

Sumitha Ahmed

<u>Institution</u>	<u>Degree</u>	<u>Date Conferred</u>	<u>Major</u>
University of North Carolina at Chapel Hill	MSD	May 2014	Operative Dentistry
University of North Carolina at Chapel Hill	Certificate	June 2014	Operative Dentistry
University of North Carolina at Chapel Hill	Certificate	May 2009	Dental Hygiene
Rajiv Gandhi University, Bangalore, India	BDS	July 2001	Dentistry

### Post-Doctoral Training

February 2015                      Colgate/AAL Clinical Research Training Program

### **Experience**

#### Academic Appointments

2014-present                      Group Practice Director, General Dentistry Clinic, School  
Dentistry, University of North Carolina at Chapel Hill

2014-present                      Clinical Assistant Professor, Department of Operative Dentistry,  
School of Dentistry, University of North Carolina at Chapel Hill

2011-2014                          Teaching Assistant, Department of Operative Dentistry, School  
of Dentistry, University of North Carolina at Chapel Hill

#### Private Dental Practice

2014-present                      Intramural Dental Faculty Practice, School of Dentistry,  
University of North Carolina at Chapel Hill

2009-2011                          Dental Hygienist, Triangle Family Dentistry, Morrisville, NC

2001-2003                          Mangalore Dental Clinic, Mangalore, India

2001-2003                          AEGD Resident, Yenepoya Dental Hospital, Mangalore, India

### **Honors and Awards**

2014                                  Excellence in Teaching- DDS Class of 2016, UNC Spurgeon  
Dental Society

2014                                  Ann and G. Randolph Babcock Fellowship, Dental Foundation of  
North Carolina

2013                                  Leadership Award for Advanced Dental Education Programs, UNC  
Spurgeon Dental Society

2013                                  Outstanding Table Clinic Presenter – 101st Hinman Dental  
Meeting

## Editorial responsibilities

none

## **Mentoring Activities**

### Predoctoral (DDS) Research Mentoring Projects Supervised

2014 Student Mentoring DDS3 Class (2 DDS3 Students): 2-3 contact hours per semester, Schweitzer Project, Interdisciplinary Care for Diabetic Patients, Collaboration between School of Nursing and School of Dentistry at UNC, Chapel Hill

### Postdoctoral (MS and PhD) Student Research Mentoring Projects Supervised

2014- present pH of water enhancers and artificial flavoring agents. Taneet Ghuman (Ongoing)

2015- present Comparison of two gingival displacement procedures. Anthony Prudenti (Ongoing)

### Other Thesis and Predoctoral Research Committees

2014 - present 2014 Dental Erosion, Caroline N. Ngoc, MS Thesis Committee Member (ongoing)

2014-present Effect of composite type and placement technique on the fatigue strength of restored teeth. Vilhelm Olafsson, MS Thesis Committee Member (completed)

2014 - present Educational research, Leslie Trippe, MS Thesis Committee Member (ongoing)

## **Publications**

### Journal Articles (\*Indicates Refereed)

1. \*Ahmed SN, Donovan TE. Survey of dentists on gingival displacement procedures used in their practice. *J Prosthet Dent. Corrected proof available online*
2. Ahmed SN, Donovan TE. Dental Erosion: The Unrecognized Epidemic. *J Esthet Restor Dent 2015; 27(3): 119-121*
3. \*Ahmed SN, Donovan TE. Evaluation of Contemporary Ceramic Materials. *J Esthet Restor Dent 2015; 27(2): 59-62*

### Abstracts (\*Indicates Refereed)

1. \*Ahmed SN, Erickson KE and Ritter AV. Assessment of Patient and Provider Satisfaction for Different Dental Isolation Methods. *J Dent Res. Vol # 94 (Spec Issue A)*, abstract number: E2305. 2015
2. \*Ahmed SN, Boushell LW. Development and Assessment of Discrimination Exercises for Faculty Calibration. ADEA 2014 Abstract No. 029.
3. \*Ahmed SN, Donovan TE. Survey of dentists on gingival displacement procedures used in their practice. *J Dent Res. Vol # 93 (Spec Issue A)*, abstract number: E1171. 2015
4. \*Ahmed SN, Kowlowitz V, Boushell LW. Didactic and Computer-Based Interactive Training Module Improves Precise Preclinical Use of the Periodontal Probe. ADEA 2013

Abstract No. 25.

5. \***Ahmed SN**, Ritter AV. Conservative Restoration of Fractured Posterior Teeth with Composite: Survival Rate of Direct Posterior Composite Restorations Compared to Indirect Restorations.

**Research Grants and/or Contracts**

None

## CURRICULUM VITAE

### LEE WARREN BOUSHELL

#### EDUCATION

<u>Institution</u>	<u>Degree</u>	<u>Date Conferred</u>	<u>Major</u>
University of North Carolina School of Dentistry Chapel Hill, North Carolina	Clinical Certificate & MS	2007	Operative Dentistry
U.S. Army DENTAC Fort Riley, Kansas	AEGD Certificate	1992	General Dentistry
University of Florida College of Dentistry Gainesville, Florida	DMD	1991	Dentistry
University of Florida Gainesville, Florida	BS	1985	Microbiology & Cell Science

1991-94  
Military Services United States Army Dental Corps

#### Licensure and Certification

2004 North Carolina, No. 7746  
1991 Florida, DN 0012657

#### PROFESSIONAL EXPERIENCE

##### Academic Appointments

2014-present Director, Graduate Program in Operative Dentistry, UNC School of  
Dentistry  
2012-present Associate Professor w/ Tenure, Department of Operative Dentistry, UNC  
School of Dentistry  
2006-2012 Assistant Professor, Department of Operative Dentistry, UNC School of  
Dentistry 2004-2006 Graduate Teaching Assistant, Department of Operative Dentistry, UNC  
School of  
Dentistry  
2001-2003 Courtesy Clinical Assistant Professor, Department of Operative  
Dentistry, University of Florida College of Dentistry  
1986-1987 Biological Scientist II, University of Florida, Division of  
Universities 1985-1986 Biological Scientist I, University of Florida, Division  
of Universities

##### Private Dental Practice

2006-Present Dental Faculty Practice, UNC School of  
Dentistry 1994-2004 General Dentistry, Winter Haven,  
Florida  
Sole Proprietor  
1991-1994 Captain (active duty) United States Army Dental Corps

### **Honors and awards**

2015 UNC School of Dentistry, Dean's Faculty Excellence Award  
2015 UNC School of Dentistry, Spurgeon Dental Society, DDS Class of 2018  
Certificate of Appreciation  
2015 Voted for inclusion in the *topDentists*<sup>TM</sup> database of the Chapel Hill area  
of North Carolina 2014 UNC School of Dentistry, Spurgeon Dental Society, DDS  
Class of 2017 Certificate of  
Appreciation  
2014 Voted for inclusion in the *topDentists*<sup>TM</sup> database of the Chapel Hill area  
of North Carolina 2013 UNC School of Dentistry, Spurgeon Dental Society, DDS  
Class of 2016 Certificate of  
Appreciation  
2013 The 101st Thomas P. Hinman Dental Meeting Outstanding Table Clinic  
Presentation Award 2013 Voted for inclusion in the *topDentists*<sup>TM</sup> database of  
the Chapel Hill area of North  
2011 Richard F. Hunt Memorial Award for Excellence in Pre-doctoral Teaching  
2010 UNC School of Dentistry, Spurgeon Dental Society, DDS Class of 2013 Certificate  
of Appreciation 1990 Retired Uniformed Services Scholarship

### **Editorial responsibilities**

2013-present Manuscript reviewer- *Caries Research*  
2012-present Manuscript reviewer - *Acta histochemica*  
2011-present Manuscript reviewer—*Journal of Dental  
Research* 2010-present Manuscript reviewer—*Journal  
of Dental Education* 2010-present Manuscript  
reviewer—*Journal of Dentistry*  
2010-present Manuscript reviewer—*International Journal of Oral Science*  
2010-present Manuscript reviewer—*Journal of Oral Rehabilitation*  
2010-present Manuscript reviewer—*Archives of Oral Biology*  
2010-present Manuscript reviewer—*Oral Diseases*  
2010-present Manuscript reviewer—*Journal of Esthetic and Restorative Dentistry*

### **Mentoring Activities**

#### Masters Theses

2014-present Correlation between learning preferences of first year dental  
students and their performance in a pre-clinical operative dentistry  
course;  
MS Thesis Mentor of Leslie Trippe  
2013-present Dentin Bond Strength of Zinc-Reinforced Glass Ionomer Restorative  
Material; MS Thesis Mentor of Anmar Kensara  
2011-2014 Development and Assessment of Methods for Faculty Calibration in  
Preclinical Operative Dentistry;

## MS Thesis Mentor of

Sumitha Ahmed Other Thesis Research

### Committees

- 2013-present Shear bond strength of orthodontic brackets with varying bonding protocols Jeremy Grabouski, MS Thesis Committee Member
- 2012-present Can root caries be arrested chemically? An *in vitro* study. Clayton Rau, MS Thesis Committee Member
- 2012-present Effect of composite type and placement technique on the fatigue strength of restored teeth. Vilhelm Olafsson, MS Thesis Committee Member

### Publications

#### Book Chapters

1. **Boushell LW**, Sturdevant JR. Clinical Significance of Dental Anatomy, Histology, Physiology, and Occlusion. In: Heymann HO, Swift EJ, Ritter AV, eds. *Sturdevant's Art and Science of Operative Dentistry*, 6th Edition, St. Louis: Elsevier, 2012, Chapter 1:1-40
2. **Boushell LW**, Walter R, Roberson TM. Fundamentals in Tooth Preparation and Pulp Protection. In: Heymann HO, Swift EJ, Ritter AV, eds. *Sturdevant's Art and Science of Operative Dentistry*, 6th Edition, St. Louis: Elsevier, 2012, Chapter 5:141-163.
3. **Boushell LW**, Walter R, Wilder AD. Preliminary Considerations for Operative Dentistry. In: Heymann HO, Swift EJ, Ritter AV, eds. *Sturdevant's Art and Science of Operative Dentistry*, 6th Edition, St. Louis: Elsevier, 2012, Chapter 7:186-215.
4. Swift EJ, Sturdevant JR, **Boushell LW**. Class I and II Indirect Tooth-Colored Restorations. In: Heymann HO, Swift EJ, Ritter AV, eds. *Sturdevant's Art and Science of Operative Dentistry*, 6th Edition, St. Louis: Elsevier, 2012, Chapter 11:280-295.
5. **Boushell LW**, Donovan TE. Introduction to Amalgam Restorations. In: Heymann HO, Swift EJ, Ritter AV, eds. *Sturdevant's Art and Science of Operative Dentistry*, 6th Edition, St. Louis: Elsevier, 2012, Chapter 13:339-352.
6. **Boushell LW**, Wilder AD, Roberson TM. Class I, II and VI Amalgam Restorations. In: Heymann HO, Swift EJ, Ritter AV, eds. *Sturdevant's Art and Science of Operative Dentistry*, 6th Edition, St. Louis: Elsevier, 2012, Chapter 14:353-409.
7. **Boushell LW**, Wilder AD, Roberson TM. Class III and V Amalgam Restorations. In: Heymann HO, Swift EJ, Ritter AV, eds. *Sturdevant's Art and Science of Operative Dentistry*, 6th Edition, St. Louis: Elsevier, 2012, Chapter 15:410-428.
8. **Boushell LW**, Wilder AD. Complex Amalgam Restorations. In: Heymann HO, Swift EJ, Ritter AV, eds. *Sturdevant's Art and Science of Operative Dentistry*, 6th Edition, St. Louis: Elsevier, 2012, Chapter 16:429-454.

#### Refereed Papers

1. Delgado AJ, Walter R, **Boushell LW**. Are all dentiform teeth with simulated caries the same? A 6- year retrospective study in preclinical operative dentistry. Submitted to *J Dent Ed* 2015; accepted for publication
2. Olafsson VG, **Boushell LW**. Pragmatic Esthetics; Severe Labial Erosion Corrected with Direct Composite Veneers. *J Cosmetic Dent* 2014;30(3):82-90.
3. Nagaoka H, Nagaoka H, Walter R, **Boushell LW**, Miguez P, Burton A, Ritter AV,

- Yamauchi M. Characterization of Genipin-Modified Dentin Collagen. *BioMed Res International* 2014;702821. doi: 10.1155/2014/702821. Epub 2014 Mar 25.
4. Walter R, **Boushell LW** et al. Three-year Clinical Evaluation of a Silorane Composite Resin. *J Esthet Restor Dent* 2013.
  5. Walter R, Feiring AE, **Boushell LW**, Braswell K, Bartholomew W, Chung Y, Phillips C, Pereira PNR, Swift Jr., EJ. One-Year Water Sorption and Solubility of "All-in-One" Adhesives. *Braz Dent J* 2013;24(4):344-348.
  6. **Boushell LW**. MMPs. *J Esthet Restor Dent* 2013;DOI 10.1111/jerd.12044.
  7. **Boushell LW**, Ritter AV, Garland GE, Tiwana KK, Smith LR, Broome A, Leonard RH. Nightguard vital bleaching: Side effects and patient satisfaction 10-17 years post-treatment. *J Esthet Restor Dent* 2012;24(3):211-219.
  8. **Boushell LW**, Kaku M, Mochida Y, Yamauchi M. Distribution and relative activity of matrix metalloproteinase-2 in human coronal dentin. *Int J Oral Sci* 2011; 3:192-199.
  9. Walter R, Swift EJ, **Boushell LW**, Braswell K. Enamel and dentin bond strengths of a new self-etch adhesive system. *J Esthet Restor Dent* 2011; 23:390-398.
  10. **Boushell LW**, Swift EJ. Dentin bonding: Matrix metalloproteinases and chlorhexidine. *J Esthet Restor Dent* 2011; 23:347-352.
  11. **Boushell LW**, Nagaoka H, Nagaoka H, Yamauchi M. Increased MMP-2 and BSP response to human coronal caries. *Caries Res* 2011; 45:453-459.
  12. **Boushell LW**, Walter R, Phillips C. Learn-A-Prep II as a predictor of psychomotor performance. *J Dent Educ* 2011; 75(10):1362-1369.
  13. **Boushell LW**, Getz G, Swift EJ, Walter R. Bond strengths of a silorane composite to various substrates. *Am J Dent* 2011; 24:93-96.

#### Refereed Abstracts

1. Olafsson VG, Ritter AV, Swift EJ, **Boushell LW**, Ko CC, Donovan TE. Effect of composite type and placement technique on shrinkage stress. *J Dent Res* 94 (Spec Iss A): 2108102, 2015.
2. Andrada MAC, Farias DCS, **Boushell LW**, Walter R. Effects of resin infiltration and mechanical loading on dentin bonding. *J Dent Res* 94 (Spec Iss A): Abstract no. 825, 2015.
3. **Boushell LW**, Walter R. Basic Preclinical Exercises as Educational Probes to Target Early Intervention. ADEA 2014 Abstract No. PO-062.
4. Ahmed SN, **Boushell LW**. Development and Assessment of Discrimination Exercises for Faculty Calibration. ADEA 2014 Abstract No. PO-029.
5. Delgado AJ, Walter R, **Boushell LW**. Variability in Dentiform Teeth with Simulated Caries. *J Dent Res* 92 (Spec Iss A), 2013: Abstract No. 1757.
6. Walter R, Swift EJ, **Boushell LW**, Heymann H, Wilder AD, Sturdevant J, Ritter AV, Chung Y. Clinical evaluation of dental adhesives of different bonding strategies. *J Dent Res* 92 (Spec Iss A), 2013: Abstract No. 605.
7. Ahmed SN, Kowlowitz V, **Boushell LW**. Didactic and Computer-Based Interactive Training Module Improves Precise Preclinical Use of the Periodontal Probe. ADEA 2013 Abstract No. 25.
8. Nagaoka H, Nagaoka H, Walter R, **Boushell LW**, Ritter AV, Yamauchi M. Genipin-induced cross-linking and dentin bond strengths. *J Dent Res* 91 (Spec Iss A), 2012: Abstract No. 154.
9. Nagaoka H, Nagaoka H, Terajima M, **Boushell LW**, Yamauchi M. Dose and time effects of genipin, a natural cross-linker, on dentin collagen. *J Dent Res* 91 (Spec Iss A), 2012: Abstract No. 1101.

10. **Boushell LW**, Nagaoka H, Nagaoka H, Yamauchi M. Identification of MMP-2 and BSP in caries affected dentinal tubules. *J Dent Res* 90 (Spec Iss A), 2011: Abstract No. 2144.
11. Swift EJ, Walter R, Braswell K, **Boushell L**. Dentin and enamel bond strengths of a new self-etch primer. *J Dent Res* 90 (Spec Iss A), 2011: Abstract No. 1687.
12. **Boushell LW**, Kaku M, Mochida Y, Yamauchi M. Comparison of MMP-2 in human and bovine dentin. *J Dent Res* 89 (Spec Iss A), 2010: Abstract No. 910.
13. Leonard R, Ritter AV, Garland GE, Tiwana KK, Smith L, **Boushell LW**, Broome A. Nightguard vital bleaching: longevity and side effects: 10-17 years post-treatment. *J Dent Res* 89 (Spec Iss A), 2010: Abstract No. 832.

