RENA BIZIOS

CURRICULUM VITAE

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CITIZENSHIP U.S.A.

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA., USA
Ph.D. in Biomedical Engineering

California Institute of Technology, Pasadena, CA, USA
M.S. in Chemical Engineering

University of Massachusetts, Amherst, MA, USA
B.S. (*Cum Laude*) in Chemical Engineering

RESEARCH AND TEACHING APPOINTMENTS

January 2, 2023 – present	**Lutcher Brown Endowed Distinguished Univerity Chair Professor**, The University of Texas at San Antonio, San Antonio, TX.
September 1, 2017- December 31, 2022	**Lutcher Brown Endowed Chair Professor**, Department of Biomedical Engineering, The University of Texas at San Antonio, San Antonio, TX.
January 1, 2016 – August 31, 2017	**Peter T. Flawn Distinguished Chair Professor**, Department of Biomedical Engineering, The University of Texas at San Antonio, San Antonio, TX
2006.-.2015	**Peter T. Flawn Professor**, Department of Biomedical Engineering, The University of Texas at San Antonio, San Antonio, TX
1981 - 2005	Professor (1997 - 2005), Associate Professor (1986 - 1996), Assistant Professor (1981 - 1986) of Biomedical Engineering, School of Engineering, Rensselaer Polytechnic Institute, Troy, NY.
2000 - 2005	Professor of Chemical Engineering, School of Engineering, Rensselaer Polytechnic Institute, Troy, NY.
July - December, 2005	Directeur de Recherche Associé, Centre National de la Recherche Scientifique, Faculté de Médicine Saint-Louis Lariboisiére, Université Paris VII, Paris, France
February - August, 2003	Chercheur Associé, Centre National de la Recherche Scientifique, Faculté de Médicine Saint-Louis Lariboisiére, Université Paris VII, Paris, France (*sabbatical leave*).

RESEARCH AND TEACHING APPOINTMENTS (*continued*)

Fall 2002	Chalmers Jubileums Professor, Chalmers University of Technology, Göteborg, Sweden (*sabbatical leave*)
1982 - 2000	Adjunct Associate Professor (1989 - 2000), Adjunct Assistant Professor (1982 - 1989), Member of the Graduate Faculty (1988 - 2000), Department of Physiology and Cell Biology, Albany Medical College, Albany, NY
Spring 1996	Visiting Associate Professor, Department of Chemical Engineering, Rice University, Houston, TX (*sabbatical leave*)
Fall 1995	Visiting Scientist, Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA (*sabbatical leave*)
1987 - 1988	Visiting Associate Professor, Department of Chemical Engineering, Rice University, Houston, TX (*sabbatical leave*).
1979 - 1980	Postdoctoral Fellow, Special Coagulation Laboratory, Roger Williams General Hospital, Providence, RI

HONORS

MEMBER OF NATIONAL and STATE ACADEMIES

- **National Academy of Medicine (NAM; 2015)**
- **Texas Academy of Medicine, Engineering, Science and Technology (TAMEST; 2016)**
- **International Academy of Medical and Biological Engineering (IAMBE; 2019)**
- **National Academy of Inventors (NAI; 2019)**
- **Academy of Athens, Greece (2020)**
- **National Academy of Engineering (NAE; 2022)**
- **American Academy of Arts and Sciences (AAA&S; 2022)**

FELLOW OF PROFESSIONAL SOCIETIES

- **Fellow, American Institute for Medical and Biological Engineering** (inducted in 1999).
- **International Fellow, International Union of Societies for Biomaterials Science and Engineering (IUSBSE)** (inducted in 2000).
- **Fellow, Biomedical Engineering Society** (inducted in 2005).
- **Fellow, American Institute of Chemical Engineers** (inducted in 2010)
- **Fellow, American Association for the Advancement of Science** (elected in 2010)

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AWARDS

- Health Sciences and Technology Fellowship, Massachusetts Institute of Technology (1975 - 1979).
- ***Outstanding Alumna in Engineering Award***, Society of Women Engineers, College of Engineering, University of Massachusetts, Amherst, MA (1985).
- ***Rensselaer Alumni Association Teaching Award***
  Rensselaer Polytechnic Institute, Troy, NY (1997).
- ***Clemson Award for Outstanding Contributions to the Literature***
  (the Scientific Literature of Biomaterials), Society for Biomaterials; (1998).
- ***Distinguished Scientist Award***, Houston Society for Engineering in Medicine and Biology (HSEMB); (2009).
- ***2010 Women's Initiatives Mentorship Excellence Award***, The American Institute of Chemical Engineers (AIChE); (2010).
- ***Founders Award***, Society for Biomaterials (2014).
- ***Theo C. Pilkington Outstanding Educator Award*****,** Biomedical Engineering Division, American Society for Engineering Education (2014).
- **Amber Award**, The UTSA Ambassadors, The University of Texas at San Antonio (UTSA), San Antonio, TX (2014).
- ***AIMBE Excellence in STEM Education Award*****,** American Institute for Medical and Biological Engineering (AIMBE); (2018).
- ***Excellence in Biomaterials Science Award***, The Surfaces in Biomaterials Foundation (2019).
- ***Distinguished Alumna in Chemical Engineering Award,***
  College of Engineering, University of Massachusetts, Amherst, MA (2020).
- ***Innovation in Healthcare and Bioscience Award***, BioMed SA, San Antonio, TX (2020)
- ***William Procter Prize for Scientific Achievement***
  Sigma Xi, The Scientific Research Honor Society (2022).
- ***Margaret H. Rousseau Pioneer Award for Lifetime Achievement by a Woman Chemical Engineer***, American Institute of Chemical Engineers (2022).

HONORS

- **Tau Beta Pi; Phi Kappa Phi; Sigma Xi**
- **Co-chair** (with P. Johnson) for the *Functional Biomaterials* Panel, First NIH
- BEACON Symposium on "Building the Future of Biology and Medicine" (1998).
- **Newcomb Lecturer**, Tulane University, New Orleans, LA (1999)
- **Chai**r, Bioengineering Research Partnership, Musculoskeletal and Dental Sciences Emphasis Panel, National Institutes of Health (1999 and 2000)
- **Chai**r, *Nanomaterials and Bioengineering* Session, National Science Foundation (NSF)-European Commission (EC) Workshop: From Nanomaterials to Nanotechnology (2002).

HONORS *(continued)*

Chalmers Jubileums Professor, Chalmers University of Technology, Göteborg, Sweden (Fall, 2002).

Discussion Leader of the *Cellular and Molecular Aspects of Tissue Biomechanics* session at the "Biomaterials: Biocompatibility and Tissue Engineering" Gordon Research Conference, Plymouth, NH (2003).

Invited speaker, Whitney Symposium on "Bionics", General Electric Global Research Center, Niskayuna, NY (2004)

Chair, *Nanoscience and Nanotechnology in Biology and Medicine* Special Emphasis Panel, National Institutes of Health (2005)

Hunter Distinguished Lecturer, Clemson University, Clemson, SC (2007).

Myrle E. and Verle D. Nietzel Visiting Distinguished Faculty Lecturer, University of Kentucky, Lexington, KY (2009)

Distinguished Speaker Series, Department of Bioengineering, Bourns College of Engineering, The University of California at Riverside, Riverside, CA (2011).

Charter Member, **Academy of Distinguished Researchers,** The University of Texas at San Antonio, San Antonio, TX (2015).

Inaugural Vlasta Klima Balloun Lecture, Department of Chemical and Biological Engineering, Iowa State University, Ames, IA (2016).

AIChE Division 15D/E Elected Plenary Speaker; Annual Meeting of the American Institute of Chemical Engineers (AIChE), San Francisco, CA. Presented November 15, 2016. Title: "Cellular Bioengineering: Past, Present, and Future".

MEMBERSHIP IN PROFESSIONAL SOCIETIES (*in alphabetical order*)

- American Association for the Advancement of Science (AAAS)
- American Association of University Women (AAUW)
- American Institute of Chemical Engineers (AIChE)
- American Society for Engineering Education (ASEE)
- Biomedical Engineering Society (BMES)
- Materials Research Society (MRS)
- Society for Biomaterials (SFB)
- Society of Women Engineers (SWE)
- Surfaces in Biomaterials Foundation
- Tissue Engineering and Regenerative Medicine International (TERMIS)

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PROFESSIONAL ACTIVITIES

- **Institute of Chemical Engineering Sciences, Foundation for Research and Technology, Hellas (FORTH), Patras, Greece**
  "Stratis V. Sotirchos Lectureship Award 2022" Committee (Member; Spring 2022)
- **National Science Foundation, Division of Materials Research**. **Alexandria, VA**
  Committee of Visitors. (Member; September 11-13, 2019).
- **Xiangshan Science Conference on Biomaterials, Biomedical Engineering and Regenerative Medicine, Beijing, China.**
  (Co-chair with N. Peppas, W. R. Wagner, X. Cao, X. Gu and X. Fu; October 9-11, 2019).
- ***Consensus Conference on Definitions on Biomaterials for the Twenty-First Century*, International Union of Societies for Biomaterials Scince & Engineering, Chengdu, China** (Invited Delegate; June 11-12, 2018).
- ***Delivery and Controlled Release Carriers and System for Drug, Gene, etc.,* Panel, International Biomaterials Forum on "The Progress and Priority of Contemporary Biomaterials", Chengdu, China** (Panelist; June 13, 2018**).**
- **Site-Visit by the *Review Team for the Academic Program of the Department of Chemical & Biological Engineering*, University of New Mexico, Albuquerque, NM**
  (Member; May 7-9, 2018).
- **European Society for Biomaterials,** International Advisory Committee for the 28th Annual Conference, Athens, Greece (Member, (2017).
- **Committee for the election of the Director of the Greek National Institute for Research, Athens, Greece** (Member, January, 24, 2023).
- **National Council of Research, Technology, and Innovation of Greece (ESETEK), Committee for the election of the Director of the Institute of Chemical Engineering Sciences, Foundation of Research and Technology-Hellas (FORTH/ICE), Athens, Greece.**
  (Member; January, 2023).

Biomedical Engineering Society: Meetings Committee (Chairperson, 1983 - 1984); Membership Committee (Member, 1986 - 1990); Board of Directors (Member, 1987 - 1990); Program Chair, Spring 1991 Meeting; Program Committee (Member, 1990 - 1991); Nominating Committee (Member, 1990 - 1991; 1992 - 1993); BMES Bulletin, Bioengineering Science News Editorial Board (Member, 1990 - 1992; Editor, 1993 - 1994); Nominating Committee (Member, 1996 – 1997); Fellows Selection Committee (Member, 2010 – 2012). Program of the Orthopedic and Rehabilitation Track at the 2010 Annual Meeting: (Co-Chair/Co-Organizer with J. P. Fisher). BMES Fellows Review Committee (Member; 2019 - 2022).

American Institute of Chemical Engineers:

Programming Area 5d/e (Chair, 1999 - 2001).Women's Initiatives Committee (WIC) Panel on "*Women Chemical Engineering Graduate Students and Post-doctoral Fellows: Careers in Academia and in Industry*", Annual 2012 Fall AIChE Meeting, Pittsburgh, PA (Member, October 28, 2012). Women's Initiatives Committee (WIC) Panel on "*Women Assistant Professors in Chemical Engineering: Developing your Career*", Annual 2012 Fall AIChE Meeting, Pittsburgh, PA (Member, October 28, 2012). Women's Initiatives Committee (WIC) Panel on "*Women Chemical Engineering Undergraduate and Graduate Students: Careers Options in Academia and in Industry*", Annual 2015 Fall AIChE Meeting, Salt Lake City, UT (Member; November 8, 2015). Women's Initiatives Committee (WIC) Panel on "*Women Assistant Professors in Chemical Engineering: Developing your Career*", Annual 2015 Fall AIChE Meeting, Salt Lake City, UT (Moderator; Round Table Discussion; November 8, 2015). *Career and Education Operating Council* (Member, 2016 - 2018). *Institute Awards Selection Subcommittee*; Member (January 2023 – December 2025).

PROFESSIONAL ACTIVITIES *(continued)*

Society for Biomaterials: *Program Committee* for the 21st Annual Meeting (Member, 1995); *Program Committee* for the 23rd Annual Meeting (Member, 1997*); "Proteins and Cells at Interfaces" Special Interest Group* (Chairperson, 1995 - 1997); *Awards, Ceremonies and Nominations Committee* (Elected Member, 1998 - 1999); Board of Directors (Elected Member-at-Large, 2005 - 2006); Subcommittee on Biomaterials Fellows (2007). Presenter/Panelist at the *Carry the Torch: Understanding Typology, Leadership and Communication Styles to Become a Dynamic and Effective Leader in the Field of Biomaterials* Workshop, 2007 Annual Meeting, Chicago, IL (2007); Fellows Selection Committee (2010). *Awards, Ceremonies and Nominations Committee* (Elected Member, 2019 - 2020; 2020 - 2021; 2021 - 2022). Fellows in Biomaterial Science and Engineering (FBSE) Nominating Committee, Society for Biomaterials (Member; Spring 2023.

American Institute for Medical and Biological Engineering (AIMBE):
Publications Committee (Chair, 1994 - 1996); Vice-President-at-Large (2009 - 2011). New Inductee Session, (Mentor; April 8, 2018). Review Subcommittee of Nominees for Fellows in Biomaterials Applications (Reviewer in 2018; 2019; 2020). Professional Impact Awards Committee (Member; 2020 and 2021). Awards Committee (2021).

