

## **CURRICULUM VITAE**

### **PERSONAL**

Name: Arthur E. (Buddy) Clark, Jr.

Date and Place of Birth: January 21, 1947 - Savannah, GA

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Gainesville, FL 32669  
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Business Address and Telephone: College of Dentistry  
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### **EDUCATION**

1965-1969 B.S., Metallurgical Engineering, University of Florida

1970-1974 M.E., Materials Science and Engineering, University of Florida

1970-1974 Ph.D., Materials Science and Engineering, University of Florida

1980-1984 D.M.D., College of Dentistry, University of Florida

### **PROFESSIONAL LICENSURE** Florida

## ACADEMIC EXPERIENCE AND APPOINTMENTS

2010-present	Professor, Department of Restorative Dentistry, College of Dentistry, University of Florida
2009-2010	Team Leader, Team 01, College of Dentistry, University of Florida
2008- 2009	Professor, Department of Prosthodontics, College of Dentistry, University of Florida
2005- 2008	Chair, Department of Prosthodontics, College of Dentistry, University of Florida
2001-2005	Associate Chair, Department of Prosthodontics, College of Dentistry, University of Florida
1998-present	Professor, Department of Prosthodontics, College of Dentistry, University of Florida. Affiliate appointments in the Department of Periodontology, College of Dentistry and Department of Materials Science and Engineering, College of Engineering, University of Florida.
1996-1998	Executive Associate Dean, College of Dentistry, University of Florida.
1991-1996	Professor and Chairman, Department of Prosthodontics, College of Dentistry, University of Florida.
1987-1991	Associate Professor, Department of Dental Biomaterials, College of Dentistry, University of Florida.
1984-1987	Associate Professor, Department of Prosthodontics, College of Dentistry, University of Florida.
1980-1984	Dental Student, College of Dentistry, University of Florida, Gainesville, Florida.
1975-1980	Assistant Professor, Department of Dental Biomaterials, College of Dentistry, University of Florida, Gainesville, Florida.

## RESEARCH AND GRANT ACTIVITY

1976-1981	Restorative Biomaterials Research NIDR/NIH #5TB2DE07045, \$151,835, Co-Investigator.
1976-1977	Mandibular Ridge Augmentation, Engineering and Industrial Experiment Station, University of Florida, \$6,000, Co-Principal Investigator.
1985-1987	Bioglass® Endosseus Ridge Maintenance Implants, \$80,000, American Biomaterials Corporation, Princeton, New Jersey, Co-Investigator.
1985-1989	Bioglass® Research Center, American Biomaterials Corporation, Princeton, NJ, \$600,000., Associate Director.
1987-1988	Application of Novel Biotechnology to Dental Implants and Restorations, \$75,000, Florida High Technology and Industrial Council, Principal Investigator.
1988-1989	Application of Novel Biotechnology to Dental Implants and Restorations, \$80,000, Florida High Technology and Industry Council, Principal Investigator.
1988-1989	Characterization of Collagen-Bioglass® Interfacial Reactions, \$3,300, Division of Sponsored Research, University of Florida, Principal Investigator.
1989-1990	Application of Novel Biotechnology to Dental Implants and Restorations \$50,000, Florida High Technology and Industry Council, Principal Investigator.
1989-1990	Specialized Materials Science Research Center, NIDR # SRC(10)1 P50 DE09307-01, \$450,419, Center Co-Principal Investigator, Project Principal Investigator.
1990-1991	Bioglass® Research Center Research Agreement, Gel-Tech Inc. Alachua, Fl. \$117, 418, Principal Investigator.

1990-1991	Specialized Materials Science Research Center, NIDR # SRC (10)1 P50 DE09307-01, \$430,015, Center Co-Principal Investigator, Project Principal Investigator.
1991-1992	Specialized Materials Science Research Center, NIDR # SRC (10)1 P50 DE09307-01, \$513,942, Center Co-Principal Investigator, Project Principal Investigator.
1992-1993	National Research Service Award in Dental Biomaterials, NIDR # DSR IT32 DE 07234-01A1, \$107,521, Co-Principal Investigator
1992-1993	Comparison of Intrapulpal Effects of a Hollow Dental Bur Handpiece Cooling System and Conventional External Air/Water Technique, \$6,353, SENEY Research Corporation, Key West, Florida, Principal Investigator.
1992-1993	Specialized Materials Science Research Center, NIDR # SRC (10)1 P50 DE09307-01, \$462,688., Center Co-Principal Investigator, Project Principal Investigator.
1993-1994	Specialized Materials Science Research Center, NIDR # SRC (10)1 P50 DE 09307-01, \$434,000, Center Co-Principal Investigator, Project Principal Investigator.
1993-1994	National Research Service Award in Dental Biomaterials, NIDR # DSR IT32 DE 07234-01A1, \$139,308, Co-Principal Investigator.
1994-1995	Specialized Materials Science Research Center, NIDR # SRC (10)1 P50 DE09307, \$499,827, Project Co-Principal Investigator.
1994-1995	National Research Service Award in Dental Biomaterials, NIDR # DSR IT32 DE 07234-01A1, \$147,046, Co-Principal Investigator.
1995-1996	Specialized Materials Science Research Center, NIDR # SRC (10)1 P50 DE09307, \$411,000, Project Co-Principal Investigator.
1995-1996	National Research Service Award in Dental Biomaterials, NIDR # DSR IT32 DE 07234-01A1, \$135,354, Co-Principal Investigator.
1996-1997	National Research Service Award in Dental Biomaterials, NIDR # DSR IT32 DE 07234-01A1, \$151,713, Co-Principal Investigator.
1996-1997	Specialized Materials Science Research Center, NIDR # SRC (10)1 P50 DE09307, \$423,962, Project Co-Principal Investigator.