#### Book Chapters submitted for Publication

1. Nesbit SP, Gonzalez-Cabezas C, Reside J, Moretti A, Tawil P, Gerdt G, **Boushell LW**, Lim PF. The Disease Control Phase of Treatment. In: Stefanac SJ, Nesbit SP, eds. *Treatment Planning in Dentistry*, 3<sup>rd</sup> Edition, St. Louis: Mosby Elsevier, 2016, Chapter 9: pp-pp.
2. Nesbit SP, Reside J, Moretti A, Gerdt G, **Boushell LW**, Barrero C. The Definitive Phase of Treatment. In: Stefanac SJ, Nesbit SP, eds. *Treatment Planning in Dentistry*, 3<sup>rd</sup> Edition, St. Louis: Mosby Elsevier, 2016, Chapter 10: pp-pp.

#### Refereed Manuscripts submitted for Publication

1. **Boushell LW**, Heymann HO, Ritter AV, Sturdevant JR, Swift EJ, Jr., Wilder AD, Chung Y, Lambert CA, Walter R. Six-year clinical evaluation of etch-and-rinse and self-etch adhesives. *Dental Materials*, Submitted for publication.
2. Farias DCS, Caldeira de Andrada MA, Arcari GM, **Boushell LW**, Walter R. Artificial aging and dentin penetration of universal adhesives. *J Dent*. Submitted for publication.

#### Other (non-refereed) Papers

1. **Boushell LW**, Ritter AV. Extensive Training in the Realm of Esthetics; The Graduate Program in Operative Dentistry at UNC. *J Cosmetic Dent* 2014;30(3):80-81.
2. Boksman L, Tousignant G, **Boushell LW**, Santos GC. Adhesives: Newer Is Not Always Better— Part 2. *Inside Dentistry*, 2012; 8(3):70-73.
3. Boksman L, Tousignant G, **Boushell LW**, Santos GC. Adhesives: Newer Is Not Always Better— Part 1. *Inside Dentistry*, 2012; 8(2):94-97.

#### Research grants and/or contracts

- |           |   |
|-----------|---|
| 2013-2015 | Dentsply Caulk Grant #4-28597/0-110-4375 "Clinical Evaluation of Total-Etch and Self-Etch Dental Adhesives - 6 Year Recall" PI: LW Boushell<br>Total Award: \$14,174                        |
| 2010-2015 | NIH Grant # R01 DE021462-01 "Understanding the mechanism of radiotherapy-induced dentition breakdown" PIs: MP Walker, Y Wang.<br>Consultant: LW Boushell 1% effort Total Award: \$1,250,000 |
| 2011-2014 | Kerr Grant #4-28171 "Clinical Evaluation of a New Two-Component Self-Etch Universal Adhesive (OptiBond XTR)" PI: AV Ritter, Investigator: LW Boushell<br>Total Award: \$41,920              |
| 2010-2012 | 3M ESPE Grant # 4-26985/0-401-4375 "Clinical Investigation of a New Low-Shrink Resin Composite Restorative in the Restoration of Posterior Teeth" PI: EJ Swift, Investigator: LW Boushell   |



Total Award: \$95,432

2010-2011 UNC School of Dentistry Grant # 3-13960 “Variability in Assessment of Student Procedure Performance by Faculty in a Preclinical Operative Dentistry Course” PI: LW Boushell

Total Award: \$1,500

2010-2011 UNC University Research Council Grant # 3-10021 (SL) “Characterization of Matrixmetalloproteinases (MMPs) in Human Coronal Dentin” PI: LW Boushell Total Award: \$5,000

2010 EXA S.A. (Switzerland) Dental Foundation of North Carolina Unrestricted Grant “Effects of Calcium Carbonate on Enamel and Restorative Materials” PI: R Walter. Investigator: LW Boushell, no cost to grant

Total Award: \$6,000

2010 Dentsply Caulk Grant # 4-27396/0-401-4375 “Clinical Evaluation of New Total-Etch and Self-Etch Dental Adhesives” PI: R Walter, Investigator: LW Boushell

Total Award: \$57,460

## **CURRICULUM VITAE**

Terence Edward Donovan

### **EDUCATION**

<u>Institution and Location</u>	<u>Degree</u>	<u>Date Conferred</u>	<u>Degree Major</u>
University of Southern California Los Angeles, CA	Certificate	1979-1981	Advanced Prosthodontics
University of Alberta Edmonton, Alberta CANADA	DDS	1963-1967	Dentistry
University of Regina Regina, Saskatchewan CANADA	none	1961-1963	pre-dentistry

### **SPECIALTY BOARDS**

Canadian National Boards United  
States National Boards  
American Board of Prosthodontics Part I

### **Honors and awards**

2014	Graduate Teaching Award UNC
2013	Graduate Teaching Award UNC
2012	Honorary Life Member American Dental Society of Europe
2010	Honorary Life Member Canadian Academy of Restorative Dentistry and Prosthodontics
2008	Honorary Life Member: Association of Prosthodontists of Canada
2004	Distinguished Alumni Award: University of Southern California
2000	Gordon Christensen Award: Chicago Dental Society

### **Editorial responsibilities**

1989-present Editorial Board, Journal of Esthetic and Restorative Dentistry

Article reviewer for numerous journals, including Journal of Prosthetic Dentistry, Journal of Prosthodontics, JADA, Journal of Clinical Practice, etc.

### **Mentoring activities**

2010 – present	Thesis Committees: Advisor
	Supawadee Naorungroj: Grad. Operative Kristi Erickson Grad. Operative
	Silvia Amaya-Pajares Grad. Operative
	Upoma Guha Grad. Operative
	Willi Olafsson Grad. Operative
	Clayton Rau Grad Operative

Taiseer Sulaiman	Grad Operative
Caroline Nguyen Ngoc	Grad Operative

Thesis Committees: Member

Alex Delgado	Grad Operative
Clayton Rau	Grad. Operative
Thomas Suryani	Grad. Prosthodontics
Emily Batson	Grad. Prosthodontics
Lida Swann	Grad. Prosthodontics
Tom Brown	Grad. Endodontics
Ayesha Swarn	Grad. Operative
Anthony Prudenti	Grad. Prosthodontics
Kevin Lim	Grad Prosthodontics
Hugh Murphy	Grad Prosthodontics

## **Publications**

### Case Reports and Technique Articles

\*Berroeta E. DDS, Ms, Chee W. BDS, Donovan TE. DDS, Zabalegui I. MD, DDS:  
Dynamic abutment: A method to re-direct screw access for implant supported  
restorations:

Technical details and clinical report. Accepted for publication J Prosthet Dent (epub ahead  
of print) 2015

Donovan, TE: Commentary: Evaluation of fracture resistance and failure risks of  
posterior partial coverage restorations. J Esthet Rest Dent 2013; 25: 123-124.

Donovan, TE: Commentary: Dental erosion: Understanding this pervasive condition. J  
Esthet Rest Dent 2011; 23: 217 – 218.

Donovan, TE: Commentary: Anterior provisional restorations used to determine form,  
function, and esthetics for complex restorative situations, using all-ceramic restorative  
systems. J Esthet Rest Dent 2010; 22: 17.

### Review Articles

\*Ahmed SM, and Donovan TE: Dental erosion: The Unrecognized epidemic. J Esthet Rest  
Dent 2015; 27: 119 – 121.

\*Ahmed SN BDS, MS and Donovan TE DDS: Evaluation of Contemporary Ceramic  
Materials. Epub ahead of print J Esthet Rest Dent 2015

\*Donovan TE, Marzola R, Becker W, Cagna DR, Eichmiller F, McKee JR, Metz JE and  
Albouy JP: Annual review of selected scientific literature: Report of the Committee on  
Scientific Investigation of the American Academy of Restorative Dentistry. J Prosthet  
Dent 2014; 112: 1038-1087.

\*Donovan TE, Anderson M, Becker W, Cagna DR, Carr GB, Albouy JP, Metz J,  
Eichmiller F and McKee JR: Annual review of selected scientific literature: Report of the  
Committee on Scientific Investigation of the American Academy of Restorative  
Dentistry. J Prosthet Dent 2013; 110: 161 – 210.

Erickson K, Donovan TE, and Swift EJ Jr.: Dental erosion: Critical Appraisal. J Esthet Rest

Dent 2013; 25: 212-216.

Jivraj SA, Reshad M and Donovan TE: Selecting luting agents. Inside Dentistry 2013; February: 108 – 114.

Donovan TE: Unique challenges for this generation of dental graduates. J Esthet Rest Dent 2012; 24: 293 – 295.

\*Donovan TE: Two-stage protocol for clinical management of root caries. Can J Rest Dent Prosthodont 2012; 5: 38 – 42.

\*Donovan TE, Anderson M, Becker W, Cagna DR, Hilton TJ, McKee JR and Metz JE: Annual review of selected scientific literature: Report of the Committee on Scientific Investigation of the American Academy of Restorative Dentistry. J Prosthet Dent 2012; 108: 15 – 50.

\*Donovan TE, Anderson M, Becker W, Cagna DR, Hilton TJ Rouse J: Annual review of selected scientific literature: Report of the Committee on Scientific Investigation of the American Academy of Restorative Dentistry. J Prosthet Dent 2011; 106: 224 – 65.

Donovan, TE and Heymann, HO: Tincture of time: A vital ingredient for dental success. J Esthet Rest Dent 2011; 23: 133- 135

\*Noble, WH, Donovan, TE and Geissberger, M: Sports drinks and dental erosion. J Cal Dent Assoc 2011; 39: 233 – 238.

Donovan, TE and Heymann, HO: Enduring amalgam: No requiem needed. J Esthet Rest Dent 2010; 22: 277 – 279.

\*Donovan, TE, Becker, W, Cagna, DR, Hilton, TJ and Rouse, J: Annual review of selected dental literature: Report of the Committee on Scientific Investigation of the American Academy of Restorative Dentistry. J Prosthet Dent 2010; 104: 13 – 47.

#### Research Articles

\*Sulaiman TA, Abdulmajeed AA, Donovan TE, Ritter AV, Vallittu PK, Lassila LV, Närhi TO. The degree of conversion of dual-polymerizing cements light-polymerized through monolithic zirconia of different thicknesses and types. Accepted for publication: Journal of Prosthetic Dentistry, 2015.

\*Sulaiman TA, Abdulmajeed AA, Donovan TE, Vallittu PK, Närhi TO, Lassila LV. The effect of staining and vacuum sintering on optical and mechanical properties of a partially and fully stabilized monolithic zirconia. Accepted for publication: Dental Materials Journal, 2015.

\*Sulaiman TA, Delgado A, Donovan TE. Survival rate of lithium disilicate restorations at 4 years: A retrospective study. Accepted for publication, Journal of Prosthetic Dentistry, 2015.

\*Olafsson VG, Delgado A and Donovan, TE: pH and erosive potential of commonly used oral moisturizers. Accepted for publication: J Prosthodont 2015

\*Ahmed SN BDS, MS and Donovan TE, DDS: Survey of materials and procedures used for gingival displacement. Accepted for publication J Prosthet Dent 2015

\*Amaya SP, Delgado AJ and Donovan TE: Inhibition of polymerization of contemporary polyvinyl siloxane impression materials by latex-free products. Forum 2014; 2: 12-19.

\*Oliveira GMS, Ritter AV, Heymann HO, Swift E Jr., Donovan TE, Brock G and Wright T: Remineralization effect of CPP-ACP and fluoride for white spot lesions in-vitro. J Dent 2014 in press online.

**Research Grants and/or contracts**

N/A

**CURRICULUM VITAE: HARALD OTTO HEYMANN**  
(Abbreviated to 2010-2015)

**Education**

<u>Institution and Location</u>	<u>Degree</u>	<u>Date Conferred</u>	<u>Degree Major</u>
UNC School of Education Chapel Hill, NC	M.Ed.	1980	Education
UNC School of Dentistry Chapel Hill, NC	D.D.S.	1978	Dentistry
Appalachian State Univ. Boone, NC	B.A. (Summa Cum Laude)	1974	Biology

**Experience**

**ACADEMIC OR PROFESSIONAL APPOINTMENTS**

March 25, 2014-present	Thomas P. Hinman Distinguished Professor
January 1995-present	Professor Department of Operative Dentistry UNC School of Dentistry
July 2000-2010	Graduate Program Director Department of Operative Dentistry UNC School of Dentistry
January 2005-2010	Guest faculty, LD Pankey Institute
June 2007-May 2008	Director, Esthetic and Restorative Dentistry, Scottsdale Center for Dentistry
January 1990-June 2000	Chair Department of Operative Dentistry UNC School of Dentistry
July 1988-December 1989	Interim Chair Department of Operative Dentistry UNC School of Dentistry
July 1988-December 1994	Associate Professor Department of Operative Dentistry UNC School of Dentistry
July 1981-June 1988	Assistant Professor Department of Operative Dentistry UNC School of Dentistry
July 1978-June 1981	Instructor Department of Operative Dentistry UNC School of Dentistry (while pursuing M.Ed degree)
January 1978-July 1978	Graduate Teaching Assistant Department of Operative Dentistry UNC School of Dentistry

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### **Honors and awards**

#### **University of North Carolina School of**

#### **Dentistry As Faculty Member**

2010-present

Selected as one of the "Outstanding Dentists" in the area through a peer-to-peer survey commissioned by *Chapel Hill Magazine*, May- June, 2010-15 (6 consecutive years).

2012

Selected as a featured clinician for the 100<sup>th</sup> Anniversary Thomas P. Hinman Dental Meeting.

2012

Elected to Life Fellow, American Academy of Esthetic Dentistry

2014

Kaplan Distinguished Scholar, University of Florida, College of Dentistry

2014

Appointed as the first Thomas P. Hinman Distinguished Professor at UNC School of Dentistry

2015

Elected to Life Membership, Omicron Kappa Upsilon Dental Honor Society

2015

Selected for inclusion: "Top Clinicians in CE for 2015" by *Dentistry Today*. (eighteenth consecutive yr).

2015

Richard F. Hunt Award for Excellence in Teaching

### **Editorial Responsibilities**

1986-present

Reviewer, *Dental Materials*

1991-present

Member, Editorial Board, *American Journal of Dentistry*

1992-present

*Journal of Esthetic and Restorative Dentistry*

1998-present

Editor-in-Chief

1994-present

Member, Editorial Board, *Operative Dentistry*

1995-present

Consultant, ADA Council on Scientific Affairs

1996-present

Reviewer, *Journal of Dental Research*

2000- present

Member, Editorial Board, *Dental Traumatology*

2002- 2014

Member, Editorial Board, *Dimensions of Dental Hygiene*

2005- present

Reviewer, *Advan Esthet and Interdisc Dentistry*

2005- present

Member, Editorial Board, *Inside Dentistry*

2005- present

Member, Editorial Board, *Journal of Contemporary Dental Practice*

2005-present

Reviewer (Board member until 2013), *Journal of Prosthodontics*

2006- 2015

Member, Board of Directors, CRA Foundation, Provo, UT  
Scottsdale Center for Dentistry, Scottsdale, AZ

2008-present

Reviewer, *Journal of Oral Rehabilitation*

2011-present

Member, Review Board, dental ANTIOXIDANTS.com

2013-present

Reviewer, *Journal of Adhesion Science and Technology*

### **International**

1989-2010

Member, Editorial Executive Board, *Journal of Dentistry*

2010-present

Reviewer, *Journal of Dentistry*

2013-present

Reviewer, *European Journal of Oral Sciences*

### **Mentoring Activities**

#### **THESES/STUDENT RESEARCH DIRECTED**

2010

Greice Oliveira, "The influence of tooth age on the microtensile bond strength of different adhesive systems to dentin," (member of M.S. thesis committee).

- 2010 Su Naorunraj, "Effect of erosive solutions on surface hardness and surface micromorphology of resin composite and RMGIC with and without protective layer" (member of M.S. thesis committee).
- 2011 Mario Ramos, "Microtensile bond strength of sound and caries-affected dentin following application of natural collagen crosslinkers," (member of M.S. thesis committee).
- 2011 Lindsey Eidson (Ortho), "Three dimensional evaluation of lip position before and after orthodontic appliance removal," (member of M.S. thesis committee).
- 2012 Roopwant Kaur, "Influence of dentin desensitizers on the microtensile bond strengths of "all-in-one" adhesives to dentin," (member of M.S. thesis committee).
- 2012 Ayesha Swarn, "Effectiveness of a new protocol for caries management in high risk patients," (member of M.S. thesis committee).
- 2013 Kristi Erickson, "The prevalence of dental erosion in GERD patients as measured by the Basic Erosive Wear Examination," (member of M.S. thesis committee).
- 2014 Alex Delgado, "Evaluation of the marginal integrity of different restorative materials based on instrumentation and location." (Chair, M.S. thesis committee)
- 2014 Sumitha Ahmed, (member of M.S. thesis committee)

## **Publications**

### Textbook Chapters

Heymann HO, Swift EJ, Ritter AV., Editors. Sturdevant's Art and Science of Operative Dentistry. 6<sup>th</sup> Ed. St. Louis: Mosby/Elsevier Inc. 2012.