Institute of Electrical and Electronics Engineers (IEEE). Innovations in Healthcare Technology Award Committee (Member, 2019 - 2022).

International Academy of Medical and Biological Engineering (IAMBE):
Fellows Election Committee (Member; 2020-2023).

American Society for Engineering Education (ASEE), Biomedical Engineering Division (BED), Awards Committee (Member; 2018).

Houston Society for Engineering in Medicine and Biology
Program Committee for the "Molecular, Cellular and Tissue Engineering" Sessions for the *26th Annual Houston Conference on Biomedical Engineering Research* (Members: R. Bizios, E. Cosgriff-Hernandez and A.G. Mikos; 2009).

Society of Women Engineers: Women in Academia Committee (Member; 1982-1988).

American Society for Engineering Education:
Women in Engineering Committee (Secretary/Treasurer; 1986 - 1987).
Biomedical Engineering Division Awards Committee (Member; 2015).

Advisory Council, Graduate Program in Biotechnology, Manhattan College:
Riverdale, NY (Member; 1989 - 1994)

EDITORIAL BOARDS

- BMES Bulletin, Bioengineering Science News (Editor, 1993 - 1994; Member 1990 - 1992)
- Modeling in Physiology, The American Physiological Society (1991 - 1994)
- Journal of Biomedical Materials Research: Applied Biomaterials (1998 - 2002)
- Journal of Biomedical Materials Research, Part A (2000 - present)
- Journal of Biomedical Materials Research, Part B (2011 - present)
- Technology/Innovation and Emerging Technologies (2013 – 2022)
- Journal of Nano Research (2013 – present)
- Regenerative Engineering and Translational Medicine (2015 – present).

PROFESSIONAL ACTIVITIES *(continued)*

ADVISORY BOARDS

- Purdue University Tissue Engineering Advisory Board (1997 - 2002)
- University of Southern California, Los Angeles CA, Biomimetic Microelectronic Systems NSF Engineering Research Center Scientific Advisory Board (Member; 2007 – 2012).
- European Consortium on "Creating International Cooperation Teams of Excellence in the Emerging Biomaterials Surface Research" (INCOMAT) (2007 - 2009).
- Institute of Biomedical Research & Technology, Center for Research &Technology-Thessaly (CERETETH), University of Thessaly, Larissa, Greece (2007 – 2012)
- University of New Mexico, Albuquerque, NM, Department of Chemical and Nuclear Engineering, Advisory Council (Member; 2011 - 2014).
- University of New Mexico, Albuquerque, NM, Department of Chemical & Biological Engineering, Advisory Council (Member; 2014-present).
- The *6th International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems*, Corfu, Greece, June 30-July 3, 2019 (Member, 2019).
- Texas A&M University, College Station, TX, Department of Biomedical Engineering, Advisory Board (Member; 2020 - 2023).
- Dean's Advisory Council, College of Engineering, University of Massachusetts, Amherst, MA (Member, 2020 - 2023).
- Advisory Board, Department of Biomedical Engineering, University of Massachusetts, Amherst, MA (Member, 2022 – present).

CONSULTING

- Committee of Examiners for the GRE Engineering Test,
  Educational Testing Service (1990 - 1994)
- MatTek Corporation, Ashland, MA (1989 - 1991)
- Advanced Surface Technology, Inc., North Billerica, MA (1990 - 1993)
- Boston Scientific Corporation (2004 – 2006).

PATENTS

- Dee, K. C, T.T. Anderson, R. Bizios. *KRSR Peptides for Altering Osteoblast Adhesion*. U.S. Patent 6,262,017-B1 (issued July 17, 2001).

- Webster, T.J., R.W. Siegel, R. Bizios. *Nanostructured Ceramic and Composite Materials for Orthopedic-Dental Implants*. U.S.Patent 6,270,347-B1 (issued August 7, 2001).

- Hicks, W. L., Jr., R. Bizios, F. V. Bright, J. A. Gardella, R. Jard, J. S. Lwebuga-Mukasa, A. N. Cartwright, B. Koc. *Resorbable Lamintaed Repair Film and Method of Using Same*. US Patent Number 7,417,174 (issued August 26, 2008).

- Creecy, C. M., R. Bizios. *Alternating Electric Current Directs, Enchances, and Accelerates Mesenchymal Stem Cell Differentiation into either Osteoblasts and Chondrocytes but not Adioocytres*. US Patent Number 8,945,894 (issued February 3, 2015).

PROFESSIONAL ACTIVITIES *(continued)*

REVIEW PANELS

- Technical/Engineering Education Grant Program, New Jersey Department of Higher Education
- NSF Biomedical Engineering and Aiding the Disabled Program
- NSF Visiting Professorships for Women Program
- NSF Faculty Awards for Women Program
- NSF Presidential Faculty Fellows Program
- NSF Graduate Research Fellowship Program
- The New York State Science and Technology Foundation
- NIH Biomedical Research Technology Program Review Committee (1993 - 1996)
- NSF Cost Effective Health Care Technologies
- NASA Microgravity Biotechnology
- Ford Foundation Predoctoral Fellowship Program
- U.S. Department of Energy
- NIH Surgery and Bioengineering Study Section (1997 - 2001)
- NIH Bioengineering Research Partnership, Musculoskeletal and Dental Sciences
- NSF Committee of Visitors, Bioengineering and Environmental Engineering (2002)
- NSF Site Visiting Committee, Engineering Research Centers
- NIH Special Emphasis Review Panel: Nanotechnology (2004; 2005)
- NIH National Institute of Dental & Craniofacial Research Special Grants Review Committee (2004 – 2008)
- NIH/NCRR Centers of Biomedical Research Excellence (COBRE) Special Emphasis Panel (2005)
- NIH Special Emphasis Panel: Skeletal Cell Biology (2006)
- NIH Special Emphasis Panel (ZRG1 BST-G (40)P): RESBIO Site Visit (2007)
- NIH/NIBIB (ZEB1 OSR-E (M1)) Training Grant Review (2008)
- NSF, Site Visit of the Partnership for Research and Education in Materials (PREM) between the University of New Mexico and Harvard University (2009)
- NIH, Center for Scientific Review Special Emphasis Panel, Challenge Grants Panel 4 (ZRG1 BST-M (58), (2009)
- NIH, National Institute of Biomedical Imaging and Bioengineering (NIBIB) Special Emphasis Panel, ARRA NIBIB P30 Enhancing Research Capacity (ZEB1 OSR-B (01), (2009)
- NIH, Biomaterials and Biointerfaces (BMBI) Study Section, Bioengineering Sciences & Technology (BST) `Integrated Review Group, (2009)
- NIH, Center for Scientific Review Special Emphasis Panel (ZRG1 BST-J (40)), Site Visit (2009)
- NIH, Center for Scientific Review, “Topics in Bioengineering” Panel (ZRG1 BST-H 90 M; 2010)
- NIH, Biomaterials and Biointerfaces (BMBI; 2011/01Study Section), (2010)
- NSF PREM Reverse Site Visit Panel A (2010)
- NSF DMR MRSEC Review Panel G (2010)
- NIH, College of CRC Reviewers (2010 – 2012)
- NIH Special Emphasis Panel ZRG1 MOSS-C (05) (Mail Reviewer, Spring 2011)
- NIH Director’s New Innovator Awards, ZGM1 NDIA-S (01)X (2011)
- NIH Special Emphasis Panel ZRG1 MOSS-C (90) (Mail Reviewer, 2011)

PROFESSIONAL ACTIVITIES *(continued)*

REVIEW PANELS *(continued)*

- NIH (ZEB1 OSP-D (J1) P) P41 Site-Visit of a "Bioengineering Technology Resource Center" (2011)
- NIH ZRG1-BST-U (02) M (June, 2012)
- NIH ZRG1-VH-F (10) B (July, 2012)
- NIH Biomaterials and Biointerfaces (BMBI) 2013/01 Panel (September, 2012)
- NIH ZRG1 MOSS-B (02) M (September, 2012)
- NIH ZRG1 BST-U (2) M (January, 2013)
- National Council of Research and Technology (E.S. E.T.) of Greece, ARISTEIA Grant Applications, General Secretariat for Research and Technology, Greek Ministry of Education, Religious Affairs, Culture, and Sports Panel on "Life Sciences outside Medicine", (January/February, 2013)
- NIH ZRG1 MOSS-C (56) (April, 2013)
- NIH ZRG1 BST-J (02) M (April, 2014)
- NSF Reverse Site Visit for PREM (May, 2016)
- NIH ZRG1 BST-H (50) (June 28, 2017)
- NIH NIGMS ZGM1 TRN-7 (MR) (R35) (April 5-6, 2018)
- NSF Virtual PREM Site Visit Panel V 230739 (May 8-9, 2023).

TEXTBOOK

Dee, Kay C, David A. Puleo, Rena Bizios. ***An Introduction to Tissue-Biomaterial Interactions***. John Wiley & Sons. Hoboken, NJ (2002).

BOOK

Puleo, D.A., and R. Bizios (*eds*.). ***Biological Interactions on Material Surfaces: Understanding and Controlling Protein, Cell and Tissue Responses*.** Springer, New York, NY (2009).

JOURNAL SPECIAL ISSUE

Puleo, D., K. C Dee, R Bizios (Guest Editors). Special Issue on ***Current Challenges in Cell-Biomaterial Interactions*.** Biomaterials, vol. 20, No. 23/24 (1999).

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Thesis Research Directed at Rensselaer Polytechnic Institute

Scott J. Solano	*Neutrophil Kinetics in the Healthy Lung*, Master's Thesis (1983).
Carole A. Heath	*A Simple Model for Describing Pulmonary Transport of Fluid and Protein in Unanesthetized Sheep*, Master's Thesis***** (1984)
Mark D. Kramer	*Pulmonary Neutrophil Kinetics in Sheep: A Model Based on Transfer Function Analysis*, Master's Thesis (1984).
Christopher M. Sloan	*The Effect of Elevated Hydrostatic Pressure on Cultured Endothelial Cell Morphology and Transport Properties*, Master's Thesis (1990).
David A. Puleo	*Interaction of Osteoblasts with Orthopedic Biomaterials In Vitro*, Doctoral Thesis (1991).
Arlene D. Acevedo	*Mechanisms of Endothelial Cell Responses to Hydrostatic Pressure: Role of Fibroblast Growth Factor*, Master's Thesis (1992).
Raymond D. Iveson	*Osteoblast Responses to Shear Stress and Electric Current Density*, Master's Thesis (1993).
Brian T. Garvey	*Transmission Electron Microscopy Examination of the Interface Between Osteoblasts and Various Orthopedic Biomaterials*, Master's Thesis (1993).
Kevin C. Olbrich	*Cellular Function on Substrates Modified with Covalently Immobilized, Adhesive Peptides*, Master's Thesis (1994).
Matthew W. Squire	*Analysis of Osteoblast Mineral Deposits on Orthopaedic/Dental Implant Metals*, Master's Thesis (1994).
Sarah A. Salwen	*Vascular Endothelial Cells Exposed to Sustained Hydrostatic Pressure: A Three Dimensional Evaluation of Proliferation and Cytoskeletal Rearrangement*, Master's Thesis (1995).

*****_Co-advisor_

Thesis Research Directed at Rensselaer Polytechnic Institute (*continued*)

Hainsworth Y. Shin	*Synthesis and Release of Bone-Related Proteins by Osteoblasts Exposed to Steady Fluid Shear Stress*, Master's Thesis (1995)
Kay C Dee	*Considerations for the Design of Proactive Dental/orthopaedic Implant Biomaterials*, Doctoral Thesis (1996).
Michael J. Burkstrand	*Bone Cell Adhesion on Substrates Modified with Adhesive Bioactive Peptides*, Master's Thesis (1996).
Lance C. Kam	*Modulation of Neuron and Astroglial Cell Function by Micropatterning and Immobilization of Select Biomolecules on Biomaterial Surfaces*. Doctoral Thesis* (1999).
Thomas J. Webster	*Design, Synthesis, and Evaluation of Nanophase Ceramics for Orthopedic/Dental Applications.* Doctoral Thesis* (2000)
Karen M. Haberstroh	*An In Vitro Model of Bladder Smooth Muscle Cell Function in Response to Sustained Hydrostatic Pressure*. Doctoral Thesis* (2000).
Eric A. Schwartz	*Molecular Mechanisms of the Responses of Human Endothelial Cells to Sustained Hydrostatic Pressure: Involvement of Integrins and Growth Factor Receptors* Doctoral Thesis (2000)
Klaus R. Ullmann	*The Effects of Alternating Electric Current Stimulation on Select Osteoblast Functions*. Master's Thesis (2000)
Meredith E. Hasenbein	*Osteoblast Functions on Micropatterned Surfaces Modified with Select Adhesive Peptides*. Master's Thesis (2001)
Jiro Nagatomi	*An in Vitro Model of the Mechanical Regulation of Bone Homeostasis: Effects of Cyclic Pressure on Select Bone Cell Functions.* Doctoral Thesis (2002)
Peter R. Supronowicz	*The Effects of Biophysical Stimuli on Select Bone Cell Functions Pertinent to Osteogenesis*. Doctoral Thesis (2002)

*****Co-advisor*

Thesis Research Directed at Rensselaer Polytechnic Institute (*continued*)

Sheila L. Dela Cruz	*Effects of Pressure on Vascular Smooth Cell Function.* Master's Thesis (2002)
Anastasia J. McManus	*A Evaluation of the Cytocompatibility and Mechanical Propertis of Novel Polymer:Nanoceramic Composites.* Master's Thesis (2002)
Hainsworth Y. Shin	*Cyclic Pressure Modulates the Endothelial Cell Phenotype: Examination of Pressure-sensitive Mechanotransduction at the Cellular, Transcriptional, and Molecular Levels.* Doctoral Thesis (2003).
Jake D. Ballard	*Investigation of Cell Adhesion to Silica Nanoparticle-Decorated Surfaces and the Associated Protein-Medicated Mechanisms.* Doctoral Thesis***** (2005).
Aaron J. Dulgar–Tulloch	*The Effects of Nanophase Ceramic Materials on the Cellular Functions of Human Mesenchymal Stem Cells*. Doctoral Thesis***** (2005).

