

Esmail Jabbari

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TWITTER: [@EsmailJabbari](https://twitter.com/EsmailJabbari)

Web links

Univ South Carolina ECHE <http://www.che.sc.edu/faculty/jabbari/>

Univ South Carolina BME <http://biomed.engr.sc.edu/faculty/jabbari.htm>

My NCBI in National Center for Biotechnology Information (NCBI) Domain

<http://www.ncbi.nlm.nih.gov/sites/myncbi/1FWvbhQo9Tr5w/bibliography/48222775/public/?sort=date&direction=ascending>

AIMBE Website <http://aimbe.org/college-of-fellows/cof-1518/>

WIKIPEDIA PAGE http://en.wikipedia.org/wiki/Esmail_Jabbari

SCHOLAR COMMONS

[http://scholarcommons.sc.edu/do/search/advanced/?q=author%3A\(%20esmaiel%20jabbari%20\)&start=0&context=1297624&sort=score](http://scholarcommons.sc.edu/do/search/advanced/?q=author%3A(%20esmaiel%20jabbari%20)&start=0&context=1297624&sort=score)

GOOGLE SCHOLAR <http://scholar.google.com/citations?user=toBei-UAAAAJ&hl=en>

LinkedIn <https://www.linkedin.com/pub/esmaiel-jabbari/2b/59b/b8>

ResearchGate http://www.researchgate.net/profile/Esmail_Jabbari

SelectedWorks http://works.bepress.com/esmaiel_jabbari/

KUDOS <https://www.growkudos.com/articles/search?q=Professor+Esmail+Jabbari>

EDITED BOOK <http://www.worldscientific.com/sda/1043/biomimetics-bioinspiration.pdf>

EDITED BOOK <http://www.worldscientific.com/worldscibooks/10.1142/7646>

EDITED BOOK <http://www.wiley.com/WileyCDA/WileyTitle/productCd-1118140427.html>

AREAS OF INTEREST

Bioinspired materials, Skeletal tissue engineering, Multi-scale composite materials, Self-assembled nanogels for growth factor delivery, Drug targeting to cancer stem cells, Stem cell encapsulation and delivery, Model gels to control cell microenvironment

EDUCATION

Ph.D. in Chemical Engineering, Purdue University, May 1993.

M.S. in Chemistry, Virginia Tech, May 1989.

M.S. in Chemical Engineering, Virginia Tech, December 1986.

B.S. in Chemical Engineering, Virginia Tech, May 1982.

PROFESSIONAL EXPERIENCE

1/2015 – Present	Univ. South Carolina	Full Professor of Chemical and Biomedical Engineering
8/2012 – 12/2012	Brigham Women’s Hospital	Visiting Professor of Medicine, Harvard Clinical and Translational Science Center
6/2010 – 8/2010	Tohoku University	Invited GI3 Visiting Professor, WPI Advanced Institute for Materials Research
7/2009 – Present	Univ. South Carolina	Tenured Associate Professor
9/2007-Present	Univ. South Carolina	Adjunct Professor of Orthopedic Surgery
8/2004-6/2009	Univ. South Carolina	Tenure-Track Associate Professor
7/2002-8/2004	Mayo Clinic	Senior Research Associate
9/2001-7/2002	Rice University	Visiting Scholar
9/94-9/2001	Tehran Polytechnic Inst.	Associate Professor and Head Biomaterials Group, Biomedical Engineering Department
6/93-7/94	Monsanto Biotech. Group	Post-Doctoral Research Fellow
1/94-5/94	Washington University	Adjunct Professor of Chemical Engineering

HONORS AND AWARDS

2015	University of South Carolina Chemical Engineering Publication Award in 2015
2013	Grand Prize Winner, Inaugural INVENT EVENT: A USC Invention Competition, “Cortical-Bone-Like Microtubular Laminated Composite,” Capstone Campus Room, Capstone House, Friday, May 3, 2013 (6:30 – 9:30 PM).
2103	Election to College of Fellows of the American Institute for Medical and Biological Engineering (AIMBE)
2012	Berton Rahn Prize Award in Orthopedic Research, AO Foundation, Davos, Switzerland
2010	Who’s Who in America
2008	Stephen B. Milam Research Award, Oral and Maxillofacial Surgery Foundation
2006	Membership in Honorary Engineering Society Tau Beta Pi
2006	Membership in Who’s Who in Engineering Education
1993	Membership in New York Academy of Sciences
1992	Adhesion Society Research Award
1989	Outstanding College Students of America
1989	Membership in the Honorary Chemistry Society Phi Lambda Epsilon
1988	Membership in the Honorary Operations Research Society Omega Rho
1988	Membership in the Honorary Research Society Sigma Xi

PROFESSIONAL SERVICE

I. Membership in professional societies

Society for Biomaterials (SFB)	
Member SFB Long-Range Planning Committee	2014
Chair of Orthopedic Biomaterials Special Interest Group	2013
Editorial Board, E-Newsletter of the Society for Biomaterials	2012
Secretary/Treasurer of Tissue Engineering Special Interest Group	2005
Secretary/Treasurer of Drug Delivery Special Interest Group	2005
Materials Research Society (MRS)	
Controlled Release Society (CRS)	
American Institute of Chemical Engineers (AIChE)	
American Chemical Society (ACS)	
Tissue Engineering and Regenerative Medicine International Society (TERMIS)	
Endorsement Committee Member	2015-2016
Membership Committee	2012-2013
Biomedical Engineering Society (BMES)	
IEEE Engineering in Medicine and Biology Society (IEEE-EMBS)	
Vice Chair, Nanobiotechnology Technical Committee	2015-2016
Orthopedic Research Society (ORS)	
American Society for Blood and Marrow Transplantation (ASBMT)	
American Association for Cancer Research (AACR)	

II. Journal editorial duties

- 2015 **Academic Editor**, Polymers, MDPI Open Access Publishing, Basel Switzerland.
- 2015 **Guest Editor**, Gels: Polymers Applied in Tissue Engineering, MDPI Open Access Publishing, Basel Switzerland.
- 2013 **Guest Editor**, Biomed Research International, Hindawi Publishing, New York, NY, USA.
- 2011 **Editor** (North America Region): Journal of Biomaterials and Tissue Engineering, American Scientific Publishers
- 2009 **Guest Editor**, International Journal of Biomaterials, Hindawi Publishing, New York, NY, USA.

III. Advisory and editorial board

- 2016 Editorial Board, Current Regenerative Medicine, Bentham Science Publishers
- 2016 Editorial Board, Journal of Stem Cell Therapy and Transplantation, Heighten Science Publication
- 2016 Editorial Board, IEEE Pulse, Institute of Electrical and Electronic Engineers
- 2015 Editorial Board, International Nano Letters, Springer Publishers
- 2015 Editorial Board, SRL Stem Cell & Research, Sci Research Publishers
- 2015 Editorial Board, AIMS Bioengineering Journal, AIMS Press
- 2016 Editorial Board, SM Journal of Biomedical Engineering, SM Online Publishers
- 2016 International Advisory Board, 11th International Conference "Medical Applications of Novel Biomaterials and Nanotechnology" of International Conferences Materials and Technologies (CIMTEC), 2015-2016.
- 2015 Editorial Board, NanoBioMedicine Journal, InTech Publishing
- 2015 Editorial Board, Gels – Open Access Physical and Chemical Gels Journal, Multidisciplinary Digital Publishing Institute (MDPI) AG, Basel Switzerland
- 2014 Editorial Board, International Journal of Cancer Studies and Research, SciDoc Publishers
- 2013 Editorial Board, International Journal of Nanoscience and Technology, Wireilla Scinetific Publications

- 2013 International advisory board, 10th International Conference “Medical Applications of Novel Biomaterials and Nano-biotechnology” of the Forum on New Materials, 2013-2014.
- 2013 Editorial Board, Tissue Engineering – Biomed Research International, Hindawi Publishing
- 2012 Editorial Board, Open Journal of Composite Materials, Scientific Research Publishing
- 2012 Steering Committee, International Journal of Engineering and Technology Frontier, World Academic Publishing
- 2012 Scientific Advisor, International Conference on Tissue Science & Engineering, Chicago, USA, October 2012.
- 2012 International Advisory Board, Tissue Engineering and Regenerative Medicine International Society World Congress, Vienna, Austria, 2012.
- 2011 Editorial Board, Journal of Life Sciences and Medical Research, Academic Publishing
- 2011 Editorial Board, American J. of Biomedical Engineering, Scientific & Academic Publishing
- 2011 Editorial Board, Journal of Organic Polymer Materials, Scientific Research Publishers
- 2011 Advisory Board, Biomedical Applications of Smart Technologies, International Conferences Materials and Technologies, 2011-2012.
- 2011 Editorial Board, Creative Education, Scientific Research Publishing
- 2010 AO Foundation Review Panel
- 2010 Editorial Board, Journal of Biochips and Tissue Chips, OMICS Publishing Group
- 2009 Advisory Board: International Conference on Medical Applications of Novel Biomaterials and Nano-biotechnology
- 2009 Editorial Board, International Journal of Biomedical Nanoscience and Nanotechnology, Interscience Publishers
- 2009 Editorial Board, International Journal of Biomaterials, Hindawi Publishing Group
- 2008 Editorial Board: Tissue Engineering & Regenerative Medicine Journal, Bentham Publishers
- 2007 Advisory Board: International Conferences on Smart Materials, Structures, and Systems and Technologies

IV. Organization of scientific conferences

- 2016 Organizing Committee member, 7th Annual Conference on Stem Cell and Regenerative Medicine, Manchester Marriott Hotel, Manchester, UK, August 4-5, 2016.
- 2016 Organizing Committee Member, 5th International Conference on Tissue Engineering and Regenerative Medicine, Berlin, Germany, September 12-14, 2016.
- 2016 Theme Chair and Editor, Micro/Nano-bioengineering, Cellular/Tissue Engineering & Biomaterials, 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE-EMBS), Disney’s Contemporary Resort, Orlando, FL, August 16-20, 2016.
- 2016 Scientific Committee, 20th National Biomedical Engineering Meeting, hosted by Izmir Katip Celebi University, Euphoria Aegean Resort & Spa, Seferihisar, Turkey, November 3-5, 2016.
- 2016 Chair, Technical Committee on Bionanotechnology and BioMEMS, IEEE Engineering in Medicine and Biology Society, Piscataway, NJ 08854.
- 2016 Organizing Committee Member, Track Chairman, Regenerative Medicine Track, Global Biotechnology Conference 2016, Hynes-Beacon Convention Center, Boston, MA, USA, May 11 – 16, 2016.

- 2016 Organizing Committee Member, Annual Conference & Exposition on Biomaterials, London, UK, March 14-16, 2016.
- 2016 Organizing Committee Member, Global Nanotechnology Congress and Expo, Dubai, United Arab Emirates, April 21-23, 2016.
- 2015 Organizing Committee Member, Materials Science: An Interdisciplinary Approach to Science & Technology, World Congress and Expo on Materials Science & Polymer Engineering, Materials Science-2015, Crowne Plaza Dubai, Dubai, UAE, November 26-28, 2015.
- 2014 Symposium Organizer and Chair, "Morphogenic Peptides and Biomaterials in Tissue Regeneration," Society for Biomaterials Annual Meeting, Denver, CO.
- 2013 Track Co-Chair, "BioMEMS/NEMS in tissue engineering and biomaterials," Theme 7: Molecular and Cellular Biomechanics, Tissue Engineering, Biomaterials, Annual International Conference of IEEE Engineering in Medicine and Biology Society (EMBC'13), Osaka, Japan.
- 2013 Membership Committee, Tissue Engineering and Regenerative Medicine International Society – Americas (2013-2014)
- 2012 Editorial Board, E-Newsletter, Society for Biomaterials, Mt. Laurel, NJ, USA
- 2012 Organizer, "Bioinspiration and Biomimetics Symposium," 3rd TERMIS World Congress, Vienna, Austria, September 8, 2012, 14:15-15:45 PM (Session# 31, Zeremoniensaal Ballroom).
- 2012 Chair of Liaison Committee to coordinate activities between MRS and SFB, Society for Biomaterials
- 2012 Organizing Committee Member, International Conference on Tissue Science & Engineering, October 1-3, 2012, Chicago, IL, USA
- 2012 Co-Chair, Theme-7, Molecular, Cellular and Tissue Engineering and Biomaterials, IEEE-EMBS Conference, San Diego, CA, USA
- 2011 Technical committee member, Biotechnology group, IEEE-EMB Society.
- 2011 Co-Chair, Theme-7, Molecular, Cellular and Tissue Engineering and Biomaterials, IEEE-EMBS Conference, Boston, MA.
- 2010 Technical Committee member, Bio-Micro-Electro-Mechanical Systems (TC-BioMEMS), IEEE Engineering in Medicine and Biology Society (EMBS), Piscataway, NJ.

V. Chair of meetings and symposia

- 44. Track Chair, 'Drug Metabolism,' Drug Discovery & Therapy World Congress, John B. Hynes Memorial Convention Center, Boston, MA, May 11-14, 2016.
- 43. Track Chair, 'Drug Metabolism,' Drug Discovery & Therapy World Congress and Global Biotechnology Congress, John B. Hynes Memorial Convention Center, Boston, MA, Thursday, July 23, 2015, 2:00 – 4:30 PM (Lecture Hall 203, Level 2).
- 42. Session Co-Chairperson, "Orthopedic Biomaterials LL," Society of Biomaterials Annual Meeting and Exposition, Charlotte Convention Center, Charlotte, NC, Thursday April 16, 2015, Concurrent Session 3, 10:30 AM – 12:30 PM (Room 217D).
- 41. Session Co-Chairperson, "Orthopedic Biomaterials I," Society of Biomaterials Annual Meeting and Exposition, Charlotte Convention Center, Charlotte, NC, Wednesday April 15, 2015, Concurrent Session 2, 4:15 PM – 6:15 PM (Room 217A).

40. Session Co-Chairperson, "Self-Assembled Biomaterials", [Session ID: 27822, Group: Bionanotechnology 22B10], AIChE Annual Meeting, Atlanta, GA, November 16-21, 2014.
39. Session Co-Chairperson, "Self-Assembled Biomaterials", [Session ID: 25495, Session 794 Group: Bionanotechnology], AIChE Annual Meeting, San Francisco, CA, Friday November 8, 2013, 8:30 AM – 11:00 AM (Continental 3, Hilton).
38. Minisymposium Co-Chair, "Tissues/Organs on Chip," Theme 7: Molecular and Cellular Biomechanics, Tissue Engineering, Biomaterials, Annual International Conference of IEEE Engineering in Medicine and Biology Society (EMBC'13), Osaka, Japan, Friday, July 5, 2013, 08:00-09:30, Track 21, 10-2 (10F).
37. Session Co-Chairperson, "Self-Assembled Biomaterials", [Session 22B17 Group: Bionanotechnology], AIChE Annual Meeting, Pittsburg, PA, Thursday November 1, 2012, 12:30-3:00 PM (Pittsburg Convention Center, Rm 310).
36. Poster Session Co-Chair, "Bioinspiration and Biomimetics," 3rd TERMIS World Congress, Vienna, Austria, September 8, 2012, 13:15-14:15 PM (Erzherzog Karl Saal, Hofburg Congress Centre).
35. Symposium Co-Chair, "Bioinspiration and Biomimetics Symposium," 3rd TERMIS World Congress, Vienna, Austria, September 8, 2012, 14:15-15:45 PM (Session# 31, Zeremoniensaal Ballroom).
34. Plenary Session Chair, "Advanced Drug Delivery for the 21st Century: Opportunities and Challenges," Theme 7: Cellular and Tissue Engineering and Biomaterials, Annual International Conference of IEEE Engineering in Medicine and Biology Society (EMBC'12), San Diego, CA, Wednesday, August 29, 2012, 8:15-9:15 AM (Session WeK1N, Sapphire Ballroom).
33. Minisymposium Co-Chair, "Biomaterial-Cell Interactions," Theme 7: Cellular and Tissue Engineering and Biomaterials, Annual International Conference of IEEE Engineering in Medicine and Biology Society (EMBC'12), San Diego, CA, Friday, August 31, 2012, 13:45-14:30 PM (Session FrC18, Aqua 309).
32. Session Co-Chair, "Physiological Monitoring I, Annual International Conference of IEEE Engineering in Medicine and Biology Society (EMBC'12), San Diego, CA, Wednesday, August 29, 2012, 16:45-17:45 PM (Session WeE08, Sapphire 411).
31. Plenary Session Chair, "Advanced Drug Delivery for the 21st Century: Opportunities and Challenges," Theme 7: Cellular and Tissue Engineering and Biomaterials, Annual International Conference of IEEE Engineering in Medicine and Biology Society (EMBC'12), San Diego, CA, Wednesday, August 29, 2012, 8:15-9:15 AM (Session WeK1N Sapphire Ballroom).
30. Track Chair, "Bone Tissue Engineering," International Conference on Tissue Engineering and Science, Hilton Chicago-North Shore, IL, USA, October 1-3, 2012.
29. Session Co-Chairperson, "Biomaterial-Cell Interactions," Theme: Cellular and Tissue Engineering and Biomaterials, 34th Annual International Conference of the IEEE Engineering in Medicine & Biology Society, Hilton San Diego Bayfront, San Diego, CA, August 28 – September 1, 2012.
28. Session Co-Chairperson, "Translational Issues in Tissue Engineering," Theme: Cellular and Tissue Engineering and Biomaterials, 34th Annual International Conference of the IEEE Engineering in Medicine & Biology Society, Hilton San Diego Bayfront, San Diego, CA, August 28 – September 1, 2012.

