Gilda A. Barabino

Education:

1986	Ph.D. in Chemical Engineering, Rice University, Houston, TX
1978	B.S. in Chemistry, Xavier University, New Orleans, LA

Professional Experience:

2020-	**President**, Olin College of Engineering, Needham, MA
2020-	**Professor of Biomedical and Chemical Engineering,** Olin College of Engineering
2015-2020	**Daniel and Frances Berg Professor** of Engineering, The City College of New York, New York, NY
2013-2020	**Dean**, Grove School of Engineering, The City College of New York
2013-2020	**Professor**, Department of Biomedical Engineering, The City College of New York
2013-2020	**Professor**, Department of Chemical Engineering, The City College of New York
2013-2020	**Professor**, CUNY School of Medicine, The City College of New York
2008-2010	**Vice Provost for Academic Diversity**, Georgia Institute of Technology, Atlanta, GA
2008-2013	**Associate Chair for Graduate Studies**, Department of Biomedical Engineering, Georgia Institute of Technology and Emory University, Atlanta, GA
2007-2013	**Professor**, Department of Biomedical Engineering, Georgia Institute of Technology and Emory University, Atlanta, GA
2006 (Sum.)	**Visiting Scientist**, Institute for Biosciences and Bioengineering, Rice University, Houston, TX
2005-2007	**Professor**, Department of Chemical Engineering, Northeastern University, Boston, MA
2003-2004	**Visiting Professor**, Institute for Bioengineering and Bioscience, Georgia Institute of Technology, Atlanta, GA
2000-2002	**Vice Provost for Undergraduate Education**, Northeastern University, Boston, MA
1999-2000	**Interim Vice Provost for Undergraduate Education**, Northeastern University, Boston, MA
1998-2003	**Research Affiliate**, Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA
1996-1998	**Visiting Professor**, Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA
1995-2005	**Associate Professor**, Department of Chemical Engineering, Northeastern University
1989-1995	**Assistant Professor**, Department of Chemical Engineering, Northeastern University
1989-1998	**Senior Research Fellow**, Center for Biotechnology Engineering, Northeastern University
1986-1989	**Research Engineer**, Rohm and Haas Company, Philadelphia, PA
1981-1986	**Teaching and Research Assistant**, Rice University, Houston, TX
1978-1981	**Commissioned Army Medical Service Corp Officer**, U.S. Army
1977-1978	**Assistant Instructor**, Department of Chemistry, Xavier University, New Orleans, LA

Awards and Honors:

2019	Elected Member, National Academy of Engineering
2019	American Institute of Chemical Engineers Award for Service to Society
2019	Crain's Notable Women in Tech Award
2018	Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring
2018	NOBCChE Joseph N. Cannon Award for Excellence in Chemical Engineering
2017	Pierre Galetti Award, American Institute for Medical and Biological Engineering

2016 Honorary Degree, Xavier University of Louisiana
2016- Trustee, Xavier University of Louisiana
2016-2018 President, American Institute for Medical and Biological Engineering
2016 Fellow, American Institute of Chemical Engineers
2016 AIChE Grimes Award
2015 Biomedical Engineering Society Distinguished Service Award
2012-2014 Sigma Xi Distinguished Lecturer
2012-2014 President, Biomedical Engineering Society
2011 Georgia Tech Woman of Distinction Award
2011 1st Joint Meeting of Women Chemists from the United States and China
2011 Fellow, American Association for the Advancement of Science
2010 Fellow, Biomedical Engineering Society
2010 Biomedical Engineering Society Diversity Award
2009 Rice University Distinguished Bioengineering Alumna
2007 Fellow, American Institute of Medical and Biological Engineering
2003 Whitaker Foundation Academic Leadership Program
2001 Woman of Achievement Award, Greensboro Commission on the Status of Women
1996-1998 NSF Visiting Professorships for Women Award (MIT sabbatical)
1994 ASEE/Dow Outstanding Faculty Award
1994 Sigma Xi
1994 Black Scholarship in New England Award (annual recognition of black scholars)
1989-1995 DiPietro Chair in Chemical Engineering for Assistant Professors

Leadership Summary:

Professional Activities:

Administration (The City College of New York)
2013-2020 Dean of The Grove School of Engineering

Administration (Georgia Institute of Technology)
2008-2010 Vice Provost for Academic Diversity
2008-2013 Associate Chair for Graduate Studies, Department of Biomedical Engineering

Administration (Northeastern University)
1999-2002 Vice Provost for Undergraduate Education

Boards, Elected Positions and Appointments
2020-2024 NIH National Advisory Council for Biomedical Imaging and Bioengineering
2019-2022 AAAS Committee on Science and Engineering Public Policy
2019-2022 National Academies of Science, Engineering and Medicine Committee on Women in Science Engineering and Medicine
2019-2022 National Academies Committee on Chemical Engineering: Challenges and Opportunities in the 21st Century
2019-2024 National Academies Roundtable on Black Men and Black Women in Science, Engineering and Medicine
2019-2021 Chair, ASEE Engineering Deans Council
2019-2020 National Academies Committee on the Women of Color in Tech Project
2019-2020 National Academies Pilot Program Ad-Hoc Committee for the Gulf Scholars Program

2019-2020	National Academies of Science, Engineering and Medicine Committee on Addressing Sickle Cell Disease: A Strategic Plan and Blueprint for Action
2019-2022	AAAS Committee on Science, Engineering and Public Policy
2019-2020	NIH NIBIB Strategic Planning Working Group
2019-	Associated Universities, Inc. Board
2018-	VentureWell Board
2018-2021	Committee on Equal Opportunity in Science and Engineering
2018-2020	Chair, Dartmouth College External Advisory Committee on the Campus Climate and Culture Initiative
2018-2021	AAAS Section on Medical Sciences, Chair-Elect, Chair, Past-Chair
2018	Co-Chair, NSF Committee of Visitors for the Emerging Frontiers in Research and Innovation
2017-2018	National Academies of Science, Engineering and Medicine Committee on the Impact of Sexual Harassment in the Academy
2017-	NYSCI Board
2017-	NY First Board
2017-	Texas A&M PathsUp Board (NSF ERC)
2017-	Regional Group Representative (North America), Council of Societies, International Federation for Medical and Biological Engineering
2017-2020	Georgia Tech/Emory Biomedical Engineering External Advisory Board
2017-2020	University of CA, Riverside Biomedical Engineering External Advisory Board
2017-2020	Vanderbilt University Biomedical Engineering External Advisory Board
2016-2022	Xavier University of Louisiana Board of Trustees
2016-2018	President, American Institute for Medical and Biological Engineering
2016-2019	University of Illinois Urbana-Champaign Biomedical Engineering External Advisory Board
2015-2018	ASEE Engineering Deans Council Executive Board
2016-2020	ABRCMS Steering Committee
2015-	NSF Engineering Advisory Committee
2015-2017	Co-Chair, International Union for Physical and Engineering Sciences (IUPESM) Women in Medical Physics and Biomedical Engineering Task Force
2014	NIH Advisory Council to the Director (ACD) Intramural Research Program (IRP) Working Group (to guide long-term planning for the IRP)
2014	International Advisory Committee for the 2015 World Congress on Medical Physics and Biomedical Engineering
2014	Chair, NSF Committee of Visitors for the Emerging Frontiers in Research and Innovation
2014-	ASEE Prism Editorial Advisory Board
2014-	University of Houston NSF ADVANCE External Advisory Board
2014-	Howard University NSF ADVANCE External Advisory Board
2012-2014	President, Biomedical Engineering Society
2012-	University of Virginia NSF ADVANCE External Advisory Board
2012-	University of Delaware NSF ADVANCE External Advisory Board
2011-2015	AIChE Chemical Engineering Technology Operating Council
2010-2014	Harvard Medical School Women of Color in Academic Medicine Advisory Board
2007-	Board of Directors for Committee on the Advancement of Women Chemists
2006-2010	NIH National Advisory Dental and Craniofacial Research Council
2006-2009	University of Alabama Birmingham Biomedical Engineering External Advisory Board
2005-2009	Treasurer, Board of Directors of the Biomedical Engineering Society

2005-2007	Faculty Co-Chair, Federal Demonstration Partnership (FDP) (The FDP is a cooperative initiative among 10 federal agencies and 94 academic institutions dedicated to streamlining the administration of federally sponsored research.)
2005-2008	Chair, AIChE Minority Faculty Forum (mentoring and development of minority faculty)
2004-	ASH Committee on Promoting Diversity
2002-2005	ASEE Chemical Engineering Division Board of Directors
2002-2007	Faculty Representative, Federal Demonstration Partnership
2001	NIH/NSF Advisory Group on Assessing Bioengineering & Bioinformatics Research Training, Education and Career Development
2000-2004	NIH Sickle Cell Disease Advisory Committee (Congressional Appointment)
1997-2000	Board of Directors of the Biomedical Engineering Society

Review Panels

2013-	NIH Biomaterials and Biointerfaces Study Section
2012-	NIH Musculoskeletal and Tissue Engineering Study Section
2012-	NSF ADVANCE Site Visits
2009	Wallace H. Coulter Faculty Early Career Award
2006-	NSF CBET Biomedical Engineering and Engineering Health Care and Chemical, Biochemical and Biotechnology Systems Panels
2005	NSF Bioengineering and Environmental Systems (BES) Committee of Visitors
2004-	NSF CBET Biomedical and Biochemical Engineering Panels
2004	NSF Engineering, Education and Centers (EEC) Committee of Visitors
2002-2006	NIH Bioengineering, Technology, and Surgical Sciences (formerly Surgery and Bioengineering) Study Section
2002-2003	NIH National Heart, Lung and Blood Institute, Special Emphasis Panel
2002	NIH National Center for Research Resources, Special Emphasis Panel
2002	NIH/NSF Bioinformatics Summer Institutes (BBSI) Panel
2002	NSF IGERT Panel
2001-2006	NSF ERC Site Visits
1998-2002	NIH National Institute of General Medical Sciences, Special Emphasis Panel
1998	NIH NCR RCMI Special Emphasis Panel
1995-1999	National Research Council, Ford Foundation Fellowships
1993-2001	NSF Panel of the Undergraduate Course and Curriculum Development Program

Editorial Boards

2015-	*Regenerative Engineering and Translational Medicine*

Educational Contributions:

- Established new Master's in Translational Medicine and master's programs in data science and engineering and cybersecurity at The City College of New York
- Contributed to national efforts to enhance biomedical engineering education to include an annual symposium on "Engineering Solutions to Address Health Care Disparities and an annual event to train undergraduate students in medical translation and innovation
- Developed and established new university-wide programs for Undergraduate Research, Teaching Assistant Training, First Year Experience, Assessment, General Education, and Retention
- Provided leadership and oversight for the transition to semesters in the areas of undergraduate curriculum, academic policies, and academic advising

- Awarded Hewlett Foundation grant for general education
- Awarded NSF Louis Stokes Alliance for Minority Participation grant
- Developed programs for teaching effectiveness workshops
- Guest Editor, Chemical Engineering Education
- Developed and taught graduate and undergraduate courses in chemical and biomedical engineering in the areas of fluid mechanics, biochemical engineering, tissue engineering, kinetics, reactor design, polymer science, and transport phenomena
- Career long mentor of undergraduate researchers

Diversity Contributions:

- Co-Founder and Co-Director of the Quantitative Studies of Diversity and Inclusion Initiative at The City College of New York
- Principal Investigator, NSF Forum for Inclusive Entrepreneurship
- Principal Investigator, NSF Engineering Deans Forum for Broadening Participation
- Inaugural Vice Provost for Academic Diversity, Georgia Tech
- Principal Investigator, NSF EEC, Academic Career Enhancement for Underrepresented Faculty in Engineering
- Principal Investigator, NSF ADVANCE IT Catalyst Award, Blueprint for Increased Representation and Advancement of Women in STEM
- Principal Investigator, NSF ADVANCE Leadership Award, Cross-Disciplinary Initiative for Minority Women Faculty
- Principal Investigator, NSF Minority Faculty Development Workshop (recent workshops held 2006 (at NSF), 2009 (at GaTech), 2010 (at MIT), 2012 (at GaTech), 2015 (at The National Academies), 2016 (at UC Berkeley), 2017 (at University of Houston), 2018 (at the University of Michigan), 2019 (at Harvard University)
- Founder, Minority Faculty Development Forum (MFDF): community of underrepresented faculty supported by an online portal and career development activities including networking and collaboration opportunities, exchange of ideas and best practices, and resource sharing; cosponsored by NSF
- Founder, National Institute for Faculty Equity
- Keynote speaker for numerous national meetings and symposia
- Consultant to New England Board of Higher Education on equity and diversity
- Consultant to National Compact for Faculty Diversity (The Compact is a partnership of regional, federal and foundation programs that focus on minority graduate education and faculty diversity)
- Co-founder of Minority Faculty Forum (MFF) of the Minority Affairs Committee of the American Institute of Chemical Engineers
- Organizer of NSF-sponsored minority faculty development workshops since 2001
- Innovator, developer and scholar on STEM diversity, education and research
- Career long mentor and role model for underrepresented minorities and women

Public Policy Contributions:

- Member, AAAS Committee on Science, Engineering and Public Policy
- Expert Panelist, AAAS Forum on Science and Technology Policy
- Expert Panelist, Congressional Briefing on “Gene Editing and a Path to a Cure for Sickle Cell Disease)
- Member, American Society for Engineering Education Deans Public Policy Committee
- Member, Federation of American Societies for Experimental Biology Science Policy Committee

- Member, Indo-US Roundtable on Advancing Women Faculty in STEM
- Founder, Public Policy Initiative for Minority Women Faculty
- Former Faculty Co-Chair, Federal Demonstration Partnership

Invitational Leadership Programs:

2016 Harvard Institute for Management and Leadership in Education
2008 Georgia Tech University Leadership Program
2008 Anita Borg Leadership Institute
2007 Georgia Tech Institute for Leadership and Entrepreneurship Leadership Roundtable
2004 NSF Women in Engineering Leadership Institute
2003 Whitaker Foundation Academic Leadership Program for future leaders of Biomedical Engineering
2002 Wharton/Institute for Research on Higher Education (IRHE) Executive Education Program
2000 American Council on Education Project on Leadership and Institutional Transformation
2001 MIT National Initiative for Minority Women Faculty
1999 HERS Management Institute for Women in Higher Education

Publications:

Refereed Publications

1. Yang Y-H, Ogando CR, **Barabino GA**. In vitro evaluation of the influence of substrate mechanics on matrix-assisted human chondrocyte transplantation. J Functional Biomaterials, 11 (5): 1-16, 2020.

2. **Barabino, GA**. Reframing Innovation. Technology and Innovation, 20:161-163, 2019.

3. Ogando CR, **Barabino GA**, Yang Y-H. Adipogenic and Osteogenic Differentiation of In-Vitro Aged Human Mesenchymal Stem Cells. In Stem Cells and Aging *(2nd edition)*, Humana Press, 107-117, 2019.

4. **Barabino G**, Frize M, Ibrahim F, Kaldoui E, Lhotska L, Marcu L, Stoeva M, Tsapaki V, Bezak. Solutions to gender balance in STEM fields through support, training, education and mentoring: Report of the international women in medical physics and biomedical engineering task group. Science and Engineering Ethics, doi.org/10.1007/s11948-019-0097-0, 2019.

5. **Barabino GA**. What looks like bravery in the academy: Reflections of an African-American Woman Engineer. In Counternarratives from women of color academics: Bravery, vulnerability and resistance, Whitaker and Grollman (ed,), Taylor and Frances/Routledge, 2019.

6. Ahmed F, Mehrabadi M, Liu Z, **Barabino GA**, Aidun C. Internal viscosity-dependent margination of red blood cells in microfluidic channels. Journal of Biomechanical Engineering, 140 (6): 061013-20, 2018.

7. Yang Y-H, Orgando CR, See CW, Chang TY, **Barabino GA**. Changes in phenotype and differentiation potential of human mesenchymal cells aging in vitro. Stem Cells Res Ther, 9:131-145, 2018.

8. **Barabino GA**, Banton SR, Leggon CB. Moving beyond the heroic journey myth: A look at the unique experiences of Black women in academic engineering. In Mentoring Diverse Leaders: Creating Change for People, Processes and Paradigms, Murrell and Blake-Beard (ed,), Taylor and Frances/Routledge, 2017.

9. Yang Y-H, Ogando, CR See CW, **Barabino GA**. Effect of hydrogel mechanics on in-situ cartilage integration. Osteoarthritis and Cartilage, 25: S388-S389, 2017.

10. Goldman SM, **Barabino GA**. Hydrodynamic loading in concomitance with exogenous cytokine stimulation modulates differentiation of bovine mesenchymal stem cells towards osteochondral lineages. BMC Biotechnology 16.10, DOI**:** 10.1186/s12896-016-0240-6, 2016.

11. Goldman SM, **Barabino GA**. Spatial engineering of osteochondral tissue constructs through microfluidically directed differentiation of mesenchymal stem cells. BioResearch Open Access. April 2016, 5(1): 109-117. doi:10.1089/biores.2016.0005.

12. Green M, Akinsami I, Lin A, Banton S, Ghosh S, Chen B, Platt M, Osunkwo I, Ofori-Acquah S, Guldberg R, **Barabino G**. Microarchitectural and mechanical characterization of the sickle bone. J Mech Behav Biomed Materials, 48:220-228, 2015.

13. Leggon CB, **Barabino GA**. Socializing African American female engineers into academic careers: The case of the cross-disciplinary initiative for minority women faculty (XD). In Changing the Face of Engineering: The African American Experience, Slaughter, Tao, Pearson, Jr. (eds.), Johns Hopkins University Press, 2015.

14. Goldman SM, **Barabino GA**. Cultivation of agarose-based microfluidic hydrogel promotes development of large, full-thickness tissue engineered articular cartilage constructs. Journal of Tissue Engineering and Regenerative Medicine, DOI: 10.1002/term.1954, 2014.

15. Yang Y-H, **Barabino GA**. Environmental factors in cartilage tissue engineering. In Tissue and Organ Regeneration: Advances in Micro and Nanotechnology, Zhang, Khademhosseini, Webster (eds.), CRC Press, 2016.

16. Yang Y-H, Ard MB, Halper JT, **Barabino GA**. Type I collagen-based fibrous capsule enhances integration of tissue-engineered cartilage with native articular cartilage. Ann Biomed Eng, 42(4): 716-726, 2014.

17. Yang Y-H, **Barabino GA**. Differential morphology and homogeneity of tissue-engineered cartilage in hydrodynamic cultivation with transient exposure to insulin-like growth factor-1 and transforming growth factor-β1, Tissue Engineering Part A, 19 (21-22): 2349-2360, 2013.

18. Perkins, K, Malone K, **Barabino, G**. Missed Encounters: A Qualitative Study of Views of Faculty on Mentoring and Student Narratives on Race in Science Education. Managing Diversity in Today's Workplace, M. Paludi (ed). Santa Barbara, CA: CLIO Inc., 2013.

19. Yang Y-H, Lee AJ, **Barabino GA**. Coculture-driven mesenchymal stem cell-differentiated articular chondrocyte-like cells support neocartilage development. Stem Cells Translational Medicine, 1:843-854, 2012.

20. Bilgen B, **Barabino GA**. Modeling of bioreactor hydrodynamic environment and its effects on tissue growth. Methods in Molecular Biology, 868: 237-255, 2012.

21. Yang Y-H, **Barabino GA**. Requirement for serum in medium supplemented with insulin-transferin-selenium for hydrodynamic cultivation of engineered cartilage. Tissue Engineering Part A, 17:2012-2035, 2011.

22. **Barabino GA**, Platt MO, Kaul DK. Sickle cell biomechanics. Annual Review of Biomedical Engineering, 12:345-367, 2010.

23. Wang L, Murthy SK, **Barabino GA**, Carrier RL. Synergic effects of crypt-like topography and ECM proteins on intestinal cell behavior in collagen based membranes. Biomaterials, 31:7586-7598, 2010.

24. Chesler NC, **Barabino G**, Bhatia SN, Richards-Kortum R. The pipeline still leaks and more than you think: A status report on gender diversity in biomedical engineering. Annals Biomed Eng, 38:1928-1935, 2010.

25. Wang L, Murthy SK, Fowle WH, **Barabino GA**, Carrier RL. Influence of micro-well biomimetic topography on intestinal epithelial Caco-2 cell phenotype. Biomaterials, 30:6825-6834, 2009.

26. Wang L, Sun B, Ziemer KS, **Barabino GA**, Carrier RL. Chemical and physical modifications to poly(dimethylsiloxane) surfaces affect adhesion of Caco-2 cells. J Biomed Mat Res Part A, published online 13 Oct 2009, DOI:10.1002/jbm.a.32621.

27. Malone KR, **Barabino GA**. Logic of the subject and the other: Research identities and race. Annual Review of Critical Psychology, 7:247-276, 2009.

28. Kaul DK, Finnegan EM, **Barabino GA**. Sickle red cell-endothelium interactions. Microcirculation, 16:97-111, 2009.

29. Bueno EM, Bilgen B, **Barabino GA**. Hydrodynamic parameters modulate biochemical, histological, and mechanical properties of engineered cartilage. Tissue Engineering, 15:773-785, 2009.

30. Bilgen B, **Barabino GA**. Tissue growth modeling in a wavy-walled bioreactor. Tissue Engineering, 15:761-771, 2009.

31. Malone K,R, **Barabino GA**. Narrations of race in STEM research settings: Identity formation and its discontents. Science Education, 93:485-510, 2009.

32. Schwartz Z, Duran M, **Barabino G**, Chaudhri R, Boyan B. Pulsed electromagnetic fields enhance BMP-2 dependent osteoblastic differentiation of human mesenchymal stem cells. J Orthopaedic Re*s*, 26 (9) 1250-1255, 2008.

33. Finnegan EM, **Barabino GA**, Liu X, Chang H, Jonczyk A, Kaul DK. Small molecule alpha V beta 3 antagonists inhibit sickle cell adhesion to vascular endothelium and vaso-occlusion.

American Journal of Physiology- Heart and Circulatory Physiology, 293:H1038-H1045, 2007.

34. Bilgen B, **Barabino GA**. Location of scaffolds in bioreactors modulates the hydrodynamic environment experienced by engineered-tissues. Biotechnology and Bioengineering, 98:282-294, 2007.

35. Bueno EM, Laevsky GL**, Barabino GA**. Enhancing cell seeding of scaffolds in tissue engineering through manipulation of hydrodynamic parameters. Journal of Biotechnology, 129:516-31, 2007.

36. Finnegan EM, Turhan A, Golan DE, **Barabino GA**. Adherent leukocytes capture sickle erythrocytes in an in vitro model of vaso-occlusion. American Journal of Hematology, 82:266-275, 2007.

37. Bilgen B, Sucosky P, Neitzel GP, **Barabino GA**. Flow characterization in a wavy-walled bioreactor for cartilage tissue engineering. Biotechnology and Bioengineering, 95(6):1009-1022, 2006.

38. Johnson TL, **Barabino GA**, Nerem RM. Engineering more physiologic in vitro models for the study of vascular biology. Progress in Pediatric Cardiology, 21:201-210, 2006.

39. Bilgen B, Chang-Mateau IM, **Barabino GA**. Characterization of mixing in a novel wavy-walled bioreactor for tissue engineering. Biotechnology and Bioengineering, 92 (7):907-919, 2005.

40. Bueno EM, Bilgen B, **Barabino GA**. The wavy-walled bioreactor supports increased cell proliferation and matrix deposition in engineered cartilage constructs. Tissue Engineering, 11:1699-1709, 2005.

41. Bueno EM, Bilgen B, Carrier R, **Barabino GA**. Increased rate of chondrocyte aggregation in a wavy-walled bioreactor, Biotechnology and Bioengineering, 88:768-777, 2004.

