SHELLY E. SAKIYAMA-ELBERT

Professor and Department Chair of Biomedical Engineering
Fletcher Stuckey Pratt Chair in Engineering
The University of Texas at Austin

Office Address:
Department of Biomedical Engineering
107 W Dean Keeton St. Stop C0800
Austin TX 78712
Phone: 512.471.3604 (Office)
Email: sakiyama@utexas.edu

Research Interests
Biomaterials, drug delivery, tissue engineering, nerve regeneration, stem cells

Education

2015	Executive Leadership in Academic Technology and Engineering Fellow
2013	Women's Leadership Forum Certificate Program, Olin School of Business, Washington University
2000	Ph.D., Chemical Engineering, California Institute of Technology *Thesis Advisor*: Jeffrey A. Hubbell
1998	M.S., Chemical Engineering, California Institute of Technology
1996	S.B., Chemical Engineering and Biology, Massachusetts Institute of Technology

Positions

2016-present	Professor and Department Chair of Biomedical Engineering, Fletcher Stuckey Pratt Chair, Cockrell School of Engineering, The University of Texas at Austin
2015-2016	Vice Dean for Research, School of Engineering, Washington University
2014-2016	Co-Director, Center of Regenerative Medicine, Washington University
2012-2106	Professor of Biomedical Engineering, Washington University (Courtesy appointments in Surgery and Energy, Environmental & Chemical Engineering)
2011-2015	Associate Chair, Department of Biomedical Engineering, Washington University
2010-2015	Director of Graduate Studies, Department of Biomedical Engineering
2007-2016	Member – Division of Biology and Biomedical Sciences–Molecular Cell Biology
2007-2012	Associate Professor of Biomedical Engineering, Washington University
2005-2016	Member – Hope Center for Neurological Disorders
2004-2016	Member, Institute for Materials Science and Engineering, Washington University
2000-2007	Assistant Professor, Department of Chemical Engineering School of Engineering, Washington University
2000-2012	Instructor, Division of Plastic Surgery and Reconstructive Surgery, School of Medicine, Washington University
2000-2007	Joseph and Florence Farrow Assistant Professor, Biomedical Engineering, School of Engineering, Washington University
1997-2000	Research Assistant, Institute for Biomedical Engineering, Materials, ETH-Zurich
1996	Internship, Focal Interventional Therapeutics, Lexington, MA
1993-1995	Research Assistant, Dept. of Chemical Engineering, MIT

Professional Society Memberships

2011–present American Association for the Advancement of Science
2000-present American Chemical Society
1993-2005 American Institute of Chemical Engineers
2000-present Biomedical Engineering Society
1998-present Society for Biomaterials, USA
1998-present Society for Neuroscience
2002-present Tissue Engineering Regenerative Medicine International Society (TERMIS)
2003-present International Society for Stem Cell Research

Research Support

ACTIVE

NIH-R01 NS090617 (**Sakiyama-Elbert – PI**)
"Developing New Tools to Understand the Role of Interneurons in Rewiring After Spinal Cord Injury"
2/1/2015-1/31/2020 25% effort $1,093,750(direct)/$1,667,970(total-5 years)

NIH – R01 AR062947 (MPI) (**Sakiyama-Elbert**, Gelberman, Thomopoulos-PIs)
"Enhanced Tendon Healing through Growth Factor and Cell Therapies"
09/15/12-08/31/17 10% effort $1,931,985(direct)/$2,673,845(total-5 years)

NIH-R01 NS051706 (MPI) (**Sakiyama-Elbert** and Mackinnon**– PIs**)
"The Effects of GDNF on Peripheral Nerve Regeneration"
02/15/2012 – 1/31/18 25% effort $1,552,405(direct)/$2,350,656(total)

COMPLETED

NIH- R01 NS051454 (**Sakiyama-Elbert – PI**)
"Fibrin-based scaffolds for spinal cord injury"
4/01/2005 – 5/31/2015 25% effort $1,125,000 (direct)/$1,810,000(total-5 years)

NIH - R21 NS077765 (MPI) (Elbert, **Sakiyama-Elbert - PIs**)
Self-Assembling Growth Factor Gradients for Nerve Regeneration
8/15/11-7/31/14 5% effort $275,000 (direct)/ $418,000 (total-2 years)

NIH –R21 NS067561 (**Sakiyama-Elbert – PI**)
"Axon -Targeted Microdevices for CNS Axon Transport Studies"
9/1/2010 - 8/31/2013 20% effort $275,000 (direct)/ $418,000 (total)

NIH – R01 DC010884 Collaborator (Paniello – PI)
"Selective Adductor Recovery After Laryngeal Nerve Injury"
7/9/2010-6/30/2015 10% effort $325,000(direct to SSE lab – 5 years)

NIH – R01 AR33097 Co-investigator (Gelberman – PI)
"Flexor Tendon Healing"
4/1/2006 - 3/31/2011 10% effort $1,422,696(direct)/$2,162,498(total-5 years)

Wallace H. Coulter Foundation (**Sakiyama-Elbert – PI**)
"Rationally Designed Delivery Systems for Nerve Injury"
8/1/05-12/31/07 25% effort $200,000 (direct) / $240,000 (total-2 years)

Whitaker Foundation (**Sakiyama-Elbert – PI**)
"Techniques for the Rational Design of Drug Delivery Systems"
9/1/01-8/31/04 25% effort $230,712

Washington University Center for Materials Innovation
"Microfluidics-based Gradient Generator for Biomedical Applications" (**Sakiyama-Elbert – PI**)
9/1/2007-8/31/2009 10% effort $27,500 (direct)/$27,500 (total- 1 years)

Hope Center for Neurological Disorders (**Sakiyama-Elbert – PI**)
"Microdevice Development for the Study of Axon Degeneration and Injury"
11/1/07-10/31/08 10% effort $50,000 (direct)/$50,000 total

Washington University Center for Materials Innovation
"Nanomedicine - Biomaterials for Gene Delivery" (**Sakiyama-Elbert – PI**)
7/1/2004-8/31/2007 10% effort $85,000 (direct cost)/$85,000 (total- 3 years)

McDonnell Foundation Grants for Molecular and Cellular Neuroscience
"Tissue-Engineered Matrices for Nerve Regeneration" (**Sakiyama-Elbert – PI**)
7/1/02-12/30/03 20% effort $30,000

McDonnell Foundation Grants for Higher Brain Research
"Reduction of Scar Formation on Microarray Electrodes" (Elbert – PI)
7/1/02-12/30/03 5% effort $30,000

Teaching Activities

2001-2016 Course Master, Washington University
Introduction to Biomaterials Science (co-taught with D. Elbert) –Spring 2001
Engineering Aspects of Biotechnology (new course) – Spring 2002, Fall 2004, Spring 2008, 2012, 2014
Tissue Engineering (new course) – Fall 2002, Spring 2004, 2007, 2010, 2013
Biotechnology Techniques for Engineers (new course) – Spring and Fall 2003, Spring 2006, 2011
Molecular Cell Biology for Engineers (new course) – Fall 2005, 2006, 2007, Spring 2009, Fall 2009, 2010, 2011, 2012, 2013, 2014, 2015

Guest Lectures: Introduction to Biomedical Engineering, Quantitative Physiology, and Biotransport.

1995-1996 Teaching Assistant, Chemistry, Massachusetts Institute of Technology
Organic Chemistry I (Fall 1995 – 2 recitations/week)
Thermodynamics (Spring 1996 – 1 recitation/week)

Mentoring Activities

Postdoctoral Advisor

2015-2016 Lindsey Crawford
2010-2011 Emily Crownover
2002-2004 Dustin J. Maxwell

Medical Resident Research Advisor

2007-2009 Amy Moore (Plastic Surgery)

Ph.D. Dissertation Advisor

The University of Texas

2017-present Jaewon Lee (qualifying exam 8/16)
2016-present Nicholas White (qualifying exam passed 06/16, post candidacy)

Washington University

2014-present Russell Thompson (MSTP) (proposal 10/15)
2014-present Ze Zhong (Bill) Wang (proposal 6/16)
2014-present Jennifer Pardicek (proposal 5/16) – NIH F31 NRSA
2012-2016 Nisha Iyer – NIH F31 NSRA – postdoc- U Wisconsin
2010-2015 Hao Xu – Pantheon Inc.
2011-2015 Thomas Wilems - NSF GRF – postdoc – U Texas Health Science Center
2011-2014 Laura Marquardt - NSF GRF – postdoctoral fellow –Stanford University
2009-2013 Dylan McCreedy - NSF GRF – Postdoctoral fellow – UC San Francisco
2009-2013 Xi Lu – Postdoctoral fellowship – Uppsala University
2008-2012 Nithya Jesuraj – Postdoctoral fellow – Boston Biomedical
2006-2009 Matthew Wood –Assistant Professor Washington University – Dept. of Surgery
2005-2009 Philip Johnson – Holaira– Senior Scientist
2004-2008 Stephanie Willerth – Associate Prof. Mechanical Eng. – Univ. of Victoria BC
2004-2008 Nicole Moore – Program Officer NCI/NIH – Physical Sciences Group
2001-2005 Sara J. Taylor – Staff Scientist Washington U School of Medicine

Rotation/Visiting Graduate Students

2016	Jaewon Lee	2008	Dylan McCreedy
2016	Matthew Curtis	2008	Amanda Walker
2015	Nicholas White	2008	Xi Lu
2015	Mengxi (Cici) Zhang (Neuro)	2007	Nithya Jesuraj
2015	Michelle Wegscheid (MSTP)	2007	Richard Seeger
2015	Deng Pan (MSTP)	2006	Yun (Mike) Zhao
2014	Ze Zhong Wang	2005	Jordan Williams (MSTP)
2014	Jennifer Pardicek	2005	Matthew Wood
2014	Russell Thompson	2004	Evan Scott
2013	Jonathan Yang	2004	Stephanie Willerth
2013	Deep Hathi	2004	Megan Kaneda
2012	Allison Throm	2004	Philip Johnson
2012	Leah Vandiver	2004	Cara Rieger
2012	Siddhant Awasthi	2004	Matthew McEwan
2011-12	Lin Bai (MS)	2003	Matthew Donaldson
2011	Tauseef Charanya	2003	Urvi Shah
2011	Suman Mondal	2003	Donghui Zhu
2011	Lin Bai	2003	Shatadal Ghosh
2011	Nisha Iyer	2003	Daniel Kuster
2011	Shivam Sham	2003	Neelesh Soman
2010	Laura Marquardt	2002	Shannon Hughes
2010	Thomas Wilems	2002	Laurence Tam
2010	Jacob Roam	2001	Anne Schmieder
2009	Hao Xu	2001	Leslie Dempsey
2009	Rebecca Schugar	2001	Brad Wacker
2009	Kelvin Liang (MSTP)	2000-01	Edgar Scott (M.S.)

