Torsion Testing. Presented at the Academy of Dental Materials meeting, South Hampton, Bermuda, 1994, Abstract P-06.
20. Ferracane, J.L.; Mitchem, J.C.; Condon, J.R.; Todd, R.; and Lamers, E.: Clinical Wear of Composites as a Function of Degree of Cure. Presented at the International Association for Dental Research meeting, Singapore, June 1995. Abstract #89.
21. Ferracane J.L.; Mitchem, J.C.; Condon, J.R.; and Todd, R.: Clinical Wear of Composites as a Function of Degree of Cure, Presented at the International Association for Dental Research meeting, San Francisco, March 1996. Abstract #851.
22. Ferracane J.L.; Mitchem, J.C.; Condon, J.R.; and Todd, R.: Wear of Composites with Varied Filler Level and Filler/matrix Adhesion, Presented at the International Association for Dental Research meeting, Orlando, March 1997. Abstract #1971.
23. Ferracane J.L. Water Sorption and Solubility of Experimental Dental Composites. Presented at the American Chemical Society meeting, Las Vegas, September, 1997.
24. Ferracane, J.L.; Condon J.R.; and Mitchem, J.C.: Correlating Abrasive Wear to Mechanical Properties of Experimental Dental Composites, Presented at the Third International Congress on Dental Materials, Honolulu, Hawaii, November, 1997, Abstract #A-21.
25. Ferracane, J.; Adey, J.; Wiltbank, K., Nakajima, H.; and Okabe, T.: Vaporization of Hg from Hg-In Amalgams During Setting and After Abrasion, Presented at the International Association for Dental Research meeting, Nice, France 1998. Abstract #1063.
26. Ferracane, J.L., Condon, J.R., Pham, B., and Mitchem, J.C.: Relating Composite Contraction Stress to Leakage in Class V Cavities, Presented at the International Association for Dental Research meeting, Vancouver, Canada 1999. Abstract #3016.
27. Ferracane JL, Robertson JR, Condon JR. Fracture Toughness of Hybrid Composites

- Containing Non-bonded Nanofillers, Presented at the International Association for Dental Research meeting, Chiba, Japan, June, 2001. Abstract #1312.
28. Ferracane JL, Ferracane LL, Braga RR. Effect of Admixed HDPE on Contraction Stress and Properties of Hybrid Composites, Presented at the International Association for Dental Research meeting, San Diego, CA, March, 2002. Abstract #963.
  29. Ferracane JL, Mitchem JC, Musanje L, Ferracane, LL, Todd RA. Clinical Wear of Hybrid Composites Containing Non-bonded Nanofillers, Presented at the International Association for Dental Research meeting, Gothenberg, Sweden, June, 2003. Abstract #2366.
  30. Ferracane JL. Fracture Mechanics of Dental Composites, Part of the Symposium on Fracture Mechanics and Enhanced Performance presented at the International Association for Dental Research meeting, Gothenberg, Sweden, June, 2003.
  31. Ferracane J, Egge A, Heintze S. Comparison of Antagonists for Producing Wear of Dental Composites in the OHSU Oral Wear Simulator, Presented at the annual meeting of the Academy of Dental Materials, Charleston, SC, October 26, 2001, Abstract #P15.
  32. Ferracane JL, Park JW. Method for Measuring Residual Stress in Dental Composites, Presented at the International Association for Dental Research meeting, Honolulu, HI, March, 2004. Abstract #56.
  33. Ferracane JL. Keynote Address: Is the Wear of Dental Composites Still a Clinical Concern? Presented at the International Association for Dental Research meeting, Honolulu, HI, March, 2004. Abstract #2860.
  34. Ferracane JL, Park JW. Early Cutting of Thin-walled Composite Rings Produces Higher Residual Stresses, Presented at the International Association for Dental Research meeting, Baltimore, MD, March, 2005. Abstract #291.
  35. Ferracane JL, Musanje, L, Randall, RC. Dentin and RMGIC Liners Reduce Composite Contraction Stress, Late Breaking News Abstract, Presented at the International Association for Dental Research meeting, Brisbane, Australia, June, 2006.
  36. Ferracane JL, Mitchell JC, Musanje L. Application Mode and Durability Evaluation of Biomimetic Dentin Desensitizer, Presented at the International Association for Dental Research meeting, Brisbane, Australia, June, 2006, Abstract #2455.
  37. Ferracane JL, Yamanaka, Y. Adhesion Affects Volumetric Contraction of Dental Composites in Mercury Dilatometer, Presented at the International Association for Dental Research meeting, New Orleans, Louisiana, March, 2007, Abstract #1611.
  38. Ferracane JL. Dental Composites, Glass Ionomers and Resin-modified Glass Ionomers: Which tests are useful for predicting clinical performance in posterior applications? Presented at the International Association for Dental Research meeting, New Orleans, Louisiana, March, 2007, Symposium.
  39. Ferracane JL, Ferracane LL. Novel Photo-initiator System (RAP) Enhances Dental Composite Properties, Presented at the International Association for Dental Research meeting, Toronto, Canada, July, 2008, Abstract #1610.
  40. Ferracane J, Khajotia S, Smart K, Ferracane L. Correlating Surface Gloss and Roughness for Abraded Commercial Composites, Presented at the Academy of Dental Materials annual meeting, Wurzburg, Germany, October, 2008, Abstract #28.
  41. Ferracane JL, Davis HB. RAP Initiator Improves Hardness and DC of Experimental Composites, Presented at the International Association for Dental Research meeting, Miami, Florida, USA, April 3, 2009, Abstract #1653.
  42. Ferracane J, Hilton T, Ortblad K, Leroux B, Lambert M, Faddis K, NW PRECEDENT. Reliability of Incidence Estimates – Pulp Cap Study in PRECEDENT. Presented at the

- International Association for Dental Research meeting, Barcelona, Spain, July 9, 2010, Abstract #1271.
43. Ferracane JL, Cooper PR, Smith AJ. Phosphoric Acid Released Dentin Matrix Components Affect Pulp Cell Behavior, Presented at the International Association for Dental Research annual meeting, San Diego, California, March 16, 2011, Abstract #155.
  44. Ferracane JL. Clinical Dental Research in the Trenches: The Northwest PRECEDENT Experience, Presented at the International Association for Dental Research annual meeting, San Diego, California, March 18, 2011, Symposium.
  45. Ferracane JL. What clinical behavior of resin-based composites can we predict from laboratory testing? Presented at the International Association for Dental Research annual meeting, Seattle, Washington, March 20, 2013. Symposium. Sponsored by the ADA, ADM and IADR-DMG.
  46. Ferracane, JL. The Challenges of Introducing New Materials into the Educational System, Presented at the International Association for Dental Research annual meeting, Seattle, Washington, March 20, 2013. Symposium.
  47. Ferracane JL. The Effect of Bacterial Biofilm on the Surface and Bulk Properties of Dental Composites Containing Bioactive Glass Additives. Presented at the International Association for Dental Research annual meeting, Seattle, Washington, March 23, 2013. Symposium.
  48. Ferracane JL and Salehi S. Dentin Matrix Components Extracted with Phosphoric Acid Enhance Cell Proliferation and Mineralization, Presented at the Academy of Dental Materials annual meeting, Vancouver, BC, October 12, 2013, poster #149.
  49. Ferracane J, Hilton T, Kruzic J, Khvostenko D, Salehi S, Gwinner F, Davis H, Mitchell J. Does Mechanical Loading affect Bacterial Penetration and Demineralization within Gaps? Presented at the International Association for Dental Research annual meeting, Boston, Massachusetts, March 12, 2015. Abstract # 0518
  50. Ferracane J. The Impact of Retrospective Basic, Translational and Clinical Research on Dentistry Today, presented at the International Association for Dental Research annual meeting, Boston, Massachusetts, March 11, 2015. Abstract # 0196. Student Research Group Symposium.
  51. Mbiya W, Navarro-Fernandez O, Huynh V, Ferracane JL, Pfeifer CS. Hydrolytic stability of novel methacrylamide monomers for dental adhesives. Presented at the Academy of Dental Materials annual meeting, Nuremburg, Germany, October, 2017, poster #59.
  52. Tertiary methacrylamides and thiourethane additives as novel dental composites. Symposium presentation at the 2016 AADR General Session, Los Angeles, CA, March 17, 2016.
  53. Dobson A; Huyhn V; Mbiya W; Ferracane JL; Pfeifer CS. Photoinitiator system effects on polymerization kinetics of methacrylamides and methacrylates. Presented at the International Association for Dental Research meeting, June 2016, Seoul, South Korea.
  54. Ferracane J. The effect of biofilms and biomechanical loading on the tooth-composite interface. Symposium presented at the 2018 IADR General Session, London, United Kingdom, June 2018.
  55. Lewis S, Tahayeri A, Faria-E-Silva A, Fugolin AP, Bertassoni L, Ferracane J\*, Pfeifer C. Thiourethane-modified dimethacrylate resins for high toughness 3D printed materials. presented at the 2019 IADR General Session, Vancouver, Canada, June 2019.

#### **Papers and Presentations - National:**

1. Ferracane, J.L.; Moser, J.B. and Greener, E.H.: Rheology of Bone Cements. Presented at the First Annual Conference on Time-Dependent Properties of Dental Materials, Northwestern

- University, Chicago, IL, September 1979.
2. Ferracane, J.L.; Moser, J.B. and Greener, E.H.: Rheology of Composite Restoratives. Presented to the American Academy for Research in Plastics in Dentistry (now the Academy of Dental Materials), February 1980.
  3. Ferracane, J.L.; Moser, J.B. and Greener, E.H.: Rheology of Composite Restoratives. Presented at the American Association for Dental Research meeting, Los Angeles, CA, March 1980. Abstract #636.
  4. Ferracane, J.L. and Greener, E.H.: Role of Equipment Design Criteria on Rheology Measurement. Presented at the Second Annual Time Dependent Properties Conference Program, Northwestern University, Chicago, IL, August 1980.
  5. Ferracane, J.L. and Greener, E.H.: FTIR Analysis of Conversion in Unfilled Bis-GMA Resins: Methods Comparison. Presented at the American Association for Dental Research meeting, Cincinnati, OH, March 1983. Abstract #1049.
  6. Ferracane, J.L.; Moser, J.B. and Greener, E.H.: Color Stability of Unfilled Bis-GMA Resins Under UV Exposure. Presented at the American Association for Dental Research meeting, Cincinnati, OH, March 1983. Abstract #453.
  7. Ferracane, J.L. and Antonio, R.: Filler/Matrix Adhesion in Dental Composite Resins During Loading. Presented at the Ninth Annual Meeting at the Adhesion Society, Hilton Head, SC, February 1986.
  8. Ferracane, J.L.; Antonio, R. and Matsumoto, H.: Effect of Composition on Fracture of Composites. Presented at the American Association for Dental Research Meeting, Washington, D.C., March 1986, Abstract #457.
  9. Ferracane, J.L. and Antonio, R.C.: Filler/Matrix Adhesion in Dental Resins During Loading. Presented at the First Conference on Composite Materials, American Society for Composites, Dayton, OH, October, 1986.
  10. Ferracane, J.L.: Crack Resistance and Propagation Mode in Dental Composites Determined by Indentation and SEM. Presented at the Materials Research Society, Boston, MA, December, 1987.
  11. Ferracane, J.L.; Mafiana, P.N.; and Okabe, T.: Rate of Mercury Dissolution from Amalgam/Alloy Galvanic Couples. Presented at the American Association for Dental Research meeting, San Francisco, CA, March 1989. Abstract #223.
  12. Ferracane, J.L.; and Condon, J.R.: Post-Cure Heat Treatments of Composites: Properties and Fractography. Presented at the American Association for Dental Research meeting, Boston, Massachusetts, March 1992. Abstract:#1661.
  13. Ferracane, J.L.; Berge, H.X. and Condon, J.R.: Aging of composites with Varied DC,  $V_f$ , and Filler Coupling. Presented at the American Association for Dental Research meeting, San Antonio, Texas, March 1995. Abstract #630.
  14. Ferracane JL, Condon JR. In Vitro Evaluation of the Marginal Degradation of Dental Composites, Presented at the American Association for Dental Research meeting, Minneapolis, Minnesota, March 1998. Abstract #966.
  15. Ferracane JL, Vandewalle K, Sakaguchi RL. Attempt to Reduce Internal Stress in Particulate Composites Through Non-bonded Nanofillers and the Effect on Toughness, Society for Experimental Mechanics annual meeting, Portland, OR, June 4, 2001.
  16. Ferracane JL, Robertson JL, Condon JR. Effect of Silane Level on K<sub>ic</sub> and Flexure Properties of Composites, Presented at the American Association for Dental Research meeting, Chicago, IL, March, 2001.
  17. Ferracane JL, Musanje L. Effect of Load and Antagonist Shape on Wear of Composite, Presented at the American Association for Dental Research meeting, San Antonio, TX, March,

- 2003, Abstract #825.
18. Ferracane JL, Mitchell, JC, Musanje, L. Biomimetic Dentin Desensitizer Based on Nanostructured Bioactive Glass, Presented at the American Association for Dental Research meeting, Orlando, FL, March, 2006, Abstract #173.
  19. Ferracane J, Hilton T5, Zhou L, Gillette J, Speed McIntyre P, Berg J, NW Precedent. Use of Caries-preventive Services in the NWPRECEDENT Dental Network, Presented at the American Association for Dental Research meeting, Dallas, Texas, April, 2008, Abstract #276.
  20. Ferracane JL. Enhanced Polymeric Dental Biomaterials Containing Bioactive Glasses, Presented at the American Association for Dental Research meeting, Dallas, Texas, April, 2008, Symposium.
  21. Ferracane J, Cooper P, Smith A. Dentin Matrix Proteins Solubilized by Solutions Relevant to Dentin Adhesives, Presented at the American Association for Dental Research meeting, Washington, DC, March, 2010, Abstract #148.
  22. T. Hilton, J. Ferracane\*, L. Mancl, Y. Coley, C. Baltuck, E. Lubisich, A. Gilbert, L. Lowder, C. Barnes, J. Peterson; for Northwest PRECEDENT. Characteristics of Cracks in Teeth – Association with Symptoms, Presented at the American Association for Dental Research annual meeting, Tampa, FL, March, 2012, Abstract #671.
  23. Ferracane JL. Keynote Address: Is Carefree Bulk Filling of Dental Composite Restorations a Reality? Presented at the American Association for Dental Research annual meeting, Charlotte, NC, March 22, 2014.
  24. Ferracane JL. Keynote Address: 0248 - Keynote Address: Assessing Models for Investigating the Formation of Caries Around Dental Composite Restorations. Presented at the American Association for Dental Research annual meeting, Los Angeles, CA, March 17, 2016.
  25. Hilton T, Baltuck C, Manning W, Funkhouser E, Vij V, Ferracane J. Correlation between symptoms and external cracked tooth characteristics: National-Dental-PBRN study. Presented at the American Association for Dental Research annual meeting, Los Angeles, CA, March 18, 2016. Abstract 1454.
  26. Ferracane J. Becoming an ethical academic professional-what does it really mean? Responding to ethical situations in research. Presented at the American Association for Dental Research annual meeting, Los Angeles, CA, March 15, 2016. Abstract #0005. Faculty Development Workshop.
  27. Ferracane J, Mbiya W, Pfeifer C. Tertiary Methacrylamides and Thiourethane Additives as Novel Dental Composites. Presented at the American Association for Dental Research annual meeting, Los Angeles, CA, March 17, 2016. Abstract # 0124. Symposium.
  28. Hilton T, Funkhouser E, Ferracane J, Gilbert G, Mungia R, Huff K, Gordan V, Barna J, Marker T, McEdward D, National Dental PBRN Collaborative Group. Cracked tooth symptoms as predictors of subsequent treatment: National-Dental-PBRN study. Presented at the American Association for Dental Research annual meeting, Fort Lauderdale, FL, March 23, 2018. Abstract # 807.

### **Papers and Presentations - Local:**

1. Ferracane, J.L.: Correlation Between Hardness and Degree of Conversion During the Setting Reaction of Unfilled Restorative Resins. Presented at the Baylor College of Dentistry Research Seminar, Dallas, TX, December 1984.
2. Wong, N.; Herwig, L. and the Department of Dental Materials of Baylor College of Dentistry: Using Glass Ionomer as Liner Under Composite Restorations, Dallas Midwinter Table Clinics, Dallas, TX, January 1985.