42. **Barabino GA**. Strategies for effective teaching in chemical engineering. Chem Eng Ed, 37(3): 168-169, 2003.

43. Tustin L, **Barabino GA**, Thatte H, Bridges K. The serum of sickle cell patients induces translocation and abnormal function of endothelial nitric oxide synthase, in Biomedical Engineering Recent Developments, Vossoughi J, ed. Medical and Engineering Publishers, Inc: 25-28, 2002.

44. Manodori AB, **Barabino, GA**, Lubin BH, Kuypers FA. Adherence of phosphatidylserine exposing erythrocytes to endothelial matrix thrombospondin. Blood, 95: 1293-1300, 2000.

45. Ameer GA, **Barabino GA**, Sasisekharan, R, Harmon, W, Cooney, CL, Langer, R. Ex vivo evaluation of a Taylor-Couette flow, immobilized heparinase I device for clinical application. Proceedings of the National Academy of Science, USA, 96: 2350-2355, 1999.

46. **Barabino GA**, Liu, XC, Ewenstein, BM, Kaul, DK. Anionic polysaccharides inhibit adhesion of sickle erythrocytes to the vascular endothelium and result in improved hemodynamic behavior. Blood 93: 1422-1429, 1999.

47. Bridges K, **Barabino GA**, Brugnara C, Christoph G, Cho M, Dover G, Ewenstein B, Golan D, Gutmann C, Hofrichter J, Mulkern R, Zhang B. A multiparameter analysis of patients undergoing hydroxyurea therapy. Blood 88: 4701-4710, 1996.

48. Kasschau MR, **Barabino GA**, Bridges KR, Golan DE. Adhesion of sickle neutrophils and erythrocytes to fibronectin. Blood 87: 771-780, 1996.

49. **Barabino GA**, Wise RJ, Woodbury VA, Zhang B, Bridges KR, Hebbel RP, Lawler J, Ewenstein BM. Inhibition of sickle erythrocyte adhesion to immobilized thrombospondin by von Willebrand factor under dynamic flow conditions. Blood 89: 2560-2567, 1997.

50. Otute A, Trantolo D, **Barabino GA**, Gresser J, Wise D. Multiphasic or pulsatile controlled release system for the delivery of vaccines, in Human Biomaterials Applications, D. L. Wise et al, eds, Humana Press, Inc: 319-343, 1996.

51. Gresser JD, Hsu H, Nagaoka H, Lyons CM, Nieratko KP, Wise DL, **Barabino GA**, Trantolo DJ. Analysis of pyrrolidone/poly(propylene fumarate) resorbable bone cement. J. Biomed Matl Res 29: 1241-1247, 1995.

52. **Barabino GA**, McIntire LV, Eskin SG, Udden M. Effects of pentoxifylline on adherence of sickle erythrocytes to vascular endothelial cells. Clinical Hemorheology 7: 339-349, 1987.

53. **Barabino GA**, McIntire LV, Eskin SG, Sears DA, Udden M. Endothelial cell interactions with sickle cell, sickle trait, mechanically injured, and normal erythrocytes under controlled flow. Blood 70: 152-157, 1987.

54. **Barabino GA**, McIntire LV, Eskin SG, Udden M. Rheological studies of erythrocyte-endothelial cell interactions in sickle cell disease, in Pathophysiological Aspects of Sickle Cell Vaso-Occlusion, Alan R. Liss: 113-127, 1987.

Refereed Conference Proceedings

55. Yang, YH, **Barabino GA**. Interplay between hypoxia and hydrodynamic force in long-term three-dimensional cultivation of articular cartilage. IFMBE Proceedings, 31 (1): 127-130, 2010.

56. **Barabino GA**, Bridges KR. Sickle erythrocyte adhesion to immobilized proteins. Proceedings of the 1995 ASME/AIChE/ASCE/BMES Summer Bioengineering Conference, BED 29: 449-451, 1995.

57. **Barabino GA**, Metghalchi M, Zhang B, Tangborn, A. Mammalian cell culture in a novel bioreactor. Proceedings of the 1993 ASME Winter Annual Meeting, BED 27: 1-4, 1993.

58. Natarajan B, Metghalchi M, Tangborn A, **Barabino GA**. Hydrodynamic Evaluation of a novel bioreactor design. Proceedings of the 1992 ASME Winter Annual Meeting, BED 23: 1-6, 1992

59. Jimoh A, McMillan ST, Metghalchi M, **Barabino GA**, Schoenfeld R, Ferrara D. Laser Doppler velocimeter investigation of hydrodynamic effects on mammalian cells and protein C production. Proceedings of the 1990 ASME Winter Annual Meeting, BED 16: 11-17, 1990.

Book Review

1. Review of "Bio-fluid Mechanics," Power H, Editor, Computational Mechanics-Publications, 1995 in Annals of Biomed, Eng 24: 453, 1996.

Presentations:

Invited Seminars and Keynote Addresses:

Keynotes

1. "A Counternarrative from a Woman of Color in STEM," Russell Women in Science Lecture, Mills College, Oakland, CA, April, 2020.

2. "Cell Biomechanics: Unlocking Determinants of Human Health and Disease," Mississippi Academy of Sciences Annual Meeting, Biloxi, MS, February, 2020.

3. "A Two Act Play: The Character of Cells and the Role of Biomechanics," NIH Wednesday Afternoon Lecture Series, Bethesda, MD, January, 2020.

4. "Cell Biomechanics: Unlocking Determinants of Human Health and Disease," University of Southern Florida Eminent Scholars Lecture Series, Tampa, FL, January, 2020.

5. "A Counternarrative from a Woman of Color in STEM," Chan Zuckerberg Biohub, San Francisco, CA, October, 2019.

6. "A Counternarrative from a Woman of Color in STEM," Stanford University, Palo Alto, CA, October, 2019.

7. "Cell Biomechanics: Unlocking Determinants of Human Health and Disease," University of Houston College of Engineering Rockwell Distinguished Lecture Series, Houston, TX, October, 2019.

8. "Examining the Culture of Science through an Intersectional Lens," AAAS Science, Technology and Policy Forum, Washington DC, May, 2019.

9. "Rethinking Diversity and Inclusion in STEM," Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, May, 2019.

10. "Rethinking Diversity and Inclusion in Engineering," College of Engineering, The Ohio State University, Columbus, OH, April, 2019.

11. "A Counternarrative from a Woman of Color in Engineering," Big Ten Triannual Women's

Engineering Mentoring and Networking Workshop, Milwaukee, WI, March, 2019.

12. "A Counternarrative from a Woman of Color in STEM," University of Massachusetts Inaugural NSF ADVANCE Event, Amherst, MA, March, 2019.

13. "Inclusive Innovation and Entrepreneurship," Women Designing the Future Conference at NJIT, Newark, NJ, March, 2019.

14. "Bone Biomechanics and Pathology in Sickle Cell Disease," Sickle Cell Foundation of Alberta (Re)Imagining Health Conference, Edmonton, Canada, November, 2018.

15. "Inclusive Innovation and Entrepreneurship," NSF I-Corps Inclusion Summit, Crystal City, October, 2018.

16. "Reframing Innovation," National Academy of Inventors 7th Annual Conference, Washington, DC, April, 2018.

17. "Ties that Bind: Unraveling Disease through Biomechanics," Presidential Colloquium Series: Thinking Out Loud, Brown University, Providence, RI, November, 2017.

18. "Career Progression in Academic Engineering: Perspectives from Women of Color," National Academies of Science, Engineering and Medicine, Women of Color in STEM Workshop, Washington, D.C., November, 2017.

19. "Intersectionality, Interdisciplinarity, Collaboration and Career Progression," Advanced Manufacturing Workshop, Iowa State University, Ames, IA, October, 2017.

20. "Intersectionality, Collaboration and Career Progression," NextProf, University of Michigan, Ann Arbor, MI, September, 2017.

21. "Women in STEM," Academia Challenges for Women in STEM: Training, Discrimination and Policy, New York Academy of Sciences, New York, NY, September, 2017.

22. "A Humanistic Approach to a Career in STEM," SMART-REU Symposium, Tulane University, New Orleans, LA, August, 2017.

23. "Biomedical Engineering: What the Future Holds," 43rd Annual Northeast Bioengineering Conference, NJIT, NJ, April, 2017.

24. "Reframing Excellence: Frameworks for Inclusive Excellence in Teaching and Learning," 29th Tufts Annual University-Wide Teaching Conference, Medford, MA, May, 2016.

25. "Future Directions for Bioengineering: Shaping the Profession," University of California San Diego Bioengineering 50th Anniversary Symposium, San Diego, CA, May, 2016.

26. "Career Navigation: Insights for Success," 2016 Minority Graduate Student Network NYC Career Fair, New York Academy of Science, New York, NY, May, 2016.

27. “Mentoring and Career Progression for Women of Color in the Academy: What’s Missing?” University of Delaware ADVANCE Conference on Women of Color in the Academy, Newark, DE, April, 2016.

28. “Identity and Career Progression for Women in STEM,” Summit for Women in STEM, University at Buffalo, Buffalo, NY, April, 2016.

29. “Tribute to Norman Francis, Longest Serving President,” Xavier University of Louisiana, New Orleans, March, 2015.

30. “Identity, Interdisciplinarity, Diversity and Career Progression,” Bioengineering Graduate Group Research Symposium, University of Pennsylvania, Philadelphia, January, 2015.

31. “Leadership 101,” Indo-US Roundtable on Advancing Women Faculty in STEM, New Delhi, India, November, 2014.

32. “Identity, Interdisciplinarity, Diversity and Career Progression,” Association of Underrepresented Minority Fellows (AUMF) National Symposium, Case Western Reserve University, Cleveland, Ohio, October, 2014.

33. “Investigation of Sickle Cell Disease using Engineering Approaches,” Sigma Xi Distinguished Lecture, Science Café, Cleveland, Ohio, October, 2014.

34. “Identity, Interdisciplinarity, Diversity and Career Progression,” 2014 Conference of Ford Fellows, Irvine, California, September, 2014.

35. Interdisciplinarity, Collaboration and Career Progression,” NIH NIBIB Nagy Symposium, Bethesda, Maryland, July, 2014.

36. “Learning in Research Settings: Role of Identity Formation,” Sigma Xi Distinguished Lecture and Undergraduate Research Symposium, University of Massachusetts, Dartmouth, April, 2014.

37. “Pathways to the Academy: One Professor’s Story,” Sigma Xi Distinguished Lecture, East Carolina University, January, 2014.

38. “Leadership 101 for Women of Color in STEM,“ ADVANCE Conference for Women Faculty at HBCUs, Houston Texas, May, 2013.

39. “Investigation of Sickle Cell Disease using Engineering Approaches,” Sigma Xi Distinguished Lecture, Louisville, May, 2013.

40. “Learning in research settings: Role of identity formation,” Sigma Xi Distinguished Lecture and Undergraduate Research Day, Mercer University, April, 2013.

41. "Identity and Career Progression: Differential Experiences for Minorities and Women," Rocky Mountain Medical Technologies Conference, University of Colorado Boulder, February, 2013.

42. “The Future of Biomedical Engineering,” Biomedical Engineering Day, Department of Biomedical Engineering, City College of New York, May, 2012.

43. “Identity Formation for Women of Color: One Professor’s Story,” SWE Annual Luncheon, City College of New York, May, 2012.

44. “Identity Formation for Women of Color,” Women of Color Conversation Series (ADVANCE Inaugural Distinguished Lecturer, Ohio State University, April, 2012.

45. “The Future of Biomedical Engineering,” Biomedical Engineering Day, Department of Biomedical Engineering, Florida International University, February, 2012.

46. “Barriers to Overcome and the Pleasures of Being an Academic,” Institute on Teaching and Mentoring, Compact for Faculty Diversity, Tampa, FL, October, 2010.

47. “Path of Professorship,” MIT Path of Professorship Conference, Cambridge, MA, October, 2010.