Heymann HO, Ritter AV, Roberson TM. Chapter 8. Introduction to composite restorations. In: Heymann, ed. Sturdevant's art and science of operative dentistry, 6th Ed. St. Louis: Mosby/Elsevier Inc. 2012.

Heymann HO. Chapter 12. Additional conservative esthetic procedures. In: Heymann, ed. Sturdevant's art and science of operative dentistry, 6th Ed. St. Louis: Mosby/Elsevier Inc. 2012.

Heymann HO. Online Chapter 4. Bonded splints and bridges. In: Heymann, ed. Sturdevant's art and science of operative dentistry, 6th Ed. St. Louis: Mosby/Elsevier Inc. 2012.

### Journal Articles

\*Ghaname ES, Ritter AV, Heymann HO, Vann WF, Shugars DA, Bader JD. Correlation Between Laser Fluorescence Readings and Volume of Tooth Preparation in Incipient Occlusal Caries in Vitro. *J Esthet Restor Dent* 2010; 22(1):31-39.

\*Maresca C, Pimenta LAF, Heymann HO, Ziemiecki TL, Ritter AV. Effect of Finishing Instrumentation on the Marginal Integrity of Resin-based Composite Restorations. *J Esthet Restor Dent* 2010; 22(2):104-113..

\* Sheikh H, Heymann HO, Swift EJ, Ziemecki TL, Ritter AV. Effect of saliva contamination and cleansing solutions on bond strengths of self-etch adhesives to dentin. *J Esthet Restor Dent* 2010; 22(6):402-411.

Radz GM, Heymann HO. 33 years later: an interview with Dr. Harald Heymann, Part I. *J Cosmetic*



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*Dent* 2011; 26(4):12-19. Non-Peer Reviewed.

Radz GM, Heymann HO. Thoughts on no-prep veneers and the “metal free” practice: an influential lesson from Dr. Harald Heymann, Part II. *J Cosmetic Dent* 2011; 26(5):14-21. Non-Peer Reviewed.

\*Walter R, Boushell LW, Heymann HO, Ritter AV, Sturdevant JR, Wilder AD, Chung Y, Swift EJ. Three-year clinical evaluation of a silorane composite resin. *J Esthet Restor Dent* 2014; 26(3):179-190.

\* Oliveira GM, Ritter AV, Heymann HO, Swift EJ, Donovan T, Brock G, Wright T. Remineralization effect of CPP-ACP and fluoride for white spot lesions in vitro. *J Dent* 2014; (Accepted Sept. 2014). Published on-line: <http://dx.doi.org/10.1016/j.dent.2014.09.004>

\* Delgado AJ, Ritter AV, Donovan TE, Ziemicki T, Heymann HO. Effect of finishing techniques on marginal integrity of composite and resin-modified glass ionomer restorations. *J Esthet Restor Dent* 2014. (Accepted November, 2014). Published on-line in Early View DOI # 10.1111/JERD 12140.

### Abstracts and Book Reviews

Bayne SC, Wilder AD, Heymann HO, Sturdevant JR, Swift EJ. Cluster analysis of short-term USPHS-category changes for class-V composites. *J Dent Res* 2010;89:0027.

Bayne SC, Wilder AD Jr, Heymann HO, Sturdevant JR, Swift EJ Jr. Sources of variation in indirect wear evaluations of clinical results. *J Dent Res* 2011;90:0147.

Kaur R, Swift EJ, Heymann HO, Ritter AV, Phillips C, Walter R. Immediate bond strengths to Gluma Power Gel-treated dentin. *J Dent Res* 2012; 90: Abstract No.156071.

Bayne SC, Wilder AD, Heymann HO, Sturdevant JR, Swift EJ. Compensation method for missing wear data in long-term clinical trials. *J Dent Res* 2012; 90: Abstract No.157686.

Bayne SC, Wilder AD, Heymann HO, and Swift EJ. Long-term color-matching trends for 37 composite materials in clinical trials. *J Dent Res* 2013; 91: Abstract No.173240.

Walter R, Swift EJ, Boushell LW, Heymann HO, Wilder AD and Sturdevant J. Clinical evaluation of dental adhesives of different bonding strategies. *J Dent Res* 2013; 91: Abstract No.177674.

Delgado AJ, Donovan TE, Ziemiecki T, Ritter AV and Heymann HO. Evaluation of the Marginal Integrity as a Result of Different Finishing Instruments Based on Restorative Material and Location. *J Dent Res* 2014; 92: Abstract No. 1466.

Vasconcellos AB, Hirata R, Blackmon R, Swift EJ, Heymann HO, Delgado AJ Oldenburg AL, Ritter AV. Cross sectional visualization of microcracks in resin-based materials by optical coherence. *J Dent Res* 2015; 93: Abstract Ctrl No. 2115646.

### Web-Based CE Courses

April 3 & June 23, 2011

- "Adhesive Dentistry: Separating Fact from Fiction," on-line webinar for Dental ED.

### Self-Instructional Units, Course Syllabi, and Educational Material

Heymann, HO. Graduate Operative Dentistry Program Syllabus, 2001-2010, (125+ pages), revised annually.

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Heymann HO. Advanced Operative Dentistry Course Syllabus, UNC School of Dentistry, First through Fifth Editions, 2010-2014 (32 pages), plus associated Lab Guides (30 pages).

### **Research grants and/or contracts**

#### Industrial Research Contracts

Title: "Clinical Investigation of a New Low Shrink Composite Restorative in the Restoration of Posterior Teeth" Grant Source: 3M ESPE Grant Amount: \$95,432 Grant Period: 03-09-05 to 03-08-12 Co-Investigator: Heymann, HO

Title: "Clinical Evaluation of New Total-Etch and Self-Etch Adhesives Grant Source: Dentsply Caulk Grant Amount: \$57,460 Grant Period: 7-1-07 to 6-30-10 Co- Investigator: Heymann, H. O.

Title: "Clinical Evaluation of New Posterior Resin (9Yr Recall)" Grant Source: Dentsply Caulk Grant Amount: \$11,580 Grant Period: 10-19-07 to 10-18-10 Co- Investigator: Heymann, H. O.

Title: "Clinical Evaluation of a New Self-Etch Adhesive System (XTR) Grant Source: Sybron Kerr Grant Amount: \$48,470 Grant Period: 9-1-11 to 9-1-14 Co- Investigator: Heymann, H. O.

Title: "Clinical Evaluation of Total-Etch and Self-Etch Dental Adhesives-6 Year Recall" Grant Source: Caulk/Dentsply Grant Amount: \$14,174 Grant Period: 10/14/2013-10/14/14 Co-Investigator: Heymann, H. O.

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University of North Carolina – School of Dentistry  
Curriculum Vitae

June, 2015

Patricia A. Miguez, DDS, MS, PhD

Education:

1992-1997 DDS Federal University of Santa Catarina, Brazil  
1998-1999 Certif. Federal University of Santa Catarina (Periodontol.) 2000-2003 MS  
University of North Carolina (Operative Dentistry) 2003-2011 PhD University of  
North Carolina (Oral Biology)  
2004-2011 Certif. University of North Carolina (Periodontol.)

Postgraduate Training and Fellowship Appointments:

1998 Fellowship, Periodontology, Brazilian Dental Association,  
Brazil  
2009 ADEA/AAL ITL Scholar, ADEA/AAL, Chapel Hill  
2014 Implant Site Development, Sclar Institute, Miami FL

Experience:

Faculty Appointments:

1998-2000 Teaching Assistant in Periodontology, Federal University  
of Santa Catarina, Brazil  
2011-2014 Assistant Professor, Department of Periodontics, University  
of Pennsylvania  
2014- Adjunct Assistant Professor, Department of Periodontics,  
University of Pennsylvania  
2014- Clinical Assistant Professor, Department of Operative  
Dentistry, University of North Carolina

Administrative Appointments:

2002 Chief Resident, Department of Operative Dentistry,  
University of North Carolina  
2008-2011 Laboratory Safety Coordinator, Collagen Biochemistry  
Laboratory, University of North Carolina  
2011-2014 Miguez Laboratory, University of Pennsylvania

Specialty Certification:

2000 Federal Council of Dentistry, Brazil (Periodontology)  
2013 Diplomate of the American Board of Periodontology

Licensure:

Santa Catarina, Brazil license #5188  
North Carolina Intern Permit (2000-2011)  
Faculty License in Pennsylvania (2013-2014)  
North Carolina Instructor's license (2014-)

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Honors and Awards:

2002	Advanced Education Fellowship, Dental Foundation of North Carolina, Inc.
2003	Derek T. Turner Award, North Carolina Section of the AADR
2005	Derek T. Turner Award, North Carolina Section of the AADR
2005	Freeland Advanced Dental Education Fellowship, Dental Foundation of North Carolina, Inc.
2007	Derek T. Turner Award, North Carolina Section of the AADR
2008	Abram and Sylvia Chasens Teaching and Research Fellowship, American Academy of Periodontology
2008	Advanced Education Fellowship, Dental Foundation of North Carolina, Inc.
2009	ADEA/AAL Institute for Teaching and Learning in the Health Professions Fellowship, American Academy of Periodontology
2011	Joseph and Josephine Rabinowitz Award for Excellence in Research, School of Dental Medicine, University of Pennsylvania
2012	IADR/Philips Oral Healthcare PRG Young Investigator Research Grant
2013	Finalist for the Teaching Fellowship, American Academy of Periodontology
2014	Tarrson Fellowship, American Academy of Periodontology
2015	The Class of 1958 Distinguished Service Award, University of North Carolina

Editorial Responsibilities:

Editorial Board:

2015	Advances in Medicine, Guest Lead Editor for Special Issue in Regenerative Dentistry, in collaboration with Janet Oldak (USC) and Anne George (UIC)
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Manuscript reviewer:

2004-present Journal of Dental Research  
2004-present Journal of Esthetic and Restorative Dentistry  
2011-present Connective Tissue Research  
2012-present Oral Diseases  
2012-present Journal of Inflammation  
2012 American Journal of Experts  
2013-present Journal of Periodontology  
2015-Journal of Engineering in Medicine

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## Mentoring

2011-2013 Kimberly Perley, BS, research assistant, Role of phytochemicals in *in vitro* musculoskeletal repair, University of Pennsylvania, School of Dental Medicine.

2012-2014 Joyce Belcher, PhD, IRACDA post-doctoral fellow, main project “Role of glycosaminoglycans of biglycan on its functions in bone”, other projects: Role of biglycan on osteoclast formation in calvaria model of resorption; Flaxseed protective effect on normal and radiated bone; Hesperidin and Genipin on Bone and Dentin Biomodification, University of Pennsylvania, School of Dental Medicine.

2012 Paula Sampaio, DDS, MS, international PhD student in Biomaterials, Acid conditioning effect on dentin remineralization potential, University of Pennsylvania, School of Dental Medicine.

2012-2013 David Farias, DDS, MS, international PhD student in Dentistry, Collagen cross-linkers and dentin properties, University of Pennsylvania, School of Dental Medicine.

2013 Pollyana Maya, DDS, research scholar, Natural compounds as modifiers of mechanical properties of dentin matrix, University of Pennsylvania, School of Dental Medicine.

2013 Michele Volchonok, BS, summer research internship student, Bone quality in a mouse model of type 2 diabetes: micro-CT and mechanical analyses, University of Pennsylvania, School of Dental Medicine.

2013 Ankita Bhalla, DDS, research internship student, Immunohistochemistry of mineralization markers in normal/KO and diseased murine bones and dentin, University of Pennsylvania, School of Dental Medicine.

2014 Ana Paula Beltrame, DDS, international PhD student in Dentistry, Effect of chitosan vs organic polymers vs fluoride on prevention of demineralization of dentin (*in vitro* erosion model), University of North Carolina

2014 Mauro Andrada, DDS, international visiting scholar, Modulation of dentin collagen quality and mineralization/re-mineralization by phytochemicals, University of North Carolina.

2015 Jerrel Wood III Coob, research internship student, ECM modulation of bone resorption in a periodontal disease model, University of North Carolina.

## Thesis or Dissertation Committees:

2011-2012 Paul E. Kocian, DMD, MS in Oral Biology Program, The effect of decreased muscle mass on somatic and craniofacial bone growth in mice, committee member, University of Pennsylvania, School of Dental Medicine.

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2012-present Joao Gustavo O. de Souza, DDS, PhD student in Implantology, Effect of natural compounds on bone regeneration in humans, mentor, Federal University of Santa Catarina, Brazil.

2013 Mohammed Alsarhan, DMD, MS in Oral Biology, Elevated levels of BLYS and APRIL inflammatory cytokines in human and gingival tissues: a quantitative and immunohistochemistry study, committee member, University of Pennsylvania, School of Dental Medicine.

2013 Meshari Al-Abdulhadi, DMD, MS in Oral Biology, Phytochemicals in mineralized tissue maintenance, mentor, University of Pennsylvania, School of Dental Medicine.

### Publications:

Research Publications, peer reviewed from the last 5 years:

Wan Y, Cui C-B, Yamauchi M, Miguez P, Costello J, Mendel G, Cardinale V, Wauthier E, Gerber D, Alvaro D, Reid L. Lineage restriction of stem cells to mature fates is made efficient by tissue-specific biomatrix scaffolds. *Hepatology* 2010; 53:293-305.

Miguez PA, Terajima M, Nagaoka H, Mochida Y, Yamauchi M. The role of glycosaminoglycans of biglycan on BMP-2 function. *BBRC* 2011; 405(2):262-6.

Mendonca DBS, Miguez PA, Mendonca G, Yamauchi M, Aragão FJL, Cooper LF. Titanium surface topography affects collagen biosynthesis of adherent cells. *Bone* 2011; 49:463-472.

Yamauchi N, Nagaoka H, Yamauchi S, Teixeira FB, Miguez P, Yamauchi M. Immunohistological characterization of newly formed tissues after regenerative procedures in immature dog teeth. *J of Endodontics* 2011; 37:1636-1641.

Reside J, Everett E, Padilla R, Arce R, Miguez P, Brodala N, DeKok I, Nares S. In vivo assessment of bone healing following Piezotome ultrasonic instrumentation. *Clin Implant Dent Relat Res* 2013 [doi: 10.1111/cid.12094].

Miguez PA, Terajima M, Nagaoka H, Ferreira J, Braswell K, Ko C, Yamauchi M. Recombinant biglycan promotes bone morphogenetic protein-induced osteogenesis in vitro and in vivo. *Journal of Dental Research* 2014 [doi: 10.1177/0022034514521237].

Nagaoka H, Nagaoka H, Walter R, Boushell LW, Miguez PA, Burton A, Ritter AV, Yamauchi M. Characterization of genipin-modified dentin collagen. *Accepted in Biomed Research International* 2014.

Research Publications, non-peer reviewed from the last 5 years:

Miguez PA. Contemporary issue - Immediate implant placement and loading: minding bone biology. *J Esthet Restor Dent* 2013 [doi: 10.1111/jerd.12072].

Farias DF, Walter R, Miguez PA. Critical appraisal - Cross-linkers and dentin matrix. *J Esthet Restor Dent* 2013 [doi: 10.1111/jerd.12080].

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Abstracts from the last 5 years:

Mendonca G, Mendonca D, Miguez P, Yamauchi M, Aragao F, Cooper L. Effect of titanium surface topology on adherent cellular collagen biosynthesis. *J Dent Res* 89 (Spec Iss A): abstract no. 129074, 2010.

Miguez P, Mochida Y, Yamauchi M. Biglycan-mediated BMP2 signaling: Role of glycosaminoglycans. *J Dent Res* 89 (Spec Iss A): abstract no. 129754, 2010.

Miguez PA, Mochida Y, Terajima M, Nagaoka H, Ferreira J, Ko C, Yamauchi M. Biglycan promotes BMP-induced bone regeneration in a rat mandible defect model. AAP 2010: abstract no.846184.

Miguez PA, Terajima M, Nagaoka H, Braswell K, Yamauchi M. BMP- induced osteogenesis is enhanced by biglycan in vivo. *J Dent Res* 90 (Spec Iss A): abstract no. 146467, 2011.

