THE UNIVERSITY OF TEXAS AT AUSTIN
Cockrell School of Engineering
Standard Resume

FULL NAME: Aaron B. Baker **TITLE:** Associate Professor
DEPARTMENT: Biomedical Engineering
EID: ab39486

EDUCATION:

2010 Postdoctoral Fellow/Associate, Center for Biomedical Engineering, Massachusetts Institute of Technology, Cambridge, MA
2006 Ph.D. in Medical Engineering and Medical Physics, Massachusetts Institute of Technology-Harvard Medical School, Cambridge, MA
2002 S.M. in Biological Engineering, Massachusetts Institute of Technology, Cambridge, MA
1999 M.S.E. in Bioengineering, University of Washington, Seattle, WA
1999 B.S.E. in Bioengineering, University of Washington, Seattle, WA

CURRENT AND PREVIOUS ACADEMIC POSITIONS:

2015-pres. Associate Professor and Fellow of the Marion E. Forsman Centennial Professorship in Engineering, Department of Biomedical Engineering, University of Texas at Austin, Austin, TX
2010-2015 Assistant Professor, Department of Biomedical Engineering, University of Texas at Austin, Austin, TX

OTHER PROFESSIONAL EXPERIENCE:

2012-2014 Associate Scientific Advisor, *Science Translational Medicine*
2010-pres. Peer Reviewer for *Annals of Biomedical Engineering, Acta Biomaterialia, Atherosclerosis, Biomaterials, Circulation, Circulation Research, Journal of Mechanics in Medicine and Biology, Journal of Biomedical Materials Research, Journal of Molecular and Cellular Cardiology, Journal of Vascular Research, Lab-on-a-Chip, Proceedings of the National Academy of Sciences, Scientific Reports, Vascular Medicine, Nature Methods.*
2006-2010 Postdoctoral Fellow/Associate, Biomedical Engineering Center, Massachusetts Institute of Technology, Cambridge, MA
1999-2000 Associated Western Universities Intern at the Pacific Northwest National Laboratories (PNNL), Richland WA
1998-1999 Graduate Research Fellow, University of Washington, Seattle, WA

HONORS AND AWARDS:

- Moncrief Grand Challenge Award Winner, Institute for Computational Engineering and Sciences, UT Austin, 2015
- Selected as a one of twenty leading new investigators for the Frontiers in Bioengineering Workshop held at the Georgia Institute of Technology, 2013
- NIH Director's New Innovator Award, National Institutes of Health, 2011
- Nominated as Leading Texas Innovator by the Academy of Medicine, Engineering and Science of Texas (TAMEST), 2011
- 1st Place Award Panhellenic Cardiology Conference, Greece, 2010
- National Scientist Development Grant, American Heart Association, 2010

- 1st Place, Abstract Working Group Award at the European Society of Cardiology, Barcelona, Spain, 2009
- Philip Morris Postdoctoral Research Fellowship, 2007-2009
- Abstract Award at the Annual Conference of the Atherosclerosis Association of Northern Greece, Thessaloniki, Greece, 2009
- Led one of the top 5 teams in the biotechnology track of MIT 100K Business Plan Competition (out of a total of 232 teams), interim CEO for NeoCore Therapeutics, Inc., 2008
- Outstanding Abstract Award at the European Society of Cardiology, Munich, Germany, 2008
- 2nd Place Award in the Merck-BMES Poster Session, Cambridge, MA, 2007
- Whitaker Foundation Graduate Fellowship, 1998 – 2004
- Associated Western Universities Internship, 1999
- Outstanding Poster Award, Undergraduate Research Symposium, University of Washington, 1997
- Mary Gates Research Scholarship, 1997
- Howard Hughes Research Fellowship, 1996

Student Awards (Univ. of Texas):