48. “Making the Right Career Choice,” Advancing Biomedical Engineering Workforce Diversity: NIGMS Workshop for Postdocs Transitioning to Independent Positions, NIH, Bethesda, MD, March, 2010.

49. “Minority Success in Undergraduate and Graduate STEM Programs,” National Academies Meeting of the Committee on Underrepresented Groups and the Expansion of the Science and Engineering Workforce Pipeline, Washington, D.C., October, 2008.

50. “Sisters in the Academy,” Negotiating the Ideal Faculty Position Conference, Rice University, October, 2007.

51. “Women of Color in the Academy,” 14th Annual Institute on Teaching and Mentoring, Compact for Faculty Diversity, Arlington, October, 2005.

52. Second Annual Colloquium for Minority Students on Preparing for Graduate School in Science and Engineering, Columbia University, New York, April, 2002.

53. First Annual Colloquium for Minority Students on Preparing for Graduate School in Science and Engineering, Columbia University, New York, April, 2001.

54. Fourteenth Annual Women of Achievement Awards Luncheon, Commission on the Status of Women, Greensboro, March, 2001.

55. Annual Biomedical Research Conference for Minority Students (NIH sponsored), Orlando, October, 2001.

56. The Leadership Alliance Symposium, Chantilly, July 2000.

57. Founders Day and Annual Science Fair, The Woodward School for Girls, Quincy, March 2000.

58. ACES, Bennett College, Greensboro, February, 2000.

59. Plenary Speaker on "Teaching," Fourth Annual Institute for the Compact for Faculty Diversity, New Orleans, October, 1997.

60. First Annual Institute for the Compact for Faculty Diversity, Atlanta, October, 1994.

Seminars

1. "Bone Biomechanics and Pathology in Sickle Cell Disease," Department of Biomedical Engineering, Clemson University (Distinguished Lecture Series), Clemson, April, 2019.

2. "Cell Biomechanics: Unlocking Determinants of Human Health and Disease," Department of Biomedical Engineering (Sotak Lecture), WPI, Worcester, March 2019.

3. "Cell Biomechanics: Unlocking Determinants of Human Health and Disease," Department of Biomedical Engineering, Columbia University, New York, February, 2019.

4. "Sickle Cell Biomechanics and Disease Pathology," Department of Biomedical Engineering, Universidad de los Andes, Bogata, Colombia, November, 2018.

5. "Diversity and Inclusion in Education and Research Settings," Department of Biomedical Engineering, Universidad de los Andes, Bogata, Colombia, November, 2018.

6. "Cell Biomechanics: Unlocking Determinants of Human Health and Disease," Department of Chemical Engineering, Stanford University, Palo Alto, November, 2018.

7. "Sickle Cell Biomechanics and Disease Pathology," Department of Biomedical Engineering, Johns Hopkins University, Baltimore, April, 2018.

8. "Mechanobiology of Sickle Cell Disease," Department of Molecular Pharmacology, Physiology and Biotechnology, Brown University, Providence, April, 2018.

9. "Cell Biomechanics and Disease," Department of Biomedical Engineering, SUNY Downstate Medical Center, New York, April, 2016.

10. "Biomechanics and Disease," Department of Biomedical Engineering, University of Southern California, Los Angeles, October, 2015.

11. "Sickle Cell Biomechanics and Disease Pathology," Department of Biomedical Engineering, University of Texas, Austin, April, 2015.

12. "Sickle Cell Biomechanics and Disease Pathology," Department of Biomedical Engineering, SUNY Binghamton, March, 2015.

13. "Sickle Cell Biomechanics and Disease Pathology," Department of Biomedical Engineering, Case Western Reserve University, Cleveland, October, 2014.

14. 'Sickle Cell Disease: Advances Toward Improved Treatment Strategies using Engineering Approaches," Department of Biomedical Engineering, University of California, Davis, April, 2014.

15. ‘Sickle Cell Disease: Advances Toward Improved Treatment Strategies using Engineering Approaches,” Department of Biomedical Engineering (Distinguished Lecture Series), University of Florida, Gainesville, March, 2014.

16. “Sickle cell Disease: Advances Toward Improved Treatment Strategies using Engineering Approaches,” Department of Biomedical Engineering, University of Minnesota, October, 2013.

17. “Investigation of Sickle Cell Disease using Engineering Approaches,” Department of Biomedical Engineering, Texas A&M University, February, 2013.

18. “Investigation of Sickle Cell Disease using Engineering Approaches,” Department of Biomedical Engineering Distinguished Lecture, University of California Riverside, January, 2013.

19. “Sickle Hemoglobinopathies: Vascular and Bone Abnormalities,” Grand Rounds, Albert Einstein College of Medicine and Montifiore Medical Center, New York, May, 2012.

20. “Modulation of Engineered Cartilage Development through Manipulation of Biochemical and Biomechanical Environments,” Department of Biomedical Engineering, Cornell University, Ithaca, April, 2012.

21. “Modulation of Engineered Cartilage Development through Manipulation of Biochemical and Biomechanical Environments,” Department of Biomedical Engineering, Ohio State University (ADVANCE Distinguished Lecturer), Columbus, April, 2012.

22. “Environmental Effects on Tissue Engineered Cartilage,” Department of Biomedical Engineering, Illinois Institute of Technology, Chicago, April, 2012.

23. “Environmental Effects on Tissue Engineered Cartilage,” Department of Biomedical Engineering, University of Oklahoma, February, 2012.

24. “Investigation of Sickle Cell Disease Using Engineering Approaches,” Department of Chemistry, Xavier University, November, 2011.

25. “Learning in Research Settings: Role of Identity Formation,” TERC, Cambridge, August, 2011.

26. “Environmental Effects on Tissue Engineered Cartilage,” Department of Biomedical Engineering, University of Rochester, Rochester, May, 2011.

27. “Vascular and bone dysfunction in sickle cell disease,” Department of Chemistry, Clark Atlanta University, Atlanta, September, 2010.

28. “Environmental Effects on Tissue Engineered Cartilage,” Department of Chemical Engineering, Virginia Tech, Blacksburg, April, 2010.

29. “Environmental Effects on Tissue Engineered Cartilage,” Department of Aerospace and Mechanical Engineering, University of Notre Dame, February, 2010.

30. "Cultivation of Engineered Cartilage in a Novel Wavy-walled Bioreactor," Department of Biomedical Engineering, Georgia Institute of Technology/Emory University, Atlanta, May, 2006.

31. "Cultivation of Engineered Cartilage in a Novel Wavy-walled Bioreactor," Department of Bioengineering, Rice University, Houston, April, 2006.

32. "Cultivation of Engineered Cartilage in a Novel Wavy-walled Bioreactor," Department of Biomedical Engineering, University of Virginia, Charlottesville, March, 2006.

33. "Cultivation of Engineered Cartilage in a Novel Wavy-walled Bioreactor," Department of Chemical Engineering, University of Michigan, Ann Arbor, September, 2005.

34. "Adhesion of Sickle Erythrocytes," Department of Chemical Engineering, West Virginia University, April, 2003.

35. "Investigation of Sickle Cell Adhesion," Department of Chemical and Biochemical Engineering, University of Maryland Baltimore County, Baltimore, MD, September, 2002.

36. Guest Lecturer, "Molecules to Man" Course, Boston University Medical School, Boston, February, 2002.

37. "Sickle Cell Adhesion," Department of Biomedical Engineering, Rice University, Houston, November, 2001.

38. Guest Lecturer, "Molecules to Man" Course, Boston University Medical School, Boston, April, 2001.

39. "Adhesion of Sickle Erythrocytes," Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, October, 2000.

40. "Rheological studies of sickle erythrocyte adhesion," Department of Chemical Engineering, University of Florida, Gainesville, February, 2000.

41. "Rheological studies of sickle erythrocyte adhesion," Department of Chemical Engineering, University of Connecticut, Storrs, February, 1998.

42. "Sickle red blood cell interactions with vascular endothelium," National Minority Research Symposium, New Orleans, October, 1997.

43. "Rheological studies of sickle erythrocyte adhesion," Department of Chemical, Bio and Materials Engineering, Arizona State University, Tempe, March, 1997.

44. "Rheological studies of sickle erythrocyte adhesion," Department of Chemical Engineering, Tulane University, New Orleans, November, 1996.

45. "Rheological studies of sickle erythrocyte adhesion," Department of Chemical Engineering, The Pennsylvania State University, University Park, October, 1996.

46. “Rheological studies of sickle erythrocyte adhesion,” Department of Chemical Engineering, New Jersey Institute of Technology, Newark, October, 1996.

47. “Rheological studies of sickle erythrocyte adhesion,” Department of Biology, Northeastern University, Boston, March, 1996.

48. “Rheological studies of sickle erythrocyte adhesion,” Department of Chemical Engineering, Worcester Polytechnic Institute, Worcester, October, 1995.

49. “Succeeding in Graduate School,” Second Annual Institute for the Compact for Faculty Diversity, Tucson, October, 1995.

50. “Biomedical Engineering Applications in the Study of Sickle Cell Disease,” Department of Chemistry, Wellesley College, Wellesley, June, 1995.

51. “Role of plasma proteins in sickle cell interactions with endothelial cells,” Department of Radiology, Boston City Hospital and Boston University Medical School, Boston, June, 1994.

52. “Studies of erythrocyte-endothelial interactions in sickle cell disease,” Department of Chemical Engineering, City College of the City University of New York, New York, November, 1993.

53. “Sickle cell interactions with endothelial cells and purified proteins,” Hinton-Wright Society of Medical Students, Harvard University Medical School, Boston, October, 1993.

54. “Dynamics of platelet and sickle red blood cell adhesion to endothelial cells and purified proteins,” Department of Chemistry, Northeastern University, Boston, May, 1993.

55. “Mammalian cell culture in biomedical and biochemical engineering,” Department of Chemical Engineering, Tufts University, Medford, March, 1993.

56. “Dynamics of platelet and sickle red blood cell adhesion to endothelial cells and purified proteins,” Division of Hematology, Brigham & Women’s Hospital, Boston, April, 1993.

57. “Role of von Willebrand factor in blood cell interactions,” Division of Hematology, Albert Einstein College of Medicine, New York, February, 1993.

58. “Characterization of a novel bioreactor for microcarrier culture,” Department of Mechanical Engineering, Northeastern University, Boston, December, 1992.

59. “Rheological studies in sickle cell disease,” College of Arts and Sciences, Xavier University, New Orleans, November, 1991.

60. “Role of von Willebrand factor in sickle vaso-occlusion,” Department of Chemical Engineering, Howard University (Graduate Seminar Series), Washington, DC, November, 1991.

61. “Rheological studies in sickle cell disease,” College of Pharmacy, Northeastern University (Biomedical Colloquia Series), Boston, November, 1991.

Conference Presentations:

1. Green M, Schaffler S, **Barabino G**. L-Glutamine increases IGF-1 liver expression to prevent bone loss in sickle mice. Annual Meeting of the American Society of Hematology. Orlando, December 2019.

2. Green M, Schaffler S, **Barabino G**. Glutamine therapy more beneficial for cortical bone than trabecular in sickle cell disease. Annual Meeting of the American Society of Bone Mineral Research. Orlando, September 2019.

3. Yang Y-H, Chang TY, **Barabino GA**. Delayed delivery of parathyroid hormone-related protein for stabilization of human mesenchymal stem cell chondrogenesis. Annual Meeting of the Biomedical Engineering Society, Atlanta, October, 2018.

4. Yang Y-H, Chang TY, **Barabino GA**. Modulation of cell hypertrophy through parathyroid hormone-related protein-loaded microparticles toward stabilization of chondrogenesis of human mesenchymal stem cells. Annual Meeting of the Society for Biomaterials, Atlanta, April, 2018.

5. See CW, Chang TY, Yang Y-H, **Barabino GA**. Variations in surface marker and gene Expression of In-Vitro Aging Human Mesenchymal Stem Cells. Annual Biomedical Research Conference for Minority Students (ABRCMS), Phoenix, November, 2017.