Undergraduate Research Advisor

Year(s)	*Name*	*Current Position*
The University of Texas Austin		
2016-17	Zachary Hartman	Current
2016-17	Peter Kenny	Current
2016-17	Sihua (Oliver) Zhao	Current
2016-17	Shao-Po (Shawn) Huang	Current
2016-17	Jeong Ha (James) Choi	Current
2017	Yaqeen Ajawad (CWRU)	Current
2017	Andrew Rios (UTEP)	Current
Washington University		
2016	Kathryn Achuck	Class of 2018
2016	Logan Groneck	Class of 2019
2015-2016	Divya Joshi	Class of 2018
2015	Mary (Molly) Munsell (U Michigan)	Class of 2017
2015	Michael Saunders (Amgen, Johns Hopkins)	post-bac research year
2014-2015	Imani Paul (URM)	Class of 2017
2014	Kathryn Moore (Amgen, U Georgia)	PhD- program UNC/NC State
2013-2014	Clark Ingram (URM)	Class of 2015
2013	Robin Harland	MD - U Colorado
2012-2013	Cara Gonzalez Welker (Amgen, URM)	PhD program - Stanford
2011-2013	Jessica Butts	PhD program – Georgia Tech
2011	Nicholas Chendid (Amgen Scholars)	MD program- Yale
2010-2013	Chelsea Brown	MD – Ohio State (Full Scholarship)
2010-2012	Nicole Applebaum (McKelvey)	Exxon Mobil
2010-2012	Tyger Howell (USTAR, URM)	PhD program- Rosewell Park Inst.
2010	Kenyeda Adams (BiomedRAP,URM)	Indian University
2009-2013	Jasmine Kwasa (URM, USTAR)	PhD program – Boston U
2009 -2010	Lydia Beasley (BS/MS, URM)	Genetech
2009	David Sanders (Biomed RAP, URM)	MD program – Washington U
2008 - 2011	Alicia Shui	PhD program – Stanford, NSF GRF
2008	Adam Canver (Biomed RAP)	MD/PhD program - Drexel
2008	Alice Ndikumana (URM)	Deloitte
2007-2009	Alexander Tatara	MD/PhD program– Rice/Baylor U
2007-2009	Alex French	PhD program – U Chicago
2007	John Pasinki	Bank of America
2006-2008	Stan Parker (BS/MS)	Accenture Consulting
2006-2008	Clayton Sheppard	Lab Tech – U Georgia
2006-2007	Josephine Chang (A&S – Chemistry)	JD – CWRU, USPTO – Attorney
2005-2008	Alison Rader (BS/MS)	JD - Saint Louis U – Patent Attorney
2005-2007	Tracey Faxel (BS/MS)	Staff Perfusionist – Rush U
2004-2008	Tiffany Barbour (URM)	Genentech – Process Engineer
2004-2005	Ben Rogers (BS Vanderbilt)	
2004-2005	Katrina Rogers	MD School – UTexas SW

2004-2005	Isabel Acevado (URM)	Technology Transfer - WashingtonU
2003-2005	Maria Doukas (BS/MS)	PhD program - Northwestern U
2003	Lauren Grabski	National Oilwell Varco, Asst. Mang.
2003-2004	Brandon Hicks (BS/MS)	MD - Arkansas
2002-2004	Kelley Foyil	Washington U – Clinical Research
2002	Adam Beagley	WH Trading
2001-2002	Sarah Parsons	MS – Georgia Tech 2004
2001	Bonnie Tang	PhD candidate – U Pittsburgh
2001	Adnan Husein	MD/JD program – U Illinois

Medical Student Research Advisor

2007	Seth Kendle	2002	Janakie Singham
2003	Saba Ahmad	2001	Annie Le
2002	Jerry Chen		

WU Academic Advising

Total Undergraduate Academic Advisees (WU) since 2000: >140

Honors

2017	Clemson Award for Basic Research – Society for Biomaterials
2016	International Union of Societies of Biomaterials Science and Engineering - Fellow
2015	American Association for the Advancement of Science (AAAS) Fellow
2015	Outstanding Faculty Mentor – Graduate Student Senate
2013	Distinguished Faculty Award - Washington University Founders Day
2013	Biomedical Engineering Society Fellow
2011	American Institute for Biological and Medical Engineering – College of Fellows
2011	Excellence in Graduate Mentoring – Graduate Student Senate and Dean of the Graduate School of Arts & Sciences
2008	Dean's Award for Excellence in Advising and Mentoring
2006	Who's Who in Technology - St. Louis Business Journal
2002	30 under 30 St. Louis Business Journal
1996-97	Corcoran Fellow, California Institute of Technology
1994	Tau Beta Pi
1992	National Merit Scholar

Professional Service

2017	BMES Annual Meeting Chair
2017-2018	BMES National Meetings Committee Co-Chair
2017-2019	Society for Biomaterials – Secretary Treasurer
2017-present	External Advisory Board – Department of Biomedical Eng.- Vanderbilt
2017-present	External Advisory Board – Department of Biomedical Eng. – George Washington
2015-present	Associate Editor – Journal of Biomedical Materials Research Part A
2015-2017	Society for Biomaterials – Secretary Treasurer Elect
2013-present	Associate Editor – Biotechnology and Bioengineering
2013-2016	BMES Awards Committee Chair 2013 (Member 2010-present)

2013	Gordon Research Conference – Biomaterials: Biocompatibility/Tissue Engineering - Chair
2013	BMES 2013 Neural Engineering Track Chair (Seattle)
2012-2013	TERMIS North America 2013 Scientific Advisory Committee (Atlanta)
2011-2012	TERMIS World Congress Vienna – International Program Committee
2010-2013	NIH Study Section – Biomaterials/Biointerfaces (BMBI) – Member
2011	Gordon Research Conference – Biomaterials: Biocompatibility/Tissue Engineering - Vice Chair
2011-2013	BMES Communications Committee –Chair (Member 2009-2013)
2009-2012	Biomedical Engineering Society (BMES) – Board of Directors
2008-2014	Council (Board of Directors) Member –TERMIS Americas
2008-present	Editorial Board – Acta Biomaterialia
2007	Discussion Leader – Gordon Conference – Biomaterials: Biocompatibility/Tissue Engineering
2006-2007	Society for Biomaterials – Tissue Engineering Special Interest Group – Vice Chair
2006	Society for Biomaterials - Strategic Planning Committee
2006	REGENERATE 2006 – Chair Neural Sessions
2005-2006	REGENERATE 2006 – Scientific Advisory Committee
2005	REGENERATE 2005 – Judge Student Awards
2004-05,06-07	Society for Biomaterials – Membership Committee
2003-2005	Society for Biomaterials – Long Range Planning Committee Long Range Strategic Planning Retreat Participant – 11/05
2002, 04-05	American Institute of Chemical Engineers – Session Chair **Area 15**
2001-05	Society for Biomaterials – Cell and Organ Therapy Special Interest Group – Vice Chair (2001-2002), Chair (2002-2003), Reporter (2003-2005)

Grant Reviews (ad-hoc):
NIH – (BMBI, BTSS, NT, SCD, RC1 special panels (3), SBIR, ZRG1 F05-R), Veterans Administration (SCI/TBI), NSF-CBET, NASA, Army-CDMRP, Science Foundation of Ireland, Network for Excellence - EU, Israel Science Foundation, Ohio Cancer Grants, Nebraska Science Foundation, NSERC Canada, CH Neilsen Foundation

Journal Manuscript Review (ad-hoc) 2006-2017:
Acta Biomaterialia, Advanced Drug Delivery Reviews, Advanced Materials, Annals of Biomedical Engineering, Biochemistry, Biomacromolecules, Biomaterials, Biomedical Materials, Biotechnology Bioengineering, Brain Research Bulletin, Cell and Molecular Bioengineering, Cell Transplantation, Cells Tissues Organs, Colloids and Surfaces B: Biointerfaces, Developmental Neuroscience, Experimental Neurology, Gene Therapy, Growth Factors, Journal of Biomedical Materials Research, Journal of Biomaterials Science Polymer Edition, Journal of Controlled Release, Journal of Neural Engineering, Molecular Therapy, Molecular Pharmaceutics, Nature Nanotechnology, Neuroscience Letters, Neuroscience Research, Peptides, PLoS One, Scientific Reports, Stem Cells and Development, Tissue Engineering

University Service (The University of Texas at Austin)

2017	Search Committee Mulva Center for Neuroscience Director - Member
2017	Search Committee Wong Eye Institute Director/Chair of Opthamology – Member
2016-17	Biomedical Engineering Faculty Search Committee - Member

University Service (Washington University)

2016	Gender Pay Equity Committee
2015	Diversity and Inclusion Steering Committee
2014-2015	Chair – BME Faculty Search – Tissue and Cardiovascular Engineering
2014-2015	School of Engineering and Applied Science – Dean Search Committee
2013-2016	Internal Competition Selection Committee (Vice Chancellor of Research)
2012-2013	Provost's Faculty Leadership Committee, Member
2012-2013	BME Chair Search Committee, Member
2012-2013	Provost's Faculty Fellow
2012-2014	Association of Women Faculty, Co-President
2011-2014	Title IX Committee, Chair (2015-2016 Interim Chair)
2011-2016	Affirmative Action Monitoring Committee - School of Engineering
2011-2012	Speaker of the School of Engineering and Applied Science Faculty Assembly
2011-2012	Metabolic Engineering Faculty Search (EECE) Committee Member
2010-2011	School of Engineering and Applied Science – Advisory Committee Member
2010	Committee on Undergraduate Women in STEM – Member
2009-2010	Working Group on Faculty Leadership – Member
2009-2010	School of Engineering and Applied Science – Advisory Committee for the Appointment of the Dean (Search Committee), Co-Chair
2009-2010	Pregraduate School Faculty Advisory Committee – Member
2009-2016	McKelvey-Luce Scholars Faculty Mentor, PI (Undergraduate Research Fellowship for Engineering and Applied Science)
2009-2012	Board Member – Association of Women Faculty, Councilor at Large
2008-2010	Biomed RAP Mentor – Washington University
2008	School of Engineering and Applied Science – Advisory Committee for the Appointment of the Interim Dean (Search Committee), Member
2008	Advisory Committee on Women Faculty, Member
2006-2007	Advanced Materials Faculty Search Committee for the McKelvey Chair
2005-2006	School of Engineering and Applied Science – Advisory Committee for the Appointment of the Dean (Search Committee), Member
2004-2007	Animal Studies Committee (IACUC)
2003-04,'06	Olin Fellowship Selection Committee
2002-2006	Washington University Library Committee (Chair – 2005-06)
2001-2016	Washington University Biomedical Engineering Society – Faculty Advisor
2001-6,9-14	Co-coordinator for St. Louis Gifted Resource Council Learning Lab for middle school students "Moving and Shaking … An Introduction to Engineering"
2001	Mentor for School of Medicine Young Scientist Program for high school students
2000-2004	Growth and Remodeling Faculty Search Committee – Biomedical Engineering
2000-2015	Graduate Admissions Committee – Biomedical Engineering (Chair 2005-12)