1997-1998	Specialized Materials Science Research Center, NIDR # SRC (10)1 P50 DE09307, \$506,262 Project Co-Principal Investigator.
1998-1999	Specialized Materials Science Research Center, NIDR # SRC (10)1 P50 DE09307, \$525,417 Project Co-Principal Investigator.
2001-2002	Controlled-Release Sealants to Prevent Secondary Caries, NIH/NIDCR DE13412, \$180,000, Co-Investigator (Project Date through 2005)
2002-2003	Controlled-Release Sealants to Prevent Secondary Caries, NIH/NIDCR DE13412, \$180,000, Co-Investigator (Project Date through 2005)
2002-2003	Novel Bioactive Glass Dentifrice Formulations, Small Business Innovative Research Program, NIH, Phase One Awarded to US Biomaterials Corp., \$98,527, Consultant.
2003-2004	Controlled-Release Sealants to Prevent Secondary Caries, NIH/NIDCR DE13412, \$180,000, Co-Investigator
2004-2005	Controlled-Release Sealants to Prevent Secondary Caries, NIH/NIDCR DE13412, \$180,000, Co-Investigator
2005-2006	Controlled-Release Sealants to Prevent Secondary Caries, NIH/NIDCR DE13412, \$180,000, Co-Investigator
2007-2009	Agreement with Astra Tech for \$375,000. to support Educational Research activities related to Implant Dentistry. Joint Effort Periodontics(I. Auckhil) and Prosthodontics(A.E. Clark)
2008-2012	Co-Investigator, NIH/NIDCR Grant Number 1K23DE018414-01A1, Factors Influencing the Survival of Implant-Supported All-Ceramic Prostheses; \$610,300 direct cost.
2008-2012	Co-Investigator, Astra Tech, Implant Supported Prostheses; 300 implant bodies, surgical kits , implant components and 300 Atlantis abutments in kind, estimated cost \$250,000
2008-2012	Co-Investigator, Ivoclar Vivadent Industry Grant, All Ceramic Prostheses; \$60,000 direct cost; ceramic furnace, laser scanner, zirconia frameworks, metal frameworks and porcelain provided in kind, estimated cost \$250,000

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| 2013-2016 | Co-Investigator, 3MESPE Industry Grant, Wear of Enamel Antagonists by Polished Ceramic Surfaces, \$220,000 direct costs.   |
| 2014-2020 | Co-Investigator (30 % salary support), "Novel Coatings to minimize surface degradation and fracture susceptibility of dental ceramics" submitted June 6, 2014 in response to Program Announce RO1 PA-13-302. PI J. Esquivel-Upshaw, other co-investigators K. Anusavice and C. Batich.: Total Federal Funds Requested \$1,875,000.00 |
| 2016-2018 | UF Opportunity Seed Fund Award, Novel coating to minimize bacterial adhesions and tooth wear in denture acrylic \$89,000 direct cost   |

## **ADMINISTRATIVE/COMMITTEE EXPERIENCE**

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| 1976-1978 | University Senate, University of Florida College of Dentistry (UFCD)                                   |
| 1977-1979 | Research Committee (Chairman 1978-1979), UFCD  |
| 1984-1991 | Associate Director Bioglass® Research Center   |
| 1985-1987 | Student Affairs Committee (Chairman 1986), UFCD  |
| 1986-1987 | Program Manager Bioglass® Research Center  |
| 1987-1991 | Curriculum Committee, UFCD (Chairman 1989-1991)  |
| 1988-1991 | Research Committee, UFCD   |
| 1989-1994 | Ad Hoc Space Committee, UFCD   |
| 1992-1994 | Ad Hoc Planning Committee for Educational Program for Graduates of Non-Accredited Dental Schools, UFCD |
| 1992-1995 | Research Committee, UFCD (Chair 94-95)   |
| 1991-1995 | Steering Committee, UFCD   |
| 1991-1996 | Co-Director Bioglass® Research Center  |
| 1991-1998 | Executive Board, UFCD  |

1991-1998	Board of Directors Faculty Practice Association, UFCD
1993-1998	Promotion and Tenure Committee, UFCD (Chair 95-96)
1996-1998	Medical Staff Executive Committee, Shands Hospital
1996-1998	Committee on Clinical Affairs, UFCD
2000-2002	Promotion and Tenure Committee, UFCD (Chair 00-01)
2001-2004	Academic Freedom, Tenure, Professional Relations and Standards Committee (Standing Committee University Senate) University Of Florida
2003-2006	Curriculum Committee, UFCD (Chair 2005& 2006)
2005-2007	Promotion and Tenure Committee, UFCD
2005-2007	University of Florida Dental Continuing Education Advisory Board, Member

## **PROFESSIONAL EXPERIENCE**

1978-1979	ASTM Task Force Surface Reactive Implant Materials
1985-1986	Consultant, Gainesville VA Medical Center
1986-1988	Consultant, American Biomaterials Corporation, Princeton, New Jersey
1987-1989	Director At Large, Implant logy Research Group, IADR-AADR
1988-1989	Secretary, Gainesville Section, AADR
1990-1991	Vice-President, Gainesville Section, AADR
1988-1993	Member Editorial Board, Journal of Oral Implantology
1990-1995	Test Constructor Joint Commission on National Dental Examinations
1990-1995	U. S. A. Representative, Biocompatibility Test by Cell Culture Method, Technical Working Party Versailles Project on Advanced Materials and Standards (VAMAS)

1988-present	Reviewer, Journal of Dental Research
1988-present	Reviewer, Journal of Biomedical Materials Research
1993-present	Reviewer, Journal of Non-Crystalline Solids
1998-present	Reviewer for National Institute of General Medical Services/NIH
2006-present	Reviewer Journal of Oral Rehabilitation
2002-2003	Monitor for Clinical Study "The Evaluation of a Novamin™ Containing Dentifrice for the Reduction of Tooth Hypersensitivity" at The University of Maryland School of Dentistry

## PROFESSIONAL ORGANIZATIONS

State	Florida Dental Association
National	American Association of Dental Schools American Dental Association American Association for Dental Research American College of Dentists
International	International Association for Dental Research Society for Biomaterials International College of Dentists

## PATENTS

Periodontal Osseous Defect Repair US Patent #4,851,046; July 25, 1989 With S. B. Low, A. E. Fetner, L. L. Hench, and J. Wilson-Hench. (Over the life of the patent the University of Florida has received Royalties of approximately a million dollars)

Alkali-Free Bioactive Sol-Gel Compositions US Patent # 5,074,916; Dec. 24, 1991 With L. L. Hench and R. Li.

Esquivel-Upshaw JF., Clark AE, Ren F. Dielectric Coatings for Fixed and Removable Oral Prosthetic Restorations. Filed US Patent Office Oct 30, 2015.

Esquivel-Upshaw JF, Clark AE, Ren F. Machines with Cycling Corrosion Capability. Filed US Patent Office Oct 30, 2015.