*****_Co-advisor_

Postdoctoral Research Directed at Rensselaer Polytechnic Institute

Bradley M. Palmer (1989 - 1990).

Master's Project at Rensselaer Polytechnic Institute

Sam Huang	*Electrical Stimulation of Osteoblasts Cultured in Three-Dimensional Scaffolds* (2002).
Haeran Kim	*Effects of Cyclic Pressure on Select Adult Mesenchymal Stem Cell Functions* (2005).

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Thesis Research Directed at the University of Texas at San Antonio

Ramon E. Coronado *Effects of Hypoxia and of Elevated Pressure on Retinal Cell Proliferation*. Master's Thesis (2011).

Courtney M. Creecy *A Strategy to Optimize Mesenchymal Stem Cell Function Pertinent to Bone Tissue Engineering*. Doctoral Dissertation (2011).

Bachelor's Honor Theses Directed at the University of Texas at San Antonio

Marissa E. Wechsler *Optimization of the Osteodifferentiation of Adult Human Mesenchymal Stem Cells Exposed to Alternating Electric Current Stimulation* (2015).

Postdoctoral Research Directed at the University of Texas at San Antonio

Yu (Lucy) Cong (2009 - 2010)

Harish Talla (2010 - 2011)

Christine F. O'Neill (2011 – 2012)

Sergio A. Montelongo (2019 - 2020)

Pediatric Scholaship Fellow

Julia D. Ruiz, M.D. (2011 – 2012)

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PUBLICATIONS

1. Moore, R., R. Parenti, I.R. Bizios. Effect of freezing and thawing on uptake of amino acids into human erythrocytes. Journal of the Minnesota Academy of Science 37:119-121, 1971.

2. Garcia-Szabo, R.R., F.L. Minnear, R. Bizios, A. Johnson, A.B. Malik. Role of thromboxane in the pulmonary response to pulmonary microembolization. Chest 83S:76S-78S, 1983.

3. Bizios, R., F.L. Minnear, H. van der Zee, A.B. Malik. Effects of cyclooxygenase and lipoxygenase inhibition on lung fluid balance after thrombin. Journal of Applied Physiology: Respiratory Environmental Exercise Physiology 55:462-471, 1983.

4. Garcia-Szabo, R.R., M.B. Peterson, W.D. Watkins, R. Bizios, D.L. Kong, A.B. Malik. Thromboxane generation after thrombin: protective effect of thromboxane synthetase Inhibition on lung fluid balance. Circulation Research 53:214-222, 1983.

5. Malik, A.B., J.W. Fenton, A. Johnson, J. Cooper, R. Bizios, F.L. Minnear. Thrombin-induced pulmonary microembolism: mechanisms of lung vascular injury. Chapter in Acute Pulmonary Insufficiency.The Role of Haemostatic, Fibrinolytic and Related Mechanisms. T. Saldeen (editor), Walter de Gruyter & Co., Berlin, pp. 33-61, 1985.

6. Garcia-Szabo, R.R., D.F. Kern, R. Bizios, J.W. Fenton, II, F.L. Minnear, A.B. Malik. Comparison of alpha- and gamma-thrombin on lung fluid balance in anesthetized sheep. Journal of Applied Physiology: Respiratory Environmental Exercise Physiology 57: 1375-1383, 1984.

7. Cooper, J.A., S.J. Solano, R. Bizios, J.E. Kaplan, A.B. Malik. Pulmonary neutrophil kinetics after thrombin-induced intravascular coagulation. Journal of Applied Physiology: Respiratory Environmental Exercise Physiology 57:826-832, 1984.

8. Malik, A.B., M. Perlman, J. Cooper, T. Noonan, R. Bizios. Pulmonary microvascular effects of arachidonic acid metabolites and their role in lung vascular injury. Federation Proceedings 44:36-42, 1985.

9. Bizios, R., L. Lai, J.W. Fenton, II, S.A. Sonder, A.B. Malik. Thrombin-induced aggregation of lymphocytes: non-enzymic induction by an hirudin-blocked thrombin exosite. Thrombosis Research 38:425-431, 1985.

10. van der Zee, H., R. Bizios, A.B. Malik. High frequency ventilation. Lack of effect on lung dynamics and prostaglandins. Respiration Physiology 61:31-42, 1985.

11. Cooper, J.A., R. Bizios, A.B. Malik. Pulmonary neutrophil kinetics in sheep: effects of altered hemodynamics. Journal of Applied Physiology 59:1796-1801, 1985.

PUBLICATIONS (*continued*)

12. Burhop, K.E., H. van der Zee, R. Bizios, J.E. Kaplan, A.B. Malik. Platelet-activating factor: pulmonary vascular response in awake sheep and role of cyclooxygenase metabolites. American Review of Respiratory Disease 134:548-554, 1986.

13. Garcia, J.G.N., A. Siflinger-Birnboim, R. Bizios, P.J. Del Vecchio, J.W. Fenton, II, A.B. Malik. Thrombin-induced increases in albumin transport across cultured endothelial monolayers. Journal of Cellular Physiology 128:96-104, 1986.

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312. Wechsler, M.E**.** (*presenter*), B. P. Hermann, R. Bizios. Human Mesenchymal Stem Cell Differentiation Monitored by Single Cell Gene Expression Analysis. Presented at the College of Sciences Research Conference, University of Texas at San Antonio, San Antonio, TX (October 3, 2014). *Note*: Marissa E. Wechsler received the Award for "Best Poster Presentation" for Undergraduate Students in *the Regenerative and Molecular Medicine* Category, at this conference (October 3, 2014).

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314. Wechsler, M.E., (*presenter*), R. Bizios. Novel Methodologies to Induce Lineage Specific Differentiation of Human Mesenchymal Stem Cells for Biomedical Applications. Presented at the Annual Biomedical Research Conference for Minority Students (ABRCMS), San Antonio, TX, 2014. *Note*: Marissa E. Wechsler received the "Best Oral Presentation Award" for her presentation at this National Conference (November 15, 2014).

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316. Wechsler, M. E., R. Bizios. Optimization of Alternating Electric Current to Achieve Osteodifferentiation of Adult Human Mesenchymal Stem Cells. Presented at the Second Annual Biomedical Research Symposium, Department of Biomedical Engineering, The University of Texas at San Antonio, San Antonio, TX, 2015.

317. Wechsler, M.E., B.P. Hermann, R. Bizios. Human Mesenchymal Stem Cell Differentiation Monitored by Single-Cell Gene Expression Analysis. Presented at the *UTSA 2015 Undergraduate Research & Creative Inquiry Showcase*, The University of Texas at San Antonio, San Antonio, TX, 2015.

318. Hamalainen, K.A., M.E. Wechsler, R. Bizios, M.A. Reilly. Choroidal Endothelial Cell Functions under Elevated Pressure and High Glucose Concentration. Presented at the *UTSA 2015 Undergraduate Research & Creative Inquiry Showcase*, The University of Texas at San Antonio, San Antonio, TX, 2015.

ABSTRACTS AND PRESENTATIONS (*continue*d)

319. M. E. Wechsler, T. E. Benavidez, M.M. Farrer, R. Bizios, C. D. Garcia. Electrochemically-Pre-adsorbed Collagen Promotes Adult Human Mesenchymal Stem Cell Adhesion on Optically Transparent Nanostructured Carbon. Presented at the "*Biomaterials Day*", Rice University, Houston, TX, 2015.

320. Hamalainen, K.A., M.E. Wechsler, R. Bizios, M.A. Reilly. Select Choroidal Endothelial Cell Functions under Elevated Pressure and High Glucose Concentrations. Presented at the Society for Biomaterials "*Biomaterials Day*", Rice University, Houston, TX, 2015.

321. Wechsler, M.E., B.P. Hermann, R. Bizios. Human Mesenchymal Stem Cell Differentiation Monitored by Single-Cell Gene Expression Analysis. Presented at the International Society for Stem Cell Research (ISSCR) Annual Meeting, Stockholm, Sweden, 2015.

322. Hamalainen, K.A., M.E. Wechsler, R. Bizios, M.A. Reilly. Effects of Elevated Pressure and High Glucose Concentrations on Select Eye Cell Functions. Presented in the "Evidence-based Practice & Research in Healthcare: Encouraging Collaborative Partnerships" event at the *First Annual San Antonio Military Health System (SAMHS) and Universities Research (SURF) Forum*, The University of Texas at San Antonio, San Antonio, TX, 2015.

323. Wechsler, M.E., B.P. Hermann, R. Bizios. Differentiation of Adult Human Mesenchymal Stem Cells Exposed to Alternating Electric Current at the Population and Single-Cell Levels. Presented in the "Evidence-based Practice & Research in Healthcare: Encouraging Collaborative Partnerships" event at the *First Annual San Antonio Military Health System (SAMHS) and Universities Research (SURF) Forum*, The University of Texas at San Antonio, San Antonio, TX, 2015.

324. M. E. Wechsler, T. E. Benavidez, M.M. Farrer, R. Bizios, C. D. Garcia. Adult Human Mesenchymal Stem Cell Adhesion on Optically Transparent Carbon Surfaces Modified with Electrochemically-Adsorbed Protein. Presented at the "*2015 Materials Research Day @UTSA*", The University of Texas at San Antonio, San Antonio, TX, 2015.

325. Wechsler, M.E, B.P. Hermann, R. Bizios. Human Mesenchymal Stem Cell Differentiation Monitored by Single-Cell Gene Expression Analysis. Tissue Engineering, Part A, Supplement 1, 21: S23 (2015). Presented at the 2015 4th Tissue Engineering and Regenerative Medicine (TERMIS) World Congress, Boston, MA, 2015.

326. Hamalainen, K.A., M.E. Wechsler, R. Bizios, M.A. Reilly. Choroidal Endothelial Cell Functions under Elevated Pressure and High Glucose Concentration. Presented at the 2015 Annual Biomedical Engineering Society Meeting, Tampa Bay, FL, 2015.

327. M. E. Wechsler, T. E. Benavidez, M.M. Farrer, R. Bizios, C. D. Garcia. Adult Human Mesenchymal Stem Cell Adhesion on Optically Transparent Carbon Surfaces Modified with Electrochemically-Adsorbed Protein. Presented at the 2015 Annual Biomedical Engineering Society Meeting, Tampa Bay, FL, 2015.

ABSTRACTS AND PRESENTATIONS (*continue*d)

328. Wechsler, M.E., B. P. Hermann, R. Bizios. Novel Methodologies to Induce Osteodifferentiation of Human Mesenchymal Stem Cells for Bone Tissue Engineering and Tissue Regeneration Applications. Presented at the International Bone-Tissue Engineering Congress (Bone-tec), Stuttgart, Germany, 2015.

329. Wechsler, M.E., B. P. Hermann, R. Bizios. Adult Human Mesenchymal Stem Cell Differentiation at the Population and Single-Cell Levels under Alternating Electric Current. Presented in the "Stem Cells in Tissue Engineering" session of the 2015 Annual Meeting of the American Institute of Chemical Engineers (AIChE), Salt Lake City, UT, 2015.

330. Benavidez, T. E., M. E. Wechsler, M. M. Fahrer, R. Bizios, C. D. Garcia. Electrochemically-preadsorbed Collagen Promotes Adult Human Mesenchymal Stem Cell Adhesion. Presented at the *First Chemistry Annual Research Symposium*, Clemson University, Clemson, SC (2016).

331. Shipley, H., R. Bizios, K. Castillo. A Multidisciplinary Approach to Support Undergraduate Students and Improve Retention and Success. Presented at the 2018 American Society for Engineering Education (ASEE) Annual Confernce & Exhibition, Salt Lake City, UT (2018).

332. Pearson, J. J., M. Rahman, J. L. Ong, R. Bizios, T. Guda. Nano-calcium Phosphate Coating and Self-assembled Collagen Direct Enthesis Regeneration on Silk. Presented at the 6th International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems (IC4N 2019), Corfu, Greece (July 3, 2019).

333. Pearson, J. J., M. Rahman, J. L. Ong, R. Bizios, T. Guda. Mechanical Evaluation of Bone-Ligament Silk Grafts for Enthesis Regeneration. Presented at the Annual Meeting of the Biomedical Engineering Society (BMES). Philadelphia, PA (October 16-19, 2019).

334. Montelongo, S. A., G. Chiou, M. R. Appleford, J. L. Ong, R., Bizios, T. Guda. Effect of Hydrostatic Pressure on the Differentiation of SHADS for Dentin Regeneration. Presented at the Annual Meeting of the Biomedical Engineering Society (BMES). Philadelphia, PA (October 16-19, 2019).

335. Chiou, G., S. A. Montelongo, B. Ram, F. Acosta, R. Bizios, C. R. Rathbone, T. Guda. Matrix Support and Fluid Perfusion Impact Dental Pulp Revitalization. Presented at the Annual Meeting of the Biomedical Engineering Society (BMES). Philadelphia, PA (October 16-19, 2019).