6. Ogando CR, Chang TY, Yang Y-H, **Barabino GA**. Morphological and histological analysis of in-vitro aging human mesenchymal stem cells. Annual Biomedical Research Conference for Minority Students (ABRCMS), Phoenix, November, 2017.

7. Yang Y-H, Ogando CR, See CW, **Barabino GA**. Effect of hydrogel mechanics on in-situ cartilage integration. Osteoarthritis Research Society International (OARSI) World Congress, Las Vegas, April, 2017.

8. **Barabino GA**, Goldman S, Yang YH. Biomaterials and Regenerative Medicine: Micro-environmental modulation for controlled cell differentiation and tissue development (Keynote). International Union for Physical and Engineering Sciences (IUPESM) World Congress on Medical Physics and Biomedical Engineering, Toronto, Canada, June, 2015.

9. Green M, Akinsami I, Lin A, Banton S, Ghosh S, Platt M, Osunkwo I, Ofori-Acquah S, Guldberg R, **Barabino G**. Microarchitectural and mechanical characterization of sickle bone. Annual Meeting of the Biomedical Engineering Society. Tampa, October 2015.

10. Akinsanmi, IA, Lin A, Guldberg R, Platt M, **Barabino GA**. Age and sex determinants of bone phenotype in a transgenic model of sickle cell disease. Annual Meeting of the American Society of Hematology, Atlanta, December, 2012.

11. Goldman SM, **Barabino GA**. Microfluidic agarose hydrogels support development of tissue engineered articular cartilage. Annual Meeting of the Biomedical Engineering Society, Atlanta, October, 2012.

12. Banton SR, Platt MO, **Barabino GA**. Exosomal release of K562-derived micro-RNA: Implications for sickle cell anemia. Annual Meeting of the Biomedical Engineering Society, Atlanta, October, 2012.

13. Yang Y-H, **Barabino GA.** Co-culture-driven MSC-differentiated cells resemble articular chondrocytes with reduced hypertrophy. Annual Meeting of the Biomedical Engineering Society, Atlanta, October, 2012.

14. Chen B, Roberts LM, Banton1 SR, Chambers D, Temenoff1 JS, **Barabino GA**, Platt MO. Quantitative Toolbox to Measure Osteoclast and Cathepsin K Activity in Orthopedic Tissues. Annual Meeting of the Biomedical Engineering Society, Atlanta, October, 2012.

15. **Barabino GA**. Negotiation and power. Hispanic Women in STEM Conference, San Juan, Puerto Rico, October, 2012.

16. Adams J, **Barabino G**, Ghee M. International undergraduate research experiences for US and international students 16th Annual International Education Association of South Africa Conference, Cape Town, South Africa, 29 August-1 September 2012.

17. Leggon C, **Barabino G**, Salo E. Collaborations: Comparative research on women in engineering in the US and South Africa 16th Annual International Education Association of South Africa Conference, Cape Town, South Africa, 29 August-1 September 2012.

18. **Barabino GA**. Putting a Face on a Statistic. Seeking Solutions: Maximizing Talent by Advancing Women of Color in Academia, The National Academies, Washington DC, June 2012.

19. **Barabino GA**, Perkins K, Malone K. Mentoring through interactive experiences in research settings and persistence in STEM. 5th Conference on Understanding Interventions that Broaden Participation in Research Careers, Baltimore, May, 2012.

20. **Barabino GA.** Understanding the power of identity for career success. 2012 STEM Women of Color Conference at Purdue University, April, 2012.

21. Meyers, D. **Barabino GA**, Lam W. Measuring the direct effects of sickle vaso-occlusion using microfluidic technology. ASH Annual Meeting, San Diego, December, 2011.

22. Goldman, SM, **Barabino GA**. Design, fabrication, and validation of a microscale impinging jet bioreactor for tissue engineering, Annual Meeting of the Biomedical Engineering Society, Hartford, October, 2011.

23. **Barabino GA** , Malone KR. Learning in research settings: Role of identity formation, 18th Annual International Conference on Learning, University of Mauritius, July, 2011.

24. **Barabino GA.** Preparing doctoral engineering students and mentoring early career faculty for careers in academe. QEM Workshop for Engineering Faculty on the Professional Development of URM Graduate Engineering Students, Baltimore, May, 2011.

25. Yang, Y, **Barabino GA**. Interplay between hypoxia and hydrodynamic force in long-term three-dimensional cultivation of articular cartilage. The 6th World Congress on Biomechanics, Singapore, August, 2010.

26. Yang Y, **Barabino GA**. Insulin-like growth factor-1 supplemented with low-serum/ITS medium regulates ECM secretion by chondrocytes: A time- and dose-dependent behavior. Annual Meeting of the Orthopedic Research Society, New Orleans, LA, March, 2010.

27. Yang Y, **Barabino GA**. Effects of low-serum medium on tissue-engineered cartilage cultured in wavy-walled bioreactor. Annual Hilton Head Workshop, Hilton Head Island, SC, March, 2009.

28. Wang L, Murthy SK, **Barabino GA**, Carrier RL. Effect of basement membrane microtopography on intestinal epithelial cell behavior. Annual Meeting of the American Institute of Chemical Engineers, Philadelphia, PA, November, 2008.

29. **Barabino GA**, Minority success in undergraduate and graduate STEM programs, National Academies Meeting of the Committee on Underrepresented Groups and the Expansion of S&T Workforce Pipeline, Washington, DC, October, 2008.

30. **Barabino GA**, Chachra D. Minorities in biomedical engineering. Annual Meeting of the Biomedical Engineering Society, St. Louis, MO, October, 2008.

31. **Barabino GA**, Chachra D. Minorities in biomedical engineering. Third Biomedical Engineering Education Summit, St. Charles, IL, June, 2008.

32. Finnegan EM, **Barabino GA**. Adherent leukocytes capture sickle erythrocytes in an in vitro model of vaso-occlusion. "30th Meeting of the national Sickle Cell disease program, Washington D.C., September, 2007.

33. Bueno EM, Bilgen B, **Barabino GA**. "Relationships between fluid dynamics of in vitro cultivation and engineered cartilage structure and function." Keystone Symposium: Tissue Engineering and Developmental Biology, Snowbird, Utah. April 12 - 17, 2007

34. Bueno EM, Bilgen B, **Barabino GA**. Fibrous capsule formation in in vitro engineered cartilage development. Engineering Tissues: Replace, Repair, Regenerate. Annual Hilton Head Workshop, Hilton Head Island, SC. March 7-11, 2007.

35. Bueno EM, Bilgen B, Ruberti JW, **Barabino GA**. "A novel model for in Vitro engineered cartilage development: Relationships between bioreactor fluid dynamics and tissue structure-function." The 53rd Annual Meeting of the Orthopaedic Research Society, San Diego, California, February 11-14, 2007.

36. Bueno EM, Bilgen B, Shekiro J, **Barabino GA**. "Investigation of fibrous capsule formation in dynamic bioreactor cultivation of engineered cartilage." Biomedical Engineering Society Annual Meeting, Chicago, IL, October 13-16 2006.

37. Bilgen B, Bueno EM, **Barabino GA**. "Modeling and optimization of engineered cartilage tissue growth in a wavy-walled bioreactor." Biomedical Engineering Society Annual Meeting, Chicago, IL, October 13-16 2006.

38. Bueno EM, Bilgen B, Ruberti J, **Barabino GA**. "Hydrodynamic parameters affect functional properties of engineered cartilage." ASME-BED 2006 Summer Bioengineering Conference, Amelia Island, FL. June 21-25, 2006.

39. Bilgen B, Bueno EM, **Barabino GA**. "Cause-and-effect relationships between hydrodynamic environment in bioreactors and cell spatial distribution in engineered cartilage." ASME-BED 2006 Summer Bioengineering Conference, Amelia Island, FL, June 21-25, 2006.

40. Bueno EM, **Barabino GA**. "Comparison of engineered cartilage development in four well characterized dynamic fluid environments," 24th Scientific Conference of The Society for Physical Regulation in Biology and Medicine, Cancun, Mexico, January, 2006.

41. Bilgen B, **Barabino GA**. "A three step modeling approach to cell seeding and attachment for cartilage tissue engineering," 24th Scientific Conference of The Society for Physical Regulation in Biology and Medicine, Cancun, Mexico, January, 2006.

42. Bilgen B, Bueno EM, **Barabino GA**. "Bioreactor optimization of scaffold seeding for cartilage tissue engineering," American Institute of Chemical Engineers (AIChE) Annual Meeting, Cincinnati, October, 2005.

43. **Barabino GA**, "A learner centered approach to teaching tissue engineering," Annual Meeting of the Biomedical Engineering Society, Baltimore, October, 2005.

44. Bilgen B*, Sucosky P, Neitzel GP, **Barabino GA**. "The use of particle image velocimetry to validate computational fluid dynamics modeling of a wavy-walled bioreactor for cartilage tissue engineering (*3 rd Place PhD Student Paper Competition, Cell and Tissue Engineering Category)," ASME-BED 2005 Summer Bioengineering Conference, Vail, June, 2005.

45. Bueno EM*, Bilgen B, **Barabino GA**. "Effect of bioreactor geometry on the efficiency of chondrocyte attachment to polymer scaffolds (*Honorable Mention PhD Student Paper

46. Competition, Cell and Tissue Engineering Category)," ASME-BED 2005 Summer Bioengineering Conference, Vail, June, 2005.

47. Finnegan EM, Turhan A, Gaines J, Golan DE, **Barabino GA**. "The effect of hydroxyurea treatment on in vivo adhesion of sickle erythrocytes to sickle leukocyte populations," Annual Meeting of the American Society of Hematology (ASH), San Diego, December, 2004. Blood **104 (11)**: 106a, 2004.

48. Bueno EM, Bilgen B, **Barabino GA**. "Improved engineered cartilage matrix composition through cultivation in a wavy-walled bioreactor," AIChE Annual Meeting, Austin, November, 2004.

49. Bilgen B, **Barabino GA**. "Improved mixing in a wavy-walled bioreactor," AIChE Annual Meeting, Austin, November, 2004.

50. Bilgen B, Sucosky P, Neitzel P, **Barabino GA.** "Flow characterization in a wavy-walled bioreactor for cartilage tissue engineering," AIChE Annual Meeting, Austin, November, 2004.

51. Finnegan E, **Barabino GA**. "Adherent leukocytes capture sickle erythrocytes in an in vitro study of sickle vaso-occlusion," AIChE Annual Meeting, Austin, November, 2004.

52. Sucosky P, Bilgen B, Aleem A, Neitzel P, **Barabino GA.** "The fluid mechanics of a wavy-walled bioreactor for cartilage tissue engineering," American Physical Society Annual Meeting, Seattle, November, 2004.

53. Bueno EM, Bilgen B, **Barabino GA**. "Hydrodynamic environment enhances composition of cartilage constructs in a wavy-walled bioreactor," Biomedical Engineering Society (BMES) Annual Meeting, Philadelphia, October, 2004.

54. Gaines J, Finnegan E, Turhan A, Golan DE, **Barabino GA**. "Adherent leukocytes capture sickle erythrocytes in an in vitro study of sickle vaso-occlusion," Minority Trainee Research Forum, Aventura, September, 2004.

55. Bueno EM, Bilgen B, **Barabino GA**. "Cartilage tissue engineering in a wavy-walled bioreactor," Regenerate 2004: Engineering Body and Tissue Conference, Seattle, June 2004.

56. Finnegan E, Turhan A, Golan G, **Barabino GA**. "In vitro studies of adhesive interactions between sickle erythrocytes and sickle leukocyte populations," 27th Annual Meeting of the National Sickle Cell Disease Program, Los Angeles, April 2004.

57. Finnegan E, **Barabino G**, "The role of red blood cell adhesion to adherent leukocytes in sickle vaso-occlusive pathology," AIChE Annual Meeting, San Francico, November, 2003.

58. Bueno, E, Bilgen B, **Barabino G**. "Characterization of a novel bioreactor for tissue-engineered cartilage," AIChE Annual Meeting, San Francisco, November, 2003.