3. Ferracane, J.L.: Dental Materials Course for Dental Hygiene Students at Baylor College of Dentistry. Texas Dental Hygiene Educator's Workshop, Dallas, TX, April 1985.
4. Aday, P.; Matsumoto, H.; Marker, V. and Ferracane, J.L.: Depth of Cure of Composite Resins-Effect of Shade. Third Annual Clinical Dental Science Symposium, University of Texas Health Science Center, San Antonio, TX, April 1985.
5. Ferracane, J.: The Effect of Post-Cure Heat Treatments in Fracture Resistance and Fractography of Dental Composites. Presented at the Symposium on Dental Materials: Preparing for the Next One Hundred Years, Northwestern University Dental School, Chicago, IL, June 21, 1991.
6. Ferracane, J.L.: Elution of Leachable Components from Composites. Presented at the Northwest Regional meeting of the AADR, Seattle, WA, January 1993.
7. Ferracane, J.L.: Polymeric Prosthodontic Materials. Presented at the 5<sup>th</sup> Annual Indiana Conference, Indianapolis, IN, June 9, 2000.
8. Ferracane, J.L.: Dental Materials – When Does the Future Become the State-of-the Art? Presented at the OHSU School of Dentistry Research Seminar, March, 2005.
9. Ferracane, J.L.: Dental Research in the Trenches – The Dental Practice-based Research Experience. Presented at the BME seminar series, OHSU, February 13, 2009.
10. Ferracane, J.L.: Stimulation of Tooth Repair and Regeneration by Interaction with Dental Materials. Presented at the Oral Biology Seminar, University of Birmingham Dental School, February 12, 2010.
11. Ferracane, J.L.: Phosphoric Acid Released Dentin Matrix Components Affect Pulp Cell Behavior, Presented at the OHSU Research Week, May 8, 2012.
12. Ferracane, J.L.: Shedding some light on the complex world of cracked teeth through a practice-based research approach, Presented at the SOD research seminar, February 24, 2020.

### **Invited Presentations:**

1. Bis-GMA - Physical Properties and Degree of Conversion. Presented to the American Academy for Plastics Research in Dentistry (now the Academy of Dental Materials), Chicago, IL, February 1982.
2. Depth of Cure Analysis of Light-Activated Composite Resins. Seminar presented at the Medical University of South Carolina, Charleston, SC, February 1986.
3. Evaluation of Depth of Cure in Visible Light-Activated Composite Resins. Lunch and Learning Presentation, American Association for Dental Research meeting, Washington, D.C., March 1986.
4. Recent Advances in Dental Composites, Bonding Agents and Glass Ionomers. Seminar presented at Children's Memorial Hospital to the Pediatric Dentistry Residents and Faculty, Dallas, TX, November 1986.
5. Depth of Cure Analysis of Light-Activated Composite Resins. Seminar presented at the Northwestern University Dental School, Chicago, IL, June, 1987.
6. Applications of FTIR Microscopy in Biomaterials Analysis. Presented at the Academic/Industry Joint Conference, San Antonio, Texas, March 1988.
7. Properties of A New Glass Ionomer/Composite Resin Hybrid Restorative; and Marginal Leakage in Class V Composite Restorations with Glass Ionomer Liners. Presented at the G-C Industrial Corp., Tokyo, Japan, April, 1988.
8. Light-activated Dental Composites: Depth of Cure and Biocompatibility. Presented at the Hiroshima University Dental School, Hiroshima, Japan, April, 1988.
9. Light-activated Dental Composites: Depth of Cure and Biocompatibility. Presented at the

- Fukuoka Dental College, Fukuoka, Japan, April, 1988.
10. Fracture Toughness of Experimental Dental Composites; and Fracture Toughness and Compressive Yield of Aged Experimental Dental Composites. Presented at the Hokkaido University Dental School, Sapporo, Japan, May, 1988.
  11. The In-Vitro Evaluation of Composite Resins. Presented at the Conference on Correlation Between In-Vivo and In-Vitro Performance of Dental Materials, Dublin, Ireland, June 1989.
  12. Scanning Microscopy and X-Ray Analysis of Dental Materials. Presented at the Spring meeting of the Pacific Northwest Electron Microscopy Society, Portland, OR, May 31, 1991.
  13. What Are the Appropriate Uses of Posterior Composites? Presented at the Symposium on Esthetic Restorative Materials sponsored by NIDR, Chicago, IL, November 11, 1991.
  14. Setting Kinetics of Dental Restorative Materials. Moderator at the Academy of Dental Materials Conference held in Loch Lomond, Scotland, June 30, 1992.
  15. Elution of Leachable Components from Composites. Presented at the Symposium on Cytotoxicity of Materials Through Dentin sponsored by Pulp Biology Group and the Dental Materials Group at the IADR meeting, Chicago, IL, March 1993.
  16. Dental Composites: Present Status and Research Directions. Presented at the Second International Congress on Dental Materials, Honolulu, HA, November 1993.
  17. Effect of Filler and Silane on the Degree of Conversion and Fracture Toughness of Dental Composites. Seminar presented at the Northwestern University Dental School, Chicago, IL, April, 1994.
  18. Current Status of Dental Composites and Dentin Adhesives. Lecture presented to the faculty at Semmelweis Medical University, Budapest, Hungary, May 1994.
  19. Current Status of Dental Composites and Dentin Adhesives. Lecture presented to the faculty and private practitioners at Olomouc University, Olomouc, Czech Republic, May 1994.
  20. In Vivo and In Vitro Performance of Dental Composites. Lecture presented to the faculty at Olomouc University, Olomouc, Czech Republic, May 1994.
  21. Current Status of Dental Composites and Dentin Adhesives. Lecture presented to the faculty and private practitioners at Charles University of Prague, Prague, Czech Republic, May 1994.
  22. Current Status of Dental Composites and Dentin Adhesives. Lecture presented to the faculty and private practitioners at Charles University Department of Stomatology, Hradec Kralove, Czech Republic, May 1994.
  23. Update on Composites, Adhesives and Glass Ionomers. Presented at the Western Regions Dental Leadership Conference, Portland, OR, November, 1994.
  24. Factors Affecting the Wear and Fracture of Dental Composites. Seminar presented at the Oral Health Sciences Seminar at the University of Michigan School of Dentistry, February 24, 1995.
  25. Wear of Composites in the OHSU Oral Wear Simulator - Clinical Correlations. Seminar presented at the Dental School, University of Munich, Munich, Germany, November, 1996.
  26. Wear of Composites in the OHSU Oral Wear Simulator - Clinical Correlations. Seminar presented at the University of Missouri - Kansas City Dental School, Kansas City, Missouri, January, 1997.
  27. Current Status of Dental Composites, Dentin Adhesives and Glass Ionomers. Lecture presented to the Residents and Staff at Wilford Hall Medical Center, Lackland Air Force Base, San Antonio, TX, May 1997.
  28. Factors Affecting the Wear and Fracture of Dental Composites. Seminar presented at the National Institute of Standards and Technology, June, 1997.
  29. Current Status of Dental Composite Research. American Academy of Gold Foil Operators, Vancouver, B.C., September, 1997.
  30. Physical Properties of Composite Resin Material. Presented at the Posterior Composite



- Workshop sponsored by the ADA, Chicago, Illinois, February, 1998.
31. Wear of Composites in the OHSU Oral Wear Simulator - Clinical Correlations. Seminar presented at the University of Oklahoma Health Sciences Center - School of Dentistry, Oklahoma City, Oklahoma, May, 1998.
  32. Factors Affecting the Release of Mercury from Dental Amalgams. Seminar presented at the National Institute of Standards and Technology, Gaithersburg, MD, June, 1998.
  33. Latest Results with Dentin Adhesives and Glass Ionomers. Second National Oral Health Primary Care Conference, San Antonio, TX, September, 1998.
  34. Packable Composites - Wear and Properties. Presentation at the Clinical and Scientific Symposium on the VIP Light and Pyramid, sponsored by Bisco, Inc., Rancho Bernardo, California, April, 1999.
  35. In Vitro Evaluation of Wear, Marginal Breakdown and Contraction Stress in Dental Composites, and Their Correlation with Clinical Outcomes. Seminar presented at 3M Dental Products, St. Paul, Minnesota, May, 1999
  36. The Effects of Non-bonded Microfiller on the Properties and Contraction Stress of Resin Composites. Seminar presented at the National Institute of Standards and Technology, Gaithersburg, MD, August, 1999.
  37. Status of Research on New Fillers and New Resins for Dental Composites. Presentation at the International Symposium on Advance Adhesive Dentistry, Grenada, Spain, December, 1999.
  38. Packable Composites: Wear and Properties. IV International Symposium of Reconstruction and Adhesion in Dentistry, Santa Margherita Ligure, Italy, April 14, 2000
  39. A Scientific Perspective on Developing Composite Technologies. Presentation to the American Academy of Restorative Dentistry, Chicago, IL, February, 2000.
  40. Reducing Contraction Stress and Improving Fracture Toughness in Dental Composites Through the Addition of Non-bonded Nanofillers, Presented to the faculty at Seoul National University, June, 2001.
  41. New Polymer Resins for Dental Restoratives, Presented at the International Symposium on Alternative Approaches to the Management of Carious Lesions, Charleston, SC, September, 2000.
  42. A Scientific Perspective on Developing Composite Technologies. Presented at the Australia-New Zealand IADR annual meeting, Perth, Australia, July, 2000.
  43. Overview of Polymer Materials for Posterior Teeth - Critical Assessment of the Materials and Their Properties, Presented at the annual meeting of the Academy of Dental Materials, Siena, Italy, October 26, 2001.
  44. Non-bonded Nanofillers Affect Polymerization Contraction Stress and Fracture Toughness of Dental Composites, Presented as a seminar to the Department of Chemistry, Portland State University, Portland, OR, March 15, 2002.
  45. Composites: Material Properties and Clinical Features, Presented at the Ivoclar Vivadent Program Scientific Meeting, Schaan, Lichtenstein, June, 2002.
  46. Charting the Future of Posterior Composites, Presented at the 1<sup>st</sup> International 3M ESPE Dental Innovation Symposium, Munich, Germany, September, 2002.
  47. Charting the Future of Posterior Composites, Presented at the Center of Excellence in Oral & Craniofacial Biology Seminar Series, LSU School of Dentistry, New Orleans, LA, February 25, 2003.
  48. Dental Materials – When Does the Future Become the State-of-the Art? Presented at the University of Washington School of Dentistry Research Day, September 24, 2003.
  49. Relevant Mechanical Properties of Direct Restorative Materials, Presented at the Ceram-X II Experts Meeting, Dentsply/DeTrey, Ohningen, Germany, May 10, 2004.

50. Efforts to Develop a More Complete Understanding of Stress Produced in Dental Composites During Polymerization, Presented at the Portland Composites Symposium, June 18, 2004.
51. Hygroscopic and Hydrolytic Effects in Networks, Presented at the annual meeting of the Academy of Dental Materials, Geneva, Switzerland, October 23, 2004.
52. Identifying appropriate methods for evaluating dental composites and predicting their performance, Presented at the Caulk/Dentsply Company, Milford, DE, March 14, 2005.
53. Identifying appropriate methods for evaluating dental composites and predicting their performance, Presented to GC America at Lake Geneva, WI, June, 17, 2005.
54. Lectures on Contraction Stress in Dental Composites and Identifying Important Properties of Composites that Predict Clinical Performance to the graduate students in the Dental Materials PhD program at the University of Campinas, Piracicaba Dental School, Piracicaba, SP, Brazil, (8 hours), October 4-5, 2006.
55. Dental Composites – Which Tests are Useful for Developing New Products and Predicting Performance? Presented at the Academy of Dental Materials annual meeting, Lake Louise, Canada, November 2, 2005.
56. Dental Composites – Tests for New Products and for Predicting Performance, Presented at the University of Florida School of Dentistry Dean’s Seminar Series, Gainesville, FL, February 17, 2006.
57. Lectures on Composites, Adhesives, Physical and Mechanical Properties and Basic Dental Materials to the graduate students in the Dental Materials PhD program at the University of Siena, Siena, Italy, (16 hours), March 20-24, 2006.
58. Dental Composites – Which Tests are Useful for Developing New Products and Predicting Performance? Presented at 3M ESPE, St. Paul, MN, April 18, 2006.
59. Dental Composites – Which Tests are Useful for Developing New Products and Predicting Performance? Presented at the Pacific Coast Society for Prosthodontics annual meeting, Portland, OR, June 22, 2006.
60. Improving Composites for Restorative Dentistry. Presented at the Oral and Craniofacial Biology Symposium of the UMKC School of Dentistry, Kansas City, MO, October 9, 2006.
61. Lecture on Contraction Stress in Dental Composites, to the graduate students at the Pontifical Catholic University of Parana, Curitiba, Brazil, (4 hours), October 19, 2006.
62. Is Wear of Dental Composites Still a Clinical Concern. Presented at the University of Alabama – Birmingham School of Dentistry, April 16, 2007.
63. Placing Dental Composites: A Stressful Situation. Presented at the National Institute of Standards, Paffenbarger Research Center, April 26, 2007.
64. Placing Dental Composites: A Stressful Situation. Presented at the Oregon State University Department of Mechanical Engineering Seminar, May 10, 2007.
65. Is Wear of Dental Composites Still a Clinical Concern. Presented at the University of Manchester - Turner School of Dentistry, May 29, 2007.
66. Lectures on Contraction Stress in Dental Composites, Physical and Mechanical Properties of Polymers and Composites, Chemical Degradation of Composites, and Wear of Dental Composites to the graduate students in the Dental Materials PhD program at the University of Sao Paulo and those at other dental schools in Brazil, USP Dental School, Sao Paulo, SP, Brazil, (16 hours), June 25-26, 2007.
67. Placing Dental Composites: A Stressful Situation. Presented at the University of Birmingham School of Dentistry, United Kingdom, October 12, 2007.
68. Placing Dental Composites: A Stressful Situation. Presented as the Buonocore Memorial Lecture at the Academy of Operative Dentistry Annual meeting, February 21, 2008.
69. Dental Research in the Trenches – The Dental Practice-based Research Experience. Presented

- at the University of Kentucky School of Dentistry Knapp Memorial Lecture, October 22, 2008.
70. Dental Research in the Trenches – The Dental Practice-based Research Experience. Presented at Louisiana State University School of Dentistry, February 19, 2009.
  71. Dental Research in the Trenches – The Dental Practice-based Research Experience. Presented at Newcastle University School of Dentistry, Newcastle, England, February 24, 2010.
  72. Dental Research in the Trenches – The Dental Practice-based Research Experience. Presented at Dentsply, Konstanz, Germany, January 29, 2010.
  73. Dental Composites – Which Tests Are Used for Developing New Products and Predicting Performance? Presented at Dentsply, Konstanz, Germany, January 29, 2010.
  74. Dental Composites – State of the Art. Presented at the Academy of Dental Materials annual meeting, Trieste, Italy, October 8, 2010.
  75. Ferracane JL. Clinical Dental Research in the Trenches: The Northwest PRECEDENT Experience, University of Colorado, School of Dentistry Annual Research Day, Keynote Address, February 11, 2011.
  76. Practice-based Research Networks. Presented at the COHRI annual summer meeting, Oregon Health & Science University, School of Dentistry, August 5, 2011.
  77. Publishing in the JDR – Tips for Dental Materials Scientists, Presented as a Lunch & Learn at the 2012 Annual meeting of the AADR, Tampa, FL, March 22, 2012.
  78. Dental Practice-based Research Networks. Presented to the organizers of the Argentinean Society of Operative Dentistry and Dental Materials annual meeting, Buenos Aires, Argentina, September 17, 2012.
  79. Resin-based composite performance: Are there some things we can't predict? Presented at the Academy of Dental Materials annual meeting, Orlando, Florida, September 21, 2012.
  80. Light Interactions with Dental Composites: Only of Interest for Color? Presented at the 4<sup>th</sup> annual meeting of the Society for Color and Appearance in Dentistry (SCAD), Chicago, IL, September 28, 2012.
  81. Effects of high irradiance on curing rate and stress generation in dental composites. Presented at the 1<sup>st</sup> Annual International Symposium on Light Sources in Dentistry, Halifax, Nova Scotia, Canada, October 11, 2012.
  82. Light Interactions with Dental Composites. Presented at the Academic Leadership Summit – Ivoclar Vivadent, Amherst, NY, October 26, 2012.
  83. Resin Composites – State-of-the-Art. Presented at Research Day 2013 – Technological Advances in Dentistry, at the University of British Columbia Dental School, January 22, 2013.
  84. Publishing Your Manuscript - a JDR Perspective. Workshop presented at the International Association for Dental Research annual meeting, Seattle, Washington, March 22, 2013.
  85. What Clinical Behavior of Resin Based Composites Can we Predict from Laboratory Testing? Presented at Caulk-Dentsply, Milford, Delaware, April 26, 2013.
  86. Causes and Outcomes of Polymerization Contraction Stress in Resin-based Dental Restorative Systems. Presented at Caulk-Dentsply, Milford, Delaware, April 26, 2013.
  87. Keynote Address: Engineering materials to maintain pulp health and restore lost tissue. Presented at the 22<sup>nd</sup> European Dental Materials Conference, Birmingham, UK, August 29-30, 2013.
  88. Engineering Materials to Maintain Pulp Health and Restore Lost Tissues. Presented at the European Dental Materials Conference, Birmingham, England, August 29, 2013.
  89. Do Bulk Chemistries Make a Difference? Presented at the Ivoclar-Vivadent Leadership Summit, Sarasota, Florida, January 8, 2014.
  90. Does Exposure Reciprocity Exist When Curing Dental Composites? Light Curing in Dentistry Conference, Halifax, Nova Scotia, Canada, May 26, 2014