Miguez PA, Belcher J, Perley K, Farias DF, Braswell K, Walter R. Genipin effect on cell proliferation, toxicity, differentiation and collagen properties. *J Dent Res* 92 (Spec Iss A): abstract no. 859, 2013.

Belcher J, McGoverin C, Pleshko N, Miguez PA. Influence of biglycan on osteogenesis and matrix and mineral quality. *J Dent Res* 92 (Spec Iss A): abstract no. 2101, 2013.

Miguez PA, Belcher J, Volchonok M, Pietrofesa R, Cristofidou- Solomidou M. Effect of flaxseed lignan on osteogenic gene expression and in vivo radiated bone volume. Submitted to AADR/IADR 2015.

Research Grants and/or Contracts:

Past:

Matrix-assisted craniofacial bone regeneration, NIH/NIDCR (R21), **key personnel**, \$250,000 (11/01/2010-11/30/2012)

Evaluation of natural cross-linker agents as modulators of muscle and bone growth factors, Rabinowitz Award for Excellence in Research, University of Pennsylvania, **PI**/ Barton PI, \$20,000 (12/2011-12/2012)

Effect of natural compounds on bone regeneration, International Association of Dental Research, Young Investigator Award, Phillips Research Grant, **PI**, \$10,000(07/2012-06/2013)

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# ANDRÉ VICENTE RITTER

## ABBREVIATED CURRICULUM VITAE

19 June 2015

### 1) Education

<u>Institution</u>	<u>Degree</u>	<u>Date Conferred</u>	<u>Major</u>
Northeastern University	MBA	January 2013	Business Admin. Healthcare Mgmt.
University of North Carolina at Chapel Hill	MSD	May 2000	Operative Dentistry
University of North Carolina at Chapel Hill	Certificate	June 2000	Operative Dentistry
Federal Univ. of Santa Catarina Florianópolis, Brazil	Certificate	December 1992	Operative Dentistry
Federal Univ. of Santa Catarina Florianópolis, Brazil	DDS	December 1987	Dentistry
Colégio Cristo Rei Joaçaba, Brazil	BS	December 1982	Chemistry

### 2) Experience

#### Academic Appointments

2014/07-present	Chair, Department of Operative Dentistry, School of Dentistry, University of North Carolina at Chapel Hill
2012-present	Professor with tenure, Department of Operative Dentistry, School of Dentistry, University of North Carolina at Chapel Hill
2009-present	Director of Clinical Research, Department of Operative Dentistry, School of Dentistry, University of North Carolina at Chapel Hill
2014/01-06	Chair (interim), Department of Operative Dentistry, School of Dentistry, University of North Carolina at Chapel Hill
2010-2014	Graduate Program Director, Advanced Education Program in Operative Dentistry (MS degree), Department of Operative Dentistry, School of Dentistry, University of North Carolina at Chapel Hill
2011-2013	Vice Chair, Department of Operative Dentistry, School of Dentistry, University of North Carolina at Chapel Hill
2003-2013	Director of Graduate Clinics, Operative Dentistry Graduate Program, School of Dentistry, University of North Carolina at Chapel Hill
2006-2011	Associate Professor with tenure, Department of Operative Dentistry, School of Dentistry, University of North Carolina at Chapel Hill
2000-2010	Assistant Graduate Program Director, Operative Dentistry Graduate Program, School of Dentistry, University of North Carolina at Chapel Hill



2000-2006	Assistant Professor, Department of Operative Dentistry, School of Dentistry, University of North Carolina at Chapel Hill
1999-2000	Research Assistant, Dental Research Center, School of Dentistry, University of North Carolina at Chapel Hill
1997-2000	Teaching Assistant, Department of Operative Dentistry, School of Dentistry, University of North Carolina at Chapel Hill
1996-2000	Assistant Professor, Graduate and Undergraduate Programs, Department of Stomatology, Operative Dentistry Division (on leave after 08/1997), School of Dentistry, Federal University of Santa Catarina, Brazil
1992-1997	Lecturer and Instructor, Graduate Programs in Operative Dentistry, Department of Stomatology, Operative Dentistry Division, School of Dentistry, Federal University of Santa Catarina, Brazil
1992-1996	Adjunct Professor, Department of Stomatology, Operative Dentistry Division, School of Dentistry, Federal University of Santa Catarina, Brazil

#### Private Dental Practice

2001-present	Intramural Dental Faculty Practice, School of Dentistry, University of North Carolina at Chapel Hill
1996-1997	Group practice, Florianópolis, SC, Brazil
1987-1996	Solo practice, Joaçaba, SC, Brazil

### 3) Honors and Awards

2014-present	Fulbright Specialist Roster candidate.
2014 recognition	UNC Celebration of Faculty Diversity, Achievement and Success
2013	Omega Kappa Upsilon Dental Honor Society, Faculty Member Induction
2011	UNC Chapel Hill Class of 1958 Award, for best clinical research paper in a given year with the paper "An eight-year clinical evaluation of filled and unfilled one-bottle dental adhesives." <b>Ritter AV</b> , Swift EJ, Heymann HO, Sturdevant JR, Wilder AD. <i>J Am Dent Assoc</i> 2009,140(1): 28-37.
2011	Nominated for Faculty Award for Excellence in Doctoral Mentoring, UNC Chapel Hill

### 4) Editorial Responsibilities

#### Peer Review Journals and Editorial Boards

2014-present	Manuscript reviewer – <i>Caries Research</i>
2014-present	Manuscript reviewer - <i>Restorative Dentistry and Endodontics</i>
2013-present	Manuscript reviewer – <i>Acta Odontologica Scandinavica</i>
2013-present	Manuscript reviewer - <i>Revista Portuguesa de Estomatologia, Medicina Dentária e Cirurgia Maxilofacial</i> (Portugal)
2012-present	Manuscript reviewer - <i>Oral Diseases</i>
2011-present	Editorial board member and manuscript reviewer - <i>The American Journal of Esthetic Dentistry</i> (Quintessence)
2011-present	Manuscript reviewer - <i>Journal of Dental Hygiene</i>
2010-present	Manuscript reviewer - <i>Photomedicine and Laser Surgery</i>
2009-present	Manuscript reviewer - <i>Clinical Oral Investigations</i>
2009-present	Manuscript reviewer - <i>Community Dentistry and Oral Epidemiology</i>

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2009-present Manuscript reviewer - *European Journal of Dentistry*  
2009-present Manuscript reviewer - *Journal of Biomedical Materials Research: Part B - Applied Biomaterials*  
2008-present Editorial board member and manuscript reviewer - *Journal of Dental Science*  
2008-present Manuscript reviewer - *Journal of Adhesive Dentistry*  
2007-present Manuscript reviewer - *Journal of Evidence-Based Dental Practice*  
2007-present Manuscript reviewer - *Journal of Dental Research*  
2006-present Manuscript reviewer - *The Journal of Contemporary Dental Practice*  
2006-present Manuscript reviewer - *Journal of Oral Rehabilitation*  
2006-present Manuscript reviewer - *The Angle Orthodontist*  
2006-present Scientific board member and manuscript reviewer - *Journal of Applied Oral Science*  
2005-present Manuscript reviewer - *The Journal of The American Dental Association*  
2004-present Manuscript reviewer - *Dental Traumatology*  
2004-present Manuscript reviewer - *Archives of Oral Biology*  
2004-present Manuscript reviewer - *Odontology*  
2003-present Manuscript reviewer - *American Journal of Dentistry*  
2002-present Editorial board member and manuscript reviewer - *Operative Dentistry*  
2002-present Manuscript reviewer - *Lasers in Surgery and Medicine*  
2000-present Editorial board member and manuscript reviewer - *Journal of Esthetic and Restorative Dentistry*, formerly *Journal of Esthetic Dentistry* (Blackwell Munksgaard, previously BC Decker)  
2000-2010 Assistant Editor - *Journal of Esthetic and Restorative Dentistry*, formerly *Journal of Esthetic Dentistry* (Blackwell Munksgaard, previously BC Decker)  
2004-2012 Editorial board member and manuscript reviewer - *Dental Traumatology*

#### Other Editorial and Reviewer Roles

2000-2011 Coordinating editor and reviewer, *Practical Reviews in Cosmetic Dentistry* (Oakstone Medical Publishing)

### **5) Mentoring Activities**

#### *Postdoctoral (MS and PhD) Student Research Mentoring Projects Supervised*

2015-present Clinical comparison of wear characteristics of conventional and bulk fill resin composite over time  
Eduard Epure (ongoing)  
2014-present Accuracy Evaluation of Intra-oral Optical Impressions: A Novel Approach  
Mohammad Atieh (ongoing)  
2014 Phillips Student Research Award Recipient, Academy of Operative Dentistry  
2014-present In Vitro Evaluation of Marginal Gaps in Posterior Composite Restorations using Optical Coherence Tomography Adalberto Bastos de Vasconcellos (post-doc, ongoing)  
2013-present Yttrium Stabilized Zirconia as a Dental Crown Material  
Taiseer Sulaiman (post-doc, ongoing)  
2013 Evaluation of the Gelation Time and Setting Time on Polyvinylsiloxane Putty Materials Alex Delgado, Silvia Amaya-Pajares American Academy of Fixed Prosthodontics Annual Meeting, Chicago  
2013 Provisional Implant Restoration and Gingival Control in Anterior Esthetic

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## Implants

Fernando Astorga & Kristi Erickson

Academy of Operative Dentistry Annual Meeting, Chicago

- 2013 Conservative Restoration of Fractured Posterior Teeth with Composite: Survival Rate of Direct Composite Restorations Compared to Fixed Restorations  
Sumitha N. Ahmed  
Academy of Operative Dentistry Annual Meeting, Chicago
- 2013 Inhibition of the Polymerization of Polyvinylsiloxane in the New Latex-Free Dentistry Era  
Silvia Amaya-Pajares  
Academy of Operative Dentistry Annual Meeting, Chicago
- 2013 Didactic and Computer-Based Interactive Training Module Improves Precise Preclinical Use of the Periodontal Probe  
Sumitha N. Ahmed  
ADEA Annual Meeting, Seattle
- 2013 Dentin Bond Strengths of a Universal Adhesive in Multiple Modes  
Fernando Astorga  
IADR Annual Meeting, Seattle
- 2013 Variability in Dentiform Teeth with Simulated Caries  
Alex J. Delgado  
IADR Annual Meeting, Seattle
- 2013 A Survey of Dental Practitioners Knowledge of Erosive Tooth Wear  
Kristi Erickson  
IADR Annual Meeting, Seattle
- 2013 Oral Moistures: Help or Harm? Alex J. Delgado & Vilhelm G. Olafsson Thomas P. Hinman Dental Meeting, Atlanta
- 2013 Evaluation of the Gelation Time and Setting Time of Poly-vinyl Siloxane Putty Material Alex J. Delgado & Silvia P. Amaya-Pajares Thomas P. Hinman Dental Meeting, Atlanta
- 2013 The Risk of Dental Erosion in GERD Patients as Measured by the Basic Erosive Wear Examination Kristi Erickson The Digestive Disease Week, Orlando
- 2012 Multidisciplinary Approach of a Complicated Crown-root Fracture Hiroko Nagaoka
- 2012 American Academy of Operative Dentistry Annual Meeting, Chicago 2012 Carolina Bridge Fernando Astorga
- 2012 American Academy of Operative Dentistry Annual Meeting
- 2010 Caries risk evaluation: Correlation between chair-side, laboratory and clinical tests (published) Ayesha Swarn

## Theses Directed (all for MS degree)

- 2009-2012 Clinical efficacy of a new protocol for caries control (completed) Ayesha Swarn
- 2008-2011 Comparison of Clinical and Digital Radiographic Detection of Occlusal and Proximal Dental Caries in Caries-Active Adults (completed, in print)  
Mario Ramos
- 2007-2010 The influence of tooth age on the microtensile bond strength of different adhesive systems to dentin (completed, published)  
Greice Oliveira

Freedland Advanced Dental Education Fellowship

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## Award

### Other Thesis and Predoctoral Research Committees

- 2014-2015 Evaluation of the Marginal Fit of CAD/CAM All Ceramic Crowns: An In- Vitro Study Using Micro-CT Technology  
Christian Brenes, MS thesis committee, Graduate Program in Prosthodontics
- 2013-present Accuracy Evaluation of Intra-oral Optical Impressions: A Novel Approach  
Mohammad Atieh, MS thesis committee, Graduate Program in Operative Dentistry
- 2013-present Evaluation of Wear Behavior of Monolithic Ceramic Materials to Enamel  
Taneet Ghuman, MS thesis committee, Graduate Program in Operative Dentistry
- 2013-present Dentin Bond Strength of Conventional and Modified Glass Ionomer Cements  
Anmar Kensara, MS thesis committee, Graduate Program in Operative Dentistry
- 2012-present A Validation of Micro CT Technology and Evaluation of Methods to Chemically Arrest Active Root Caries. Clayton Rau, MS thesis committee, Graduate Program in Operative Dentistry
- 2012-present Comparative Evaluation of Four Porcelain Repair Systems  
Upoma Guha, MS thesis committee, Graduate Program in Operative Dentistry
- 2012-present Effect of Composite Type and Placement Technique on the Fatigue Strength of Restored Teeth. Vilhelm Olafsson, MS thesis committee, Graduate Program in Operative Dentistry
- 2011-2014 Effect of Mixed Alcohol Beverages on Microhardness and Weight Loss Measurement of Human Enamel.  
Silvia Amaya-Pajares, MS thesis committee, Graduate Program in Operative Dentistry
- 2011-2014 Evaluation of the Margin Integrity in Different Restorative Materials based on Instrumentation and Location.  
Alex Delgado, MS thesis committee, Graduate Program in Operative Dentistry
- 2010-2013 Utility of a Natural Cross-Linker, Genipin, For Dental Collagen Stabilization Hiroko Nagaoka, MS thesis, Graduate Program in Operative Dentistry
- 2010-2013 Evaluation of Ozone as an Antibacterial Agent on Streptococcus Mutans on Root Surfaces  
Fernando Astorga, MS thesis committee, Graduate Program in Operative Dentistry
- 2009-2012 Influence Of Dentin Desensitizers On The Microtensile Bond Strengths Of “All-In-One” Adhesives To Dentin  
Roopwant Kaur, MS thesis, Graduate Program in Operative Dentistry

## 6) Publications

### Books & Chapters

1. **Ritter AV**. Operative Dentistry. In: Dowd F, ed. Mosby’s Review for the NBDE Part II, 2<sup>nd</sup> ed. St Louis:Elsevier; 2014:35-78.
2. Heymann HO, Swift EJ, **Ritter AV**, eds. Sturdevant’s Art and Science of Operative Dentistry, 6<sup>th</sup> ed. St Louis:Elsevier; 2012: 652 pages.
3. **Ritter AV**, Eidson RS, Donovan TE. Dental Caries: Etiology, Clinical Characteristics, Risk Assessment, and Management. In: Heymann HO, Swift EJ, **Ritter AV**, eds. Sturdevant’s Art and Science of Operative Dentistry, 6<sup>th</sup> ed. St Louis:Elsevier; 2012:41- 88.
4. Heymann HO, **Ritter AV**, Roberson TM. Introduction to Composite Restorations. In: Heymann HO, Swift EJ, **Ritter AV**, eds. Sturdevant’s Art and Science of Operative Dentistry, 6<sup>th</sup> ed. St Louis:Elsevier; 2012:216-228.

5. **Ritter AV**, Walter R, Roberson TM. Class III, IV, and V Direct Composite and Other Tooth-Colored Restorations. In: Heymann HO, Swift EJ, **Ritter AV**, eds. Sturdevant's Art and Science of Operative Dentistry, 6<sup>th</sup> ed. St Louis:Elsevier; 2012:229-253.
6. **Ritter AV**, Walter R, Roberson TM. Class I, II, and VI Direct Composite and Other Tooth-Colored Restorations. In: Heymann HO, Swift EJ, **Ritter AV**, eds. Sturdevant's Art and Science of Operative Dentistry, 6<sup>th</sup> ed. St Louis:Elsevier; 2012:254-279.