## HONORS AND AWARDS

1968	Florida Engineering Society Certificate of Service.
1968	Benton Engineering Council Certificate of Merit.
1968	Charter Member, Engineering Leadership Circle.
1969	Benton Engineering Council Leadership Key.
1969	President, Benton Engineering Council, (Representative Body for College of Engineering).
1973	Elected to Alpha Sigma Mu (Metallurgical Engineering Honor Society).
1975	Elected to Sigma Xi (Scientific Research Society).
1976	Graduate Faculty Status, University of Florida.
1977	Invited Speaker, Alabama Implant Congress III, Birmingham, Alabama, May 12, 1977.
1979	Co-Chairman, Dental Porcelain Session, Annual Meeting of International Association of Dental Research, New Orleans, Louisiana.
1980	Awarded Tenure, College of Dentistry, University of Florida.
1985	Invited Speaker, First Annual Symposium Implant Dentistry Forefront 85, American Academy of Implant Dentistry Research Foundation, Forsyth Dental Center, and Boston, Massachusetts. April 19-21, 1985.
1986	Invited Speaker, Symposium The Replaceable Human Body: New Parts for Old Using Ceramics and Polymers "Bioglass® Implant Materials", American Association for the Advancement of Science, May 26, 1986, Philadelphia, Pennsylvania.
1986	Alberta Heritage Foundation for Medical Research Guest Speaker Award.
1987	Awarded Tenure, College of Dentistry, University of Florida

- 1987           Invited Speaker, Gordon Research Conference on Calcium Phosphates, "Compositional Dependence of Bioactive Implants, Plymouth, New Hampshire, June 24, 1987.
- 1988           Graduate Faculty Status, University of Florida
- 1990           Chairman, Implantology Research Session, IADR-AADR Annual Meeting, March 9, 1990, Cincinnati, Ohio.
- 1994           Invited Speaker, Symposium "Defining the Bio Component in Dental Biomaterials",       Sponsored by the Dental Materials Group, IADR and the Biomaterials Section of the AADS. Topic "Tissue Reactions to Dental Biomaterials", Seattle, Washington, March 12, 1994.
- 1995           Fellow, International College of Dentists.
- 1998           Elected to Alpha Sigma Mu (National Dental Honorary Society).
- 1999           1999 UF Dental Alumni Association Outstanding Alumnus Award
- 2005           Superior Accomplishment Award, University of Florida
- 2005           Outstanding Clinician Award (selected by UFCD Senior Class to present                   Hoods           at Graduation)
- 2006           Fellow, American College of Dentists
- 2006           Selected by Senior Class for Presentation of Doctoral Hoods
- 2013           Article and cover image in Journal of Dental Research  
**Esquivel-Upshaw JF**, Dieng F, Clark AE, Neal D, Anusavice KJ. Surface Degradation of Dental Ceramics as a Function of Environment pH. J Dent Res 2013; 92: 467-71.
- 2014           Most downloaded article in the Journal of Prosthodontics for 2014 and most cited article for 2016  
**Esquivel-Upshaw JF**, Clark AE, Shuster J, Anusavice KJ. Randomized Clinical Trial of Implant-Supported Ceramic-Ceramic and Metal-Ceramic Fixed Dental Prostheses: Preliminary Results. J Prosthodont 2014; 23: 73–82.

## PUBLICATIONS

Hench, L.L., Tuohig, W.D., and Clark, A.E. (1972): Fast Neutron Effects in Glass-Ceramics and Amorphous Semiconductors, In: Ceramics in Severe Environments, New York, Plenum Press, pp. 575-587.

Hench, L.L., Clark, A.E., and Schaake, H.F.: (1972) Effects of Microstructure on the Radiation Stability of Amorphous Semiconductors. Inter J Non-Cryst Solids, 8:837-843.

Pantano, C.G., Clark, A.E., and Hench, L.L. (1974): Multilayer Corrosion Films on Bioglass® Surfaces, J Amer Cer Soc, 57:412-413.

Clark, A.E., (1975): Solubility and Biocompatibility of Glass, Ph.D. Dissertation, Materials Science and Engineering, University of Florida, Dissertation Abstracts International 368:1369.

Clark, A.E., Pantano, C.G., and Hench, L.L. (1976): Auger Spectroscopic Analysis of Bioglass® Glass Corrosion Films, J Amer Cer Soc 59(1-2):37-39.

Clark, A.E., Paschall, H.A., and Hench, L.L. (1976): The Influence of Surface Chemistry on Implant Interface Histology: A Theoretical Basis for Implant Materials Selection, J Biomed Mat Res, 10(2):161-174.

Mohammed, H., Clark, A.E., and Atmaram, G.H. (1977): Material Systems in Dentistry I. A Self-Instructional Text, Department of Dental Biomaterials, College of Dentistry, University of Florida.

Mohammed, H., Clark, A.E., Hofsess, P., and Schoen, F.J. (1978): Material Systems in Dentistry II, A Self-Instructional Text, Department of Dental Biomaterials, College of Dentistry, University of Florida.

Mohammed, H., Farah, J.W., Clark, A.E., and Atmaram, G.H. (1979): Dental Biomaterials: Status of the Art 1975-1978, Part I, Fla Dent J, 50(1):17-22.

Mohammed, H., Farah, J.W., Clark, A.E., and Atmaram, G.H. (1979): Dental Biomaterials Status of the Art 1975-1978, Part II, Fla Dent J, (50) (2):19-45.

Clark, A.E., Farah, J.W., Clark, T.D., Etts, C., and Mohammed, H. (1979): The Influence of Condensation Pressure on the Strength of Dental Amalgam, J Oper Dent. 6 : ( 1):6-10.

Farah, J.W., Clark, A.E., and Ainpour, P.R., (1981): Elastomeric Impression Materials, J. Oper. Dent. 6(1):15-19.

Stanley, H.R., Hench, L.L., Bennett, Jr., C.G., Chellemi, S.J., King, C.J., Going, R.E., Ingersoll, N.J., Ethridge, E.C., Kreutziger, K.L., Loeb, L., and Clark, A.E. (1981): The Implantation of Natural Tooth Form Bioglass® in Baboons-Long Term Results, Inter J Oral Implant, 2(2):82-87.

Farah, J.W., Clark, A.E., Thomas, P.A., and Borkow, I. (1981): Cement Bases Under Amalgam Restorations: Effect of Thickness, J Oper Dent, 6(3):82-87.

Hench, L.L. and Clark, A.E. (1982): Adhesion to Bone, In: Biocompatibility of Orthopedic Implants, Vol. II. D.F. Williams, Ed., Boca Raton, CRC Press Inc., pp.129-170.