59. Bueno E, Bilgen B, **Barabino GA**, "Cartilage cultivation in a novel bioreactor," BMES Annual Meeting, Nashville, November, 2003.

60. Tustin L, **Barabino GA**, Thatte H, Bridges K, "The serum of sickle cell patients induces translocation and abnormal function of endothelial nitric oxide synthase," 21st Southern Biomedical Engineering Conference, Washington, D.C., September, 2002.

61. **Barabino, GA**, Qualters DM, "Who's in Charge: Exploring the Complexities of Administering FYE Programs," International Conference on the First Year Experience, Bath, England, July, 2002.

62. Kaul DK, Liu XD, Finnegan BE Jonczk A, **Barabino GA**, "Inhibition of sickle red cell adhesion to vascular endothelium by $\alpha_V\beta_3$ antagonists," Annual Meeting of the American Society of Hematology, Orlando, December, 2001. Blood 98 (11): 750a, 2001.

63. Tustin L*, **Barabino GA**, Thatte H, Bridges K, "Oxidized Cholesterol Mediated Endothelial Dysfunction in Sickle Cell Disease," Annual Meeting of the Society for Physical Regulation in Biology and Medicine San Diego, November, 2001. *Best student paper award

64. Finnegan E, **Barabino G**, "Role of VCAM-1/VLA-4 in sickle cell adhesion: Analysis using in vitro and in vivo models," Annual Meeting of the American Institute of Chemical Engineers (AIChE), Los Angeles, November, 2000.

65. Finnegan E, **Barabino G**, "Role of VCAM-1/VLA-4 in sickle red blood cell-endothelium interactions," Biomedical Engineering Society Annual Meeting (BMES), Seattle, October, 2000. Annals of Biomed Eng 28:S86, 2000.

66. Manodori AB, Luong V, **Barabino GA**, Lubin BH, Kuypers FA. "Adherence of phosphatidylserine (PS) exposing erythrocytes to endothelial cell monolayer," Annual ASH Meeting, Miami Beach, December, 1998. Blood 92 (10): 471a, 1998.

67. Ameer GA, **Barabino GA**, Cooney C, Langer R. "Fluidization of agarose immobilized heparinase within circumferential flow in a membrane vortex flow medical reactor," AIChE Annual Meeting, Miami Beach, November, 1998.

68. Ameer GA, **Barabino GA**, Sassisekhaharan R, Cooney C, Harmon W, Langer R. "A novel enzymatic device for regional heparinization," BMES Annual Meeting, Cleveland, October, 1998. Annals of Biomed Eng 26:S68, 1998.

69. **Barabino GA**, Ewenstein BM, Liu XD and Kaul DK. "Anionic polysaccharides inhibit thrombospondin-enhanced adhesion of sickle erythrocytes to the vascular endothelium and result in improved hemodynamic behavior," ASH Annual Meeting, San Diego, December, 1997.

70. **Barabino GA**, Ewenstein BM, Liu XD and Kaul DK. "Anionic polysaccharides inhibit adhesion of sickle erythrocytes to vascular endothelium and result in improved hemodynamic behavior," BMES Annual Meeting, San Diego, October, 1997. Annals of Biomed Eng 25:33, 1997.

71. **Barabino GA**, "Sickle red blood cell interactions with vascular endothelium," National Minority Research Symposium, New Orleans, October, 1997.

72. **Barabino GA**, Ewenstein BM, Liu XD and Kaul DK. "Anionic polysaccharides inhibit adhesion of sickle erythrocytes to the vascular endothelium and result in improved hemodynamic behavior," Annual Meeting of the National Sickle Cell Disease Program, Washington, DC, September, 1997.

73. **Barabino, GA**, Wise RJ, Lawler J and Ewenstein BM. "Inhibition of sickle erythrocyte adhesion to immobilized thrombospondin by von Willebrand factor," BMES Annual Meeting, University Park, October, 1996. Annals Biomed Eng 24:33, 1996.

74. Wise RJ, **Barabino GA**, Zhang B, Lawler J and Ewenstein BM. "Von Willebrand factor specifically binds to immobilized thrombospondin and inhibits sickle red blood cell adhesion," ASH Annual Meeting, Seattle, December, 1995. Blood 86:136a, 1995.

75. Zhang B, **Barabino GA**, Ewenstein BM, Woodbury VA, Beacham D, Handin RI and Wise RJ. "An *in vitro* system demonstrating an exclusive role for glycoprotein 1B/1X in mediating platelet adhesion and rolling on immobilized von Willerbrand factor," ASH Annual Meeting, Seattle, December, 1995. Blood 86:85a, 1995.

76. **Barabino GA**, Zhang B, Wise RJ, Woodbury VA, Bridges KR and Ewenstein BM. "Sickle erythrocyte adhesion to immobilized proteins," ASME/AIChE/ASCE/BMES Summer Bioengineering Conference, Beaver Creek, June, 1995. BED 29:449, 1995.

77. **Barabino GA**, Zhang B, Wise RJ, Woodbury VA, Bridges KR and Ewenstein BM. "Sickle erythrocyte adhesion to immobilized thrombospondin and von Willebrand factor under dynamic flow conditions," Annual Meeting of the National Sickle Cell Disease Program, April, 1995.

78. Zhang B, **Barabino GA**, Ewenstein B, Bridges K and Hebbel RP. "The Role of thrombospondin in sickle red blood cell-human umbilical vein endothelial cell interactions under controlled flow conditions," AIChE Annual Meeting, San Francisco, November, 1994.

79. **Barabino GA**, Zhang B, Bridges K and Hebbel RP. "Sickle erythrocyte adhesion to purified plasma proteins," Annual Meeting of the Biomedical Engineering Society (BMES), Tempe, October, 1994. Annals Biomed Engin 22:26, 1994.

80. **Barabino GA**, Kasschau M, Bridge K and Golan D. "Adhesion of sickle neutrophils and erythrocytes to fibronectin," Annual Meeting of the National Sickle Cell Disease Program, New York, March, 1994. Annals Biomed Engin 22:26, 1994.

81. Bridges K, **Barabino GA**, Brugnara C, Christoph G, Cho M, Dover G, Eaton W, Ewenstein B and Zhang B. "Early changes in sickle RBC parameters in patients treated with hydroxyurea," Annual Meeting of the National Sickle Cell Disease Program, New York, March, 1994.

82. **Barabino GA**, Zhang B, Bridges KR and Ewenstein BM. "Role of plasma proteins in mediating sickle red blood adhesion to endothelial cells," AIChE Annual Meeting, St. Louis, November, 1993.

83. **Barabino GA**, Zhang B and Metghalchi M. "Mammalian cell culture in a novel bioreactor," Annual Meeting of the American Society of Mechanical Engineers (ASME), New Orleans, November, 1993.

84. Kasschau MR, **Barabino GA**, Bridges KR and Golan DE. "Adhesion of sickle neutrophils and erythrocytes to fibronectin," Annual Meeting of the American Society for Cell Biology, November, 1993. Mol Cell Biol 4:460a, 1993. Mol Cell Biol 4:460a, 1993.

85. Radian A, Gresser JD, Trantolo DJ, **Barabino GA** and Wise DL. "Bone repair biopolymers as carriers of bone repair proteins," Material Research Society Fall Meeting, Boston, December, 1993.

86. **Barabino GA**, Zhang B, Narin S, Cruz MA, Ewenstein BM, Wise RJ and Handin RI. "Role of the vWF-A1 domain in platelet adhesion under controlled flow conditions," BMES Annual Meeting, Memphis, October, 1993. Annals Biomed Eng 21:42, 1993.

87. **Barabino GA**. "Applications of fluid mechanics to biomedical and biochemical engineering," National Council, Northeastern University, Boston, April, 1993.

88. **Barabino GA**, Kasschau MR, Zhang B, Ewenstein BM and Golan DE, "Adhesion of sickle RBC's to purified immobilized plasma proteins," ASH Annual Meeting, Anaheim, December, 1992. Blood 80 (10): 345a, 1992.

89. **Barabino GA**, Beacham D, Cruz M, Zhang B and Handin RI. "Recombinant vWF and GPIba polypeptides which selectively inhibit vWF binding to platelet GPIb/IX also inhibit flow dependent platelet adhesion," Annual Meeting of the American Society of Hematology, Anaheim, December 1992. Blood 80(10):321a, 1992.

90. Natarajan B, **Barabino GA** and Metghalchi M. "Hydrodynamic evaluation of a novel mammalian cell bioreactor," Annual Meeting of AIChE, Miami Beach, November, 1992.

91. **Barabino GA**, Zhang B, Ewenstein BM and Beacham DA. "Role of von Wilebrand factor (vWF) in blood cell adhesive interactions," AIChE Annual Meeting, Miami Beach, November, 1992.

92. Natarajan B, Metghalchi M, Tangborn A and **Barabino GA**. "Hydrodynamic evaluation of a novel bioreactor design," American society of mechanical engineers (ASME) Annual Meeting, Anaheim, November, 1992.

93. **Barabino GA**, Kasschau MR, Zhang B, Ewenstein BM and Golan DE. "Mobility and adhesion of sickle membrane components," NIH Sickle Cell Disease Annual Investigator's Meeting, Bethesda, September, 1992.

94. Natarajan B, Metghalchi M, **Barabino GA** and Jimoh A. "Application of ultrasound doppler in characterizing turbulence in a novel bioreactor," AIChE Annual Meeting, Los Angeles, November, 1991.

95. Jimoh A, McMillan ST, Metghalchi M and **Barabino GA**. "Laser doppler velocimeter investigation of hydrodynamic effects on mammalian cells and protein c production," ASME Annual Meeting, Dallas, November, 1990.

96. **Barabino GA**. "Rheological Studies in Sickle Cell Disease," University of Houston Biomedical Symposium, Houston, 1985.

97. **Barabino GA** and McIntire LV. "Rheological studies in sickle cell disease," NIH investigators meeting on the Rheological aspects of sickle cell disease, Bethesda, 1985.

Research and Development Funding:

EAGER: Quantitative Studies of Career Trajectories for African American Women in Engineering and Computing	NSF	PI	09/01/19-08/31/21	$299,311
HDR DSC: Collaborative Research: Connecting the Dots	NSF	PI	09/01/18-08/31/22	$402,053
Workshop for Evaluating Part-time Doctoral Study For Growing the Underrepresented Student Pop.	NSF	co-PI	09/01/18-08/31/19	$49,809
Louis Stokes STEM Pathways and Research Alliance: NYC LSAMP Alliance	NSF	co-PI	06/22/18-06/21/23	$3.9M
Convergence and Interdisciplinarity in Advancing Larger Scale Research	NSF	PI	01/15/18-01/14/19	$49,989
Engineering Deans Forum on Broadening Participation	NSF	PI	11/1/17-10/31/18	$99,529
Forum on Inclusive STEMM Entrepreneurship	NSF	PI	7/1/17-6/30/18	$99,621
Wallace H. Coulter Foundation (WHCF) BMES Coulter College and BME Minority Network	WHCF	PI	5/1/16-4/30/20	$1.25M
Academic Career Enhancement for Underrepresented Faculty in Engineering	NSF	PI	2/1/15-1/31/20	$750,000
ADVANCE CCNY: Blueprint for Increased Representation and Advancement of Women in STEM	NSF	PI	9/1/14-8/31/16	$188,000
2014 NSF EFRI Workshop: Interdisciplinarity and Innovation	NSF	PI	6/1/14-5/31/15	$50,000
CCNY-MSKCC Partnership	NIH	co-PI	9/1/13-8/31/18	$5M
Novel Prognostic Microfluidic Systems for Cell Separation from Whole Blood	NSF	PI	8/01/12-7/31/15	$150,000
2012 Minority Faculty Development Workshop	NSF	PI	8/1/11-7/31/12	$225,000
2008 Minority Faculty Development Workshop	NSF	PI	8/1/08-7/31/10	$250,000
Development of Biomaterial Microstructure and Surface Chemistry for Tissue Engineering of Intestine	NSF	co-PI	4/01/07-3/31/10	$378,222