91. Does Exposure Reciprocity Exist in Dental Composite Light Curing? Presented as a breakfast and learn at the Academy of Dental Materials annual meeting, Bologna, Italy, October 9, 2014.
92. And Then You Light Cure. Simple, Right? Presented at the PROH annual meeting, Portland, OR, October 31, 2014.
93. Resin Composites – Present and Future. Presented at the 6<sup>th</sup> International Conference on Adhesive Dentistry, Bangkok, Thailand, January 31, 2015.
94. Cracked Teeth – What Are We Learning? Presented at the Academy of Operative Dentistry Meeting, Chicago, IL, February 27, 2015.
95. Resin Composites – Present and Future. Presented at the 35<sup>th</sup> annual Professionals Day, Case Western University Dental School, Cleveland, OH, March 26, 2015.
96. Polymerization Stress. Is it Clinically Meaningful? Presented at the Academy of Dental Materials Meeting, Maui, Hawaii, October 8, 2015.
97. Caries Formation Around Dental Composite Restorations – Assessing Models for Investigating the Formation of Caries Around Dental Composite Restorations. Keynote address presented at the AADR annual meeting, March 17, 2016.
98. Caries Formation Around Dental Composite Restorations – Assessing In vitro Models for a Multifaceted Problem, Indiana University School of Dentistry 24<sup>th</sup> annual Research Day, April 11, 2016.
99. Caries Formation Around Dental Composite Restorations – Assessing In vitro Models for a Multifaceted Problem, Indiana University School of Dentistry 24<sup>th</sup> annual Research Day, Indianapolis, IN, April 11, 2016.
100. Caries Formation Around Dental Composite Restorations – Assessing In vitro Models for a Multifaceted Problem, Oral Biology Seminar Series, University of North Carolina School of Dentistry, Chapel Hill, NC, April 12, 2016.
101. Caries Formation Around Dental Composite Restorations – Assessing In vitro Models for a Multifaceted Problem, University of Toronto Faculty of Dentistry, Dean’s Seminar series, Toronto, Ontario, Canada, April 18, 2016.
102. Assessing Models for Investigating the Formation of Caries Around Dental Composite Restorations, presented at the Yonsei University Dental School, Seoul, South Korea, June 21, 2016.
103. The State of the Art of Dental Composite Restorative Materials, presented to the faculty and graduate students at Osaka University Dental School, Osaka, Japan, October 24, 2016.
104. The State of the Art of Dental Composite Restorative Materials. 1st Scientific Symposium A.T. Still University and Arizona Chapter of the AADR, Scottsdale, AZ, January 21, 2017.
105. Presentation of Study Results. Cracked Tooth Registry, presented to the South Atlantic meeting of the National Dental Practice-based Research Network, Atlanta, GA, January 28, 2017.
106. Is the Polymerization Stress Produced During the Curing of Dental Composite Restorations Clinically Meaningful? Keynote Address at the 7<sup>th</sup> annual James B. Edwards College of Dental Medicine Scholars Day, MUSC, Charleston, SC, February 23, 2017.
107. Current trends and future advancements in dental composite restorative materials. Keynote lecture. 4<sup>th</sup> EuroBiomat, Weimar, Germany, May 9, 2017.
108. Current Status and Future Advances in Dental Composite Restorative Materials. 54th Encontro do Grupo Brasileiro de Materiais Dentários, Niteroi, Brazil, July 2018.
109. Clinically predictive laboratory based research in “bioactive” restorative materials. Is this possible? Northern Lights Conference, Oslo, Norway, July 2018.
110. Is the Polymerization Stress Produced During the Curing of Dental Composite Restorations Clinically Meaningful? The Ohio State University School of Dentistry Distinguished Lecture

- Series, October 11, 2018.
111. Cracked Teeth Registry. Northeast Regional meeting of the National Dental Practice-based Research Network, September 21, 2018.
  112. Polymerization Stress in Dental Composites – Where Does It Come From and Is It Clinically Meaningful? Presented to the Tokuyama Dental Corporation, Tsukuba, Japan, August 31, 2018.
  113. Clinically predictive laboratory based research in traditional and “bioactive” restorative materials. Is this possible? Meeting of the Japanese Society for Dental Materials and Devices. Tokyo, Japan, November 14, 2018.
  114. Dental Composites – A True Disruptive Change in Dentistry. 66<sup>th</sup> annual meeting of the Japanese Association for Dental Research, Sapporo, Japan, November 17, 2018.
  115. Polymerization Stress in Dental Composites – Where Does It Come From and Is It Clinically Meaningful? Presented to the GC Corporation, Tokyo, Japan, November 15, 2018.
  116. Is the Polymerization Stress Produced During the Curing of Dental Composite Restorations Clinically Meaningful? University of Mississippi Medical Center, School of Dentistry Research Day, Jackson, MS, Keynote address, February 19, 2019
  117. The State-of-the-Art and Future Advances in Dental Composite Restorative Materials, presented to the dental students, graduate students and faculty at the University of Bologna Dental School, March 25, 2019.
  118. Current and future strategies for bonded composite restorations, presented at the 2019 International Congress on Adhesive Dentistry meeting, Seattle, WA, June 16-17, 2019.
  119. Current Status and Future Advances in Dental Composite Restorative Materials, presented at the ConsAsia 2019, Seoul, South Korea, November 7, 2019.
  120. Current and Future Strategies for Bonded Composite Restorations, keynote lecture presented at the 4<sup>th</sup> Meeting of the International Association for Dental Research Asia Pacific Region, November 29, 2019.
  121. Clinically Predictive Laboratory Based Research in “Bioactive” Restorative Materials. Is this possible? Symposium presentation at the 4<sup>th</sup> Meeting of the International Association for Dental Research Asia Pacific Region, November 30, 2019.
  122. The Current Status and Future Directions of Dental Composites, GBD Science Talk presentation for the Grupo Brasileiro de Professores de Dentística, April 29, 2021 (virtual).
  123. Bioactive dental restorative materials – what should we expect? Symposium presentation at the 6<sup>th</sup> Meeting of the DMCE (Indonesian Society of Dental Materials and Devices - IPAMAGI). July 8, 2021. (virtual presentation)
  124. The Blue Light Hazard-How Worried Should We Be? Keynote Address co-presented with Dr. Richard Price at the 99<sup>th</sup> IADR meeting, 2021 (virtual).
  125. Is the Polymerization Stress Produced During the Curing of Dental Composite Restorations Clinically Meaningful? World Prestigious Scholar Lecture Series, Seoul National University School of Dentistry, February 7, 2022. (virtual).
  126. Is the Polymerization Stress Produced During the Curing of Dental Composite Restorations Clinically Meaningful? Rutgers University School of Dental Medicine, Research Seminar Series, March 8, 2022. (virtual).
  127. Current and Future Strategies for Enhancing Dental Composite Restoratives. GC 100<sup>th</sup> Anniversary and 5<sup>th</sup> International Dental Symposium, Tokyo, Japan, April 17, 2022 (virtual)
  128. Evidence for Polymerization Stress Effects on Resin-Tooth Bonding. 41<sup>st</sup> JSAD (Japan Society for Adhesive Dentistry) and IAD 2022 (International Congress on Adhesive Dentistry), Sapporo, Japan, June 4, 2022.

129. Bioactive Dental Materials – Developing, Promising, Confusing. Symposium presented at the IADR annual meeting, Chengdu, China (virtual), June 24, 2022. (symposium organizer)
129. Bioactive dental restorative materials – What are they and what can they do for dentistry? Research Day Keynote presentation, Temple University Kornberg School of Dentistry, Philadelphia, Pennsylvania, March 8, 2023.
130. Practice-based Clinical Dental Research – Focus on Cracked Teeth. Presented at the OHSU School of Dentistry Spirit of Discovery Series, Portland, Oregon, March 27, 2023.
131. “Bioactive” Materials – Their Potential Use in Bonded Dental Restorations. The 7<sup>th</sup> International Congress on Adhesive Dentistry, Konya, Turkey, August 30, 2023.
132. Restorative Biomaterials as an Anti-caries/reparative Strategy for Dentistry. American Academy of Cariology annual meeting, San Diego, California, October 4, 2023.
133. “Bioactive” Materials – Their Potential Use in Bonded Dental Restorations. AMDB Seminar Series. Live Webinar. UBC College of Dentistry. November 1, 2023.

## **TEACHING RESPONSIBILITIES**

Oregon Health & Science University, Portland, Oregon:

CDH 421 (Fourth Year Dental Hygiene)  
Lecturer/Course co-Director (1999)

Dental Materials 501, 505, 511-513, 521-523 (Graduate Dental Materials)  
Lecturer (1995-1996) - Thomas Hilton M.S. in Dental Materials Science  
Lecturer (2000-2002) – Kraig Vandewalle M.S. in Biomaterials and Biomechanics  
Lecturer (2003-3004) – Sharavana Kumar Gajapathi M.S. in Biomaterials and Biomechanics  
Instructor (2007-2008) – Jon Dossett M.S. in Biomaterials and Biomechanics

Dental Materials 531 (Graduate Orthodontics)  
Lecturer (1990-present)/Course Director (1990-1995; 2013; 2015-present)

Dental Materials 531 (Graduate Orthodontics/Pediatric Dentistry)  
Lecturer: 2005-2007

Dental Materials 631/632 (Third Year Dental)  
Lecture/Course Director: 1989-2002

Dental Materials 631 (Third Year Dental)  
Lecture/Course Director: 2002-2006

Dental Materials 731 (Third Year Dental)  
Lecture/Course Director: 2006-2019; lecturer: 2019-present

Dental Materials 611/612/613 (First Year Dental)  
Lecturer (2001-present)/Course Director for DM613 (2001-2006)  
Laboratory Instructor: 1994-2006

Dental Materials 421 (Second Year Dental Hygiene)  
Lecturer: 1997

Dental Materials 606 (Research Elective)  
Lecturer: 1995–2011

Dental Materials 711 (First Year Dental)  
Lecturer: 2011-2015, 2017, 2018, 2021, 2022

Dental Materials 712 (First Year Dental)  
Course Director and Lecturer: 2013-present

Dental Materials 713 (First Year Dental)  
Lecturer/Course Director: 2007-2013

Biomedical Engineering – BME 645  
Lectures: 2013

Biomedical Engineering - BME 608  
Grant reviews; qualifying exams: 2021

Additional assorted lectures given to dental students in Operative Dentistry and Restorative Dentistry (and dental hygiene students most years up to 1999). Specialty board reviews for Pediatric Residents 2012, 2013.

OGI School of Science and Engineering - OHSU

ECE 580 (originally MSE 589) - Introduction to Biomaterials  
Lecturer (1999; 2001)

Baylor College of Dentistry, Dallas, Texas:

Dental Materials Laboratory 502 (First Year Dental)  
Lecture and Lab: 1983-1989  
Course Director: 1985-86; 1984-85

Dental Materials 542 (Second Year Dental)  
Lecture: 1983-1989

Dental Hygiene Dental Materials 315 (First Year)  
Lecture: 1983-1989  
Course Director (lecture and lab): 1985-86; 1984-85

Applied Dental Materials - Senior Selective  
Lecture: 1984-85

Seminar in Dental Materials - Graduate Prosthodontics  
Lecture: 1988; 1984-85

Seminar in Dental Materials - Graduate Pediatric Dentistry

Lecture: 1988; 1987

Cook County Graduate School of Medicine, Chicago, Illinois

Bioengineering Aspects of Joint Replacement  
Basic Science of Acrylic Bone Cement  
Lecturer: August 1982

Northwestern University Dental School, Chicago, Illinois

Freshman Dental Materials (lecture and lab)  
Teaching Assistant and Lecturer: 1983; 1982; 1981; 1980; 1979

Dental Materials for Dental Hygienists (lecture and lab)  
Teaching Assistant and Lecturer: 1982; 1981; 1980

Biostatistics - Graduate Dental Students  
Teaching Assistant and Lecturer: 1981; 1980

### **MAJOR RESEARCH INTERESTS**

Influence of Resin Matrix Chemistry and Filler Composition on the Fracture, Wear, Shrinkage, Fatigue and Clinical Performance of Dental Composites

Evaluation of Dental Composites and Adhesives

Evaluation of the Use of Bioactive Glass as a Dentin Desensitizing Agent and its use in dental restorative materials

Developing New Monomers for Dental Composites and Adhesives, with antimicrobial behavior

Developing and Implementing Practice-based Research Networks for Conducting Clinical Studies in Dentistry

Interaction of biomaterials and dental tissues and its role in tissue regeneration

Mechanism of tooth demineralization around margins of dental composite restorations

### **PUBLICATIONS**

#### **Books/Chapters:**

1. Dental Implant Materials, in Skinner's Science of Dental Materials by R.L. Phillips, 9th edition, W.B. Saunders Company, Philadelphia, 1991, pp. 553-558. (Also revised this chapter for 10th edition)
2. Materials in Dentistry: Principles and Applications. J.B. Lippincott, Philadelphia, PA, 1995, 360 pages. Second Edition published in 2001.
3. Navigating the Dentin Bond Strength Testing Highway: Lessons and Recommendations. Jack



- L. Ferracane, Jon M. Dossett, Fernanada Pelogia, Manoel R.P. Macedo, and Thomas J. Hilton, in Adhesion Aspects in Dentistry, Ed. J.P. Matinlinna, K.L. Mittal, Koninklijke Brill NV, Leiden, *Journal of Adhesion Science and Technology* 23 (2009) 245-260.
4. Study Idea Acquisition, Prioritization, and Development. Jack Ferracane and Tom Hilton, Section in a book chapter entitled "Dental Practice-based Research Networks," in *Principles of Clinical Oral Health Research*, Blackwell Publishing Professional, ed. R. Genco, W. Giannobile, B. Burt, pp. 272-276, 2009.
  5. Ferracane JL, Palin WM. Particulate filler systems and physical properties of polymer composites. In *Non-metallic Biomaterials for Tooth Repair and Replacement*. Edited by Pekka Vallitu and Scott Dyer, Woodhead Publishing, 2012.
  6. Summitt's Fundamentals of Operative Dentistry. A Contemporary Approach, Fourth Edition. Edited by Thomas J. Hilton, Jack L. Ferracane and James C. Broome, Quintessence Publishing Co., Inc., Chicago, 2013.
  7. Palin WM, Ferracane, JL. Chapter 6: Resin-Based Cements Used in Dentistry. In *Handbook of Oral Biomaterials*, Edited by Jukka Matinlinna, Pan Stanford Publishing Pte. Ltd., pp. 213-254, 2014.
  8. Ferracane JL, Palin WM, Lohbauer U. Understanding the mechanical behavior of the material-tissue and material-material interface in dental reconstructions, in *Material-Tissue Interfacial Phenomena from Reconstruction of Oral Tissues*, Edited by Paulette Spencer and Anil Misra, Elsevier, Inc., 2016.
  9. Ferracane JL, Pfeifer CS, Bertassoni LE. Biomaterials for Oral Health. *Dent Clin North Am.* 2017 Oct;61(4):xi-xii. PMID: 28886773
  10. Craig's Restorative Dental Materials. 14<sup>th</sup> edition. Edited by Ronald L. Sakaguchi, Jack L. Ferracane, John M. Powers, Elsevier Inc., 2019.
  11. Ferracane JL, Pfeifer CS. The Organic Matrix of Restorative Composites and Adhesives, in *Biomaterials Science. An Introduction to Materials in Medicine. Fourth Edition.*, Edited by William R. Wagner, Shelly E. Sakiyama-Elbert, Guigen Zhang, and Michael J. Yaszemski, Academic Press/Elsevier, pp. 139-152, 2020.
  12. Pfeifer CS, Kreth J, Koley D, Ferracane JL., Considerations for Designing Next-Generation Composite Dental Materials, in *Oral Biofilms and Modern Dental Materials. Advances Toward Bioactivity*, Springer Nature, pp. 99-114, 2021.
  13. Ferracane JL, Pfeifer CS, Bertassoni LE. Advances in Biomaterials for Oral Health. *Dent Clin North Am.* 2022 Oct;66(4):xiii-xiv. PMID: 36216454

### Journal Articles:

1. Ferracane, J.L.; Moser, J.B. and Greener, E.H.: Rheology of Composite Restoratives. *J. Dental Research* 60(9):1678- 1685, 1981.
2. Ferracane, J.L. and Greener, E.H.: Rheology of Acrylic Bone Cements. *Biomaterials, Medical Devices and Artificial Organs* 9(3):213-221, 1981.
3. Ferracane, J.L.; Wixson, R.L. and Lautenschlager, E.P.: Effects of Fat Admixture on the Strengths of Conventional and Low-Viscosity Bone Cements. *J. Orthopaedic Research* 1(4):450-453, 1984.
4. Ferracane, J.L. and Greener, E.H.: Fourier Transform Infrared Analysis of Degree of Polymerization in Unfilled Resins - Methods Comparison. *J. Dental Research* 63(8):1093-1095, 1984.
5. Ferracane, J.L.: Correlation Between Hardness and Degree of Conversion During Setting Reaction of Unfilled Dental Restorative Resins. *Dental Materials* 1(1):11-14, 1985.