27. Symposium Co-Chairperson, "Specific Biomaterials as Basis of TERM: Bioinspiration and Biomimetics in TERM," Tissue Engineering and Regenerative Medicine International Society Conference, Vienna, Austria, September 5-8, 2012.
26. Panelist, Nanomedicine Science and Business Panel (Therapeutics and Diagnostics), Biomedical Engineering Society Annual Meeting, Hartford, CT, Fridays October 14, 2011.
25. Session Co-Chairperson, "Self-Assembled Biomaterials", [Session 22B17 Group: Bionanotechnology], AIChE Annual Meeting, Minneapolis, MN, October 16-21, 2011.
24. Session Co-Chairperson, "Musculoskeletal Tissue Engineering", Tissue Engineering Track, Biomedical Engineering Annual Conference, Hartford, CT, October 12-15, 2011.
23. Session Co-Chairperson, "Controlling Microenvironment and Cell Fate," Tissue Engineering and Regenerative Medicine International Society Conference, Orlando, FL, Dec. 6, 2010 (10:00-11:30 AM, Walt Disney Hilton)
22. Session Chairperson, "Self-Assembled Biomaterials", [Session 22B17 Group: Nanoscale Science and Engineering Forum], AIChE Annual Meeting, Salt Lake City, UT, November 12, 2010 (8:30 AM Canyon B Hilton).
21. Session Chairperson, "Regenerative Medicine and Tissue Engineering (session FL-4), 9th International Conference: Medical Applications of Novel Biomaterials and Nano-Biotechnology, Vittoria Congressi, Montecatini-Terme, Italy, Wednesday June 16, 2010 (10:30 – 12:40 Room Smeraldo 3).
20. Session Chairperson, "Self-Assembled Biomaterials II", [Session 22021 Group: Nanoscale Science and Engineering Forum], AIChE Annual Meeting, Nashville, TN, November 2009.
19. Session Organizer and Chairperson, "Drug Delivery in Tissue Engineering and Regenerative Medicine Poster Session," Society for Biomaterials Annual Meeting, San Antonio, TX, April 2009, Thursday, April 23, 2009, 5:15 – 6:00 PM and Friday, April 24, 2009, 3:30 – 4:15 PM.
18. Session Organizer and Chairperson, "Drug Delivery in Tissue Engineering and Regenerative Medicine Rapid Fire Session," Society for Biomaterials Annual Meeting, San Antonio, TX, April 2009, Thursday, April 23, 2009, 3:15 – 4:10 PM.
17. Session Organizer and Chairperson, "Drug Delivery in Tissue Engineering and Regenerative Medicine Oral session," Society for Biomaterials Annual Meeting, San Antonio, TX, April 2009, Thursday, April 23, 2009, 1:00 – 3:00 PM.
16. Session Chairperson, "Nanostructured Biomaterials," [Session 08b07; Group: Biomaterials (08b)], AIChE Annual Meeting, Philadelphia, PA, November 2008.
15. Session Chairperson, "Self-Assembled Biomaterials II," [Session 22B19; Group: Bionanotechnology Topical T8(22b)], AIChE Annual Meeting, Philadelphia, PA, Nov. 2008.
14. Session Co-Chairperson, "Biomaterials," [Session 08B00; Area: Biomaterials; Group: Materials Engineering and Sciences Division], AIChE Annual Meeting, Salt lake City, UT, Nov. 2007.
13. Session Chairperson, "Self-Assembled Biomaterials," [Session T8013; Group: Bionanotechnology Topical T8(22b)], AIChE Annual Meeting, Salt lake City, UT, Nov. 2007.
12. Session Chairperson, "Functional Biomaterials," [Session 08B13; Biomaterials; Group: Materials Engineering and Sciences Division], AIChE Annual Meeting, Salt lake City, UT, Nov. 2007.
11. Session Co-Chairperson, "Biomimetics III-Cell-Materials Interactions," AIChE Annual Meeting, San Francisco, CA, November 2006.
10. Session Co-Chairperson, "Poster session on Medical Engineering, Drug Delivery, and Therapeutic Systems," [Session TG008; Topical G: US-Japan Joint Topical Conference on Medical Engineering, Drug Delivery, and Therapeutic Systems], AIChE Annual Meeting, San Francisco, CA, November 2006.
9. Session Co-Chairperson, "Biomimetics," AIChE Annual Meeting, San Francisco, CA, Nov. 2006.

8. Session Co-Chairperson, "Biocomposites," AIChE Annual Meeting, San Francisco, CA, November 2006.
7. Session Chairperson, "Biomaterial Product Design," AIChE Annual Meeting, San Francisco, CA, November 2006.
6. Session Chairperson, "Self-Assembled Biomaterials," AIChE Annual Meeting, San Francisco, CA, November 2006.
5. Secretary/Treasurer, Tissue Engineering Special Interest Group, Society for Biomaterials, Mt. Laurel, NJ, 2005-2006.
4. Secretary/Treasurer, Drug Delivery Special Interest Group, Society for Biomaterials, Mt. Laurel, NJ, 2005-2006.
3. Session Chair, "Self-Assembled Biomaterials," Annual meeting of American Institute of Chemical Engineers, Cincinnati, OH, November 2005.
2. Session Co-Chair, "Tissue Engineering on Microfabricated Devices/Scaffolds," Annual Meeting of American Institute of Chemical Engineers, Austin, TX, November 2004.
1. Co-Chairperson of ASTM Task Force, "Development of Reference Scaffolds for Tissue Engineered Medical Products," Biomaterials and Biomolecules (F04.42), Polymer Division, National Institute of Standards and Technology (NIST), 2004.

VI. Reviewer for funding agencies

National Science Foundation

- Biomedical Engineering Review Panel, February 2016.
- Biomechanics and Mechanobiology of Cells and Tissue Review Panel, January 2016.
- Biomedical Engineering Review Panel, September 2015.
- Tissue Engineering & Regeneration SBIR/STTR Phase I Panel Review, September 2015.
- Tissue Engineering & Regeneration SBIR/STTR Phase I Panel Review, February 2015.
- Biomedical Engineering Review Panel, September 2014.
- Biomedical Engineering Review Panel, November 2013.
- Biomaterials Review Panel, October 2012.
- Biomedical Engineering Review Panel, October 2012.
- Biomechanics and Mechanobiology (BMMB) Review Panel, January 2012.
- Biomedical Engineering Review Panel, January 2012.
- Biomedical Engineering Review Panel, October 2011.
- Biomedical Engineering Review Panel, May 2011.
- Biomedical Engineering Review Panel, May 2010.
- Biomedical Engineering Review Panel, December 2009.
- Biomedical Engineering Career Review Panel, March 2009.
- Biomedical Engineering Review Panel, December 2008.
- Biomedical Engineering Review Panel, December 2006.
- Cooperative Science Program, December 2010.

National Institutes of Health

- NIH NCI, Innovative Research in Cancer Nanotechnology Review Panel, July 2016 (Invited).
- NIH Musculoskeletal, Oral and Skin Sciences Special Emphasis Panel, June 2016 (Invited).
- NIH Musculoskeletal, Oral and Skin Sciences Special Emphasis Review Panel, February 2015.
- NIH NCI Innovative Research in Cancer Nanotechnology Special Emphasis Review Panel, February 2015.
- NIH Bioengineering Sciences and Technologies Panel Review, November 2015.
- NIH Small Business Oral, Dental & Craniofacial Sciences Review Panel, November 2015.
- NIH Bone, Cartilage, Tendon/Ligament Special Emphasis Panel, November 2015 (Invited).
- NIH Tissue Eng. & Targeted Drug Delivery Special Emphasis Panel, November 2015.

NIH Tissue Eng. & Targeted Drug Delivery Special Emphasis Panel, July 2015 (Invited).
 NIH Cartilage and Tendon/Ligament Special Emphasis Panel, July 2015.
 NIH Oral, Dental, Craniofacial Small-Business Review Panel, July 2015.
 NIH – NCI Innovative Research in Cancer Nanotechnology review panel, March 2015.
 NIH-NIBIB Bioengineering Sciences scientific review group, February 2015
 NIH-NIBIB Review Panel, November 2014
 NIH-NIAMS Review Panel, March 2014.
 NIH-NIBIB Review Panel, February 2014.
 NIH-NIAMS Review Panel, April 2013.
 NIH-NIAMS Review Panel, March 2013.
 NIH-NIAMS Review Panel, March 2013.
 NIH-NIAMS Review Panel, Oct. 2012.
 NIH-NSF New Biomed. Frontiers at Interf. of Life & Physical Sci. Review Panel, Oct. 2011.
 NIBIB Career Awards (K mechanism) Review Panel, June 2011.
 NIBIB LRP Review Panel, April 2011.
 NIH-NSF New Biomed. Frontiers Interface Life & Physical Sci. Review Panel, Oct. 2010.
 Musculoskeletal Tissue Engineering BRDG-SBIR Review Panel, Nov. 2009.
 NIBIB Training/Career Awards Review Panel, Nov. 2009.

Department of Defense

DoD PRMRP Nanomaterials for Bone Regeneration Program Award, December 2015.
 Army Medical Research and Material Command, DoD CDMRP, June 2015 (invited).
 Orthopedic Research Program (PRORP), DoD CDMRP, December 2014.
 Defense Medical Research and Development Program Review Panel, August 2014.

American Association for the Advancement of Science

Washington State Life Discovery Fund 2009
 Rhode Island Science and Technology Advisory Council 2010
 Czech Science Foundation 2016
 Swiss National Science Foundation 2015 (invited)
 UK Regenerative Medicine platform 2013
 Poland National Science Center, OPUS Grants (2016)
 French National Research Agency 2012
 Kazakhstan National Centre for Science and Technology Evaluation (2014)
 AO Foundation Peer-Review Panel (7/19/2010- present)
 Qatar National Research Foundation (2011- present)
 RUBRIQ Reviewer Network (2015 - Present)
 Netherland Organization for Scientific Research (2006-present)
 Petroleum Research Fund, ACS (2006-2008)
 Austrian Research Fund (2012)
 Netherlands Technology Foundation STW (2008-2011)
 South Carolina Spinal Cord Injury Research Fund (2008-2010)
 Canada Natural Sciences and Engineering Research Council (2014)

VII. Reviewer for scientific conferences

Society for Biomaterials, Morphogenic Peptides & Biomater. in Tissue Regeneration, 2014.
 Tissue Eng. & Regenerative Med. Int. Society, Biomimetic and Bioinspiration Track, 2012
 Materials Research Society, 2012
 Biomedical Engineering Society, Tissue Engineering Track, 2011
 Society for Biomaterials, Drug Delivery in Tissue Engineering symposium, 2008
 ASME International Conference on Manufacturing Science and Engineering, 2007
 IEEE Engineering in Medicine and Biology Conference (EMBC), 2016

VIII. Reviewer for scientific journals

Journal Applied Polymer Science	Journal Biomaterials Science-Polymer Edition
J. Biomedical Materials Research	J. Biomed Mater. Research Applied Biomater.
Annals of Biomedical Engineering	International Journal of Pharmaceutics
Biomaterials	Biomacromolecules
Biopolymers	Journal of Bioactive and Compatible Polymers
Macromolecular Bioscience	American Journal of Drug Delivery
Journal of Pharmacy & Pharmacology	Macromolecular Materials and Engineering
Polymer Composites	Polymer Letters
Acta Biomaterialia	Biomedical Microdevices
Macromolecular Chemistry and Physics	Nanotechnology
European J. Pharmaceut. Biopharmaceutics	Smart Materials and Structures
European Polymer Journal	Physics Letters
Stem Cells	Chemistry Today
Materials Chemistry and Physics	Journal of American Chemical Society
Journal of Controlled Release	Polymer
J. Industrial & Eng. Chemistry Research	Current Drug Safety
Journal of Materials Research	Biotechnology & Bioengineering
Chemical Product and Process Modeling	Industrial & Engineering Chemistry Research
International J. Molecular Sciences	Journal of Membrane Science
AIChE Journal	Analytical Biochemistry
Expert Opinion on Drug Delivery	Journal of Physics D-Applied Physics
J. Thermoplastic Composite Materials	Langmuir
Molecular Pharmaceutics	Pharmaceutical Research
Proceed. National Academy of Sciences	J. Tissue Engineering & Regenerative Medicine
Advanced Materials Letters	Mechanics of Materials
Journal of Biomechanics	Expert Opinion on Biological Therapy
Journal of Orthopedic Research	Journal of Creative Education
Journal of the Royal Society Interface	WIREs Nanomedicine & Nanobiotechnology
Nanomedicine	Integrative Biology
Journal of Visualized Experiments	Drug Discovery Today
Advanced Materials	PLoS ONE
Chemical Reviews	Advanced Functional Materials
ACS Neuroscience	ACS Nano
Nano Today	Scientific Reports

UNIVERSITY SERVICE AND OUTREACH

University

Member, Caravel Editorial Board, USC, 2015-Present

Member, Instructional Development Committee, USC, 2012-2014
 Chair, University-Wide Instructional Development Committee, USC, 2011
 Senator, Faculty Senate, University of South Carolina (USC), 2010-2014
 Member, Intellectual Property Committee, Univ. South Carolina, 2011-2014
 Member, university-wide faculty welfare committee, USC, 2007-2010
 Member, Provost-chaired Biomedical Engineering Committee, USC, 2005-2006
 Member, Chemical Engineering Undergraduate Committee, USC, 2008-2010
 Member, Chemical Engineering Graduate Recruiting Committee, USC, 2008-2009
 Member, Biomedical Engineering Faculty Search Committee, USC, 2006-2008
 Faculty mentor, Theta Tau Colony, University of South Carolina, 2008-present

Community

Organizer, High-School Teacher Workshop, Impact of bionanotechnology on education, Annual Meeting of SC Academy of Science and Engineering, April 16, 2009
 Mentor, Robotic team, First Robotics Tour, University of South Carolina, April 1, 2005
 Judge, Annual Science and Engineering Fair, Columbia, SC, 2005-2010
 Judge, Hammond High School, Science Fair, 2010

SCHOLARLY AND PROFESSIONAL PUBLICATIONS (>3000 citations, h-index 30, i10-index 66)

I. Books

1. E. Jabbari, "From Proteins to Peptides," World Scientific Publishers, in Preparation (2014).
2. E. Jabbari, A. Khademhosseini, D. Kim, L. Lee, and A. Ghaemmaghami, "Handbook of Biomimetics and Bioinspiration," World Scientific Publishers, Published March 15, 2014.
3. M. Ramalingam, E. Jabbari, S. Ramakrishna, and A. Khademhosseini Editors, "Micro and Nanotechnologies in Engineering Stem Cells and Tissues," Wiley-IEEE Press, Hoboken, New Jersey, 328 pages, Published June (2013).
4. E. Jabbari, A. Khademhosseini Editors, "Biologically-Responsive Hybrid Biomaterials," World Scientific Publishers, ISBN: 978-981-4295-67-3, 423 pages, Published March (2010).

II. Encyclopedia entry

1. E. Jabbari, "Nanoengineered hydrogels for cell engineering," in Encyclopedia of Nanotechnology, Bharat Bhushan Ed., Springer, New York, NY, Chap. 404, Vol. 3, , pp. 1539-1543 (2012). DOI 10.1007/978-90-481-9751-4

III. News Articles

1. E. Jabbari, "Modeling Virulent Cancer Stem Cells," in Genetic Engineering News, July 26 issue (2016). www.genengnews.com

IV. Book chapters

20. S. Moeinzadeh, E. Jabbari, "3D cell culture in micro-patterned hydrogels prepared by photomask, micro-needle or soft lithography techniques," in 3-D Cell Culture: Methods and Protocols, Zuzana Zuzana Koledova Ed., in Methods in Molecular Biology Book Series, Springer Publishing, in press (2016).
19. S. R. Pajuom Shariati, S. Moeinzadeh, E. Jabbari, "Hydrogels for Cell Encapsulation and Bioprinting," in Bioprinting, Kursad Turksen Ed., in Stem Cells and Regenerative Medicine Book Series, Springer Publishing, Chapter 4, pp. 89-108 (2015).

18. S. Moeinzadeh and E. Jabbari, "Morphogenic peptides in regeneration of load bearing tissues," in *Engineering Mineralized and Load Bearing Tissues*, Luiz Bertassoni Ed., in *Advances in Experimental Medicine and Biology Series 881*, Springer Publishing, Part 3, Section 1, Chapter 6, pp. 95-110 (2015).
17. T. Karimi, Seyedsina Moeinzadeh, and E. Jabbari, "Growth factors for musculoskeletal tissue engineering," in *Regenerative Engineering Musculoskeletal Tissues and Interfaces*, Editors, Syam Nukavarapu, Joseph Freeman, Cato Laurencin, Woodhead Publishing, Part I, Chapter 3, 43-76 (2015).
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4. E. Jabbari, M. Khakpour, Effect of chain extending agent on morphology of porous polyurethane microspheres, *Proceed. Int'l Symp. Control. Rel. Bioact. Mater.*, pp. 212-213 (1999).
3. E. Jabbari, Effect of mechanism of macromolecular motion on the rate of healing at the interface of dissimilar polymer bilayers, *Proceedings of International Seminar Polymer Science and Technology*, Tehran, Iran, pp. 44-50 (1997).
2. E. Jabbari, K. Arjomand-Hessabi, Monte Carlo simulation of branching in emulsion polymerization of dienes: I. Effect of initiator concentration, *Proceedings of International Seminar Polymer Science and Technology*, Tehran, Iran, pp. 123-131 (1997).

1. F. Lahootifard, E. Jabbari, Investigation of the release mechanism of nitroglycerin from a transdermal microreservoir system, *Proceedings of International Seminar Polymer Science and Technology*, Tehran, Iran, pp. 758-763 (1997).

PRESENTATIONS AT PROFESSIONAL MEETINGS

I. Keynote Presentations

3. Keynote Address, "Polyethylene Glycol Nanogels for On-Demand and Bioactive Delivery of Protein Drugs," 3rd Annual Controlled and Modified Drug Release & 2nd Drug Delivery Strategy Conferences, Warwick Hotel, Philadelphia, PA, 10:00 – 10:40 AM, August 30, 2016.
2. Keynote Address, "Engineered Enrichment System for Cancer Stem Cells," 3rd 3D Models & Drug Screening Conference," Maritim Hotel Berlin, Berlin, Germany, 8:00 – 8:50 AM, May 11, 2016.
1. Keynote Address, "Polyethylene Glycol Nanogels for On-Demand and Bioactive Delivery of Protein Drugs," Global Drug Bioavailability Enhancement Summit, Omni Park House Hotel, Boston, MA, USA, May 10, 2016 (9:15 – 10:00 AM).

II. Invited presentations

61. "Biofunctional Nanomaterials in Regeneration of Skeletal Tissues," The Southeastern Regional Meeting of the American Chemical Society, Columbia, SC, October 23-27, 2016. ????
60. "Role of Macrophages in Nanoparticle-Mediated Drug Targeting to Cancer Stem Cells," Track A: Preclinical Models Targeting the Tumor Microenvironment for Enhanced Predictability, 4th Annual Tumor Models, , Boston, MA, Wednesday, July 20, 2016, 15:00 – 15:30 PM.
59. "Engineered in vitro Culture System for Cancer Stem Cell Drug Screening," 5th Annual Murine Models, Cell Lines, Organoids, Gene Editing in Oncology and Immune-Oncology: Part 1: Preclinical Models in Oncology, Westin Boston Waterfront Hotel, Boston, MA, Thursday, June 16, 2016, 11:30 AM – 12 PM.
58. "Developmentally Inspired Approach to Cartilage Tissue Engineering," in Session Q-2- Multifunctional materials in tissue engineering and regenerative medicine, 11th International Conference on "Medical Applications of Novel Biomaterials and Nanotechnology" in 7th – Structure, CIMTEC 2016, Perugia, Italy, June 5-9, 2016, ????
57. "3D Gel Culture System for Enrichment of the Stem Cell Sub-population of Cancer Cells," Massachusetts Technology Transfer Center (MTTC), Boston, MA, Thursday December 10, 2015 (7th Floor, 28 State Street, 8 – 10 AM).
56. "3D Gel Culture System for Enrichment of the Stem Cell Sub-population of Cancer Cells," Strategic Alliances: Novartis Institutes for BioMedical Research, Cambridge, MA, Tuesday December 8, 2015 (3-4 PM).
55. "CORTIAMIC Technology," Defense Innovation Technology Acceleration Challenges, JW Marriott, Austin, TX, Wednesday December 2, 2015 (Griffin Hall, Showcase 2817).
54. "Engineered Culture Systems for Cancer Stem Cells," in Cancer-On-A-Chip: Engineering 3D Models of Tumor, in Complex Cellular Models Predictive of Human Response to Improve early Decision Making, 3rd Annual Screening and Functional Analysis of 3D Models Congress, Renaissance Waterfront Hotel, Boston, MA, Wednesday, November 11, 2015 (2:20 – 2:45 PM).

53. "Engineered Microenvironments for Bone and Cartilage Regeneration", School of Biological and Health Systems Engineering, Arizona State University, Tempe, AZ, Friday, September 18, 2015 (3:00 – 4:00 PM).
52. "Bionanotechnology in Engineering and Medicine," TC Symposium on Frontiers of Biomedical Engineering, 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, MiCo – Milano Conference Center, Milan, Italy, Thursday August 27, 2015 (5 – 5:30 PM, room White 1).
51. "Nano-/Micro- Engineering in Cartilage Regeneration," 3rd Annual Workshop on Micro- and Nanotechnologies in Medicine, Tissue Engineering Session II, Biomaterials Innovation Research Center, 65 Landsdowne, Brigham and Women's Hospital, Friday July 31 , 2015, 4:30 – 5:15 PM.
50. "Synthesis of Hydrolysable Nanogels for Controlled Temporal Delivery of Vasculogenic Factors in Patterned Cellular Constructs," Drug Metabolism Track, Drug Discovery & Therapy World Congress 2015 and Global Biotechnology Congress 2015, John B. Hynes Veterans Memorial Convention Center, Boston, MA, Thursday, July 23, 2015, 4:00 – 4:30 PM (Lecture Hall 203, Level 2, chaired by: M. Linder and W.A. Zaghary).
49. "Drug Screening with a Model 3D Breast Cancer Stem Cell Culture System," Tumor Models Symposium, LeMeridien, Cambridge-MIT, Cambridge, MA, Wednesday, July 22, 2015, 3:40 PM – 4:10 PM.
48. "NSF-NCI Workshop on Integrative Additive Biomanufacturing and Tumor Engineering Workshop," Building 35A, Porter Neuroscience Research Center, NIH Campus, Bethesda, MD, April 1-2, 2015 (Invited but due to a time-conflict did not participate).
47. "Engineering Cancer Stem Cell Microenvironment," Department of Biomedical Engineering, Tuft University, Boston, MA, Tuesday October 14, 2014, 10:00 – 11:00 AM.
46. "Multiscale approach to skeletal tissue regeneration," 2nd Annual Workshop For Micro- And Nanotechnologies for Medicine: Emerging Frontiers And Applications, 65 Landsdowne, Department of Medicine, Brigham and Women's Hospital, Thursday, July 31, 2014, 11:00 AM – 12:00 PM.
45. "Role of Tissue Stiffness on the Maintenance of Breast Cancer Stem Cells," Invited Session Biomechanics I, 7th World Congress of Biomechanics, John B. Hynes Memorial Convention Center, Boston, MA, Tuesday, July 8, 2014, 11:00 AM - 12:30 PM (Abstract No 14-IS-1032-WCB).
44. "Cortical-bone-mimetic hierarchical composites," in Session FO-7 - Progress in Implant Prostheses, 10th International Conference on "Medical Applications of Novel Biomaterials and Nano-biotechnology" in 6th Forum on New Materials, CIMTEC 2014, Montecatini Terme, Italy, June 18, 2014, 17:20 PM – 17:50 PM (Presentation No IL02, Sirio Room, Palazzo Dei Congressi).
43. "Bioinspired approach to skeletal regeneration," Chemical, Biochemical, and Biotechnology Systems, National Science Foundation, Arlington, VA, Monday, June 9, 2014, 10:00 AM – 11:00 AM.
42. "Micro and nanotechnologies in engineering the cancer stem cell niche" NSF funded workshop on BioMEMS and Tissue Engineering, Department of Medicine, Brigham and Women's Hospital, Friday, August 2, 2013, 10:45 AM – 12:00 PM.
41. "Engineered Matrix, Microenvironment and Cancer Stem Cell Maintenance," Wyss Institute for Biologically Inspired Engineering, Harvard University, Boston, MA, Wednesday, July 17, 2013, 4:00 – 5:00 PM (Room 521).
40. "Engineered Matrix to Study Cancer Stem Cell Microenvironment," Department of Biomedical Technologies, Graduate School of Natural and Applied Sciences, Ege University, Izmir, Turkey, Friday June 21, 2013, 9:00 – 10:00 AM.

39. "Bioinspired Design of Materials for Bone Tissue Regeneration," Department of Chemical and Petroleum Engineering, University of Kansas, Lawrence, Kansas, Thursday, May 16, 2013, 9:00 – 10:00 AM, 2112 Learned Hall.
38. "Synergistic effect of osteopontin and BMP-2 derived peptides grafted to a hydrogel on osteogenic and vasculogenic differentiation of stromal cells," Biomaterial-Cell Interactions Minisymposium, Theme 7: Cellular and Tissue Engineering and Biomaterials, Annual International Conference of IEEE Engineering in Medicine and Biology Society (EMBC'12), San Diego, CA, Friday, August 31, 2012, 13:45-14:00 PM (paper# FrC18.2, Aqua 309).
37. "Engineered matrix to study the effect of microenvironment on maintenance of cancer stem cells and drug response," Northeastern University, Boston, MA, January 11, 2103 (11:45 AM to 1:15 PM).
36. "Adult mesenchymal stem cells in bone regeneration," The Third Royan International Summer School, Royan Stem Cell Institute, Tehran, July 18, 2012.
35. "Biomimetic approaches to engineering skeletal tissues," Department of Chemical Engineering, Sharif University of Technology, Tehran, July 15, 2012.
34. "In-situ crosslinkable osteoinductive poly(lactide) scaffold for bone regeneration," Berton Rahn Award Presentation, AO Foundation Board of Trustees Meeting, Congress Center, Davos, Switzerland, June 30, 2012.
33. "Biomimetic Approaches to Rational Design of Materials for Skeletal Tissues," Department of Chemical, Biological, and Pharmaceutical Engineering," New Jersey Institute of Technology, Newark, NJ, April 10, 2012 (1:00 – 2:00 PM).
32. "Nanoparticles for Protein Delivery: Improving Efficacy, Reducing Protein Diffusion, and reducing tissue overgrowth," Track 3: Nanomedicine, International Conference and Exhibition on Nanotechnology & Nanomedicine, Omaha, NE, March 12, 2012 (Marriott, Salon DE, 17:25 PM to 17:45 PM).
31. "Biomimetic Approaches to Engineering Skeletal Tissues," Department of Biomedical Engineering, The Case Western Reserve University, Cleveland, OH, March 6, 2012 (10:00 AM to 11:00 AM).
30. "Biomimetic Engineered Materials for Growth Factor Delivery and Tissue Regeneration," Department of Chemical Engineering, University of Illinois Chicago, Chicago, IL, September 29, 2011 (11:00 AM-12:00 PM).
29. "Ligand-Conjugated Self-Assembled Nanoparticles for Targeting Tumor Stem Cells," in Session J-5 - Targeted Delivery and Release Systems of Symposium J - Biomedical Applications of Smart Technologies, International Conferences Materials and Technologies, Montecatini, Italy, June 10-14 , 2012.
28. "Engineered Materials for Tissue Engineering and Growth Factor Delivery," Department of Bioengineering, The Pennsylvania State University, State College, PA, May 5, 2011 (12:45-13:15 PM).
27. "Biomimetic Engineered Constructs for Bone Regeneration," "Medical Education and Research Center, School of Medicine, Temple University, Philadelphia, PA, April 29, 2011 (12:00-13:00 PM).
26. "Biomimetic Engineered Constructs for Bone Regeneration," Department of Bioengineering, College of Engineering, Temple University, Philadelphia, PA, April 28, 2011 (12:30-13:30 PM).
25. "Macro, Micro and Nano Mechanics of Polymer Composite Systems," Multiphase Polymer and Polymer Composites: From Nanoscale to Macro Composites, Paris-Est University, Paris, France, June 7, 2011.

24. "Effect of 3D Microstructure on Osteogenic Expression of Mesenchymal Stem Cells," Controlling Microenvironment and Cell Fate session, Tissue Engineering and Regenerative Medicine International Society Conference, Orlando, FL, December 6, 2010 (11:15 – 11:30 AM, Walt Disney Hilton).
23. "Role of Substrate Microstructure on Osteogenic Differentiation of Mesenchymal Stem Cells," Tissue Mechanics Track, Annual International Conference of IEEE Engineering in Medicine and Biology Society (EMBC'10), Buenos Aires, Argentina, September 2, 2010, 6:00-6:15 PM (paper# ThE13.3).
22. "Effect of Sustained Release of Bone Morphogenetic Protein on Osteogenic Expression of Mesenchymal Stem Cells," Biomimetic materials, implantable biosensor and local drug delivery systems Track, Annual International Conference of IEEE Engineering in Medicine and Biology Society (EMBC'10), Buenos Aires, Argentina, September 3, 2010, 9:45-10:00 AM (paper# FrA09.2).
21. "Bone-Mimetic Laminated Nano-Structures for Regeneration of Skeletal Tissues," International Conference on Modern Materials and Technologies, 5th Forum on New Materials, 9th International Conference on Medical Applications of Novel Biomaterials and Nano-Biotechnology, Regenerative Medicine and Tissue Engineering session, Montecatini, Italy, June 17, 2010 (FL-4:IL11, paper# 11).
20. "Engineering Bone Formation with Peptidomimetic Hybrid Biomaterials," Biomaterial-Cell Interactions Session, Cellular & Tissue Engineering, & Biomaterials Track, Annual International Conference of IEEE Engineering in Medicine and Biology Society (EMBC'09), Minneapolis, MN, Thursday, September 3, 2009, 2:15 – 2:30 PM (paper# ThCT12.4).
19. "Bio-Inspired Materials for Bone Tissue Engineering", Department of Chemical and Biological Engineering, University of Alabama, Tuscaloosa, AL, Thursday, October 16, 2008 (11:00 AM – 12:00 PM).
18. "Bio-Inspired Materials: Peptide-Reinforced Nanocomposites and Self-Assembled Nanoparticles," Department of Chemical Engineering and Materials Science, University of California Irvine, Irvine, CA, Tuesday, April 22, 2008 (11:00 – 11:45 AM).
17. "Biomimetic Nanomaterials for Tissue Engineering and Tumor Delivery", Iran's First International Conference on Biomaterials," Biomaterials Research Center, University of Tehran, Tehran, Iran, Monday, November 12, 2007 (11:30-12:00 AM).
16. "In-Situ Crosslinkable Osteoinductive Poly(lactide) Scaffold for Bone", AO Symposium: "Biomaterials, Cell-, Tissue and Gene based Therapies: From Basic Research to Clinical Applications," University Hospital Lausanne, Lausanne, Switzerland, October 20, 2006 (9:25 AM).
15. "Bioinspired Nano-Composite Materials as Scaffolds for Bone Tissue Regeneration," Department of Chemical & Biomolecular Engineering, Georgia Tech, Atlanta, GA, September 20, 2006.
14. "Synthesis, Processing, and Applications of Biomimetic Nanocomposites in Tissue Engineering," Nanotechnology Seminar Series, Accelrys Corp., San Diego, CA, August 15, 2006.
13. "Biomimetic Osteoinductive In situ Crosslinkable Poly(lactide) for Bone Regeneration," 1st Marie Curie Cutting Edge InVENTS Conference on New Developments on Polymers for Tissue Engineering, Replacement, and Regeneration, Funchal, Madeira, Portugal, June 3, 2006 (4:00 PM).
12. "Bioresorbable Cell Responsive Materials for Tissue Regeneration," Department of Cell Biology and Anatomy, Medical University of South Carolina, Charleston, SC, February 22, 2006.
11. "Bone Regeneration in a Load-Bearing Defect with PLAF Scaffold," Calvert Research Institute, Cary, NC, December 14, 2005.

10. "Soft Tissue Biomaterials in Orthopaedics," Department of Orthopaedic Surgery, School of Medicine, University of South Carolina, Columbia, SC, April 26, 2005.
9. "Biomaterials for Musculoskeletal Tissue Engineering," Department of Orthopaedic Research, Medical University of South Carolina, Charleston, SC, October 1, 2004.
8. "Injectable Biomimetic Scaffolds for Regeneration of Skeletal Tissues," School of Chemical Engineering and Materials Science, University of Oklahoma, Norman, OK, August 27, 2004.
7. "Injectable Biomimetic Composites for Regeneration of Skeletal Tissues," Department of Biomedical Engineering, School of Medicine, Mayo Clinic, Rochester, MN, May 28, 2004.
6. "Injectable and Biomimetic Polymers as Scaffolds for Regeneration of Skeletal Tissues," Department of Chemical and Biomedical Engineering, Cleveland State University, Cleveland, OH, April 8, 2004.
5. "Injectable and Biomimetic Polymers as Scaffolds for Regeneration of Skeletal Tissues," Department of Chemical and Petroleum Engineering, University of Kansas, Lawrence, KS, March 18, 2004.
4. "Injectable and Biomimetic Polymers as Scaffolds for Regeneration of Skeletal Tissues," Department of Chemical Engineering, Auburn University, Auburn, AL, February 20, 2004.
3. "Injectable and Degradable Composite Biomaterials for Regeneration of Skeletal Tissues," Department of Chemical Engineering, University of South Carolina, Columbia, SC, January 15, 2004.
2. "Development of a Novel Degradable, Injectable, and Self-Crosslinkable Composite Biomaterial for Orthopedic Applications," National Science Foundation Sponsored Materials Chemistry Workshop, Tempe, Arizona, October 2003.
1. "Injectable Biomimetic Composites for Regeneration of Skeletal Tissues," Biomedical Engineering Seminar Series, Mayo Clinic, Rochester, Minnesota, May 28, 2004.

III. Research presentations

200. "Mesenchymal Stem Cells Mediate Maintenance of Breast Cancer Stem cells in 3D Culture," 4th Annual Tumor Models, The Colonnade Hotel, Boston, MA, July 20, 2016 (Poster).
199. "Effect of Timed and Localized Release of BMP-2 and VEGF on Vascularized Osteogenesis in a 3D Co-Culture of Human Mesenchymal and Endothelial Stem Cells," Biomaterials for pluripotent stem cell culture and differentiation Session, New Frontiers Symposium, 10th World Biomaterials Conference, Montreal, Quebec, Canada, Thursday, May 19, 2016, 14:00 – 15:00 PM (Palais des Congres de Montreal, Rm 518).
198. "Nanogel Formation By Self-Assembly of Polyethylene Glycol Macromers Sequentially Chain-Extended with Short Lactide and Glycolide Segments," Self-Assembled Biomaterials Session, Nanoscale Science and Engineering Forum, AIChE Annual Meeting, Salt Palace Convention Center, Salt Lake City, UT, Sunday November 8, 2015, 4:40 – 5:10 PM (Salt Palace Convention Center, Rm 253A).
197. "Zone Specific Chondrogenic Differentiation of Human Mesenchymal Stem Cells Using Developmentally Defined Differentiation Factors," Stem Cell Engineering Track, BMES 2015 Annual Meeting, Tampa Convention Center, Tampa, FL, October 7-10, 2015 (Submission ID# 2029).
196. "A Biomimetic Approach for Engineering Stratified Organization of Articular Cartilage by Recapitulating Biochemical, Biomechanical and Geometrical Factors Involved in Cartilage Tissue Development," 2015 4th TERMIS World Congress, Wednesday September 9, 2015, 10:30 – 12:00 AM (Boston Marriott Copley Place).

195. "Determination of Optimum Matrix Stiffness for Maintenance of Human Colon Cancer Stem Cells," 2015 4th TERMIS World Congress, Thursday September 10, 2015, 7:00 – 8:00 AM (Boston Marriott Copley Place).
194. "Nanogels For Dual Delivery Of Bone Morphogenetic Proteins And Vascular Endothelial Growth Factor In Bone Regeneration," 2015 4th TERMIS World Congress, Thursday September 10, 2015, 7:00 – 8:00 AM (Boston Marriott Copley Place).
193. "Immune Response And Macrophage Polarization On Mineralized Cell Sheets Seeded With Human Mesenchymal And Endothelial Progenitor Cells," Drug Discovery & Therapy World Congress 2015, John B. Hynes Memorial Convention Center, Boston, MA, Friday, July 24, 2015, 11:00 – 13:00 PM (DDTWC-P#27, Poster Exhibition Area).
192. "Role of Citric Acid on Apatite Nucleation and Osteogenic Differentiation of Human Mesenchymal Stem Cells on Aligned Nanofibers," Poster Presentations: Orthopedic Biomaterials, Society of Biomaterials Annual Meeting and Exposition, Charlotte Convention Center, Charlotte, NC, Wednesday April 15, 2015, 6:00 PM – 8:15 PM (Poster Hall, Presentation #812).
191. "Developmentally Inspired Zone-Specific Chondrogenic Differentiation of Human Mesenchymal Stem Cells," Concurrent Session 5: Materials and Matrices for Osteochondral Tissue Engineering, Society of Biomaterials Annual Meeting and Exposition, Charlotte Convention Center, Charlotte, NC, Thursday April 16, 2015, 4:30 PM – 4:45 PM (Room 213A, Oral Presentation #267).
190. "Cortical Bone Mimetic Matrix for Regeneration of Segmental Bone Defects," Session Biomaterials – Bone, Orthopedic Research Society 2015 Annual Meeting, MGM Grand Hotel, Las Vegas, NV, Sunday March 29, 4:45 – 5:25 PM (PS1-003, Poster# 0310).
189. "3D Micropatterning of Biological Structures using Holographic Optical Tweezers," Session: Tools and Platforms for Stem Cell Therapies, TERMIS Americas Annual Conference, Renaissance Hotel, Washington DC, Sunday December 16, 2014, 11:00 – 11:30 AM.
188. "Synergistic Effect of Tissue-Mimetic Stiffness and Growth Factors on Zone-Specific Chondrogenic Differentiation of Human Mesenchymal Stem Cells," Session: Stem and progenitor cell-based approaches to musculoskeletal tissue therapies, TERMIS Americas Annual Conference, Renaissance Hotel, Washington DC, Sunday December 14, 2014, 11:00 – 11:30 AM.
187. "In Vivo Evaluation of a Cortical-Bone-Mimetic Resorbable Matrix in a Load-Bearing Segmental Defect Model," Session: Implants and host response to biomaterials, TERMIS Americas Annual Conference, Renaissance Hotel, Washington DC, Sunday December 14, 2014, 1:00 – 2:00 PM.
186. "Engineered Cellular Hydrogels for Zonal Regeneration of Articular Cartilage," Annual Meeting of the Society for Biomaterials, Denver Colorado, April 16-19.
185. "Experimental and Computational Investigation of BMP-2 Peptide Activity in Amphiphilic Hydrogels," Annual Meeting of the Society for Biomaterials, Denver Colorado, April 16-19.
184. "Maintenance of breast cancer stem cells in an inert matrix is mediated by mesenchymal stem cells in the tumor stroma," Category: Tumor Biology 7, 2014 Annual Meeting of the American Association for Cancer Research, San Diego Convention Center, San Diego, CA, Sunday April 6, 2014, 1:00 PM – 5:00 PM (Hall A-E, Poster Section 7, Abstract No 7251).
183. "Engineered model matrix to mimic cancer stem cell microenvironment: effect of integrin and heparin binding peptides," Category: Tumor Cell and Molecular Biology: Microenvironment – Stromal-Epithelial Interactions, 2013 San Antonio Breast Cancer Symposium, Henry B. Gonzalez Convention Center, San Antonio, Texas, Wednesday, December 11, 2013, 4:45 – 6:45 PM (Exhibition Hall A-B, Poster Session I, Poster # P1-06-09, Abstract No 1241).

182. "Inert patterned matrix for engineering cancer stem cell niche," Tumor Environment and Cancer Biology (Lessons Learned) Session, TERMIS-Americas 2013 Annual Conference, Hyatt Regency, Atlanta, GA, Tuesday, November 12, 2013, 2:30 – 4:00 PM (Exhibition Hall, Poster #234).
181. "Effect of matrix compressive modulus on zonal marker expression of stromal cells in chondrogenesis," Mechanotransduction Session, TERMIS-Americas 2013 Annual Conference, Hyatt Regency, Atlanta, GA, Monday, November 11, 2013, 4:30 – 6:00 PM (Exhibition Hall, Poster #162).
180. "Osteogenic differentiation of stromal cells in cortical-bone-mimetic microtubes," Engineering of Matrix Composition Session, TERMIS-Americas 2013 Annual Conference, Hyatt Regency, Atlanta, GA, Monday, November 11, 2013, 4:30 – 6:00 PM (Exhibition Hall, Poster #127).
179. "Sequential release of VEGF and BMP-2 proteins in PEG-based hydrogel micropatterns," Drug Delivery Principles Session, TERMIS-Americas 2013 Annual Conference, Hyatt Regency, Atlanta, GA, Monday, November 11, 2013, 4:30 – 6:00 PM (Exhibition Hall, Poster #101).
178. "BMP2-derived peptide aggregation conjugated to amphiphilic PEG macromers in aqueous solution," Computation Modeling Session, TERMIS-Americas 2013 Annual Conference, Hyatt Regency, Atlanta, GA, Tuesday, November 12, 2013, 1:45 – 2:00 PM (Centennial 1 Hall, Oral).
177. "Differentiation and mineralization of marrow stromal cells in osteon-inspired microtubes," TermIstanbul-EU 2013, Biomaterials-OP2 Session, Istanbul, Turkey, Tuesday, June 18, 2013, 17:30 – 19:00 PM (Hall 4: Inonu Hall, Poster).
176. "An engineered inert matrix for in-vitro maintenance of cancer stem cells," Section: Engineering Instructive Cues Biomaterials, Society for Biomaterials Annual Meeting, Hynes Convention Center, Boston, MA, Thursday April 11, 2013, 1:00 PM to 5:00 PM (Abstract No 653, Exhibit Hall A, Poster).
175. "Engineered matrix to study the effect of microenvironment on cancer stem cell maintenance," Session ID: Tumor Biology 3, American Association for Cancer Research (AACR) Annual Meeting, Washington, DC, Sunday Apr 7, 2013 1:00 PM - 5:00 PM (Abstract No 251, Hall A-C, Poster Section 14).
174. "Structure, properties, and stromal cell response of self-assembled micellar star poly(ethylene oxide-co-lactide) hydrogels," Self-Assembled Biomaterials Session, Bionanotechnology Group, AIChE Annual Meeting, Pittsburg, PA, Thursday November 1, 2012, 12:30-12:50 PM (Pittsburg Convention Center, Rm 310).
173. "Response of breast tumor cells to hybrid polymer-peptide self-assembled nanoparticles," Self-Assembled, Bionanotechnology Group, AIChE Annual Meeting, Pittsburg, PA, Thursday November 1, 2012, 12:30-12:50 PM (Pittsburg Convention Center, Rm 310).
172. "Cell encapsulation in hydrolytically degradable polyethylene glycol gels," Stimuli Responsive Biomaterials, Society for Biomaterials Annual Meeting, New Orleans, LA, October 5, 2012, Friday (Poster, Abstract ID# 274, 3:30-4:15 PM, Acadia Room, New Orleans Marriott).
171. "Synergistic effect of osteopontin and bmp-2 derived peptides grafted to a hydrogel on osteogenic and vasculogenic differentiation of stromal cells," Cell-Biomaterial Interactions Minisymposium, Theme-7: Cellular and Tissue Engineering and Biomaterials, Annual Conference of IEEE Engineering in Medicine and Biology Society (EMBC'12), San Diego, CA, Hilton Bayfront, August 31, 2012 (Oral, Paper FrC18.2, Aqua 309).
170. "Effect of degradable segment type and length on nanostructure formation of star polyethylene glycol macromonomers in aqueous solution," Division of Polymer Chemistry, Computational Polymer Modeling, 244th American Chemical Society National Meeting, Philadelphia, PA, August 19-23, 2012 (Oral, Abstract ID# 15538).

169. "CD44 binding peptide attached to an engineered matrix prevents the formation of CSC tumorspheres," LBPO.TB04. Late-Breaking Research: Tumor Biology 4, American Association for Cancer Research Annual Meeting, Chicago, IL, Wednesday April 4, 2012 (POSTER, 8:00 AM – 12:00 PM, McCormick Place West, Hall F, Poster Session 38).
168. "Effect of BMP2 peptide grafted nanoparticles on osteogenic expression of stromal cells encapsulated in a hydrogel," Poster Session II, Tissue Engineering and Regenerative Medicine International Society (TERMIS) Annual Conference, Hilton Americas, Houston, TX, Tuesday, December 13, 2011 (POSTER, 4:30 PM, Grand Ballroom).
167. "Effect of CD44 binding peptide conjugated to an engineered hydrogel matrix on maintenance of 4T cancer stem cells," Cancer Session, Tissue Engineering and Regenerative Medicine International Society (TERMIS) Annual Conference, Hilton Americas, Houston, TX, Wednesday, December 14, 2011 (ORAL, 11:30 AM, Grand Ballroom EF).
166. "Mesoscale Simulation of the Structure of Star Acrylated Poly(Ethylene Glycol-co-Lactide) Hydrogels," Symposium LL: Synthetic and Biological Gels, Materials Research Society Meeting, Hynes Convention Center, Boston, MA, Tuesday, November 29, 2011 (ORAL, 11:15 AM, LL4.7, Room 101).
165. "Gelation Characteristics and Encapsulation of Stromal Cells in Star Acrylate-Functionalized Poly (Ethylene Glycol-co-Lactide) Macromonomers," Joint Symposium KK: Biomaterials for Tissue Regeneration and Symposium V: Multifunctional Polymer-based Materials, Materials Research Society Meeting, Hynes Convention Center, Boston, MA, Monday, November 28, 2011 (ORAL, 4:00 PM, KK2.8/V3.8; V3.8/KK2.8, Room 312).
164. "Effect of BMP-2 Derived Peptide Grafted to Nanoparticles on Differentiation of Stromal Cells," Symposium KK: Biomaterials for Tissue Regeneration, Materials Research Society Meeting, Hynes Convention Center, Boston, MA, Tuesday, November 29, 2011 (POSTER, 8:00 PM to 11:00 PM, KK6.34, Exhibit Hall).
163. "Matrix Modulus Affects Invasion Rate of Tumor Cells Through Synthetic Hydrogels," Symposium LL: Synthetic and Biological Gels, Materials Research Society Meeting, Hynes Convention Center, Boston, MA, Wednesday, November 30, 2011 (ORAL, 11:30 AM, LL7.8, Room 101).
162. "The Effect of Surface Modifications on Apatite Formation on Aligned PLGA Nanofibers," Undergraduate Research Track, Biomedical Engineering Society Annual Meeting, Hartford, CT, October 15, 2011 (Poster, 09:30AM to 01:00PM in Convention Center - Exhibit Hall).
161. "Effect of Glutamic Acidic Peptide Modification of Aligned Electrospun PLGA Nanofibers on Calcium-Phosphate Deposition," Tissue Engineering Track, Biomedical Engineering Society Annual Meeting, Hartford, CT, October 12, 2011 (Oral, Abstract ID# 1453).
160. "Synthesis and Characterization of Degradable and Crosslinkable Unsaturated Poly(ethylene oxide-b-lactide-co-glycolide) Macromers," Division of Polymer Chemistry, General Topics in the Design, Synthesis, and Characterization of Polymers session, 242nd American Chemical Society National Meeting, Denver, Co, August 28, 2011 (Oral, Abstract ID# 15256, 4:40-5:00 PM, Sheraton Denver, Room: Governor's Square 16).
159. "Mesoscale simulation of the self-assembly of peptide-conjugated poly(L-lactide) macromers," Division of Polymeric Materials: Science and Engineering, Dynamics of Nanostructured Polymers session, 242nd American Chemical Society National Meeting, Denver, Co, September 1, 2011 (Oral, Abstract ID# 10281, 11:15-11:45 AM, Sheraton Denver, Room: Governor's Square 12).

158. "In vivo tumor toxicity of Doxorubicin encapsulated in peptide-assembled polylactide nanoparticles," Cancer Drug Delivery, Society for Biomaterials Annual Meeting, Orlando, FL, April 14, 2011, Thursday, (Poster, Abstract ID# 707, 4:00-6:00 PM, Walt Disney Contemporary Resort).
157. "Uptake and migration of tumor cells in response to hybrid polymer-peptide self-assembled nanoparticles," Cancer Drug Delivery, Society for Biomaterials Annual Meeting, Orlando, FL, April 14, 2011, Thursday, (Poster, Abstract ID# 672, 4:00-6:00 PM, Walt Disney Contemporary Resort).
156. "rhBMP-2 Protein Grafted to Resorbable Nanoparticles Enhances Osteogenic Expression of Stromal Cells," Nanobiotechnology for Regenerative Medicine, Tissue Engineering and Regenerative Medicine International Society Conference, Orlando, FL, Monday December 6, 2010 (Poster, Abstract ID# 552, 4:30 – 6:00 PM, Walt Disney Hilton).
155. "A Model Microtubular Culture System to Study Osteogenesis and Bone Formation," Musculoskeletal Tissue Engineering session, Tissue Engineering and Regenerative Medicine International Society Conference, Orlando, FL, Tuesday December 7, 2010 (Poster, Abstract ID# 559, 4:30 – 6:00 PM, Walt Disney Hilton).
154. "Effect of BMP-2 and Osteopontin Protein-Derived Peptides Grafted to a Hydrogel Substrate on Osteogenesis of Stromal Cells," Functionalization of Cells and Biomaterials session, Tissue Engineering and Regenerative Medicine International Society Conference, Orlando, FL, Monday December 6, 2010 (Poster, Abstract ID# 565, 4:30 – 6:00 PM, Walt Disney Hilton).
153. "Effect of 3D Microstructure on Osteogenic Expression of Mesenchymal Stem Cells," Controlling Microenvironment and Cell Fate session, Tissue Engineering and Regenerative Medicine International Society Conference, Orlando, FL, Monday December 6, 2010 (Oral, Abstract ID# T2010-1532, 11:15 – 11:30 AM, Walt Disney Hilton).
152. "Conjugation of rhBMP-2 Derived Peptide to Self-Assembled Nanoparticles Enhances Osteogenic Differentiation of Mesenchymal Stem Cells," AIChE Annual Meeting, Nanotechnology for Biotechnology and Pharmaceuticals I, Nanoscale Science and Engineering Forum, Salt Lake city, UT, November 11, 2010, (Oral, Abstract ID# 204578, Thursday, 4:05 PM, Alpine Ballroom West, Hilton).
151. "Tumor Suppression Characteristics of Doxorubicin Encapsulated in Novel Peptidomimetic Nanoparticles," AIChE Annual Meeting, Self-Assembled Biomaterials, Nanoscale Science and Engineering Forum, Salt Lake city, UT, November 12, 2010, (Oral, Abstract ID# 204359, Friday, 10:10 AM, Canyon B, Hilton).
150. "Uptake of Fluorescently-Labeled Peptidomimetic Nanoparticles by Tumor Cells," AIChE Annual Meeting, Nanotechnology for In Vivo and In Vitro Imaging, Nanoscale Science and Engineering Forum, Salt Lake city, UT, November 9, 2010, (Oral, Abstract ID# 204379, Tuesday, 9:10 AM, Canyon B, Hilton).
149. "Role of Substrate Microstructure on Osteogenic Differentiation of Mesenchymal Stem Cells," Tissue Mechanics Track, Annual International Conference of IEEE Engineering in Medicine and Biology Society (EMBC'10), Buenos Aires, Argentina, 1-4 September 2010, Paper#1812.
148. "Effect of Sustained Release of Bone Morphogenetic Protein on Osteogenic Expression of Mesenchymal Stem Cells," Biomimetic materials, implantable biosensor and local drug delivery systems Track, Annual International Conference of IEEE Engineering in Medicine and Biology Society (EMBC'10), Buenos Aires, Argentina, 1-4 September 2010, Paper#1836.
147. "Migration of Stromal Cells in Response to Sustained Release of Stromal Derived Factor-1 α ," Hydrogelsession, 37th Annual Meeting of the Controlled Release Society, Oregon Convention Center, Portland, OR, USA, July 14, 2010 (11:30-11:45 AM).

146. "Sustained Release of Stromal Derived Factor-1 Enhances Migration of Marrow Stromal Cells," Nanomedicine II session, 37th Annual Meeting of the Controlled Release Society, Oregon Convention Center, Portland, OR, USA, July 14, 2010 (3:15-3:30 PM).
145. "Synergistic Effect of rhBMP-2 and osteopontin Derived Peptides Grafted to a Hydrogel Substrate on Osteogenesis of Marrow Stromal Cells," Spotlight Session 20: Stem Cell Differentiation, 56th Annual Meeting of the Orthopedic Research Society, New Orleans, LA, March 6, 2010 (2:45-3:00, #89).
144. "Sustained Release of rhBMP-2 Grafted to Self-Assembled Nanoparticles Enhances the Expression of Osteogenic Markers of Mesenchymal Stem Cells," Poster Session 34: Biomaterials, 56th Annual Meeting of the Orthopedic Research Society, New Orleans, LA, March 6, 2010 (6:00-6:30 PM, #1217).
143. "Synthesis and characterization of peptidomimetic self-assembled biodegradable nanoparticles," Materials Research Society Meeting, Symposium UU: Molecular Biomimetics and Materials Design, Boston, MA, Wednesday, December 2, 2009 (2:30 PM, UU5.4).
142. "Marrow stromal cell response to fiber-reinforced laminated nanocomposites," Materials Research Society Meeting, Symposium RR: Engineering Biomaterials for Regenerative Medicine, Boston, MA, Tuesday, December 1, 2009 (2:45 PM, RR5.5).
141. "Migration of stem cells in response to sustained release of stromal-derived factor 1- α ," Materials Research Society Meeting, Symposium RR: Engineering Biomaterials for Regenerative Medicine, Boston, MA, Monday, November 30, 2009 (8:00 PM, RR3.40).
140. "Release characteristics and osteogenic activity of rhbmp-2 grafted to resorbable nanoparticles," AIChE Annual Meeting, Nashville, TN, November 8-13, 2009, (08B19 Skeletal Tissue Engineering, Oral, Abstract ID# 170645).
139. "Synergistic Effects of RGD and BMP-2 Peptides Grafted to a Biodegradable Scaffold On Osteogenic Differentiation of Stromal Cells," AIChE Annual Meeting, Nashville, TN, November 8-13, 2009, (08B04 Cell-Material Interactions II, Oral, Abstract ID# 170626).
138. "Fabrication and stromal cell response to laminated fiber-reinforced nanocomposites," AIChE Annual Meeting, Nashville, TN, November 8-13, 2009, (08B14 Biomimetic Materials II, Oral, Abstract ID# 170219).
137. "Novel star multifunctional polylactide-co-glycolides as injectable in-situ crosslinkable macromers," AIChE Annual Meeting, Nashville, TN, November 8-13, 2009, (08B22 Injectable Biomaterials 22021, Oral, Abstract ID# 170095).
136. "Self-assembled peptide-conjugated polymer nanoparticles for tumor targeting," AIChE Annual Meeting, Nashville, TN, November 8-13, 2009, (22021 Self-Assembled Biomaterials II, Oral, Abstract ID# 169822).
135. "Synthesis and release characteristics of rhBMP-2 protein grafted to novel self-assembled poly(lactide-co-glycolide fumarate) nanoparticles," 238th National Meeting of the American Chemical Society, Washington, DC, August 16-20, 2009, (Paper ID: 1299140, Paper No. 387, Division of Polymeric Materials: Science & Engineering, Hybrid Smart Micro- and Nanoparticles session, August 19, Oral Presentation, 9:30 – 9:50 AM).
134. "Modulation of Osteogenic Differentiation of Stromal Cells by the BMP-2 Protein-Derived Peptide Grafted to a Hydrogel Substrate," 238th National Meeting of the American Chemical Society, Washington, DC, August 16-20, 2009, (Paper ID: 1298873, Paper No. 206, Division of Polymeric Materials: Science & Engineering, Biomaterials and Bioengineering session, August 17, Oral Presentation, 4:00 – 4:20 PM).
133. "Engineering Bone Formation with Peptidomimetic Hybrid Biomaterials," 31st Annual International IEEE EMBS Conference, Minneapolis, MN, September 2-6, 2009, (Oral Presentation September 3: 14:15 – 14:30 PM; ThCT12 Biomaterial-Cell Interactions track).

132. "Effect of alignment of electrospun fibers on osteogenic differentiation of marrow stromal cells", Society for Biomaterials Annual Meeting, San Antonio, TX, April 23-24, 2009, (Poster Presentation April 23: 5:15-6:00 PM; April 24: 3:30-4:15 PM).
131. "Release characteristics and osteogenic activity of rhBMP-2 conjugated to self-assembled nanoparticles", Society for Biomaterials Annual Meeting, San Antonio, TX, April 23, 2009, Thursday, (Oral Presentation Rapid Fire Session 1, #100, 3:15 – 4:15 PM).
130. "In-vivo bone formation in RGD-conjugated crosslinked poly (lactide) scaffolds with well-defined pore geometry", Society for Biomaterials Annual Meeting, San Antonio, TX, April 23-24, 2009, (Poster Presentation April 23: 5:15-6:00 PM; April 24: 3:30-4:15 PM).
129. "Peptide-induced self-assembly of synthetic poly(lactide fumarate) macromer", Society for Biomaterials Annual Meeting, San Antonio, TX, April 23, 2009, Thursday, (Oral Presentation Rapid Fire Session 3, #118, 4:15 – 5:15 PM).
128. "Mechanical characterization of electrospun laminated hydrogel/apatite nanocomposite", AIChE Annual Meeting, Philadelphia, PA, November 20, 2008, Thursday, (1:08 PM, session#656c, Biomaterials (08b) - Nanostructured Biomaterials (08B07)).
127. "Release characteristics of rhBMP-2 conjugated to self-assembled biodegradable nanoparticles", AIChE Annual Meeting, Philadelphia, PA, November 20, 2008, Thursday, (12:49 PM, session#656c, Biomaterials (08b) - Nanostructured Biomaterials (08B07)).
126. "Biodegradable nanoparticles conjugated with $\alpha\beta3$ integrin-binding ligand for targeted tumor delivery", AIChE Annual Meeting, Philadelphia, PA, November 20, 2008, Thursday, (4:30 PM, session#714e, Bionanotechnology (22b) - Self-Assembled Biomaterials II (22B19)).
125. "Sustained in situ delivery of rhBMP-2 by conjugation to novel biodegradable nanoparticles," Society for Biomaterials 2008 Translational Biomaterial Research Symposium, Saturday, September 13, 2008 (paper# 276; 2:45-4:15 PM).
124. "Biodegradable self-assembled nanoparticles for targeted delivery of Paclitaxel to tumor cells," Society for Biomaterials 2008 Translational Biomaterial Research Symposium, Musculoskeletal Applications session, Saturday, September 13, 2008 (paper# 152; 3:35-4:30 PM).
123. "Modulation of osteogenic and vasculogenic differentiation of stromal cells in a collagen scaffold," Society for Biomaterials 2008 Translational Biomaterial Research Symposium, Friday, September 12, 2008 (paper# 275; 2:45-4:15 PM).
122. "BMP-2 peptide grafted to a degradable substrate enhances osteogenic differentiation of stromal cells," Society for Biomaterials 2008 Translational Biomaterial Research Symposium, Musculoskeletal Applications session, Saturday, September 13, 2008 (paper# 280; 2:30-4:00 PM).
121. "Release characteristics of rhBMP-2 from self-assembled biodegradable PLEOF nanoparticles," 35th Controlled Release Society Annual Meeting, New York, NY, Monday, July 14, 2008 (paper# 324; 14:00-15:00 PM).
120. "Cytotoxicity of Paclitaxel in biodegradable self-assembled core-shell PLGEOF nanoparticles," 35th Controlled Release Society Annual Meeting, New York, NY, Tuesday, July 15, 2008 (paper# 622; 13:00-14:00 PM).
119. "Quantification of membrane adhesion on ligand gradient substrates," 8th World Biomaterials Conference, Modeling session, Amsterdam, The Netherlands, May 31, 2008 (paper# 1830.00).
118. "Morphology of rat bone marrow stromal cells on aligned electrospun biodegradable fibers," Amsterdam, The Netherlands, May 29, 2008 (paper# 1829.00).

117. "Biodegradable self-assembled nanoparticles for targeted delivery of Paclitaxel to tumor cells," 8th World Biomaterials Conference, Micro/Nanoparticles for drug delivery session, Amsterdam, The Netherlands, June 1, 2008 (paper# 1827.00; 10:30-12:00).
116. "The role of polymer-particle interactions on the viscoelastic properties of polymer nanocomposites," Materials Research Society Meeting, Symposium HH: Nanophase and Nanocomposite Materials V, Boston, MA, Tuesday, November 27, 2007 (8:00 PM, HH8.29).
115. "Effect of ligand density gradient on the adhesion kinetics of biological membranes," Materials Research Society Meeting, Symposium OO: Solids at biological interfaces, Boston, MA, Monday, November 26, 2007 (11.45 AM, OO1.10).
114. "Synthesis of degradable nanotubes by tubulin template polymerization," AIChE Annual Meeting, Salt Lake City, UT, Thursday, November 8, 2007, Thursday (12:30 PM, session#599a, Nanostructured Biomaterials (08B12)).
113. "Release behavior of paclitaxel from self-assembled degradable nanoparticles," AIChE Annual Meeting, Salt Lake City, UT, November 8, 2007, Thursday (1:04 PM, session#606c, Topical 8: Bionanotechnology (T8)).
112. "Marrow stromal cell function on multi-functional peptide-reinforced nanocomposite scaffold," AIChE Annual Meeting, Salt Lake City, UT, Thursday, November 8, 2007, Thursday (2:36 PM, session#575h, Biomimetic Materials II (08B06)).
111. "Gelation, degradation, and marrow stromal cells function on photo-crosslinked pol(lactide-co-glycolide-co-ethylene oxide) hydrogels," AIChE Annual Meeting, Salt Lake City, UT, November 7, 2007, Wednesday (6:30-9:00 PM, session#515bg, #515 - Bioengineering Poster Session (15C05)).
110. "Fabrication of Functional Biodegradable Scaffolds with Well-Defined Pore Geometry," AIChE Annual Meeting, Salt Lake City, UT, November 8, 2007, Thursday, (9:39 AM, session#536d, Functional Biomaterials (08B13)).
109. "Concurrent osteogenic and vasculogenic differentiation of marrow stromal cells," AIChE Annual Meeting, Salt Lake City, UT, Tuesday, November 6, 2007, Tuesday, (1:50 PM session#266e, Tissue Engineering II (08B07)).
108. "Effect of an unsaturated amphiphilic macromer on electrospinning of aligned PLGA fibers," November 8, 2007, Thursday, (1:42 PM, session#599e, Nanostructured Biomaterials (08B12)).
107. "Concurrent Differentiation of Marrow Stromal Cells to Osteogenic and Vasculogenic Lineages in a 3-D culture system," 6th Combined Meeting of the Orthopaedic Research Societies, Honolulu, Hawaii, October, 23, 2007 (11:00 AM, Session 21 Tissue Engineering II (Bone and Tendon), Paper#184, Room 311).
106. "Fabrication of biomimetic scaffolds with well-defined pore geometry by fused deposition modeling," ASME International Conference on Manufacturing Science and Engineering, Georgia Institute of Technology, Atlanta, GA, October 18, 2007, Thursday (10:30 AM, MSEC2007-31011, Session: 2-2 Tissue Scaffold Fabrication).
105. "Multi-functional shape-specific biodegradable nanocomposite scaffolds for bone regeneration," Poster Session, Poster #16, South Carolina Bioengineering Summit, Medical University of South Carolina, Charleston, SC, June 14, 2007 (5:00-7:00 PM).
104. "Interdisciplinary bioengineering and biomedical research in ophthalmology," Poster Session, Poster #45, South Carolina Bioengineering Summit, Medical University of South Carolina, Charleston, SC, June 14, 2007 (5:00-7:00 PM).

103. "Development of a tissue engineering controls laboratory for research training," Poster Session, Poster #49, South Carolina Bioengineering Summit, Medical University of South Carolina, Charleston, SC, June 14, 2007 (5:00-7:00 PM).
102. "Degradation Characteristics of Novel In-Situ Crosslinkable Poly(Lactide-co-Glycolide-Ethylene Oxide-Fumarate) Copolymer Networks," Poster Session: Biomimetics and Nanoscience: Advances in Protein/Peptide-Based Biomaterials, Society for Biomaterials, 2007 Annual Meeting, Chicago, IL., April 19, 2007, Thursday, (5:15 PM, #353).
101. "Response of Marrow Stromal Cells to Multi-Functional Peptide-Reinforced Cell-Adhesive Nanocomposite Scaffolds," Session VI: Biomimetics and Nanoscience: Advances in Protein/Peptide-Based Biomaterials, Society for Biomaterials 2007 Annual Meeting, Chicago, IL., April 21, 2007, Saturday, (9:30-9:45 AM).
100. "A Novel Three-Dimensional Culture System to Study vasculogenesis and Osteogenic Differentiation of BMS Cells," Session III: Tissue Engineering, Society for Biomaterials 2007 Annual Meeting, Chicago, IL., April 20, 2007, Friday, (8:00-8:15 AM).
99. "Proepicardial Cells Modulate the Osteogenic Potential of BMS Cells in Aligned Collagen I Scaffold," Poster Session: Orthopaedic Biomaterials, Society for Biomaterials 2007 Annual Meeting, Chicago, IL., April 20, 2007, Friday, (3:00 PM, #633).
98. "Osteonectin-Derived Peptide Significantly Affects Modulus of Apatite/Hydrogel Composites," AIChE Annual Meeting, San Francisco, CA, November 16, 2006, Thursday, (1:00 PM, session#534b).
97. "Self-Assembly and Nanoparticle Formation of a Novel Bioresorbable and Crosslinkable Terpolymer," AIChE Annual Meeting, San Francisco, CA, November 15, 2006, Wednesday, (9:45 AM, #324f).
96. "Biomimetic Osteoinductive in Situ Crosslinkable Poly(Lactide) for Bone Regeneration," AIChE Annual Meeting, San Francisco, CA, November 15, 2006, Wednesday, (4:30 PM, #431d).
95. "Modeling and Measurement of Rheological Properties of Poly(Lactide Ethylene Oxide Fumarate)/Hydroxyapatite Nanocomposites," AIChE Annual Meeting, San Francisco, CA, November 17, 2006, Friday, (12:50 PM, #670b).
94. "Modeling and Gelation Kinetics of Injectable in Situ Crosslinkable Poly(Lactide-Ethylene Oxide-Fumarate) Hydrogel Networks," AIChE Annual Meeting, San Francisco, CA, November 14, 2006, Tuesday, (10:30 AM, #190g).
93. "In-Situ Crosslinkable Osteoinductive Poly(lactide) Scaffold for Bone," AO Symposium: Biomaterials, Cell-, Tissue and Gene based Therapies: From Basic Research to Clinical Applications, University Hospital Lausanne, Lausanne, Switzerland, October 20, 2006 (9:25 AM).
92. "Bioinspired Nano-Composite Materials as Scaffolds for Bone Tissue Regeneration," Department of Chemical & Biomolecular Engineering, Atlanta, GA, September 20, 2006.
91. "Synthesis of novel multi-functional matrix metalloproteinases degradable peptide crosslinkers," 7th International Biorelated Polymers Symposium, 232nd ACS National Meeting, San Francisco, CA, USA, Sept. 10-14, 2006 (Oral Paper#609; 3:00 PM, September 13, 2006).
90. "Synthesis and material properties of functionalized lactide oligomers as in situ crosslinkable scaffolds for tissue regeneration," 7th International Biorelated Polymers Symposium, 232nd ACS National Meeting, San Francisco, CA, USA, Sept. 10-14, 2006 (Oral Paper#295; 2:20 PM, September 11, 2006).

89. "Synthesis, Processing, and Applications of Biomimetic Nanocomposites in Tissue Engineering," Nanotechnology Seminar Series, Accelrys Corp., San Diego, CA, August 15, 2006.
88. "Biomimetic Osteoinductive In situ Crosslinkable Poly(lactide) for Bone Regeneration," 1st Marie Curie Cutting Edge InVENTS Conference on New Developments on Polymers for Tissue Engineering, Replacement, and Regeneration, Funchal, Madeira, Portugal, June 3, 2006 (4:00 PM).
87. "Enzymatically Degradable Hydrogel Nanocomposite for Bone Regeneration," NSTI Nanotech, Boston, MA, May 11, 2006, Thursday, 11:10 AM (TH25.03).
86. "In Situ Crosslinkable Bioresorbable Poly(Lactide Fumarate) Scaffolds for Guided Bone Regeneration," Society for Biomaterials Annual Meeting, Pittsburg, PA, April 26-29, 2006 (9:30 AM, Thursday April 27, 2006).
85. "Biomimetic Hydrogel/apatite Nanocomposite Scaffolds for Bone Regeneration," Materials Research Society (MRS) Fall Meeting, Boston, MA, November 30, 2005 (2:15 PM, session#J7.3).
84. "Synthesis and characterization of poly(l-lactide) networks as in-situ crosslinkable scaffolds for guided tissue regeneration," AIChE Annual Meeting, Cincinnati, OH, October 31, 2005 (12:50 PM, session#50b).
83. "Solid-phase synthesis of functionalized peptides as enzymatically degradable crosslinkers for fabrication of tissue engineering scaffolds," AIChE Annual Meeting, Cincinnati, OH, October 31, 2005 (1:10 PM, session#50c).
82. "Effect of lactide to ethylene glycol ratio on material properties of novel biodegradable poly(lactide-ethylene oxide-fumarate) terpolymer hydrogels," AIChE Annual Meeting, Cincinnati, OH, October 31, 2005 (4:45 PM, session#100f).
81. "Synthesis and characterization of apatite nanoparticles grafted with unsaturated hydrophilic macromers," AIChE Annual Meeting, Cincinnati, OH, November 1, 2005 (3:55 PM, session#256c).
80. "Aqueous based hydrogel/apatite nanocomposite scaffolds for guided bone regeneration," AIChE Annual Meeting, Cincinnati, OH, November 1, 2005 (4:15 PM, session#256d).
79. "Biodegradable hybrid scaffolds with interconnected networks for bone tissue engineering," XXXII Annual European Society for Artificial Organs (ESAO) Congress, Bologna, Italy, October 7, 2005 (16:00 PM).
78. "Biodegradable Hybrid Scaffolds with Interconnected Networks for Bone Tissue Engineering," 4th International Conference on Polymer Science and Technology (ISPST2005), Tehran, Iran, 27-29 September 2005.
77. "Chitosan/Gelatin/Beta-Tricalcium Phosphate Materials as Potential Tissue Engineered Orthopedic Substitutes," 4th International Conference on Polymer Science and Technology (ISPST2005), Tehran, Iran, 27-29 September 2005.
76. "Material Properties and Biocompatibility of Self-Crosslinkable, Poly(caprolactone fumarate) Copolymer as a Scaffold for Guided Tissue Regeneration," AIChE Annual Meeting, Austin, TX, November 12, 2005 (9:27 AM, session# 89e).
75. "Permeability of Polymeric Scaffolds with Defined Pore Micro-architecture and Interconnectivity fabricated by Solid Freeform Fabrication," AIChE Annual meeting, Austin, TX, November 11, 2005 (4:00 PM, session# 87c).
74. "PLGA Microspheres Embedded in Porous Biodegradable Scaffold as a Delivery Vehicle for Sustained Release of Recombinant Human Bone Morphogenetic Protein-2 (rhBMP-2)," AIChE Annual meeting, Austin, TX, November 9, 2005 (1:25 PM, session#68d).

73. "In Vitro Migration and Proliferation of Human Osteoblasts in Injectable in Situ Crosslinkable Poly(caprolactone fumarate) Scaffolds," AIChE Annual meeting, Austin, TX, November 9, 2005 (12:45 PM, session#68b).
72. "Monte Carlo simulation of the effect of water-soluble monomer in emulsion terpolymerization of styrene/butadiene/acrylic acid," AIChE Annual meeting, Austin, TX, November 10, 2005 (5:30 PM, session#337y).
71. "Effect of Macromer Grafted Nano-Hydroxyapatite on Compressive Mechanical Properties of Poly(Propylene Fumarate) Scaffolds," 7th World Biomaterials Congress, Sidney, Australia, 17-21, May 2004.
70. "Investigating Scaffold Interconnectivity with Micro-CT and Image Analysis," 7th World Biomaterials Congress, Sidney, Australia, 17-21, May 2004.
69. "Evaluation of The Cytocompatibility of a Novel Poly(Caprolactone Fumarate) Injectable Scaffold with Human Fetal Osteoblast Cells," 7th World Biomaterials Congress, Sidney, Australia, 17-21, May 2004.
68. "Fabrication of Shape Specific Biodegradable Porous Polymeric Scaffolds With Controlled Interconnectivity by Solid Free-Form Microprinting," 7th World Biomaterials Congress, Sidney, Australia, 17-21, May 2004.
67. "Release Characteristics of *Recombinant Human Bone Morphogenic Protein-2* from PLGA microspheres embedded in a Poly(Propylene Fumarate) Porous Scaffold," 7th World Biomaterials Congress, Sidney, Australia, 17-21, May 2004.
66. "Swelling of Fumarate Based Hydrogels Affects Osteogenic Differentiation of Embedded Marrow Stromal Cells," 7th World Biomaterials Congress, Sidney, Australia, 17-21, May 2004.
65. "Cell-Seeded, Bio-degradable Polymer Implants in the Quantitative Assessment of Regeneration after Spinal Cord Injury in Rats," 56th Annual Meeting of the American Academy of Neurology, San Francisco, CA, April 30 (April 24-May 1), 2004(S66.002).
64. "Development of an Injectable and in situ Crosslinkable Scaffold Based on Hydrogels as the Porogen for Guided Bone Regeneration," 6th Annual International Conference of the Tissue Engineering Society, Toronto, Canada, December 2003.
63. "Anatomically-Inspired Scaffolds to Promote Axon Regeneration in the Spinal Cord," 6th Annual International Conference of the Tissue Engineering Society, Toronto, Canada, December, 2003.
62. "Release Kinetics of Recombinant Human Bone Morphogenic Protein-2 (rhBMP-2) from Biodegradable Poly(DL-lactic-co-glycolic acid) Microspheres," Annual meeting of American Institute of Chemical Engineers, San Francisco, CA, November, 2003.
61. "A Novel Biocompatible and Self-Crosslinkable Poly(caprolactone fumarate) Copolymer with Controlled Degradation as a Scaffold for Guided Bone Regeneration," Annual meeting of American Institute of Chemical Engineers, San Francisco, CA, November, 2003.
60. "Development of a Novel Degradable, Injectable, and Self-Crosslinkable Composite Biomaterial for Orthopedic Applications," National Science Foundation Sponsored Materials Chemistry Workshop, Tempe, Arizona, October 2003.
59. "Hydrophobicity Effects of Crosslinking Agent on Swelling Behavior of Poly (acrylic acid) Hydrogels in Electrical Fields," 6th Seminar on Polymer Science and Technology (ISPST), Tehran, 12-15 May (2003).

58. "Synthesis of Poly (Acrylic Acid) Nanoparticles as Drug Delivery Carriers," 6th Seminar on Polymer Science and Technology (ISPST), Tehran, 12-15 May (2003).
57. "Preparation and Characterization of pH-Responsive Poly(Methacrylic Acid-g-Ethylene Glycol) Nanogels," 6th Seminar on Polymer Science and Technology (ISPST), Tehran, 12-15 May (2003).
56. "Bone Formation from Marrow Stromal Cells Encapsulated in Oligo(PEG fumarate) Hydrogels," Biomedical Engineering Society Annual Fall Meeting, Nashville, TN, October 2003.
55. "Monte Carlo Simulation of Particle Formation and Molecular Weight Distribution in Styrene/Butadiene Emulsion Copolymerization," 4th European Congress of Chemical Engineering, Granada, Spain, Sep. 21-25, 2003.
54. "Synthesis and Characterization of Nano Hydroxyapatite Grafted with Biodegradable and Crosslinkable Fumaric/ Adipic Acid Macromer," 226th ACS National Meeting, New York, NY, September 2003.
53. "Schwann Cell Seeded Biodegradable Polymer Implants Promote Axonal Regeneration in Spinal Cord Injury," Peripheral Nerve Society Biennial Meeting", Banff, Canada, July 2003.
52. "Development of a Novel Self-Crosslinkable Poly(caprolactone fumarate) as a Biodegradable and Injectable Scaffold for Bone Tissue Engineering," 25th IEEE Engineering in Medicine and Biology Conference, Cancun, Mexico, September 2003.
51. "Encapsulation and Mineralization of Marrow Stromal Cells in Synthetic Biodegradable and in Situ Crosslinkable Hydrogels," 14th International Symposium on Microencapsulation, Singapore, September 2003.
50. "Encapsulation of a Model Double Stranded Plasmid DNA from Synthetic and Biodegradable Poly(ethylene glycol fumarate) Hydrogel Microspheres," 14th International Symposium on Microencapsulation, Singapore, September 2003.
49. "The Assessment of Interconnectivity of Tissue Engineering Scaffolds Using Hydraulic Permeability," Annual Meeting of the Society for Biomaterials, Reno, Nevada, March 2003.
48. "Controlled Release of Plasmid DNA from Biodegradable Oligo(poly(ethylene glycol) fumarate) Hydrogel Microspheres," Annual meeting of the American Institute of Chemical Engineers, Indianapolis, IN, November 2002.
47. "Development of a Biodegradable Redox Initiated Oligo(poly(ethylene glycol) fumarate) Based Hydrogel as an Injectable in situ Crosslinkable Cell Carrier," Annual meeting of the American Institute of Chemical Engineers, Indianapolis, IN, November 2002.
46. "Morphology and Release Behavior of Polyurethane Microspheres Prepared by Solvent Extraction/ Interfacial Polycondensation," 29th International Symposium on Controlled Release of Bioactive Materials, Seoul, South Korea, June 2002.
45. "Effect of Crosslinking Agent on the Swelling Behavior of Anionic Acrylic Acid Hydrogels in an Externally Applied Electric Field," 29th International Symposium on Controlled Release of Bioactive Materials, Seoul, South Korea, June 2002.
44. "Swelling Behavior and Cytotoxicity of Poly(vinyl alcohol) Hydrogel Grafted with N-Vinyl Pyrrolidone or Acrylic acid," Annual Meeting of the Society for Biomaterials, Tampa, FL, March 2002.
43. "Effect of Grafting N-Ninyl Pyrrollidone or Acrylic Acid on Cytotoxicity and Water Content of Crosslinked Poly(vinyl alcohol) as Artificial Cartilage," 5th Asian Symposium on Biomedical Materials, Hong Kong, December 2001.

42. "Increased Fluid Solid Friction Coefficient of Silicone Rubber Poly(acrylic acid) Composite Due to Change of Polarity Upon Addition of Hydrogel," 5th Asian Symposium on Biomedical Materials, Hong Kong, December, 2001.
41. "Swelling and Cytotoxicity of Poly(vinyl alcohol) Based Hydrogel Composites," 10th National Biomedical Engineering Conference, Tehran, Iran, October 2001.
40. "Effect of Aluminum Oxide/ Silicon Oxide Ratio on Properties of Glass Ionomer Cements for Dental Applications," 10th National Biomedical Engineering Conference, Tehran, Iran, October 2001.
39. "Release Behavior of a Model Active Agent from Polyurethane Microspheres Based on Methylene Bisphenylisocyanate or Hexamethylene Diisocyanate and Castor Oil," 10th National Biomedical Engineering Conference, Tehran, Iran, October 2001.
38. "Increase in Surface Polarity of a Buffer-Rinsed Biocomposite with Time," 10th National Biomedical Engineering Conference, Tehran, Iran, October 2001.
37. "Effect of Mesh Size of the Network on Mucoadhesion of Poly(acrylic acid) Hydrogel to the Intestinal Mucous in Simulated Physiological Conditions," 28th International Symposium on Controlled Release of Bioactive Materials, San Diego, CA, June 2001.
36. "Microstructure and Release Behavior of Polyurea Microcapsules Prepared by the Method of Interfacial Polycondensation," 28th International Symposium on Controlled Release of Bioactive Materials, San Diego, CA, June 2001.
35. "Effect of pH and Extent of Crosslinking on Swelling Pressure of Anionic Acrylic Acid Hydrogel," 28th International Symposium on Controlled Release of Bioactive Materials, San Diego, CA, June 2001.
34. "Variation of Equilibrium Water Content of Silicone Rubber/ Poly(acrylic acid) Particular Composite with Hydrogel Content," 28th International Symposium on Controlled Release of Bioactive Materials, San Diego, CA, June 2001.
33. "Effect of PAA to Silicone Ratio on Wettability and Swelling Behavior of Polyacrylic Acid and Silicone Rubber Particulate Composite," 5th National Seminar on Polymer Science and Technology, Tehran, Iran, September 2000.
32. "Adsorption Kinetics of Lysozyme on Soft Hydrophilic Contact Lenses," 5th National Seminar on Polymer Science and Technology, Tehran, Iran, September 2000.
31. "Finite Element Analysis of the Effect of Geometry on Mechanical Design of Low Modulus Plastic Orthopedic Plates," 12th Conference of the European Society of Biomechanics, Dublin, Ireland, June 2000.
30. "Encapsulation and Controlled Release of Antifouling Agent Tributyl Tin Chloride by Complex Coacervation," 27th International Symposium on Controlled Release of Bioactive Materials, Paris, France, July 2000.
29. "Release Behavior of Nitroglycerin from a Micro-Reservoir Transdermal Delivery Device," 27th International Symposium on Controlled Release of Bioactive Materials, Paris, France, July 2000.
28. "Effect of Electric Field on Swelling of Anionic Acrylic Acid Hydrogels," 27th International Symposium on Controlled Release of Bioactive Materials, Paris, France, July 2000.
27. "Finite Element Modeling of Bone Fixed with Composite Plate," Proceedings of the Second Asian-Australian Conference on Composite Materials, Sidney, Australia, August 2000.

26. "Sustained Delivery of Nitroglycerin for Treatment of Angina Pectoris via the Transdermal Route," 9th National Conference on Biomedical Engineering, Tehran, Iran, February 2000.
25. "The Effect of Crosslinking Agent Concentration on Swelling Behavior of Anionic Acrylic Acid Hydrogel in an External Electric Field," 9th National Conference on Biomedical Engineering, Tehran, Iran, February 2000.
24. "Release Behavior of the Antifouling Agent Tributyl Tin Chloride from Microcapsules Prepared by the Method of Complex Coacervation," 1st National Conference on Novel Delivery Systems for Biologically Active Agents, Tehran, Iran, April 2000.
23. "Theoretical and Experimental Investigation of the Swelling Behavior of Acrylic Acid Hydrogel in an External Electric Field," 1st National Conference on Novel Delivery Systems for Biologically Active Agents, Tehran, Iran, April 2000.
22. "Design of a Sustained Transdermal Drug Delivery System for Nitroglycerin," 1st National Conference on Novel Delivery Systems for Biologically Active Agents, Tehran, Iran, April 2000.
21. "Measurement of Mucoadhesion of Chemically Crosslinked acrylic acid and Hydroxyethyl Methacrylate and Physically Crosslinked Polyvinyl alcohol Hydrogels to the Surface of Small Intestine," 1st National Conference on Novel Delivery Systems for Biologically Active Agents, Tehran, Iran, April 2000.
20. "Characterization of Microcapsules Synthesized by Interfacial Polycondensation of Polymethylene Phenyl Isocyanate and Hexamethylene Diamine," 1st National Conference on Novel Delivery Systems for Biologically Active Agents, Tehran, Iran, April 2000.
19. "Effect of Chain Extending Agent on Morphology of Porous Polyurethane Microspheres," 26th International Symposium on Controlled Release of Bioactive Materials, Boston, MA, June 1999.
18. "Effect of Swelling on Mucoadhesion of Anionic Acrylic Acid Hydrogel to the Surface of Small Intestine," 26th International Symposium on Controlled Release of Bioactive Materials, Boston, MA, June 1999.
17. "Effect of Strain Rate on Mucoadhesion of Synthetic Hydrogels to the Surface of Small Intestine," 26th International Symposium on Controlled Release of Bioactive Materials, Boston, MA, June 1999.
16. "Effect of Annealing on the Release of Pilocarpine from Polyvinyl alcohol Gels," 4th National Chemical Engineering Congress, Tehran, Iran, November 1999.
15. "Preparation of Aqueous Suspension of Polyurethane Microparticles by Suspension Condensation Polymerization," 4th National Chemical Engineering Congress, Tehran, Iran, November 1999.
14. "Controlled Delivery of Nitroglycerin Based on a Transdermal Delivery System," 4th National Chemical Engineering Congress, Tehran, Iran, November 1999.
13. "Sustained Ocular Delivery of Pilocarpine Hydrochloride Using Water Insoluble Poly Vinyl Alcohol Gels," 6th National Conference on Pharmaceutical Sciences, Isfahan, Iran, August 1998.
12. "The Effect of Crosslinking on Mucoadhesive Force Between Acrylic Acid Hydrogel and Small Intestine for Targeted Gastro-Intestinal Drug Delivery," 6th National Conference on Pharmaceutical Sciences, Isfahan, Iran, August 1998.
11. "Characterization of Microcapsules Prepared by Interfacial Polycondensation of Polymethylene phenyl isocyanate and Hexamethylene diamine," 2ed National Congress of Chemical Engineering, Tehran, Iran, November 1997.
10. "Microencapsulation and Controlled Delivery of Diazinon Using Interfacial Polymerization," 2ed National Congress of Chemical Engineering, Tehran, Iran, November 1997.

9. "Investigation of the Release Mechanism of Nitroglycerin from a Transdermal Microreservoir System," 5th National Conference on Pharmaceutical Sciences, Tehran, Iran, November 1997.
8. "Effect of Mechanism of Macromolecular Motion on the Rate of Healing at the Interface of Dissimilar Polymer Layers," 2ed International Seminar on Polymer Science and Technology, Tehran, Iran, November 1997.
7. "Application of Poly(acrylic acid) Bioadhesive in Targeted Delivery of Biologically Active Compounds," 8th Iranian Conference on Biomedical Engineering, Tehran, Iran, December 1996.
6. "Swelling Behavior of Acrylic Acid Hydrogels Crosslinked with Gamma Radiation for Sustained Enteric Drug Delivery," 8th National Conference on Biomedical Engineering, Tehran, Iran, December 1996.
5. "Measurement of Chain Interpenetration at a Mucoadhesive Interface Using Attenuated Total Reflection Infrared Spectroscopy," 1st National Congress of Chemical Engineering, Tehran, Iran, November 1994.
4. "Measurement of the Concentration Profile at a Poly(vinyl chloride) and Poly(methyl methacrylate) Interface with Analytical Electron Microscopy," Annual Meeting of the American Institute of Chemical Engineers, Miami, FL, November 1992.
3. "Use of ATR-FTIR Spectroscopy for the Investigation of Chain Interpenetration in Bioadhesion," Annual Meeting of the American Institute of Chemical Engineers, Miami, FL, November 1992.
2. "Interdiffusion in Compatible Polymer Pairs," American Physical Society Annual Conference, Indianapolis, IN, March 1992.
1. "Interfacial Adhesion of Poly(vinyl chloride) and Poly(ethyl methacrylate)," Adhesion Society Annual Conference, Hilton Head, SC, February 1992.

FUNDED RESEARCH

25. Type: External (PI: Esmail Jabbari)
Agency: National Science Foundation
Title: PFI: AIR-TT: Biomimetic Composite for Segmental Bone Regeneration
Date: 04/01/2015 Amount: Duration: 1.5 years
24. Type: External (PI: Esmail Jabbari)
Agency: National Science Foundation
Title: Cancer stem cell mechanotransduction in engineered matrix
Date: 07/01/2014 Amount: Duration: 3 years
24. Type: Internal (Co-PI: Esmail Jabbari; PI: Roger Sawyer, Biological Sciences)
Agency: USC Office of Vice President for Research (ASPIRE II Funding)
Title: From genome to novel materials: Developing the beta (β) keratin monomer as a nanofiber for fabrication of new products with new properties
Date: May 16, 2014 Amount: Duration: 15 months
23. Type: Internal (PI: Esmail Jabbari)
Agency: USC Office of Vice President for Research (ASPIRE II Funding)
Title: Cancer initiating cell mechanotransduction in a model hydrogel culture system
Date: May 16, 2014 Amount: Duration: 15 months
22. Type: External (PI: Esmail Jabbari)
Agency: National Science Foundation I-Corps Program
Title: I-Corps: Biomimetic Degradable Load Bearing Osteoconductive Bone Graft

- Date: October 1, 2013 Amount: Duration: 6 months
21. Type: External (PI: Esmail Jabbari)
 Agency: National Institutes of Health R56
 Title: Microengineered Osteoinductive and Vasculogenic Scaffold
 Date: September 1, 2013 Amount: Duration: 2 years
20. Type: State Sponsored (PI: Esmail Jabbari)
 Agency: The South Carolina Project for Organ Transplantation
 Title: Engineering Hydrogel Matrix for Cell Printing
 Date: September 1, 2012 Amount: Duration: 1 year
19. Type: External (PI: Esmail Jabbari)
 Agency: National Science Foundation EAGER Grant
 Title: Microengineered Osteon-Mimetic Composite
 Date: September 1, 2010 Amount: Duration: 2 years
18. Type: External (PI: Esmail Jabbari)
 Agency: AO (Arbeitsgemeinschaft Fur Osteosynthesefragen) Foundation
 Title: Biodegradable Inductive Load-Bearing Bone Regeneration Scaffold
 Date: August 1, 2010 Amount: Duration: 3 years
17. Type: External (PI: Esmail Jabbari)
 Agency: National Science Foundation
 Title: Engineered Nanoparticles for Tumor Targeting
 Date: September 1, 2009 Amount: Duration: 3 years
16. Type: External (PI: Esmail Jabbari)
 Agency: National Science Foundation Graduate Supplement
 Title: Engineering Bone Formation in Multi-Functional Nanocomposite Scaffolds
 Date: August 5, 2009 Amount: Duration: 1 year
15. Type: External (PI: Esmail Jabbari)
 Agency: National Institutes of Health R03
 Title: Biodegradable Self-Inductive Scaffold for Cranial Regeneration
 Date: March 25, 2009 Amount: Duration: 2 years
14. Type: External (PI: Esmail Jabbari)
 Agency: National Football League Charities
 Title: Self-Healing Injectable Bone Graft
 Date: May 6, 2008 Amount: Duration: 1 year
13. Type: External (PI: Esmail Jabbari)
 Agency: South Carolina Spinal Cord Injury Fund
 Title: Biodegradable Scar-Inhibiting Implants for Guided Spinal Cord Regeneration
 Date: January 15, 2008 Amount: Duration: 2 years
12. Type: External (PI: Esmail Jabbari)

- Agency: National Science Foundation
 Title: Engineering Bone Formation in Multi-Functional Nanocomposite Scaffolds
 Date: September 15, 2007 Amount: Duration: 3 years
11. Type: External (PI: Esmail Jabbari)
 Agency: Oral and Maxillofacial Surgery Foundation
 Title: Role of BMP-2 peptide grafted poly(lactide) in cranial regeneration
 Date: August 31, 2007 Amount: Duration: 1 year
10. Type: State-Wide (PI: Esmail Jabbari)
 Agency: South Carolina Idea Network of Biomedical Research Excellence (INBRE)
 Title: PLGEOF Nanoparticles Conjugated with $\alpha\beta3$ integrin-binding ligand for Targeted Tumor Delivery
 Date: May 31, 2007 Amount: Duration: 1 year
9. Type: External (PI: Philip A. Voglewede Co-PI: Esmail Jabbari)
 Agency: National Science Foundation
 Title: Continuous renewal of undergraduate education via an interdisciplinary, inquiry-based laboratory
 Date: October 15, 2006 Amount: Duration: 2 years
8. Type: External (PI: Esmail Jabbari)
 Agency: Aircast Foundation
 Title: Synergistic Effects of Microencapsulated BMP and RGD Peptide on Osteoinductivity of Injectable In-Situ Crosslinkable Poly(lactide) Scaffolds
 Date: April 1, 2006 Amount: Duration: 2 years
7. Type: External (PI: Esmail Jabbari)
 Agency: AO Foundation
 Title: In-Situ Crosslinkable Osteoinductive PLA Scaffold for Bone Regeneration
 Date: September 1, 2005 Amount: Duration: 2 years
6. Type: Internal (PI: Esmail Jabbari)
 Agency: Research & Productive Scholarship Award, University of South Carolina
 Title: Bimodally Degradable Hydrogels as Carrier for Stem cells in Cartilage Regen.
 Date: February 3, 2005 Amount: Duration: 1 year
5. Type: External (PI: Dr. Michael A. Yaszemski Co-Investigator: Esmail Jabbari)
 Agency: National Institutes of Health R01
 Title: Osteoinductive injectable degradable polymeric scaffold
 Date: May 15, 2004 Amount: Duration: 5 years
4. Type: External (PI: Dr. Michael A. Yaszemski Co-Investigator: Esmail Jabbari)
 Agency: National Institutes of Health R01
 Title: Injectable osteoinductive biodegradable composites
 Date: May 15, 2004 Amount: Duration: 5 years
3. Type: External (PI: Dr. Anthony J. Windebank Co-Investigator: Esmail Jabbari)
 Agency: National Institutes of Health R01
 Title: Biodegradable implants to promote axonal regeneration in spinal cord injury

- Date: May 15, 2004 Amount: Duration: 5 years
2. Type: External (PI: Dr. Anthony J. Windebank Co-Investigator: Esmail Jabbari)
 Agency: W.L. Gore & Associates
 Title: Synthetic dural implants to promote axonal regeneration in spinal cord injury
 Date: September 15, 2002 Amount: Duration: 1 year
1. Type: Internal, University of South Carolina (PI and Mentor: Esmail Jabbari)
 Agency: Magellan Scholarship Fund & SURF Grants for Undergraduate Research, USC
1. Targeted Delivery to Tumor Cells with Taxol-Entrapped Nanospheres (Kevin Yeh, \$3000, 2007)
 2. Functional Self-Assembled Poly(Lactide-co-Glycolide Fumarate) Nanoparticles (Ryan Cassaro, \$2500, 2009)
 3. Engineered Nanoparticles for Targeted Tumor Delivery (Sowjanya Kadali, \$3000, 2008)
 4. Multichannel Hydrogel for Neurogenic Differentiation of Marrow Stromal Cells (Sana Khaliq, \$2900, 2010)
 5. Effect of terminal charge on self-assembly of polymer-peptide nanoparticles (Romel Menacho, \$2500, 2010)
 6. cRGD ligand conjugated nanoparticles for receptor-mediated tumor targeting, SURF Fund (George R, Plasko, \$3000, 2011)
 7. Synthesis and characterization of peptide-conjugated PLEOF hydrogels for cell encapsulation, SURF Fund (Vadhar Kaushal, \$3000, 2011)
 8. Effect of A5G27 peptide binding to CD44 receptor on maintenance of breast cancer stem cells (Purva and Pooja Choudhari, Biomedical Engineering, \$3000, 2012)
 9. Micropatterned Hydrogels for Osteogenic and Vasculogenic Stem Cell Differentiation (George Plasko, Biomedical Engineering, \$2500, 2012)
 10. Synthesis of Macromer Based Biodegradable Hydrogels for Differentiation and Proliferation of Marrow Stromal Cells (John Sieracke, Biomedical Engineering, \$2000, 2012)
 11. Osteogenic and Vasculogenic Potential of Microtube Scaffolds Using a Perfusion Bioreactor (Joshua Walters, Biomedical Engineering, \$2500, 2013)
 12. Vasculogenic Induction of Endothelial Progenitor Cells via Extracellular Matrix Protein Derived Peptides in UV Crosslinked Hydrolytically Degradable Poly(Ethylene Glycol) Hydrogel (Ibrahim Askar, Biomedical Engineering, \$2500, 2013)
 13. Investigation into the Use of Sodium Citrate to Control the Deposition of Calcium Phosphate Crystals onto Electrospun Nanofibers for use in Bone Tissue Engineering (Joshua Walters, Biomedical Engineering, Magellan Mini Grant, \$500, 2014).
 14. Investigation into the Use of Sodium Citrate to Control the Deposition of Calcium Phosphate Crystal on Electrospun Nanofibers for Bone Tissue Engineering (Joshua Walters, Biomedical Engineering, Magellan Capstone Scholars Grant, \$1000, 2104).
 15. Synthesis of microtubular scaffolds of nanofibers for bone replacement (Ryan McCormick, Biomedical Engineering, SURF grant, #3000, 2014).
 16. Modified nanofibers with CaP-nucleating organic acids (Shawn Patel, Biomedical Engineering, SURF grant, \$3000, 2014).
 17. Fabrication of biomimetic nanofibers (Weston Grove, Biomedical Engineering, SURF grant, \$3000, 2014).
 18. Influence of cyro-freezing on the viability of stem cells on cell sheets (Samuel Keeney, Biomedical Engineering, SURF grant, \$3000, 2014).
 19. Effect of Various Peptides on Breast Cancer Stem Cells (Katherine Melink, Biomedical Engineering, Capstone Scholars Magellan Apprentice, \$1000, 2015).

20. The effect of peptides on breast cancer stem cells maintenance and tumorsphere formation within PEGDA hydrogel (Victoria A. Baldock, Biomedical Engineering, Science Undergraduate Research Fellowship, \$3000, July 2015 – June 2016).
21. The effect of peptides on breast cancer stem cells maintenance and tumorsphere formation within PEGDA hydrogel (Samuel J. Keeney, Biomedical Engineering, Science Undergraduate Research Fellowship, \$2000, July 2015 – June 2016).
22. The effect of organic acid additives on mineralization properties of aligned polymer nanofibers (Ryan C. McCormick, Biomedical Engineering, Science Undergraduate Research Fellowship, \$1500, July 2015 – June 2016).
23. Synthesis of lab-made peptides through manipulation of the Fmoc amino inhibitors (Reilly Carr, Biomedical Engineering, Science Undergraduate Research Fellowship, \$3000, September 2015 – August 2016).
24. Production of biodegradable hydrogel scaffolds with defined pore geometry by 3D printing (Janay M. Clytus, Biomedical Engineering, Summer Research, SC Alliance for Minority Participation, \$4000, May 2016 – August 2016).
25. Effects of hypoxia on breast cancer stem cell maintenance and tumorsphere formation (Victoria Baldock, Biomedical Engineering, Science Undergraduate Research Fellowship, \$1500, August 2016 –December 2016).

RESEARCH SUPERVISION AND MENTORSHIP

I. Recognition for student mentoring

- 2015 Second Place Winner to Samuel Keeney (Undergraduate Biomedical Engineering Student), "Effects of IKLLI peptide on breast cancer stem cells maintenance and tumorsphere formation within PEGDA hydrogel," Discovery Day, Biology & Biomedical Sciences A, University of South Carolina, April 24, 2015.
- 2014 International Spotlight, Seyedsina Moeinzadeh, University of South Carolina (highest recognition to an international student on the university)
- 2013 First Place Winner to John Sieracke (Undergraduate Biomedical Engineering Student), "Synthesis and characterization of hydrolytically degradable polyethylene glycol hydrogels for use in tissue engineering," Discovery Day, Biology & Biomedical Sciences II Session, University of South Carolina, April 26, 2013.
- 2011 First Place Winner to Richard Doe (Undergraduate Student), "Synthesis and characterization of functional self-assembling nanoparticles," Discovery Day, University of South Carolina, April 22, 2011.
- 2011 Excellence in Research Award to Junyu Ma (doctoral student), Department of Chemical Engineering, University of South Carolina, April 11, 2011.
- 2010 One of the finalists (Angel E. Mercado) for Bionanotechnology Graduate Student Research Award, 2010 AIChE Annual Meeting, Salt Lake City, UT, November 10, 2010, Grand Ballroom A, Hilton, 5:08 PM.
- 2010 Excellence in Research Award to Angel E. Mercado (doctoral student), Department of Chemical Engineering, University of South Carolina, March 17, 2010.
- 2010 Magellan Undergraduate Research award to Chemistry UG Sana Khaliq (Mentor E.Jabbari: *Development and Characterization of a Biodegradable Multichannel Hydrogel for Neurogenic Differentiation of Marrow Stromal Cells*) award by the USC Office of Vice President for Research.

- 2009 Magellan Undergraduate Research award to Biomed Eng UG Ryan Cassaro (Mentor E.Jabbari: *Functional Self-Assembled Poly(Lactide-co-Glycolide Fumarate) Nanoparticles as Carriers for Targeted Tumor Delivery*) award.
- 2008 Magellan Undergraduate Research award to Biomed Eng UG Sowjanya Kadali (Mentor E.Jabbari: *Engineered Nanoparticles for Targeted Tumor Delivery*) award.
- 2008 Student Travel Achievement Recognition (STAR) Award to Junyu Ma (doctoral student) by Society for Biomaterials, *BMP-2 Peptide Grafted to a Degradable Substrate Enhances Osteogenic Differentiation of Stromal Cells*, nominated by Orthopaedic Biomaterials Special Interest Group and awarded by the Education and Professional Development Committee of Society for Biomaterials, Translational Biomaterial Research Symposium, Atlanta, GA, Saturday Sep 13, 2008 2:30-4:00 PM.
- 2008 First place research award to Angel E. Mercado (doctoral student) at the Third Annual South East Alliance for Graduate Education and the Professoriate (SEAGEP), *Release Behavior of Paclitaxel from Self-Assembled Degradable Nanoparticles*, May 13, 2008, Univ. of Florida, Gainesville, FL.
- 2007 Graduate Research Fellowship award to Junyu Ma (doctoral student) by USC Graduate School.
- 2006 Magellan Undergraduate Research award to Chemical Eng UG Kevin Yeh (Mentor E.Jabbari: *Targetted Delivery to Tumor Cells with Taxol-Entrapped Nanospheres*) award.

II. Visiting scholars

1. Murlidhar Pandey, Visiting Junior Undergraduate Scholar, Department of Biotechnology, National Institute of Technology Warangal, "Synthesis and characterization of chitosan matrices for encapsulation of mesenchymal stem cells," May 2016 - August 2016.
2. Mehran Miroliaei, Visiting Scholar, University of Isfahan, "Computational and experimental investigation of drug attachment and transportation in lipid binding proteins for in vivo controlled release of low molecular weight drugs," January 2016 – August 2016.
3. Ali Akbari, Visiting Research Associate, Tabriz University, "Polyhedral Oligomeric Silsesquioxane (POSS) nanohybrid polymers as a platform for targeted agent delivery in cancer therapy," September 2015 – March 2016.
4. Hadi Shirali, Visiting Research Associate, Amirkabir Institute of Technology, "Synthesis of poly(butylene succinate-co-ethylene terephthalate) nanofiber scaffolds", July 2015 - March 2016.
5. Sogol Naghavi Sheikholeslami, Visiting Research Associate, Amirkabir Institute of Technology, "Characterization of calcium phosphate nucleated poly(butylene succinate-co-ethylene terephthalate) nanofibers," July 2015 – March 2016.
6. Amir Salati, Visiting Research Associate, National Institute of Engineering and Biotechnology, "Synthesis of biologically inspired highly elastic polyethylene glycol hydrogels," August 2014 - July 2015.
7. Seyed-Ramin Pajoum-Shariati, Visiting Assistant Professor, Department of Chemical Engineering, Shahid Beheshti University, "Hierarchically structured biomaterials," February 2014 – December 2014.
8. Nadeem Siddiqui, Visiting Associate Researcher, National Institute of Technology, Rourkela, India, "Synthesis and characterization of hydroxy acid chain-extended poly ethylene glycol and chitosan hydrogels," July 2013 - September 2013.
9. Tahereh Karimi, Visiting Scholar from Royan Research Institute, Shiraz, Iran, "Effect of Mesenchymal stem cell-matrix interactions on intracellular signaling pathways leading to the expression of osteogenic genes and mineralization," April 2013 – August 2013.
10. Mohammad Sadeghi, visiting scholar from Freie Universitat Berlin, Berlin, Germany, "Synthesis of novel POSS crosslinked hydrogels for biomedical applications," January 2103 - April 2013.
11. Saied Nouri-Khorasani, visiting professor from Isfahan University of Technology, Isfahan, Iran, "Synthesis and processing of novel in-situ crosslinkable macromers as bone cement," January 2009-August 2009.

III. Medical residents

1. Carlos D. Kugler, 2005-2008, "Osteoinductive injectable poly(lactide fumarate) for healing of segmental bone defects," Department of Orthopedic Surgery, School of Medicine, University of South Carolina.

IV. Post-doctoral research fellows

8. Seyedsina Moeinzadeh, "Role of physical, chemical, and biochemical factors in zonal lineage commitments of human mesenchymal stem cells in articular cartilage regeneration," January 2015 – present.
7. Angel E. Mercado, "4T1 breast tumor cell response to self-assembled cell penetrating nanoparticles," August 2010 – 2011.
6. Xiaoming Yang, "Toxicity of V6K2-PLGA nanoparticles for tumor delivery," April 2010 – Present (part-time).
5. Valarmathi Mani Thiruvanamalai, "Differentiation and mineralization of bone marrow stromal cells on biomimetic scaffolds", May 15, 2006 – March 21, 2007.
4. Saeid Kheirandish, "Gelation kinetics of biodegradable in-situ crosslinkable PLEOF hydrogels", January 5, 2006 to February 23, 2006.
3. Ali S. Sarvestani, "Modeling and characterization of biodegradable polymer nano-composite scaffolds for tissue engineering applications", September 10, 2005 July 1, 2008.
2. Xuezhong He, "Synthesis and characterization of hydrogels with enzymatically degradable peptide sequences as scaffolds for regeneration of skeletal tissues", March 1, 2005 to Present.
1. K. Prasanna U. Perera, "Synthesis and Characterization of poly(lactic acid fumarate) as an injectable in situ crosslinkable scaffold for guided bone regeneration", December 10, 2004 to May 3, 2005.

V. Doctoral students

9. Safaa Kader, "Enzymatically cleavable therapeutic nanostructures for growth factor delivery to stem cells," Chemistry and Biochemistry Department, University of South Carolina, May 2015 – Present.
8. Nazli Gharraee, Noggin in vascularized osteogenesis, Biomedical Engineering Department, University of South Carolina, April 2015 – Present.
7. Ozan Karaman, "Fabrication of 3D nanofiber scaffolds with cell-adhesive RGD peptide density gradient," Biomedical Engineering, University of South Carolina, August 2010 - June 2014. (graduated May 2014)
6. Samaneh Kamali, "Synthesis and characterization of nanofiber scaffolds with well-defined pore geometry for bone tissue engineering," August 2010 – June 2014. (graduated August 2014)
5. Danial Barati, "Osteogenic differentiation of mesenchymal stem cells in layered hydroxyapatite nanocomposites," August 2010 – December 2016.
4. Seyedsina Moeinzadeh, "Osteogenic and vasculogenic characterization of marrow stromal cells on crosslinked poly(lactide-co-ethylene oxide) scaffolds," August 2009 to December 2014. (graduated December 2014).
3. Junyu Ma, "Tissue engineered bone regeneration in biodegradable osteoinductive PLEOF hydrogel scaffolds," Chemical Engineering, University of South Carolina, August 2006 to April 2011 (graduated 4/6/2011).

2. Angel Mercado, "Functional self-assembled poly (l-lactide) nanoparticles for targeted delivery of bioactive agents," Chemical Engineering, University of South Carolina, August 2006 to June 2010 (graduated 6/29/2010).
1. Weijie Xu, "Development of fiber-reinforced laminated nanocomposites for bone regeneration," Chemical Engineering, University of South Carolina, June 2006 to June 2009 (graduated 6/8/2009).

VI. Master students

University of South Carolina (USA)

4. Cody Buffkin, Effect of hypoxic conditions on the maintenance of cancer stem cells, Biomedical Engineering, University of South Carolina, August 2015 to Present.
3. Leily Daneshian, Engineered hydrogel culture system for studying cancer stem cell mechanotransduction, Biomedical Engineering, University of South Carolina, 2013-2015, graduated December 2015.
2. Ozan Karaman, "A novel technique for fabricating aligned nanofibers by using solution electrospinning," Biomedical Engineering, University of South Carolina, defended and graduated December 2009, graduated December 2009.
1. Jianping Wu, Synthesis and characterization of injectable star-shaped poly(lactide-co-glycolide-co-acrylate) macromers, Biomedical Engineering, defended and graduated November 2009, graduated December 2009.

Tehran Polytechnic (Tehran, Iran)

20. Ali Shabani, 1999-2002, "Synthesis and characterization of novel glass ionomer cements based on acrylic acid and cis-itaconic acid," Biomedical Engineering Department, Tehran Polytechnic.
19. Ashkan Tavasoli, 1998-2001, "Study of the effect of modulus, fiber orientation, and plate geometry for replacing conventional metallic orthopedic plates with composites using finite element method," Biomedical Engineering Department, Tehran Polytechnic.
18. Hamid Mahdavi, 1998-2001, "The effect of polyacrylic acid as a mucoadhesive on the release behavior of albumin from polyvinyl alcohol microparticles prepared by the freezing and thawing process," Biomedical Engineering Department, Tehran Polytechnic.
17. Saeed Karbasi, 1998-2001, "Investigation of mechanical properties and swelling behavior of a composite based on polyvinyl alcohol and polyacrylic acid with hydroxyapatite as an artificial cartilage," Biomedical Engineering Department, Tehran Polytechnic.
16. Ali A'rabi, 1998-2001, "Effect of pH and temperature on bioadhesion of ionic hydrogels to the surface of small intestine in similar biological conditions," Biomedical Engineering Department, Tehran Polytechnic.
15. Saeed Kheirandish, 1998-2001, "Investigation of the effect of hydrogel coating on flowability of biological fluids on silicone polymer surfaces," Biomedical Engineering Department, Tehran Polytechnic.
14. Farhad Farmanzad, 1997-2000, "Design on stress analysis of orthopedic composite fixation plates," Biomedical Engineering Department, Tehran Polytechnic.
13. Ali Sheikholmoluke, 1997-2000, "Theoretical and experimental investigation of protein adsorption on soft contact lens," Biomedical Engineering Department, Tehran Polytechnic.

12. Javad Tavakoli, 1997-2000, "Modeling and measurement of the extent of swelling and deswelling of biocompatible hydrogels in an external electric field," Biomedical Engineering Department, Tehran Polytechnic.
11. Alireza Sadeghi, 1996-1999, "Design and fabrication of an orthopedic plate based on polymeric composites," Biomedical Engineering Department, Tehran Polytechnic.
10. Mohammad Reza Abidian, 1996-1999, "Design of a centrifugally casting device for preparation of hydroxy ethyl methacrylate based soft contact lens," Biomedical Engineering Department, Tehran Polytechnic.
09. Alireza Tolu-Kuroshi, 1996-1999, "Measurement of swelling pressure and degree of swelling of acrylic acid and hydroxy ethyl methacrylate hydrogels in simulated stomach and small intestine environment," Biomedical Engineering Department, Tehran Polytechnic.
08. Mahmood Etemadi, 1996-1999, "Design of a bioadhesion measuring instrument and comparison of bioadhesiveness of poly acrylic acid with poly hydroxy ethyl methacrylate on small intestine," Biomedical Engineering Department, Tehran Polytechnic.
07. Mehrdad Khalili, 1996-1999, "Investigating the effect of strain rate on bioadhesion of acrylic acid hydrogel and small intestine surface," Biomedical Engineering Department, Tehran Polytechnic.
06. Ali JanNesari, 1996-1999, "Study the release of toxic agents in antifouling coatings by means of microencapsulation," Polymer Engineering Department, Tehran Polytechnic.
05. Maziar Khakpour, 1996-1999, "morphology of polyurethane particles prepared by suspension condensation polymerization," Polymer Engineering Department, Tehran Polytechnic.
04. Keyvan Arjomand-Hesabi, 1996-1999, "Monte carlo simulation of branching in emulsion polymerization of dienes," Polymer Engineering Department, Tehran Azad University.
03. Farzad Lahootifard, 1996-1999, "Investigation of the release mechanism of nitroglycerin from a transdermal microreservoir system," Polymer Engineering Department, Tehran Azad University.
02. Haleh Tabatabai, 1996-1999, "Investigation of release mechanism of urea from a natural rubber matrix," Polymer Engineering Department, Tehran Azad University.
01. Hosein Nobari, 1995-1998, "Controlled release of bioactive compounds using starch coating," Polymer Engineering Department, Tehran Polytechnic.

VII. Undergraduate students

58. Jacob Anderson, 3D printing of bioresorbable hydrogels, Biomedical Engineering, University of South Carolina, May 2016 - Present.
57. Taylor Johnson, Effect of rosmarinic acid on viability of cancer stem cells, Biomedical Engineering, University of South Carolina, May 2016 – Present.
56. Elizabeth McCourt, Effect of VEGF-BMP2 gradients in a patterned matrix on vasculogenic differentiation of MSC-ECFC co-cultures, Biomedical Engineering, University of South Carolina, April 2016 – Present.
55. Helen Carr, "Effect of VEGF-BMP2 gradients in a patterned hydrogel on osteogenic differentiation of MSC-ECFC co-cultures, Biomedical Engineering, University of South Carolina, April 2016 – Present.
54. Riley Meekins, "Effect of rosmarinic acid on fructose-mediated glycation of hemoglobin," Biomedical Engineering, University of South Carolina, March 2016 – Present.
53. Janay Clytus, "3D Printing of biodegradable hydrogel scaffolds by printing-triple molding," Biomedical Engineering, University of South Carolina, January 2016 – Present.

52. Julianna L. Madigan, "Biomimetic hydrogels for concurrent vascularization and osteogenesis," Biomedical Engineering, University of South Carolina, January 2016 – Present.
51. William Tierney, "Cartilage regeneration based on digested animal cartilage," Biomedical Engineering, University of South Carolina, January 2016 – Present.
50. Colton Kostelnik, Nanogel based growth factor delivery for bone tissue engineering, Biomedical Engineering, University of South Carolina, January 2016 – Present.
49. Jakub Ratkowski, Effect of cell density on articular cartilage regeneration, Biomedical Engineering, University of South Carolina, January 2016 – Present.
48. Delany Thomas, Patterned hydrogels with gradients in osteogenic and vasculogenic growth factors for vascularized osteogenesis, Biomedical Engineering, University of South Carolina, November 2015 – Present.
47. Madeline Riese, Engineered composite hydrogels for coupling osteogenesis and vasculogenesis, Biomedical Engineering, University of South Carolina, November 2015 – Present.
46. Elizabeth Richardson, "Co-culture systems for induction of vascularized osteogenesis," Biomedical Engineering, University of South Carolina, November 2015 – Present.
45. Elizabeth Hammond, "Synthesis of endoprotease-degradable nanogels for the delivery of bone morphogenetic proteins," Biomedical Engineering, University of South Carolina, September 2105 – Present.
44. Oyindamola Awe, "Isolation of β -keratin from turkey feather," Biomedical Engineering, University of South Carolina, January 2015 – Present.
43. Ryan Rubin, "Effect of chelating proteins on calcium phosphate deposition on aligned resorbable nanofibers," Biomedical Engineering, University of South Carolina, January 2015 – Present.
42. Katie Melink, "Effect of matrix elastic modulus on the growth of cancer stem cells encapsulated in an engineered hydrogel," Biomedical Engineering, University of South Carolina, January 2015 – Present.
41. Brian Madden, "Processing and commercialization of load-bearing resorbable biomimetic scaffolds for bone regeneration," Biomedical Engineering, University of South Carolina, January 2015 – Present.
40. Victoria Baldock, "Effect of hypoxic conditions on the growth of breast cancer stem cells," Biomedical Engineering, University of South Carolina, January 2015 – Present.
39. Ryan Barrs, Measurement and testing of impact strength of cortical-bone-like microtubular matrix," Biomedical Engineering, University of South Carolina, January 2015 – Present.
38. Joel Keefe, "Fabrication of multi-layer fiber-laden hydrogels to simulate the zonal structure of articular cartilage," Exercise Science, University of South Carolina, September 2014 – present.
37. Samuel Keeney, "The Effect of peptides on breast cancer stem cells maintenance and tumorsphere formation within PEGDA hydrogel," Biomedical Engineering, University of South Carolina, September 2014 – present.
36. Weston Grove, "Effect of tartaric acid on the size and shape of calcium phosphate crystals nucleated on aligned nanofibers," Biomedical Engineering, University of South Carolina, May 15, 2014 to present.
35. Ryan McCormick, "The effect of organic acid additives on mineralization properties of aligned polymer nanofibers, University of South Carolina, May 15, 2014 – present.

34. Adam Richardson, "Effect of tartaric acid on the extent of mineralization on aligned peptide-conjugated nanofibers," Biomedical Engineering, University of South Carolina, March 1, 2014 – present.
33. Walter Brandsema, "Effect of ascorbic acid (vitamin C) on size of calcium phosphate crystals grown on aligned nanofibers," University of South Carolina, February 1, 2014 – present.
32. Shawn Patel, "Fabrication of bio-inspired osteon-like structures," Biomedical Engineering," University of South Carolina, February 2103 – present.
31. Cody Buffkin, "Synthesis and characterization of hydroxy acid chain-extended polyethylene glycol hydrogels," Department Biomedical Engineering, University of South Carolina, June 1, 2012 - present.
30. Shubham Patel, "Effect of Citrate on nucleation calcium phosphate crystals on poly(L-lactide) nanofibers," Biomedical Engineering, University of South Carolina, October 1, 2013 – May 2014.
29. William C. Welsh, Research Assistant, "Effect of engineered hydrogel stiffness on chondrogenic differentiation of human mesenchymal stem cells," Department of Chemical Engineering, University of South Carolina, May 15, 2013 to August 15, 2014.
28. Paige Harris, "Effect of conjugated CD44 binding peptide on maintenance of cancer stem maintenance encapsulated in polyethylene glycol hydrogel," Biomedical Engineering Department, University of South Carolina, January 2013 – May 2014.
27. Joshua Walters, "Differentiation and maturation of marrow stromal cells seeded in an osteon-mimetic scaffold in a perfusion cell culture system," Biomedical Engineering Department, University of South Carolina, November 2012 – August 2014.
26. Ibrahim Askar, "Osteogenic differentiation of marrow stromal cells in cortical-bone-like microtubular structures," Biomedical Engineering Department, University of South Carolina, January 2013 – May 2014.
25. John Sieracke, "Generation of 3D macroporous aligned electrospun fibers," Biomedical Engineering Department, University of South Carolina, February 2012 – May 2013.
24. Olivia Tran, "Synthesis and gelation of star poly(dioxanone-ethylene glycol) acrylate macromonomers," Biomedical Engineering Department, University of South Carolina, September 2011 – May 2012.
23. Purva Choudhari, "Effect of fibronectin derived integrin binding peptide on maintenance of 4T1 tumor stem cells in a 3D matrix," Biomedical Engineering Department, University of South Carolina, August 2011- May 2013.
22. Pooja Choudhari, "Effect of CD44 binding peptide on maintenance of 4T1 tumor stem cells in a 3D matrix," Biomedical Engineering Department, University of South Carolina, August 2011- May 2013.
21. Kaushal Vadhar, "Derivatization of PLGEOF macromer for tissue engineering applications," Biomedical Engineering Department, University of South Carolina, August 2011- May 2012.
20. George Plasko, "Synthesis and analysis of peptide-polymer nanoparticles," Biomedical Engineering Department, University of South Carolina, September 2010 – May 2013.
19. Ethan Hart, "Self-assembled tumor penetrating nanoparticles," Biomedical Engineering Department, University of South Carolina, November 2010 – May 2011.
18. Alek Wagner, "Macroporous nanofiber scaffolds with well-defined pore geometry," Biomedical Engineering Department, University of South Carolina, October 2010 – May 2011.

17. Richard Doe, "Integrin-binding nanoparticles for targeted tumor delivery," Biomedical Engineering Department, University of South Carolina, May 2010 – May 2012. (minority student)
16. Ankur Kumar, "Synthesis and characterization of nanofiber scaffolds with well-defined macropore geometry. Integrin binding nanoparticles for targeted tumor delivery," Chemical Engineering Department, University of South Carolina, April 2010 to May 2012.
15. Romel Menacho-Melgar, "Peptidomimetic self-assembled poly(L-lactide) nanoparticles for targeted delivery of antitumor agents," Biomedical Engineering Department, University of South Carolina, September 2009 – May 2011.
14. Joseph Jordan III, "Synthesis and assembly of bi-conjugated CV6K2-PLGF Macromer," Biomedical Engineering, University of South Carolina, September 1 2009 – May 2010.
13. Sana Khaliq, "Role of marrow-derived mesenchymal stem cells in spinal cord regeneration", Chemistry Department, University of South Carolina, May 2009 – May 2011.
12. Ryan Cassaro, "Functional self-assembled poly(lactide-co-glycolide fumarate) nanoparticles as carriers for targeted tumor delivery", Biomedical Engineering, University of South Carolina, November 2008 – May 2010.
11. Sowjanya Kadali, "Enzymatically activated tumor delivery, USC Biomedical Engineering, September 2008 to May 2011.
10. Kevin Yeh, "Targeted delivery to tumor cells with taxol-entrapped nanospheres", USC Chemical Engineering, August 2006 - May 1, 2008.
9. David Farr, "Isolation and characterization of bone marrow stromal cells", USC Medical School, May 15, 2006 - August 1, 2006.
8. Isaiah Davis, "Cell viability of poly(lactide-ethylene oxide-fumarate) terpolymers", USC Chemical Engineering, January 5, 2006 to May 1, 2008. (minority student)
7. Caitlin Molloy, "In vitro Comparison of marrow stromal cells with umbilical cord stem cells on vascularization and mineralization of tissue engineered scaffolds", USC Chemical Engineering, October 1, 2005 to May 1, 2006.
6. Steven Sheibani, "Taxol-entrapped self-assembled nanospheres as a delivery system to aid in the treatment of cancer", USC Chemical Engineering, September 1, 2005 to May 1, 2006.
5. Jacob Riis, "Isolation and characterization of multi-lineage progenitor cells from the bone marrow of rat", USC Medical School, January 2006 to May 2007.
4. Alan A. Henderson, "Isolation and characterization of stromal cells from the bone marrow of rat", Medical College of Charleston, May 2005 to August, 2005.
3. Jessica Jaeger, "Cytocompatibility of injectable poly(l-lactide-co-ethylene oxide-co-fumarate) hydrogel for encapsulation of marrow stromal cells", USC Biology, May 2005 to August 2005.
2. Deanna Canay Norris, "Preparation and degradation characteristics of thin poly(lactic acid fumarate) films by spin casting", USC Chemical Engineering, October 2004 to May 2005. (minority student)
1. Paul Andrew Pepin, "Synthesis and characterization of poly(lactic acid fumarate)", USC Chemical Engineering, January 2005 to May 2005.

VIII. Summer Research Experience for Undergraduates (REU)

21. Candace Ballentine, Effect of hypoxia on cancer stem cells, Clemson University-University of South Carolina, May 25, 2016 – July 31, 2016.

20. Jamie Crawford, Bioprinting mesenchymal stem cells with polyethylene glycol based inks, Furman University – University of South Carolina, May 31, 2015 – August 31, 2015.
19. William C. Molair, “Synthesis and characterization of keratin-based hydrogels,” Biomedical Engineering Department, University of South Carolina, May 15, 2015 – August 15, 2015.
18. Stephen Fediw, “Nanofiber electrospinning of keratin isolated from chicken feather,” Biomedical Engineering Department, University of South Carolina, May 15, 2015 – August 15, 2015.
17. Jill der Outer, “Characterization of keratin isolated from chicken feather,” Biomedical Engineering Department, University of South Carolina, May 15, 2015 – August 15, 2015.
16. Gaurav Bhat, Visiting Research Assistant from Duke University, “Cell encapsulation and printability of hydroxy acid chain-extended polyethylene glycol hydrogels for organ printing,” May 15, 2013 to August 15, 2013.
15. Sarah White, “Effect of CD44 peptide on maintenance of breast cancer stem cells in a 3D in vitro culture system,” Department Chemical Engineering, University of South Carolina, June 1, 2012 to August 1, 2012.
14. Leah Pruzinsky, “Targeted Delivery of Chemotherapy Drugs to Tumor Cells,” Department of Biomedical Engineering, University of Connecticut, June 1, 2011 to August 1, 2011.
13. Matthew Getzin, “Engineering bone formation in multi-functional nanocomposite scaffolds,” Chemical Engineering Department, University of South Carolina, June 1, 2010 - August 1, 2010.
12. Sharon Keren, “Synthesis and self-assembly of mono-conjugated CV6K2-PLGF macromer,” Biomedical Engineering, University of South Carolina, June 1 2009 - August 1 2009.
11. Mohammad Chowdry, “Fabrication of multi-channel scaffolds for spinal cord regeneration,” Medical University of South Carolina, June 1, 2009 to August 1, 2009.
10. Sudeep Sunthakar, Synthesis of star Lactide-glycolide-co-acrylate macromer,” North Carolina State University, June 1, 2009 to August 1, 2009.
9. Idalys Reyes Hernandez, “Release characteristics of Doxorubicin from peptidomimetic nanoparticles,” University of Puerto Rico, Mayaguez campus, June 1, 2009 to August 1, 2009. (minority student)
8. Elizabeth Savage, “Targeted Tumor Delivery”, Clemson University Chemical Engineering, June 1, 2008 to August 1, 2008.
7. Jamario C. White, “Shape-Specific Nano Composites”, South Carolina State University Engineering, May 1, 2008 to August 1, 2008. (minority student)
6. Jeremy Greeter, “Mechanical Properties of Bionanocomposites for Bone regeneration”, University of Florida Mechanical Engineering, May 1, 2007 to August 1, 2007.
5. Rocco Panella, “Biomimetic Nano Composites for Bone regeneration”, Penn State University Chemical Engineering, NSF REU Student, May 1, 2007 to August 1, 2007.
4. Jordan S. Carter, “Fabrication of Biomimetic Degradable Crosslinked Nano-Fibers by Electrospinning”, Lehigh University Chemical Engineering, NSF REU Student, May 1, 2006 to August 1, 2006.
3. Efe Sahinoglu, “Self-Assembly and targeted Delivery of PLEOF Nanoparticle Formation To Tumor Cells”, Auburn University Chemical Engineering, NSF REU Student, May 1, 2006 to August 1, 2006.
2. Carrie A. Farberow, “Bimodally degradable hydrogels as a carrier for stem cells in cartilage regeneration”, University of Oklahoma Chemical Engineering, summer 2005 REU students, May 1, 2005 to August 1, 2005.

1. Michael Pettinella, "Biomimetic nano composites for bone regeneration", University of Villanova Chemical Engineering, summer 2005 REU student, May 1, 2005 to August 1, 2005.

VIII. Senior Design Projects for Undergraduate Students

1. C. Milner, C. Molten, P. Purohit, S. Thomas, "Bioresorbable rib fixation system," Biomedical Engineering Department, University of South Carolina, January 8 – April 29, 2015.

IX. Summer Research Experience for High-School Student (REU)

5. Amanda Steel, Effect of Hypoxia on maintenance and expression profile of MDA-MB-231 human breast cancer stem cells, South Carolina Governor's School, June 1 - July 31, 2015.
4. Prem Chockalingam, "Synthesis of vasculoinductive hydrogels," Hammond School, Columbia, South Carolina, June 10, 2014 to July 31, 2014.
3. Ayan Dasgupta, "Synthesis of enzymatically degradable nanogels in regenerative medicine," Hammond School, Columbia, South Carolina, June 1, 2014 to July 31, 2014.
2. Sarah Lee, Synthesis and testing of biomass-based carbon aerogels as super-capacitors, Spring Valley High School, Columbia, South Carolina, June 1, 2013 to July 31, 2013.
1. Peter McWilliams, "Synthesis of glutamic acid functionalized PLGA nanofibers," Hammod School, May 15 2012 to August 1, 2012.

TEACHING

3. Department of Chemical and Biomedical Engineering, University of South Carolina (2004-Present)
 - Graduate Courses:
 - Advanced Tissue Engineering (ECHE 789J)
 - Undergraduate Courses
 - Mass Transfer (ECHE 322)
 - Chemical Engineering Process Principles (ECHE 300)
 - Transport in Biological Systems (BMEN 354)
 - Tissue Engineering (BMEN 572)
 - Introduction to Biomaterials (BMEN 271)
2. Department of Biomedical Engineering, School of Medicine, Mayo Clinic (2003-4)
 - Graduate Courses:
 - Introduction to Biomedical Engineering (BME 5000)
 - Concepts in Biomedical Engineering (BME 6750)
1. Department of Bioengineering, Rice University (2001-2)
 - Graduate Courses:
 - Hydrogels and their applications in biomedical engineering (BIOE 532)

PATENTS

1. Esmail Jabbari: Regulating cancer stem cell maintenance with integrin and heparin binding peptides, University of South Carolina, Docket# 01067 PPA 02, Filed 10/30/2013, application no. 61/962056.
2. Esmail Jabbari: Engineered matrix for enriching malignant cancer stem cells, University of South Carolina, Docket# 01067 PPA 01, Filed 10/23/2013, application no. 61/962057.
3. Esmail Jabbari: Nanostructure formation in polyethylene glycol hydrogels chain extended with short hydroxy acid segments, University of South Carolina, Docket # 01012 PPA 02, Filed 4/24/2013; serial no. 61/854,439.

4. 2. Esmail Jabbari: Gelation characteristics and osteogenic differentiation of stromal cells in inert hydrolytically degradable micellar polyethylene glycol hydrogels, University of South Carolina, Docket # 01012 PPA 01, Filed 4/24/2013; serial no. 61/854,438.
5. Esmail Jabbari: Effect of surface modification of nanofibers with glutamic acid peptide on calcium phosphate nucleation and osteogenic differentiation of marrow stromal cells, University of South Carolina, Docket # 01013 PPA 01, Filed 4/24/2013; serial no. 61/854,441.
6. Esmail Jabbari: Osteogenic differentiation of marrow stromal cells (MSCs) in cortical-bonelike microtubular structures. University of South Carolina, Docket # 01013 PPA 02, Filed 4/24/2013; serial no. 61/854,437.
7. Esmail Jabbari: Peptidomimetic Resorbable Peptide-Polymer Hybrid Polyester Nanoparticles. University Of South Carolina Dec, 23 2010: US 20100322979.
8. Esmail Jabbari: Fabrication of Biomimetic Scaffolds with Well-Defined Pore Geometry by Fused Deposition Modeling. University Of South Carolina Apr, 8 2010: US 20100084784.
9. Michael J Yaszemski, Bradford L Currier, Esmail Jabbari, Lichun Lu: Hydroxyapatite grafted fumarate based macromers for biodegradable composites. Mayo Foundation for Medical Education and Research Jan, 5 2010: US 7642300.
10. Esmail Jabbari: Fiber-Reinforced Laminated Hydrogel / Hydroxyapatite Nanocomposites. University Of South Carolina Sep, 6 2012: US 20120226295.
11. Esmail Jabbari: Electrospun Fibrous Three-Dimensional Scaffolds with Well-Defined Pore Geometry. University Of South Carolina Dec, 30 2010: US 20100327494.
12. Esmail Jabbari, Self-Assembled Biodegradable Nanoparticles for Medical and Biological Applications, University Of South Carolina Filed October 8, 2009, Issued Apr, 8 2010, US 20100086607.
13. Esmail Jabbari, Bioresorbable composition for repairing skeletal tissue. University of South Carolina, Filed July 12, 2006, Issued April, 30 2009: US 20090110732.
14. Esmail Jabbari, Michael J Yaszemski, Bradford L Currier, Lichun Lu: Hydrogel Porogens for Fabricating Biodegradable Scaffolds. Mayo Foundation for Medical Education and Research, Filed 8/27/2004, US 20080206308.
15. Michael J Yaszemski, Bradford L Currier, Esmail Jabbari, Lichun Lu: Self-crosslinkable poly(caprolactone fumarate). Mayo Foundation for Medical Education and Research, Filed 6/29/2004, US 20070043202.
16. Michael J Yaszemski, Bradford L Currier, Esmail Jabbari, Lichun Lu: Hydroxyapatite grafted fumarate based macromers for biodegradable composites. Mayo Foundation for Medical Education and Research Oct, Filed 6/29/2004, Issued 1/5/2010, US Patent# 7642300.
17. Michael J Yaszemski, Bradford L Currier, Lichun Lu, Xun Zhu, Esmail Jabbari: Blend, cross-linkable poly(propylene fumarate) for immobilization and controlled drug delivery. Mayo Foundation for Medical Education and Research, Filed 4/25/2003, Issued 4/26/20005, US Patent# 6884432.