Training Grant Participation

Funded Programs Washington University

NIH MARC – U-STAR (Washington University) – Mentor – 3 female URM mentees (2009-15)

NIH NIDCD T32 - DEVELOPMENT OF CLINICIAN/RESEARCHERS IN ACADEMIC ENT – Mentor (2006-12)

NIH T32 – Biomechanics – NIBIB-Mentor (2014-2016)

Publications: **Total Citations – 6503 H-index 43** (Google Scholar 8/17), **36 (**Web of Science)

Peer-reviewed journal articles

1. Iyer NR, Wilems TS, **Sakiyama-Elbert SE**. Stem cells for spinal cord injury: Strategies to inform differentiation and transplantation. *Biotechnol Bioeng*. 114(2):245-259, 2017.
2. Walter C, Crawford L, Lai M, Toonen JA, Pan Y, **Sakiyama-Elbert S**, Gutmann DH, Pathak A. Increased Tissue Stiffness in Tumors from Mice with Neurofibromatosis-1 Optic Glioma. *Biophysical Journal* 112(8):1535-1538*,* 2017.
3. Gelberman RH, Linderman SW, Jayarm R, Dikina A, **Sakiyama-Elbert S**, Alsberg E, Thomopoulos S, Shen H. The effect of stem cells and BMP12 on the proliferative stage of tendon repair. *Clinical Orto Rel Res* (accepted) 2017.
4. Ee X, Yan Y, Hunter DA, Schellhardt L, **Sakiyama-Elbert SE**, Mackinnon SE, Wood MD. Transgenic SCs expressing GDNF-IRES-DsRed impair nerve regeneration within acellular nerve allografts. *Biotechnology & Bioengineering* (in press) 2017.
5. Shen H, Kormpakis I, Havlioglu N, Linderman SW, **Sakiyama-Elbert S**, Erickson IE, Zarembinsk T, Silva MJ, Gelberman RH, Thomopoulos S. The effect of mesenchymal stromal cell sheets on the inflammatory stage of flexor tendon healing. *Stem Cell Research & Therapy*, 7:144, 2016.
6. Iyer N, Huettner JE, Butts JC, Brown CR and **Sakiyama-Elbert SE**. Generation of Highly Enriched V2a Interneurons from Mouse Embryonic Stem Cells. *Experimental Neurology*, 277:305-16, 2016.
7. Sand JP, Park AM, Bhatt N, Desai SC, Marquardt L, **Sakiyama-Elbert SE**, Paniello RC. A Comparison of Conventional, Revascularized and Bioengineered Methods of Recurrent Laryngeal Nerve Reconstruction. *JAMA Otolaryngology-Head & Neck Surgery*, 142(6):526-532, 2016.
8. Gelberman RH, Shen H, Kormpakis I, Rothrauff B, Yang G, Tuan RS, Xia Y, **Sakiyama-Elbert S**, Silva MJ, Thomopoulos S. The effect of adipose-derived stromal cells and BMP12 on intrasynovial tendon repair: A biomechanical, biochemical, and proteomics study. *Journal of Orthopaedic Research*, Apr;34(4):630-40, 2016.
9. Xu H, Iyer N, Huettner JE, **Sakiyama-Elbert SE**. A puromycin selectable cell line for the enrichment of mouse embryonic stem cell derived V3 interneurons. *Stem Cell Research & Therapy,* 6:220, 2015.
10. Marquardt LM, Ee X, Iyer N, Hunter DA, Wood MD, **Sakiyama-Elbert SE**. Finely Tuned Temporal and Spatial Delivery of GDNF Promotes Enhanced Nerve Regeneration in a Long Nerve Defect Model. *Tissue Eng Part A,* 21:2852-2864, 2015.
11. Wilems TS, Pardieck J, Iyer N, **Sakiyama-Elbert SE**. Combination Therapy of Stem Cell Derived Neural Progenitors and Drug Delivery of Anti-Inhibitory Molecules for Spinal Cord Injury. *Acta Biomaterialia,* 28:23-32, 2015.
12. Xu, H **Sakiyama-Elbert SE.** Directed Differentiation of V3 Interneurons from Mouse Embryonic Stem Cells" *Stem Cells and Development*, 24:2723-32, 2015.
13. Wilems TS, **Sakiyama-Elbert SE.** Sustained dual drug delivery of anti-inhibitory molecules for treatment of spinal cord injury. *Journal of Controlled Release,* 213:103-111, 2015.
14. Manning CN, Martel C, **Sakiyama-Elbert SE**, Silva MJ, Shah S, Gelberman RH, Thomopoulos S. Adipose-derived mesenchymal stromal cells modulate tendon fibroblast responses to macrophage-induced inflammation in vitro. *Stem Cell Research & Therapy*, 6:74, 2015.
15. Marquardt LM, **Sakiyama-Elbert SE**. GDNF preconditioning can overcome Schwann cell phenotypic memory. *Experimental Neurology* 265:1–7, 2015.

16. Mohammadkhaha A, Marquardt LM, **Sakiyama-Elbert SE,** Day DE, Harkins AB. Fabrication and Characterization of Poly-(ε)-Caprolactone and Bioactive Glass Composites for Tissue Engineering Applications. *Materials Science & Eng: C* 49:632-639, 2015.
17. Hoben G, Yan Y, Iyer N, Newton P, Hunter DA, Moore AM, **Sakiyama-Elbert SE**, Wood, MD and Mackinnon SE. Comparison of acceular nerve allograft modification with Schwann cells or VEGF. *Hand*, 10(3):396-402, 2015.
18. McCreedy D, Wilems T, Xu H, Butts J, Brown C, Smith A, **Sakiyama-Elbert SE**. Survival, Differentiation, and Migration of High-Purity Mouse Embryonic Stem Cell-derived Progenitor Motor Neurons in Fibrin Scaffolds after Sub-Acute Spinal Cord Injury. *Biomaterials Science* 2:1672-1682, 2014.
19. McCreedy DA, Brown CR, Butts JC, Xu H, Huettner J, **Sakiyama-Elbert SE**. A New Method for Generating High Purity Motoneurons from Mouse Embryonic Stem Cells. *Biotechnology and Bioengineering* 111:2041-2055, 2014.
20. Brown CR, Butts JC, McCreedy DA, and **Sakiyama-Elbert SE**. Generation of V2a interneurons from mouse embryonic stem cells. *Stem Cells and Development* 23:1765-76, 2014.
21. Wu-Fienberg Y, Moore AM, Marquardt LM, Newton P, Johnson PJ, Mackinnon SE, **Sakiyama-Elbert**SE, Wood MD. Viral transduction of primary Schwann cells using a Cre-lox system to regulate GDNF expression. *Biotechnology and Bioengineering* 106:970-979, 2014.
22. Lu X, Kim-Han JS, Harmon, S, **Sakiyama-Elbert SE[#],** O'Malley KL, The Parkinsonian mimetic, 6-OHDA, impairs axonal transport in dopaminergic axons. *Molecular Neurodegeneration* 9:17, 2014.
23. Jesuraj NJ, Marquardt LM, Kwasa J, **Sakiyama-Elbert SE**. Glial cell line-derived neurotrophic factor promotes increased phenotypic marker expression in femoral sensory and motor-derived Schwann cell cultures. *Experimental Neurology* 257:10–18, 2014.
24. Manning CN, Havlioglu N, Knutsen E, **Sakiyama-Elbert SE,** Silva MJ, Thomopoulos S, Gelberman RH. The early inflammatory response after flexor tendon healing: A gene expression and histological analysis. *J Orthopedic Research*. 32(5):645-52, 2014.
25. **Sakiyama-Elbert SE.** "Incorporation of Heparin into Biomaterials" *Acta Biomaterialia* 10(4):1581-1587, 2014.
26. Jesuraj NJ, Santosa KB, MacEwan MR, Moore AM, Kasukurthi R, Ray WR, Flagg ER, Hunter DA, Borschel GH, Johnson PJ, Mackinnon SE, and **Sakiyama-Elbert SE**. "Schwann Cells Seeded in Acellular Nerve Grafts Improve Functional Recovery". *Muscle and Nerve* 49(2):267-76, 2014.
27. Marquardt LM, Day D, **Sakiyama-Elbert SE,** and Harkins AB. Effect of Borate Based Bioactive Glass on Neuron viability and Neurite Extension. *Journal of Biomedical Materials Research*. 102(8): 2767-75, 2014.
28. Marquardt, L and **Sakiyama-Elbert SE**. "Engineering Peripheral Nerve Repair" *Current Opinion in Biotechnology* 24: 887-892, 2013.
29. Shen H, Gelberman RH, Silva MJ, **Sakiyama-Elbert SE**, Thomopoulos S. BMP 12 induces tenogenic differentiation of adipose-derived stem cells. *PLoS ONE,* 8(10) e77613, 2013.
30. Manning CN, Schwartz AG, Liu W, Xie J, Havlioglu N, **Sakiyama-Elbert SE,** Silva MJ, Xia Y, Gelberman RH, Thomopoulos S. Controlled delivery of mesenchymal stem cells and growth factors using a nanofiber scaffold for tendon repair. *Acta Biomaterialia* 9:6905-14, 2013.
31. Lu X, Kim-Han JS, O'Malley KL, **Sakiyama-Elbert SE**. A Microdevice Platform for Visualizing Mitochondrial Tansport in Aligned Dopaminergic Axons. *J Neuroscience Methods* 209:35-39, 2012.