6. Okabe, T.; Mitchell, R.J.; Butts, M.B. and Ferracane, J.L.: Microstructural Changes on the Surface of Dental Amalgam During Aging. *Microstructural Science*. 13:177-195, 1985.
7. Ferracane, J.L.; Moser, J.B. and Greener, E.H.: Ultraviolet Light-Induced Yellowing of Dental Restorative Resins. *J. Prosthetic Dentistry* 54(4):483-488, 1985.
8. Ferracane, J.L.; Matsumoto, H. and Okabe, T.: Time- Dependent Deformation of Composite Resins - Compositional Considerations. *J. Dental Research* 64(11):1332-1336, 1985.
9. Ferracane, J.L. and Greener, E.H.: The Effect of Resin Formulation on the Degree of Conversion and Mechanical Properties of Dental Restorative Resins. *J. Biomedical Materials Research* 20(1):121-131, 1985.
10. Okabe, T.; Staman, J.; Ferracane, J.L. and Mitchell, R.: Effect of Free Mercury on the Strengths of Dental Amalgams. *Dental Materials* 1(5):180-184, 1985.
11. Matsumoto, H; Gres, J.E.; Marker, V.A.; Okabe, T.; Ferracane, J.L. and Harvey, G.A.: Depth of Cure of Visible Light-Cured Composite Resin - Clinical Simulation. *J. Prosthetic Dentistry* 55(5):574-578, 1986.
12. Ferracane, J.L.; Aday, P.; Matsumoto, H. and Marker, V.A.: Relationship Between Shade and Depth of Cure for Light- Activated Dental Composite Resins, *Dental Materials* 2(3):80-84, 1986.
- \* 13. Ferracane, J.: Filler/Matrix Adhesion in Dental Composite Resins During Loading, *Proceedings of the American Society for Composites, First Technical Conference*, pp. 281-293, 1986.
- \* 14. Moody, C.R.; DeWald, J.P. and Ferracane, J.L.: Restorative Materials - A Review, *Baylor Dental J.* 30:9-17, 1986.
15. Okabe, T.; Ferracane, J.; Cooper, C.; Matsumoto, H. and Wagner, M.: Dissolution of Mercury from Amalgam into Saline Solution, *J. Dental Research*, 66(1):33-37, 1987.
16. DeWald, J.P.; Moody, C.R.; Ferracane, J.L. and Cotmore, J.M.: Crown Retention: A Comparative Study of Core Type and Luting Agent, *Dental Materials*, 3(2):71-73, 1987.
17. DeWald, J.P. and Ferracane, J.L.: A Comparison of Four Modes of Evaluating Depth of Cure of Light-activated Composites, *J. Dental Research*, 66(3):727-730, 1987.
18. Ferracane, J.L.; Antonio, R.C. and Matsumoto, H.: Variables Affecting the Fracture Toughness of Dental Composites, *J. Dental Research*, 66(6):1140-1145, 1987.
19. Hanawa, T.; Takahashi, H.; Ota, M.; Pinizzotto, R.F.; Ferracane, J.L. and Okabe, T.: Surface Characterization of Amalgams Using X-ray Photoelectron Spectroscopy, *J. Dental Research*, 66(9):1470-1478, 1987.
20. Ferracane, J.L.; Mafiana, P.; Cooper, C. and Okabe, T.: Time-Dependent Dissolution of Amalgams into Saline Solution, *J. Dental Research* 66(8):1331-1335, 1987.
21. Tsutsumi, S.; Nakamura, M.; Ferracane, J.L.; Schiller, T.L.; Hanawa, T. and Okabe, T.: Thermal Analysis of Amalgams, *Dental Materials* 4(5):307-311, 1988.
22. Arcoria, C.J.; DeWald, J.P.; Moody, C.R. and Ferracane, J.L.: Effects of Thermocycling on Amalgam and Alloy/Glass Ionomer Cores Luted to Cast Gold Crowns, *Dental Materials* 4(3):155-157, 1988.
23. Ferracane, J.L.: Indentation Fracture Toughness Testing of and Crack Propagation Mode in Dental Composites. *Materials Research Society Symposium Proceedings* 110:619-624, 1989.
24. Fukushima, T.; Ferracane, J.L.; Horibe, T.; and Okabe, T.: Bonding of Various Succinoy Methacrylates to Dental Alloys. *Dental Materials J.*, 7:1-12, 1988.
25. DeWald, J.P.; Moody, C.R.; and Ferracane, J.L.: Softening of Composite Resin by Moisture and Cements. *Quintessence International*, 19(9):619-621, 1988.
26. Kaga, M.; Seale, N.S.; Hanawa, T.; Ferracane, J.L.; and Okabe, T.: Cytotoxicity of Amalgams. *J. Dental Research*, 67(9):1221-1224, 1988.

27. Moody, C.R.; DeWald, J.P.; and Ferracane, J.L.: Comparative Study of Luting Agents with Composite Cores. *J. Prosthetic Dentistry*, 62:527-529, 1989.
28. Mathis, R.S.; DeWald, J.P.; Moody, C.R.; and Ferracane, J.L.: Marginal Leakage in Class V Composite Restorations with Glass Ionomer Liners *In Vitro*. *J. Prosthetic Dentistry*, 63(5):522-525, 1990.
29. Mathis, R.S. and Ferracane, J.L.: Properties of a Glass Ionomer/Composite Resin Hybrid Material. *Dental Materials* 5:355-358, 1989.
- \* 30. Ferracane, J.L.: The In-Vitro Evaluation of Composite Resins. *Trans. Academy Dental Materials* 2(2):6-35, 1989.
31. Ferracane, J.L.: Obstacles to the Development of a Standard for Posterior Composite Resins. *J. American Dental Association* 118:649-651, 1989.
32. Arcoria, C.J.; Vitasek, B.; and Ferracane, J.L.: Microleakage of Composite Resin Restorations Following Thermocycling and Instrumentation. *General Dentistry*, 38(2):129-131, 1990.
33. Ferracane, J.L. and Condon, J.R.: Rate of Elution of Leachable Components from Composite. *Dental Materials* 6:282-287, 1990.
34. Kaga, M.; Seale, N.S.; Hanawa, T.; Ferracane, J.L.; Waite, D.E.; and Okabe, T.: Cytotoxicity of Amalgams, Alloys, and Their Elements and Phases, *Dental Materials*, 7:68-72, 1991.
35. Kohri, M.; Cooper, E.P; Ferracane, J.L.; and Waite, D.E.: Comparative Study of Hydroxyapatite and Titanium Dental Implants in Dogs, *J Oral and Maxillofacial Surgery*, 48:1265-1273, 1990.
36. Ferracane, J.L. and Marker, V.A.: Solvent Degradation and Reduced Fracture Toughness in Aged Composites. *J. Dental Research*, 71:13-19, 1992.
37. Ferracane, J.L.; Hanawa, T.; and Okabe, T.: Effectiveness of Oxide Films in Reducing Mercury Release from Amalgams. *J. Dental Research*, 71:1151-1155, 1992.
38. Ferracane, J.L.: Amalgam Derived Mercury: How and How Much? *General Dentistry*, 40:225-229, 1992.
39. Engle, J.H.; Ferracane, J.L.; Wichmann, J.; and Okabe, T.: Quantitation of Total Mercury Vapor Released During Dental Procedures. *Dental Materials*, 8:176-180, 1992.
40. Ferracane, J.L.; Condon, J.R.; and Mitchem, J.C.: Evaluation of Subsurface Defects Created During the Finishing of Composites. *J. Dental Research* 71:1628-1632, 1992.
41. Ferracane, J.L.: Using Posterior Composites Appropriately. *J. American Dental Association* 123:53-58, 1992.
42. Ferracane, J.L. and Condon, J.R.: Post-cure Heat Treatments For Composites: Properties and Fractography. *Dental Materials*, 8:290-295, 1992.
43. Hanawa, T.; Gnade, B.E.; Ferracane, J.L.; Okabe, T.; and Watari, F.: Compositions of Surface Layers Formed on Amalgams in Air, Water, and Saline. *Dental Materials Journal*, 12:118-126, 1993.
44. Beemer, R.L.; Ferracane, J.L.; and Howard, H.E.: Orthodontic Band Retention on Primary Molar Stainless Steel Crowns. *Pediatric Dentistry*, 15:408-413, 1993.
45. Ferracane, J.L.; Nakajima, H.; and Okabe, T.: Enhanced Evaporation of Mercury from Amalgams in Non-oxidizing Environments. *Dental Materials*, 9(5):300-305, 1993.
- \* 46. Ferracane, J.L.: Dental Composites: Present Status and Research Directions. *Transactions of the Second International Congress on Dental Materials*, pp. 43-53, 1993.
47. Ferracane J.L. and Mitchem, J.C.: Properties of Posterior Composites: Results of Round Robin Testing for a Specification, *Dental Materials*, 10(2):92-99, 1993.
48. Ferracane, J.L.; Engle, J.H.; and Okabe, T.: Reduction in Operatory Mercury Levels After Contamination or Amalgam Removal. *American Journal of Dentistry*, 7:103-107, 1994.
49. Ferracane, J.L.: Elution of Leachable Components from Composites. *J Oral Rehabilitation*,

- 21:441-452, 1994.
50. Mitchem, J.C.; Wagner, P.C.; and Ferracane, J.L.: Marginal Adaptation of the Concept Inlay System. *American Journal of Dentistry*, 7(5):232-234, 1994.
  51. Okabe, T.; Yamashita, T.; Nakajima, H.; Berglund, A.; Zhao, L.; Guo, I.; and Ferracane, J.L.: Reduced Mercury Vapor Release from Dental Amalgams Prepared with Binary Hg-In Liquid Alloys. *J of Dental Research*, 73:1711-1716, 1994.
  52. Fujishima, A.; Fujishima Y.; and Ferracane, J.L.: Shear Bond Strength of Four Commercial Bonding Systems to cpTi. *Dental Materials*, 11:82-86, 1995.
  53. Ferracane, J.L.; Adey, J.D.; Nakajima, H.; and Okabe, T.: Mercury Vaporization from Amalgams with Varied Alloy Compositions. *J of Dental Research*, 74(7):1414-1417, 1995.
  54. Ferracane, J.L. and Berg, H.X.: Fracture Toughness of Experimental Dental Composites after Aging in Ethanol. *J of Dental Research*, 74(7):1418-1423, 1995.
  55. Ferracane, J.L.: Current Trends in Dental Composites. *Critical Reviews in Oral Biology and Medicine*, 6(4):302-318, 1995.
  56. Ferracane JL, Hopkin JK, Condon JR. Properties of Heat-treated Composites After Aging in Water. *Dent Mater* 11:354-358, 1995.
  57. Fujishima A, Ferracane JL. Comparison of Four Modes of Fracture Toughness Testing for Dental Composites. *Dent Mater* 12:38-43, 1996.
  58. Horosawa N, Nakajima H, Ferracane JL, Takahashi S, Okabe T. Cyclic Voltammetry of Dental Amalgams, *Dent Mater* 12:154-160, 1996.
  59. Condon JR, Ferracane JL. Evaluation of Composite Wear with a New Multi-mode Oral Wear Simulator. *Dent Mater*, 12:218-226, 1996.
  60. Nakajima H, Lorenzana E, Ferracane JL, Okabe T. Initial Mercury Evaporation from Amalgams Made with In-containing Commercial Alloys. *Dent Mater J* 15:168-174, 1996.
  61. Nakajima H, Akaiwa Y, Hashimoto H, Ferracane JL, Okabe T. Surface Characterization of Amalgam Made with Hg-In Liquid Alloy. *J Dent Res*, 76:610-616, 1997.
  62. Ferracane JL, Mitchem JC, Condon JR, Todd R. Wear and Marginal Breakdown of Composite with Varied Degree of Cure, *J Dent Res*, 76:1508-1516, 1997.
  - \* 63. Ferracane JL. Water Sorption and Solubility of Experimental Dental Composites. *Polymer Preprints*, 38:116-117, 1997.
  64. Okabe T, Ohmoto K, Nakajima H, Woldu M, Ferracane JL. Effect of Pd and In on Mercury Evaporation from Amalgams, *Dent Mater J* 16:191-199. 1997.
  65. Hilton TJ, Schwartz RS, Ferracane JL. Microleakage of Four Class II Resin Composite Insertion Techniques at Intraoral Temperatures, *Quint Int* 28:35-144, 1997.
  66. Condon JR, Ferracane JL. Factors Effecting Dental Composite Wear In Vitro, *J Biomed Mater Res (Appl Biomater)* 38:303-313, 1997.
  67. Condon JR, Ferracane JL. In vitro Wear of Composite with Varied Cure, Filler Level, and Filler Treatment, *J Dent Res* 76:1405-1411, 1997.
  68. Ferracane JL, Mitchem JC, Adey JD. Fluoride Penetration Into the Hybrid Layer from a Dentin Adhesive, *Amer J Dent*, 11:23-28, 1998.
  69. Ferracane JL, Berge HX, Condon JR. In Vitro Aging of Dental Composites in Water - Effect of Degree of Conversion, Filler Volume and Filler/matrix Coupling, *J Biomed Mater Res*, 42:465-472, 1998.
  70. Griffin JT, Ferracane JL. Laboratory Evaluation of Adhesively Crimped Surgical Ball Hooks, *Int J Adult Orthod Orthognath Surg*, 13:169-175, 1998.
  71. Sakaguchi RL, Ferracane JL. Stress Transfer from Polymerization Shrinkage of a Chemical-cured Composite Bonded to a Pre-cast Composite Substrate, *Dent Mater*, 14:106-111, 1998.
  72. Condon JR, Ferracane JL. Reduction of Composite Contraction Stress Through Non-bonded

- Microfiller Particles, *Dent Mater*, 14:256-260, 1998.
73. Freiberg RS, Ferracane JL. Evaluation of Cure, Properties and Wear Resistance of Artglass Dental Composite, 11:214-218, 1998.
  74. Ferracane J, Adey J, Wiltbank K, Nakajima H, Okabe T. Vaporization of Hg from Hg-In Amalgams During Setting and After Abrasion, *Dent Mater*, 15:191-195, 1999.
  75. Ferracane JL, Condon JR. In Vitro Evaluation of the Marginal Degradation of Dental Composites Under Simulated Occlusal Loading, *Dent Mater*, 15:262-267, 1999.
  76. Ferracane JL, Choi K, Condon JR. In Vitro Wear of Packable Dental Composites, *Compend Cont Ed Dent* 20:suppl. 25, S60-S66, 1999.
  77. Hilton TJ, Ferracane JL. Cavity Preparation Factors and Microleakage of Class II Composite Restorations Filled at Intraoral Temperatures, *Am J Dent* 12:123-130, 1999.
  78. Condon JR, Ferracane JL. The Effect of Composite Formulation on Polymerization Stress, *J Amer Dent Assoc*, 131:497-503, 2000.
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  80. Choi KK, Ferracane JL, Hilton TJ, Charlton D. Properties of Packable Dental Composites. *J Esthet Dent* 12:216-226, 2000.
  81. Lim BS, Ferracane JL, Condon JR, Adey JD. Effect of Filler Fraction and Filler Surface Treatment on Wear of Microfilled Composites, *Dent Mater*, 18:1-11, 2002.
  82. Lim BS, Ferracane JL, Sakaguchi RL, Condon JR. Reduction of Polymerization Contraction Stress for Dental Composites by Two-Step Light Activation, *Dent Mater*, 18:436-444, 2002.
  83. Kaga M, Noda M, Ferracane JL, Nakamura W, Oguchi H, Sano H. The in vitro Cytotoxicity of eluates from dentin bonding resins and their effect on tyrosine phosphorylation of L929 cells, *Dent Mater*, 17:333-339, 2001.
  84. Sakaguchi RL, Ferracane JL. Effect of Light Power Density on Development of Elastic Modulus of a Model Light-activated Composite During Polymerization, *J Esth Rest Dent* 13:121-130, 2001.
  85. Keanini RG, Ferracane JL, Okabe T. Theoretical Models of Mercury Dissolution from Dental Amalgams in Neutral and Acidic Flows, *Metall Mater Trans B*, 32B:409-416, 2001.
  86. Fujishima A, Ikeda K, Aoyama M, Miyazaki T, Sasa R, Ferracane JL. Durability of resin-modified glass ionomer cements after long term water immersion, *J Showa U Dent Soc* 21:178-185, 2001.
  87. Ferracane JL. New polymer resins for dental restoratives, *Oper Dent*, Supplement 6:199-210, 2001.
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#### Book Reviews:

1. The Bone-Biomaterial Interface. Editor: J.E. Davies, University of Toronto Press, 1991. Review published in the *International Journal of Oral and Maxillofacial Implants*, 1992.