Journal Articles (\*Indicates Refereed)

1. Sulaiman TA, Abdulmajeed AA, Donovan TE, **Ritter AV**, Vallittu PK, Lassila LV, Närhi TO. The degree of conversion of dual-polymerizing cements light-polymerized through monolithic zirconia of different thicknesses and types. *J Prosthet Dent* 2015 (in press, accepted Feb 26, 2015).
2. Boushell LW, **Ritter AV**. Extensive training in the realm of esthetics. *J Cosmetic Dent* 2014;30(3):80-81.
3. \*Delgado AJ, Heymann HO, Donovan TE, **Ritter AV**, Ziemiecki T. Effect of finishing techniques on the marginal integrity of composite and resin-modified glass ionomer restorations. *J Esthet Restor Dent* 2014 (accepted Nov 14, 2014).
4. \*Oliveira GMS, **Ritter AV**, Heymann HO, Swift Jr. E, Donovan T, Brock G, Wright T. Remineralization effect of CPP-ACP and fluoride for white spot lesions in vitro. *J Dent* 2014;42(12):1592-1602. PMID: 25260438
5. \*Nagaoka H, Nagaoka H, Walter R, Boushell LW, Miguez P, Burton A, **Ritter AV**, Yamauchi M. Characterization of genipin-modified dentin collagen. *BioMed Research International* 2014, published online March 26, 2014. PMID: 24795891
6. \*Walter R, Boushell LW, Heymann HO, **Ritter AV**, Sturdevant JR, Wilder Jr. AD, Chung Y, Swift EJ. Three-year clinical evaluation of a silorane composite resin. *J Esthet Restor Dent* 2014;26(3):179-190. PMID: 24344912
7. \***Ritter AV**, Ramos MD, Astorga F, Shugars DA, Bader JD. Visual-tactile vs. radiographic caries detection in caries-active adults. *J Public Health Dent* 2013;73(3):252-260. PMID: 23772747
8. \***Ritter AV**, Bader JD, Leo MC, Preisser JS, Shugars DA, Vollmer WM, Amaechi BT, Holland JC, for the X-ACT Collaborative Research Group. Tooth-surface-specific effects of xylitol: randomized trial results. *J Dent Res* 2013;92(6):512-517. PMID: 23589387
9. \*Hamamoto DT, Farrar SK, Caplan DJ, Lanphier TF, Panza JC, **Ritter AV**. Use of shared faculty in US and Canadian dental schools. *J Dent Educ* 2013;77(3):264-275. PMID: 23486891
10. \*Bader JD, Vollmer WM, Shugars DA, Gilbert GH, Amaechi BT, Brown JP, Laws RL, Funkhouser KA, Makhija SK, **Ritter AV**, Leo MC, for the X-ACT Collaborative Research Group. Principal results from the Xylitol for Adult Caries Trial (X-ACT). *J Am Dent Assoc* 2013;144(1):21-30. PMID: 23283923
11. \***Ritter AV**, Preisser JS, Chung Y, Bader JD, Shugars DA, Amaechi BT, Makhija SK, Funkhouser KA, Vollmer WM, for the X-ACT Collaborative Research Group. Risk indicators for the presence and extent of root caries among caries-active adults enrolled in the Xylitol for Adult Caries Trial (X-ACT). *Clin Oral Investig* 2012;16(6):1647-1657. PMID: 22198596
12. \*Oliveira GCB, Oliveira GMS, **Ritter AV**, Heymann HO, Swift Jr. EJ, Yamauchi M. Influence of tooth age and etching time on the microtensile bond strengths of adhesive systems to dentin. *J Adhes Dent* 2012;14(3):229-234. PMID: 22282746

13. \*Boushell LW, **Ritter AV**, Garland GE, Tiwana KK, Smith LR, Broome A, Leonard RH. Nightguard vital bleaching: side effects and patient satisfaction 10-17 years post-treatment. *J Esthet Restor Dent* 2012;24(3):211-220. PMID: 22691084
14. \*Banting DW, Amaechi BT, Bader JD, Blanchard P, Gilbert GH, Gullion CM, Holland JC, Makhija SK, Papas A, **Ritter AV**, Singh M, Vollmer WM. Examiner Training and Reliability in Two Randomized Clinical Trials of Adult Dental Caries. *J Public Health Dent* 2011;71(4):335-344.
15. \***Ritter AV**, Roberts MW, Wright JT. Remineralization of smooth surface incipient enamel lesions. *J Cosmet Dent* 2011;26(4):80-89.
16. \*Sheikh H, Heymann HO, Swift EJ, Ziemiecki TL, **Ritter AV**. Effect of saliva contamination and cleansing solutions on the bond strength of self-etch adhesives to dentin. *J Esthet Restor Dent* 2010;22(6):402-410.
17. \*Oliveira GM, Oliveira GB, **Ritter AV**. Crown fragment reattachment: Report of an extensive case with intra-canal anchorage. *Dent Traumatol* 2010;26(2):174-181.
18. \***Ritter AV**, Shugars DA, Bader JD. Root caries risk indicators: A systematic review of risk models. *Community Dent Oral Epidemiol* 2010;38(5):383-397.
19. \*Bader JD, Robinson DS, Gilbert GH, **Ritter AV**, Makhija SK, Funkhouser KA, Amaechi BT, Shugars DA, Laws R. Four "lessons learned" while implementing a multi-site caries prevention trial. *J Public Health Dent* 2010;70(3):171-175.
20. \*Maresca C, Pimenta LAF, Heymann HO, Ziemiecki TL, **Ritter AV**. Effect of finishing instrumentation on the marginal integrity of resin-based composite restorations. *J Esthet Restor Dent* 2010;22(2):104-113.
21. \*Ghaname ES, **Ritter AV**, Heymann HO, Vann WF, Shugars DA, Bader JD. Correlation between laser fluorescence readings and volume of tooth preparation in incipient occlusal caries in vitro. *J Esthet Restor Dent* 2010;22(1):31-9.

#### Journal Abstracts (\* Indicates Refereed)

1. \***Ritter AV**, Heymann HO, Swift EJ, Sturdevant J, Boushell LW, Lambert C. Eighteen-month clinical evaluation of a two-component self-etch adhesive. *J Dent Res* 2015;94 (Special Issue A, USB of abstracts, abstract # 855)
2. \*Ahmed S, Erickson K, **Ritter AV**. Assessment of patient and provider satisfaction of different dental isolation methods. *J Dent Res* 2015;94 (Special Issue A, USB of abstracts, abstract # 2305)
3. \*Vasconcellos AB, Hirata R, Blackmon R, Swift EJ, Heymann H, Delgado AH, Oldenburg AL, **Ritter AV**. Cross-sectional visualization of microcracks in resin-based materials by optical coherence tomography. *J Dent Res* 2015;94 (Special Issue A, USB of abstracts, abstract # 1984)
4. \*Guha U, **Ritter AV**, Parker J, Swift EJ, Donovan T. etching and water storage affect self-etch porcelain repair systems. *J Dent Res* 2015;94 (Special Issue A, USB of abstracts, abstract # 3488)
5. \*Olafsson VG, **Ritter AV**, Swift EJ, Boushell LW, Ko C, Donovan TE. Effect of composite type and placement technique on shrinkage stress. *J Dent Res* 2015;94 (Special Issue A, USB of abstracts, abstract # 2198)
6. \*Astorga F, Arnold R, Sexton K, **Ritter AV**, Pimenta LA. Antibacterial effects of ozone on *Streptococcus mutans*: Clinical practicality. *J Dent Res* 2014;93 (Special Issue A, USB of abstracts, abstract # 1324)
7. \*Delgado AJ, **Ritter AV**, Donovan TE, Ziemiecki T, Heymann HO. Effect of finishing techniques on the margin integrity of restorations. *J Dent Res* 2014;93 (Special Issue A, USB of abstracts, abstract # 1466)

8. \***Ritter AV**, Preisser JS, Chung Y, Bader JD, Vollmer WM, Shugars DA. Predictive modeling of root caries incidence. *Caries Res* 2013;47(5):495 (abstract #151)
9. \***Ritter AV**, Bader JD, Leo MC, Preisser JR, Shugars D, Vollmer WM, Amaechi BT, Holland JC. Does xylitol have a tooth surface-specific caries preventive effect? *J Dent Res* 2013;92 (Special Issue A, USB of abstracts, abstract # 2896)
10. \*Walter R, Swift Jr EJ, Boushell LW, Heymann HO, Wilder Jr AD, Sturdevant J, **Ritter AV**, Chung Y. Clinical evaluation of dental adhesives of different bonding strategies. *J Dent Res* 2013;92 (Special Issue A, USB of abstracts, abstract # 605)
11. \***Ritter AV**, Ramos MD, Astorga F, Shugars DA, Bader JD. Clinical vs. radiographic caries detection in caries-active adults. *J Dent Res* 2012;91 (Special Issue A, USB of abstracts, abstract #67).
12. \*Nagaoka H, Nagaoka H, Walter R, Boushell L, **Ritter AV**, Yamauchi M. Genipin-induced cross-linking and dentin bond strength. *J Dent Res* 2012;91 (Special Issue A, USB of abstracts, abstract #154).
13. \*Kaur R, Swift Jr. E, Heymann HO, **Ritter AV**, Phillips C, Walter R. Immediate bond strengths to gluma power gel-treated dentin. *J Dent Res* 2012;91 (Special Issue A, USB of abstracts, abstract #786).
14. \*Swarn A, Eidson RS, Donovan T, Arnold RR, Simmons EV, **Ritter AV**. Clinical salivary ph vs. laboratory buffering capacity: A comparison. *J Dent Res* 2012;91 (Special Issue A, USB of abstracts, abstract #1429).
15. \***Ritter AV**, Preisser JB, Amaechi BT, Anabtawi MZ, Makhija SK, Shugars DA, for the X-ACT Collaborative Research Group. Root caries index as an outcome variable in regression modeling of root caries. *Caries Res* 2010;44(3):231 (abstract #61).
16. \***Ritter AV**, Preisser JB, Amaechi BT, Anabtawi MZ, Gilbert GH, Makhija SK, Shugars DA, for the X-ACT Collaborative Research Group. Risk indicators and root caries prevalence: influence of non-cavitated lesions. *J Dent Res* 2010;89 (Special Issue B, USB of abstracts, abstract #1596).
17. \*Swarn A, **Ritter AV**, Donovan T, Eidson S. Caries risk evaluation: Correlation between chair-side, laboratory and clinical tests. *J Dent Res* 2010;89 (Special Issue B, USB of abstracts, abstract #4272). (Also published at the UNC School of Dentistry Dental Research in Review Proceedings 2011; abstract #2)
18. \*Leonard RH, **Ritter AV**, Garland GE, Tiwana KK, Smith L, Boushell LW, Broome A. Nightguard Vital Bleaching: Longevity and side effects: 10-17 years post-treatment. *J Dent Res* 2010;89 (Special Issue A, USB of abstracts, abstract #832).
19. \*Oliveira GCB, Oliveira GMS, **Ritter AV**, Heymann HO, Swift Jr EJ. Influence of tooth age on the microtensile bond strength of different adhesive systems to dentin. UNC School of Dentistry Dental Research in Review Proceedings 2010:31 (abstract #30).

Other Unrefereed Works (includes editorials, invited commentaries, interviews, review guides, and dissertations)

1. **Ritter AV**. The efficacy of fluoride on root caries progression may be dose-dependent. *J Evid Based Dent Pract* 2013;13(4):177-179.
2. **Ritter AV**, Browning WD, Swift EJ. Critical Appraisal: Partial caries excavation. *J Esthet Restor Dent* 2012;24(2):1148-152.
3. **Ritter AV**. Computer-Aided-Design/Computer-Aided-Manufactured adhesive restoration of molars with a compromised cusp: effect of fiber reinforced immediate dentin sealing and cusp overlap on fatigue strength - Commentary. *J Esthet Restor Dent* 2012;24(2):147.

4. **Ritter AV.** Clinical techniques: A review of posterior composites. *ADA Professional Product Review* 2011;6(4):3-8.
5. **Ritter AV,** Stevenson RG III. Clinical techniques: A review of posterior composites: A follow-up discussion. *ADA Professional Product Review* 2011;6(4):9-10.
6. **Ritter AV.** Direct esthetic restorations based on translucency and opacity of composite resins - Commentary. *J Esthet Restor Dent* 2011;23(2):88.
7. **Ritter AV.** Posterior Composites. *MetLife Quality Resource Guide*, 3<sup>rd</sup> edition, 2011, 22 pages
8. Sarrett D, Armstrong S, Hilton TJ, **Ritter AV.** ADA Professional Product Review Panel Discussion, Restorative Materials. *ADA Professional Product Review* 2010;5(2):13-16.
9. **Ritter AV.** Comparison of various resin composite shades and layering technique with a shade guide - Commentary. *J Esthet Restor Dent* 2010;22(2):125-126.

## 7) Research grants and/or contacts

### Completed

2011-2014	Kerr Corporation Grant “Clinical evaluation of a New Two-Component Self-Etch Universal Adhesive” PI: AV Ritter 10-15% effort Total award: \$48,470
2006–2012	NIDCR Grant 5U01DE018048-01 “Xylitol Adult Caries Trial (X-ACT) UNC Clinical Center” PI: D Shugars, Investigator: AV Ritter 2% effort Total award: \$775,114
2005-2012	3M ESPE Grant “Clinical Evaluation of a New Low-shrink Resin Composite Restorative in the Restoration of Posterior Teeth (Clinical Trial)” PI: EJ Swift, Investigator AV Ritter 2% effort Total award: \$95,432
2005-2010	UNC School of Dentistry (Dept of Diagnostic Sciences) Grant “Nightguard Vital Bleaching: Safety and Stability at 5-15 Years (Clinical Trial)” PI: AV Ritter 5% effort Total award: N/A

### Approved but not funded

2010	NIDCR proposal 1 R03 DE022072-01 “Root Caries Prediction Using Risk Models,” PI: AV Ritter and J Preisser, impact/priority score: 49
2012	NIDCR proposal 1 R34 DE022384-01A1 “Clinical Trial of CPP-ACP for Adult Caries Prevention,” PI: AV Ritter, impact/priority score: 31



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## John Sturdevant

### 1) Education

<u>Institution and Location</u> <u>Major</u>	<u>Degree</u>	<u>Date Conferred</u>	<u>Degree</u>
University of North Carolina School of Dentistry	DDS Dentistry at Chapel Hill	1979	
University of North Carolina at Chapel Hill	BA	1975	Chemistry

### 2) Experience

#### Licensure

1979-Present      North Carolina Dental Practice License

#### Academic Appointments

1989-Present      Associate Professor—Operative  
Dentistry School of Dentistry—UNC at  
Chapel Hill

1988      Adjunct Associate Professor—Oral Biology  
Medical College of Georgia—Augusta,  
Georgia

1982—1988      Assistant Professor—Operative  
Dentistry School of Dentistry—UNC at  
Chapel Hill

1980      Instructor—Operative Dentistry  
School of Dentistry—UNC at Chapel Hill

1979      Visiting Instructor—Fixed  
Prosthodontics School of Dentistry—  
UNC at Chapel Hill

#### Dental Practice

1980—Present      UNC-SOD Dental Faculty Practice

### 3) Honors and Awards

2010      America's Top Dentists-Consumer's Research Council of America  
2012      Teaching Award, First Year DDS Students (Class of 2015)  
2012-15      America's Top Dentists-Consumer's Research Council of America

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#### 4) **Editorial responsibilities**

2012-2015 Editorial Board-*Scientific World Journal*

#### 5) **Mentoring Activities**

2013-2014 Thesis/mentoring committee (MS), Dr. Sumitha Ahmed

#### 6) **Publications**

##### Textbook Chapters

1. Boushell LW, Sturdevant JR. Clinical significance of dental anatomy, histology, physiology, and occlusion. In: Heymann HO, et al, editors. Sturdevant's The art and science of Operative Dentistry, Ed. 6. St Louis:Elsevier, 2013:280-295.
2. Swift EJ, Sturdevant JR, Boushell LW. Indirect tooth colored restorations. In: Heymann HO, et al, editors. Sturdevant's The art and science of Operative Dentistry, Ed. 6. St Louis:Elsevier, 2013:1-40.
3. Sturdevant JR. Class II cast metal restorations. In: Heymann HO, et al, editors. Sturdevant's The art and science of Operative Dentistry, Ed. 6. St Louis:Elsevier, 2013:455-517.

##### Journal Articles

1. Walter R, Boushell LW, Heymann HO, Ritter AV, **Sturdevant JR**, Wilder AD Jr, Chung Y, Swift EJ Jr. Three-year clinical evaluation of a silorane composite resin. *J Esthet Restor Dent*. 2014 May-Jun;26(3):179-90

##### Refereed Abstracts

1. Bayne SC, Swift EJ, Wilder AD, Heymann HO, Sturdevant JR. Cluster analysis of long- term USPHS-category changes for posterior composites. *Dent Mater* 2010; 26: e128.
2. Bayne S, Wilder A, Heymann H, Sturdevant J, Swift E. Cluster analysis of short-term USPHS-category changes for Class-V composites. *J Dent Res* 89(Spec Iss A), 2010: Abstract No. 27.
3. Bayne S, Wilder A, Heymann H, Sturdevant J, Swift E. 10-year clinical wear-factor analysis for conventional versus packable molar composites. *J Dent Res* 89(Spec Iss B), 2010: Abstract No. 3569.
4. Bayne SC, Wilder AD, Heymann H, Sturdevant J, Swift EJ. Sources of variation in indirect wear evaluations of clinical results. *J Dent Res* 90 (Spec Iss A), 2011: Abstract No.147761.
5. Bayne SC, Wilder AD, Heymann HO, Sturdevant JR, Swift EJ Compensation method for missing wear data in long-term clinical trials. *J Dent Res* 2012.