32. Namani R, Feng Y, Okamoto RJ Jesuraj N, **Sakiyama-Elbert SE**, Genin GM, Bayly PV Elastic Characterization of Transversely Isotropic Soft Materials by Dynamic Shear and Asymmetric Indentation. *J Biomechanical Engineering* 134(6):061004, 2012.
33. McCreedy,DA, Silverman C, Gottleib DI, and **Sakiyama-Elbert SE**. Combination Therapies in the CNS: Engineering the Environment. *Neuroscience Letters* 519: 115-121, 2012.
34. McCreedy,DA, Silverman C, Gottleib DI, and **Sakiyama-Elbert SE**. Transgenic Enrichment of Mouse Embryonic Stem Cell-derived Progenitor Motor Neurons. *Stem Cell Research* 8: 368-378, 2012.
35. Moore NM and **Sakiyama-Elbert SE**. Analysis of Cell Binding and Internalization of Multivalent PEG-Based Gene Delivery Vehicles. *IEEE Transactions on Nanobioscience*, 11, 54-61, 2012.
36. Jesuraj, NJ, Nguyen, P, Wood, MD, Moore, AM, Mackinnon, SE, Borschel, GH, **Sakiyama-Elbert, SE**. Differential Gene Expression in Motor and Sensory Schwann Cells in the Rat Femoral Nerve. *Journal of Neuroscience Research* 90(1):96-104, 2012.
37. Jesuraj, NJ, Santosa, KB, Newton, P, Liu, Z, Hunter, DA, Mackinnon, SE, **Sakiyama-Elbert, SE**[#], Johnson, PJ. A Systematic Evaluation of Schwann Cell Injection into Acellular Cold-Preserved Nerve Grafts. *J Neuroscience Methods* 97:209-15, 2011.
38. Manning CN, Kim HM, **Sakiyama-Elbert S**, Galatz LM, Havlioglu N, Thomopoulos S. Sustained delivery of transforming growth factor beta three enhnaces tendon-to-bone healing in a rat model. *Journal of Orthopaedic Research* 29:1099-105, 2011.
39. Johnson, PJ, Tatara, A, McCreedy, DA, Shiu A, **Sakiyama-Elbert SE**. Tissue-engineered fibrin scaffolds containing neural progenitors enhance functional recovery in a subacute model of SCI. *Soft Matter* 6: 5127-5137, 2010.
40. Moore AM, Wood MD, Chenard K, Hunter DA, Mackinnon SE, **Sakiyama-Elbert SE**, Borschel GH. Controlled Delivery of Glial Cell Line–Derived Neurotrophic Factor Enhances Motor Nerve Regeneration. *Journal of Hand Surgery* 35:2008-17, 2010.
41. Thomopoulos S, Kim, HM, Das R, Silva MJ, **Sakiyama-Elbert S**, Amiel D, Gelberman RH. The Effects of Exogenous Basic Fibroblast Growth Factor on Intrasynovial Flexor Tendon Healing in a Canine Model. *J. Bone and Joint Surgery- American* 92A:2285-2293, 2010.
42. Wood, MD, MacEwan MR, French AR, Moore, AM, Hunter, Mackinnon, SE, Moran DW, Borschel, GH, and **Sakiyama-Elbert, SE**. Fibrin Matrices with Affinity-based Delivery Systems and Neurotrophic Factors Promote Functional Nerve Regeneration. *Biotechnology and Bioengineering* 106:970-979, 2010.
43. Wood, MD, Moore, AM, Hunter, Mackinnon, SE, and **Sakiyama-Elbert, SE**. Heparin-Binding-Affinity-Based Delivery Systems Releasing Nerve Growth Factor Enhance Sciatic Nerve Regeneration. *Journal of Biomaterials Science Polymer Edition* 21:771-87, 2010.
44. Thomopoulos S, Das R, **Sakiyama-Elbert S**, Silva MJ, Charlton N, Gelberman RH. bFGF and PDGF-BB for Tendon Repair: Controlled Release and Biologic Activity by Tendon Fibroblasts In Vitro. *Ann. Biomed. Engineering* 38:225-34, 2010.
45. Johnson, PJ, Tatara, A, Shiu, A, **Sakiyama-Elbert, SE**. Controlled release of neurotrophin-3 and platelet derived growth factor from fibrin scaffolds containing neural progenitor cells enhances survival and differentiation into neurons in a subacute model of SCI. *Cell Transplantation* 19: 89-101, 2010.
46. Johnson, PJ, Parker, SR, **Sakiyama-Elbert, SE.** Fibrin-based tissue engineering scaffolds enhance neural fiber sprouting and delays the accumulation of reactive astrocytes at the lesion in a subacute model of spinal cord injury. *Journal of Biomedical Materials Research* 92(1):152-63, 2010.

47. Xie J, Macewan MR, Willerth SM, Li X, Moran DW, **Sakiyama-Elbert SE**, Xia Y. Conductive Core-Sheath Nanofibers and Their Potential Application in Neural Tissue Engineering. *Adv Funct Mater*. 19(14):2312-2318, 2009.
48. Namani R, Wood MD, **Sakiyama-Elbert SE**, Bayly PV. Anisotropic mechanical properties of magnetically aligned fibrin gels measured by magnetic resonance elastography. *J Biomech*. 42(13):2047-53, 2009.
49. Johnson, PJ, Parker, SR, **Sakiyama-Elbert, SE.** Controlled release of neurotrophin-3 from fibrin-based tissue engineering scaffolds enhances neural fiber sprouting following subacute spinal cord injury. *Biotechnology and Bioengineering* 104(6):1207-14, 2009.
50. Xie J, MacEwan MR, Li X, **Sakiyama-Elbert SE,** Xia Y. Neurite Outgrowth on Nanofiber Scaffolds with Different Orders, Structures, and Surface Properties. *ACS Nano*. 3 (5), 1151–1159, 2009.
51. Thomopoulos S, Das R, Silva MJ, **Sakiyama-Elbert S**, Harwood FL, Zampiakis E, Kim HM, Amiel D, Gelberman RH. Enhanced flexor tendon healing through sustained delivery of PDGF-BB. *Journal of Orthopaedic Research*, 27(9):1209-15, 2009.
52. Wood, MD, Moore, AM, Hunter, DA, Tuffaha, S, Borschel, GH, Mackinnon, SE, and **Sakiyama-Elbert, SE**. Affinity-based Release of Glial-Derived Neurotrophic Factor from Fibrin Matrices Enhances Sciatic Nerve Regeneration. *Acta Biomaterialia* 5:959-68, 2009.
53. Xie, J, Willerth, SM, LI, X Rader, A, MacEwan, MR, Gottlieb, DI, **Sakiyama-Elbert, SE**, and Xia, Y. The Differentiation of Embryonic Stem Cells Seeded on Electrospun Nanofibers into Neural Lineages. *Biomaterials* 30(3):354-62, 2009.
54. Moore, NM, Sheppard, CL, **Sakiyama-Elbert, SE**. Characterization of a Multifunctional PEG-Based Gene Delivery System Containing Nuclear Localization Signals and Endosomal Escape Peptides. *Acta Biomaterialia* 5:854-64, 2009.
55. Willerth, SM, and **Sakiyama-Elbert, SE**. Kinetic Analysis of Neurotrophin-3 Mediated Differentiation of Embryonic Stem Cells into Neurons *Tissue Engineering* 15(2): 307-318, 2009.
56. Wood MD, Borschel GH, and **Sakiyama-Elbert SE.** Controlled release of glial-derived neurotrophic factor from fibrin matrices containing an affinity-based delivery system. *Journal of Biomedical Materials Research Part A* 15; 89(4):909-18, 2009.
57. Willerth, SM, Rader; A, **Sakiyama-Elbert, SE.** The Effect of Controlled Growth Factor Delivery on Embryonic Stem Cell Differentiation Inside of Fibrin Scaffolds. *Stem Cell Research* 1: 205-218, 2008.
58. **Sakiyama-Elbert S,** Das R, Gelberman RH, Harwood F, Amiel D, Thomopoulos S. Controlled release kinetics and biologic activity of PDGF-BB for use in flexor tendon repair. *Journal of Hand Surgery [American]*, 33A: 1548-1557, 2008.
59. Moore NM, Sheppard CL, Barbour TR, **Sakiyama-Elbert SE.** The effect of endosomal escape peptides on in vitro gene delivery of polyethylene glycol-based vehicles. *Journal of Gene Medicine*, 10: 1134-1149, 2008.
60. Moore, NM, Barbour, TR, **Sakiyama-Elbert, SE.** Synthesis and Characterization of Four-Arm Poly (ethylene glycol) Based Gene Delivery Vehicles Coupled to Integrin and DNA Binding Peptides. Molecular Pharmaceutics 5:140-150, 2008.
61. Willerth, SM, and **Sakiyama-Elbert, SE**, "Cell Therapy for Spinal Cord Regeneration." *Advanced Drug Delivery Reviews* 60:263-276, 2008.
62. Wood MD and **Sakiyama-Elbert, SE**. Release Rate Controls Biological Activity of Nerve Growth Factor Released from Fibrin Matrices Containing Affinity-Based Delivery Systems. *Journal of Biomedical Materials Research Part A* 84:300-312, 2008.

63. Willerth, SM, Faxel, TE, Gottlieb, D, and **Sakiyama-Elbert, SE**. The Effects of Soluble Growth Factors on Embryonic Stem Cell Differentiation Inside of Fibrin Scaffolds. *Stem Cells* 25(9):2235-2244, 2007.
64. Thomopoulos, S, Zaegel, M, Das, R, Harwood FL, Silva, MJ, Amiel, D, **Sakiyama-Elbert, S,** Gelberman, RH. PDGF-BB Released in Tendon Repair Using a Novel Delivery System Promotes Cell Proliferation and Collagen Remodeling. *Journal of Orthopedic Research* 25(10): 1358-1368, 2007.
65. Willerth, SM, and **Sakiyama-Elbert, SE**, "Approaches to neural tissue engineering using scaffolds for drug delivery." *Advanced Drug Delivery Reviews*, 59:325-338, 2007.
66. Gelberman, RH, Thomopoulos, S, **Sakiyama-Elbert, S,** Das, R, Silva, M. The Early Effects of Sustained Platelet Derived Growth Factor Administration on the Functional and Structural Properties of Repaired Intrasynovial Flexor Tendons *Journal of Hand Surgery* 32(3): 373-379, 2007.
67. Schmieder, AH, Grabski, LE, Moore, NM, Dempsey, LA, **Sakiyama-Elbert, SE.** Development of Novel Poly(ethylene glycol) Based Vehicles for Gene Delivery. *Biotechnology and* Bioengineering 96(5): 967-976, 2007.
68. Willerth, SJ, Johnson, PJ, Maxwell, DJ, Parsons, SP, **Sakiyama-Elbert, SE**. Rationally Designed Peptides for Controlled Release of Nerve Growth Factor from Fibrin Matrices. *Journal of Biomedical Materials Research* Part A 80:13-23, 2007.
69. Taylor, SJ and **Sakiyama-Elbert, SE**. Effect of Controlled Delivery of Neurotrophin-3 from Fibrin on Spinal Cord Injury in a Long Term Model. *Journal of Controlled Release* 116:204-210, 2006.
70. Willerth, SJ, Arendas KJ, Gottlieb, DI, **Sakiyama-Elbert, SE.** Optimization of Fibrin Scaffolds for Differentiation of Murine Embryonic Stem Cells into Neural Lineage Cells. *Biomaterials* 27:5990-6003, 2006.
71. Taylor, SJ, Rosenzweig, ES, McDonald, JW, **Sakiyama-Elbert, SE**. Controlled Delivery of Neurotrophin-3 from Fibrin Scaffolds Enhances Neural Fiber Sprouting After Spinal Cord Injury. *Journal of Controlled Release* 113:225-235, 2006.
72. Maxwell, DJ, Hicks, BC, Parson, S, **Sakiyama-Elbert, SE**. Development of Rationally Designed Affinity-based Drug Delivery Systems. *Acta Biomaterialia* 1:101-113, 2005.
73. Taylor, SJ, McDonald, JW, **Sakiyama-Elbert, SE.** Controlled release of neurotrophin-3 from fibrin gels for spinal cord injury. *Journal of Controlled R*elease 98(2):281-94, 2004.
74. Lee, AC, Yu, VM, Lowe, JB, Brenner, MJ, Hunter, DA, Mackinnon , SE, and **Sakiyama-Elbert, SE.** Controlled Release of Nerve Growth Factor Enhances Sciatic Nerve Regeneration. *Experimental Neurology* 184(1): 295-303, 2003.
75. **Sakiyama-Elbert, S.E.** and Hubbell, J.A., "FUNCTIONAL BIOMATERIALS: Design of Novel Biomaterials", *Annual Review of Materials Research*, 31: 183-201, 2001.
76. Zisch, AH, Schenk, U, Schense, JC, **Sakiyama-Elbert, SE**, and Hubbell, JA. Covalently Conjugated VEGF-Fibrin Matrices for Endothelialization. *Journal of Controlled Release* 72:101-13, 2001.
77. **Sakiyama-Elbert, S.E**., Panitch, A., and Hubbell, J.A., "Development of Novel Growth Factor Fusion Proteins with Exogenous Immobilization Domains for Cellularly Controlled Drug Delivery", *FASEB Journal* 15:1300-2, 2001.
78. Ye Q, Zünd G, Benedikt P, Jockenhoevel S, Hoerstrup SP, **Sakyama S***, Hubbell JA, Turina M. Fibrin gel as a three dimensional matrix in cardiovascular tissue engineering. *Eur J Cardiothorac Surg.* 17(5):587-91, 2000.
79. **Sakiyama-Elbert, SE** and Hubbell, JA. Controlled Release of Non-heparin Binding Growth Factors From Heparin-Based Delivery Systems, *Journal of Controlled Release*. 69(1): 149-158, 2000.