#### Patents:

1. Inventors: Pfeifer; Carmem S. (Portland, OR), Ferracane; Jack L. (Portland, OR). United States Patent 10,071,027, September 11, 2018. Dental composites.

2. Inventors: Pfeifer; Carmem S. (Beaverton, OR), Ferracane; Jack L. (Beaverton, OR), Mbiya; Wilbes (Portland, OR). United States Patent 10,342,745, July 9, 2019. Methacrylamide compounds.
3. Inventors: Fernandez, Oscar Navarro (Tigard, OR); Pfeifer, Carmem (Beaverton, OR), Fugolin, Ana Paula Piovezan (Portland, OR), Ferracane; Jack (Beaverton, OR). United States Patent 10,689,329 B2, June 23, 2020. Tert-amine core-bearing acrylamides and adhesive formulations.
4. Inventors: Mbiya; Wilbes (Portland, OR), Pfeifer; Carmem S.C. (Portland, OR), Ferracane; Jack L. (Portland, OR). United States Patent Publication Application US2021/0047450A1, Feb. 18, 2021. Methacrylamide adhesive systems. Application Publication.

## **STUDENT RESEARCH**

### **Baylor College of Dentistry:**

1. Aday, P.L.: Depth of Cure of Visible Light-Activated Composite Resin-Effect of Shade, 1984; abstract presented at the IADR meeting, Las Vegas, Nevada, March 1985; paper published in Dental Materials 2:80-84, 1986.
2. Anderson, D.A.F.: Cytotoxicity of Combinations of Dental Composite Components, 1986; abstract presented at the AADR meeting, Chicago, IL, March, 1987.
3. Mathis, R.S.: Properties of a New Glass Ionomer/Composite Resin Hybrid Restorative, 1986; abstract presented at the IADR meeting, Chicago, IL, March, 1987; paper published in Dental Materials 5:355-358, 1989.
4. Mathis, R.S.: Glass Ionomer as a Liner Under a Microfilled Composite: Influence of Thermocycling on Marginal Leakage, 1987; abstract presented at the AADR meeting, Montreal, Canada, March, 1988; paper published in J. Prosthetic Dentistry, 63:522-525, 1990.
5. Pham, D.: Leaching of Residual Components from Light-cured Composite Resins with Variable Degrees of Conversion, 1987; abstract presented at the AADR meeting, San Francisco, CA March, 1989.
6. Anderson, D.A.F.: Cytotoxicity of Variably Cured Light-Activated Dental Composites, 1987; abstract presented at the AADR meeting, Montreal, Canada, March, 1988.
7. Hardie, W.R.: Comparison of the Mechanical Properties of "Identical" Orthodontic Wires from Four Wire Manufacturers, 1987; abstract presented at the AADR meeting, Montreal, Canada, March, 1988.
8. Anderson, D.A.F.: Microleakage Measurements and Pulpal Reactions to Light-Activated Dental Composites Using Variable Placement Techniques. AADR Student Fellowship, 1988; abstract presented at the AADR meeting, San Francisco, CA, March, 1989.

### **Oregon Health & Science University:**

1. Wagner, P. C.: Marginal Adaptation of the Concept Inlay System, 1992; paper published in the American Journal of Dentistry 7:232-234, 1994.
2. Hopkin, J.: Effect of Aging on the Mechanical Properties of Heat-treated Composites, 1992; abstract presented at the Northwest Regional meeting of the AADR, Seattle, WA, January, 1993, and at the IADR meeting, Chicago, IL, March, 1993; paper published in Dental Materials 11:354-358, 1995.
3. Fennimore, R.: Mercury Dissolution from Amalgam Alloys and Phases, 1992.
4. Fennimore, R.: Factors Affecting the Interfacial Bond Stress for Composite Inlays, 1993;

- abstract presented at the IADR meeting, Seattle, WA, March, 1994.
5. Hopkin, J.: Immunogenic Potential of Dental Resins. 1993-1994.
  6. Fennimore, R.: Stress Development and Interfacial Failure in Composite Inlays, 1994; abstract presented at the AADR meeting, San Antonio, TX, March, 1995.
  7. Wiltbank, K.: Vaporization of Hg from Hg-In Amalgams After Abrasion, 1995; abstract presented at the AADR meeting, San Francisco, CA, March, 1996.
  8. Freiberg, R.S.: Evaluation of Cure and Properties of a New Dental Composite, 1996; NIH/NIDR T35 Training Grant Project at OHSU; abstract presented at the IADR meeting, Orlando, FL, March, 1997.
  9. Chamberlain, T.H.: Effect of Light-Curing Energy on Energy on DC and Cross-linking of Composites, 1997; NIH/NIDR T35 Training Grant Project at OHSU; abstract presented at the AADR meeting, Minneapolis, MN, March, 1998.
  10. Payne, M.D.: Curing Reaction Kinetics and Thermal Properties of Composite Materials; NIH/NIDCR T35 Training Grant Project at OHSU; abstract presented at the IADR meeting, Washington, D.C., April, 2000.
  11. Pham B.: Mechanical Properties of Composites with Variable Filler Coatings After Extended Aging in Water, abstract presented at the IADR meeting, Washington, D.C., April, 2000.
  12. Payne, M.D., Ferracane, J.L., Sakaguchi, R.L.: Monitoring Curing of Composites with Varied BHT Levels Using DMA and PhotoDSC, abstract presented at the AADR meeting, Chicago, IL, March, 2001.
  13. Robertson, J.L.: Fatigue Strength of Composite Containing Silanated or Non-silanated Microfiller, abstract presented at the AADR meeting, Chicago, IL, March, 2001.
  14. Eller, G.D.: Enhanced Bonding Characteristics and Reduced Microleakage at the Dentin/Adhesive Interface: A Biomimetic Approach, 2003. (AADR Student Summer Fellowship; co-mentor with John Mitchell), abstract presented at the IADR meeting, Baltimore, MD, March, 2005.
  15. Wappett, A.: Relationship of Polymerization Relaxation and Increased Dentin Bond Strength in Class V Composite Restorations, 2005 (AADR Student Summer Fellowship; co-mentor with Tom Hilton).
  16. Chen, A: Methods for Reducing Stress and Enhancing Bond Strength in Dental Composite Restorations, 2006 (AADR Student Summer Fellowship; co-mentor with Tom Hilton).
  17. Rickert, L: Evaluation of the effects of varying eugenol concentrations for a provisional zinc-oxide-eugenol restorative on bond strength of resin-based restorative materials, 2007 (OSLER grant awardee, OHSU, co-mentor with Tom Hilton).
  18. Kotzin, R: Degree of conversion and hardness of light-cured injectable polymers, 2008 (OSLER grant awardee, OHSU, co-mentor with John Mitchell).
  19. Gates, Denise: Early identification of carious lesions, comparing DIAGNOdent and Caries ID, 2011-2013 (AADR Student Research Fellowship awardee, mentor; and third place in the Clinical Science Division of the Caulk Dentsply Student Competition at the 2013 IADR).
  20. Ma, Jason: Effects of Bioactive Glass and ACTIVA BioACTIVE composites on biofilm cell viability, surface roughness, and adhesion strength, 2015-2017 (AADR Student Research Fellowship, co-mentor with Justin Merritt).
  21. Conor Scanlon: Effect of Monomer Conversion on Biofilm Formation on Dental Resins, 2020-2021 (AADR Student Research Fellowship; mentor; co-mentors: Carmem Pfeifer and Justin Merritt)

## **GRADUATE STEERING**

**Baylor College of Dentistry:**

1. Jensen, J.D.: An In Vitro Analysis of the Clinical Potential for Visible Light-Cured Orthodontic Bonding Agents. M.S. Thesis - Department of Orthodontics, 1985-86.
2. Reed, A.: An Evaluation of the Friction Reducing Properties of Sputtered Teflon on Orthodontic Arch Wires. M.S. Thesis - Department of Orthodontics, 1986-87.
3. VerSteeg, J.: The Early Surface Changes and Microleakage of a Glass-Ionomer Cement in Primary Incisors. M.S. Thesis - Department of Pediatric Dentistry, 1986-87.
4. Bryant, S.S.: A Comparison of Different Sealants in the Prevention of Decalcification. M.S. Thesis - Department of Orthodontics, 1987-88.

**Oregon Health & Science University:**

1. Park, Douglas: Direct Bonding of Orthodontic Brackets Using a Dual-Cured Adhesive with a Tack-set Bonding Technique, Department of Pediatric Dentistry, Oregon Health Sciences University, 1990-1991.
2. Beemer, Randall: Evaluation of Bond of Cemented Commercial or Custom Bands on Stainless Steel Crowns, Department of Pediatric Dentistry, Oregon Health Sciences University, 1991-1992.
3. Delio, Anthony F.: Glass Ionomers as Orthodontic Bonding Agents, Department of Orthodontics, Oregon Health Sciences University, 1993-1994.
4. Mergaert, James S.: An In Vitro Study Testing the Ability of Intermediary Sealants to Prevent Enamel Decalcification Around Bonded Orthodontic Attachments, Department of Orthodontics, Oregon Health Sciences University, 1993-1994.
5. Schwendeman, Fred J.D.: Thermal Pulpal Insult from Laser Debonding Ceramic Brackets, Department of Orthodontics, Oregon Health Sciences University, 1994-1995.
6. Hardin, Tod M.: Investigation of an Alternative Porcelain Bonding Technique, Department of Orthodontics, Oregon Health Sciences University, 1995-1996.
7. Allen, Trevor: Effect of Light-curing Technique on the Bonding of Orthodontic Brackets, Department of Orthodontics, Oregon Health Sciences University, 1996-1997.
8. Martin, Jennifer: Effect of Salivary Contamination on the Bonding Of Brackets with Resin Modified Glass Ionomer Cements, Department of Orthodontics, Oregon Health Sciences University, 1996-1997.
9. Griffin, James T.: A Laboratory Evaluation of Crimped Surgical Ball Hooks, Department of Orthodontics, Oregon Health Sciences University, 1996-1997.
10. McColm, Shelly L.: Effects of Argon Laser Curing on Caries-like Lesions Surrounding Orthodontic Brackets, Department of Orthodontics, Oregon Health Sciences University, 1996-1997.
11. Trammell, Curtis: The Effect of Thermocycling on the Retention of Adhesively Bonded vs Crimped Surgical Ball Hooks, Department of Orthodontics, Oregon Health Sciences University, 1996-1997.
12. Thurston, Thomas: Evaluation of Laser Curing of Composite Cements for Bonding Orthodontic Brackets, Department of Orthodontics, Oregon Health Sciences University, 1996-1997.
13. Gardner, Joel P.: An Investigation of Bond Strengths Achieved to Artglass and Charisma, and the effects of Two Different Surface Roughening Procedures, Department of Orthodontics, Oregon Health Sciences University, 1998-1999.
14. DeSantos, Bernadette: The Effects of Successive Sealant Coats on Decalcification and Bond

- Strengths, Department of Orthodontics, Oregon Health Sciences University, 1998-1999.
15. Oliverson, Sean: Department of Orthodontics, Oregon Health & Science University, 2001.
  16. Mentor for Dr. Kraig S. Vandewalle: Resin Composite Restorations: Effect of Energy Density on Properties and Marginal Integrity, M.S. Thesis, Department of Biomaterials and Biomechanics, graduated June, 2002.
  17. Chamberlain, Thomas: Department of Orthodontics, Oregon Health & Science University, 2002.
  18. Moses, Ryan: Department of Orthodontics, Oregon Health & Science University, 2002.
  19. Hilton, Thomas J. (Mentor): The effect of silane treated and non-silane treated colloidal silica on the physical, mechanical and wear properties of microfilled and hybrid composites, M.S. Thesis, Department of Biomaterials and Biomechanics, completed August 2003.
  20. Buxton, Mark (Mentor): MS in Orthodontics Department of Orthodontics, Oregon Health Sciences University, The effect of bracket material on fatigue strength of the orthodontic bond 2003-2004.
  21. da Cunha, Marcia (co-Mentor), visiting PhD student from the University of Campinas, Piracicaba, Brazil (September 2002-January 2003).
  22. Salomon, Jean-Pierre (co-Mentor), visiting PhD student from the Paris V University, Paris, France, June, 2003 - present.
  23. Musanje, Lawrence (Mentor), postdoctoral fellow, April 2001-December 2004.
  24. Turssi, Cecilia (co-Mentor) visiting PhD student from the University of Campinas, Piracicaba, Brazil (September 2003-August 2004).
  25. Correr, Gisele (co-Mentor), visiting PhD student from the University of Campinas, Piracicaba, Brazil (August 2004-January 2005).
  26. Herion, Tracy (Mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health Sciences University, 2004-2005.
  27. Almeida, Matthew (Mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health Sciences University, 2004-2006.
  28. Chen, Yin-Chu (co-Mentor), PhD in Biomedical Engineering, Department of Biomedical Engineering, OGI School of Science and Engineering, Oregon Health & Science University, 2003-2005.
  29. Cunha, Leonardo (co-Mentor) visiting PhD student from the University of Campinas, Piracicaba, Brazil (April 2005-October 2005).
  30. Pfeifer, Carmem Silvia Costa (co-Mentor) visiting PhD student from the University of Sao Paulo, Sao Paulo, Brazil (August 2005-July 2006).
  31. Schneider, Luis Felipe (co-Mentor) visiting PhD student from the University of Campinas, Piracicaba, Brazil (April 2006 – March 2007).
  32. Rodrigues, Sinval Alberto (co-Mentor) visiting PhD student from the University of Passo Fundo, Brazil (April 2006 – March 2007).
  33. Herion, Drew (Mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2006-2008.
  34. Pelogia, Fernanda (co-Mentor) visiting PhD student from the Sao Paulo State University, Sao Jose dos Campos, Brazil (September 2007-September 2008).
  35. Macedo, Manoel (co-Mentor) visiting PhD student from the University of Sao Paulo, Sao Paulo, Brazil (February 2008 – August 2008).
  36. Wyngrove, Danielle (co-Mentor), Certificate in Endodontics, Department of Endodontology, Oregon Health & Science University, 2007-2009.
  37. Vest, Devan (Mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2007-2009.

38. Espinoza, Ana (committee member), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2010-2012.
39. Senestrago, Seth (committee member), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2010-2012.
40. Messenger, Jennifer (mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2011-2013.
41. Yamakawa, Rachel (mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2011-2013.
42. Fugolin, Ana Paula Piovezan (co-mentor), visiting PhD student from the University of Campinas, Piracicaba, Brazil (August 2012 – August 2013).
43. Luwiharto, Sheila (committee member), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2012-2014.
44. Knapp, Brandon (mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2012-2014.
45. Alatsis, Patra (mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2012-2014.
46. Atamna, Alaisha (mentor), PhD in Biomedical Engineering, Department of Biomedical Engineering, Oregon Health & Science University, 2012-2016.
47. Oliveira, Dayane (co-mentor), visiting PhD student from the University of Campinas, Piracicaba, Brazil (July 2014 – November 2014).
48. Andre, Carolina (co-mentor), visiting PhD student from the University of Campinas, Piracicaba, Brazil (December 2014 – October 2015).
49. Darcy, Kaitlyn (mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2014-2015.
50. Weber, Lauren (mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2014-2015.
51. Pioch, Amanda (committee member), MS in Dental Sciences, Department of Endodontology, Oregon Health & Science University, 2014-2016.
52. Ahdab, Hani (mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2015-2016.
53. Ward, Adam (mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2016-2017.
54. McBride, Robert (mentor), Certificate in Endodontics, Department of Endodontics, Oregon Health & Science University, 2016-2017.
55. Aquino, Sarah (co-mentor), visiting PhD student from Federal Fluminense University School of Dentistry, Niteroi, Rio de Janeiro, Brazil, 2017-2018.
56. Mushashe, Amanda (co-mentor), visiting PhD student from Positivo University Dental School, Curitiba, Brazil, 2017-2018 (PhD completed July 2018).
57. Twohig, Chelsea (thesis committee), MS in Periodontology, Department of Periodontology, Oregon Health & Science University, 2016-2018.
58. Ghaderi, Nikta (thesis committee), MS in Periodontology, Department of Periodontology, Oregon Health & Science University, 2016-2018.
59. Yih, Jonathan (mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2017-2018.
60. Hezinga, Mari (thesis committee), MS in Periodontology, Department of Periodontology, Oregon Health & Science University, 2016-2018.
61. Buckendorf, Lena (mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2018-2019.