336. Guda, T., Pearson, J. J., M. Rahman, J. L. Ong, R. Bizios. Evaluation of a Mineralized Silk, Collagen Graft for Enthesis Regeneration. Presented at the TERMIS-AP 2019 Meeting, Brisbane, Australia (October 16, 2019).

337. Bizios, R., Montelongo, S. A., G. Chiou, J. L. Ong, T. Guda. Applications of biophysical stimuli towards regenerative endodontics. Presented at the TERMIS-AP 2019 Meeting, Brisbane, Australia (October 16, 2019).

ABSTRACTS AND PRESENTATIONS (*continue*d)

338. Miar, S., C. Pearson, J. Ong, R. Bizios, G. Dion, T. Guda. Gecko inspired adhesive patches for laryngeal stenosis therapy. Presented at the 11th World Biomaterials Congress (virtual), Glasgow, Scotland, (December 11-16, 2020).

339. Chiou, G., A. Boehme, E. Jui, F. Acosta, C. Perez, J. Ong, R. Bizios, C. Rathbone, T. Guda. Role of biomaterial scaffold architecture in tissue vascularization: experimental and computational validation. Presented at the 11th World Biomaterials Congress (virtual), Glasgow, Scotland, (December 11-16, 2020).

340. Shipley, H., R. Bizios, K. Castillo, R. Guo, T. Yuen. A student success program for engineering undergraduate students to improve retention and graduation. Presented at the American Society for Engineering Education (ASEE) Virtual Conference (June 22-26, 2020).

341. Miar, S., Y. Pillai, F. F. Tiner, R. Bizios, J. L. Ong, G. Dion, T. Guda. Endotracheal tube modified with polycaprolactone fiber coating for sustained release of dexamethasone. Presented at the at the 2020 Annual Meeting of the Biomedical Engineering Society (virtual), San Diego, CA, (October 14-17, 2020).

342. Miar, S., F. F. Tiner, C. Pearson, R. Bizios, J. Ong, G. Dion, T. Guda. Bioinspired drug delivery system for tracheal stenosis treatment. Presented at the at the 2020 Annual Meeting of the Biomedical Engineering Society (virtual), San Diego, CA (October 14-17, 2020).

343. Guda, T., G. Chiou, E. Jui, A. C. Rhea, A. Gorthi, S. Miar, F. M. Acosta, C. Perez, Y. Suhail, K. Gupta, J. L. Ong, R. Bizios, C. R. Rathbone. Scaffold architecture and matrix strain modulate mesenchymal cell and microvascular growth and development in a time-dependent manner. Presented at the at the 2020 Virtual Annual Meeting of the Biomedical Engineering Society, San Diego, CA, (October 14-17, 2020).

344. Miar, S., Helal, Z., Y. Pillai, R. Bizios, J. L. Ong, G. Dion, T. Guda. Development of an *in vitro* microphysiological model of the tracheal epithelium. Presented at the Society for Biomaterials Annual Meeting (virtual); (April 22, 2021).

345. Miar, S., F. F. Tiner, Y. Pillai, R. Bizios, J. L. Ong, G. Dion, T. Guda. The development of lubricated drug-eluting composite coatings for endotracheal tubes. Presented at the Society for Biomaterials Annual Meeting (virtual); (April 23, 2021).

346. Chiou, G., I. Arredondo, J. L. Ong, C. Rathbone, R. Bizios, T. Guda. Matrix support and microvessel physiology synergistically determine tissue vascularization. Presented at the Annual Biomedical Engineering Society Meeting, Orlando, FL (October 7, 2021).

347. Miar, S., F. Fernandes Tiner, R. Bizios, J. Ong, G. Dion, T. Guda. Innovative endotracheal tubes for tracheal stenosis prevention: tunable dual-release targeting fibroplasia. Presented at the Annual Biomedical Engineering Society Meeting, Orlando, FL (October 8, 2021).

ABSTRACTS AND PRESENTATIONS (*continue*d)

348. Miar, S., Y. Pillai, Z. Helal, R. Bizios, J. L. Ong, G. R. Dion, T. Guda. The correlation between local mechanical properties of modified endotracheal tubes and the degree of laryngotracheal mucosal damage in a porcine *ex vivo* model. Presented at the Annual Biomedical Engineering Society Meeting, Orlando, FL (October 6-9, 2021).

349. Miar, S., Y. Pillai, Z. Helal, R. Bizios, J. Ong, G. Dion, T. Guda. Mimickied mucosal layer of upper airway using 3D polycaprolactone electrospun fibers in a coculture system. Presented at the Annual Biomedical Engineering Society Meeting, Orlando, FL (October 8, 2021).

350. Chiou, G., A. Gorthi, J. Ong, J. Chen, R. Bizios, C. Rathbone, T. Guda. Biomaterial scaffold architecture impacts tissue vascularization pattern via matrix strain. Presented at the 6th World Congress of the Tissue Engineering and Regenerative Medicine International Society Meeting World Congress (TERMIS) 2021 (virtual). Maastricht, The Netherlands (November 11-14, 2021).

351. Miar, S., R. Bizios, T. Guda**.** The impact of polycaprolactone electrospun fibers' orientation on laryngotracheal scar tissue models. Presented at the 6th World Congress of the Tissue Engineering and Regenerative Medicine International Society Meeting (TERMIS) World Congress 2021 (virtual). Maastricht, The Netherlands (November 11-14, 2021).

352. Miar, S., R. Bizios, J.L. Ong, G. Dion, T. Guda. Coculture for upper airway modeling: understanding basemenet membrane regulation. Cellular and Molecular Bioengineering Meeting of the Biomedicl Engineering Society, Indian Wells, CA (January 3-7, 2021).

353. Miar, S., R. Bizios, J.L. Ong, G. Dion, T. Guda. Polycaprolactone electrospun fibers to modulate basement membrane remodeling in upper airway coculture. Presented at the Joint Symposium of the Society for Biomaterials--Japanese Society for Biomaterials. Honolulu, HI (January 8-10, 2022).

354. Chiou, G., I. Arredondo, J. Ong, R. Bizios, T. Guda. Temporal dynamics of interpenetrating Collagen I:Fibrin hydrogels in supporting musculoskeletal remodeling. Presented at the Jont Symposium of the Society for Biomaterials--Japanese Society for Biomaterials. Honolulu, HI (January 8-10, 2022).

355. Chiou, G., I. Arredondo, J. Ong, R. Bizios, T. Guda. Interpenetrating Collagen I:Fibrin matrices differentially support musculoskeletal remodeling over time. Presented at the Society for Biomaterials Annual Meeting, Baltimore, MD (April, 2022).

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356. Miar, S., G. Gonzales, R. Bizios, J.L. Ong, T. Guda. Microphysiological systems to modeling basement membrane in the upper airway. Presented at the MicroPhysiological Society Meeting. New Orleans, LA (June, 2022).

ABSTRACTS AND PRESENTATIONS (*continue*d)

357. Miar, S., G. Gonzales, R. Malka, J. Ong, R. Bizios, G. Dion, T. Guda. Restoring vocal fold biomechanics after laryngeal nerve injury through biomaterial augmentation. Presented at the 7th International Conference on Tissue Engineering in conjunction with the "5th International Conference on Regenerative Biomedical Materials", Ioannina, Greece (May, 2022).

358. Chiou, G., E. Jui, A. Rhea, R. Bizios, J. Ong, C. Rathbone, T. Guda. Matrix strain and stromal support guide tissue engineering scaffold vascularization in a time dependent manner. Presented at the 7th International Conference on Tissue Engineering in conjunction with the "5th International Conference on Regenerative Biomedical Materials", Ioannina, Greece (May, 2022).

359. Chiou, G., I. Arredondo, J. Ong, R. Bizios, T. Guda. Differential Temporal Remodeling of Collagen I: Fibrin Matrices Via Musculoskeletal Progenitor Cells. Presented at the 2022 Annual Meeting of the Biomedical Engineering Society, San Antonio, TX (October 14, 2022).

Rena Bizios

INVITED LECTURES/SEMINARS

- Department of Physiology, New York Medical College, Valhalla, NY (March 16, 1987).
- Center for Biochemical Engineering, Duke University, Durham, NC (March 31, 1988).
- Chemical Engineering Department, University of Puerto Rico, Mayaguez, PR (June 27, 1988).
- Department of Pathology/Biomaterials, University of Medicine and Dentistry of New Jersey, Piscataway, NJ (November 20, 1989).
- Tekmat Corporation, Ashland, MA (November 21, 1989).
- Department of Chemical Engineering, Tufts University, Medford, MA (April 23, 1990).
- Miles, Inc., West Haven, CT (June 4, 1990).
- Zimmer, Inc., Warsaw, IN (June 28, 1990).
- Pulmonary Research Group, School of Medicine, Indiana University, Indianapolis, IN (June 29, 1990).
- MatTek Corporation, Ashland, MA (July 18, 1990).
- Creative Biomolecules, Hopkinton, MA (August 17, 1990).
- Pharmacia, Experimental Medicine-La Jolla, San Diego, CA (September 5, 1990).
- School of Engineering Fischbach Lecture Series, Manhattan College, Riverdale, NY (February 27, 1991).
- Department of Applied Mechanics and Engineering Sciences, Bioengineering, The University of California at San Diego, La Jolla, CA (November 15, 1991).
- Department of Orthopaedics, Rhode Island Hospital, Providence, RI (March 11, 1992).
- Center for Biophysics, Rensselaer Polytechnic Institute, Troy, NY (March 31, 1992).
- Biomaterial Seminarium, University of Göteborg (Anatomiska Institutionen, Institutionen för Handikappforskning, Histologiska Institutionen) and Chalmers University of Technology (Institutionen för Fysik), Göteborg, Sweden (May 5, 1992).
- Center for Biophysics, Rensselaer Polytechnic Institute, Troy, NY (December 1, 1992)
- College of St. Rose, Albany, NY (January 27, 1993).
- Miles, Inc., West Haven, CT (June 9, 1993).
- Department of Chemical Engineering, Rensselaer Polytechnic Institute, Troy, NY (February 9, 1994).

INVITED LECTURES/SEMINARS (*continued*)

- Department of Chemical Engineering, Rice University, Houston, TX (March 16, 1995).
- Laboratory for Tumor Biology, Department of Radiation Oncology, Massachusetts General Hospital, Boston, MA (December 14, 1995).
- College of Dentistry, New York University, New York, NY (October 10, 1996).
- Bard Vascular Systems Division, Chelmsford, MA (September 11, 1997).
- Institut des Biomatériaux du Québec, Pavillon Saint-François d'Assise, Centre Hospitalier Universitaire de Québec, Québec (Québec), Canada (September 19, 1997).
- Department of Bioengineering & Institute for Biomedical Engineering, The University of California at San Diego, La Jolla, CA (April 22, 1998).
- Biomedical Engineering Institute, University of Minnesota, Minneapolis, MN (October 6, 1998).
- School of Chemical Engineering, Purdue University, West Lafayette, IN (January 19, 1999).
- Departments of Biomedical Engineering and of Chemical Engineering, Tulane University, New Orleans, LA (April 16, 1999).
- College of Dentistry, New York University, New York, NY (May 11, 1999).
- Lehrstuhl für Pharmazeutische Tecnologie, Universität Regensburg, Regensburg, Germany (July 13, 1999).
- School of Pharmacy, University of Wisconsin-Madison, Madison, WI (September 3, 1999).
- School of Dentistry, University of Michigan, Ann Arbor, MI (February, 24, 2000).
- Department of Oral Biology, University of Medicine & Dentistry of New Jersey, Newark, NJ (March 14, 2000).
- Center for Cardiovascular Sciences, Albany Medical College, Albany, NY (September 22, 2000).
- Department of Chemical Engineering, State University of New York at Buffalo, Buffalo, NY, (September 27, 2000).
- Department of Biomedical Engineering, University of California, San Diego, La Jolla, CA, (November 14, 2000).

INVITED LECTURES/SEMINARS (*continued*)

- Department of Materials Science and Engineering, Rensselaer Polytechnic Institute, Troy, NY, (January 25, 2001).
- Johnson & Johnson Corporate Biomaterials Center, Somerville, NJ, (February 13, 2001).
- Department of Biomedical Engineering, Duke University, Durham, NC (March 9, 2001).
- Department of Orthopaedics, Medical School of Larissa, Larissa, Greece (June 9, 2001).
- Department of Bioengineering, University of Pittsburgh, Pittsburgh, PA (November 16, 2001).
- Department of Biomedical Engineering, University of California at Davis, Davis, CA (March 11, 2002).
- Bioscience Colloquium, Chalmers University of Technology, Göteborg, Sweden (October 1, 2002).
- Physics and Engineering Physics Colloquium, Chalmers University of Technology, Göteborg, Sweden (October 17, 2002).
- Biomaterials Research Center, Göteborgs University, Göteborg, Sweden (November 7, 2002).
- Laboratoire de Recherches Orthopédiques, U.P.R.E.S. - A. – C.N.R.S. 7052, Université Denis Diderot – Paris VII, Paris, France (April 14, 2003).
- Laboratoire de Recherches Orthopédiques, U.P.R.E.S. - A. – C.N.R.S. 7052, Université Denis Diderot – Paris VII, Paris, France (May 6, 2003).
- Department of Bioengineering and Neuroscience, Syracuse University, Syracuse, NY (October 31, 2003).
- Department of Chemical, Biomedical and Materials Engineering, Stevens Institute of Technology, Hoboken, NJ (November 12, 2003).
- Laboratoire de Recherches Orthopédiques, U.P.R.E.S. - A. – C.N.R.S. 7052, Université Denis Diderot – Paris VII, Paris, France (November 27, 2003).
- Research Service, Stratton Veterans Administration Medical Center, Albany, NY (February 5, 2004).
- Department of Chemical and Department of Mechanical Engineering, University of Puerto Rico, Mayaqüez, Puerto Rico (April 1, 2004).
- GE Global Research Center, Niskayuna, NY (March 8, 2004).
- Department of Materials Science and Engineering, University of Connecticut, Storrs CT (September 22, 2004).
- Department of Biology, Minority Biomedical Research Support (MBRS) and Minority Access to Research Careers (MARC) Programs, University of Texas at San Antonio, San Antonio, TX (October 1, 2004).