80. **Sakiyama-Elbert, S.E.** and Hubbell, J.A., "Development of Fibrin Derivatives for Controlled Release of Heparin-Binding Growth Factors", *Journal of Controlled Release*, 65:389-402, 2000.
81. **Sakiyama, S.E**. and Hubbell, J.A., "Heparin-binding Peptides Enhance Neurite Extension in Three Dimensional Fibrin Gels", *FASEB Journal*, 13: 2214-2224, 1999.

* note name misspelled in this publication, # corresponding author

Patents

US Patents:

1. Thomopoulos S, Sakiyama-Elbert S, Silva M, Gelberman R, Xia Y, Schwartz A, Xie J. Polymer Nanofiber Scaffold for a Heparin/Fibrin Based Growth Factor Delivery System. US Patent 9,375,516
2. Thomopoulos S, Sakiyama-Elbert S, Silva M, Gelberman R, Xia Y, Schwartz A, Xie J. Polymer Nanofiber Scaffold for a Heparin/Fibrin Based Growth Factor Delivery System. US Patent 8,673,323
3. Hubbell, J.A., Schense, J.C., Sakiyama-Elbert, S.E., Jen, A. "Growth factor modified protein matrices for tissue engineering" US Patent 7,601,685.
4. Hubbell, J.A., Schense, J.C., Sakiyama, S.E . "Enzyme-mediated modification of fibrin for tissue engineering: fibrin formulations with peptides US Patent 7,241,730
5. Hubbell, J.A., Schense, J.C., Sakiyama, S.E., "Enzyme-Mediated Modification of Fibrin for Tissue Engineering: Incorporation of proteins", US Patent 6,960,452.
6. Hubbell, J.A., Schense, J.C., Sakiyama-Elbert, S.E., "Growth Factor Modified Protein matrices for Tissue Engineering", US Patent 6,894,022.
7. Hubbell, J.A., Sakiyama-Elbert, S.E., "Controlled Release of Non-Heparin-Binding Growth Factors from Heparin-Containing Matrices", US Patent 6,723,344.
8. Hubbell, J.A., Schense, J.C., Sakiyama, S.E., "Enzyme-Mediated Modification of Fibrin for Tissue Engineering: Incorporation of Proteins", US Patent 6,468,731.

International Patents:

1. Leuthardt LC Alexander BE, Willie JT, Limbrick DM, Genin GM, Wang LH, Sakiyama-Elbert SE, Peters DA. IMPLANTABLE PRESSURE INDICATOR WITH EXTERNAL INTERROGATION. WO Patent 2,013,055,329
2. Hubbell, J.A., Schense, J.C, Sakiyama-Elbert, S.E., Jen, A. "Growth factor modified protein matrices for tissue engineering" European Patent 1,280,566.
3. Hubbell, J.A., Schense, J.C., Sakiyama-Elbert, S.E . "Modified Protein Matrices" European Patent 1,178,834.

Non-peer-reviewed journal articles (invited review)

1. **Sakiyama, S.E.** and Hubbell, J.A., "FUNCTIONAL BIOMATERIALS: Design of Novel Biomaterials", *Annual Review of Materials Research*, 31: 183-201, 2001.
2. Willerth, SM, and **Sakiyama-Elbert, SE**, "Cell Therapy for Spinal Cord Regeneration." *Advanced Drug Delivery Reviews* 60:263-276, 2008.

Book chapters

1. Werner C & Sakiyama-Elbert, SE. "Delivery by Heparin Conjugation". *Comprehensive Biomaterials* Elsevier, 2017. (in press)
2. Willerth, SM, and **Sakiyama-Elbert, SE.** Combining stem cells and biomaterial scaffolds for constructing tissues and cell delivery. Stem Cell Book. ed. The Stem Cell Research Community, StemBook, doi/10.3824/stembook.1.1.1, http://www.stembook.org.

3. Sakiyama-Elbert, S, Johnson, PJ, Hodgetts, SI, Plant, GW, and Harvey, AR. Scaffolds to Promote Spinal Cord Regeneration. *Handbook of Clinical Neurology*, 109:575-94, 2012.
4. Sakiyama-Elbert, SE. "Delivery by Heparin Conjugation". *Comprehensive Biomaterials* Elsevier, 2012.
5. Sakiyama-Elbert, SE. "Stem cells and regenerative medicine in the nervous system" The Biomedical Engineering Handbook 4/e. Taylor and Francis, 2012.
6. Sakiyama-Elbert, SE. "Stem cells and regenerative medicine in the nervous system" The CRC Stem Cells Handbook. Chapter 5 Taylor and Francis, 2012.

Invited Lectures

1. Sakiyama-Elbert, SE. Clemson Award for Basic Research – Plenary Lecture – Society for Biomaterials Annual Meeting, Minneapolis, MN, April 2017.
2. Sakiyama-Elbert, SE. Thought Leaders in Challenge in Neural Regeneration – Society for Biomaterials Annual Meeting, Minneapolis, MN, April 2017.
3. Sakiyama-Elbert, SE. Department of Biomedical Engineering – University of Michigan – April 2017.
4. Sakiyama-Elbert, SE. Department of Bioengineering – University of California San Diego – February 2017.
5. Sakiyama-Elbert, SE. Department of Bioengineering – Rice University – January 2017
6. Sakiyama-Elbert, SE. AIChE Annual Meeting, San Francisco, CA – November 2016
7. Sakiyama-Elbert, SE. Department of Biomedical Engineering – The University of California at Davis - October 2016.
8. Sakiyama-Elbert, SE. MRSEC program – Duke University - October 2016.
9. Sakiyama-Elbert, SE and Xu H. "Genome Engineering to Understand the Role of Interneurons in Recovery After Spinal Cord Injury" BMES Annual Meeting, Minnesota, MN – October 2016
10. Sakiyama-Elbert, SE. International Society for Stem Cell Research Annual Meeting – San Francisco, CA – June 2016.
11. Sakiyama-Elbert, SE. World Biomaterials Congress – Montreal CANADA – May 2016.
12. Sakiyama-Elbert, SE. Department of Neuroscience – Drexel University – April 2016.
13. Sakiyama-Elbert, SE. Department of Biomedical Engineering – The University of New Mexico – March 2016.
14. Sakiyama-Elbert, SE. Department of Genetics – Washington University– January 2016.
15. Sakiyama-Elbert, SE. Hope Center for Neurological Disorders – Cell Therapeutics mini-symposium– Washington– January 2016.
16. Sakiyama-Elbert, SE. Department of Biomedical Engineering – The University of Texas at Austin - January 2016.
17. Sakiyama-Elbert, SE. Department of Biomedical Engineering – University of California Irvine – November 2015.
18. Sakiyama-Elbert, SE. Department of Biomedical Engineering – Vanderbilt University – October 2015.
19. Sakiyama-Elbert, SE. American Society of Neurorehabilitation – Chicago October 2014.
20. Sakiyama-Elbert, SE. Department of Biomedical Engineering –University of Victoria – May 2015.
21. Sakiyama-Elbert, SE. Department of Biomedical Engineering – Carnegie Mellon University– March 2015.
22. Sakiyama-Elbert, SE. Department of Biomedical Engineering – Boston University – January 2014.

23. Sakiyama-Elbert, SE. Department of Biomedical Engineering – Georgia Institute of Technology– February 2014.
24. Sakiyama-Elbert, SE. Department of Bioengineering – Rice University – March 2014.
25. Sakiyama-Elbert, SE. Department of Biomedical Engineering – Texas A&M – August 2014.
26. Sakiyama-Elbert, SE. Department of Biomedical Engineering – University of Virginia – September 2014.
27. Sakiyama-Elbert, SE. Department of Biomedical Engineering – Page Morton Hunter Distinguished Lecturer – Clemson University – January 2013.
28. Sakiyama-Elbert, SE. Department of Biomedical Engineering –Purdue University – August 2013.
29. Sakiyama-Elbert, SE. Department of Materials Science and Engineering – Johns Hopkins University – September 2013.
30. Sakiyama-Elbert, SE. Department of Biomedical Engineering – Duke University – October 2013.
31. Sakiyama-Elbert, SE. "*Growth factor delivery from fibrin scaffolds to direct ES derived neural progenitor survival and differentiation for spinal cord injury"* California Institute for Regenerative Medicine "Engineering Strategies, Opportunities, and Challenges for Tissue Repair and Regeneration" Workshop San Francisco, CA January 2012.
32. Sakiyama-Elbert, SE. "*Fibrin scaffolds for promoting stem cell survival and differentiation."* American Chemical Society PMSE Division, Philadelphia, PA, August 2012.
33. Keynote Talk: Sakiyama-Elbert S, Johnson P "*Biomaterials for cell transplantation and drug delivery after spinal cord injury*". TERMIS World Congress Vienna, AUSTRIA. September 2012.
34. Sakiyama-Elbert, SE. "Controlled Delivery of Neurotrophic Factors for Peripheral Nerve Injury" AIMBE Annual Event – Invited Talk – February 2011
35. Sakiyama-Elbert, SE. University of Toronto - Chemical Engineering and Applied Chemistry Seminar, Toronto, CANADA (June 2011).
36. Sakiyama-Elbert, SE. Department of Biomedical Engineering Seminar – Tufts University – October 2011.
37. Sakiyama-Elbert, SE. Department of Biomedical Engineering Seminar– Saint Louis University – September 2011.
38. Sakiyama-Elbert, SE University of Texas at Austin – Biomedical Engineering - Departmental Seminar, Austin Texas (April 2010)
39. Sakiyama-Elbert, SE. "Biomaterials for Cell Transplantation and Drug Delivery" 3rd International Congress on Stem Cells and Tissue Formation – Dresden, Germany, July 2010. – Keynote Address.
40. Sakiyama-Elbert, SE. "Biomaterials for Cell Transplantation and Drug Delivery" 10th New Jersey Symposium on Biomaterials Science– Invited Talk – October 2010.
41. Department of Chemical Engineering – University of Maryland, Baltimore County – Department Seminar Series – November 2009.
42. Department of Biomedical Engineering –Yale University – Neural Engineering Seminar Series – March 2008
43. Department of Biomedical Engineering – WISELI joint lecture, University of Wisconsin, Madison – May 2007
44. Department of Neurology/Hope Center Seminar – Washington University – March 2006
45. 9th European Symposium on Controlled Drug Delivery – Noordwijk aan Zee, The Netherlands, April 2006
46. Society for Biomaterials Annual Meeting – Tutorial - Methods to characterize cells in contact with materials: gene expression and activation of cell signaling cascades – Memphis, TN April 2005