62. Sei, Kim (co-mentor), MS in Periodontology, Department of Periodontology, Oregon Health & Science University, 2019-2020.
63. Lin, Kathy (mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2020-2021.
64. Tsai, Matthew (mentor), MS in Orthodontics, Department of Orthodontics, Oregon Health & Science University, 2020-2022.
65. McCunniff, Michael (mentor), Research for Certificate in Endodontics, Department of Endodontics, Oregon Health & Science University, 2020-2021.
66. Martin, Ryan (mentor), Research for Certificate in Endodontics, Department of Endodontics, Oregon Health & Science University, 2020-2021.
67. Athirasala, Avathamsa (thesis committee), PhD in Biomedical Engineering, Department of Biomedical Engineering, Oregon Health & Science University, 2019-2022

### **Postdoctoral Fellows/Visiting Professors:**

1. Akihiro Fujishima, Visiting Professor, Showa University, Tokyo, Japan. (August 1992-July 1993)
2. Yukari Fujishima, Visiting Professor, Showa University, Tokyo, Japan. (August 1992-July 1993)
3. Kyung Kyu Choi: Visiting Professor, Kyung Hee University School of Dentistry, Seoul, South Korea (August 1997-March 1999).
4. Bum-soon Lim: Visiting Professor, Seoul National University, Seoul, South Korea. (July 1999-June 2000).
5. Keichi Yoshida, Visiting Professor, Nagasaki University, Nagasaki, Japan. (July 2000-September 2000).
6. Roberto R. Braga, Visiting Professor, University of Sao Paulo, Sao Paulo, Brazil. (August 2000-July 2002).
7. Lawrence Musanje, Postdoctoral Fellow, April 2001- December 2004 (submitted and was awarded an F32 grant – scored 167, but left to pursue a dental degree).
8. Roland Bryant, Visiting Professor, University of Sydney, Sydney, Australia. (July 2002-December 2002).
9. Marcia Regina Bernardi da Cunha, Visiting Professor, State University of Campinas, Piracicaba, Brazil. (September 2002-January 2003).
10. Scott Dyer, postdoctoral fellow, August 2003- July 2004.
11. Jeong-Won Park, Visiting Professor. Yonsei University, Seoul, South Korea. (February 2003-January 2005).
12. Ji-Yeon Lee, Visiting Scholar, Seoul, South Korea. (February 2003-January 2005).
13. Jean-Pierre Salomon, Visiting Professor, School of Dentistry, Paris, France. (May 2003).
14. Rodrigo Nunes Rached, Visiting Professor, Pontifical Catholic University of Parana, Curitiba, Brazil. (August 2004-February 2005).
15. Rui Mazur, Visiting Professor, Pontifical Catholic University of Parana, Curitiba, Brazil. (July 2005-January 2006).
16. In-bog Lee, Visiting Professor. Seoul National University, Seoul, South Korea (2006-2007)
17. Takatsugu Yamamoto, Visiting Professor. Tsurumi University, Yokohama, Japan (2006-2007).
18. Yuichiro Otsuka, Visiting Professor, Meikai University, Saitima, Japan. (2008-2009).
19. Harry Davis, Post-doctoral fellow (2008 – present).
20. Satin Salehi, Post-doctoral fellow (2008-2016)

21. Eitetsu Cho, Visiting Professor, Tokyo Medical and Dental University, Tokyo, Japan (June 2012).
22. Jeong Won Park, Visiting Professor, Yonsei University, Seoul, South Korea (2010-2012, second sabbatical)
23. Ji-Yeon Kim, Visiting Scholar, Seoul, South Korea (2010-2012)
24. Hong-Keun Huyn, Visiting Associate Professor, Seoul National University, Seoul, South Korea. (2014-2016).
25. Duck-Su Kim: Visiting Associate Professor, Seoul National University, Seoul, Korea. (2015-2016)
26. Masaya Suzuki, Visiting Associate Professor, Niigata University, Niigata, Japan. (2015-2017).
27. Lourenco Sobrinho Correr, Visiting Professor, University of Campinas, Piracicaba, Brazil. (2016-2017)
28. Sung-Joon Kim: Visiting Research Scholar, Jeju National University, South Korea. (2018-2019).
29. Hoon-Sang Chang: Visiting Assistant Professor, Chonam National University, Gwangju, South Korea. (2018-2019).
30. Deniz Sen, visiting Professor, Istanbul University, Istanbul, Turkey (2016; 2 months)
31. Gamze Karacolak, post-doctoral fellow, Ege University, Izmir, Turkey (2017; 3 months)
32. Natsuko Aida: Visiting Assistant Professor, Tokyo Dental College, Tokyo, Japan. (2018-2019).
33. Hiroshi Morisaki, Visiting Scholar, Tokuyama Dental Company, Tsukuba, Japan. (2018-2019).
34. Mikihiro Kobayashi, Visiting Professor, Showa University, Tokyo, Japan. (2022-2023).

## **SELF-INSTRUCTIONAL UNITS AND COURSE SYLLABI**

### **Course Syllabi and Manuals:**

#### Oregon Health Sciences School of Dentistry:

Development of Course Syllabus for Dental Materials 631 (3rd year dental students): 1991-present.

Development of Course Syllabus for Dental Materials 613 (1st year dental students): 2003-present

Presentation to Senior Dental Students of Review of Dental Materials for National Board Exam: 1990, 1992, 1993, 1994, 1995, 1996, 1997

#### Baylor College of Dentistry:

Revision of Lab Manual for Dental Materials 502 (1st year dental students): 1985; 1984

Revision of Lab Manual for Dental Hygiene Dental Materials 315: 1985; 1984

Author or Co-author of the following instructional videotapes for Dental Materials Lab Courses:

- 1) Preparation of a Study Model from an Alginate Impression
- 2) Lost Wax Casting Procedure
- 3) Dental Amalgam: Effect of Manipulation Variables

- 4) Soldering: Investment Technique
- 5) Cements, Bases and Liners
- 6) Class III Restoration with a Light-Cured Composite Resin
- 7) Spruing and Investing

### **Videotape Narrations: Baylor College of Dentistry**

- 1) Library Orientation: Basic Services (Media Resources Department)
- 2) Library Orientation: Advanced Resources (Media Resources Department)
- 3) Recruitment Program (Media Resources Department)

### **Presentations/Publications for the American Association of Dental Schools**

- 1) Predoctoral Curriculum Guidelines for Biomaterials (contributor), published in the Journal of Dental Education, 1991.
- 2) Incorporating New Biomaterials Technology Into the Dental Curriculum - A Historical Perspective, Presented at the meeting of the Section on Biomaterials at the AADS annual meeting in Cincinnati, OH, March 1990.
- 3) Application of Case-Based Examinations and Critical Thinking in Dental Biomaterials, Presented at the meeting of the Section on Biomaterials at the AADS annual meeting in Seattle, WA, March 1994.

### **GRANTS AND CONTRACTS**

#### **Grants funded: Intramural**

<u>Date</u>	<u>Agency</u>	<u>Direct Costs</u>
1/1984 - 12/1985	Baylor College of Dentistry	\$2048
Title: Effect of Resin Matrix and Filler Particle Components on the Compressive Creep of Dental Composite Resins (PI)		
6/1985	Baylor College of Dentistry	\$6400
Title: Funding request for Fourier Transform Infrared Spectrometer (Co-PI)		
6/1993 - 5/1995	Oregon Health Sciences U.	\$6,534
Title: Investigation of the Immunogenic Potential of Dental Resins (PI)		
4/2013 – 5/2015	Oregon Health & Science U.	\$40,000
Title: Pilot Study on Crack Characteristics (co-PI; Tom Hilton PI)		
7/1992 - 6/1994	MRF of Oregon	\$14,920
Title: Wear and Marginal Fracture of Dental Composite Restoratives (PI)		
9/1/2005-8/31/2006	Medical Research Foundation of Oregon	\$30,000
Title: Nanoparticle Reinforced Visible Light-Cured Biodegradable Polymer Scaffolds: Design (PI)		

#### **Grants funded: Extramural**

12/1984 - 11/1987	NIH/NIDR R23 DE 07079-01	\$105,315
Title: Effect of Composition on Fracture and Creep of Composite (PI)		
3/1986 - 2/1989	NIH/NIDR RO1 DE 07644-01	\$203,965
Title: Evaluation of Mercury Release from Dental Amalgam (Co-PI)		
6/1988 - 5/1991	NIH/NIDR RO1 DE 07079-04	\$177,591
Title: Effect of Composition on Fracture and Wear of Composite (PI)		
4/1989 - 3/1994	NIH/NIDR RO1 DE 07644-04	\$712,593
Title: Evaluation of Mercury Release from Dental Amalgam (Co-PI)		
6/1990 - 5/1991	NIH/DRR (SIG)	\$396,600
Title: SEM/Electron Microprobe (PI)		
4/1992 - 3/1998	NIH/NIDR RO1 DE 07079-07	\$620,647
Title: Effect of Composition on Fracture and Wear of Composite (PI)		
1/1995 - 12/1998	NIH/NIDR RO1 DE 07644-09	\$742,858
Title: Evaluation of Mercury Release from Dental Amalgam (Co-PI)		
5/1996 - 4/ 2001	NIH/NIDR T35	\$77,310
Title: Short-term Training Students in Health Professional School (PI)		
8/1997 - 7/1998	NIH/NIDR P60	\$99,283
Title: Center in Oral/Facial Hard Tissue Studies (PI)		
12/1997 -11/2003	NIH/NIDR RO1 DE 07079-12	\$959,900
Title: Composites With Reduced Fracture, Wear and Curing Stress (PI)		
8/1998 - 7/2003	NIH/NIDR RO1DE 09431	\$230,915 (yr 1)
Title: Reduction of Composite Polymerization Contraction Stress (co-Inv.) PI - Sakaguchi		
4/2000 - 3/2005	NIH/NIDCR RO1 DE 07644-13	\$310,725
Evaluation of Mercury Release from Dental Amalgam (PI of subcontract from Baylor College of Dentistry - TAMUS)		
8/2003 – 7/2004	NIH/NIDCR 1 R24 DE015491	\$100,000
Title: Improving the Dental Research Infrastructure at OHSU (PI)		
2/1/04 – 1/31/05	IADR/GlaxoSmithKline	\$90,000
Title: Novel Dental Desensitizing Agent Based on a Biomimetic Approach		
4/1/2005 – 3/31/2012	NIH/NIDCR 1 UO1 DE016750	\$2,650,000
Network Chair for the Pacific Northwest DPBRN (OHSU subcontract from U. Washington) (PI)		
7/1/2008-6/30/2010	NIH/NIDCR 1 R21 DE016758	\$224,531 (total)
Title: Curing Models for Photoactivated Resin Composites (co-PI-OHSU; PI- Scott Prahl,		

Providence St. Vincent Medical Center)

6/23/2009-6/22/2010	NIH/NIDCR 1F33DE020007-01	\$51,552
Title: Stimulation of Tooth Repair and Regeneration by Interaction with Dental Materials (PI)		
6/23/2009-6/22/2010	NIH/NIDCR 1F33DE020007-01X1	\$8,650
Title: Stimulation of Tooth Repair and Regeneration by Interaction with Dental Materials (PI)		
07/01/09 – 06/30/11	NIH/NIDCR1 R21DE018054-01A2	\$275,000
Visible light-cured tissue engineering polymers filled with bioactive glass (co-investigator; PI = John Mitchell)		
09/10/2010-09/09/2014	NIH/NIDCR 1 R01 DE021372-01	\$1,500,000 total
Effect of Bacteria and Mechanical Loading on Degradation of the Composite-Tooth Interface (PI)		
09/01/2012-08/31/2014	NIH/NIDCR 1 R01 DE021372-01S1	\$ 547,497
Effect of Bacteria and Mechanical Loading on Degradation of the Composite-Tooth Interface – Administrative Supplement (PI)		
05/01/13 – 04/30/19	1 U19-DE-22516 Subcontract of NIH/NIDCR grant from U. Alabama–Birmingham	\$249,000 annual
Cracked Tooth Registry (co-Investigator; PI = Dr. Tom Hilton)		
09/02/2013-08/31/2018	NIH/NIDCR U01DE023756	\$2,360,000 total
Tertiary methacrylamides and thiourethane additives as novel dental composites Co-PI (with Dr. Carmem S. Pfeifer)		
07/01/2015-06/30/2017	NIH/NIDCR 1R21DE025370-01	\$20,491/yr
Going Local: Probing Real-Time Chemical Exchange Between Biofilm and Dental Composites. Co-I (PI: Dipankar Koley, Oregon State University)		
07/01/2016 – 06/30/2019	NIH/NIDCR 1 R01 DE026113-01	\$337,000 annual
Smart Self-Sterilizing Dental Composites for Class V Restorations. Role: co-PI (with Dr. Carmem S. Pfeifer and Dr. Justin L. Merritt)		
08/01/2018 – 07/31/2023	NIH/NIDCR 1 R01 DE027999-01	\$120,000 annual
Manipulation of Bacterial Metabolism: A New Approach to Develop Smart Dental Composites. Role: co-I (with Dr. Jens Kreth for subcontract) (PI: Dipankar Koley, Oregon State University)		
9/01/2016 – 10/01/2017 (no cost extension through 10/01/2019)	Oregon Nanoscience & Microtechnologies Institute (ONAMI)	\$163,000 total
Role: PI		
8/01/2016 – 7/31/2021	NIH/NIDCR R01 DE026170-01	\$2,275,475 total
Microengineering the Dental Pulp Vascular Microenvironment Role: Co-I (PI: Luiz Bertassoni)		
7/1/2019 – 6/30/2027	NIH/NIDCR (1R35 DE029083)	Title: Novel polymeric materials

with improved durability in the oral environment: tailoring responses to host and bacterial enzymes with anti-proteolytic and ecology-based antimicrobial approaches

Total direct costs: \$ 7,989,000

Role: Co-Investigator (PI: Carmem Pfeifer)

6/24/2021 – 6/24/2026 NIH/NIDCR (1T90 DE030859-01 and 1TR90 DE031533-01)

PORT (Portland Oral health Research Training)

Total direct costs: \$ 350,929 (annually)

Role: co-Director; Principal Investigator: Hui Wu

### Contracts funded (Industry):

10/1984 - 9/1985	GC International Corporation	\$7,993
Title: Modification of Glass Ionomer Restorative Materials (Co-PI)		
7/1995 - 6/1996	Shofu Inc.	\$21,395
Title: Evaluation of New Dentine Adhesive Systems (PI)		
8/1997 - 7/1998	3M Dental Products (ORG 148999)	\$16,800
Title: Protocol for the Fracture Evaluation of New Dental Composites/Compomers (PI)		
8/1998	Ora Innovations	\$500
Safety and Reliability Testing of Handpieces (PI)		
6/1999	Kerr Corporation	\$10,935
Development of Fatigue Testing System for Dental Materials		
5/1/199-5-30/1999	Bisco, Inc.	\$1,000
Wear of evaluation of experimental composite (PI)		
7/1999 – 9/1999	GC America	\$4,800
Title: Wear evaluation of condensable composites (PI)		
11/2000	ESPE	\$4,000
Title: Evaluation of a New LED Curing Unit for Dental Resins		
10/2000 – 4/2001	Kuraray Corporation	\$15,000
Title: Evaluation of a New Antibacterial, Fluoride-Containing Adhesive (co-PI; Hilton)		
4/2000 - 3/2001	3M Dental Products	\$39,607
Title: Effect of Extent of Cure on Marginal Integrity of Dental Restorations (co-PI; Hilton)		
5/30/2001 - 8/31/2001	The Management Alliance (Doug Wills)	\$3,500
Title: Evaluation of Shear Bond Strength of Provisional Materials to Direct Crown (PI)		
9/16/2002	3M Dental Products	\$5,000