INVITED LECTURES/SEMINARS (*continued*)

- Boston Scientific Corporation, Natick, MA (December 13, 2004).
- Laboratoire de Recherches Orthopédiques, U.P.R.E.S. - A. – C.N.R.S. 7052, Université Denis Diderot – Paris VII, Paris, France (June 9, 2005).
- School of Dentistry, University of Missouri in Kansas City (UMKC), Kansas City, MO (October 7, 2005).
- College of Dentistry, New York University, New York, NY (November 17, 2005).
- Central Texas Chapter of the IEEE Engineering in Medicine and Biology Society, San Antonio, TX (September 21, 2006).
- Department of Biomedical Engineering, The University of Texas at Austin (October 25, 2006).
- Department of Biomedical Engineering, Clemson University, Clemson, SC (February 23, 2007).
- Department of Chemical, Biological and Materials Engineering, The University of Oklahoma, Norman, OK (October 25, 2007).
- Department of Chemical and Department of Biomedical Engineering, Wayne State University, Detroit, MI (November 15, 2007).
- Laboratoire de Recherches Orthopédiques, U.P.R.E.S. - A. – C.N.R.S. 7052, Université Denis Diderot – Paris VII, Paris, France (January 10, 2008).
- Department of Chemical Engineering, University of West Virginia, Morgantown, WV (October 17, 2008).
- Kinetic Concepts, Inc. (KCI), San Antonio, TX (November 24, 2008).
- University of Kentucky Graduate School and Center for Biomedical Engineering, University of Kentucky, Lexington, KY (May 4, 2009).
- Department of Materials Science and Engineering,The University of Texas at Arlington, Arlington, TX (October 30, 2009).
- Department of Biology, The University of Texas at San Antonio, San Antonio, TX (April 19, 2010).
- Seminars in Translational Research (STRECH), The University of Texas Health Science Center at San Antonio, San Antonio, TX (March 23, 2011)
- Department of Biomedical Engineering, Illinois Institute of Technology, Chicago, IL (April 8, 2011).

INVITED LECTURES/SEMINARS (*continued*)

- Department of Bioengineering, University of California at Riverside, Riverside, CA (April 20, 2011).
- Department of Chemical Engineering, University of Massachusetts, Amherst, MA (April 3, 2012).
- Laboratory of Bioengineering and Biomechanics for Bone Articulation (B2OA – UMRCNRS 7052), Université Denis Diderot, Paris, France (May 25, 2012).
- Laboratory for Plasma Processing of Materials, Department of Mechanical Engineering, Universidade Federal do Rio Grande do Norte, Natal, RN, Brazil (August 14, 2012).
- Bioengineering Graduate Program, The University of Kansas, Lawrence, KS, "Fall 2012 Bioengineering Colloquium" (November 2, 2012).
- RISE 2BEST Program, University of Puerto Rico, Mayaguez, PR (December 6, 2012).
- San Antonio Nano-Tech Forum (SANTF), San Antonio, TX (January 30, 2013).
- Weldon School of Biomedical Engineering, Purdue University, West Lafayette, IN (April 24, 2013).
- UTSA MBRS-RISE Summer Research Experience Program, San Antonio, TX (July 31, 2013).
- Department of Material Science and Engineering,The University of Texas at Arlington, Arlington, TX (September 13, 2013).
- Department of Chemical and Biomolecular Engineering, University of California at Los Angeles, Los Angeles, CA (November 1, 2013).
- Department of Apllied Physics, Chalmers University of Technology, Gothenburg, Sweden "A Short Introduction to Tissue Engineering" (November 26, 2015).
- Department of Apllied Physics, Chalmers University of Technology, Gothenburg, Sweden "Biomedical Engineering in the United States of America: A Short Historical Perspective"" (November 26, 2015).
- Department of Apllied Physics, Chalmers University of Technology, Gothenburg, Sweden "Effects of Electric Stiumlation on Bone Cell Functions Pertinent to New Tissue Formation" (November 26, 2015).
- Department of Material Science and Engineering,The University of Texas at Arlington, Arlington, TX (March 3, 2017).

Rena Bizios

INVITED PRESENTATIONS AT LOCAL/REGIONAL/NATIONAL/INTERNATIONAL CONFERENCES

- Bizios, R. (*Speaker*), P.J. Del Vecchio, A.B. Malik. *Transport properties of cultured vascular endothelial monolayers*. Presented at the 40th Annual Conference on Engineering in Medicine and Biology, Niagara Falls, NY, 1987.

- Bizios, R. (*Speaker*), R.S. Cargill, R.D. Iveson, L.A. Holleran. *Cultured endothelial monolayers: A model for transport studies*. Presented at the International Symposium on Engineering Approaches to Atherosclerosis, World Congress on Medical Physics and Biomedical Engineering, San Antonio, TX, 1988.

- Sloan, C.M., S.S. Bowser, R. Bizios (*Speaker*). *Endothelial cell responses to sustained normal stresses*. Workshop on "Mechanical Stress Effects on Vascular Cells." Presented at the "Mechanical Stress Effects on Vascular Cells" Workshop, Atlanta, GA, 1991.

- Puleo, D.A., R. Bizios (*Speaker*). Mechanisms of osteoblast adhesion to biomaterials. Presented at the Fall Meeting of the Materials Research Society, Boston, MA, 1991.

- Bizios, R. (*Speaker*). *Mechanisms of osteoblast adhesion to substrates*. Presented at the Cells and Materials Symposium of the 1993 Scanning Microscopy Meeting, Los Angeles, CA, 1993.

- Bizios, R. (*Speaker*). *In vitro studies of osteoblast interactions with implant biomaterials*. Presented at the Biological Mechanisms of Tooth Eruption, Resorption and Replacement by Implants International Conference, Danvers, MA, 1993.

- Bizios, R. (*Speaker*). *Cell function on surfaces containing immobilized, bioactive peptides*. Presented at the Biomaterials for Drug and Cell Delivery Symposium of the 1993 Fall Materials Research Society Meeting, Boston, MA, 1993.

- Shin, H.Y., F.A. Blumenstock, R. Bizios (*Speaker*). *Osteoblast responses to steady shear stress*. Presented at the Symposium on Cell Mechanics and Cellular Engineering, Second World Congress of Biomechanics, Amsterdam, The Netherlands, 1994.

- Schwartz, E.A. (*Speaker*), R. Bizios, M.E. Gerritsen. *Effects of sustained hydrostatic pressure on the expression of adhesion molecules by human vascular endothelial cells*. Presented at the Mechanical Force Regulation on Genes Minisymposium, Experimental Biology `96 Meeting, Washington, DC, 1996.

- Bizios, R. (*Speaker*). *Molecular responses of endothelial cells to normal stresses*. Presented at the Scientific Conference on The Pathogenesis and Treatment of Pulmonary Edema, Eighth Pulmonary Circulation Conference, American Heart Association/American Thoracic Society/The Pulmonary Circulation Foundation, Sedalia, CO, 1996.

- Bizios, R. (*Speaker*). *Conditions that optimize bone cell interactions with materials*. Presented at the Surfaces in Biomaterials `96 Symposium, Phoenix, AZ, 1996.

INVITED PRESENTATIONS AT LOCAL/REGIONAL/NATIONAL/INTERNATIONAL CONFERENCES (*continued*)

- Dee, K.C. (*Speaker*), T.T. Andersen, R. Bizios. *Immobilization of Select Peptides to Control Osteoblast Adhesion*. Presented at the BIOSURF. Biomaterials: Surfaces & Biocompatibility, Eidgenössische Technische Hochschule, Zürich, Switzerland, 1997.

- Bizios, R. (*Speaker*). *Bone Cell Responses to Mechanical Perturbations*. Presented at the Biological Mechanisms of Tooth Eruption, Resorption, and Replacement by Implants International Conference, Toledo, Spain, 1997.

- Bizios, R. (*Speaker*). *Proactive Biomaterials*. Presented at the 24th Annual Meeting of the Society for Biomaterials, San Diego, CA, 1998.

- Bizios, R. (*Speaker*). *Proactive Biomaterials for Tissue Engineering Applications*. Presented at 2nd Annual NMHCC Bio/Technology Conference on Orthopaedic Tissue Engineering, Boston, MA, 1998.

- Schwartz, E.A., R. Bizios, M.E. Gerritsen (*Speaker*). *Endothelial Cell Responses to Sustained Pressure*. Presented at the 1999 Lifeline Foundation Research Initiatives Conference, "Movers and Shakers in the Vascular Tree-Hemodynamic and Biomechanical Factors in Blood Vessel Pathology", Bethesda, MD, 1999.

- Bizios, R. (*Keynote Speaker*). *Design and Evaluation of Proactive Biomaterials*. Presented at The NIST International Symposium on Advanced Materials with Biomedical Applications, Gaithersburg, MD, 1999.

- Bizios, R. (*Speaker*). *Cell Adhesion and Adhesive Receptors*. Presented at the Advances in Tissue Engineering short course, Rice University, Houston, TX, 1999.

- Bizios, R. (*Speaker*). *Cell Interactions with Patterned Surfaces*. Presented at the Nanobio-technology Interfacing the Physical and Biological Worlds Symposium, Albany, NY, 2000.

- Schwartz, E. A., M.E. Gerritsen, R. Bizios (*Speaker*). *Endothelial Cell Responses to Sustained Pressure*. Presented at the World Congress on Medical Physics and Biomedical Engineering, Chicago, IL, 2000.

- Bizios, R. (*Speaker*). *Synthesis and Evaluation of Nanophase Materials for Orthopaedic/Dental Applications*. Presented at the 5th New Jersey Symposium on Biomaterials Science, Somerset, NJ, 2000.

- Bizios, R. (*Speaker*). *New Directions for Biomaterials Research.* Presented at the “Frontiers of Materials Research” Symposium at the Fall 2000 Materials Research Society (MRS) Meeting, Boston, MA, 2000.

INVITED PRESENTATIONS AT LOCAL/REGIONAL/NATIONAL/INTERNATIONAL CONFERENCES (*continued*)

- Bizios, R. (*Speaker*), D.W. Metzger, S. Salon, R.W. Siegel, R.H. Doremus, P. Ajayan, L. Schadler. "*Strategies for Bone Tissue Engineering: Novel Material Formulations and Select Biophysical Stimuli*". Presented at the Biotechnology in the Capital Region. Part I: Imaging and Bioengineering, Rensselaerville, NY, 2001.

- Bizios, R. (*Speaker*). *Design and Evaluation of Biomaterials that Modulate Biological Activity*. Presented at the International and American Association for Dental Research (IADR) Meeting, San Diego, CA, 2002.

- Bizios, R. (*Speaker*), R.W. Siegel, P.M. Ajayan, R.H.Doremus. *Nanocomposite Materials for Orthopaedic Applications*. Presented at the "Polymers in Orthopaedics: Resorbable and Nanostructured Polymers" Symposium at the 224th National Meeting of the American Chemical Society, Boston, MA, 2002.

- Bizios, R. (*Speaker*), R.W. Siegel, P.M. Ajayan, R.H. Doremus. *Nanocomposites for Orthopaedic/Dental Applications*. Presented at the NSF-EC Nanomaterials Workshop: From Nanomaterials to Nanotechnology, Cambridge, MA, 2002.

- Bizios, R. (*Speaker*). *Nanophase Materials for Orthopaedic/Dental Applications*. Presented at the International Symposium on "Applications of Nanotechnology for Biomaterials and Artificial Organs", Tokyo, Japan, 2003.

- Bizios, R. (*Speaker*). *Synthesis and Evaluation of Nanoocmposite Materials for Orthopaedic/Dental Applications*. Presented at the European Congress on Advanced Materials and Processes, Lausanne, Switzerland, 2003.

- Bizios, R. (*Speaker*). *Tissue Engineering.* Presented at the "2003 Whitney Symposium on Bionics", GE Global Research Center, Niskayuna, NY, 2004.

- Bizios, R. (*Speaker*), R.W. Siegel, P.M. Ajayan, L.S. Schadler. *Nanostructured Materials for Orthopaedic/Dental Applications*. Plenary presentation at the 133rd TMS Annual Meeting & Exhibition, Charlotte, NC, 2004.

- Bizios, R. (*Speaker*). *Strategies for Bone Tissue Engineering: The Role of Select Biophysical Stimuli.* Presented at the Regenerate 2004: Tissue Engineering the Human Body, Seattle, WA, 2004.

- Bizios, R. (*Speaker*). *Strategies for Bone Tissue Engineering: Novel Material Formulations and Select Biophysical Stimuli*. Presented at the Société de Biomécanique-Gamac. Congrès 2004, Paris, France, 2004.