- Farah, J.W., Clark, A.E., Mohsein, M., and Thomas, P.E. (1983): Effect of Cement Base Thickness on MOD Amalgam Restorations, *J Dent Res*, 62(2):109-111.
- Gray, J.B., Steen, M.E., King, G.J., and Clark, A.E. (1983): Studies of the Efficacy of Implants as Orthodontic Anchorage, *Amer J Ortho*, 83(4):311-317.
- Clark, A.E.: (1986) Bioglass® Dental Implants, *J Oral Implant*, 12(3):477-484.
- Stanley, H.R., Hall, M.B. Colaizzi, F., and Clark, A.E. (1987) Residual Alveolar Ridge Maintenance with a New Endosseous Implant Material, *J Prosthetic Dent*, 58:607-613.
- Clark, A.E. and Hench, L.L. (1988): Biomedical Engineering, In: *McGraw-Hill Yearbook of Science and Technology*, McGraw-Hill Publishing Co. pp. 40-42.
- Wilson, J., Stanley, H., Clark, A.E., Hench, L.L., and Gross, U. (1988): The Development of Bioglass® in Implantology, *Phillip J Restaurative Zahnmedizin*, 5:242-246.
- Warren, L.D., Clark, A.E., and Hench, L.L., (1989): Quality Assurance of Bioglass® Powders, *J Biomed Mat Res-Applied Biomaterials*, 23, (A2): 201-209.
- Kim, C.Y., Clark, A.E., and Hench, L.L. (1989): Early Stages of Calcium Phosphate Layer Formation in Bioglasses, *J Non-Cryst Solids*, 113:195-202.
- Caswell, C.W. and Clark, A.E., (Editors) (1991) *Dental Implant Prosthodontics*, Philadelphia, J.B. Lippincott Company, 331 pages.
- Clark, A.E. (1991): Principles of Tissue-Implant Material Interactions, In: *Dental Implant Prosthodontics* Clark, A.E., Caswell, C.W., Eds., Philadelphia, J.B. Lippincott Company, pp.317-322.
- Clark, A.E., Kim, C.Y., West, J., and Wilson, J., (1991): Reactions of Fluoride and Non-Fluoride Containing Bioactive Glasses, In: *Handbook of Bioactive Ceramics, Volume I: Bioactive Glasses and Glass Ceramics*, Yamamuro, T., Hench, L.L., Wilson-Hench, J., Eds., Boca Raton, FL CRC Press Inc., pp.73-88.
- West, J., Clark, A.E., Hall, M., and Turner, G., (1991): In-vivo Bone Bonding Study of Bioglass® Coated Titanium Alloy, In: *Handbook of Bioactive Ceramics, Volume I: Bioactive Glasses and Glass Ceramics*, Yamamuro, T., Hench, L.L., Wilson-Hench, J., Eds., Boca Raton, Florida, CRC Press, Inc., pp. 161-166.
- Hench, L.L., Stanley, H.R., Clark, A.E., Hall, M., and Wilson, J., (1991): Dental Applications of Bioglass® Implants, In: *Bioceramics 4*, W. Bonfield, G.W.Hastings and K.E. Tanner, Eds., Guildford, England Butterworth-Heinemann Ltd., pp. 231-238.
- Wilson, J., Clark, A.E., Walker, R.D., and Ramer, M., (1991): Development and Use of an Injectable Form of Bioglass®, In: *Bioceramics 4*, W. Bonfield, G.W., Hastings, and K.E.Tanner, Eds., Guildford, England Butterworth-Heinemann Ltds., pp. 99-103.
- Clark, A.E. and Anusavice, K.J. (1991) Biological Applications for Traditional and Advanced Glasses. In: *Engineered Materials Handbook Volume 4 Ceramics and Glasses*, American Society of Metals, Materials Park, Ohio, pp 1091-1099.

Li, R., Clark, A.E., & Hench, L.L.: (1992) An Investigation of Bioactive Glass Powders by Sol-Gel Processing, *J. of Applied Biomaterials*. 2:231-239.

Li, R., Clark, A.E., and Hench, L.L. (1992): Effects of Structure and Surface Area on Bioactive Powders by Sol-Gel Process. In: *Chemical Processing of Advanced Materials*, Hench, L.L. and West, J.K., Eds., John Wiley & Sons, New York, pp 627-634.

Kim, C.Y., Clark, A.E., & Hench, L.L. (1992): Compositional Dependence of Calcium Phosphate Layer Formation In Fluoride Bioglasses, *J. of Biomed. Mat. Res.*, 26:1147-1162.

Walker, R.D., Wilson, J., and Clark, A.E. (1992): Injectable Bioglass® as a Potential Substitute for Injectable Polytetrafluoroethylene, *J. of Urology*, 148:645-647.

Oguntebi, B., Clark, A.E., and Wilson, J. (1993): Pulp Capping with Bioglass® and Autologous Demineralized Dentin in Miniature Swine, *J. of Dent. Res*, 72(2):484-489.

Baker, P.S. and Clark, A.E. (1993): Compositional Influence on the Strength of Dental Porcelain, the *Int. J. of Prosth.* 6(3):291-297.

Wilson, J., Clark, A.E., Hall, M., and Hench, L.L. (1994): Tissue Response to Bioglass® Endosseous Ridge Maintenance Implants, *J. of Oral Imp.*, 19:295-302.

Pereira, M.M., Clark, A.E., Hench, L.L. (1994): Homogeneity of Bioactive Sol-Gel Derived Glasses in the System CaO-P2O5-SiO2, *J. Mat. Synth. & Processing*, 2(3), 189-195.

Pereira, M.M., Clark, A.E., and Hench, L.L. (1994): Calcium Phosphate Formation on Sol-Gel Derived Bioglasses In-Vitro, *J. Biomed. Mat. Res.*, Vol. 28, 693-698.

Wilson, J., Clark, A.E., Dovek, E., Kreiger, J., Smith, W.K., and Zamet, J.S. (1994): Clinical Applications of Bioglass® Implants, In: *Bioceramics Vol. 7*, O.H. Andersson and A. Yli-Urpo, Eds, England, Butterworth - Heineman Ltd. pp 415-422.

Oguntebi, B., Heaven, T., Clark, A., and Pink, F. (1995): Quantitative Assessment of Reparative Dentin Bridge Formation Following Pulp Capping in Miniature Swine. *J. of Endodontics*, 21:79-82.

Clark, A.E. and Sposetti, V.J. (1995): Prosthodontic Preclinical Education, Today's Florida Dental Association, 3:1-8.

Stanley, H.R., Clark, A.E., Hench, L.L. (1995): Alveolar Ridge Maintenance Implants. *Bioceramics*, Vol. 8, L.L. Hench and J. Wilson Eds., England, Butterworth - Heineman Ltd. pp 256-269.