#### 7) **Research grants/contracts**

2011-2014 Kerr Corporation Grant (\$48,470)  
Co-investigator with principal investigator Boushell LW.  
Clinical evaluation of a new two component self etch universal adhesive



## EDWARD J. SWIFT, JR., DMD, MS

**Education**

<u>Institution and location</u>	<u>Degree</u>	<u>Date Conferred</u>	<u>Degree Major</u>
The University of Iowa Iowa City, IA	M.S.	1989	Operative Dentistry
Medical Univ. of South Carolina Charleston, SC	D.M.D.	1979	Dentistry
University of South Carolina Columbia, SC	B.S. <i>(summa cum laude)</i>	1976	Biology

**Experience**

2015-present	Associate Dean for Education
07/2014-12/2014	Interim Associate Dean for Education
01/2014-06/2014	Interim Associate Dean for Student Clinics
2000-2014	Chair, Department of Operative Dentistry
1999-present	Professor
1997-2000	Graduate Program Director
1993-1999	Associate Professor with tenure Department of Operative Dentistry The University of North Carolina School of Dentistry Chapel Hill, North Carolina
1992-1993	Associate Professor with tenure
1989-1992	Assistant Professor
1986-1989	Clinical Instructor Department of Operative Dentistry The University of Iowa College of Dentistry Iowa City, Iowa
1985-1986	Instructor Department of Restorative Dentistry School of Dentistry University of Mississippi Medical Center Jackson, Mississippi

**PRIVATE DENTAL PRACTICE**

1993-2015	Dental Faculty Practice, UNC School of Dentistry
1986-1993	Dental Service Plan, University of Iowa
1985-1986	Intramural Faculty Practice, University of Mississippi
1982-1985	Solo private practice, Travelers Rest, South Carolina
1979-1982	Associate in private practice, Travelers Rest, South Carolina

## **Honors and awards**

2011-2014	Adjunct Senior Scientist Houston Center for Biomaterials and Biomimetics, University of Texas Dental Branch
2011	Certificate of Appreciation Class of 2014 DDS-1 Teaching Award UNC School of Dentistry
2011	Recognized as one of the “Top Dentists in Chapel Hill” <i>Chapel Hill Magazine</i> , May-June 2011
2011	Fellow, American College of Dentists
2012	Recognized as one of the “Top Dentists in Chapel Hill” <i>Chapel Hill Magazine</i> , May-June 2012
2013	Recognized as one of the “Top Dentists in Chapel Hill” <i>Chapel Hill Magazine</i> , May-June 2013
2014	Recognized as one of the “Top Dentists in Chapel Hill” <i>Chapel Hill Magazine</i> , May-June 2014
2014	UNC School of Dentistry Leadership Award (1 <sup>st</sup> annual) “For significant contribution to the life of the school”
2015	UNC Chapter of ASDA Advocate Award For “a commitment to dental students and organized dentistry”
2015	Recognized as one of the “Top Dentists in Chapel Hill” <i>Chapel Hill Magazine</i> , May-June 2015 (pending)

## **Editorial responsibilities**

1991-present	<i>Operative Dentistry</i> , Editorial Board
1993-present	<i>American Journal of Dentistry</i> , Editorial Board
1998-present	<i>Journal of Esthetic and Restorative Dentistry</i> , Associate Editor
2009-present	Board of Directors, Society for Color and Appearance in Dentistry
2011	Member, Oral, Dental, and Craniofacial Sciences Study Section
(NIH) 2013-present	Member, 3M ESPE Scientific Dentistry Board

## **Mentoring activities**

2010	Naorungroj S. M.S., Operative Dentistry (thesis committee member)
2010	Oliveira Gr. M.S., Operative Dentistry (thesis committee member)
2012	Slack M. M.S., Orthodontics (thesis committee member)
2012	Kaur R. M.S., Operative Dentistry (thesis committee member)
2015	Guha U. M.S., Operative Dentistry (thesis committee member)
2015	Olafsson W. M.S., Operative Dentistry (thesis committee member)
2014-15	Walker C, Abdelbaky O. Oral Wellness and Nutrition (OWN) project (Schweitzer Fellowship mentor)

## **Publications**

### *Books and Monographs*

1. Bayne SC, Powers JM, Swift EJ, Thompson JY. Biomaterials. In: Darby ML, ed. Mosby's Comprehensive Review of Dental Hygiene (7<sup>th</sup> edition). St. Louis: Mosby Elsevier; 2012: Chapter 13, 478-526.
2. Perdigão J, Swift EJ, Walter R. Fundamental concepts of enamel and dentin adhesion. In: Heymann HO, Swift EJ, Ritter, AV, eds. Sturdevant's Art and Science of Operative Dentistry (6<sup>th</sup> edition). St. Louis: Mosby Elsevier; 2012: Chapter 4, 114-140.
3. Swift EJ, Sturdevant JR, Ritter AV. Indirect tooth-colored restorations. In: Heymann HO, Swift EJ, Ritter AV, eds. Sturdevant's Art and Science of Operative Dentistry (6<sup>th</sup> edition). St. Louis: Mosby Elsevier; 2012: Chapter 11, 280-295.

### *Journal Articles – Clinical Case Reports and Technique Articles*

(peer-reviewed publications indicated by \*)

1. Terry DA, Swift EJ. Post-and-cores: Past to present. *Dentistry Today* 2010; 29(1):132-135.
2. Swift EJ. Ask the experts: Dentin/enamel bonding. *J Esthet Restor Dent* 2010; 22:4-6.
3. Swift EJ. 20 tips on bonding: Things you might or might not know. *J Cosmetic Dent* 2010; 26(3):70-73.
4. Croll TP, Swift EJ. Posterior Class VI adhesive tooth repair. *Inside Dentistry* 2014; 10(10):60-64.

### *Journal Articles – Research Reports and Literature Reviews*

(peer-reviewed publications indicated by \*)

- 1.\* Naorungroj S, Wei H-H, Arnold RR, Swift EJ, Walter R. Antibacterial surface properties of fluoride-containing resin-based sealants. *J Dent* 2010; 38:387-391.
2. Swift EJ. Critical appraisal: Options for dentin/enamel bonding. Part II. *J Esthet Restor Dent* 2010; 22:149-154.
3. Swift EJ. Critical appraisal: Options for dentin/enamel bonding. Part III. *J Esthet Restor Dent* 2010; 22:200-205.
4. Swift EJ. Critical appraisal: Options for dentin/enamel bonding. Part IV. *J Esthet Restor Dent* 2010; 22:270-275.
- 5.\* Paravina RD, O'Neill PN, Swift EJ, Nathanson D, Goodacre CJ. Teaching of color in undergraduate and postgraduate dental education in 2009. *Journal of Color and Appearance in Dentistry*, a supplement to *J Dent* 2010; 38(Suppl):e34-e40.
- 6.\* Sheikh H, Heymann HO, Swift EJ, Ziemiecki TL, Ritter AV. Effect of saliva contamination and cleansing on the bond strengths of self-etch adhesives to dentin. *J Esthet Restor Dent* 2010; 22:402-411.
- 7.\* Boushell LW, Getz G, Swift EJ, Walter R. Bond strengths of a silorane composite to various substrates. *Am J Dent* 2011; 24:93-96.

8. Swift EJ. Critical appraisal: Visible light-curing. *J Esthet Restor Dent* 2011; 23:191-196.
- 9.\* Walter R, Swift EJ, Boushell LW, Braswell K. Enamel and dentin bond strengths of a new self-etch adhesive system. *J Esthet Restor Dent* 2011; 23:390-396.
- 10.\* Piascik J, Swift E, Braswell K, Stoner B. Surface fluorination of YSZ: Adhesive strength comparison to commercial primers. *Dent Mater* 2012; 28:604-608.
- 11.\* Walter R, Swift EJ, Nagaoka H, Chung Y, Bartholomew W, Braswell KM, Pereira PNR. Two-year bond strengths of “all-in-one” adhesives to dentine. *J Dent* 2012; 40:549-555.
12. Swift EJ. Critical Appraisal: Self-adhesive resin cements. Part I. *J Esthet Restor Dent* 2012; 24:221-225.
- 13.\* Oliveira GCB, Oliveira GMS, Ritter AV, Heymann HO, Swift EJ, Yamauchi M. Influence of tooth age and application time on the microtensile bond strengths of adhesive systems to dentin. *J Adhes Dent* 2012; 14:229-234.
14. Swift EJ. Critical Appraisal: Self-adhesive resin cements. Part II. *J Esthet Restor Dent* 2012; 24:287-291.
15. Swift EJ. Critical Appraisal: Reversal of compromised bonding after bleaching. *J Esthet Restor Dent* 2012; 24:357-361.
16. Swift EJ. Contemporary Issues: Contemporary dental cements. *J Esthet Restor Dent* 2012; 24:365-366.
- 17.\* DeLong R, Pintado M, Douglas W, Fok A, Wilder AD, Swift EJ, Bayne SC. Wear of a dental composite in an artificial oral environment: A clinical correlation. *J Biomed Mater Res: Part B - Applied Biomaterials* 2012; 100:2297-2306.
- 18.\* Slack ME, Swift EJ, Rossouw PE, Phillips C. Tooth whitening in the orthodontic practice: A survey of orthodontists. *Am J Orthod Dentofac Orthoped* 2013; 143(Suppl 4):S64-71.
- 19.\* Oliveira GM, Miguez PA, Oliveira GB, Swift EJ, Farrell S, Anastasia MK, Conde E, Walter R. Safety and efficacy of a high-adhesion whitening strip under extended wear regimen. *Journal of Color and Appearance in Dentistry*, a supplement to *J Dent* 2013; 41 (Suppl 3):e46-e52.
- 20.\* Walter R, Feiring AE, Braswell K, Bartholomew W, Boushell LW, Chung Y, Phillips C, Pereira PNR, Swift EJ. One-year water sorption/solubility of “all-in-one” adhesives. *Braz Dent J* 2013; 24:344-348.
- 21.\* Feiz A, Barekatin B, Khalesi S, Khalighinejad N, Badrian H, Swift EJ. Effect of several bleaching agents on teeth stained with a resin-based sealer. *Int Endod J* 2014; 47:3-9.
- 22.\* Khalighinejad N, Feiz A, Faghihian R, Swift EJ. Effect of dentin conditioning on bond strength of fiber posts and dentin morphology: A review. *Am J Dent* 2014; 27:3-6.
- 23.\* Walter R, Boushell LW, Ritter AV, Sturdevant JR; Wilder AD, Chung Y, Swift EJ. Three-year clinical evaluation of a silorane composite resin. *J Esthet Restor Dent*, 2014; 26:179-190.
- 24.\* Feiz A, Samimi P, Karami A, Badrian H, Goroohi H, Swift EJ. Effect of surface treatments on fracture resistance of root filled teeth with bonded fibre posts. *Dent Traumatol* 2014; 30:302-305.

- 25.\* Oliveira GMS, Ritter AV, Heymann HO, Swift EJ, Donovan T, Brock G, Wright T. Remineralization effect of CPP-ACP and fluoride for white spot lesions in vitro. *J Dent* 2014;42:1592-1602.

### Abstracts

1. Bayne SC, Swift EJ, Wilder AD, Heymann HO, Sturdevant JR. Cluster analysis of long-term USPHS-category changes for posterior composites. *Dent Mater* 2010; 26: e128.
2. Piascik JR, Swift EJ, Wolter SD, Thompson JY, Grego S, Stoner BR. Novel approach to improved silanation of zirconia. *Dent Mater* 2010; 26:e155.
3. Bayne S, Wilder A, Heymann H, Sturdevant J, Swift E. Cluster analysis of short-term USPHS-category changes for Class-V composites. *J Dent Res* 89(Spec Iss A), 2010: Abstract No. 27.
4. Swift EJ, Walter R, Qian E, Nguyen T, Bui H. Dentin and enamel bond strengths of self-adhesive composite resins. *J Dent Res* 89(Spec Iss A), 2010: Abstract No. 430.
5. Walter R, Swift E. Two-year bond strengths of “all-in-one” adhesives to dentin. *J Dent Res* 89(Spec Iss A), 2010: Abstract No. 793.
6. Bayne S, Wilder A, Heymann H, Sturdevant J, Swift E. 10-year clinical wear-factor analysis for conventional versus packable molar composites. *J Dent Res* 89(Spec Iss B), 2010: Abstract No. 3569.
7. Bayne SC, Wilder AD, Heymann H, Sturdevant J, Swift EJ. Sources of variation in indirect wear evaluations of clinical results. *J Dent Res* 90 (Spec Iss A), 2011: Abstract No.147.
8. Stoner BR, Piascik JR, Swift EJ, Wolter SD. Non-destructive evaluation of composite failure using electrochemical impedance spectroscopy. *J Dent Res* 90 (Spec Iss A), 2011: Abstract No.390.
9. Walter R, Miguez PA, Oliveira GCB, Oliveira GMS, Farrell S, Anastasia MK, Conde E, Swift EJ. Safety and efficacy of a 2-hour whitening strip. *J Dent Res* 90 (Spec Iss A), 2011: Abstract No. 555.
10. Swift EJ, Walter R, Braswell K, Boushell L. Dentin and enamel bond strengths of a new self-etch primer. *J Dent Res* 90 (Spec Iss A), 2011: Abstract No. 1687.
11. Patel A, Swift EJ, Rueggeberg FA. Initial composite increment conversion enhancement by exposure through second increment. *J Dent Res* 90 (Spec Iss A), 2011: Abstract No. 1956.
12. Stoner B, Piascik J, Swift E, Byers B, Nistico L, Ehrlich G, Costerton W. Evaluation of *Streptococcus mutans* on dental composite resins. *J Dent Res* 91 (Spec Iss A), 2012: Abstract No. 87.
13. Braswell K, Swift E, Walter R. Comparison of two methods for shear bond strength testing. *J Dent Res* 91 (Spec Iss A), 2012: Abstract No. 440.
14. Bayne S, Wilder A, Heymann H, Sturdevant J, Swift E. Compensation method for missing wear data in long-term clinical trials. *J Dent Res* 91 (Spec Iss A), 2012: Abstract No. 646.
15. Piascik J, Wolter SD, Swift E, Stoner B. Surface fluorination of zirconia: A comparison to commercial primers. *J Dent Res* 91 (Spec Iss A), 2012: Abstract No. 709.



16. Kaur R, Swift E, Heymann H, Ritter A, Phillips C, Walter R. Immediate bond strengths to Gluma Power Gel-treated dentin. *J Dent Res* 91 (Spec Iss A), 2012: Abstract No. 786.
17. Bayne SC, Wilder AD, Heymann HO, Sturdevant JR, Swift EJ. Clinical test of accelerated-wear hypothesis for composite restoration grooves. *J Dent Res* 91 (Spec Iss B), 2012: Abstract No. 29.
18. Astorga F, Erickson K, Donovan T, Swift EJ. Dentin bond strengths of a universal adhesive in multiple modes *J Dent Res* 92 (Spec Iss A), 2013, Abstract No. 167.142.
19. Walter R, Swift EJ, Boushell LW, Heymann H, Wilder AD, Sturdevant J, Ritter AV, Ching Y. Clinical evaluation of dental adhesives of different bonding strategies. *J Dent Res* 92 (Spec Iss A), 2013, Abstract No. 605.
20. Bayne SC, Wilder AD, Heymann H, Swift EJ. Long-term color-matching trends for 37 composite materials in clinical trials. *J Dent Res* 92 (Spec Iss A), 2013, Abstract No. 2930.
21. Bayne SC, Wilder AD, Swift EJ. Data adjustment for missing values in long-term composite clinical trials. *J Dent Res* 93 (Spec Iss A), 2014, Abstract No. 99.
22. Bayne SC, Wilder AD, Swift EJ. 15-year pattern of clinical research trials for packable-condensable posterior composites. *J Dent Res* 93 (Spec Iss b), 2014, Abstract No. 90.
23. Ritter A, Heymann H, Swift EJ, Sturdevant J, Boushell LW, Lambert C. Eighteen-month clinical evaluation of a two-component self-etch adhesive. *J Dent Res* 94 (Spec Iss A), 2015, Abstract No. 855.
24. Vasconcellos AB, Hirata R, Blackmon R, Swift EJ, Heymann H, Delgado AJ, Oldenburg AL, Ritter A. Cross-sectional visualization of microcracks in resin-based materials by optical coherence tomography. *J Dent Res* 94 (Spec Iss A), 2015, Abstract No. 1984.
25. Olafsson VG, Ritter A, Swift EJ, Boushell LW, Ko C, Donovan TE. Effect of composite type and placement technique on shrinkage stress. *J Dent Res* 94 (Spec Iss A), 2015, Abstract No. 2198.
26. Guha U, Ritter A, Parker J, Swift EJ, Donovan T. Etching and water storage affect self-etch porcelain repair systems. *J Dent Res* 94 (Spec Iss A), 2015, Abstract No. 3488.