- Bizios, R. (*Speaker*). *Cellular Responses to Select Biophysical Stimuli*. Presented at the 4th International Technology Transfer Days: Biomaterials 2004, Erfurt, Thüringen, Germany, 2004.

INVITED PRESENTATIONS AT LOCAL/REGIONAL/NATIONAL/INTERNATIONAL CONFERENCES (*continued*)

- Bizios, R. (*Speaker*). *Mammalian Cell Interactions with Nanophase Materials*. Presented at the "Applications of Micron and Nanoscale Materials in Biology and Medicine" Symposium at the Fall 2004 Materials Research Society (MRS) Meeting, Boston, MA, 2004.

- Bizios, R. (*Speaker*). *Bone Cell Responses to Select Biophysical Stimuli*. Presented at the "Current Concepts & Advancements in the Management of Knee Disorders" International Symposium, Larissa, Greece, 2004.

- Bizios, R. (*Speaker*). *Strategies for Bone Tissue Engineering: Material Substrates, Growth Factors and Select Biophysical Stimuli*. Presented at the "Current Concepts & Advancements in the Management of Knee Disorders" International Symposium, Larissa, Greece, 2004.

- Bizios, R. (*Speaker*). *Challenges for Tissue Engineering Applications in Tissue Repair*. Presented at the 2nd International Conference on Tissue Engineering, Crete, Greece, 2005.

- Bizios, R. (*Speaker*). *Design Strategies for the Next Generation of Nanophase Materials for Biomedical Applications.* Presented at the "Next Generation Biomaterials" Symposium at the Materials Science & Technology 2005 Conference, Pittsburgh, PA, 2005.

- Bizios, R. (*Speaker*). *Mammalian Cell Function on Nanostructured Materials*. Presented at the "Whitaker Nanobioengineering Symposium: Nanotechnology in Medicine and Biology", The Associated Nanotechnology Congress Meeting, Houston, TX (October 11, 2005).

- Bizios, R. (*Speaker*). *Mammalian Cell Function on Nanostructured Materials*. Presented at the "Whitaker Nanobioengineering Symposium: Nanotechnology in Medicine and Biology", The Associated Nanotechnology Congress Meeting, Houston, TX (October 11, 2005).

- Bizios, R. (*Speaker*). *Design and Evaluation of Biomaterials to Induce Biological Activity*. Presented at the "Biological Responses to Central nervous System Implants" Research Symposium, Biomimetic MicroElectronic Systems Center, University of Southern California, Los Angeles, CA (January 27, 2006).

- Bizios, R. (*Speaker*). *Design Strategies for the Next Generation of Nanophase Materials for Biomedical Applications*. Presented at the "23rd Annual Houston Conference on Biomedical Engineering Research", The Houston Society for Engineering in Medicine and Biology, Houston, TX (February 9, 2006).

- Bizios, R. (*Speaker*). *Mammalian Cell Interactions on Nanostructured Materials*. Presented at the "Nanomaterials Applications in Orthopaedics" Workshop at the 52nd Meeting of the Orthopaedic Research Society, Chicago, IL (March 20, 2006).

- Bizios, R. (*Speaker*). *Vascular Cell Responses to Pressure.* Presented at the "Symposium on the 65th Birthday of Professor Clark K. Colton", at the 2006 Annual Meeting of the American Institute of Chemical Engineers (AIChE), San Francisco, CA (November 14, 2006).

INVITED PRESENTATIONS AT LOCAL/REGIONAL/NATIONAL/INTERNATIONAL CONFERENCES (*continued*)

- Bizios, R. (*Speaker*). *Nanophase Materials for Biomedical Applications.* Presented at the "Biomaterials from 2D to 3D to Larger than Life" Symposium on the Future of Biomaterials to Celebrate Professor Buddy Ratner's 60th Birthday, Maui, Hawaii (December 17, 2006).

- Bizios, R. (*Speaker*). *Design of Material Substrates to Modulate Biological Activity*. Presented at the First "Creating International Cooperation Teams of Excellence in the Emerging Biomaterials Surface Research" (INCOMAT) Meeting, Erfurt, Germany (May 11, 2007).

- Bizios, R. (*Speaker*). *Nanophase Materials for Biomedical Applications.* Presented at the "omics & Nanotechnology in Biomedicine" International Symposium, Institute of Biomedical Research & Technology, School of Health Sciences, University of Thessalia, Larissa, Greece (December 1, 2007).

- Bizios, R. (*Speaker*). *Materials for Cell Targeting Pertinent to New Tissue Formation and Function*. Presented at the Second Regional Bioengineering Day, University of Kansas Medical Center, Kansas City, KS (December 8, 2007).

- Bizios, R. (*Speaker*). *Challenges and Opportunities in Tissue Engineering, Genetic Engineering and Regenerative Medicine*. Presented at the 25th Annual Houston Conference on Biomedical Engineering Research, The Houston Society of Engineering in Medicine and Biology (HSEMB), Houston, TX (February 8, 2008).

- Gibson, C.C., D.A. Puleo and R. Bizios (*Speaker*). *The Role of Growth Factors and Soluble Mediators in Bone Tissue Engineering*. Presented at the Third International Conference on Tissue Engineering, Rhodes, Greece (September 22, 2008).

- Bizios, R. (*Speaker*). *Biomimetic Extracellulae Matrix Analogue Coatings*. Presented at the "5th International Technology Transfer Days: Biomaterials 2009", Erfurt, Germany (February 19, 2009).

- Bizios, R. (*Speaker*). *Nanophase Materials for Medical Implant Applications: Potential, Challenges and Opportunities*. Presented at the "2nd International Conference from Nanoparticles & Nanomaterials to Nanodevices & Nanosystems", Rhodes, Greece (June 30, 2009).

- Bizios, R. (*Speaker*). *The Tissue/Hydroxyapatite Implant Interface: A Cellular Perspective*. Presented at the "2nd Biomaterials Symposium", Queen Mary University of London, London, UK (November 30, 2009).

- Bizios, R. (*Invited Plenary Speaker*). Nanostructured *Biomaterials for Implant Applications: Potential, Challenges and Future Directions*. Presented at the "Nanotheranostics: Fabrication and Safety Concerns". Ayia Napa, Cyprus (April 28, 2010).

INVITED PRESENTATIONS AT LOCAL/REGIONAL/NATIONAL/INTERNATIONAL CONFERENCES (*continued*)

- Bizios, R. (*Speaker*). *Nanostructured Biomaterials for Implant Applications: Potential, Challenges and Future Directions*. Presented at the "XIX International Materials Research Congress (IMRC) 2010, Symposium 21: Nanomaterials for Biomedical Applications" Symposium. Cancun, Mexico (August 16, 2010).

- Bizios, R. (*Speaker*) *Nanostructured Biomaterials: Potential, Challenges and Needs*. Presented at the "Next Generation Biomaterials: Nanobiomaterials" Symposium at the Materials Science & Technology 2010 Conference and Exhibition (MS&T'10), Houston, TX, (October 19, 2010).

- Bizios. R. (*Speaker*). *Nanostrucutred Ceramics: Potential, Challenges and Opportunities for Implant Applications.* Presented at the Next Generation Bioceramics Symposium at the "35th International Conference and Exhibition on Advanced Ceramics and Composites (ICACC'11)". Daytona Beach, FL. (January 26, 2011).

- Bizios, R. (*Speaker*). *Strategies to Promote Mammalian Cell Functions Pertinent to Tissue Formation at the Tissue-Implant Interface.* Presented at the "TMS2011 Annual Meeting & Exhibition." San Diego. CA (March 1, 2011).

- Bizios, R. (*Speaker*). *Development of Materials for Biomedical Applications.* Presented at the "Biomaterial Days at Texas A&M", Texas A&M University, College Station, TX (May 16, 2011).

- Bizios, R. (*Speaker*). *Strategies to Promote Cell Functions Pertinent to New Tissue Formation: The Role of Biochemical and Biophysical Stimuli.* Presented at the "4th International Conference on Tissue Engineering". Chania, Crete, Greece (June 2, 2011).

- Bizios, R (*Speaker*). *Nanostructured Biomaterials: Opportunities and Challenges*. Presented at the "3rd International Conference from Nanoparticles & Nanomaterils to Nanodevices & Nanosystems (IC4N)". Crete, Greece (June 29, 2011).

- Bizios, R. (*Speaker*). *BIOMATERIALS: Past Accomplishments, Current Advances, and Future Trends*. Presented at the "28th Southern Biomedical Engineering Conference". Houston, TX (May 5, 2012).

- Bizios, R. (*Speaker*). *New Trends in Biomaterials*. Presented at the "2012 Spring European Materials Research Society Meeting (E-MRS)", Strasbourg, France (May 17, 2012).

- Bizios, R. (*Invited Keynote Speaker*). *Nanostructured Biomaterials for Implant Applications: Potential and Challenges*. Presented at the "9th International Conference on Nanosciences & Nanotechnologies (NN12)", Thessaloniki, Greece (July 6, 2012).

- Bizios, R. (*Invited Speaker*). *Material-related Approaches to Regulate Tissue Regeneration Pertinent to Tissue Enginering*. Presented at the "6th International Summer School on Nanosciences & Nanotechnologies: Organic Electronics & Nanomedicine (ISSON12)", Thessaloniki, Greece (July 7, 2012).

INVITED PRESENTATIONS AT LOCAL/REGIONAL/NATIONAL/INTERNATIONAL CONFERENCES (*continued*)

- Bizios, R. (*Invited Speaker*). *Material-Related Approaches to Promote Cell Functions Pertinent to New Tissue Formation*. Presented at the "7th Latin American Congress of Artificial Organs and Biomaterials (COALOB)". Natal, Brazil (August 23, 2012).

- Bizios, R. (*Invited Speaker*). *The Tissue/Ceramic Implant Interface: A Cell Perspective*. Presented at the "Ceramics in Biology, Medicine, and Human Health: Symposium 24: Nanostructured Bioceramics and Ceramics for Biomedical Applications: Nanostructured Bioceramics I" Symposium of the 10th Pacific Rim (PACRIM) Conference on Ceramic and Glass Technology. San Diego, CA (June 3, 2013).

- Bizios, R. (*Invited Keynote Speaker*). *Implant Biomaterials: Curent Status, Trends, and Opportunities*. Presented at the "Biomaterials, Smart Materials, and Structures" Symposium of the 8th Pacific Rim International Conference (PRICM-8) on Advanced Materials and Processing. Waikoloa, HI (August 9, 2013).

- Bizios, R. (*Invited Keynote Speaker*).*Challenges in Nanotheranostics: A Materials Perspective*. Presented at the International Conference on Nanotheranostics (ICoN 2013). Larnaca, Cyprus (September 28, 2013)

- Bizios, R. (*Invited Speaker*). *Materials for Medical Implant Applications: Potential, Challenges, and Opportunities.* Presented at the "Biomimetic Materials, Nanostructured Biomaterials & Biological Interactions" Symposium of the THERMEC'2013 International Conference on Processing & Manufacturing of Advanced Materials. Las Vegas, NV (December 3, 2013).

- Wechsler. M.E., R. Bizios (*Invited Speaker*). Novel Methodologies to Induce Specific Differentiation of Human Mesenchymal Stem Cells for Biomedical Applications. Presented at the First Annual San Antonio Conference on Stem Cell Research and Regenerative Medicine (RegenMed-SA), San Antonio, TX (February 13, 2014).

- Bizios, R. (*Invited Speaker*). Nanostructured Biomaterials: Potential, Challenges and Opportunities for Implant Applications. Presented at the "Expanding the Frontiers of Nanotechnology in San Antonio and South Texas", Second Annual Conference of the San Antonio Nanotechnology Forum (SANTF), San Antonio, TX (February 21, 2014).

- Bizios, R. (*Invited Speaker*). Cell and Protein Interactions with Materials: Past, Present and Future. Presented at the 2014 Annual Meeting and Exposition of the Society for Biomaterials, Denver, CO (April 16, 2014).

- Wechsler, M. E., B. P. Hermann, R. Bizios (*Invited Speaker*). Novel Methodologies to Induce Osteodifferentiation of Human Adult Mesenchymal Stem Cells. Presented at the 5th Aegean International Conference on Tissue Engineering. Kos, Greece (June 22, 2014).

INVITED PRESENTATIONS AT LOCAL/REGIONAL/NATIONAL/INTERNATIONAL CONFERENCES (*continued*)

- Bizios, R. (*Invited Keynote Lecture*). Material-related Approaches to Promote Cell Functions Pertinent to Neotissue Formation for Biomedical Implant Applications. Presented at the 2nd Hellenic Forum for Science, Technology and Innovation, Greek National Center for Scientific Research "Demokritos", Athens, Greece (July 1, 2014).

- Bizios, R. (*Invited Keynote Speaker*). Nanostructured Biomaterials for Implant Applications: Potential, Challenges and Opportunities. Presented at the "International Conference on Translational Nanomedicine (T-NANO 2014)", Ahmedabad, India (December 15, 2014).

- Bizios, R. (*Invited Lead Speaker*). Nanostructured Biomaterials for Implant Applications: Potential, Challenges and Opportunities. Presented at the "Nano-Biomaterials" Section of the *13th EURASIA Conference on Chemical Sciences*, Bangalore, India (December 16, 2014).

- Bizios, R. (*Invited Speaker*). "Responsible Authorship and Peer Review". Presented at the *Responsible Conduct of Research Training Workshop.* The University of Texas at San Antonio, San Antonio, TX (January 7, 2015).