Pereira, M.M., Clark, A.E., Hench, L.L. (1995): Effect of Texture on the Rate of Hydroxapatite Formation on Silica Gel Surface, *J. Amer. Ceram. Soc.* 78[9]:2463-2468.

Stanley, H.R., Hall, M.B., Clark, A.E., and King, C. (1997): Using 45S5 Bioglass® Cones As Endosseous Ridge Maintenance Implants (ERMIs) To Prevent Alveolar Ridge Resorption - A 5 Year Evaluation. *Int. J. Oral Maxillofac. Implants* 12(1):95-105.

Shapoff, C.A., Alexander, D.C., Clark, A.E. (1997): Clinical Use of a Bioactive Glass Particulate in the Treatment of Human Osseous Defects. *Compendium* 18(4):1-9.

West, J.K., Brennan, A.B., Clark, A.E. and Hench, L.L. (1997): Molecular Orbital Models of Ring Expansion Mechanisms in the Silica-Carbon Monoxide System, J. Biomed. Mat. Res. 36:209-215.

West, J.K., Brennan, A.B., Clark, A.E., Zamora, M., and Hench, L.L. (1998): Cyclic Anhydride Ring Opening Reactions: Theory and Applications, J. Biomed. Mat. Res. 40:8-17

Sharp, B., Morton, D., and Clark, A.E. (2000): The Acrylic Resin - Metal Alloy Interface: Evaluation of Methods to Improve Resistance to Microleakage. J. Prosth Dentistry 84:617-622.

Stanley, H. R., Clark, A. E., Pameijer, C. H., and Louw, N. P. (2001): Pulp Capping with a modified Bioglass® Formula (# A 68 - Modified) Amer. J Dentistry 14:227-232.

Domingues, R.Z., Clark, A. E., and Brennan, A. B. (2001): A Sol-Gel Derived Bioactive Fibrous Mesh, J. Biomed. Mat. Res., 55(4):468-474.

Orefice, R.L., Clark, A. E., and Brennan, A. B. (2001): Novel Sol-Gel Bioactive Fibers, J. of Biomed. Mat. Res., 55(4) 460-467.

Nguyen K.H., Esquivel-Upshaw J.F., Clark A.E. (2003): Surface Treatments to Increase Bond Strength in Removable Partial Dentures, J of General Dentistry. 51(5) 402-405.

Pereira M, Clark AE, Hench LL, Effect of Texture on the Rate of Hydroxyapatite Formation on Gel-Silica Surface, (2005), J of American Ceramic Society 78(9):2463-2468.

Orefice, R.L., Clark, A. E., and Brennan, A. B., AFM Study on the Interactions Across Interfaces Containing Attached Polymer Chains (2006), J. Macromolecular Materials & Engineering:291(4)377-386.

Orefice, R.L., Clark, A. E., and Brennan, A. B., Bioactive Composites with Designed Interphases Based on Hyperbranched Macromers (2006) J of Applied Polymer Science,99(3)1153-1166.

Pantano CG, Clark AE, Hench LL., Multilayer Corrosion Films on Glass Surfaces (2006) J of American Society 57(9):412-413.

Clark AE, Pantano CG, Hench LL, Auger Spectroscopic Analysis of Bioglass Corrosion Films (2006) J of American Ceramic Society 59(1-2):37-39.

Tai, B. J., Jiang, H., Zhuan, B., Greenspan, D. C., Zhong, J., Clark, A. E., and Du, M. Q., Anti-Gingivitis Efficacy of a Dentifrice Containing Bioactive Glass (Novamin®) Particulate, (2006), J of Clinical Periodontology 33:86-91.

Orefice, R.L., Clark, A.E., West, J., Brennan, A., Hench, L.L., Processing, properties, and in-vitro bioactivity of polysulfone bioactive glass composites, (2007) J. Biomed Mater Res A 80(3):565-580.

R L Oreface, A E Clark, and A Brennan, Engineered Hyperstructures Based on Attaching Macromers onto Polymers, (2008) European Polymer Journal, 44(12), 3969-3980.

Josephine F. Esquivel-Upshaw, William Rose, Erica Oliveira, Mark Yang, Arthur E. Clark, Kenneth J. Anusavice, (2012) Three years in-vivo wear analysis of all-ceramic and metal ceramic crowns and their antagonists. Dent Mater, 28(6), 615-621.

Esquivel-Upshaw JF, Rose WF, Jr., Barrett AA, Oliveira ER, Yang MC, Clark AE, Anusavice KJ, In- vivo wear of core ceramic, veneers, and enamel antagonists at three years. (2012) Dent Mater;28(6):615-21. Epub 2012 Mar 10. NIHMSID: 367057.

Esquivel-Upshaw JF, Clark AE, Shuster J, Anusavice KJ. (2013). Randomized controlled clinical trial of bilayer-ceramic and metal-ceramic crown performance. J Prosthodont 22(3):166-173.

Esquivel-Upshaw JF, Dieng FY, Clark AE, Neal D, Anusavice KJ. (2013) Surface Degradation of Dental Ceramics as a Function of Environment pH, J. of Dent. Research 92:5:467-471.

Esquivel-Upshaw JF, Clark AE, Shuster JJ, Anusavice KJ. (2014) Randomized clinical trial of implant-supported ceramic-ceramic and metal-ceramic fixed dental prostheses: preliminary results. J Prosthodont.Feb;23(2):73-82.

Esquivel-Upshaw JF, Mehler A, Clark AE, Neal D, Anusavice KJ. (2014) Fracture analysis of randomized implant-supported fixed dental ceramic prostheses. J of Dent. 42(10): 1335-1342.

Esquivel-Upshaw JF, Mehler A, Clark AE, Neal D, Gonzaga L, Anusavice KJ (2014) Peri-implant Complications for Posterior Endosteal Implants. Clin. Oral Implants Res. Dec;26(12):1390-6.

Esquivel JF, Kim MJ, Abdulhameed N, Jenkins R, Neal D, Ren F, Clark AE. (2018) Randomized Clinical Study of Wear of Enamel Antagonists Against Polished Monolithic Zirconia Crowns. J. Dent. 68:1:19-27.

Esquivel-Upshaw JF, Ren F, Hsu SM, Dieng FY, Neal D, Clark AE. (2018) Novel Testing for Corrosion of Glass-Ceramics for Dental Applications. J of Dent. Research 97:3:296-302.