## Unrestricted gift to support research activities (PI)

1/10/2002 - 2/28/2002	Ultradent Products, Inc.	\$5,000
Evaluation of the Properties of a new Microhybrid composite (PI)		
1/1/2002 - 2/28/2002	Bisco, Inc.	\$2,400
Title: Evaluation of wear of Tescara and belleGlass composites (PI)		
1/14/2002-7/14/2002	3M ESPE (GBIOM0013A)	\$14,300
Title: Evaluation of the wear and fatigue resistance of Unicem, a new dental cement. (PI)		
1/14/2002-10/16/2002	3M Dental Products (GBIOM0016A)	\$24,130
Title: Evaluation of the wear, fracture toughness, modulus development, polymerization shrinkage and polymerization contraction stress of Hermes, a new dental composite. (co-PI; Sakaguchi)		
2/2002 – 10/2002	Kerr Corporation	\$44,877
Title: Evaluation of Point 4 Flowable Composite and Self-etch Optibond Solo Plus Dual Cure Adhesive. Part 1 - Comparison of the mechanical properties of Point 4 Flowable to other flowable composites. Part 2 - Evaluation of the adhesive properties of a new Self-etch bonding agent to various substrates. (co-PI; Hilton)		
12/2002-2/2003	Ivoclar Vivadent (GBMIO0021A)	\$12,000
Title: Evaluation of the wear of Four Seasons composite in comparison to other commercial dental composites using the OHSU Oral Wear Simulator (PI)		
2/2003 – 10/2004	Ivoclar Vivadent (GBIOM0014A)	\$17,000
Title: Evaluation of the effect of filler particle size and shape on the wear of experimental dental composites using the OHSU oral wear simulator (PI)		
5/2003-7/2003	GC America	\$6,000
Title: Evaluation of the Properties of Gradia Direct Anterior and Posterior New Microhybrid Dental Composites (PI)		
4/2003 – 10/2003	3M ESPE (GBIOM0018A)	\$12,600
Title: Evaluation of Freelight 2: contraction stress comparison of three lights, four materials and two test methods (co-PI; Sakaguchi)		
8/1/2004-10/14/2004	Voco	\$5,400
Title: Evaluation of the physical properties of Grandio (PI)		
10/5/2004-11/30/2004	Discus Dental	\$4,500
Title: Evaluation of depth of cure of Flashlite 1350 photocuring unit in comparison to other commercial photocuring units using Knoop hardness (PI: da Costa; co-PI)		
6/2/2005 – 6/31/2006	Addent	\$6,000
Title: Effect of the Calset Warmer on Flow of Commercial Composites (co-PI, PI-da Costa)		
11/20/2005-12/16/2005	Dentsply DeTrey	\$3,000

Title: Testing K1c of various composites: K-0152: 14.1157 (PI)

8/1/2005-12/16/2005                      SDS Kerr    \$10,500

Title: Evaluation of a Prototype Low Shrinkage Composite. Part 1 - Comparison of the shrinkage stress of the prototype composite to other composites. Part 2 - Evaluation of the microleakage of the prototype composite to other composites. (co-PI; PI Hilton)

11/25/2005-2/14/2006                      3M ESPE Dental Products    \$7,800

Title: Evaluation of the abrasion and attrition wear of glass ionomer dental materials using the OHSU Oral Wear Simulator. (PI)

1/1/2006–3/1/2006                      Ivoclar Vivadent    \$6,000

Title: Evaluation of the abrasion and attrition wear of 6 denture teeth materials. (PI)

4/1/2006-3/31/2007                      3M Company    \$5,000

Title: The Effect of Surface Finish on One Step and Multiple Step Polishing Systems on Various Resin Composites (co-PI; Da Costa)

1/19/2006-4/14/2006                      3M ESPE Dental Products    \$2,400

Title: Evaluation of the contraction stress in Z250 dental composite placed with two types of light-cured RMGIC liners (Vitrebond control and new Experimental liner). (PI)

12/1/2006-1/7/2007                      Confi-Dental    \$1,000

Title: Wear of an Experimental Dental Composite (PI)

2/1/2007-4/30/2007                      3M ESPE Dental Products    \$16,800

Title: Evaluation of Two Experimental Self-Etch Adhesives in Comparison to Current Commercial Systems. Part 1 –Shear Bond Strength. Part 2 – Microleakage. (PI, with Tom Hilton)

3/1/2007-2/29/2008                      Ultradent Products (GBIOM0037A)    \$11,200

Title: Evaluation of An Experimental Self-Etch Adhesive in Comparison to a Total Etch and Other Commercial Self-Etch Adhesive Systems using Microtensile Bond Strength (PI; co-PI - Tom Hilton)

8/27/2007-6/30/2008                      Dentsply Caulk (GBIOM0041A)    \$18,690

Title: Evaluation of the Durability and Effectiveness of Lasting Touch for Maintaining Smoothness and Gloss of Dental Composite Restoratives (PI)

1/1/2008-6/30/2008                      Tokuyama Dental Corporation    \$18,690

Title: Evaluation of the Properties of Two New Experimental Composites (PI)

1/22/2008-9/22/2008                      Kerr Corporation    \$20,500

Title: Evaluation of Two Improved Resin Cements, Maxcem Elite and NX3, in Comparison to Other Competitive Products (PI-Tom Hilton, co-PI)

1/1/2008-6/30/2008                      Tokuyama Dental Corp. (GBIOM0046A)    \$21,890

Title: Evaluation of a New Self-Etch Adhesive in Comparison to Five Other Commercial Self-Etch Adhesive Systems using Microtensile Bond Strength (PI)



- 1/1/2008-6/30/2008 Tokuyama Dental Corp. (GBIOM0043A) \$18,690  
Title: Evaluation of Properties of Two New Experimental Dental Composites (PI)
- 2/15/2008-11/14/2008 Kerr Corporation (GBIOM0045A) \$26,833  
Title: Characterization of the Physical Properties of an Improved Composite, Premise NF, in Comparison to Other Competitive Products (PI, with Tom Hilton)
- 11/17/2008-5/16/2009 GC Corporation (GBIOM0051A) \$9,211  
Title: Evaluation of an improved version of G-bond self-eth adhesive (GBA-400) in comparison to two other commercial self adhesive systems using microtensile bond strength. (PI)
- 1/1/2009-6/30/2009 GC America (GBIOM0055A) \$9,345  
Title: Evaluation of the volumetric shrinkage of a new dental composite (PI)
- 2/16/2009-8/15/2009 CrownBeav, LLC \$7,476  
Title: Evaluation of Shear Bond Strength of Composite and Bis-Acryl Cements to Provisional Crown Material Using Four Different Adhesives (PI)
- 7/31/2009-10/18/2009 Kerr Corporation \$10,400  
Title: Evaluation of Two Improved Resin Cements, Maxcem Elite and NX3, in Comparison to Other Competitive Products (PI Tom Hilton, coPI)
- 9/28/2009-10/31/2009 Kerr Corporation \$1,500  
Title: Evaluation of The Polymerization Contraction Stress Produced During the Curing of Three Experimental Dental Composites (PI)
- 6/1/2013-6/28/2013 Dentsply DeTrey (GSODO0002A) \$4,620  
Title: Objective and subjective evaluation of time to achieve maximum gloss and gloss retention for a new and an existing dental composite formulation (PI Juliana da Costa; co-PI)
- 6/5/2013-8/5/2013 Kerr Corporation \$4,800  
Title: Evaluation of two experimental RMGI, in comparison to other competitive products. (co-PI, with Carmem Pfeifer)
- 11/20/2014-1/31/2014 Dentsply DeTrey \$2,376  
Title: Evaluation of time to achieve maximum gloss and gloss retention for two experimental dental composite formulations. K-0183 MP3 study No 14.1482 (PI, with Juliana da Costa)
- 5/1/2014-6/30/2014 Dentsply DeTrey (GSODO0025A) \$7,128  
Title: Evaluation of time to achieve maximum gloss and gloss retention for two experimental dental composite formulations. K-0183 MP3 study No 14.1493 (PI, with Juliana da Costa)
- 8/31/2014-9/30/2014 Denstply DeTrey (GSODO0029A) \$11,088  
Title: Evaluation of the wear of seven dental composite materials. (PI)
- 11/1/2014-12/31/2014 Dentsply DeTrey (GSODO0035A) \$11,880  
Title: Evaluation of time to achieve high and maximum gloss and gloss retention for five

experimental dental composite formulations. K-0183 MP2 study No 14.1501 (PI, with Juliana da Costa)

1/27/2015-7/26/2015 Pulpdent Corporation (GSODO0039A) \$24,288  
Title: Evaluation of Certain Critical Properties of Activa Restorative and Base/Liner Material (PI, with Tom Hilton)

3/20/2015-6/1/2015 Dentsply DeTrey (GSODO0041A) \$11,880  
Title: Evaluation of time to achieve high and maximum gloss and gloss retention for 10 groups (dental composite / polishing system combination. K-0183 MP3 study No 14.1525 (PI, with Juliana da Costa)

4/27/2015-7/27/2015 Dentsply Caulk (GSODO0043A) \$4,620  
Title: Evaluation of the polymerization contraction stress produced during the curing of seven dental composites. (PI)

7/30/2015-7/29/2016 Kavo Kerr Group (GSODO0048A) \$26,136  
Title: Evaluation of Various Properties of SonicFill 2 Dental Composite Restorative and Several other Commercial Dental Composites (PI)

11/18/2015-2/28/2016 Kavo-Kerr DMC Group \$4,620  
Title: Cement Stability - evaluation of gel/set time of commercially available resin cements after accelerated aging (PI)

7/9/2015-9/12/2015 Ivoclar Vivadent \$3,300  
Title: Characterization of the Polymerization Contraction Stress of a New Dental Composite, Tetric EvoFlow Bulk Fill, in Comparison to Four Other Competitive Products

2/9/2016-5/11/2016 3M ESPE ~\$3,000  
Title: Evaluation of Three Sided Curing Technique on Depth of Cure of an Experimental Bulk Fill Composite (PI- Tom Hilton, co-PI)

10/30/2016-2/28/2017 Dentsply DeTrey (GSODO0084A) \$19,272  
Title: Evaluation of time to achieve high and maximum gloss and gloss retention for various dental composite / polishing system combinations. K-0183 (TPH Spectra II) study No 14.1543 (PI, with Juliana da Costa)

8/15/2017-1/2/2018 Dentsply DeTrey (ASODO0099) \$7,290  
Title: Instrumental and visual gloss evaluation of polished composites – three part study (R1128: 14.1549) (PI, with Juliana da Costa)

11/1/2017-10/31/2018 Tokuyama Dental Corp. (GSODO0095A) \$28,350  
Title: Evaluation of Various Properties of ECM-001 and Other Commercial Dental Composites (PI, with Carmem Pfeifer, Hidehiko Watanabe)

4/13/2018-8/31/2018 Ivoclar Vivadent (GSODO0104A) 27,405  
Title: Evaluation of properties of new F-Composite 2 activated with Bluephase PowerCure light: depth of cure, polymerization shrinkage stress and flexure strength/modulus (PI, with Tom Hilton)

- 2/14/2018-5/31/2018                      Dentsply Sirona (GSODO0099A)                      \$16,200  
 Title: Evaluation of time to achieve high and maximum gloss and gloss retention for one experimental dental composite formulation and three others using three polishing systems: Dentsply R1129 (PI, with Juliana da Costa)
- 3/31/2018-2/28/2019                      Premier Dental Products (ASODO0100)                      \$4,320  
 Title: Evaluation of Physical Properties and Remineralizing Capabilities of a New Ion-Releasing Orthodontic Cement to Combat White Spot Lesions (PI)
- 9/1/2018-12/20/2018                      Dentsply Sirona (GSODO0121A)                      \$18,550  
 Title: Evaluation of time to achieve high and maximum gloss and gloss retention of 13 dental material and polishing system combinations for one experimental dental composite formulation and three others using three polishing systems: Dentsply R-1129K-0180 ASAR: 14.1588 (PI, with Juliana da Costa)
- 8/6/2018-12/7/2018                      Nobio Ltd. (GSODO0110A)                      \$9,720  
 Title: A study of the antibacterial and anticaries effect of a composite with quaternary ammonium silica particles using a secondary caries model. (PI, with Carmem Pfeifer, Justin Merritt, Jens Kreth)
- 10/1/2018-9/30/2019                      Tokuyama Dental Corp. (GSODO0122A)                      \$31,050  
 Title: Evaluation of Various Properties of ECM-001 and Other Commercial Dental Composites (PI, with Carmem Pfeifer and Hidehiko Watanabe)
- 5/1/2019-8/1/2019                      3M ESPE AG (GSODO0125A)                      \$10,125  
 Title: Evaluation of Depth of Cure for a Dual-cure Flowable Resin Composite as Compared with Four Other Commercial Materials (PI, with Tom Hilton)
- 11/14/21-5/14/22                      Zest Dental Solutions (GSODO0175A)                      \$14,175  
 Title: Evaluation of Various Properties of Bulk EZ Prototype (PI, with Carmem Pfeifer)
- 2/25/22-6/25/22                      Kerr Corporation                      (GSODO0178A)                      \$15,140  
 Title: Evaluation of the properties of BulkFill and BulkFill flowable dental composites (PI, with Carmem Pfeifer)

### **CONTINUING EDUCATION OR STUDY CLUB PRESENTATIONS**

1. New Developments in Cosmetic Bonding. A Combined Hands-On and Didactic Approach. M. Goldfogel, V. Marker and J. Ferracane. Baylor College of Dentistry, Dallas, TX, January 21, 1987.
2. The Formulation of Dental Composites and Dentin Bonding Agents. Oregon Health Sciences University, Prosthodontics Study Club, Portland, OR, March 30, 1989.
3. Update on Dental Composites and Sealants. Study Club of the Oregon Academy of Pediatric Dentists, Portland, OR, September 15, 1989.
4. Current Thoughts on Dental Composites and Dentin Bonding Agents. Jacobsen's Research Group, Portland, OR, October 23, 1989.
5. Update on Glass Ionomers, Dentin Bonding and Composite Resins. Clackamas County Dental

- Society, Milwaukie, OR, January 30, 1990.
6. Recent Developments in Esthetic Dental Materials. Oregon Health Sciences University Round Table, Oregon Dental Association Annual Meeting, Portland, OR, April 7, 1990.
  7. Update on Dental Materials, Marion-Polk-Yamhill County Dental Society, Woodburn, OR, April 10, 1990.
  8. Composites, Dentin Adhesives, Glass Ionomers and the Hg Issue. Oregon Society of Dentistry for Children, Ka-Nee-Ta, OR, June 16, 1990.
  9. Composite Restoratives, Adhesive Agents, Glass Ionomers, Amalgams and Mercury. Foundation for the Study of Dental Materials, Buenos Aires, Argentina, August 17 and 18, 1990.
  10. Recent Advances in Composites And Dentin Adhesives. Multnomah County Dental Society, Portland, OR, September 18, 1990.
  11. Update on Esthetic Dental Materials. Clackamas II Study Club, Portland, OR, October 9, 1990.
  12. Dental Composites. OHSU School of Dentistry Alumni Day, Portland, OR, October 20, 1990.
  13. Update on Esthetic Dental Materials. Marginal Failure Study Club, Portland, OR, December 5, 1990.
  14. Update on Esthetic Dental Materials. Clark County Dental Society, Vancouver, WA, December 6, 1990.
  15. Update on Esthetic Dental Materials. Central Oregon Study Club, Bend, OR, January 18, 1991.
  16. Update on Glass Ionomers, Dentin Bonding and Composite Resins. Marion County Dental Research Group, Salem, OR, March 27, 1991.
  17. Mercury Release from Dental Amalgam: How and how much? Oregon Health Sciences University C.E. Course, Portland, OR, April 13, 1991.
  18. Composite/Ceramic Inlays and Onlays. Associated Study Clubs of Oregon, OHSU, Portland, OR, May 8, 1991.
  19. Update on Composites and Dentin Adhesives. Lane County Dental Society, Springfield, OR, September 17, 1991.
  20. A Scientific Response to Public/Media Amalgam Phobia. Oregon Health Sciences School of Dentistry Alumni Day, Portland, OR, October 19, 1991.
  21. Current Status of Dentin Adhesives, Posterior Restoratives and Glass Ionomers. Marion-Polk-Yamhill Dental Society, November 8, 1991.
  22. Dental Amalgam. Controversy and Alternatives. Marquam Hill Lecture Series, Oregon Health Sciences University, Portland, OR, December 5, 1991.
  23. Dental Materials Update. Lane County Dental Research Group, Eugene, OR, January 10, 1992.
  24. Dental Materials Update. Gnathology Northwest, Portland, OR, February 7, 1992.
  25. Dental Materials Update. Annual meeting of the Oregon Dental Association, Portland, OR, April 6, 1992.
  26. Dental Amalgam - Mercury Controversy. Senior Studies Institute, Portland, OR, May 6, 1992.
  27. Dentin Adhesives. Associated Study Clubs of Oregon, OHSU, Portland, OR, May 13, 1992.
  28. Dental Materials Update. General Dentistry Study Club, Portland, OR, December 11, 1992.
  29. Dental Materials Update. Clackamas 2 Dental Seminars, Portland, OR, February 9, 1993.
  30. Composites, Adhesives and Glass Ionomers. Dept. of Public Health Dentistry, OHSU, Portland, OR, May 4, 1993.
  31. Dental Materials Update. Cantwell Study Club, Portland, OR, April 8, 1993.
  32. Dentin Adhesives. Lower Columbia Dental Society, Longview, WA, April 21, 1993.