- Wechsler, M. E., B. P. Hermann, R. Bizios (*Invited Speaker*). **"**Novel Methodologies to Induce Osteodifferentiation of Adult Human Mesenchymal Stem Cells***"***. Presented at the *QualityNano plus NANoREG plus EU-NCL Meeting*, Crete, Greece (July 17, 2015).

- Bizios, R. (*Invited Speaker*). Nanostructured Biomaterials for Implant Applications: Potential, Challenges, and Opportunities. Presented at the *MedTEx15 USA* Conference, North Carolina State University, Raleigh, NC (September 8, 2015).

- Bizios, R. (*Invited Plenary Lecture)*. "Health and Safety Challenges in Nanotheranostics: An Update from the Biomaterials Perspective". Presented at the 2nd *International Conference on Nanotheranostics* (ICoN 2015)*,* Limassol, Cyprus (October 31, 2015).

- Bizios, R. (*Invited Speaker*). "Health and Safety Challenges Regarding Medical Applications of Nanomaterials". Presented at the *5th International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems* (5th IC4N), Porto Heli, Greece (June 28, 2016).

- Bizios, R. (*Invited Plenary Lecture*). "Innovation, Safety and Regulation of Nanomaterials Used in Medical Applications". Presented at the 11th Annual Event of the European Technology Platform on Nanomedicine (ETPN), Heraklion, Greece (October 12, 2016).

INVITED PRESENTATIONS AT LOCAL/REGIONAL/NATIONAL/INTERNATIONAL CONFERENCES (*continued*)

- Bizios, R. (*Invited Speaker*)."Biomaterials for tissue engineering applications: current challenges and future opportunities". Presented at the 6th International Conference on Tissue Engineering/3rd International Conference on Regenerative Biomedical Materials. Crete, Greece (June 18, 2017).

- Bizios, R. (*Invited Keynote Speaker*)."At the Crossroads: Current Challenges and Future Opportunities for Implant Biomaterials". Presented at the 28th Annual Conference of the European Society for Biomaterials. Athens, Greece (September 5, 2017).

- Bizios, R. (*Invited Speaker*). "Implant Biomaterials in the Age of Tissue Engineering and Regenerative Medicine". Presented at the TERMIS EU-2019 Conference, Rhodos, Greece (May 29, 2019).

- Bizios, R. *(Invited Speaker)*. *"The Tissue-Implant Interface: Lessons Learned from Biology and Physiology"*. Presented at the *BioInterface 2019 Workshop & Symposium*, Surfaces in Biomaterials Foundation. Park City, UT (September 5, 2019).

- Bizios, R. *(Invited Speaker)*. *"Implant Biomaterials in the Age of Tissue Engineering and Regenerative Medicine".* Presented at the *Carnegie Mellon Forum of Biomedical Engineering and the Annual Gathering* of the International Academy of Medical and Biological Engineering (IAMBE), Carnegie Mellon University. Pittsburgh, PA (September 19, 2019).

- Bizios, R. (Invited Speaker). *"Implant Biomaterials in the Age of Tissue Engineering and Regenerative Medicine"*. Presented at the Xiangshan Science Conference on *Biomaterials, Biomedical Engineering and Regenerative Medicine*. *Difficulties and Breakthroughs of Tissue Regeneration and Restoration: Building and Improving the Regenerative Microenvironment through Innovative Materials and Biomedical Engineering*. Beijing, China (October 10, 2019).

- Bizios, R. (*Invited Keynote Speaker*). "*Implant Biomaterials: Past Accomplishments, Current Advances, and Future Trends*". Presented at the "2020 Southern Biomedical Engineering Conference (SBEC)". New Orleans, LA (March 7, 2020).

- Bizios, R. (*Invited Plenary Speaker*). "*Considerations for Biomaterial Scaffolds: Lessons Learned from Physiology and Biology.* Presented at the "7th International Conference on Tissue Engineering" in conjunction with the "5th International Conference on Regenerative Biomedical Materials", Ioannina, Greece (May 27, 2022)

- Bizios, R. (*Invited Keynote Speaker*). "*Strategies for Implantable Materials and Devices: Lessons Learned from Physiology and Biology*". Presented at the Hellenic Scientific Conference in Chemical Engineering, Patras, Greece (June 3, 2022).

Rena Bizios

TECHNICAL SYMPOSIA ORGANIZED AND CHAIRED AT NATIONAL CONFERENCES

- "Transport Phenomena at the Blood Vessel Wall." American Institute of Chemical Engineers 1987 Annual Meeting, New York, NY, November 1987 (Co-chaired with J.A. Frangos).
- "Cellular Responses to Stress and Injury." American Institute of Chemical Engineers 1989 Annual Meeting, San Francisco, CA, November 1989 (Co-chaired with J.A. Frangos).
- "Tissue Engineering." American Institute of Chemical Engineers 1990 Annual Meeting, Chicago, IL, November 1990 (Co-chaired with J.A. Frangos).
- "Cell Engineering." American Institute of Chemical Engineers 1990 Annual Meeting, Chicago, IL, November 1990 (Co-chaired with J.A. Frangos).
- "Molecular and Cellular Approaches in Bioengineering: Cell Responses to Different Stimuli." American Institute of Chemical Engineers 1991 Annual Meeting, Los Angeles, CA, November 1991 (Co-chaired with E.T. Papoutsakis).
- "Mechanisms of Cell-Biomaterial Interactions I." American Institute of Chemical Engineers 1992 Annual Meeting, Miami, FL, November 1992 (Co-chaired with K. Leong).
- "Biomaterials for Repair or Replacement of Tissues." American Institute of Chemical Engineers 1993 Annual Meeting, St. Louis, MO, November 1993 (Co-chaired with A.G. Mikos).
- "Environmental Effects on Animal Cells." American Institute of Chemical Engineers 1993 Annual Meeting, St. Louis, MO, November 1993 (Co-chaired with E.T. Papoutsakis)
- "Gene Therapy and Cell Transplantation." American Institute of Chemical Engineers 1994 Annual Meeting, San Francisco, CA, November 1994 (Co-chaired with L.T. Baxter).
- "Cellular Engineering in Bone," 1995 Annual Fall Meeting of the Biomedical Engineering Society, Boston, MA, October 1995 (Co-chaired with D.A. Puleo).
- "Cell Transplantation and Gene Therapy," 5th World Congress of Chemical Engineering, San Diego, CA, July 1996.
- "Biomolecular Modification of Materials," Society for Biomaterials 1999 Meeting, Providence, RI, April 1999, (Co-chaired with D. Tirrell).
- "*In Vitro* Endothelial and Epithelial Cell Attachment." The 17th Annual Meeting of the Society for Biomaterials, Scottsdale, AZ, May 1991 (Co-chaired with G.L. Picciolo).
- "*Cell-Biomaterial Interactions*." The 21st Annual Meeting of the American Association for Dental Research, Boston, MA, March 1992 (Co-chaired with J.C. Keller).
- **"***Advances in Nano Medicine and Biotechnology***".** The 6th International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems, Corfu, Greece, July 3, 2019 (Co-haired with K. Velonia and T. Guda).

Rena Bizios

TECHNICAL SYMPOSIA CHAIRED AT NATIONAL/INTERNATIONAL CONFERENCES

- "Cell and Tissue." 1992 Annual Fall Meeting of the Biomedical Engineering Society, Salt Lake City, UT, October 1992.
- "Current Concepts in Cell Adhesion." The 1993 ASME/AIChE/ASCE Summer Bioengineering Conference, Breckenridge, CO. (Co-chaired with L.V. McIntire; June 1993)
- "Proteins and Cells I." The 20th Annual Meeting of the Society for Biomaterials, Boston, MA. (Co-chaired with J.A. Hubbell; April 1994).
- "Proteins and Cells at Interfaces I." The 21st Annual Meeting of the Society for Biomaterials, San Francisco, CA. (Co-chaired with J. Woodard; March 1995).
- "Bone-Surface Interactions." Fifth World Biomaterials Congress, Toronto, Canada. (Co-chaired with S. Szmuckler-Moncler; June 1996).
- "Hydrogels and Extracellular Matrix Gels." American Institute of Chemical Engineers1996 Annual Meeting, Chicago, IL. (Co-chaired with A.G. Mikos; November 1996).
- "Excellence Session II." The 23rd Annual Meeting of the Society for Biomaterials, NewOrleans. LA. (Co-chaired with K. Kottke-Marchant; May 1997).
- "The Role of Physical Forces in Remodeling of Systemic and Pulmonary Microvessels." The 1997 Annual Fall Meeting of the Biomedical Engineering Society, San Diego, CA. (Co-chaired with T.C. Skalak; October 1997).
- "Biomaterials and Tissue Engineering." The 10th International Conference on Mechanics in Medicine and Biology, Honolulu, HI. (Co-chaired with P.X. Ma; March 1998).
- "Cell and Protein Interactions with Orthopaedic Biomaterials." The 24th Annual Meeting of the Society for Biomaterials, San Diego, CA. (Co-chaired with K. C Dee; April 1998).
- "Student Oral Presentations". Bioceramics 11: The 11th International Symposium on Ceramics in Medicine, New York, NY. (Co-chaired with A. Yii-Urpo; November 1998).
- "Molecular and Cellular Engineering". Minisymposium at the First Joint Meeting of the BMES and EMBS, Atlanta, GA, October 1999.
- "Cells at Surfaces". The First Joint Meeting of BMES and EMBS, Atlanta, GA, October 1999.
- "Orthopaedic Biomaterials: Bone Formation/Bone Substitutes". Sixth World Biomaterials Congress, Kamuela, HI. (Co-chaired with T. Bauer and K. Ushio; May 2000).

TECHNICAL SYMPOSIA CHAIRED AT NATIONAL/INTERNATIONAL CONFERENCES (*continued*)

- "Protein and Cell Interactions with Biomaterials". 27th Annual Meeting of the Society for Biomaterials, St. Paul, MN. (Co-chaired with C. Frondoza and C. Siedlecki; April 2001).
- "Biomedical II". Eight International Conference on Composites Engineering, Tenerife, Spain, August 2001.
- "Protein-Mediated Cell Behavior on Matrices for Tissue Engineering. Symposium II". 28th Annual Meeting of the Society for Biomaterials, Tampa, FL. (Co-chaired with J. Tschopp; April 2002).
- "Cellular and Molecular Aspects of Tissue Biomechanics", Biomaterials: Biocompatibility and Tissue Engineering Gordon Research Conference, Plymouth, NH, July 2003.
- "Bone". Regenerate 2004: Tissue Engineering the Human Body, Seattle, WA, June, 2004.
- "Nanotechnology & Biomaterials Symposium IV – Tissue & Cellular Engineering", 30th Annual Meeting of the Society for Biomaterials, Memphis, TN. (Co-chaired with S. E. Sakiyama-Elbert; April, 2005).
- "Nano-Bio Interface". 23rd Annual Houston Conference on Biomedical Engineering Research, The Houston Society for Engineering in Medicine and Biology, Houston, TX. (Co-chaired with K. F. Kelly; February 2006).
- "Tissue Engineering Strategies I", 3rd International Conference on Tissue Engineering, Rhodes, Greece, 2008.
- First Morning Session (on February 20, 2009), *5th International Technology Transfer Days: Biomaterial 2009*, Erfurt, Germany, 2009.
- Afternoon Session (on November 30, 2009), 2nd Biomaterials Symposium, Queen Mary University of London, London, UK, 2009.
- "Next Generation Biomaterials: Ceramic Biomaterials III", Materials Science & Technology 2010 (MS&T'10) Conference and Exhibition. Houston, TX (Co-chaired with Antony Tomsia; October 19, 2010).
- "Stem Cells and Regenerative Medicine", Session III at the *San Antonio Stem Cell Conference,* San Antonio, TX (Co-chaired with Steve Wolf; October 20, 2010).
- "Ethical Issues in Biomedical Research", T*he 6th International Conference on Ethical Issues in Biomedical Engineering*, New York, NY (Co-chaired with Gene Diresta; April 3, 2011).
- "Nano/Bio Materials". The 3rd International Conference from Nanoparticles & Nanomaterils to Nanodevices & Nanosystems (IC4N). Crete, Greece (Co-chaired with Artemis Stamboulis; June 28, 2011).

TECHNICAL SYMPOSIA CHAIRED AT NATIONAL/INTERNATIONAL CONFERENCES (*continued*)

- "Bioactive Scaffold Materials", TERMIS North America Annual Conference and Exposition 2011, Houston, TX (Co-chaired with H. Tseng on December 13, 2011).

- "Drug Delivery", European Materials Research Society Meeting (EMRS) 2012 Spring Meeting, Strasbourg, France (May 16, 2012).

- "Biomaterials at Nanoscale", 9th International Conference on Nanosciences & Nanotechnologies (NN12), Thessaloniki, Greece (Co-chaired with P. Kavatzikidou; July 3, 2012).

- "Regenerative Medicine", 9th International Conference on Nanosciences & Nanotechnologies (NN12), Thessaloniki, Greece (Co-chaired with I. Missirlis; July 6, 2012).

- "Nanostructured Bioceramics and Ceramics for Biomedical Applications: Nanostructured Bioceramics I". The 10th Pacific Rim Conference (PacRim 10) on Ceramic and Glass Technology, San Diego, CA (Co-chaired with M. Yoshimura; June 3, 2013).