Development of Novel Models for the Growth of Tissue Engineered Cartilage	NSF	PI	6/01/06-5/31/10	$270,000
Cross-Disciplinary Initiative for Minority Women Faculty	NSF	PI	6/01/06-5/31/11	$300,001
2006 Minority Faculty Development Workshop	NSF	PI	8/11/05-7/31/07	$130,000
Investigation of Sickle Cell Adhesion NHLBI HL071631	NIH	PI	5/1/04-4/30/07	$423,669
Single Molecule Analysis of Erythrocyte Adhesion in Sickle Cell Disease	NIH	Co-PI	4/1/03-3/31/08	$268,947*
NHLBI HL070819 (PI: Steinberg) Boston Comprehensive Sickle Cell Center Sickle Cell Adhesion	NIH	Co-PI	4/1/03-3/31/08	$79,327
NHLBI HL070994 (PI: Nagel) Bronx Comprehensive Sickle Cell Center Vaso-occlusive Processes in Sickle Cell Retinopathy NHLBI HL45922 (PI: Lutty)	NIH	Co-PI	6/1/03-5/31/08	$125,000*
Role of Thrombin in Sickle Vaso-occlusion	NIH	Co-PI	4/1/98-3/31/03	$262,000*.
Cultivation of Cell-Polymer Constructs in Novel Bioreactors	NSF	PI	9/1/96-8/31/98	$117,579
Role of von Willebrand Factor in Sickle Vaso-occlusion	NIH	Co-PI	4/1/93-3/31/98	$352,229*
Studies of Erythrocyte-Endothelial Interactions in Sickle Cell Disease by Image Analysis	NSF	PI	6/1/91-5/31/95	$214,884
Research Technician Support for Biomedical Research	NU	PI	9/1/93-8/31/94	$15,071
Erythrocyte-Endothelial Interactions in Sickle Cell Disease	NU	PI	6/1/93-3/31/94	$4,000
Mobility and Distribution of Sickle Membrane Components	NIH	co-PI	9/1/91-3/31/93	$126,954*
Hydrodynamic Effects on Mammalian Cell Culture	NSF	PI	8/1/90-1/1/92	$12,000
Effect of Pharmacologic Agents on Adherence of Sickle Erythrocytes to Vascular Endothelial Cells	NU	PI	1/1/91-12/31/91	$8,000
Rheological Studies of Sickle Cell Disease	NU	PI	3/15/91-4/1/91	$3,000

Hydrodynamic Effects on Mammalian Cell Culture	NU	PI	9/1/90-8/31/91	$5,000

*****Funds awarded to Barabino as PI on subcontract for studies conducted at Northeastern University under my direction

Education and Training Funding:

IGERT-Nanomedicine Science and Technology	NSF	Co-PI	10/01/05-9/30/10	$3,320,651
New England Louis Stokes Alliance for Minority Participation (NE LSAMP)	NSF	PI	11/1/01-10/31/06	$500,000
Embedded Learning Modules (ELMO) Curricular Reform (innovative hands-on experiences for Teaching science to non-science majors)	DOE	Co-PI	9/01/00-8/31/03	$637,046
Advancing Academic Common Experience (ACE): Integrating General Education into the Major	Hew. Fdn.	PI	4/1/00-3/31/02	$150,000

Research Supervision:

<u>Ph.D. Theses Directed</u>:
The City College of New York
Mykel Green (2014-), degree expected 2019
Alexander Williams (2018-), degree expected, 2021

Georgia Institute of Technology
Yueh-Hsun Yang (2007-2013)
Stephen Goldman (2008- 2014)
Shereka Banton (2011- 2017)
Faisal Ahmed (2011-2017)
Candice Hovell (2012- 2017)
Mykel Green (2012-2014)

Northeastern University
Eileen Finnegan (2000-2008), "Models of Sickle Cell Adhesion."
Bahar Bilgen (2000-2006), "Hydrodynamic Characterization of a Novel Bioreactor for Tissue Engineering."
Erikca Bueno (2000-2006), "Cartilage-Constructs for Repair: Bioreactor Studies."
Beibing Zhang, Ph.D. (1991-1996), "Blood Cell Interactions with Endothelial Cells and Purified Proteins Under Controlled Flow Conditions."

<u>Master's Theses Directed:</u>
Georgia Institute of Technology
Lola Brown, (200-2004) "Effect of Sickle Red Blood Cells on Endothelial Permeability."

Northeastern University
Dilek Tansoy (2004- 2006), "Modulation of Chondrogenesis in Bioreactors."
Laura Tustin, M.S. (2000-2002), "Role of Oxysterols in Sickle Cell Adhesion."
Wei Li, M.S. (1994-1996), "Characterization of Microcarrier Culture in Novel Bioreactors."
Maryam Shariati, M.S. (1993-1995), "Mammalian Cell Culture in a Novel Bioreactor."
Bhaskaran Natarajan,M.S. (1990-1992), "Hydrodynamic Evaluation of a Novel Bioreactor."

Thesis Committee Membership:
Georgia Institute of Technology
Anthony Awodooju, degree awarded 2014.
Samantha Andrews, degree awarded 2010.
Carolyn Sargent, degree awarded 2010.
Andrea Para, degree awarded 2012.
Philip Kegan, degree expected 2017.
Northeastern University
Dilek Sendil, "Polymeric Controlled Release Systems for the Alleviation of Chronic Pain," Fullbright Scholar from Middle East Technological University, Ph.D., 2002.
Sandhya Ramanthan, Pharmaceutical Sciences Department, "Pharmacokinetics-Toxicodynamic Modeling of Adramycin and Epirubicin in a Chronic Rat Module Using Changes in Sarcoplamic Reticulum Function and Lactate Dehydrogenase-1 Isozyme," Ph.D, 1996.
Yung Yueh Hsu, "Tuberculosis Chemotherapy with Biodegradable Polymers," Ph.D, 1996.
Chien-Tsung Wang, "The Catalytic Destruction of Dimethyl Methylphosphonate Over Mixed Oxide Aerogel Catalysts in Supercritical Carbon Dioxide," Ph.D, 1992.
Otute Akiti, "Implantable Biodegradable Polymer Capsules for Vaccine Delivery," MS, 1995.
Soon Ook Huang, "Gas Phase Enzyme Biocatalytic Processing," Ph.D, 1992.
Betty Bridgforth, "Curriculum for Genetic Diseases on the Secondary School Level," University of Massachusetts, Amherst, Ph.D., 1993.

Research Experiences for Undergraduate Students:

The City College of New York
Katalina Bustamante (2018-
Nohelly Derosiers (2017-
Vaughn Greene (2015-2017)
Courtney Ogando (2015-2019)
Reylen Roldan (2015-2016)
Carmen See (2015-2019)
Kiara Smith (2016-2018)
Sara Stein (2016-2019)
Kamyine Tsuen (2018-2019)
William-Ray Vista (2015-2017)

Georgia Institute of Technology
Melanie Henry (2008)
Christopher Williams (2008)
Tiara Napier (FACES Fellow) (2007-2008)
Shereka Banton (URS Fellow, Petit Scholar) (2009-2011)
Anna Lee (2010-2011)

Ankit Kaushik (2011- 2013)
Soham De (2011- 2013)
Amelia George (2011-2012)
Jennifer Tsai (2011-2012)
Claire Matthews (2011-2013)
Soham Bose (2011-2013)
Hifza Sakhi (2012-2013
Northeastern University
Joseph Shekiro (2006)
Kelly Trowbridge (2006)
Jennifer Gaines (2003-2004)
Omari Patterson (2002-2003)
Eileen Finnegan (1998-1999)
Alison Pratt (1992-1993)
Julia Galperin (1992-1993)
David Brown (1992-1993)
David Barry (1992)
Teresa Wordell (1992)
Peter Zawadski (1992)
Mikesha Anderson (Smith College, Premedicine) (1992)
Kerry Schaefer (1991-1992)
Jason Harrison (Boston University, Department of Biomedical Engineering) (1991)

Research Experiences for High School Students:

Faculty Mentor for NSF Young Scholars Program, Summers of 1991, 1992, and 1995.
Faculty Mentor for NSF GTEC Internship Program 2003-2004

Teaching:

Interdisciplinary Programs:

IDS 81660 Rethinking Higher Education in the Knowledge Economy

This interdisciplinary course was co-taught with a University Professor at the Graduate Center of the City University of New York under the Futures Initiative: Advancing Equity and Innovation in Higher Education.

Undergraduate and Graduate Courses Taught:

BMED 2210 Biomedical Engineering Principles
BMED 1300 Problems in Biomedical Engineering
BMED 7001 Integrated Core in Biomedical Engineering Fundamentals
CHE 1421 Chemical Engineering Kinetics
CHE 1519 Polymer Science
CHE 1530 Biochemical Engineering

CHE 1577 Honors Chemical Engineering Kinetics
CHE 1777 Honors Biochemical Engineering
CHE 3560 Fluid Mechanics
CHE 3670 Special Topics: Biochemical Engineering
CHE G260 Cellular and Tissue Engineering
CHE G350 Transport Phenomena
GE 1000 Introduction to Engineering

New Course Development:

Introduced the following new courses into the curriculum in support of University strategic initiatives:

ChE 1530 *Biochemical Engineering*, technical elective course open to seniors, survey of fundamentals in biochemistry and cell biology and review of engineering applications in these areas

ChE 3670 *Special Topics: Biochemical Engineering*, technical elective course open to graduate students, survey of fundamentals in biochemistry and cell biology and review of engineering applications in these areas, review of current research advances

ChE 1519 *Polymer Science*, technical elective course open to seniors in chemical engineering and chemistry, survey of polymer chemistry, properties, processing, and applications

ChE G260 *Special Topics: Cellular and Tissue Engineering*, technical elective course open to graduate students, survey of fundamentals and recent advances in the fields of cellular and tissue engineering, innovative learner centered teaching strategies to promote learning

Courses Taught Externally:

2004 INT G120 Introduction to Biotechnology Course in the Professional Master of Science Biotechnology Program at Northeastern
2003 Dartmouth Third International Summer School on Biocomplexity
2002 ASEE Summer School for Chemical Engineering Faculty, Workshop Leader
2001-2003 "Molecules to Man" Course, Boston University Medical School
1996 Sophomore Chemical Engineering Seminar, Massachusetts Institute of Technology

Teaching Workshops:

2002 ASEE Summer School for Chemical Engineering Faculty, Workshop Leader, Boulder, CO
2001 AAHE Assessment Conference, Denver, CO
2000 ACT Assessment Workshop, New Orleans, LA
2000 New England Association of Schools and Colleges (NEASC) Assessment Conference, Boston, MA
1998 Institute on Teaching and Mentoring, Workshop Leader, San Diego, CA
1997 ASEE Summer School for Chemical Engineering Faculty, Snowbird, UT
1997 Institute on Teaching and Mentoring, Workshop Leader, New Orleans, LA

1994 National Effectiveness in Teaching Institute, ASEE Annual Meeting, Edmonton, Canada
1994 ASEE New England Section, Teaching Effectiveness Workshop, Workshop Leader, University of New Hampshire
1994 Institute on Teaching and Mentoring, Workshop Leader, New Orleans, LA
1991 NSF Workshop: "Teaching Macromolecular Chemistry and Engineering," Participant, Virginia Polytechnic Institute, Blacksburg, VA
1991 National Effectiveness in Teaching Institute, ASEE Annual Meeting, New Orleans, LA

Service:

Editorial Responsibilities:

2011- Reviewer, Science Translational Medicine
2010 Reviewer, Biomaterials
2010 Reviewer, Acta Biomatrialia
2008- Reviewer, British Journal of Hematology
2004- Reviewer, Journal of Biomaterials Research
2003- Reviewer, Tissue Engineering
2003- Reviewer, Langmuir
2003 Guest Editor, Chemical Engineering Education
2003- Reviewer, Chemical Engineering Education
2002- Reviewer, Annals of Biomedical Engineering
2002- Reviewer, American Journal of Hematology
2002- Reviewer, Journal of Engineering Education
2000- Reviewer, Blood
2000 Reviewer, Journal of Clinical Investigation
1999- Reviewer, Biotechnology and Bioengineering