33. Light-cured Glass Ionomers. Associated Study Clubs of Oregon, OHSU, May 11, 1993.
34. Dental Materials in Pediatric Dentistry. North Umpqua Pediatric Study Club, Steamboat Inn, Glide, OR, September 25, 1993.
35. Dental Materials Update. Jacobsen Dental Research Study Group, Portland, OR, January 24, 1994.
36. Dental Materials Update. Clackamas 2 Dental Seminars, Portland, OR, March 15, 1994.
37. Adventures in Dental Materials. OHSU Continuing Education, Portland, OR, March 19, 1994.
38. Dental Materials Update. General Dentistry Study Club, Portland, OR, April 8, 1994.
39. Dental Materials Update. Cantwell Study Club, Portland, OR, April 14, 1994.
40. Dental Materials Update. Willamette Dental Research Group, Portland, OR, October 13, 1994.
41. Guide to Glass Ionomers. Washington County Dental Society, Portland, OR, January 10, 1995.
42. Composites, Adhesives and Glass Ionomers. Eastern Oregon Dental Society, Pendleton, OR, February 17, 1995.
43. Guide to Glass Ionomers. Southern Oregon Dental Society, Medford, OR, March 14, 1995.
44. Adventures in Dental Materials. OHSU Continuing Education, Portland, OR, April 8, 1995.
45. Dental Materials Update. Anchorage Dental Society, Anchorage, AK, April 20, 1995.
46. Guide to Glass Ionomers. Clackamas County Dental Society, Portland, OR, April 25, 1995.
47. Dental Materials Update. General Dentistry Study Club, Portland, OR, May 12, 1995.
48. New Horizons in Restorative Materials - A Practical Approach to the Use and Cementation of All-Ceramic Restorations. 1995 Cantwell Memorial Lecture, OHSU School of Dentistry Alumni Weekend, Portland, OR, October 14, 1995 (with John Sorensen).
49. Dental Materials Update. Spring Break Seminars. Cancun, Mexico, March 22, 1996.
50. Dental Materials in Pediatric Dentistry. Paul P. Taylor Pediatric Association, Dallas, TX, April 20, 1996.
51. New Horizons in Restorative Materials - A Practical Approach to the Use and Cementation of All-Ceramic Restorations. Lane County Dental Society, Eugene, OR, April 26, 1996 (with John Sorensen).
52. Dental Materials Update. General Dentistry Study Club, Portland, OR, May 10, 1996.
53. Dental Materials Update. Clackamas 2 Dental Seminars, Portland, OR, May 14, 1996.
54. Dental Materials in Orthodontics. Orthodontics Study Club, Portland, OR, June 3, 1996.
55. Adventures in Dental Materials. Academy of General Dentistry annual meeting, Portland, OR, June 30, 1996.
56. Adventures in Dental Materials. Kaiser Permanente Dental, Blaine, WA, August 17-18, 1996.
57. Dental Materials Update. Cantwell Study Club, Portland, OR, October 17, 1996.
58. Dental Materials Update. Clark County Community College, Vancouver, WA, February 8, 1997.
59. New Horizons in Restorative Materials - A Practical Approach to the Use and Cementation of All-Ceramic Restorations. OHSU School of Dentistry Alumni Assoc., Bend, OR, February 14, 1996 (with John Sorensen).
60. Dental Materials Update. Oregon Dental Assistant's Association, Portland, OR, May 10, 1997.
61. Dental Materials Update. Orthodontic Research Study Club, Portland, OR, April 4, 1997.
62. Dental Materials Update. General Dentistry Study Club, Portland, OR, April 11, 1997.
63. Dental Materials Update. Clackamas 2 Dental Seminars, Portland, OR, April 8, 1997.
64. Adventures in Dental Materials. Kaiser Permanente Dental, Sun River, OR, July 15-16, 1997.
65. Recent Developments in Dental Composites. Academy of Gold Foil Operators, Vancouver, BC, Canada, September 11, 1997.
66. Dental Materials Update. Jacobsen Dental Research Group, Portland, OR, October 9, 1997.
67. Dental Materials Update. Lane County Study Club, Eugene, OR, October 10, 1997.

68. Current Trends in Dentin Adhesives and Glass Ionomers. Northern Nevada Dental Society, February 12, 1998.
69. Dental Materials Update. General Dentistry Study Club, Portland, OR, May 8, 1998.
70. Dentin Adhesives and Glass Ionomers. MPY Dental Society, McMinnville, OR, May 13, 1998.
71. Dental Materials Review. Current Materials and Basis for Selection, OHSU Continuing Education, Portland, OR, May 2, 1998 (with Ron Sakaguchi).
72. Dental Composites, Adhesives and Glass Ionomers. U. Oklahoma Dental School C.E., Oklahoma City, OK, May 22, 1998.
73. Dental Adhesives and Composites. Gentle Dental Meeting, September 16, 1998.
74. Ceramics and Packable Composites. Jacobsen Dental Research Study Club, Portland, OR, October 15, 1998.
75. Ceramics and Packable Composites. General Dentistry Study Club, Portland, OR, December 11, 1998.
76. Current Trends in Dentin Adhesives. Dallas County Dental Society, Dallas, TX, February 16, 1999.
77. Dental Materials and the Pediatric Dentist. Washington State Academy of Pediatric Dentists, Port Ludlow, WA, April 18, 1999.
78. Dental Materials Update. Clackamas Dental Research Study Club, Portland, OR, May 11, 1999.
79. Emerging Views of Caries Management in Dental Practice. OHSU Continuing Education, Bend, OR, February 18-19, 2000 (with Tom Hilton and George Riviere).
80. Adhesives and Composites. Marion Dental Research Group, Kaiser, OR, March 15, 2000 (with Tom Hilton)
81. Composites, Adhesives and Glass Ionomers. Midwest Dental Conference, Kansas City, MO, March 19, 2000.
82. Update on Dental Materials. Jacobsen Study Club, Portland, OR, April 20, 2000.
83. Update on Dental Materials. General Dentistry Study Club, Portland, OR, April 21, 2000.
84. Dental Composites, Adhesives and Glass Ionomers. Lane Dental Research, Eugene, OR, May 12, 2000 (with Tom Hilton).
85. Current Issues in Dental Materials. South Willamette Dental Study Club, Corvallis, OR, February 7, 2001.
86. Glass Ionomers and Prosthodontic Composites. Marion Dental Research Group, Kaiser, OR, April 18, 2001 (with Tom Hilton).
87. Update on Dental Materials. General Dentistry Study Club, Portland, OR, May 11, 2001.
88. Glass Ionomers/Amalgam Hg Controversy. COOR Study Club, Vancouver, WA, May 11, 2001 (with Tom Hilton).
89. Dental Materials Update. Willamette Dental Research, Portland, OR, May 17, 2001.
90. A Critical Assessment of Dental Materials. Anchorage Dental Society, Anchorage, AK, October 5, 2001.
91. The Current Status of Dental Amalgam and Its Alternatives, Oregon Dental Convention, April, 2002.
92. Amalgam/Hg Controversy. Oregon Dental Association, Portland, OR, May, 2002.
93. Update on Dental Materials. General Dentistry Study Club, Portland, OR, May 10, 2002.
94. Update on Dentin Adhesives. Lane County Dental Society, Eugene, OR, May 21, 2002.
95. Update on the Amalgam/Hg issue. Clackamas County Dental Society, Portland, OR, November, 2003.
96. Critical Assessment of Composites, Adhesives and the Amalgam/Hg Issue. Permanente Dental

- Associates, Portland, OR, April, 2003.
97. Update on Current Literature in Dental Materials. South Willamette Dental Study Club, Corvallis, OR, April, 2002.
  98. Update on Dentin Adhesives. General Dentistry Study Club, Portland, OR, May, 2003.
  99. Update on Dentin Adhesives. Willamette Dental Research Group, Portland, OR, May, 2003.
  100. A Critical Look at Dental Composites, Dentin Adhesives, and the Amalgam Controversy, OHSU CE, November 8, 2003.
  100. Update on Dentin Adhesives. Gentle Dental, Portland, OR, January 15, 2004.
  101. Update on Dental Materials. Willamette Dental Research, Portland, OR, May 20, 2004.
  102. Update on Dental Materials. General Dentistry Study Club, Portland, OR, May 14, 2004.
  103. Update on Dental Materials. Jacobson Study Club, Portland, OR, November 22, 2004.
  104. Critical Assessment of Dental Adhesives, Composites and Curing Lights. Yankee Dental Congress, Boston, MA, January 27, 2005.
  105. Update on Dental Adhesives and Light Curing, Sunset Study Club, Portland, OR, May 12, 2005.
  106. Update on Dental Materials. General Dentistry Study Club, Portland, OR, May 13, 2005.
  107. Update on Dental Materials. Willamette Dental Research, Portland, OR, May 19, 2005.
  108. A Critical Assessment of Dental Adhesives, III Congresso Internacional de Odontologia XII Jornada Odontologica de Piracicaba, Piracicaba, SP, Brazil, October 6, 2005.
  109. Critical Assessment of Dentin Adhesives, Composites and Light Curing. University of Texas Health Science Branch – Houston, May 5, 2006.
  110. Update on Dental Materials. General Dentistry Study Club, Portland, OR, May 12, 2006.
  111. Update on Dental Materials. Willamette Dental Research, Portland, OR, May 19, 2006.
  112. A Critical Look at Dentin Composites, Adhesives, and Light Curing. OHSU Dental Study Group Seminar at Sea, Alaska, August 1, 2006.
  113. A Critical Look at Dentin Adhesives, Third Meeting of Esthetic Dentistry, Curitiba, Brazil, October 21, 2006.
  114. A Critical Look at Dental Composites, Adhesives, and Light Curing. Current Concepts in Dentistry, University of Victoria, Victoria, Canada, November 13, 2006.
  115. A Critical Look at Dental Composites, Adhesives, and Light Curing. Northern Arizona Dental Society, Flagstaff, AZ, December 1, 2006.
  116. A Critical Look at Dental Composites, Adhesives, and Light Curing. Chicago Midwinter meeting, Chicago, Illinois, February 24-25, 2007.
  117. A Critical Look at Dental Composites, Adhesives, and Light Curing. California State Dental Association Annual Meeting, Anaheim, CA, May 5-6, 2007.
  118. A Critical Look at Dental Composites and Dental Adhesives. British Dental Association Annual Meeting, Harrogate, England, May 26, 2007.
  119. Dental Composites Update. Gnathology Northwest, December 7, 2007.
  120. A Critical Look at Dental Composites, Adhesives, and Light Curing. Southwest Dental Conference, Dallas, TX, January 24-25, 2007.
  121. Dental Materials Update: When Does the Future Become the State-of-the-Art? Pacific Northwest Dental Conference, Seattle, WA, July 10-11, 2008.
  122. Gnathology Northwest, A Critical Look at Dental Adhesives, Portland, OR, November 7, 2008.
  123. A Critical Look at Dental Composites, Adhesives, and Light Curing. Hawaii Dental Association Annual meeting, Honolulu, HI, January 23, 2009.

124. Oregon Academy of General Dentistry, A Critical Look at Dental Composites, Adhesives, and Light Curing, Current Status of Dental Education, Evidence-based Dentistry (15 hours), Playa Herradura, Costa Rica, March 24-26, 2009.
125. A Critical Look at Dental Composites, Adhesives, and Light Curing. Current Concepts in Dentistry, University of Victoria, Victoria, Canada, November 8, 2009.
126. Current Status of Dental Composites, Italian Academy of Conservative Dentistry, Mantova, Italy, June 6, 2010.
127. A Critical Look at Dental Composites, Adhesives, and Light Curing. Dental Study Club, Scottsdale, Arizona, September 14, 2010.
128. When Does the State of the Art Become the Standard of Care? William Howard Memorial Lecture, Oregon Academy of General Dentistry, Portland, Oregon, March 11, 2011.
129. Dental Materials Update for Dental Hygienists. ADE Study Club. Portland, Oregon, February 21, 2012.
130. The State-of-the-Art of Resin-based Dental Composites, Dental Adhesives, and Light Curing, The Argentinean Society of Operative Dentistry and Dental Materials, Buenos Aries, Argentina September 19, 2012.
131. A Critical Assessment of Dental Adhesives, Composites and Light Curing. Oregon Dental Conference, Portland, Oregon, April 4, 2013.
132. Critical Assessment of Composite, Adhesive, and Light Curing Technology. University of Iowa Department of Operative Dentistry continuing education, Iowa City, Iowa, October 25, 2013.
133. Clinical Research in the Private Practice Setting – Findings from the Northwest PRECEDENT Dental Practice-based Research Network, G.E. Lilly Professional Pregame Program Series 2013, University of Iowa, Iowa City, Iowa, October 26, 2013.
134. Update in Dental Materials: A Critical Look at Dental Composites, Adhesives, and Light Curing Technology, 15th Annual Current Concepts in Dentistry, Victoria, British Columbia, Canada, November 12, 2013.
135. Update in Dental Materials: A Critical Look at Dental Composites, Adhesives, Ceramics and Light Curing Technology, Bend, OR, March 7, 2014
136. A Critical Look at Dental Composites, Adhesives, and Light Curing Technology, McGill University, Continuing Dental Education, Montreal, Quebec, Canada, March 29, 2014.
137. Dental Materials Update, Academy of Gold Foil Operators, Portland, Oregon, May 9, 2014.
138. Glass Ionomer Review, Indian Health Service (webinar), February 18, 2015.
139. Update in Dental Materials: A Critical Look at Dental Composites, Adhesives, and Light Curing Technology, Montana Dental Association, Helena, MT, March 26, 2015.
140. Resin Composites. State of the Art. Presented at the 23rd General Meeting of the Japanese Association for Dental Science, Fukuoka, Japan, October 21, 2016.
141. Polymerization Stress in Dental Composites – Where Does It Come From and Is It Clinically Meaningful?; The State of the Art of Dental Composite Restorative Materials.; and Shedding Light on Dental Materials. Three lectures given at the Hokkaido Summer Institute at Hokkaido University, Sapporo, Japan, July 18-21, 2017.
142. Current Status and Future Advancement in Composites, presented to the Western Regional CODE Meeting, OHSU School of Dentistry, Portland, OR, USA, September 28, 2017.
143. Polymerization Stress in Dental Composites – Where Does It Come From and Is It Clinically Meaningful? and The State of the Art of Dental Composite Restorative Materials. Two lectures given at the Hokkaido Summer Institute at Hokkaido University, Sapporo, Japan, August 27-28, 2018.



144. The State-of-the-Art and Future Advances in Dental Composite Restorative Materials, presented at the Apollonia Symposium 2019 Restoratiivinen hoito, Helsinki, Finland, March 22, 2019.
145. The State-of-the-Art and Future Advances in Dental Composite Restorative Materials, presented as the Maynard K. Hine Scholarship Lecture, Indiana Section of the American College of Dentists, Indianapolis, IN, April 26, 2019.
146. The State-of-the-Art and Future Advances in Dental Composite Restorative Materials, presented at the Sunriver Summer CE Weekend, OHSU and U. Washington joint CE course, Sunriver, OR, July 20, 2019.
147. Shedding some light on the complex world of cracked teeth through a practice-based research approach, Clark County Dental Society, May 7, 2020 (virtual).
148. Is the Polymerization Stress Produced During the Curing of Dental Composite Restorations Clinically Meaningful? Presented to the Sardinia Dental Teaching Center, September 19, 2020 (virtual)
149. Is the Polymerization Stress Produced During the Curing of Dental Composite Restorations Clinically Meaningful? Presented to the Sardinia Dental Teaching Center, March 20, 2021 (virtual)
150. Bioactive dental restorative materials – what should we expect? Lecture given at the Hokkaido Summer Institute at Hokkaido University, Sapporo, Japan, August 24, 2021 (virtual).
151. 2021 Cantwell Memorial Lecture: Producing Durable Direct Esthetic Dental Restorations form the Tooth Group Up. Co-presented with Dr. Carmem Pfeifer, September 25, 2021 (virtual).
152. Current status and future advances for dental composites, including techniques for optimizing light curing and bonding. Presentation to the Idaho State Dental Association, Northern Idaho Conference, Coeur d'Alene, Idaho, March 3, 2023. 3 hours.
153. Current status and future advances for dental composites, including techniques for optimizing light curing and bonding. Presentation to the Oregon Dental Conference, Portland, Oregon, April 13, 2023. 3 hours.
154. Bioactive dental restorative materials. Lecture given at the Hokkaido Summer Institute at Hokkaido University, Sapporo, Japan, September 15, 2023.
155. Update in Biomaterials for Pediatric Dentistry. Lecture given at the College of Diplomates of the American Board of Pediatric Dentistry Fall Study Club, Newberg, Oregon, October 20, 2023. 4 hours