### **Research grants and /or contracts**

- 2010      NIDCR (\$227,267)  
Grant #1-R56-DE021387-01  
Swift E (PI), Costerton W, Piascik J, Stoner B  
Investigation of dental composite interaction with  
biofilms Funding period: 9/13/10-8/31/12
- 2012      Kerr Corporation  
Co-investigator with principal investigator Ritter A  
Clinical evaluation of OptiBond XTR
- 2014      HRSA (\$10,022) Swift EJ Ryan White Dental Reimbursement Program (Grant #  
T22HA27523)

## **Curriculum Vitae**

Ricardo Walter, DDS, MS

**EDUCATION**

Professional Education:

1994 – 1999            DDS    Federal University of Santa Catarina, Brazil  
2002 – 2005            MS     University of North Carolina (Operative Dentistry)

Postgraduate Training:

2013                    Excellence and Innovations in Anterior Composites: Direct & Indirect  
Techniques and the Totally New “Prefabricated” Composite Veneer  
System, Dr. Didier Dietschi, IDEA, San Francisco, CA  
2010                    ADEA/AAL ITL Scholar, ADEA/AAL, Chapel Hill, NC

**EXPERIENCE**

2014 – present            Clinical Associate Professor  
Department of Operative Dentistry, UNC School of Dentistry  
2013                    Adjunct Assistant Professor  
Department of Operative Dentistry, UNC School of Dentistry  
2011 – 2014            Assistant Professor  
Department of Preventive and Restorative Sciences, UPenn School of  
Dental Medicine  
2010 – 2011            Clinical Associate Professor  
Department of Operative Dentistry, UNC School of Dentistry  
2006 – 2010            Clinical Assistant Professor  
Department of Operative Dentistry, UNC School of Dentistry  
2005 – 2006            Visiting Instructor  
Department of Operative Dentistry, UNC School of Dentistry  
2002 – 2005            Graduate Teaching Assistant  
Department of Operative Dentistry, UNC School of Dentistry  
2000 – 2002            Private practice, Brazil

**HONORS AND AWARDS**

2013                    Josephine and Joseph Rabinowitz Award for Excellence in  
Research, UPenn School of Dental Medicine

## **EDITORIAL RESPONSIBILITIES**

### Editorial Board:

2010 – present Journal of Esthetic and Restorative Dentistry, Editorial Board

### Manuscript Reviewer:

2014 – present American Journal of Dentistry  
2013 – present Journal of Dental Research  
2012 – present Journal of Dentistry  
2011 – present Journal of Adhesion  
2010 – present Journal of the American Dental Association  
2010 – present Journal of Applied Oral Science  
2010 – present Clinical Oral Investigations  
2010 – present Journal of Biomedical Materials Research: Part B – Applied Biomaterials  
2009 – present Journal of Oral Rehabilitation 2007  
– present The Journal of Adhesive Dentistry  
2005 – present Journal of Esthetic and Restorative Dentistry  
2005 – present Journal of Prosthodontics

## **MENTORING ACTIVITIES**

### Thesis Committee Membership

2014 – present Clinical comparison of wear characteristics of conventional and bulk-fill composite resins overtime, Master's thesis, Dr. Eduard Epure, mentor  
2010 – 2013 Genipin-induced cross-linking and dentin bond strength, Master's thesis, Dr. Hiroko Nagaoka, member  
2009 – 2012 Influence of dentin desensitizers on the microtensile bond strengths of "all-in-one" adhesives to dentin, Master's thesis, Dr. Roopwant Kaur, mentor (2009 – 2011) and member (2011 – 2012)  
2008 – 2011 Comparison of clinical and digital radiographic detection of occlusal and proximal dental caries in caries-active adults, Master's thesis, Dr. Mario D. Ramos, member

### Pre-dental Students

2009 – 2011 Krista M. Braswell, currently research assistant at UNC-CH School of Dentistry  
2008 – 2010 Whitley W. Bartholomew, currently DDS student at UNC-CH School of Dentistry

### Post-doctoral Students

2014 – present	Dr. Mauro Andrada, full professor at the Federal University of Santa Catarina (Brazil) in sabbatical
2014 – present	Dr. Ana Paula Beltrame, PhD student from Federal University of Santa Catarina (Brazil) completing dissertation studies at UNC-CH School of Dentistry
2013	Dr. Pollyana Ferreira, intern in research laboratory
2012 – 2013	Dr. David Farias, PhD student from Federal University of Santa Catarina (Brazil) completing dissertation studies at UPenn School of Dental Medicine
2012	Dr. Paula Sampaio, PhD student from University of Brasilia (Brazil) completing dissertation studies at UPenn School of Dental Medicine

### **PUBLICATIONS**

#### Book Chapters

1. Perdigao J, Swift Jr. EJ, Walter R. Fundamental concepts of enamel and dentin adhesion. In: Heymann HO, Swift Jr. EJ, Ritter AV, eds. Sturdevant's art and science of Operative Dentistry. St. Louis, MO: Elsevier Mosby; 2012:114-140.
2. Boushell LW, Roberson TM, Walter R. Fundamentals of tooth preparation and pulp protection. In: Heymann HO, Swift Jr. EJ, Ritter AV, eds. Sturdevant's art and science of Operative Dentistry. St. Louis, MO: Elsevier Mosby; 2012:141-163.
3. Boushell LW, Walter R, Wilder Jr. AD. Preliminary considerations for Operative Dentistry. In: Heymann HO, Swift Jr. EJ, Ritter AV, eds. Sturdevant's art and science of Operative Dentistry. St. Louis, MO: Elsevier Mosby; 2012:186-215.
4. Ritter AV, Walter R, Roberson TM. Class III, IV, and V direct composite and glass ionomer restorations. In: Heymann HO, Swift Jr. EJ, Ritter AV, eds. Sturdevant's art and science of Operative Dentistry. St. Louis, MO: Elsevier Mosby; 2012:229-253.
5. Ritter AV, Walter R, Roberson TM. Class I, II, and VI direct composite restorations and other tooth-colored restorations. In: Heymann HO, Swift Jr. EJ, Ritter AV, eds. Sturdevant's art and science of Operative Dentistry. St. Louis, MO: Elsevier Mosby; 2012:254-279.

#### Journal Articles (non peer-reviewed publications\*)

1. Farias D, Andrada MAC, Arcari GM, Boushell LW, Walter R. Artificial aging and dentin penetration of universal adhesives. J Adhes Dent, *submitted*.
2. Walter R, Atlas AM, Saleh N, Ozer F, Chung Y, Hariton-Gross K, Blatz MB. The effects of etching prior to universal adhesive application in postoperative sensitivity. Clin Oral

Investig. *submitted*.

3. Farias D, Walter R, Chung Y, Blatz MB. Bond strengths of various resin cements to different ceramics. *J Appl Oral Sci*, *accepted*.
4. Delgado AJ, Walter R, Behar-Horenstein, Boushell LW. Are all dentiform teeth with simulated caries the same? A 6-year retrospective study in preclinical operative dentistry. *J Dent Educ*, *accepted*.
5. Mirzakoucheki P, Walter R, Khalighinejad N, Jahromi MZ, Mirsattari S, Akbarzadeh N. Effects of endodontic tri-antibiotic paste on bond strengths of dentin adhesives to coronal dentin. *Restor Dent Endod* 2015; 40:136-142.
6. Nagaoka H, Nagaoka H, Walter R, Boushell LW, Miguez PA, Burton A, Ritter AV, Yamauchi M. Characterization of genipin-modified dentin collagen. *Biomed Res Int*, vol. 2014, article ID 702821, 7 pages, 2014, doi:10.1155/2014/702821.
7. \*Farias D, Walter R. Critical appraisal: Postoperative sensitivity with indirect restorations. *J Esthet Restor Dent* 2014; 26:208-213.
8. Walter R, Boushell LW, Ritter AV, Heymann HO, Sturdevant JR, Wilder AD Jr., Chung Y, Swift EJ Jr. Three-year clinical evaluation of a silorane composite resin. *J Esthet Restor Dent* 2014; 26:179-190.
9. \*Walter R, Blatz MB. Bonding to ceramics: Ensuring the best possible outcome in a variety of patient situations. *Inside Dental Technology* 2014; 10:36-39.
10. \*Mante FK, Ozer F, Walter R, Atlas AM, Saleh N, Dietschi D, Blatz MB. The current state of adhesive dentistry: A guide for clinical practice. *Compend Contin Educ Dent* 2013; 34 Spec 9:2-8.
11. Walter R, Feiring AE, Boushell LW, Braswell K, Bartholomew W, Chung Y, Phillips C, Pereira PNR, Swift EJ Jr. One-year water sorption and solubility of “all-in-one” adhesives. *Braz Dent J* 2013; 24:344-348.
12. \*Walter R, Swift EJ Jr. Critical appraisal: Bulk-fill flowable composite resins. *J Esthet Restor Dent* 2013; 25:72-76.
13. Oliveira GM, Miguez PA, Oliveira GB, Swift EJ Jr., Farrell S, Anastasia MK, Conde E, Walter R. Safety and efficacy of a high-adhesion whitening strip under extended wear regimen. *J Dent* 2013; 41S:e46-e52.
14. Walter R, Swift EJ Jr., Nagaoka H, Chung Y, Bartholomew W, Braswell KM, Pereira PN. Two-year bond strengths of “all-in-one” adhesives to dentine. *J Dent* 2012; 40:549-555.
15. Walter R, Swift EJ Jr., Boushell LW, Braswell K. Enamel and dentin bond strengths of a new self-etch adhesive system. *J Esthet Restor Dent* 2011; 23:390-398.

16. Boushell LW, Walter R, Phillips C. Learn-A-Prep II as a predictor of psychomotor performance in a restorative dentistry course. *J Dent Educ* 2011; 75:1362-1369.
17. Boushell LW, Getz G, Swift EJ Jr., Walter R. Bond strengths of a silorane composite to various substrates. *Am J Dent* 2011; 24:93-96.
18. Naorungroj S, Wei H-H, Arnold RR, Swift EJ Jr., Walter R. Antibacterial surface properties of fluoride-containing resin-based sealants. *J Dent* 2010; 38:387-391.

#### Abstracts

1. Ozer F, Pande R, Yakymiv O, Sazak-Ovecoglu H, Tarcin B, Irmak O, Ozturk B, Walter R, Saleh N, Blatz MB. Clinical performance of two fluoride-releasing resin materials in Class I restorations. *J Dent Res* 94 (Spec Iss A): abstract no. 1112, 2015.
2. Andrada MAC, Farias DCS, Boushell LW, Walter R. Effects of resin infiltration and mechanical loading on dentin bonding. *J Dent Res* 94 (Spec Iss A): abstract no. 825, 2015.
3. Boushell LW, Walter R. Basic preclinical exercises as educational probes to target early intervention. *ADEA*: abstract no. PO-062, 2014.
4. Walter R, Swift EJ Jr., Heymann HO, Wilder AD Jr., Boushell LW, Sturdevant JR, Ritter AV, Chung Y. Clinical evaluation of dental adhesives of different bonding strategies. *J Dent Res* 92 (Spec Iss A): abstract no. 177674, 2013.
5. Farias DCS, Walter R, Andrada MACD. Immediate bond strengths of universal dental adhesives. *J Dent Res* 92 (Spec Iss A): abstract no. 177288, 2013.
6. Miguez PA, Belcher J, Perley K, Farias DC, Braswell K, Walter R. Genipin effect on cell proliferation, toxicity, differentiation and collagen properties. *J Dent Res* 92 (Spec Iss A): abstract no. 176345, 2013.
7. Delgado AJ, Walter R, Boushell LW. Variability in dentiform teeth with simulated caries. *J Dent Res* 92 (Spec Iss A): abstract no. 175780, 2013.
8. Kaur R, Swift EJ Jr., Heymann H, Ritter A, Phillips C, Walter R. Immediate bond strengths to Gluma Power Gel-treated dentin. *J Dent Res* 91 (Spec Iss A): abstract no. 786, 2012.
9. Braswell K, Swift E, Walter R. Comparison of two methods for shear bond strength testing. *J Dent Res* 91 (Spec Iss A): abstract no. 440, 2012.
10. Nagaoka H, Nagaoka H, Walter R, Boushell L, Ritter A, Yamauchi M. Genipin- induced cross-linking and dentin bond strength. *J Dent Res* 91 (Spec Iss A): abstract no. 154, 2012.

11. Swift EJ, Walter R, Braswell K, Boushell L. Dentin and enamel bond strengths of a new self-etch primer. J Dent Res 90 (Spec Iss A): abstract no. 1687, 2011.
12. Walter R, Miguez PA, Oliveira GCB, Oliveira GMS, Farrell S, Anastasia MK, Conde E, Swift EJ Jr. Safety and efficacy of a 2-hour whitening strip. J Dent Res 90 (Spec Iss A): abstract no. 555, 2011.
13. Walter R, Swift EJ Jr. Two-year bond strengths of “all-in-one” adhesives to dentin. J Dent Res 89 (Spec Iss A): abstract no. 793, 2010.
14. Swift EJ Jr., Walter R, Qian E, Nguyen T, Bui H. Dentin and enamel bond strengths of self-adhesive composite resins. J Dent Res 89 (Spec Iss A): abstract no. 430, 2010.

### **RESEARCH GRANTS AND/OR CONTRACTS**

#### UNC School of Dentistry

Jul 2014 – present      Government-funded grant – NC TraCs Institute, co-principal investigator, Development of a novel antimicrobial dental composite

#### UPenn School of Dental Medicine

May 2012 – Jun 2014 Company funded grant, Dentsply Caulk, principal investigator, Clinical evaluation of an experimental universal adhesive used with and without phosphoric acid pretreatment in posterior composite resin restorations

#### UNC School of Dentistry

Apr 2015 – Mar 2022 Company-funded grant, 3M ESPE, principal investigator, Clinical investigation of a new bulk-fill composite resin in the restoration of posterior teeth

Mar 2005 – Dec 2012 Company-funded grant, 3M ESPE, co-investigator, Clinical investigation of a new low-shrink resin composite restorative in the restoration of posterior teeth

Jul 2007 – Jun 2011      Company-funded grant, Dentsply Caulk, principal investigator, Clinical evaluation of new total-etch and self-etch dental adhesives

**ANDREA G. FERREIRA ZANDONÁ**  
(05/2015)

**Education**

<u>Institution</u>	<u>Degree</u>	<u>Date Conferred</u>	<u>Major</u>
Indiana University	PhD	Sept 1997	Dental Sciences
Indiana University	MSD	Mar 1994	Operative Dentistry
Pontifical Catholic University of Paraná School of Dentistry Brazil	DDS	July 1990	Dentistry

Licensure and Certification

2014	North Carolina Instructors License
2008-2013	Indiana Instructors License
1993	Certificate of Training in Operative Dentistry
1990	Dental License, Brazil

**Experience**

Academic Appointments

2013-present Associate Professor with Tenure, Department of Operative Dentistry, School of Dentistry, University of North Carolina at Chapel Hill

2013 Visiting Associate Professor, Department of Operative Dentistry, School of Dentistry, University of North Carolina at Chapel Hill

2013 - present Adjunct Associate Professor, Department of Preventive and Community, Indiana University School of Dentistry

2013 Interim Chair, Department of Preventive and Community, Indiana University School of Dentistry

2009-2013 Director, Graduate MS/MSD Preventive Dentistry Program, Indiana University School of Dentistry

2007-2013 Associate Professor with Tenure, Department of Preventive and Community Dentistry, Indiana University School of Dentistry

2000-2001 Associate Dean for Research, Tuiuti University School of Dentistry, Curitiba Paraná, Brazil

1998-2007 Assistant Professor, Department of Preventive and Community Dentistry, Indiana University School of Dentistry



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1999-2000	Associate Professor, Tuiuti University School of Dentistry, Department of Public Health and Preventive Dentistry, Brazil
1999-2000	Associate Professor, Tuiuti University School of Dentistry, Department of Dental Occlusion, Brazil
1998-1999	Professor, Bráz Cubas University School of Dentistry, Department of Restorative Dentistry, Brazil
1998-1999	Professor, Bráz Cubas University School of Dentistry, Department of Public Health and Preventive Dentistry, Brazil
1997-1998	Assistant Scientist, Oral Health Research Institute, Indiana University School of Dentistry
1994-1997	Research Assistant, Oral Health Research Institute, Indiana University School of Dentistry
1993-1997	PhD Candidate, Indiana University School of Dentistry, Department of Oral Biology
1991-1994	Graduate Student, Indiana University School of Dentistry, Department of Restorative Dentistry
1991	Teaching Assistant, School of Dentistry, Federal University of Parana, Brazil
1990	Visiting Scholar, College of Dentistry, University of Illinois at Chicago
1989-1990	Teaching Assistant, School of Dentistry, Pontifical Catholic University of Parana, Department of Restorative Dentistry,