Hsu SM, Ren F, Abdulhameed N, Kim MJ, Neal D, Esquivel-Upshaw JF. Measurement of Wear and Volume Loss Using Standardized Measurement Techniques (submitted for publication Dent. Mater., April 2017)

## AUDIOVISUAL MATERIALS

Clark, A.E., Sullivan, S.M., Hall, M.B., Shapoff, C.A., and Smith, W.K. (1996): PerioGlas® Bioglass® Synthetic Bone Graft Particulate - Science and Clinical Applications. Sponsored by an educational grant from Block Drug Corporation.

Mellonig, J., Genco, R., O'Neal, R., and Clark, A. (1996): An Overview of Bone Regeneration Materials - Current Perspectives on Periodontal Regeneration - Clinical Healing with Bone Grafting Materials. Sponsored by an educational grant from Block Drug Corporation.

## ABSTRACTS

Clark, A.E., Paschall, H.A., Hench, L.L., and Harrell, M.(1975): Surface Chemical Analysis of Bioglass® Orthopedic Implants, Symposium on Materials for Reconstructive Surgery, Clemson University, Clemson, South Carolina.

Kreutziger, K.L., Clark, A.E., Hench, L.L., and Stanley, H.R. (1977): Correction of Mandibular Horizontal Ramus Discontinuity with a Bioglass® Ceramic Prosthesis. Florida Scientist, Vol. 40, Suppl. 1, pg. 29 #MSS-4.

Mohammed, H., Clark, A.E., and Fischschweiger, W. (1977): Potential of Co-Cr-Ni-Ti as a Dental Alloy System, J Dent Res, 56B:212 (Abstract), 1977, Manuscript on Dental Materials Group Microfilm AADR.

Mohammed, H., Abdel-Fattah, R.A., and Clark, A.E. (1977): Iron Substitution of Nickel in Co-Cr-Ni Alloy System, J Dent Res, 56B:B212 (Abstract), 1977, Manuscript on Dental Materials Group Microfilm, AADR.

Clark, A.E., Lazear, J., and Mohammed, H.(1978): Compositional Influence on the Strength of Dental Porcelain, J Dent Res, 57A:291 (Abstract), 1978, Manuscript on Dental Materials Group Microfilm, AADR

.Harrell, M.S., Keane, M.A., Acree, W.A., Bates, S.R., Clark, A.E., and Hench, L.L.(1978): Thickness of Bioglass®-Bonding Layers. Transactions of the Fourth Annual Meeting of the Society for Biomaterials, San Antonio, Texas, pg. 70.

Clark, A.E., Mohammed, H., and Nero, D. (1979): The Quantitation of Surface Roughness of Investments Before and After Burnout, J Dent Res, 58A:410 (Abstract) 1979, Manuscript on Dental Materials Group Microfilm, AADR.

Clark, A.E., Stanley, H.R., Acree, W.A., and Kreutziger, K. (1979): Thickness of Bonding Layers on Bioglass® Dental Implants, J Dent Res, 58A:824.

Clark, A.E., Farah, J.W., Mohammed, H., and Clark, T.D. (1979): The Influence of Condensation Pressure on the Strength of High Copper Amalgam Alloys, J Dent Res, 58A:34 (Abstract) 1979, Manuscript on Dental Materials Group Microfilm, AADR.



Farah, J.W., Clark, A.E., Borkow, I., and Thomas, P.A. (1980): Optimization of Cement Base Thickness Under Amalgam Restorations, J Dent Res, 59A:376 (Abstract #434), 1980. Manuscript on Dental Materials Group Microfilm, AADR.

Clark, A.E., and Mohammed, H., (1980) Mechanical Characterization of Bioglass®-Bone Interface, J Dent Res, 59A:378 (Abstract #443), 1980, Manuscript on Dental Materials Group Microfilm, AADR.

Clark, A.E., Farah, J.W., Mohammed, H., and Clark, T.D. (1980) Correlation Between Clinical Condensation Pressure and Microstructure of Amalgam, J Dent Res, 59A:380 (Abstract #452), Manuscript on Dental Materials Group Microfilm, AADR.

Paige, S., Clark, A.E., Costa, P., King, G.J., and Waldron, J.M. (1980) Orthodontic Stress Application to Bioglass® Implants in Rabbit Femurs, J Dent Res, 59A:445, (Abstract #721).

Fujimoto, J., Clark, A.E., and Louie, K. (1980): Effects of Topical Fluorides on Surface Characteristics of Glazed Porcelain, J Dent Res, 59A:520, (Abstract #1006).

Farah, J.W., Clark, A.E., Mohsein, J., and Thomas, P.A. (1980): Effect of Cement Base Thickness on MOD Amalgam Restorations, J Dent Res, 60A:372 (Abstract #247). Manuscript on Dental Materials Group Microfilm, AADR.

Stanley, R.R., Hench, L.L., Bennett, C.G., Chellemi, S.J., King, C.J., Going, R.E., Ingersoll, N., Ethridge, E.C., Kreutziger, K.L., Clark, A.E., and Loeb, L. (1982): Implantation of Tooth Form Bioglass® in Baboons-Long-Term Results, J Dent Res, 61:282, (Abstract #934).

Clark, A.E., Stanley, H.R., Hall, M., and King, C.J. (1986): Clinical Trials of Bioglass® Implants for Alveolar Ridge Maintenance. J Dent Res, 65:304 (Abstract #1211).

Clark, N.P., Clark, A.E., and Smith, G.E. (1986): Instrument Wear During Amalgam Cavity Preparation: SEM Evaluation and Hardness. J Dent Res, 65, 316 (Abstract #1324).

Stanley, H.R., Hall, M., Clark, A.E., King, C.J., Colaizzi, F., Spilman, D., and Hench, L.L. (1986): Clinical Trials of Bioglass® Implants for Alveolar Ridge Maintenance. Transactions of the 12<sup>th</sup> Annual Society for Biomaterials Meeting, May 28-June 1, 1986, Minneapolis, Minnesota, page 150.

Fetner, A., Hartigan, M.S., Low, S., and Clark, A. (1988): Comparison of Bioglass® Collagen Formulations Implanted into Guinea Pig Calvaria Defects, J Dent Res, 67:370 (Abstract #2059).

Hall, M.B., Clark, A.E., Stanley, H.R., Colaizzi, F., and Turner, G.E. (1988): Clinical Trials of Bioglass® Implants for Alveolar Ridge Maintenance - Two-Year Follow Up. J Dent Res, 67:367 (Abstract #2035).

Wilson, J., Fetner, A., Hartigan, M.S., and Clark, A.E. (1988): Bioactive Paste for Craniofacial Repairs. Transactions of the Third World Biomaterials Congress, Kyoto, Japan, pg. 464.

Kim, C.Y., Clark, A.E., and Hench, L.L. (1988): Reactions of Fluoride Containing Bioactive Glasses. Transactions of the Third World Biomaterials Congress, Kyoto, Japan, pg. 76.

Clark, A.E., Hall, M., Turner, G., West, J., and Wilson, J. (1989): Bioglass®-Coated and HA-Coated Titanium Alloy Implants in Dogs. Transactions of the 15<sup>th</sup> Annual Meeting of the Society for Biomaterials, Lake Buena Vista, Florida, pg. 175.

Clark, A.E., Stanley, H.R., Hall, M.B., and Turner, G.E., (1990) Alveolar Ridge Maintenance with Endosseus Bioglass® Cones, J Dent Res. 69:267 (Abstract #1270).

Li, R., Clark, A.E., and Hench, L.L.,(1990) An Investigation of Bioactive Glass Powders by the Sol-Gel Process, Transactions 16<sup>th</sup> Annual Meeting Society For Biomaterials, Charleston, South Carolina, Pg. 40.

Ramer, M., Wilson, J., Walker, D., and Clark, A.E.,(1990) Bioglass® - Hylan Suspension For Treatment of Urinary Incontinence, Transactions 16<sup>th</sup> Annual Meeting Society For Biomaterials, Charleston, South Carolina, Pg. 195.

Oguntebi, B., Clark, A.E., Wilson, J., and Hall, M. (1991): Pulp capping with Bioglass® and Demineralized Dentin in Miniature Swines, J. Dent. Res. 70:384. (Abstract #944).

Li, R., Clark, A.E., and Hench, L.L. (1991): Bioactive Glass Powders by the Sol-Gel Process, J. Dent. Res., 70:456. (Abstract #1517).

Pereira, M.M., Clark, A.E., and Hench, L.L., (1994): Homogeneity and Bioactivity of Sol-Gel-Derived Glasses, J. Dent. Res., 73:276. (Abstract #1396).

Stanley, H.R., Brandt, R.L., Hall, M., Clark, A.E., and King, C. (1994): Alveolar Ridge Maintenance using Endosseously Placed Bioglass® Cones (4.5 - year evaluation), J. Dent. Res., 73:399. (Abstract #2376).

Clark, A.E., Pameijer, C.H., and Stanley, H.R. (1996): Bioglass® as a Pulp capping Agent, J. Dent. Res., 75:280 (Abstract #2104).

Chen, X.F., Clark, A.E., Greenspan, D.C., and Anusavice, K.J. (1997): Sol-Gel Derived SiO<sub>2</sub> and TiO<sub>2</sub> Coatings on Dicor® Glass-Ceramic, Transactions of 23<sup>rd</sup> Annual Meeting, Society for Biomaterials, New Orleans, LA, pg. 314.

Clark, A.E., Pameijer, C.H., Stanley, H.R., and Louw, N.P. (1999): Pulp capping with a Modified Bioglass® Formula, J. Dent. Res., 78:219 (Abstract #910).

Clark, A.E., Barrett, A.A., Anusavice, K.J. and Yang, M.C. (2000): Color Vision Testing and Teaching of Shade Matching Using Computer Monitors, J. Dent. Edu. 64 No.3.

Barrett, A.A., Clark, A.E., Anusavice, K.J. and Yang, M.C.K (2000): Using Computer Monitor Images for Matching Porcelain by Hue and Value, J. Dent. Res. 79:541 (abstract #3184).

Barrett, A.A., Grimaudo, N.J., Clark, A.E. and Anusavice, K. J. (2001): Hydroxyl Layer Healing of a Pre-Cracked Ceramic, J. Dent. Res. 80:41 (abstract #045).

Barrett, A.A., Clark, A.E., Grimaudo, N.J. and Anusavice, K. J. (2001): Characterization of a Self-Healing Ceramic in Solution after Two Years Exposure J. Dent. Res. 80:41 (abstract #046).

Clark, A.E., Latorre, G. and McKenzie, K. (2002): Dentin Surface Morphological and Chemical Changes Produced with a Bioactive Prophylaxis Agent. J Dent. Res. 81:A279 (abstract # 2182).

Grimaudo, N., Barrett, A., Clark, A.E., and Hamidfar, A. (2004): Effect of High Bleaching Concentration on Enamel and Subsequent Staining. J Dent. Res. 83 (abstract #1917).

Greenspan, D., Clark, A. E., and LaTorre, G. (2004): Invitro Antimicrobial Properties of a Bioactive Glass Containing Dentifrice. J. Dent. Res. 83 (abstract #1586).

Jennings, D. T., McKenzie, K. M., Greenspan, D., and Clark, A. E. (2004): Quantitative Analysis of Tubule Occlusion Using NovaMin. J. Dent. Res. 83 (abstract #2416).

Tai, B. J., Du, M. Q., Jiang, H., Zhong, J. P., Greenspan, D., and Clark, A. E. (2004): Anti-Gingivitis Efficacy of a Dentifrice Containing Bioactive Glass Particulate. J. Dent. Res. 83 (abstract#1545).

Du, M. Q., Tai, B. J., Jiang, H., Zhong, J. P., Greenspan, D., and Clark, A. E. (2004): Efficacy of Dentifrice Containing Bioactive Glass on Dentin Hypersensitivity. J. Dent. Res. 83 (abstract #1546).

Esquivel-Upshaw JF, Anusavice KJ, Clark AE, Barrett, AA, Mecholsky JJ, Quinn GD. Fractographic Analysis of Ceramic Fracture Surfaces on Implant-Supported Bridges. (2010) J Dent Res 89. (Spec Issue B): 659.

Esquivel-Upshaw JF, Anusavice KJ, Rose WF, Oliveira E, Clark AE, Yang MK. (2011) In-vivo performance of all-ceramic and metal-ceramic crowns. J Dent Res 90 (Spec Issue A): 1934.

K.J. Anusavice, A.A. Barrett, J. Esquivel-Upshaw, J.J. Mecholsky, Jr., C. Shen, A.E. Clark, And W. Rose. (2011) Microstructures/Properties of Ceramics Used in a Parallel Clinical Trial. J Dent Res 90 (Spec Issue A): 32.

Esquivel-Upshaw JF, Clark AE, Anusavice KJ. (2012) Randomized Clinical Trial of Implant-Supported Ceramic-Ceramic Posterior FDPs.) J Dent Res 91 (Spec Iss A): 808.

Esquivel-Upshaw JF, Dieng F, Clark AE, Neal D Anusavice KJ. (2013) Microstructural Analysis of Ceramic Materials Immersed in Different pH Environments. J Dent Res 91 (Spec Iss B): 1675.

Esquivel-Upshaw JF, Dieng F, Clark AE, Neal D Anusavice KJ. (2013) Surface Degradation of Ceramic Materials in Different pH Environments. J Dent Res 92 (Spec Iss B): 1674.

E.16. Esquivel-Upshaw JF, Dieng F, Clark AE, Neal D, Anusavice KJ. Corrosion of a glass-ceramic veneer in a pH-cycling environment. J Dent Res 93 (Spec Iss B); 916: 2014.

Esquivel-Upshaw JF, Mehler A, Clark AE, Neal D, Anusavice KJ. Clinical fractures for ceramic-ceramic and metal-ceramic implant-supported FDPs. J Dent Res 93 (Spec Iss A): 101; 2014.

Mehler A, Esquivel-Upshaw JF, Anusavice KJ, Clark AE. Soft-Tissue Complications Resulting from Posterior Endosseous Implants. J Dent Res 93 (Spec Iss A): 935; 2014

Esquivel-Upshaw JF, Dieng F, Clark AE, Neal D, Anusavice KJ. Surface degradation of glass-ceramic in a pH cycling environment. J Dent Res 93 (Spec Iss B); 917: 2014

Esquivel-Upshaw JF, Kim M, Clark AE, Neal D, Anusavice KJ. "In Vivo Wear of Glass-Ceramic Veneers for Metal-Ceramic and Ceramic-Ceramic Implant-Supported Prostheses ". J Dent Res 94 (Spec Iss A): 3702, 2015.

Esquivel-Upshaw JF, Dieng FY, Clark AE, Neal D, Anusavice KJ. "Corrosion of Veneering and Core Ceramics as a Function of Solution pH", J Dent Res 94 (Spec Iss A): 242, 2015.

Anusavice KJ, Esquivel-Upshaw JF, Dieng FY. "Chemical Degradation of Veneering Ceramics in Acidic and Basic Environments.", J Dent Res 94 (Spec Iss A): 243, 2015. Esquivel-Upshaw JF, Clark AE, Neal D, Anusavice KJ. "Randomized Clinical Trial of Implant-Supported Ceramic-Ceramic FDPs", J Dent Res 95 (Spec Iss B): 412, 2016.

Esquivel-Upshaw JF, Hsu SM, Abdulhameed N, Kim MJ, Clark AE, Ren F. "Volume Loss and Depth Analysis Using Stylus Profiler and Laserscanner". J Dent Res 96 (Spec Iss A) :668, 2017.

Clark AE, Esquivel-Upshaw JF, Hsu SM, Ren F. "Mechanism for Glass-Ceramic Corrosion in Alternating pH Environments". J Dent Res 96 (Spec Iss A): 3210, 2017.

Abdulhameed N, Clark AE, Ren F, Esquivel-Upshaw JF. "Wear of Enamel by Monolithic Zirconia and PFM crowns". J Dent Res 96 (Spec Iss A): 674, 2017.

Kim M, Hsu F, Dieng F, Ren F, Clark A, Esquivel-Upshaw J. "In-Vitro Simulation of pH Changes in the Oral Cavity". J Dent Res 97 (Spec Iss A): 0668, 2018

Abdulhameed N, Hsu F, Clark A, Ren F, Esquivel-Upshaw J. "A Comparison of Different Methods for Vertical Wear Measurements of Dental Ceramic". J Dental Res 97 (Spec Iss A): 1294, 2018.

Chen Z, Beers K, Ren F, Abdulhameed N, Kim M, Clark A, Esquivel-Upshaw J. "Demonstration of SiO<sub>2</sub>/SiC Based Novel Protective Coating for Ceramic Prostheses". J Dental Res 97 (Spec Iss A): 1497, 2018.

Hsu S, Ren F, Dieng F, Clark D, Neal D, Esquivel-Upshaw J. "Different Ion Release Mechanism in Alternating pH Environments". J Dental Res 97 (Spec Iss A): 1590, 2018.

Esquivel-Upshaw J, Gonzaga L, Beers K, Hsu S, Clark A, Ren F. "Clinical Performance of Dentsply Osseospeed Implants in Posterior Regions of the Mouth After 5-Years". J Dental Res 97 (Spec Iss A): 1646, 2018.

## **GRADUATE STUDENT COMMITTEES**

- |           |   |
|-----------|---|
| 1977-1981 | Ph.D. Committee Member, degree candidate W. R. Lacefield, degree awarding unit, Materials Science and Engineering.    |
| 1988-1989 | M.S. Committee Member, degree candidate L. D. Warren, degree awarding unit, Materials Science and Engineering.        |
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| 1989-1991 | Ph.D. Committee Member, degree candidate R. Li, degree awarding unit, Materials Science and Engineering.              |
| 1990-1994 | Ph.D. Committee Co-Chairman, degree candidate M. Perreira, degree awarding unit, Materials Science and Engineering.   |
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| 1996-1997 | MS Committee Chair, degree candidate, B. Sharp, degree awarding unit, Dentistry.                                      |
| 1996-1999 | MS Committee Chair, degree candidate, K.H. Nguyen, degree awarding unit, Dentistry.                                   |
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1998-1999	MS Committee Member, degree candidate, A. Luu, degree awarding unit, Dentistry.
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2002-2004	Committee Chair, certificate candidate, A Hamidfar, degree awarding unit, Dentistry.
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2005-2008	MS Committee Member, degree candidate, Y. Feldman, degree awarding unit, Dentistry
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2006-2009	MS Committee Member, degree candidate H. Mousawi, degree awarding unit, Dentistry.
2008-2010	MS Committee Chair, degree candidate A. Bowers, degree awarding unit, Dentistry
2008-2010	MS Committee Chair, degree candidate H Ibrahim, degree awarding unit Dentistry

2008-2010 MS Committee Member, degree candidate C Horton, degree awarding unit Dentistry  
2008-2012 PhD Committee Member, Degree candidate S. Cooper, degree awarding unit Materials Science and Engineering

### **TEACHING ACTIVITIES IN DMD PROGRAM**

Provide clinical coverage for juniors and seniors in the Prosthodontic Clinic (Fixed and Removable Procedures).

Director for the Removable Partial Denture Preclinical Course

Director for the Occlusion Preclinical Course

Director for Fixed Preclinical Courses

Team Leader 2009-2010 (Team leaders are responsible for 16 juniors and seniors. This includes screening prospective patients, supervising data collection and treatment planning, coverage of clinical treatment, and monitoring student patient pools and clinical accomplishments to insure an adequate clinical experience.)