Professional Societies:

2013- American Society for Engineering Education (ASEE) Engineering Deans Council (EDC)
EDC Board
Public Policy Committee
Committee on K-12 Education
2008- American Institute for Medical and Biological Engineering
Committee on Underrepresented Minorities, Chair
Women in Medical and Biological Engineering Committee
Annual Programming Committee, Co-Chair 2009 Meeting
2003- Tissue Engineering Society
1994- Sigma Xi
1992- American Society of Hematology (ASH)
Awards Committee, 2019-2022
Committee on Promoting Diversity, 2003-2015
1991- American Society for Engineering Education (ASEE)
Dow Lectureship Committee, 2003
1991- Biomedical Engineering Society (BMES)
President-elect, President and Past-President, 2011-2015
Finance Chair, 2010-2011

Treasurer, 2005-2007
Nomination Committee, 2000-2001; Membership Committee, 1997-1999

1988- National Organization of Black Chemists and Chemical Engineers (NOBChE)

1987- American Association for the Advancement of Science (AAAS)
Section on Medical Sciences (Chair-elect 2018)

1986- American Chemical Society (ACS)

1984- American Institute of Chemical Engineers (AIChE)
Chemical Engineering Technology Operating Council, 2011-
Societal Impact Operating Council, Minority Affairs Committee, 1991- and Minority Faculty Forum, 1995- Professional Development Committee (PDC) and the PDC Subcommittee on Women and Minorities, 1990-1994

Conferences Organized:

2019 Organizer, NSF Minority Faculty Development Workshop
2018 Organizer, NSF Minority Faculty Development Workshop
2018 Organizer, NSF Forum on Inclusive STEM Entrepreneurship, October 2018
2018 Organizer, NSF Engineering Deans Forum on Broadening Participation
2018 Organizer, 2018 ASEE Engineering Dean's Institute
2017 Organizer, NSF Forum on Inclusive STEM Entrepreneurship, November 2017
2017 Organizer, NSF Minority Faculty Development Workshop
2016 Organizer, NSF Minority Faculty Development Workshop
2015 Organizer, NSF Minority Faculty Development Workshop
2014 Organizer, NSF EFRI Workshop
2012 Organizer, NSF Minority Faculty Development Workshop
2011 AIMBE Leadership Institute
2011 Program Chair, Sickle Cell Disease Research Symposium
2010 Program Chair, Sickle Cell Disease Symposium
2010 Organizer, NSF Minority Faculty Development Workshop
2010-2012 Session Chair, BMES Annual Meetings
2009 Program Chair, AIMBE Annual Meeting
2009 Organizer, NSF ADVANCE Cross-Disciplinary Initiative for Minority Women Faculty Conference
2008 Organizer, NSF ADVANCE Cross-Disciplinary Initiative for Minority Women Faculty Conference
2008 Organizer, NSF Minority Faculty Development Workshop
2006-2007 Chair, AIChE Area 15d/e, Engineering Fundamentals in Life Science
2006 Organizer, NSF Minority Faculty Development Workshop
2004 Co-Organizer, NSF Development of Minority Engineering Faculty Workshop
2003 Member, Scientific Advisory Committee for the 2004 Regenerate: Tissue Engineering the Human Body Conference (Session Chair)
2002 Session Chair, ASEE Chemical Engineering Summer School for Faculty
2001 Co-Organizer, NSF Chemical Engineering Minority Faculty Workshop
1992-2005 Session Co-Chair/Chair, AIChE Annual Meetings
2006 Vice-Chair/2007 Chair, AIChE Area 15d/e Programming
1997-1998 Session Co-Chair, BMES Annual Meetings
1996 Session Chair, Fifth World Congress of Chemical Engineering

1995-1996 Session Co-Chair, ASEE Annual Meetings
1995 Session Co-Chair, 20th Annual Meeting of the Sickle Cell Disease Program

Diversity Activities:

2002 National Initiative for Minority Women Faculty Meeting, MIT, Cambridge, MA
2000-2007 New England Board of Higher Education (NEBHE) Advisory Committee on Equity and Diversity
2000 Team Leader, Wharton/Institute for Research on Higher Education (IRHE) Executive Education Program
1994-2000 Faculty Mentor, Compact for Faculty Diversity
1991-1993 Harvard Medical School Biomedical Careers Science Project Planning Committee
1991-2007 Faculty Role Model/Mentor, New England Board of Higher Education (NEBHE) Role Model Network for Under Represented Students

Georgia Institute of Technology:

Department
2007 Graduate Committee
2008 Reappointment, Promotion and Tenure Committee

Northeastern University:

University
2005 **Presidential Search Committee**
2004 Commencement Speaker Nomination Board
2002 Distributed Learning (distance learning) Advisory Committee
2002 Distributed Learning Advisory Group
2001-2002 **Provost Search Committee**
Retention Task Force
2000-2001 Chair, Director of the University Honors Program Search Committee
Chair, Director of Assessment Search Committee
Living Learning Center Committee
Scholarship Task Force
Chair, Director of Center for Effective University Teaching Search Committee
1999-2002 Chair, University Undergraduate Curriculum Committee
Chair, Advising Network
Chair, First Year Experience Committee
Member, Athletic Support Committee
1999-2000 Chair, Associate Vice Provost for Academic Opportunity Search Committee
1998 **Provost Search Committee**
1997-2000 President's Women's Advisory Group on Diversity
1997-1998 Accreditation Committee
1997 Graduate Council
1996 Vice Provost for Research and Graduate Education Search Committee

1996-1997	**Presidential Strategic Advisory Group**
1995-1996	Strategic Planning Implementation Advisory Committee
1994-1999	Women's Studies Executive Committee
1994-1997	Research and Scholarship Development Fund (RSDF) Review Panel
1993-1994	Chair, University Subcommittee on Recruitment, Retention, and Promotion for Diversity and Excellence
1993-1994	University Strategic Planning Task Force on Faculty
1992-1998	Northeastern University Chapter of the Society Organized Against Racism
1991-1998	Women's Studies Advisory Board
1991-1993	Residential Life Advisory Committee
1991-1997	Minority Faculty Development Fund Review Committee
1991-1998	University IRB Human Subjects Committee
1991-1998	University Council on Research and Scholarship
1990-1999	University Institutional Biosafety Committee
1990-1991	University Complaint Resolution Committee

College and Department

2006	Chair, Chemical Engineering Department Strategic Planning Committee
2004-2005	Chemical Engineering Department Chair Search Committee
2000-2003	Chair, Chemical Engineering Undergraduate Committee
2000-2006	Chemical Engineering Merit Review Committee
1999-2004	Chemical Engineering Faculty Search Committee
1999-2002	Chemical Engineering Department Chair Search Committee
1998-1999	Chair, Chemical Engineering Faculty Search Committee
1997-1999	Chemical Engineering Graduate Committee
1997-1999	College of Engineering Sabbatical Leave Committee
1997-1998	College of Engineering Strategic Planning Committee
1997-1999	College of Engineering Tenure and Promotion Committee
1996	College of Engineering Dean Search Committee
1991-1997	College of Engineering Awards Committee
1990- 1999	Presenter, College of Engineering Recruitment Program for Area High Schools
1990-1992	Chair, Department of Chemical Engineering Ad Hoc Graduate Review Committee

Professional Development:

Development Programs:

2016	Harvard University Institute for Management and Leadership in Education
2009	Georgia Tech University Leadership Program
2008	Anita Borg Leadership Institute
2007	Georgia Tech Institute for Leadership and Entrepreneurship Leadership Roundtable
2004	Women in Engineering Leadership Institute
2003	Whitaker Foundation Academic Leadership Program
1999	HERS Management Institute for Women in Higher Education, Wellesley College
1993-1994	Boston Fellows Program (Program designed to develop and retain senior-level professionals of color in Boston administered by The Partnership, Inc.).

Workshops/Short Courses:

2003 IEEE/EMB/NSF/Dartmouth Third International Summer School on Biocomplexity
2001 NSF/AAAS EMERGE Workshop for STEM Education and Administration
1995 Short Course on Tissue Engineering, Rice University, Houston, TX
1991 National Effectiveness in Teaching Institute, ASEE Annual Meeting, New Orleans, LA
1991 Animal Cell Reactor Engineering Course, University of Minnesota, St. Paul, MN
1990 MIT Short Course on Polymeric Controlled Drug Delivery, Massachusetts Institute of Technology, Boston, MA

Symposia:

2006 Keystone Symposia, Development and Tissue Engineering
2002 Smith & Nephew International Symposium: Translating Tissue Engineering Into Products, Georgia Tech, Atlanta, GA
1998 NIH Biomedical Engineering Symposium, Bethesda, MD
1997 NIH Biomedical Engineering Symposium, Bethesda, MD
1992 Engineering Foundation Conference, "Cell Culture Engineering III," Palm Coast, FL
1991 International Symposium on Calcium Magnesium Acetate, (Session Chair), Boston, MA

External Community Outreach:

Higher Education Panels:

1. Conference on An Unfinished New England Agenda: Expanding Access and Opportunity at the Millennium sponsored by the New England Board of Higher Education (NEBHE), Boston, March, 1999.
2. Effectiveness in Teaching Institute Workshop held at the ASEE New England Section Fall Meeting, 1994.
3. NEBHE New England Support Network for Under-Represented Students Workshops: "Surviving in Predominantly White Institutions," and "Succeeding Beyond Graduate School," October 1991, 1992, 1996.
4. Northeastern University Women in Engineering Network, June 1990.
5. Conference on Women and the Professions: Outlooks for the Nineties, Northeastern Boston, May, 1990.

Scientific Presentations to High School Teachers:

1. High School Teachers/Counselors Conferences sponsored by the College of Engineering, Northeastern University, 1991, 1992.
2. Special Summer Institute for Applications of Biotechnology, Northeastern University, July, 1990.

Scientific Presentations to Elementary and Secondary (K-12) Students:

1. Girl Scouts, "Introduction to Women Scientists and Engineers," Northeastern University, April 1998.
2. Science Program, Needham High School, "Researching Sickle Cell Disease from an Engineering Perspective," Needham, MA, June 1995.
3. Wise Career Day, Salem College, Salem, MA, May 1995.
4. Northeastern University Comprehensive Center for Minorities, "Polymers, Plastic, and Slime," Northeastern University, April 1995.
5. Minority Scientists as Role Models for Inner City Students, Program Sponsored by the Boston Fellows, Third Grade Presentations at Marshall School, Dorchester, MA, April 1995.
6. Radcliffe Summer Program in Science, Radcliffe College and the Harvard University Summer School, July 1994.
7. Science Fair (Keynote Speaker and Science Fair Judge), Mary McLeod Bethune Institute for 3rd-6th Grade Girls, Northeastern University, Boston, MA, May 1993.
8. Science Career Day, Peabody High School, Peabody, MA, February 1993.
9. AAAS Science Day for 4th-5th Graders held at Northeastern University, Boston, MA, February 1993.
10. Visiting Scientists Program cosponsored by NSF, Massachusetts PEP, and the Boston Children's Museum for Boston Middle Schools, June 1992.
11. Northeastern University College of Engineering Recruitment Program (Engineering Faculty present their research to high school students in the regional area), 1990, 1991, 1992, 1993.
12. Applications of Biotechnology for High School Students, Northeastern University, Fall 1990.
13. What is Engineering? Summer Institute for Minority High School Students, Northeastern University, July 1990.

K-12 Board Memberships:

2004-2007	Member, The Atrium School Board of Trustees
1994-2000	Member, Cambridge Friends School Board of Trustees
1994-1996	Clerk (Chair), Cambridge Friends School Parent Community Meeting (Parent Association)
1991-1993	Member, Fayerweather Street School Board of Directors