- Joint Session Symposia 23 (*Advances in Biomineralized Ceramics, Bioceramics, and Bioinspiored Designs*) and 24 (*Nanostructured Bioceramics and Ceramics for Biomedical Applications*). Bioceramics: Joint Session I. The 10th Pacific Rim Conference (PacRim 10) on Ceramic and Glass Technology, San Diego, CA (Co-chaired with A. Osaka; June 4, 2013).

- "Session I: Nanomaterials in Medicine", *International Conference on Translational Nanomedicine (T-NANO 2014)*, Ahmedabad, India. (Co-chaired with J. Bellare; December 15, 2014).

- "Session III. Nano-Biomaterials", *13th EURASIA Conference on Chemical Sciences*, Bangalore, India. (Co-chaired with V. P. Shastri; December 17, 2014).

- "Session 4: "Round Robins, Inter Laboratory Comparison and Tools for the Community Governance", QualityNano Conference and Training Workshop, Heraklion, Crete, Greece (Co-chaired with D. Longevin; July 16, 2015).

- Round Table Discussion:"How Close Are We in Meeting the Clinical Challenges (in Nanotheranostics)?" At the *2nd International Conference on Nanotheranostics,* Limassol, Cyprus (Co-Ordinator; November 1, 2015).

- Opening Plenary Session of the *5th International Conference from Nanoparticles and Nanomaterials to Nanodevices and Nanosystems* (5th IC4N), Porto Heli, Greece (Chair; June 27, 2016).

TECHNICAL SYMPOSIA CHAIRED AT NATIONAL/INTERNATIONAL CONFERENCES (*continued*)

- "Session 18: Biomaterials for Bone" of the *28th Annual Conference of the European Society for Biomaterials* (ESB2017), Athens, Greece (Co-Chair with N. Papaioannou and A. Georgopoulou; September 6, 2017).

- Session 8 Symposium: "Induction and Modulation of Immune Response for Tissue Regeneration". *5th TERMIS-World Congress 2018,* Kyoto, Japan (Co-chair with J. Babensee and A. M. Padma; September 5, 2018).

- "Session S48. *Biomaterials*". TERMIS-EU-2019. Rhodes, Greece (Co-chaired with A. Hibbits; (May 28, 2019).

Rena Bizios

SUMMARY OF TEACHING EXPERIENCE

Courses Taught at Rensselaer Polytechnic Institute (year)

- 20.201. Engineering I (1981)
- 20.201. Engineering Modeling and Design (1982; 1983; 1984; 1986)
- 20.210. Thermodynamics I (1985; 1989)
- 20.220. Lumped Parameter Systems (1985)
- 20.243. Introduction to Heat Transfer (1987; 1989; 1990; 1991; 1992; 1993; 1994; 1995; 1997; 1998; 1999)
- 31.425. Hematology and Hemodynamics for Engineers (1981; 1982; 1985)
- 31.425. Hemodynamics (1986; 1988)
- 31.494. Studies in Biomedical Engineering (1981; 1983; 1991; 1992; 1993)
- 31.496. Transport Phenomena in Living Systems (1983)
- 31.4962/36. 4962 Chemical Kinetics in Biomedical and Materials Engineering***** (1984)
- 31.694 Studies in Biomedical Engineering (1981; 1983; 1984; 1985; 1990; 1993; 1994; 1995)
- 31.423. Transport Phenomena in Medicine and Biology (1987; 1989)
- 31.424. Tissue-Biomaterial Interactions (1989; 1990; 1991; 1992;1993; 1994; 1995; 1997; 1998; 1999)
- 31.624/BMED-6240 The Tissue-Implant Interface (1990******; 1991******; 1992; 1993; 1994; 1996)
- BMED-6240 The Tissue-Implant Interface (2000; 2003)
- BMED-4240 Tissue-Biomaterial Interactions (2000; 2001; 2002; 2004;2005)
- ENGR-2250. Thermal and Fluids Engineering I (2001; 2002; 2003; 2004)

New Courses Developed at Rensselaer Polytechnic Institute

- 31.425. Hemodynamics
- 31.423. Transport Phenomena in Medicine and Biology
- 31.4962. Chemical Kinetics in Biomedical Engineering*
- 31.424/ BMED-4240 Tissue-Biomaterial Interactions
- 31.624/BMED-6240 Tissue-Implant Interfaces**

***Co-taught with Robert H. Doremus*

****Co-taught with John B. Brunski*

SUMMARY OF TEACHING EXPERIENCE (*continued*)

Courses Taught at the Chemical Engineering Department of Rice University (year)

- 401a. Transport Phenomena (1987; part time)
- 601b. Fluid Mechanics and Transport: Hemorheology (1988)
- Process Design (senior, capstone-design Chemical Engineering course; 1996; part time)

Short Courses

- Teaching Faculty in Advances in Tissue Engineering (Organizer: A.G. Mikos), Rice University, Houston, TX (1999; 2007; 2008; 2009; 2010; 2011; 2012; 2013; 2014; 2015; 2016; 2017; 2018; 2019; 2021; 2022).
- Teaching Faculty in Advanced Biomaterials (Organizers: F.J. Monteiro, M. Barbosa, P. Granja), University of Porto, Porto, Portugal (2001).
- Teaching Faculty in Material-Cell Interactions for the Development of Biocompatible Medical Devices (Organizers: P. Thomsen, J. Gold, C. Gretzer, C. Larsson), Chalmers University of Technology and Göteborg University, Ellös, Sweden (2001).
- Teaching Faculty in Dental and Craniofacial Bioengineering (Director: P. Spencer; Co-Directors: M. Bilgen, J.L. Katz, A. Misra, L. Friis, Y. Wang), University of Missouri-Kansas City, Kansas City, MO (2007).
- Teaching Faculty at the "Mechanotransduction" section of the Biomécanique et bioingénerie du vieillissement des tissus Short Course. School for Bioengineering, French Centre National de la Recherche Scientifique (CNRS). (Co-chairs: T. Hoc and P. Chabrand), Marrakech, Morocco (2011).
- Lecturer at the 6th International Summer Schools on Nanosciences & Nanotechnologies: Organic Electronics & Nanomedicine (ISSON12), Aristotelion Univeristy, Thessaloniki, Greece (June 7, 2012).
- Lecturer on "Theranostic Nanoparticles" at the "*Nanotheranostics: All-in-One Personalized Medicine*" Short Course, International Conference on Nanotheranostics (ICoN 2013), Larnaca, Cyprus (September 28, 2013).

SUMMARY OF TEACHING EXPERIENCE (*continued*)

Graduate Courses Taught at the University of Texas at San Antonio (year)

- BME.6923.001. Tissue Engineering
  (2006; 2007; 2008; 2009; 2010; 2011; 2012; 2014; 2015; 2017)

- BME.6933.001. Tissue-Biomaterial Interactions
  (2007; 2008; 2009; 2010; 2011; 2012; 2013; 2018; 2019; 2021; 2022)

Undergraduate Courses Taught at the University of Texas at San Antonio (year)

- BME.3413.001. Biocompatibility of Materials
  (2013; 2014; 2015; 2016; 2017; 2018; 2019; 2020; 2021; 2022)

- BME.4423.001. Tissue Engineering (2015; 2016; 2017; 2019; 2021; 2022; 2023)

New Graduate Course Developed at the University of Texas at San Antonio (year)

- BME.6923.001. Tissue Engineering (2006)

- BME.6933.001. Tissue-Biomaterial Interactions (2007)

New Undergraduate Course Developed at the University of Texas at San Antonio (year)

- BME.3413.001. Biocompatibility of Materials (2013)

- BME.4423.001. Tissue Engineering (2015)

Rena Bizios

UNIVERSITY SERVICE AT RENSSELAER POLYTECHNIC INSTITUTE

- President's Council on Affirmative Action (Member, 1981)
- Affirmative Action Advisory Committee (Member, 1981 - 1984; Chairperson, 1982 -1983)
- Task Force on Promotion and Tenure (Member, 1983 - 1984)
- Dean of Engineering Search Committee (Member, 1984 - 1985)
- Vollmer Fries Lecture Series Selection Committee (Member, 1984 - 1986)
- School of Engineering Faculty Council (Member, 1985 - 1987)
- Psychology Department Chairman Search Committee (Member, 1986 - 1987)
- Engineering School Council (Chairperson of the Council, 1990 -1991; Chairperson-Elect, 1989 - 1990; Elected At-Large Faculty Representative, 1988 - 1990; Chairperson, Faculty Affairs Committee, 1988 - 1990)
- Life Sciences Electron Microscopy Laboratory Advisory Committee (Member, 1990 - 1994)
- Rensselaer Faculty Council (Elected Member-at-Large, 1992 - 1994)
- Rensselaer Faculty Senate (Elected Member-at-Large, 1994 - 1995)
- Library Director Search Committee (Member, 1994)
- Task Force on Undergraduate Student Advising, School of Engineering (Member, 1994 - 1995)
- Dean's Committee on Women in Engineering, School of Engineering (Member, 1996 - 1998)
- Dean's Committee on the Faculty Reward System, School of Engineering (Member, 1997)
- Strategic Planning Subcommittee, School of Engineering (Member, 1998)
- Promotion and Tenure Committee, Rensselaer Faculty Senate (Elected Member, 1998 - 2001)
- Dean of Engineering Search Committee (Member, 1998 - 1999)
- Subcommittee on “An Inclusive and Rewarding Learning Environment”, School of Engineering (Member, 1999)
- Faculty Search Committee, Department of Chemical Engineering, (Member, 1999 - 2000)
- Institute Diversity Committee (Member, 2000 - 2002)
- Faculty Search Committee, Department of Materials Science and Engineering, (Member, 2001 - 2002)
- Core Engineering Advisory Council, School of Engineering (Member, 2002)
- School of Engineering Space Committee (Member, 2003 – 2005)
- Biomedical Engineering Department Chairperson Search Committee (Member, 2003 – 2004)
- School of Engineering Promotion & Tenure Committee (Elected Faculty Representative, 2004 – 2005)
- Rensselaer Faculty Senate (Secretary of the Faculty, 2004 – 2005)
- Biotechnology Constellation Search Committee (Member, 2004 – 2005)
- Department of Biology Chair Search Committee (Member, 2004 – 2005)

Rena Bizios

SERVICE AT THE UNIVERSITY OF TEXAS AT SAN ANTONIO (UTSA)

Department of Biomedical Engineering (BME)

- Department Faculty Review Advisory Committee (DRFAC)
  (Chair, 2006-2016; Member, 2018-present; Chair; Spring 2019; Chair; part of Fall 2019)
- Faculty Search Committee (Member, 2006 – 2008 and 2014 – 2015; Chair, 2017-2018)
- BME Department Chair Search Committee (Chair, 2015-2016; Member, 2016-2017)
- Senior Faculty Search Committee (Member, 2010-2011)
- Faculty Advisor, UTSA Student Chapter of the Society for Biomaterials (2010 - 2014)

College of Engineering

- College of Engineering Faculty Review Advisory Committee (CFRAC)
  (Member, 2006-2012; 2015-2019; 2020-2021)
- Governing Board of the Center for Excellence in Engineering Education
  (Member, 2008 – 2010)
- Faculty Search Committee, Department of Mechanical Engineering
  (Member, 2006-2007; 2009–2010; 2010-2011)
- Task Group on Faculty Workload Policy (Member, 2015)
- Nominations Committee (Member, 2015 – 2016)
- Faculty Advisor, UTSA Tau Beta Pi – Texas Mu Chapter (2015)
- Elected Representative of the Department of Biomedical Engineering to the College Executive Advisory Committee (Member, 2016; Chair, 2017 - 2018)
- “Developing Elements for the Brand” Committee (Member; 2018)
- Senior Endowed Professors Committee (Member, 2018 - present)
- “Shape the Future Initiative: *Thriving Faculty and Staff Subommittee”*
  (Member, 2018-2020)
- Integrated Design Initiative (IDI) Vision Team (Member; 2020 - 2021)
- Evaluation Standards & Guidelines Working Group (Member, 2022 – present)

SERVICE AT THE UNIVERSITY OF TEXAS AT SAN ANTONIO (UTSA) (*continued*)

University

- Faculty Senate (Member, 2006-2009)
- Graduate Council: Representative of the Biomedical Engineering Department (2007-2012)
- Graduate Council: Special Membership Committee (Member, 2007 – 2012)
- Southern Association of Colleges (SACS) Leadership Committee (Member, 2007 – 2010)
- University Review Committee (URC) (Member, 2009)
- San Antonio Life Sciences Institute (SALSI) Review Committee (Alternate Reviewer, 2009–2010)
- College of Sciences Faculty Review Advisory Committee (CFRAC) (Member, 2013; 2020)
- NSF ADVANCE Grant, Internal Advisory Committee (Member, 2014)
- Committee on Conflict of Interest in Research & Intellectual Property (Alternate Voting Member representing the UTSA College of Engineering, 2012 - 2016)
- Promotion and Tenure Process Review Committee (Member, 2017)
- University Faculty Review Advisory Committee (UFRAC) (Member, 2017 - 2019)
- Provost Search Committee (Member, 2018)
- Welch Chair Search Committee, UTSA College of Sciences (Member, 2018 - 2019)
- Integrated Design Initiative Task Force Phase III (Member, 2020 - 2021)

UTSA/UTHSCSA Joint Biomedical Engineering Graduate Program

- Committee on Graduate Studies (COGS) (Member, 2008–2020)
- Joint BME Graduate Program Curriculum Committee (Chair, 2016-2019)