47. Neurosurgery Grand Rounds – Washington University – May 2005
48. Regenerate 2005 Biologically Inspired Approaches to Drug Delivery for Nerve Regeneration – Atlanta, GA June 2005
49. Traumatic Brain Injury Seminar Series – Hope Center –Washington University – July 2005
50. Biomedical Engineering Society Annual Meeting – Gene and Drug Delivery for Neural Tissue Engineering Session – Baltimore, MD, September 2005
51. Georgia Institute of Technology – Institute for Bioengineering and Biosciences – Seminar Bioactive drug delivery systems for the treatment of nerve injury - December 2005
52. INDO-US Workshop on Tissue Engineering and Stem Cell Technologies – Trivandrum, INDIA February 2004
53. Cell Biology Departmental Seminar Series - Washington University – September 2004
54. Orthopedic Research Seminar Series - Washington University – October 2004
55. Biomedical Engineering Seminar Series – Duke University – January 2003
56. Gordon Conference – "Biomaterials: Biocompatibility and Tissue Engineering" – July 2003
57. Northwestern University – Biomedical Engineering Departmental Seminar Series – November 2003
58. Tissue Engineering Society International – Orlando, FL December 2003
    Bioactive Drug Delivery Systems for Nerve Regeneration –Wound Healing Session
59. Engineering Tissue Growth Conference – Pittsburgh, PA, March 2002 Neural Tissue Engineering section"Bioactive Delivery Systems for Nerve Regeneration"
60. Society for Biomaterials – Annual Meeting Tampa Florida Workshop - "Practical Aspects of Genomics and Proteomics" "Practical Aspects of PCR-based techniques"
61. American Chemical Society – Unilever Award Symposium celebrating Young Investigators at the Interface of Materials and Medicine – Boston, MA Aug 2002
62. BMES Annual Meeting – Houston, TX October 2002 "Bioactive Delivery Systems for Nerve Regeneration"
63. Orthopaedic Surgery Research Seminar Series - Washington University – April 2001

Conference presentations

1. Thompson RE, Sakiyama-Elbert SE. "Astrocyte Extracellular Matrix Incorporation Improves Neurite Growth on Hyaluronic Acid Hydrogels" Society for Biomaterials Annual Meeting, Minneapolis, MN, April 2017.
2. Wang Z, Wood M, Mackinnon S, Sakiyama-Elbert SE. "A Microfluidic Platform to Study the Effects of GDNF on Neuronal Axon Entrapment" TERMIS-AM Annual Meeting, San Diego, CA. December 2016.
3. Thompson, R, Sakiyama-Elbert SE. "Ability of Astrocyte Extracellular Matrix to Support Axon Growth Depends on Astrocyte Phenotype" BMES Annual Meeting, Minnesota, MN – October 2016.
4. Iyer N, Sakiyama-Elbert SE. "A Culture Platform to Assess Responses of Isolated Ventral Spinal Populations to Extracellular Cues" BMES Annual Meeting, Minnesota, MN – October 2016.
5. Crawford L and Sakiyama-Elbert, SE. "In vitro Approaches for Directing the Differentiation of Adult Neural Stem Cells into Neurons" BMES Annual Meeting, Minnesota, MN – October 2016.
6. Marquardt, L Sakiyama-Elbert SE. "Spatial and temporal control of GDNF delivery from acellular nerve grafts and Schwann cells improves regeneration across a long nerve defect" 10th World Biomaterials Congress, Montreal CANADA, May 2016.

7. Crawford, L and Sakiyama-Elbert, SE. "Directing the Differentiation of Adult Neural Stem Cells" MidWest Regen Medicine Meeting, Monticello, IL, April 2016.
8. Iyer N, Huettner J, Brown C, Butts J, Sakiyama-Elbert SE. "Development of High Purity V2a Interneurons for Spinal Cord Injury" 16th International Symposium on Neural Regeneration. Asilomar, CA, December 2015.
9. Iyer N, Huettner J, Brown C, Butts J, Sakiyama-Elbert SE. "Development of High Purity V2a Interneurons for Spinal Cord Injury" Biomedical Engineering Society 2015 Annual Meeting. Tampa, Florida, October 2015.
10. Gamble J, Iyer N, Sakiyama-Elbert S, Barbour D. "Novel In Vitro Characterization of Embryonic Stem Cell Derived Neural Circuit Connectivity." Biomedical Engineering Society 2015 Annual Meeting. Tampa, Florida, October, 2015.
11. Wilems T, Pardieck J, and Sakiyama-Elbert SE. Combination therapy of stem cell derived neural progenitors and drug delivery of anti-inhibitory molecules for spinal cord injury. Biomedical Engineering Society Annual Meeting, Tampa, FL. October 2015.
12. Iyer N, Huettner J, Brown C, Butts J, Sakiyama-Elbert SE. "Evaluating Growth Factor Effects in Isolated Spinal Interneuron Populations". Tissue Engineering and Regenerative Medicine International Society 4th World Congress. Boston, Massachusetts, September, 2015.
13. Marquardt LM, Ee X, Iyer N, Hunter DA, Mackinnon SE, Wood MD, Sakiyama-Elbert SE. "Controlled Temporal and Spatial Delivery of GDNF Promotes Enhanced Nerve Regeneration in a Long Nerve Defect Model." Tissue Engineering and Regenerative Medicine International Society 4th World Congress. Boston, Massachusetts, September, 2015.
14. Iyer N, Huettner J, Brown C, Butts J, Sakiyama-Elbert SE. "Modeling Spinal Microcircuitry for Improved Regeneration After Injury." Gordon Research Conference: Biomaterials & Tissue Engineering. Girona, Spain, July, 2015.
15. Wilems T, Sakiyama-Elbert SE. Combination therapy of stem cell derived neural progenitors and drug delivery of anti-inhibitory molecules for spinal cord injury. Society for Biomaterials Annual Meeting, Charlotte, NC. April 2015.
16. Wilems T, Ingram C, Sakiyama-Elbert, SE. Sustained in vivo dual drug delivery of anti-inhibitory molecules for spinal cord injury treatment. Biomedical Engineering Society Annual Meeting, San Antonio, TX. October 2014.
17. Wilems T, Ingram C, Sakiyama-Elbert, SE. Development biomaterials for sustained delivery of bioactive molecules in spinal cord injury. Society for Biomaterials Annual Meeting, Denver, CO. April 2014.
18. Marquardt LM, Sakiyama-Elbert SE. Effect of GDNF on Schwann Cell Differentiation and Interaction with Neurons in vitro. Northeast Bioengineering Conference, Boston, MA. April 2014.
19. Wilems T, McCreedy D, Marquardt L, Sakiyama-Elbert, SE. Microspheres for sustained delivery of NEP1-40 and chondroitinase ABC for treatment of spinal cord injury. Society for Biomaterials Annual Meeting, Boston, MA. April 2013.
20. LM Marquardt and S. Sakiyama-Elbert. Effect of Schwann Cell Phenotype on Axon Extension. Gordon Research Conference on Biomaterials and Tissue Engineering. Holderness, NH July, 2013.
21. LM Marquardt, D Day, SE Sakiyama-Elbert, and AB Harkins. Bioactive Borate Glass for Nerve Regeneration. BMES Annual Meeting, Seattle WA, September 2013.