#### Brazil Non-Academic Appointments

2015	Member Cariology International Consensus Conference, Leuven, Belgium
2014	IADR General Session and Exhibition, Oral Session Chair, Cape Town, South Africa. June 25-28, 2014 AADR/CADR Annual Meeting, Poster Session Chair, March 19-22, Charlotte NC
2013	Coordinator-Global Collaboratory for Caries Management,
London 2012	Co-Editor-ACCDON, LLC
2011	NIH Study Section Reviewer, Oral, Dental and Craniofacial Sciences Study Section, 2009/05 Council ODCS, January 26 <sup>th</sup> to 28 <sup>th</sup>
2011	NIH Study Section Reviewer, Oral, Dental and Craniofacial Sciences Study Section, 2009/05 Council ODCS, June, 2 <sup>nd</sup> – 3 <sup>rd</sup>
2010	NIH Study Section Reviewer, Oral, Dental and Craniofacial Sciences Study Section, 2009/05 Council ODCS, February 15 <sup>th</sup> to 17 <sup>th</sup>
2010	NIH Study Section Reviewer, Oral, Dental and Craniofacial Sciences Study Section, 2009/05 Council ODCS, June 15 <sup>th</sup> to 16 <sup>th</sup>
2010	NIH Study Section Reviewer, Oral, Dental and Craniofacial Sciences Study Section, 2009/05 Council ODCS, October 6 <sup>th</sup> to 7 <sup>th</sup>
2009-2013	Study Section ODCS Member-NIDCR, NIH
2009-2013	Council ODCS chartered member

#### Private Dental Practice

2014-present Dental Faculty Practice, University of North Carolina at Chapel Hill, School of Dentistry, Chapel Hill, NC

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1999-2001	Group General Practice, Curitiba, Paraná, Brazil
1990-1991	Solo General Practice, Curitiba, Paraná, Brazil

### **Honors and Awards**

2015	2015-16 Fellow ADEA/ADEA Gies Foundation Dr. Anthony R. Volpe Scholar in the ADEA Leadership Institute
2013	2013 Trustees Teaching Award, IUPUI

### **Editorial responsibilities**

2014-present	Reviewer, Journal of Esthetic and Restorative Dentistry
2014-present	Reviewer, International Journal of Paediatric Dentistry
2014-present	Reviewer, PLOS ONE
2013- present	Reviewer, MedEdPORTAL
2012	Reviewer-Cariology Abstracts for IADR meeting, Rio de Janeiro, Brazil
2011-present	Reviewer-Journal of Dental Education
2011-present	Reviewer-Journal of Public Health Dentistry
2011-present	Reviewer-Journal of Biomedical Optics
2011-present	Reviewer-European Journal of Oral Sciences
2009-present	Reviewer-Journal of Dental Research
2008-present	Reviewer-Brazilian Journal of Dental Sciences
2005-present	Reviewer-General Dentistry
2005-present	Reviewer-Caries Research
2002-present	Reviewer-Academy of Operative Dentistry Journal

### **Mentoring Activities**

#### Undergraduate Research Mentoring

2011-2012	Validation of a Risk Assessment Form Aleks Alavanja, BS, Indiana University 2012 AADR
2010-2011	Early Detection of Caries Using ICDAS and E-Learning. Nina Sadeghi, BS, Purdue University 2011 Indiana University School of Dentistry Research Day Research Presentation

#### Predoctoral (DDS) Research Mentoring Projects Supervised

2011	Comparison of Different magnifications for the detection of proximal caries using bite-wing radiographs Felipe Belmonte Archetti, DDS student, Positivo University School of Dentistry, Curitiba, Brazil
2011	Comparison of Different magnifications for the detection of proximal caries using bite-wing radiographs \\\nRafael Afonso Navarro, DDS student, Positivo University School of Dentistry, Curitiba, Brazil
2011	Comparison of Different magnifications for the detection of proximal caries using bite-wing radiographs Amanda Viera de Araújo, DDS student, Positivo University School of Dentistry,

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Curitiba, Brazil  
2011 Comparison of Different magnifications for the detection of proximal caries using bite-wing radiographs  
Nayra Bittencourt Orlowski, DDS student, Positivo University School of Dentistry, Curitiba, Brazil  
2010-2011 An in vitro comparison of two light fluorescence devices for the detection of demineralization  
Laura D'avilla, DDS 2012, IUSD  
2011 Johnson Public Health Dentistry Award  
2010-2011 The Effect of FOTI Light Output on Proximal Caries Detection, Emily Sadler, DDS 2011, IUSD  
2011 AADR  
2010 Risk of Caries Adjacent to Glass Ionomer and Composite Resin Restorations.  
Isabella Göhringer, DDS Student, Positivo University School of Dentistry, Curitiba, Brazil  
2010 Risk of Caries Adjacent to Glass Ionomer and Composite Resin Restorations.  
Michelle Nascimento Meger, DDS Student, Positivo University School of Dentistry, Curitiba, Brazil

#### Theses Directed (MSD, PhD)

2012-2014 Mahamed Jallad, DDS, Operative Dentistry Resident, IUSD  
2014 IADR  
2010-2014 Effect Of Nylon-6 Nanofibers On The Flexural Strength Of An Experimental Resin-Based Sealant  
Maria Fernanda Hamilton, MSD, Operative/Preventive Dentistry Resident, IUSD  
2013 Academy of Dental Materials Conference  
2010-2013 In Vitro Progression of Artificial White Spot Lesions Sealed with an Infiltrant Resin  
Rakhi Gelanni II, MSD, Preventive Dentistry Resident, IUSD  
2010-2013 Efficacy of an infiltrant to arrest active approximal lesions- An in vitro study Oriana Capin MSD, Operative/Preventive Dentistry Resident, IUSD Thesis Research Committees  
2013 Benjamin Gray DMD MPH, Oral and Maxillofacial Radiology Resident UNC School of Dentistry  
2013 Mohammad A. Aldosari, DDS, PhD Candidate, IUSD  
2011 Effect of various ceramic spacers on photo activation conversion grades and hardness of different cements.  
Patricia Calgaro, MS Resident, Clinical Dentistry, Positivo University School of Dentistry, Curitiba, Brazil  
2010-2012 Resin-Coated Glass Ionomer Cement Abrasion and Wear Resistance  
Abdul S. AlJamhan, MSD, Operative Dentistry Resident, IUS  
2012 AADR  
2010-2012 Effectiveness and mechanisms of action of whitening dentifrices on enamel extrinsic stains.  
Salem Alshara, MSD, Preventive Dentistry Resident, IUSD  
2010-2013 Relative Fluoride Response of Caries Lesions created in Fluorotic and Sound Teeth studied under Remineralizing Conditions

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Hala Alhawij, MSD, Preventive Dentistry Resident, IUSD  
2010-2013 Interaction between tin/fluoride-containing solutions and artificially created dental pellicles on erosion prevention in-vitro.

Amna A. Algarni, MSD, Operative/Preventive Dentistry Resident, IUSD  
2010-2013 Vibration Force Facilitated Rapid Maxillary Expansion

Mohammad Aldosari, Ph.D. Candidate, IU  
2010-2012 Understanding the impact of service learning while in dental school on developing civic-minded professionals

Ruchin S. Mandiwala, MPH. Public Health Resident, IU Received Service Learning Assistantship Scholarship

#### Other Graduate Research Mentoring Projects Supervised (non-thesis)

2012-2013 Photo Inactivation of Streptococcus mutans Biofilm by Blue Light  
Grace Felix Gomez, PhD Candidate, Indiana University  
2013 IUPUI Research Day

2010-2011 Dose-response effects of strontium and fluoride on caries lesion remineralization  
Gaeth Yassen PhD Candidate, Indiana University 2011 AADR

### **Publications**

#### Books & Book Chapters

1. Ferreira Zandoná AG. Identificação de Problemas: Índices de cáries dental e critérios diagnósticos – Outros índices de cáries. Gomes Pinto, V (ed.): Saúde Bucal Coletiva; 2013, Chapter 5 pp 139-222.

#### Journal Articles \*(Refereed)

1. Hamilton MF, Otte AD, Gregory RL, Pinal R, Ferreira-Zandoná A, Bottino MC 2014. Physicomechanical and antibacterial properties of experimental resin-based dental sealants modified with nylon-6 and chitosan nanofibers. J Biomed Mater Res Part B 2014;00B:000–000 doi: 10.1002/jbm.b.3334
2. Diniz MB, Crodeiro RCL, **Ferreira Zandona AG**. Detection of Caries around Amalgam Restorations on Approximal Surfaces. J Oper Dent (in press).
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#### MSD Thesis

1994            Ferreira Zandona AG. The local Schwartzman phenomenon and human dentin permeability to endotoxin. MSD thesis, Indiana University School of Dentistry

#### PhD Dissertation

1997            Ferreira Zandona AG. Detection of demineralization on occlusal pit and fissures. PhD Dissertation, Indiana University School of Dentistry

#### Presentations (Oral/Poster with Published Abstracts)

1. Puranik CP, Benecha HK, Preisser JS, Ferreira Zandona AG. Retrospective Longitudinal Observation of Caries Around Restorations by QLF. *J Dent Res* 2015;94(A):1054
2. Garcia-Godoy B, Toro-Arrivillaga MJ, Ferreira Zandona, Muñoz-Torres F, Encarnación-Burgos A, Elias-Boneta AR. ICDAS Training and Calibration Exercise in Adolescents and Young Adults. *J Dent Res* 2015;94(A):1061
3. Jallad M, Ferreira-Zandona A, Zero DT, Eckert G. Detection of Primary Occlusal Caries With ICDAS, PTR/LUM and QLF. *J Dent Res* 2015;94(A):1064
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5. Fontana M, Eckert G, Ferreira Zandona A, Warren J, Kelly S, Yanca E, Jackson R; Katz B, Keels MA, Kemper A, Levy B, Levy S; Swigonski N. Examiner Training/Reliability

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- in a Clinical Study of Early Childhood Caries. *J Dent Res* 2015;94(A):2497
6. Gomez GF, Eckert GJ, Ferreira Zandona AG. Orange Fluorescence in QLF Images of Progressive Carious Lesions. *J Dent Res* 2014;93(B):210.
  7. Ferreira Zandona AG, Soini H, Vivaldi J, Novotny M, Eckert GJ, Zero DT. Metabolites from Sound and Caries-Active Sites - A Pilot Study. *J Dent Res* 2014;93(A):158.
  8. Jallad A, Ferreira Zandona AG. Detection of Primary Occlusal Caries with ICDAS, PTR/LUM and QLF. *J Dent Res* 2014;93(A):922
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  10. Ferreira Zandona AG, Santiago E, Eckert GJ, Zero DT. Using ICDAS and QLF-I combined to predict caries lesion progression. *Caries Res* 2013;47:219.
  11. Ferreira Zandona AG, Santiago E, Gomez G, Ando M, Garcia-Corretjer M, Eckert GJ, Zero DT. Caries Lesions Progression over 48 months by fluorescence Image Analyses. *J Dent Res* 2013;92(A):2894.
  12. Ferreira Zandona AG, Peterson S, Bretz W, Santiago E, Eckert GJ, Zero DT. 16S rDNA Analyses of dental biofilm microbiome of Caries active and Caries Free Children. *Caries Res* 2012;47:49.
  13. Alavanja A, Ferreira Zandona AG, Eckert GJ. Validation of A Risk Assessment Form. *J Dent Res* 2012;91(Spec Iss A):1428.
  14. Diniz MB, Cordeiro RCL, Ferreira Zandona AG. Detection of secondary caries on approximal surfaces of amalgam restorations. *Caries Res* 2012;47:59.
  15. AlJamhan AS, Platt JA, Cook NB, Cochran MA, Matis BA, Ferreira Zandona AG. Resin-Coated Glass Ionomer Cement Abrasion and Wear Resistance. *J Dent Res* 2012;91(Spec Iss A):1045.
  16. Ferreira Zandona AG, Santiago E, Eckert GJ, Zero DT. Caries Lesions Progression over 48-months Using ICDAS and Activity Assessment. *J Dent Res* 2012;91(Spec Iss A):8.
  17. Ferreira Zandona AG, Soini HA, Novotny MV, Santiago E, Eckert GJ, Zero DT. A Signature Biomarker for Caries Activity-A Pilot Clinical Study. *J Dent Res* 2012;91(Spec Iss B):3116.
  18. Ferreira Zandona AG, Santiago E, Eckert GJ, Zero DT. ICDAS Assessment of Caries Incidence and Progression over 40 months. *J Dent Res* 2011;90(Spec Iss A):3361.
  19. Chin J, Fontana M, Eckert GJ, Ferreira Zandona AG. Longitudinal Assessment of an IUSD Caries Risk Form in Children. *J Dent Res* 2011;90(Spec Iss A):1262.
  20. Yassen G, Lippert F, Eckert GJ, Ferreira Zandona AG. Dose-response effects of strontium and fluoride on caries lesion remineralization. *J Dent Res* 2011;90(Spec Iss A):2625.
  21. Sadler E, Eckert GJ, Ferreira Zandona AG. The Effect of FOTI Light Output on Proximal Caries Detection. *J Dent Res* 2011;90(Spec Iss A):3.
  22. Eckstrand KR, Martignon S, Lara JS, Deery C, Douglas G, Eggertsson H, Gamboa LF, Ferreira Zandona AG, Kolker J, Longbottom C, Pitts N, Ricketts D, Sohn W, Zero DT. How Reliable are Members of the ICDAS Core Group at Using the ICDAS? An in vitro study. *Caries Res* 2010;44:128.
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  24. Ando M, Garcia-Corretjer M, Eckert GJ, Santiago E, Katz B, Zero DT, Ferreira Zandona AG. Lesion Progression evaluated by Fluorescence Image Analyses. *J Dent Res* 2010;89(Spec Iss A):893.

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## Electronic Digital Media

- 2014 Ekstrand K, Fontana M, Ferreira Zandona A, Pitts N, Zero D. Modern Caries Management.  
<https://demos.globaldentalschools.net/course/view.php?id=5>
- 2011 Kano-Wilson LH, Ferreira Zandona AG, Comer RS, Bao X, Eckert GJ, Haranto S, Kernick J, Zeckel I. Clinical Features of Dental Caries.  
[http://www.skipcomer.net/projects/dentistry/dental\\_caries.html](http://www.skipcomer.net/projects/dentistry/dental_caries.html)
- 2011 International Caries Detection and Assessment System Coordinating Committee. Rationale and Evidence for the International Caries Detection and Assessment System (ICDAS II).  
<http://www.dundee.ac.uk/dhsru/docs/Final%20ICDAS%20II%20criteria%20document.doc>
- 2011 International Caries Detection and Assessment System Coordinating Committee. Criteria Manual International Caries Detection and Assessment System (ICDAS II).  
<http://www.dundee.ac.uk/dhsru/docs/Final%20ICDAS%20II%20criteria%20document.doc>

## **Research grants and/or contracts**

### Completed

NIDCR-NIH Grant# 1-U01-DE-021412-01-A - Predicting Caries Risk in Underserved Toddlers in Primary Healthcare Settings.

PI: M. Fontana

Consultant: A Ferreira Zandona (5% effort 2011-2013) Total Award: \$7,569,792

Glaxo-Smith-Klein Grant 13-D-216 - Performance of ICDAS, The Canary System, Luminescence and QLF to Detect Primary Caries in Permanent Teeth

Co-PI: A Ferreira Zandona/D Zero (3% effort 2012-2013). Total Award: \$120,000

IUSD-Bridge Funding - Clinical Validation of a Biofilm for Early Caries Activity Assessment

PI: A Ferreira Zandona (10% effort 2012-2013) Total Award: \$100,000

NIDCR-NIH R56-2R56DE017890-06 - Clinical Validation of a Biofilm for Early Caries Activity Assessment

PI: A Ferreira Zandona (10% effort 2012-2013) Total Award: \$138,930

NIDCR-NIH R01DE017890-01 - Clinical Validation of Combined ICDAS/QLF Exam for Early Caries Detection

PI: A Ferreira Zandona (35% effort 2006-2012) Total Award: \$3,403,850 with indirect

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NIH-CTSI-IU - Clinical Validation of a Biofilm Signature for Early Caries Detection  
PI: A Ferreira Zandona (1% effort 2011) Total Award:  
\$16,117

NIH 3R01DE017890-03S1 - NIH Diversity Supplement Mentor PI: A  
Ferreira Zandona (1% effort 2008-2010) Total Award: \$27,130

Industry (3M) Clinical Investigation of a New Bulk Fill Composite  
Resin in the Restoration of Posterior Teeth  
PI Ricardo Walter  
Co-Investigator Ferreira Zandona Total Award:



