Brandon J. Tefft, Ph.D.

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Medical College of Wisconsin
Marquette University
Department of Biomedical Engineering
TBRC C2805
8701 W. Watertown Plank Rd.
Milwaukee, WI. 53226

EDUCATION

Sept 2005 – Aug 2011 **Northwestern University**, Evanston, IL., USA
The Graduate School
Ph.D. in Biomedical Engineering, August 2011
Kellogg Certificate in Management for Scientists and Engineers, August 2010
M.S. in Biomedical Engineering, December 2008
GPA: 3.93 / 4.00

Aug 2001 – May 2005 **University of Illinois at Urbana-Champaign**, Urbana, IL., USA
College of Engineering
B.S. in General Engineering with highest honors, May 2005
Minor in Biomedical Engineering, May 2005
GPA: 3.97 / 4.00

FACULTY APPOINTMENTS

April 2018 – present **Medical College of Wisconsin & Marquette University**, Milwaukee, WI., USA
Department of Biomedical Engineering
Assistant Professor
Cardiovascular regenerative engineering laboratory

- Developing cardiovascular tissues including blood vessels and heart valves using regenerative engineering approaches
- Developing novel nanotechnologies and biomaterials for regenerative engineering

POSTDOCTORAL RESEARCH FELLOWSHIPS

Nov 2011 – Mar 2018 **Mayo Clinic**, Rochester, MN., USA
Department of Cardiovascular Medicine & Division of Engineering
Postdoctoral Research Fellow & Research Associate
Instructor in Biomedical Engineering & Instructor in Medicine
Laboratory of Robert D. Simari, M.D., Amir Lerman, M.D., Gurpreet S. Sandhu, M.D., Ph.D., & Dan Dragomir-Daescu, Ph.D.

- Worked with industry partner to develop a cardiac valve bioreactor system capable of physiological flows and pressures
- Performed computational fluid dynamics simulations of flow to improve bioreactor design
- Developed tissue engineered cardiac valves using decellularized xenografts and 3D-bioprinting
- Performed mechanical testing and extracellular matrix content testing of cardiac valve tissue
- Developed a protocol to synthesize superparamagnetic iron oxide nanoparticles and use them to label cells
- Developed magnetic vascular stents and tested in a porcine model
- Developed magnetic vascular stent-grafts and grafts by electrospinning and tested in a porcine model
- Developed magnetic surgical and transcatheter cardiac valves by electrospinning
- Developed a novel magnetic nanofiber biomaterial by coaxial electrospinning
- Developed conformable vascular stents
- Worked with industry partner to develop a self-centering guide catheter

Sept 2011 – Nov 2011 **Northwestern University**, Evanston, IL., USA
Department of Biomedical Engineering
Postdoctoral Research Fellow
Laboratory of Shu Q. Liu, Ph.D.

- Researched endothelial cell focal contact formation and adhesion using cell culture, siRNA, immunocytochemistry, fluorescence microscopy, digital image analysis, and computational fluid dynamics

DISSERTATION RESEARCH

June 2005 – Aug 2011 **Northwestern University**, Evanston, IL., USA
Department of Biomedical Engineering
Graduate Research Assistant
Laboratory of Shu Q. Liu, Ph.D.

- Designed, constructed, and validated a variable-width parallel plate flow chamber for cell adhesion studies
- Researched endothelial cell adhesion using cell culture, siRNA, immunocytochemistry, fluorescence microscopy, flow cytometry, digital image analysis, and animal tissue harvesting
- Demonstrated improved adhesion of endothelial cells to a vascular graft material by using siRNA-mediated SHP-1 or SHP-2 knockdown

Dissertation Title: Enhancement of Endothelial Cell Retention on Vascular Constructs by siRNA-Mediated Gene Silencing

Dissertation Committee: Shu Q. Liu, Ph.D. (chair), Guillermo A. Ameer, Ph.D., Matthew R. Glucksberg, Ph.D., and Phillip B. Messersmith, Ph.D.

UNDERGRADUATE RESEARCH EXPERIENCE

Sept 2003 – May 2005 **University of Illinois at Urbana-Champaign**, Urbana, IL., USA
Beckman Institute for Advanced Science and Technology
Undergraduate Research Assistant
Narayan R. Aluru, Ph.D., Computational Electronics Group
- Researched DNA translocation through a nanopore in silicon dioxide using molecular dynamics software

June 2004 – Aug 2004 **Clemson University**, Clemson, SC., USA
Department of Bioengineering
Undergraduate Research Assistant
NIH/NSF Bioengineering and Bioinformatics Summer Institutes
Thomas Boland, Ph.D., Nanoscale Biointerfaces Laboratory
- Learned bioengineering concepts and techniques through courses, seminars, and workshops
- Researched 3D-bioprinting of anatomically correct hydrogel scaffolds using stereolithography, polymer chemistry, and cell culture
- Communicated research findings in invited platform and poster presentations at a research symposium

AWARDS & HONORS

Nov 2019 **Outstanding Graduate School Educator**, Graduate School of Biomedical Sciences, Medical College of Wisconsin, Milwaukee, WI.

Mar 2019 **Foxconn Smart Cities – Smart Futures Competition**, final round honorable mention with idea entitled “Non-invasive optical quantum dot aptamer system,” statewide competition in Wisconsin.

Mar 2019 **Foxconn Smart Cities – Smart Futures Competition**, competition winner with idea entitled “Computerized stethoscope: 4D sound mapping for medical diagnostics,” statewide competition in Wisconsin.

Sept 2010	**Annual Biomedical Engineering Research Day**, first prize platform presentation, Department of Biomedical Engineering, Northwestern University, Evanston, IL.
June 2010	**Gore/BME Partnership Event**, second prize platform presentation, W.L. Gore & Associates, Inc., Flagstaff, AZ.
Feb 2010	**InNUvation Applied Research Day**, second prize poster presentation, Northwestern University, Evanston, IL.
Sept 2009	**Annual Biomedical Engineering Research Day**, second prize poster presentation, Department of Biomedical Engineering, Northwestern University, Evanston, IL.
April 2008	**Excellence in Science award**, American Association for the Advancement of Science, Washington DC.
May 2005	**University Honors** (Bronze Tablet), University of Illinois at Urbana-Champaign, Urbana, IL.
Sept 2003 – May 2005	**Engineering Merit Scholarship**, College of Engineering, University of Illinois at Urbana-Champaign, Urbana, IL.
Sept 2001 – May 2005	**James Scholar**, College of Engineering, University of Illinois at Urbana-Champaign, Urbana, IL.
Sept 2001– May 2005	**Dean's List**, College of Engineering, University of Illinois at Urbana-Champaign, Urbana, IL.
April 2005	**General Engineering Service Award**, Department of General Engineering, University of Illinois at Urbana-Champaign, Urbana, IL.
April 2005	**Senior 100 Honorary**, Alumni Association, University of Illinois at Urbana-Champaign, Urbana, IL.
April 2003, 2004, 2005	**General Engineering Scholar**, Department of General Engineering, University of Illinois at Urbana-Champaign, Urbana, IL.
May 2001, 2002, 2004	**Public Affairs Scholarship**, Illinois General Assembly, Springfield, IL.

PROFESSIONAL MEMBERSHIPS

May 2019 – present	**Clinical & Translational Science Institute of Southeast Wisconsin**, member

Oct 2018 – present	**Cardiovascular Center**, Medical College of Wisconsin, member
Mar 2015 – present	**American Heart Association**, member
Aug 2010 – present	**Biomedical Engineering Society**, member
May 2010 – present	**Tissue Engineering & Regenerative Medicine International Society**, member
May 2008 – May 2009	**American Association for the Advancement of Science**, member

PROFESSIONAL SERVICE

Grant reviewer	**Fulbright Scholar Program** **Children's Research Institute** Pilot Innovative Research Award
Journal reviewer	**Acta Biomaterialia** **Cellular and Molecular Bioengineering** **Materials and Design** **Nanomedicine: Nanotechnology, Biology, and Medicine** **Recent Patents on Cardiovascular Drug Development** **Recent Patents on Regenerative Medicine** **Tissue Engineering** **Journal of Biomechanical Engineering**
Jan 2020 – present	**BME Safety Committee** Department of Biomedical Engineering Medical College of Wisconsin *Co-safety officer*
Nov 2019	**Annual Graduate School and Postdoc Research Poster Day** Medical College of Wisconsin *Judge*
Nov 2019 – present	**B.U.I.L.D. Program** Medical College of Wisconsin *Faculty advisor*
Aug 2019 – present	**Cardiovascular Center NIH T32** Medical College of Wisconsin *Faculty mentor*
July 2019	**Summer Programs Symposium** Medical College of Wisconsin *Judge*

May 2019 **Biomedical Engineering Society**
2019 annual meeting
Abstract reviewer

Nov 2018 – present **Medical Student Summer Research Program NIH T35**
Medical College of Wisconsin
Faculty mentor

July 2017 **Biomedical Engineering Society**
2017 annual meeting
Abstract reviewer

Jan 2015 – Jun 2017 **Valve Group Journal Club**
Mayo Clinic
Coordinator
- Founded and coordinated a weekly journal club for discussing tissue engineered heart valve literature

Sept 2008 – Sept 2010 **Biomedical Engineering Graduate Students (BMEGS)**
Northwestern University
Webmaster
- Designed and maintained the organization's website

Jan 2010 – Mar 2010 **Science Club**
Northwestern University
Science Mentor Volunteer
- Taught engineering and design concepts to junior high students
- Mentored junior high students during a prosthesis design competition

Sept 2008 – Aug 2009 **Biomedical Engineering Graduate Students (BMEGS)**
Northwestern University
Co-President
- Planned and executed events for biomedical engineering graduate students
- Acted as a liaison between faculty and graduate students
- Designed and maintained the organization's website

May 2008 – Aug 2009 **InNUvation**
Northwestern University
Graduate School Chapter Co-President and *Treasurer*
- Planned and executed innovative campus events designed to educate graduate students on entrepreneurship and innovation strategies and concepts
- Led the planning committee for the 2009 Applied Research Day event for students to translate their research into a business model

- Managed the $4,200 annual chapter budget

Sept 2007 – Aug 2008 **McCormick Graduate Leadership Council (MGLC)**
Northwestern University
Social Committee Member and *Webmaster*
- Planned and executed innovative campus events for engineering graduate students to socialize and collaborate, including the first annual McCormick Art Fair
- Designed and maintained the organization's website

Sept 2005 – May 2008 **VaNTH Get-A-Grip**
Northwestern University in collaboration with Vanderbilt University, University of Texas, and Harvard University
Engineering Instructor Volunteer
VaNTH Engineering Research Center for Bioengineering Educational Technologies
- Lectured engineering and design concepts to middle school students
- Mentored middle school students during a prosthesis design competition

Sept 2006 – Aug 2007 **McCormick Graduate Leadership Council (MGLC)**
Northwestern University
Professional Committee Chair
- Led professional committee during planning and executing of innovative campus events for the professional development of engineering graduate students, including a career resources fair

Sept 2005 – Aug 2006 **Biomedical Engineering Graduate Students (BMEGS)**
Northwestern University
Seminar Series Chair
- Invited faculty speakers to Department of Biomedical Engineering seminars

RESEARCH GRANTS & AWARDS

Sept 2020 **Advancing a Healthier Wisconsin Biomedical Engineering Pilot Award**, Medical College of Wisconsin, Milwaukee, WI.
Fundable score received, but not funded due to eligibility technicality.

Aug 2020 – Jul 2021 **Clinical and Translational Science Award (UL1)**, National Institutes of Health (NCATS), Bethesda, MD.

Oct 2019 – Mar 2020 **Clinical and Translational Science Award (UL1)**, National Institutes of Health (NCATS), Bethesda, MD.

Aug 2018 – Jul 2021	**Pathway to Independence Award (R00)**, National Institutes of Health (NHLBI), Bethesda, MD.
April 2018 – Mar 2021	**Advancing a Healthier Wisconsin Research and Education Program Faculty Recruitment Sub-Award**, Medical College of Wisconsin, Milwaukee, WI.
May 2016 – April 2018	**Career Development Award in Cardiovascular Disease Research Honoring Dr. Earl H. Wood**, Mayo Clinic, Rochester, MN.
April 2016 – Mar 2018	**Pathway to Independence Award (K99)**, National Institutes of Health (NHLBI), Bethesda, MD.
Mar 2014 – Mar 2016	**Ruth L. Kirschstein Institutional National Research Service Award (T32)**, National Institutes of Health (NHLBI), Bethesda, MD.
Jun 2006 – May 2009	**Graduate Research Fellowship Program Award**, National Science Foundation, Arlington, VA.
Sept 2005 – May 2006	**Royal E. Cabell Fellowship**, The Graduate School, Northwestern University, Evanston, IL.

COMMITTEE SERVICE

July 2020	**Cardiovascular Research Workgroup** School of Medicine, Medical College of Wisconsin *Member*
Jul 2020 – present	**Faculty Council** Medical College of Wisconsin *Department Representative*
Nov 2019 – present	**Biomedical Engineering Faculty Search Committee** Medical College of Wisconsin *Member*
Nov 2019 – present	**Cardiovascular Thematic Interest Working Group** Tissue Engineering & Regenerative Medicine International Society *Vice Chair*
Jul 2019 – present	**Human iPSC Program Oversight Committee** Medical College of Wisconsin *Member*
Oct 2018	**Cardiovascular Research Focus Group**

Medical College of Wisconsin
Member

Jun 2018 – Jun 2020 **Faculty Council**
Medical College of Wisconsin
Department Representative Alternate

May 2018 – present **Undergraduate Studies Committee**
Department of Biomedical Engineering
Marquette University & Medical College of Wisconsin
Member

- Provide recommendations to the faculty regarding undergraduate program curricular development
- ABET accreditation review and reporting

TEACHING EXPERIENCE

Oct 2019 **Medical College of Wisconsin**, Milwaukee, WI. USA
Graduate School
Guest Lecturer
Gave two 75-minute guest lectures to course BIEN 6710-101: Cellular and Molecular Bioengineering

Nov 2018 **University of St. Thomas**, Saint Paul, MN. USA
School of Engineering
Guest Lecturer
Gave 3-hour guest lecture to course ETLS 723: Biomaterials for Designing of Medical Devices

Oct 2017 **Mayo Clinic**, Rochester, MN. USA
Center for Regenerative Medicine
Course Faculty
Gave 35-minute lecture to Regenerative Medicine Minnesota course Exploring the Body's Building Blocks

Oct 2017 **Mayo Clinic**, Rochester, MN. USA
Department of Cardiovascular Medicine
George M. Gura Symposium Faculty
Gave 15-minute lecture on functional testing of novel heart valve prostheses to symposium Advancing Tissue Engineered Valves to Clinical Practice

Apr 2017 **Mayo Clinic**, Rochester, MN., USA
School of Medicine
Course Faculty
Gave 30-minute lecture to medical school selective course Regenerative Medicine and Surgery.

Apr 2016 **Mayo Clinic**, Rochester, MN., USA
School of Medicine
Course Faculty
Gave 50-minute lecture to medical school selective course Regenerative Medicine and Surgery.

Jun 2015 **Mayo Clinic**, Rochester, MN., USA
School of Medicine
Guest Lecturer
Gave 50-minute guest lecture and discussion to course CTSC 6821: Regenerative Medicine Journal Club.

Apr 2015 **Mayo Clinic**, Rochester, MN., USA
School of Medicine
Course Faculty
Gave 50-minute lecture to medical school selective course Regenerative Medicine and Surgery.

Feb 2015 **Mayo Clinic**, Scottsdale, AZ., USA
Division of Radiology
Continuing Medical Education Course Faculty
Gave 30-minute lecture and participated in round table discussion at CME course Collaborative 3D-Printing in Medical Practice.

Oct 2011 **Northwestern University**, Evanston, IL., USA
Department of Biomedical Engineering
Guest Lecturer
Gave 90-minute guest lecture to course BMD_ENG 349: Bioregenerative Engineering.

Oct 2010 **Northwestern University**, Evanston, IL., USA
Department of Biomedical Engineering
Graduate Guest Lecturer
Gave 90-minute guest lecture to course BMD_ENG 310: Molecular and Cellular Aspects of Bioengineering.

Feb 2010 **Northwestern University**, Evanston, IL., USA
Department of Biomedical Engineering
Graduate Guest Lecturer
Gave 90-minute guest lecture to course BMD_ENG 349: Bioregenerative Engineering.

Oct 2008 **Northwestern University**, Evanston, IL., USA
Department of Biomedical Engineering
Graduate Guest Lecturer
Gave 90-minute guest lecture to course BMD_ENG 310: Molecular and Cellular Aspects of Bioengineering.

Spring 2008 **Northwestern University**, Evanston, IL., USA
Department of Biomedical Engineering
Graduate Teaching Assistant
Ran laboratory sections of BMD_ENG 346: Tissue Engineering.

Nov 2007 **Northwestern University**, Evanston, IL., USA
Department of Biomedical Engineering
Graduate Guest Lecturer
Gave 90-minute guest lecture to course BMD_ENG 475: Cardiovascular Biology and Engineering.

ACADEMIC MENTORSHIP

2020-2021 biomedical engineering senior design (5 students), Marquette University

Aleks Zielonka, PhD Student, Marquette University & Medical College of Wisconsin

Paul Kashishian, High School Research Student (SUPREMES), Marquette University & Medical College of Wisconsin

William Yuan, Medical Student (Pathways Program), Medical College of Wisconsin

Roger Guillory, NIH research diversity supplement mentee, Northwestern University

2019-2020 undergraduate student advising (3 students), Marquette University

Katharine Schwister, Undergraduate Research Student, Marquette University & Medical College of Wisconsin

2019-2020 biomedical engineering senior design (4 students), Marquette University

Nicholas Yang, Summer Research Student (SPUR), University of Michigan

2018-2019 undergraduate student advising (4 students), Marquette University

Arash GhorbanniaHassankiadeh, PhD Student, dissertation committee member, Marquette University & Medical College of Wisconsin

Joseph Cherny, High School Research Student (SUPREMES), Marquette University & Medical College of Wisconsin

Clare Dyra, Undergraduate Research Student, Marquette University & Medical College of Wisconsin

Akankshya Shradhanjali, Postdoctoral Research Fellow, Marquette University & Medical College of Wisconsin

Jacob Horder, Undergraduate Research Student (SURF awardee), Marquette University & Medical College of Wisconsin

Jacob Beery, Undergraduate Research Student (SURF awardee), Marquette University & Medical College of Wisconsin

Jayne Wolfe, PhD Student, Marquette University & Medical College of Wisconsin

Shayan Shafiee, PhD Student, Marquette University & Medical College of Wisconsin

Pedro Lopez, Summer Undergraduate Research Student, Marquette University & Medical College of Wisconsin

Matthew Kunze, Summer Undergraduate Research Student, Marquette University & Medical College of Wisconsin

Harsimran Kalsi, Summer Research Student (CTSI 500 Stars, SPUR), Marquette University & Medical College of Wisconsin

Nazeli Acosta, Summer Undergraduate Research Student, Mayo Clinic

Erik Wennberg, Summer Undergraduate Research Student, Mayo Clinic

Ahna Buntrock, Summer Undergraduate Research Student, Mayo Clinic

2014-2015 senior design clinic (8 students), University of St. Thomas

2013-2014 senior design clinic (9 students), University of St. Thomas

Anu Gupta, Postdoctoral Research Fellow, Mayo Clinic

Janelle Gooden, Clinical Resident, Mayo Clinic

Raga Siddharthan, Undergraduate Research Student, Northwestern University

PATENTS

Oct 2020	**Tefft BJ**, Yuan W (2020). Foldable prosthetic heart valve. USA #63/086,564. Provisional application filed.
Jan 2019	**Tefft BJ**, Shafiee S (2019). Non-invasive quantum dot aptamer system and methods of use. USA #62/799,443. Provisional application filed.

Jan 2019 **Tefft BJ**, Shafiee S (2019). Systems and methods for sound mapping of anatomical and physiological acoustic sources using an array of acoustic sensors. USA #PCT/US2020/016179. Application filed.

Apr 2017 **Tefft BJ**, Spoon DB, Sandhu GS, McGowan RW, Haverkost PA, Groff JN, Radman L, Ross D (2017). Emboli-capturing centering device. USA #PCT/US2018/026004. Application filed.

Mar 2016 **Tefft BJ**, Spoon DB, Sandhu GS, McGowan RW, Haverkost PA, Groff JN, Radman L, Ross D (2016). Self-centering guide catheter. USA #PCT/US2017/020462. Application filed.

May 2014 **Tefft BJ**, Dragomir-Daescu D, Sandhu GS, Uthamaraj S (2014). Devices and methods for forming stents in vivo. USA #PCT/US2015/029713. Application filed.

May 2014 **Tefft BJ**, Dragomir-Daescu D, Sandhu GS, Uthamaraj S (2014). Devices and methods for endothelialization of magnetic vascular grafts. USA #10,136,986 B2.

July 2013 **Tefft BJ**, Spoon DB, Sandhu GS (2013). Devices and methods for self-centering a guide catheter. USA #9,889,006 B2 & 10,709,558 B2.

PUBLICATIONS

Mar 2019 **Tefft BJ**, Choe JA, Young MD, Hennessy RS, Morse DW, Bouchard JA, Hedberg HJ, Consiglio JF, Dragomir-Daescu D, Simari RD, Lerman A (2019). Cardiac valve bioreactor for physiological conditioning and hydrodynamic performance assessment. *Cardiovascular Engineering and Technology*, 10(1): 80-94. [PMID 30311149]

Jul 2018 Choe JA, Jana S, **Tefft BJ**, Hennessy RS, Go J, Morse D, Lerman A, Young MD (2018). Biomaterial characterization of off-the-shelf decellularized porcine pericardial tissue for use in prosthetic valvular applications. *Journal of Tissue Engineering & Regenerative Medicine*, 12(7): 1608-1620. [PMID 29749108]

Jul 2018 **Tefft BJ**, Uthamaraj S, Harbuzariu A, Harburn JJ, Witt TA, Newman B, Psaltis PJ, Hlinomaz O, Holmes DR, Gulati R, Simari RD, Dragomir-Daescu D, Sandhu GS (2018). Nanoparticle mediated cell capture enables rapid endothelialization of a novel bare metal stent. *Tissue Engineering Part A*, 24(13-14): 1157-1166. [PMID: 29431053]

Aug 2017 Hennessy RS, Go JL, Hennessy RR, **Tefft BJ**, Jana S, Stoyles NJ, Al-Hijji MA, Thaden JJ, Pislaru SV, Simari RD, Stulak JM, Young MD, Lerman A (2017). Recellularization of a Novel Off-the-Shelf Valve Following Xenogenic Implantation into the Right Ventricular Outflow Tract. *PLoS One*, 12(8): e0181614. [PMID: 28763463]

Jul 2017 Helder MRK, Stoyles NJ, **Tefft BJ**, Hennessy RS, Hennessy RRC, Dyer R, Witt T, Simari RD, Lerman A (2017). Xenoantigenicity of porcine decellularized valves. *Journal of Cardiothoracic Surgery*, 12(1): 56-64. [PMID: 28716099]

Apr 2017 **Tefft BJ**, Uthamaraj S, Harburn JJ, Hlinomaz O, Lerman A, Dragomir-Daescu D, Sandhu GS (2017). Magnetizable stent-grafts enable endothelial cell capture. *Journal of Magnetism and Magnetic Materials*, 427:100-104. [PMID: 28286359]

Feb 2017 Hennessy RS, Jana S, **Tefft BJ**, Helder MR, Young MD, Hennessy RR, Stoyles NJ, Lerman A (2017). Supercritical carbon dioxide-based sterilization of decellularized heart valves. *JACC: Basic to Translational Science*, 2(1): 71-84. [PMID: 28337488]

Oct 2016 Uthamaraj S, **Tefft BJ**, Jana S, Hlinomaz O, Kalra M, Lerman A, Dragomir-Daescu D, Sandhu GS, (2016). Fabrication of small caliber stent-grafts using electrospinning and balloon expandable bare metal stents. *Journal of Visualized Experiments*, 116. [PMID: 27805589]

Feb 2016 Helder MR, Hennessy RS, Spoon DB, **Tefft BJ**, Witt TA, Marler RJ, Pislaru SV, Simari RD, Stulak JM, Lerman A (2016). Low-Dose Gamma Irradiation of Decellularized Heart Valves Results in Tissue Injury In Vitro and In Vivo. *Annals of Thoracic Surgery*, 101(2): 667-674. [PMID: 26453425]

Oct 2015 **Tefft BJ**, Uthamaraj S, Harburn JJ, Klabusay M, Dragomir-Daescu D, Sandhu GS (2015). Cell labeling and targeting with superparamagnetic iron oxide nanoparticles. *Journal of Visualized Experiments*, 104. [PMID: 26554870]

Sept 2015 Uthamaraj S, **Tefft BJ**, Hlinomaz O, Sandhu GS, Dragomir-Daescu D (2015). Ferromagnetic bare metal stent for endothelial cell capture and retention. *Journal of Visualized Experiments*, 103. [PMID: 26436434]

Sept 2015 **Tefft BJ**, Kopacz AM, Liu WK, Liu SQ (2015). Enhancement of endothelial cell retention on vascular constructs by siRNA-mediated SHP-1 or SHP-2 gene silencing. *Cellular and Molecular Bioengineering*, 8(3): 507-516.

Dec 2014 Uthamaraj S, **Tefft BJ**, Hlinomaz O, Klabusay M, Sandhu GS, Dragomir-Daescu D (2014). Design and validation of a novel ferromagnetic bare metal stent capable of capturing and retaining endothelial cells. *Annals of Biomedical Engineering*, 42(12): 2416-2424. [PMID: 25138164]

July 2014 Jana S, **Tefft BJ**, Spoon DB, Simari RD (2014). Scaffolds for tissue engineering of cardiac valves. *Acta Biomaterialia*, 10(7): 2877-2893. [PMID: 24675108]

Dec 2013 **Tefft BJ**, Kopacz AM, Liu WK, Liu SQ (2013). Experimental and computational validation of Hele-Shaw stagnation flow with varying shear stress. *Computational Mechanics*, 52(6): 1463-1473.

June 2013 Spoon DB, **Tefft BJ**, Lerman A, Simari RD (2013). Challenges of biological valve development. *Interventional Cardiology*, 5(3): 319-334.

Jan 2013 **Tefft BJ**, Gooden JY, Uthamaraj S, Harburn JJ, Klabusay M, Holmes DR, Simari RD, Dragomir-Daescu D, Sandhu GS (2013). Magnetizable duplex steel stents enable endothelial cell capture. *IEEE Transactions on Magnetics*, 49(1): 463-466.

Dec 2012 Liu SQ, **Tefft BJ**, Roberts DT, Zhang L-Q, Ren Y, Li YC, Huang Y, Zhang D, Phillips HR, Wu YH (2012). Cardioprotective proteins upregulated in the liver in response to experimental myocardial ischemia. *American Journal of Physiology - Heart and Circulatory Physiology*, 303(12): H1446-1458. [PMID: 23064833]

Feb 2012 Liu SQ, **Tefft BJ**, Dong B (2012). Liver-mediated myocardial protection in experimental myocardial infarction. *Journal of Clinical & Experimental Cardiology*, S7:002.

Dec 2011 Liu SQ, **Tefft BJ**, Zhang L, Liu C, Wu YH (2011). Regulation of hepatic cell mobilization in experimental myocardial ischemia. *Cellular and Molecular Bioengineering*, 4(4): 693-707.

Dec 2011 Liu SQ, **Tefft BJ**, Zhang D, Roberts D, Schuster DJ, Wu A, (2011). Cardioprotective mechanisms activated in response to myocardial ischemia. *Molecular & Cellular Biomechanics*, 8(4): 319-338. [PMID: 22338709]

Feb 2011 **Tefft BJ**, Kopacz AM, Liu WK, Liu SQ (2011). Enhancing endothelial cell retention on ePTFE constructs by siRNA-mediated SHP-1 gene silencing. *Journal of Nanotechnology in Engineering and Medicine*, 2(1): 0110071-0110076.

Jun 2010 Liu SQ, **Tefft BJ**, Zhang L, Li YC, Wu YH (2010). Elastic laminae in vascular development and disease. *Molecular & Cellular Biomechanics*, 7(2): 59-76. [PMID: 20936740]

May 2008 Liu SQ, **Tefft BJ**, Zhang A, Zhang L, Wu YH (2008). Formation of smooth muscle α actin filaments in CD34+ bone marrow cells on arterial elastic laminae. *Matrix Biology*, 27(4): 282-294. [PMID: 18258420]

April 2007 **Tefft BJ**, Tefft JA (2007). Galilean relativity and the work-kinetic energy principle. *The Physics Teacher*, 45(4): 218-220.

Nov 2005 Liu SQ, Alkema PK, Tieche C, **Tefft BJ**, Liu DZ, Li YC, Sumpio BE, Caprini JA, Paniagua M (2005). Negative regulation of monocyte adhesion to arterial elastic laminae by signal-regulatory protein and SH2 domain-containing protein tyrosine phosphatase-1. *The Journal of Biological Chemistry*, 280(47): 39294-39301. [PMID: 16159885]

CONFERENCE ABSTRACTS

Oct 2020 Shradhanjali A, Martinez Ramirez H, **Tefft BJ** (2020). Characterization of Blood Outgrowth Endothelial Cells from Porcine Peripheral Blood. *Biomedical Engineering Society 2020*, virtual.

Oct 2020 Wolfe J, **Tefft BJ** (2020). Subpopulation of BOECs Demonstrates Increased Cell Retention Under Physiologic Shear Stress. *Biomedical Engineering Society 2020*, virtual.

Dec 2019 Shradhanjali A, Horder J, **Tefft BJ** (2019). Vascular grafts functionalized with magnetic particles for superior endothelialization with autologous cells. *Tissue Engineering & Regenerative Medicine International Society 2019*, Orlando, FL., USA.

Oct 2019 Shradhanjali A, **Tefft BJ** (2019). Vascular grafts functionalized with magnetic particles for superior endothelialization with autologous cells. *Biomedical Engineering Society 2019*, Philadelphia, PA., USA.

Apr 2019 Kalsi HS, **Tefft BJ** (2019). Enhancement of endothelial cell adhesion through treatment with CEACAM6 or TNF-α. *National Conference on Undergraduate Research 2019*, Kennesaw GA., USA.

Oct 2017 **Tefft BJ**, Choe JA, Uthamaraj S, Dragomir-Daescu D, Sandhu GS, Lerman A (2017). Ferromagnetic vascular graft enables magnetic

targeting of endothelial cells. *Biomedical Engineering Society 2017*, Phoenix, AZ., USA.

Oct 2017 Uthamaraj S, Choe JA, **Tefft BJ**, Lerman A, Dragomir-Daescu D, Sandhu GS (2017). Stent-grafts with novel electrospun magnetic material and bare metal stent capable of cell capture. *Biomedical Engineering Society 2017*, Phoenix, AZ., USA.

Oct 2017 Choe JA, **Tefft BJ**, Uthamaraj S, Sandhu GS, Lerman A, Dragomir-Daescu D (2017). Biocompatible ferromagnetic polyurethane nanofibers for tissue engineering. *Biomedical Engineering Society 2017*, Phoenix, AZ., USA.

Dec 2016 **Tefft BJ**, Jana S, Young MD, Hennessy RS, Stoyles NJ, Lerman A (2016). Novel techniques for electrospinning transcatheter and surgical cardiac valve prostheses with potential for endothelialization and durability. *Tissue Engineering & Regenerative Medicine International Society 2016*. *Tissue Engineering Part A* 22(1 suppl): S52-S52, San Diego, CA., USA.

Oct 2016 **Tefft BJ**, Spoon DB, Hennessy RS, Stoyles NJ, Young MD, Jana S, Dragomir-Daescu D, Simari RD, Lerman A (2016). Cardiac valve bioreactor capable of physiological conditioning. *Biomedical Engineering Society 2016*, Minneapolis, MN., USA.

Aug 2016 **Tefft BJ**, Uthamaraj S, Hlinomaz O, Kalra M, Lerman A, Dragomir-Daescu D, Sandhu GS (2016). Rapidly endothelializing vascular stent-grafts and grafts for soldiers unable to take anti-platelet agents due to bleeding risk. *Military Health Systems Research Symposium 2016*, Kissimmee, FL., USA.

May 2016 **Tefft BJ**, Uthamaraj S, Harburn JJ, Hlinomaz O, Lerman A, Dragomir-Daescu D, Sandhu GS (2016). Magnetizable stent-grafts enable endothelial cell capture. *Scientific and Clinical Applications of Magnetic Carriers 2016*, Vancouver, Canada.

Mar 2016 Wennberg E, **Tefft BJ**, Uthamaraj S, Dragomir-Daescu D, Sandhu GS (2016). Electrospun polyurethane graft porosity for cellular infiltration: current methods and future directions. *Mayo Clinic Young Investigators Research Symposium 2016*, Rochester, MN., USA.

Aug 2015 **Tefft BJ**, Uthamaraj S, Harburn JJ, Dragomir-Daescu D, Sandhu GS (2015). Nanotechnology enabled endothelialization of stent-grafts. *European Society of Cardiology 2015*. *European Heart Journal* 36(1 suppl): 384-384 London, UK.

Aug 2015 Hennessy R, Spoon D, **Tefft B**, Vo T, Jana S, Helder M, Lerman A. A novel method to remove sodium dodecyl sulfate from decellularized cardiac tissue. *Rejuvination Biotechnology 2015*, San Francisco, CA., USA.

Aug 2015 **Tefft BJ**, Uthamaraj S, Dragomir-Daescu D, Sandhu GS (2015). Rapidly endothelializing stents and stent-grafts for soldiers unable to take anti-platelet agents due to bleeding risk. *Military Health Systems Research Symposium 2015*, Ft. Lauderdale, FL., USA.

July 2015 Uthamaraj S, **Tefft BJ**, Sandhu GS, Dragomir-Daescu D (2015). Ferromagnetic stent-graft for rapid endothelial cell capture. *International Academy of Cardiology 2015*. *Cardiology* 131(2 suppl): 38-38, Vancouver, BC., Canada.

Feb 2015 Helder MR, **Tefft BJ**, Hennessy R, Koch CD, Spoon DB, Simari RD, Lerman A (2015). A dynamic model of in-vitro thrombogenicity testing for heart valves. *Academic Surgical Congress 2015*, Las Vegas, NV., USA.

May 2014 Uthamaraj S, **Tefft BJ**, Newman B, Harburn JJ, Klabusay M, Hlinomaz O, Holmes DR, Simari RD, Sandhu GS, Dragomir-Daescu D (2014). Design of a magnetic stent that enables rapid endothelial cell capture. *The Society for Cardiovascular Angiography and Interventions 2014*, Las Vegas, NV., USA.

Nov 2013 **Tefft BJ**, Uthamaraj S, Harburn JJ, Klabusay M, Hlinomaz O, Holmes DJ, Simari RD, Dragomir-Daescu D, Sandhu GS (2013). Novel duplex steel stent enables nanoparticle mediated cell capture and demonstrates endothelialization at three days. *American Heart Association 2013*. *Circulation* 128(22 suppl), Dallas, TX., USA.

Sept 2013 **Tefft BJ**, Uthamaraj S, Harburn JJ, Klabusay M, Hlinomaz O, Holmes DJ, Simari RD, Dragomir-Daescu D, Sandhu GS (2013). Magnetic capture of endothelial cells to vascular stents. *Biomedical Engineering Society 2013*, Seattle, WA., USA.

April 2013 **Tefft BJ**, Uthamaraj S, Gooden JY, Harburn JJ, Klabusay M, Holmes DJ, Simari RD, Dragomir-Daescu D, Sandhu GS (2013). Magnetic capture of endothelial cells to vascular stents within an externally applied magnetic field. *Society for Biomaterials 2013*, Boston, MA., USA.

April 2013 Spoon DB, **Tefft BJ**, Coffman KE, Pan S, Taylor DA, Lerman A, Simari RD (2013). Cell injection initiates the recellularization process in decellularized porcine aortic valve scaffolds. *Society for Biomaterials 2013*, Boston, MA., USA.

Oct 2012 Uthamaraj S, **Tefft BJ**, Gooden JY, Harburn JJ, Holmes DJ, Simari RD, Sandhu GS, Dragomir-Daescu D (2012). Design and testing of magnetic vascular stents for rapid endothelialization. *Materials Science & Technology 2012*, Pittsburgh, PA., USA.

May 2012 **Tefft BJ**, Gooden JY, Uthamaraj S, Harburn JJ, Holmes DJ, Simari RD, Dragomir-Daescu D, Sandhu GS (2012). Magnetizable duplex steel stents enable endothelial cell capture. *Scientific and Clinical Applications of Magnetic Carriers 2012*, Minneapolis, MN., USA.

Mar 2012 Gooden JY, **Tefft BJ**, Uthamaraj S, Simari RD, Dragomir-Daescu D, Sandhu GS (2012). Magnetically endothelialized coronary stents. *Mayo Clinic Young Investigators Research Symposium 2012*, Rochester, MN., USA.

July 2011 Liu SQ, **Tefft BJ**, Kharitonenkov A, Ren Y, Zhang L-Q, Wu YH (2011). Fibroblast growth factor 21 mediated protection of ischemic myocardium. *American Heart Association Basic Cardiovascular Sciences 2011 Scientific Sessions*, New Orleans, LA., USA.

Jan 2011 **Tefft BJ**, Kopacz AM, Liu SQ, Liu WK (2011). Modeling of endothelial cell adhesion dynamics modulated by experimental molecular engineering. *National Science Foundation CMMI Engineering Research and Innovation Conference 2011*, Atlanta, GA., USA.

Dec 2010 **Tefft BJ**, Kopacz AM, Liu WK, Liu SQ (2010). Molecular modulation of endothelial cell adhesion for vascular tissue engineering. *Tissue Engineering & Regenerative Medicine International Society North America Chapter 2010 Annual Conference*, Orlando, FL., USA.

Dec 2010 Liu SQ, **Tefft BJ**, Ren Y, Liu C, Zhang L-Q, Wu YH (2010). Cardioprotective role of hepatic cells in myocardial ischemia. *Tissue Engineering & Regenerative Medicine International Society North America Chapter 2010 Annual Conference*, Orlando, FL., USA.

Oct 2010 **Tefft BJ**, Kopacz AM, Liu WK, Liu SQ (2010). Molecular modulation of endothelial cell adhesion for vascular tissue engineering. *Biomedical Engineering Society 2010 Annual Meeting*, Austin, TX., USA.

Feb 2010 **Tefft BJ**, Kopacz AM, Liu WK, Liu SQ (2010). Knockdown of SHP-1 enhances endothelial cell retention for vascular regeneration. *Proceedings of ASME2010 First Global Congress on NanoEngineering for Medicine and Biology* 351-352, Houston, TX., USA.

Feb 2010 Kopacz AM, **Tefft BJ**, Liu SQ, Liu WK (2010). Modeling of cell adhesion dynamics modulated by molecular engineering. *Proceedings of ASME2010 First Global Congress on NanoEngineering for Medicine and Biology* 313-314, Houston, TX., USA.

Oct 2006 Liu SQ, **Tefft BJ**, Tieche C, Alkema PK, Wu YH (2006). Formation of smooth muscle alpha actin filaments in CD34+ bone marrow cells. *79th Annual Scientific Session of the American-Heart-Association*. *Circulation* 114(18 suppl): 216-216, Chicago, IL., USA.

Oct 2006 Tieche C, Alkema PK, **Tefft BJ**, Liu SQ (2006). Reduction of leukocyte adhesion to elastic laminae scaffolds by lactose-impregnation. *Biomedical Engineering Society 2006 Annual Meeting*, Chicago, IL., USA.

Oct 2006 Alkema PK, Tieche C, **Tefft BJ**, Liu SQ (2006). Vascular smooth muscle cell migration in response to collagen and elastic laminae. *Biomedical Engineering Society 2006 Annual Meeting*, Chicago, IL., USA.

Mar 2006 Liu SQ, **Tefft BJ**, Tieche C, Alkema PK, Hoshi R, Zhang LQ, Wu YH (2006). Formation of smooth muscle alpha actin filaments in CD34+ bone marrow cells in elastic lamina-containing matrix. *Experimental Biology 2006 Meeting*. *FASEB J*. 20(4): A405-A405, San Francisco, CA., USA.

Mar 2006 Liu SQ, **Tefft BJ**, Tieche C, Alkema PK, Hoshi R, Wu YH (2006). Molecular basis for the anti-inflammatory effect of arterial elastic laminae. *Experimental Biology 2006 Meeting*. *FASEB J*. 20(4): A413-A413, San Francisco, CA., USA.

PRESENTATIONS

Nov 2020 **Tefft BJ** (2020). Endothelialization of implantable cardiovascular devices. *Biomedical Engineering Seminar*, Department of Biomedical Engineering, Michigan Technological Institute, Houghton, MI. USA. Invited platform presentation.

Apr 2019 **Tefft BJ** (2019). Healing from within: unlocking the body's capacity for self-repair. *Conversations with Scientists*, Advancing a Healthier Wisconsin Endowment, Medical College of Wisconsin, Milwaukee, WI. USA. Invited platform presentation.

Apr 2019 **Tefft BJ**, Shafiee S (2019). Computerized stethoscope: 4D acoustic mapping for medical diagnostics. *First Look Forum*, UWM

Research Foundation, University of Wisconsin-Milwaukee & Medical College of Wisconsin, Milwaukee, WI. USA. Invited platform presentation.

Mar 2019 **Tefft BJ** (2019). Tissue engineered heart valves. *ATVB Signature Program Seminar*, Cardiovascular Center, Medical College of Wisconsin, Milwaukee, WI., USA. Invited platform presentation.

Jan 2019 **Tefft BJ** (2019). Endothelialization of implantable cardiovascular devices by magnetic cell targeting. *Biomedical Engineering Seminar*, Department of Biomedical Engineering, Marquette University & Medical College of Wisconsin, Milwaukee, WI., USA. Invited platform presentation.

Nov 2018 **Tefft BJ** (2018). Endothelialization of implantable cardiovascular devices by magnetic cell targeting. *ATVB Signature Program Seminar*, Cardiovascular Center, Medical College of Wisconsin, Milwaukee, WI., USA. Invited platform presentation.

Nov 2018 **Tefft BJ** (2018). Nanomaterials for cardiovascular regenerative engineering. *Materials Science and Engineering Seminar*, University of St. Thomas, Saint Paul, MN., USA. Invited platform presentation.

Oct 2017 **Tefft BJ**, Choe JA, Uthamaraj S, Dragomir-Daescu D, Sandhu GS, Lerman A (2017). Ferromagnetic vascular graft enables magnetic targeting of endothelial cells. *Biomedical Engineering Society 2017*, Phoenix, AZ., USA. Poster presentation.

Jul 2017 **Tefft BJ**, Tranquillo RT, Dragomir-Daescu D, Sandhu GS, Lerman A (2017). Nanotechnology for magnetic endothelialization of implantable cardiovascular devices. *NHLBI K-to-R01 Investigators Meeting 2017*, Bethesda, MD., USA. Poster presentation.

Dec 2016 **Tefft BJ**, Jana S, Young MD, Hennessy RS, Stoyles NJ, Lerman A (2016). Novel techniques for electrospinning transcatheter and surgical cardiac valve prostheses with potential for endothelialization and durability. *Tissue Engineering & Regenerative Medicine International Society 2016*, San Diego, CA., USA. Poster presentation.

Oct 2016 **Tefft BJ**, Spoon DB, Hennessy RS, Stoyles NJ, Young MD, Jana S, Dragomir-Daescu D, Simari RD, Lerman A (2016). Cardiac valve bioreactor capable of physiological conditioning. *Biomedical Engineering Society 2016*, Minneapolis, MN., USA. Platform presentation.

Sep 2016 **Tefft BJ** (2016). Implantable cardiovascular devices developed with a tissue engineering approach. *Physiology & Biomedical Engineering Seminar*, Mayo Clinic, Rochester, MN., USA. Invited platform presentation.

Aug 2016 **Tefft BJ**, Uthamaraj S, Hlinomaz O, Kalra M, Lerman A, Dragomir-Daescu D, Sandhu GS (2016). Rapidly endothelializing vascular stent-grafts and grafts for soldiers unable to take anti-platelet agents due to bleeding risk. *Military Health Systems Research Symposium 2016*, Kissimmee, FL., USA. Platform presentation.

Aug 2016 **Tefft BJ**, Tranquillo RT, Dragomir-Daescu D, Sandhu GS, Lerman A (2016). Nanotechnology for magnetic endothelialization of implantable cardiovascular devices. *NHLBI K-to-R01 Investigators Meeting 2016*, Bethesda, MD., USA. Poster presentation.

May 2016 **Tefft BJ**, Uthamaraj S, Harburn JJ, Hlinomaz O, Lerman A, Dragomir-Daescu D, Sandhu GS (2016). Magnetizable stent-grafts enable endothelial cell capture. *Scientific and Clinical Applications of Magnetic Carriers 2016*, Vancouver, Canada. Platform presentation.

Feb 2016 **Tefft BJ** (2016). Next-generation implantable cardiovascular devices developed with a regenerative medicine approach. *Center for Clinical and Translational Science Grand Rounds*, Mayo Clinic, Rochester, MN., USA. Invited platform presentation.

Aug 2015 **Tefft BJ**, Uthamaraj S, Dragomir-Daescu D, Sandhu GS (2015). Rapidly endothelializing stents and stent-grafts for soldiers unable to take anti-platelet agents due to bleeding risk. *Military Health Systems Research Symposium 2015*, Ft. Lauderdale, FL., USA. Poster presentation.

Jul 2015 Uthamaraj S, **Tefft BJ**, Sandhu GS, Dragomir-Daescu D (2015). Ferromagnetic stent-graft for rapid endothelial cell capture. *International Academy of Cardiology 2015*, Vancouver, BC., Canada. Platform presentation.

Apr 2015 **Tefft BJ** (2015). Rapid endothelialization of coronary stents by magnetic cell targeting. *Design of Medical Devices 2015*, Minneapolis, MN., USA. Invited platform presentation.

May 2014 **Tefft BJ** (2014). Magnetics, nanotechnology and rapid endothelialization of implanted cardiovascular devices. *2nd Annual Life Sciences Innovation Showcase*, Minneapolis, MN., USA. Platform presentation.

Apr 2014 **Tefft BJ** (2014). Design of a tissue engineered heart valve capable of remodeling, growth, and repair. *Design of Medical Devices 2014*, Minneapolis, MN., USA. Invited platform presentation.

Dec 2013 **Tefft BJ**, Uthamaraj S, Sandhu GS (2013). Nanotechnology and a rapidly healing Mayo developed stent. *Cardiac Catheterization Laboratory Conference*, Mayo Clinic, Rochester, MN., USA. Platform presentation.

Dec 2013 **Tefft BJ**, Uthamaraj S (2013). Development of a rapidly endothelializing stent. *Cardiovascular Research Seminar*, Mayo Clinic, Rochester, MN., USA. Platform presentation.

Nov 2013 **Tefft BJ**, Uthamaraj S, Harburn JJ, Klabusay M, Hlinomaz O, Holmes DJ, Simari RD, Dragomir-Daescu D, Sandhu GS (2013). Novel duplex steel stent enables nanoparticle mediated cell capture and demonstrates endothelialization at three days. *American Heart Association 2013*, Dallas, TX., USA. Platform presentation.

Sep 2013 **Tefft BJ**, Uthamaraj S, Harburn JJ, Klabusay M, Hlinomaz O, Holmes DJ, Simari RD, Dragomir-Daescu D, Sandhu GS (2013). Magnetic capture of endothelial cells to vascular stents. *Biomedical Engineering Society 2013*, Seattle, WA., USA. Platform presentation.

Apr 2013 **Tefft BJ**, Uthamaraj S, Gooden JY, Harburn JJ, Klabusay M, Hlinomaz O, Holmes DJ, Simari RD, Dragomir-Daescu D, Sandhu GS (2013). Magnetic capture of endothelial cells to vascular stents within an externally applied magnetic field. *Society for Biomaterials 2013*, Boston, MA., USA. Poster presentation.

Feb 2013 **Tefft BJ**, Uthamaraj S (2013). Magnetic stents for rapid endothelialization. *Cardiovascular Research Seminar*, Mayo Clinic, Rochester, MN., USA. Platform presentation.

May 2012 **Tefft BJ**, Gooden JY, Uthamaraj S, Harburn JJ, Holmes DJ, Simari RD, Dragomir-Daescu D, Sandhu GS (2012). Magnetizable duplex steel stents enable endothelial cell capture. *Scientific and Clinical Applications of Magnetic Carriers 2012*, Minneapolis, MN., USA. Platform presentation.

Mar 2012 Gooden JY, **Tefft BJ**, Uthamaraj S, Simari RD, Dragomir-Daescu D, Sandhu GS (2012). Magnetically endothelialized coronary stents. *Mayo Clinic Young Investigators Research Symposium 2012*, Mayo Clinic, Rochester, MN., USA. Poster presentation.

Sep 2011 **Tefft BJ** (2011). Molecular modulation of endothelial cell adhesion for vascular regeneration. *Department of Biomedical Engineering*

seminar, Northwestern University, Evanston, IL., USA. Platform presentation.

Jan 2011 **Tefft BJ**, Kopacz AM, Liu SQ, Liu WK (2011). Modeling of endothelial cell adhesion dynamics modulated by experimental molecular engineering. *National Science Foundation CMMI Engineering Research and Innovation Conference 2011*, Atlanta, GA., USA. Poster presentation.

Dec 2010 **Tefft BJ**, Kopacz AM, Liu WK, Liu SQ (2010). Molecular modulation of endothelial cell adhesion for vascular tissue engineering. *Tissue Engineering & Regenerative Medicine International Society North America Chapter 2010 Annual Conference*, Orlando, FL., USA. Poster presentation.

Oct 2010 **Tefft BJ**, Kopacz AM, Liu WK, Liu SQ (2010). Molecular modulation of endothelial cell adhesion for vascular tissue engineering. *Biomedical Engineering Society 2010 Annual Meeting*, Austin**,** TX., USA. Poster presentation.

Sep 2010 **Tefft BJ**, Kopacz AM, Liu WK, Liu SQ (2010). Molecular modulation of endothelial cell adhesion for vascular regeneration. *Annual Biomedical Engineering Research Day*, Northwestern University, Evanston, IL., USA. Platform presentation, first prize.

Jun 2010 **Tefft BJ**, Liu SQ (2010). Molecular modulation of endothelial cells for vascular regeneration. *Gore/BME Partnership Day*, Flagstaff, AZ., USA. Platform presentation, second prize.

Feb 2010 **Tefft BJ**, Kopacz AM, Liu WK, Liu SQ (2010). Molecular modulation of endothelial cell adhesion for vascular regeneration. *InNUvation Applied Research Day*, Evanston, IL., USA. Poster presentation, second prize.

Feb 2010 **Tefft BJ**, Kopacz AM, Liu WK, Liu SQ (2010). Knockdown of SHP-1 enhances endothelial cell retention for vascular regeneration. *ASME2010 First Global Congress on NanoEngineering for Medicine and Biology*, Houston, TX., USA. Platform presentation.

Sep 2009 **Tefft BJ**, Kopacz AM, Liu WK, Liu SQ (2009). Molecular modulation of endothelial cell adhesion for vascular regeneration. *Annual Biomedical Engineering Research Day*, Northwestern University, Evanston, IL., USA. Poster presentation, second prize.

Sep 2008 **Tefft BJ**, Liu SQ (2008). Molecular modulation of vascular endothelial cells for vascular regeneration. *Annual Biomedical Engineering Research Day*, Northwestern University, Evanston, IL., USA. Poster presentation.

Oct 2006 Tieche C, Alkema PK, **Tefft BJ**, Liu SQ (2006). Reduction of leukocyte adhesion to elastic laminae scaffolds by lactose-impregnation. *Biomedical Engineering Society 2006 Annual Meeting*, Chicago, IL., USA. Poster presentation.

Oct 2006 Alkema PK, Tieche C, **Tefft BJ**, Liu SQ (2006). Vascular smooth muscle cell migration in response to collagen and elastic laminae. *Biomedical Engineering Society 2006 Annual Meeting*, Chicago, IL., USA. Poster presentation.

Apr 2006 **Tefft BJ**, Tieche C, Alkema PK, Liu SQ (2006). Differentiation of endothelial cells from CD133+ bone marrow stromal cells and adhesion strength of SHP-1 knockdown endothelial cells for vascular regeneration. *Annual Biomedical Engineering Research Day*, Northwestern University, Evanston, IL., USA. Poster presentation.

Aug 2004 **Tefft BJ**, Boland T (2004). Application of stereolithography to organ printing. *Bioengineering and Bioinformatics Summer Institutes (BBSI) Annual Symposium*, Clemson University, Clemson, SC., USA. Platform presentation.

Aug 2004 **Tefft BJ**, Boland T (2004). Application of stereolithography to organ printing. *Bioengineering and Bioinformatics Summer Institutes (BBSI) Annual Symposium*, Clemson University, Clemson, SC., USA. Poster presentation.

INDUSTRY EXPERIENCE

May 2003 – Aug 2003 **MPC Products Corporation**, Skokie, IL.
Engineering Intern
Linear Actuation Group

- Assisted engineers in the linear actuation group
- Performed analytical stress analyses on linear actuator components
- Communicated analyses in a report for The Boeing Company
- Modeled parts with CAD software
- Designed and tested a tool to improve efficiency during manual fabrication

May 2001 – Jan 2003 **Highland Park Hospital**, Highland Park, IL.
Radiology Technician Aide
Radiology Department

- Assisted radiology technicians with clinical X-ray, CT scan, MRI, and ultrasound imaging

- Developed and copied radiographic films

RELEVANT SKILLS

Laboratory Techniques: cell culture, siRNA, immunocytochemistry, fluorescence microscopy, confocal microscopy, immunoblotting, flow cytometry, digital image analysis, animal implantation models, synthetic chemistry, biomechanical testing, electron microscopy, immunohistochemistry, bioreactor design, prototype medical device design, computational fluid dynamics (CFD), ELISA.

Computer Software: Excel, Word, PowerPoint, Access, AutoCAD, Inventor, SolidWorks, MathCAD, MatLab, MiniTab, ANSYS, AMBER, Quicken, Weasel, CellProfiler, ImageJ, SPSS, Photoshop, Dreamweaver, Acrobat, GraphPad Prism.

Computer Operating Systems: Windows, macOS, Unix.

Computer Languages: C, HTML, PHP, SQL, Visual Basic for Applications (VBA), MatLab

Machining Equipment: lathe, computerized milling machine, drill press, band saw, belt sander.