22. Laura M. Marquardt; Shelly E. Sakiyama-Elbert. Effect of GDNF on Schwann Cell Phenotypes and Role in Neurite Outgrowth TERMIS –AM Meeting, Atlanta, GA. November 2013.
23. Marquardt LM and Sakiyama-Elbert SE. Effect of Schwann Cell Phenotype on Axon Extension. BMES Annual Meeting, Atlanta, GA. October 2012.
24. Lu X, Sakiyama-Elbert SE, Kim-Han JS, and O'Malley K. Microdevice Development to Study the Effect of Toxins on Axonal Transport. BMES Annual Meeting, Atlanta, GA. October 2012.
25. Butts J, Brown C, McCreedy D, and Sakiyama-Elbert S. Induction of V2a Interneurons from Mouse Embryonic Stem Cells. BMES Annual Meeting, Atlanta, GA. October 2012.
26. Kwasa JA, Jesuraj NJ, and Sakiyama-Elbert S. Effects of Nerve Growth Factor on Schwann Cell Viability and Proliferation. BMES Annual Meeting, Atlanta, GA. October 2012.
27. Jesuraj N, Sakiyama-Elbert S, Effect of neurotrophic factors on Schwann cell differentiation prior to transplantation. TERMIS World Congress Vienna, AUSTRIA. September 2012.
28. McCreedy DA, Sakiyama-Elbert SE. Survival and Differentiation of High Purity Progenitor Motor Neurons in Fibrin Scaffolds for use as a Combination Therapy for Spinal Cord Injury; Society for Biomaterials Fall Symposium, New Orleans, LA. October 2012.
29. Santosa K, Jesuraj NJ, MacEwan M, Moore A, Ray WZ, Borschel GH, Hunter DA, Johnson PJ, Sakiyama-Elbert S, Mackinnon S. Enhancing Functional Recovery by Supplementing Acellularized Nerve Grafts with Motor and Sensory Schwann Cells, American Society of Peripheral Nerve Annual Meeting, January 2011.
30. Jesuraj, NJ, Marquardt, LM, Sakiyama-Elbert, SE. Culturing De-differentiated Schwann Cells on Fibrin Scaffolds Promotes Differentiation into Mature Schwann Cells. Society for Biomaterials Annual Meeting, Orlando, FL, April 2011.
31. McCreedy, DA, Silverman, CR, Gottlieb, DI, Sakiyama-Elbert, SE. Transgenic Enrichment of Mouse Embryonic Stem Cell-Derived Progenitor Motor Neuron Cells. International Society for Stem Cell Research Annual Meeting, Toronto, CANADA, June 2011.
32. Jesuraj, NJ, Sakiyama-Elbert, S. Effects of Growth Factors on Schwann Cell Differentiation. Biomedical Engineering Society Annual Meeting, Hartford, CT, October 2011.
33. Howell, T, Lu, X, Sakiyama-Elbert, S. Lipid Based Drug Delivery Vehicles for Delivering Unstable Proteins. Biomedical Engineering Society Annual Meeting, Hartford, CT, October 2011.
34. McCreedy, DA, Silverman, CR, Gottlieb, DI, Sakiyama-Elbert, SE High Purity Mouse Embryonic Stem Cell-derived Progenitor Motor Neurons For Transplantation After Spinal Cord Injury. TERMIS-NA Meeting Houston TX, December 2011.
35. McCreedy, DA, Silverman, CR, Gottlieb, DI, Sakiyama-Elbert, SE High purity mouse embryonic stem cell-derived progenitor motor neurons for transplantation after spinal cord injury" International Symposium on Neural Regeneration, Asilomar, CA December 2011.
36. Santosa KB, Jesuraj NJ, Moore AM, Kasukurthi R, Flagg ER, Hunter D, Borschel G, Sakiyama-Elbert S, Johnson P and Mackinnon SE. Injection of Motor and Sensory Schwann Cells into Cold-Preserved Nerve Allografts to Enhance Nerve Regeneration. American Society of Peripheral Nerve – Jan 2010 Boca Raton FL
37. Santosa KB, Jesuraj NJ, Moore AM, Kasukurthi R, Hunter D, Flagg ER, Johnson P, Mackinnon SE, Borschel G, and Sakiyama-Elbert S. Evaluation of Schwann Cell Expression Profiles After Implantation into Cold-Preserved Nerve Allografts. American Society of Peripheral Nerve – Jan 2010 Boca Raton FL
38. Jesuraj, NJ, Santosa, KB, Moore, AM, Kasukurthi, R Flagg ER, Hunter, D Borschel, G, Johnson PJ, Mackinnon SE, Sakiyama-Elbert, SE. Schwann Cell Gene Expression Profiles After Injection into Decellularized Cold-Preserved Nerve Allografts. Society for Biomaterials Annual Meeting, Seattle WA, April 2010.

39. McCreedy, DA and Sakiyama-Elbert, SE. Progenitor Motor Neurons for Transplantation after Spinal Cord Injury. Society for Biomaterials Annual Meeting, Seattle WA, April 2010.
40. Jesuraj, NJ, Santosa, K, MacEwan, M, Moore AM, Kasukurthi, R, Ray, W, Flagg, E, Hunter, D, Borschel, G, Johnson, P, Mackinnon, S, Sakiyama-Elbert, S. Injection of Schwann Cells into Acellular Cold-Preserved Nerve Grafts to Enhance Nerve Regeneration. Biomedical Engineering Society Annual Meeting, Austin Texas, October 2010.
41. McCreedy, DA and Sakiyama-Elbert, SE. Mouse Embryonic Stem Cell-derived Progenitor Motor Neurons for Transplantation After Spinal Cord Injury. Biomedical Engineering Society Annual Meeting, Austin Texas, October 2010.
42. MacEwan, M, Zellmer, E, Siewe, D, Wheeler, J, Sakiyama-Elbert, SE, Moran, D. "Functional Stimulation of Peripheral Motor Axons Via Neuroregenerative Sieve Microelectrodes". Biomedical Engineering Society Annual Meeting, Austin Texas, October 2010.
43. MacEwan, M, Xie, J, Jesuraj, N, Siewe, D, Sakiyama-Elbert, SE, Xia, Y. Schwann Cell-Seeded Nanofiber Scaffolds Enhance and Direct Axonal Regeneration. Biomedical Engineering Society Annual Meeting, Austin Texas, October 2010.
44. Jesuraj, N, Santosa, K, Moore, A, Hunter, D, Johnson, P, Borschel, G, Mackinnon, S, Sakiyama-Elbert, SE. Schwann Cells Enhnace Trophic Factor Levels and Promote Functional Recovery After Injection into Acellular Nerve Grafts. Tissue Engineering and Regenerative Medicine International Society North America Meeting, Orlando, Florida, December 2010.
45. Moore AM, Wood MD, Ray WZ, Hunter DA, Mackinnon SE, Sakiyama-Elbert S, and Borschel GH. Controlled release of glial cell line-derived neurotrophic factor (GDNF) enhances nerve regeneration. Poster Presentation. American Society for Peripheral Nerve. Maui, Hawaii, January 2009.
46. Wood, MD, Sakiyama-Elbert, SE, Hunter, DA, Moore, AM, Borschel, G, Tuffaha, S Mackinnon, SE. Glial-Derived Neurotrophic Factor Released from a Fibrin-based Delivery System Enhances Nerve Regeneration. Society for Biomaterials Annual Meeting San Antonio, Texas, April 2009.
47. MacEwan, MR, Wheeler, JJ, Kim, J, Williams, JC, Sakiyama-Elbert, SE, Moran, DW. Controlled Delivery of Nerve Growth Factor Enhances Sieve Electrode Interface with Peripheral Nerve Tissue. Society for Biomaterials Annual Meeting San Antonio, Texas, April 2009.
48. Johnson, PJ and Sakiyama-Elbert, SE Fibrin-based tissue engineered scaffolds containing neural progenitors cells for subacute spinal cord injury. Society for Biomaterials Annual Meeting San Antonio, Texas, April 2009.
49. N. J. Jesuraj , P. K. Nguyen, M. D. Wood, A. M. Moore, G. H. Borschel1, S.E. Mackinnon, and S. E. Sakiyama –Elbert. Gene Expression Differences in Motor and Sensory SchwannCells in the Rat Femoral Nerve Biomedical Engineering Society Annual Meeting, Pittsburgh, PA, October 2009.
50. Johnson, PJ and Sakiyama-Elbert, SE Fibrin-based scaffolds containing neural progenitors cells for subacute spinal cord injury. Biomedical Engineering Society Annual Meeting, Pittsburgh, PA, October 2009.
51. M. R. MacEwan, J. Xie, X. Li, S. Sakiyama -Elbert, and Y. Xia. Spatially-Ordered and Surface-Modified Nanofiber Scaffolds for Neural Tissue Engineering Applications Biomedical Engineering Society Annual Meeting, Pittsburgh, PA, October 2009.
52. MacEwan, MR, Xie, J Li, X Moran DW, Sakiyama-Elbert, SE, Xia, Y. Axon guidance and patterning via spatially-ordered and surface-modified nanofiber matrices. Society for Neuroscience Annual Meeting , Chicago, IL November 2009.

53. Johnson, PJ and Sakiyama-Elbert, SE. Fibrin-based scaffolds for neural progenitor cell transplantation after spinal cord injury. International Symposium on Neural Regeneration, Asilomar CA, December 2009.
54. Sakiyama-Elbert, Shelly "The Effect of Controlled Growth Factor Delivery on Embryonic Stem Cell Differentiation inside of Fibrin Scaffolds" Stem Cell Engineering conference – Coronado, CA – Jan 2008.
55. P. J. Johnson and S.E. Sakiyama-Elbert "Fibrin-Based tissue engineered scaffolds containing embryonic stem cell derived neural progenitor cells for the treatment of subacute spinal cord injury"14th Annual Kentucky Spinal Cord and Head Injury Research Trust Symposium, Lexington, Kentucky, June 2008.
56. P. J. Johnson and S.E. Sakiyama-Elbert "Fibrin-Based tissue engineered scaffolds for the treatment of subacute spinal cord injury" Biomedical Engineering Society, Saint Louis, MO. October, 2008.
57. Wood MD, Moore AM, Hunter DA, Tuffaha S, Mackinnon SE, Borschel G, and Sakiyama-Elbert, SE. Glial-Derived Neurotrophic Factor Release from a Fibrin-based Delivery System Enhances Nerve Regeneration. Poster Presentation, Annual BMES Conference, October 2008. Saint Louis, MO.
58. Shelly E. Sakiyama-Elbert, Philip J. Johnson, Stephanie M. Willerth. *The Effects of Growth Factor Delivery and Embryonic Stem Cell Transplantation on Spinal Cord Injury* Tissue Engineering and Regenerative Medicine International Society – North America meeting – La Jolla, CA – December 2008
59. Moore NM, Barbour, TR, and Sakiyama-Elbert, SE. In Vitro Gene Delivery sing Polyethylene Glycol Based Vehicle Coupled to Endosomal Escape Peptides. Society for Biomaterials, Chicago, IL, April 2007.
60. Willerth, SM and Sakiyama-Elbert, SE. The Effects of Growth Factors on Embryonic Stem Cell Differentiation inside of Fibrin Scaffolds. Society for Biomaterials, Chicago, IL, April 2007.
61. Johnson, PJ and Sakiyama-Elbert, SE. Evaluation of Fibrin-based Scaffolds Implanted in Chronic Spinal Cord Injury. Society for Biomaterials, Chicago, IL, April 2007.
62. Moore NM, Barbour, TR, and Sakiyama-Elbert, SE. Development of Bifunctional Polyethylene Glycol Gene Delivery Vehicles. American Society for Gene Therapy, Seattle, WA. June 2007.
63. Johnson PJ and Sakiyama-Elbert SE. Evaluation of Fibrin-based Tissue Engineering Scaffolds Implanted in Subacute Spinal Cord Injury. 13th Annual Kentucky Spinal Cord and Head Injury Research Trust Symposium, Louisville, KY June 2007.
64. Willerth, SM and Sakiyama-Elbert, SE. Tissue Engineered Scaffolds for the Treatment and Repair of Spinal Cord Injury. Kentucky Spinal Cord and Head Injury Research Trust Symposium. Louisville, KY June, 2007.
65. Johnson PJ and Sakiyama-Elbert SE. Fibrin-Based Tissue Engineering Scaffolds for the Treatment of Subacute Spinal Cord Injury Biomedical Engineering Society, Los Angeles, CA. September 2007.
66. Wood MD, Borschel GH, and Sakiyama-Elbert, SE. Controlled Release of Glial-Derived Neurotrophic Factor from an Affinity-Based Delivery System. Biomedical Engineering Society, Los Angeles, CA. September 2007.
67. Willerth, SM and Sakiyama-Elbert, SE. Controlled Growth Factor Release On Embryonic Stem Cell Differentiation Inside of Fibrin Scaffolds. Biomedical Engineering Society, Los Angeles, CA September 2007.
68. Johnson PJ and Sakiyama-Elbert SE. Fibrin-Based Tissue Engineering Scaffolds for the Treatment of Subacute Spinal Cord Injury International Symposium on Neural Regeneration, Oak Grove, CA December 2007

69. Willerth, SM and Sakiyama-Elbert, SE Effect of Growth Factors on the Differentiation of Embryonic Stem Cells Seeded Inside of Fibrin Scaffolds. REGENERATE 2006. Pittsburgh, PA. April 2006
70. Johnson, PJ, Willerth, SM, Maxwell, DJ, Parsons, SR, Sakiyama-Elbert, SE. Rationally Identified Affinity Peptides for Local Delivery of Nerve Growth Factor. Society for Biomaterials.Pittsburgh, PA. April 2006.
71. Moore, NM, Barbour, TR, Sakiyama-Elbert, SE Design and Characterization of a Polyethylene Glycol-Peptide Conjugate for In Vitro Gene Delivery. Society for Biomaterials. Pittsburgh, PA. April 2006.
72. Wood, MD, Maxwell, DJ, Sakiyama-Elbert, SE. Controlled Release of NGF from a Rationally Design Delivery System Using Heparin-Binding Peptides. Biomedical Engineering Society. Chicago, IL, October 2006.
73. Willerth, SM, Sakiyama-Elbert, SE. Effects of Growth Factors on Embryonic Stem Cell Differentiation Inside Fibrin Scaffolds. Biomedical Engineering Society. Chicago, IL, October 2006.
74. Moore, NM, Barbour, TR, and Sakiyama-Elbert, SE. Design and Characterization of a Poly(ethylene glycol) Peptide Conjugate for *In Vitro* Gene Delivery. Biomedical Engineering Society. Chicago, IL, October 2006.
75. Taylor, SJ, Sakiyama-Elbert, SE. Controlled Delivery of Neurotrophin-3 from Fibin-based Scaffolds for Spinal Cord Regeneration. Society for Biomaterials Memphis, TN April 2005.
76. Kohrt, NM, Grabski, LE, Sakiyama-Elbert, SE. Development of a Polyethylene-glycol Gene Delivery Vehicle. Society for Biomaterials Memphis, TN April 2005.
77. Sakiyama-Elbert, SE. Rational Design of Affinity-based Drug Delivery Systems. Society for Biomaterials Memphis, TN April 2005.
78. Sakiyama-Elbert, SE and Walsh JJ. Neural Differentiation of Embryonic Stem Cells Within Fibrin-based Scaffolds. Society for Biomaterials Memphis, TN April 2005.
79. Willerth, SM, Johnson, PJ, Maxwell, DJ, Doukas, ME, Parsons, SR, Sakiyama-Elbert, SE. Development of Rationally Designed Affinity-based Peptides for Local Delivery of Nerve Growth Factor, Biomedical Engineering Society. Baltimore, MD September 2005.
80. Sakiyama-Elbert, SE Bioactive Drug Delivery Systems for Neural Tissue Engineering Biomedical Engineering Society. Baltimore, MD September 2005.
81. Sakiyama-Elbert, SE and Taylor, SJ Fibrin-based drug delivery scaffolds for treatment of spinal cord injury. International Symposium for Nerve Regeneration. Pacific Groove, CA, December 2005.
82. Schmieder, AH, Sakiyama-Elbert, SE. Synthetic Gene Delivery Vehicle Design using Kinetic Modeling. American Chemical Society – Anaheim, CA, 2004.
83. Shah, UH, Sakiyama-Elbert, SE. Controlling Embryonic Stem Cells Differentiation with Fibrin-based Scaffolds. American Chemical Society – Anaheim, CA, 2004.
84. Hicks, B.C., Maxwell, D.J., Parsons, S.R., Sakiyama-Elbert, S.E. Rational Design of Affinity-based Drug Delivery Systems. World Biomaterials Congress – Sydney, AUSTRALIA, 2004.
85. Shah, UH, Gottlieb, D, and Sakiyama-Elbert, SE. Controlling Embryonic Stem Cell Differentiation with Fibrin-based Scaffolds. World Biomaterials Congress – Sydney, AUSTRALIA, 2004
86. Taylor, SJ and Sakiyama-Elbert, SE. Controlled Delivery of Neurotrohpin-3 form Fibrin-based Scaffold Enhances Neural Fiber Sprouting in the Injure Spinal Cord. World Biomaterials Congress – Sydney, AUSTRALIA, 2004
87. Sakiyama-Elbert, SE. Rational Design of Affinity-based Delivery Systems Allow Modulation of Drug Release and Biological Activity. Biomaterials in Regenerative Medicine – Philadelphia, PA, 2004.

88. Taylor, SJ, and Sakiyama-Elbert, SE. Controlled Delivery of Neurotrophin-3 from Fibrin-based Scaffolds for Spinal Cord Regeneration. Biomaterials in Regenerative Medicine – Philadelphia, PA, 2004.
89. Controlled Delivery of Neurotrophin-3 from Fibrin Scaffold Enahnces Neural Fiber Sproutin in the Injured Spinal Cord. AIChE Annual Meeting – Austin, TX, 2004.
90. Taylor, SJ, and Sakiyama-Elbert, SE. Controlled Delivery of Neurotrophin-3 from Fibrin-based Scaffolds for Spinal Cord Injury. Society for Neuroscience - San Diego, CA, 2004.
91. Taylor, SJ, Sakiyama-Elbert, SE. Development of Fibrin-based TissueEngineered Scaffolds to Enhance Spinal Cord Regeneration Society for Biomaterials, Reno, NV 2003.
92. Schmieder, AH, Dempsey, LA, Sakiyama-Elbert, SE. Development of Novel Poly(Ethylene Glycol) Based Vehicles for Gene Therapy, American Society for Gene Therapy, Washington DC 2003.
93. Parsons, SR, Maxwell, MJ, Hicks, BC, and Sakiyama-Elbert, SE. Techniques for the Rational Design of Drug Delivery Systems. BMES Annual Meeting, Nashville, TN, 2003.
94. Taylor, SJ, Sakiyama-Elbert, SE. Fibrin-Based Tissue Engineered Scaffolds for Spinal Cord Regeneration. BMES Annual Meeting, Nashville, TN, 2003.
95. Shah, UH, Sakiyama-Elbert, SE. Using Fibrin Scaffolds to control Differentiation of Embryonic Stem Cells. BMES Annual Meeting, Nashville, TN, 2003.
96. Taylor, SJ, Howard, MJ, McDonald, JW, and Sakiyama-Elbert, SE. Controlled delivery of neurotrophin-3 enhances neural fiber sprouting in the injured spinal cord. Society for Neuroscience – New Orleans, LA 2003.
97. Taylor, SJ, Sakiyama-Elbert, SE. Fibrin-Based Tissue Engineered Scaffolds for Spinal Cord Regeneration. Tissue Engineering Society International – Orlando, FL , 2003 .
98. Lee AC, Yu VM, Lowe JB, Brenner MJ, Hunter DA, Mackinnon SE, Sakiyama-Elbert, SE. Controlled release of NGF enhances peripheral nerve regeneration, Plastic Surgery Research Council – Boston, MA April 2002
99. Taylor, SJ, Sakiyama-Elbert, SE. Development of Fibrin-based Tissue-Engineered Scaffolds to Enhance Spinal Cord Regeneration, Society for Biomaterials– Tampa, FL April 2002.
100. Schmieder, AH, Sakiyama-Elbert, SE. Development of Novel Poly(ethylene glycol) Based Vehicles for Gene Therapy Society for Biomaterials– Tampa, FL April 2002.
101. Schmieder, AH, Dempsey, LA, Sakiyama-Elbert, SE. Development of Novel Poly(ethylene glycol) Based Vehicles for Gene Therapy. BMES, Houston TX, 2002.
102. Taylor, SJ, Sakiyama-Elbert, SE. Development of Fibrin-based Tissue-Engineered Scaffolds to Enhance Spinal Cord Regeneration, BMES, Houston TX, 2002.
103. Schmieder, AH, Dempsey, LA, Sakiyama-Elbert, SE. Development of Novel Poly(ethylene glycol) Based Vehicles for Gene Therapy. AIChE, Indianapolis, IN, 2002.
104. Taylor, SJ, Sakiyama-Elbert, SE. Development of Fibrin-based Tissue-Engineered Scaffolds to Enhance Spinal Cord Regeneration, AIChE, Indianapolis, IN, 2002.
105. Smith, S. J., Sakiyama-Elbert, S.E. Tissue-engineered scaffolds for spinal cord regeneration, BMES, 2001, Raleigh, NC.
106. Hausmann, K.M., Beaumont, M.A., Sakiyama-Elbert, S.E., Kipke, D.P., Panitch, A. Physiological evidence for the efficacy of NGF-fibrin as a bioactive electrode medium, BMES, 2001, Raleigh, NC.
107. Liu, S, Sakiyama-Elbert, S, Bonnot, J Lu, A, McDonald, J. Neural stem cells derived from embryonic stem (Es) cells produce extensive extracellular matrix (ECM) that is highly supportive for neurite outgrowth, SFN, 2001, San Diego, CA.
108. Sakiyama-Elbert, S.E., Panitch, A., Hubbell, J.A. Development of Novel Growth Factor Fusion Proteins with Exogenous Immobilization Domains for Cellularly Triggered Drug Delivery, 6th World Congress for Biomaterials, 2000, Hawaii.

109. Sakiyama-Elbert, S.E., Panitch, A., Hubbell, J.A. Development of Novel Growth Factor Fusion Proteins with Exogenous Immobilization Domains for Cellularly Triggered Drug Delivery, Biomedical Engineering Society (BMES), 2000, Seattle, WA.
110. Sakiyama-Elbert, S.E., Panitch, A., Hubbell, J.A. Development of Novel Growth Factor Fusion Proteins with Exogenous Immobilization Domains for Cellularly Triggered Drug Delivery, AIChE, 2000, Los Angeles, CA.
111. Sakiyama-Elbert, S.E., Hubbell, J.A. Development of Fibrin Derivatives for Controlled Release of Heparin-Binding Growth Factors, Society for Biomaterials, 1999, Providence, RI.
112. Sakiyama-Elbert, S.E., Hubbell, J.A. Incorporation of Heparin-Binding Peptides into Fibrin Gels to Enhance Neurite Extension, Society for Biomaterials, 1999, Providence, RI.
113. Sakiyama-Elbert, S.E., Hubbell, J.A. Development of Fibrin Derivatives for Controlled Release of Growth Factors, AIChE, 1999, Dallas, TX.
114. Sakiyama-Elbert, S.E., Schense, J.C., Bloch, J., Aebischer, P., Hubbell, J.A. Incorporation of Exogenous Bioactive Peptides into Fibrin Gels to Enhance Peripheral Nerve Regeneration, American Institute of Chemical Engineers (AIChE), 1999, Dallas, TX.
115. Sakiyama, S.E. and Hubbell, J.A. Heparin-binding peptides enhance neurite extension through fibrin gels, Society for Neuroscience (SFN), 1998, Los Angeles, CA.