- Collin Johnson, LifeTechnologies Award for Excellence in Public Health, Nutrition, or Biomedical Sciences Research ($500), UT Austin College of Natural Sciences, 2012
- Collin Johnson, College of Natural Sciences (CNS) Travel Grant ($500) to attend the Atherosclerosis, Thrombosis and Vascular Biology conference in Chicago, IL, 2012
- Collin Johnson, Health Sciences Fellowship from the American Heart Association ($4,000 in summer salary support), 2013
- Collin Johnson, College of Natural Sciences (CNS) Award for Excellence in Public Health, Nutrition, or Biomedical Sciences Research ($500), UT Austin College of Natural Sciences, 2014
- Peter Voyvodic, David Bruton, Jr. Graduate School Fellowship, 2013
- Peter Voyvodic, Best Poster Award from the Cardiovascular Biomaterials Special Interest Group of the Society for Biomaterials, 2014
- Gunjan Singh, Unrestricted Endowed Presidential Scholarship, 2013
- Gunjan Singh, first prize ($300) in the Intellectual Entrepreneurship Pre–Graduate School Internship Poster Competition, 2013
- Somali Chaterji, Atherosclerosis, Thrombosis and Vascular Biology Travel Award for Young Investigators, American Heart Association, 2013
- Anthony Monteforte, University of Texas at Austin Graduate School Fellowship
- Anthony Monteforte, Cockrell School of Engineering Doctoral Fellowship
- Anthony Monteforte, Poster Competition Finalist ($100), Biomaterials Day, Society for Biomaterials Regional Conference, 2014
- Subhamoy Das, Poster Competition Winner ($500), Biomaterials Day, Society for Biomaterials Regional Conference, 2014
- Subhamoy Das, Travel Award ($400), Biomedical Engineering Society Conference, 2014
- Subhamoy Das, Travel Award ($500), Atherosclerosis, Thrombosis and Vascular Biology Travel Award, American Heart Association Conference, 2014
- Adrianne Shearer, National Science Foundation Graduate Fellowship
- Andrew Sligar, UT Engineering Fellowship ($36,000), 2015
- Victoria Le, American Heart Association Graduate Fellowship, 2017 – Present
- Victoria Le, Graduate Dean's Prestigious Fellowship Supplement, 2017

- Jason Lee, Travel Award ($500), North American Vascular Biology Organization (NAVBO) Vascular Biology Conference, 2017

MEMBERSHIP IN PROFESSIONAL AND HONORARY SOCIETIES:

- American Chemical Society, 2016 – Present
- International Society for Stem Cell Research, 2015 – Present
- Wound Healing Society, 2014 – Present
- American Association for Cancer Research (AACR), 2014 – Present
- Society for Biomaterials, 2013 – Present
- American Association for the Advancement of Science, 2011 – Present
- American Society for Mechanical Engineers, 2011 – Present
- Biomedical Engineering Society, 2010 – Present
- American Society for Biochemistry and Molecular Biology, 2010 – Present
- American Heart Association, 2006 – Present
- American Society for Cell Biology, 2006 – Present
- Sigma Xi, 2006 – Present

UNIVERSITY COMMITTEE ASSIGNMENTS:

Department

- Undergraduate Curriculum Committee Chair, 2015 – Present
- Undergraduate Curriculum Committee Member, 2010 – Present
- Graduate Admissions Committee, 2010 – 2017
- UT BME Liaison for Medical Device Action Group, 2010 – 2014
- UT BME Graduate Studies Council Executive Committee, 2011 – 2015
- UT BME Strategic Planning Committee, 2014
- UT BME Grant Review Committee for Texas 4000 Foundation Seed Grants, 2014
- Qualifier Coordinating Committee, 2012 – 2013
- UT BME Grant Review Committee for Texas 4000 Foundation Seed Grants, 2012
- Hiring Committee for Assistant Director Position, 2011
- Chair of the BME Staff Excellence Committee, 2011

Cockrell School of Engineering

- Blue Ribbon Committee on Unified First Year Engineering Curriculum for the Cockrell School of Engineering, 2016 – Present
- CSE Equal Opportunity Committee, 2014 – Present
- CSE Accreditation and Assessment Committee, 2011 – 2014
- Department Chair Review Committee, 2013

College of Natural Sciences

- CNS Catalyst Grant Review Committee, 2017

Dell Medical School

- Full Member, Quantitative Research Program, LIVESTRONG Cancer Institutes, 2017 – Present

University

- Animal Resources Center Faculty Advisory Committee, 2016 – Present
- Reviewer, Undergraduate Research Fellowship (URF) Program, 2014 – Present

PROFESSIONAL SOCIETY AND MAJOR GOVERNMENTAL COMMITTEES:

Editorial Boards

- Associate Scientific Advisor, *Science Translational Medicine*, 2012 – 2014

Professional Society/Conference Organization

- Abstract Reviewer, Society for Biomaterials Conference, 2017
- Track Chair, Tissue Engineering Track, Biomedical Engineering Society Conference, 2017
- Session Chair, Vascular Tissue Engineering, NAVBO Vascular Biology Conference, 2017
- Organizing Chair, Southwest Regional Biomaterial's Day Conference, Society for Biomaterials, 2017
- Session Chair, Biomedical Engineering Society Conference: Mechanobiology of Cell Adhesion II Session, 2016
- Vice Chair, Cardiovascular Biomaterials Special Interest Group of Society for Biomaterials, 2014 – Present
- Program Chair, Southern Biomedical Engineering Society Conference: Cell and Tissue Engineering/Cell Adhesion and Biomechanics Track, 2012
- Abstract Reviewer, Southern Biomedical Engineering Society Conference, 2012
- Poster Professor, American Heart Association Scientific Sessions, 2013
- Abstract Reviewer, Biomedical Engineering Society Conference, 2014
- Abstract Reviewer, Society for Biomaterials Conference, 2014
- Session Chair, Biomedical Engineering Society Conference: Biomaterials Track, Therapeutic and Theranostic Biomaterials Session, 2014
- Session Chair, Biomedical Engineering Society Conference: Cardiovascular Biomechanics Poster Presentation Session, 2014
- Session Chair, Biomedical Engineering Society Conference: Heart Valves and Stents Poster Presentation Session, 2014

Review Committees

- NIH Review Panel for the Atherosclerosis and Inflammation of the Cardiovascular System (AICS) Study Section, 2018.
- NIH Review Panel for the NIH Support for Conferences and Scientific Meetings (Parent R13) program, 2017
- Department of Defense, Congressionally Directed Medical Research Program Grant Review Panel, 2017
- NIH Review Panel for the Molecular and Cellular Analysis Technology Development for Cancer Research Program (RFA-CA-16-002), 2017
- Grant Reviewer for ETH Zurich Research Commission, 2017
- Thesis Reviewer for Doctoral Students of the Engineering of Industrial Products and Processes program, University of Naples Federico II, Italy, 2017
- Grant Reviewer for University of Nebraska internal grant program, 2017
- Department of Defense, Congressionally Directed Medical Research Program Grant Review Panel, 2015
- American Heart Association Bioengineering/Biosciences Grant Review Panels (two per year), 2013 – Present
- NIH Review Panel for Vascular Interventions/Innovations and Therapeutic Advances (VITA) Program (BAA-NHLBI-CSV-HV-2013-02-JS), 2012
- Grant Reviewer for the Small Business Innovation Research (SBIR) Program for the South Carolina Experimental Program to Stimulate Competitive Research and Institutional Development Awards (EPSCoR/IDeA), 2012

- Journal Peer Review: *Annals of Biomedical Engineering, Acta Biomaterialia, Atherosclerosis, Biomaterials, Circulation, Circulation Research, Journal of Mechanics in Medicine and Biology, Journal of Biomedical Materials Research, Journal of Molecular and Cellular Cardiology, Journal of Vascular Research, Lab-on-a-Chip, Proceedings of the National Academy of Sciences, Scientific Reports.*

COMMUNITY ACTIVITIES/PUBLIC SERVICE:

- Baker AB, faculty mentor at the Women in Biomedical Engineering (WMBE) annual mentoring lunch (SP2015)
- Baker AB, Graduate and Industry Networking (GAIN) event hosted by the Graduate Engineering Council, Judge for Poster Session (SP2014)
- Baker AB, UT BME Graduate Undergraduate Research Union, Judge for Poster Session (SP2013)
- Baker AB, speaker for the Graduate Engineering Council's Lecture Series for graduate students applying to faculty positions (SP2012)
- Baker AB, speaker to new faculty at the Cockrell School of Engineering Orientation (F2012)
- Baker AB, speaker at the TriBeta Biology student honors society (F2012)
- Baker AB, panel speaker at Texas 4000 Cancer Speaker Series (F2012)
- Baker AB, speaker at Texas 4000 Foundation student meeting (F2012)
- Baker AB, speaker at T32 grant seminar for graduate students considering a postdoctoral position (F2012)
- Baker AB, speaker to parents at the UT Family Weekend (F2011)
- Baker AB, speaker for the Graduate Engineering Council's Lecture Series for graduate students applying to faculty positions (SP2011)
- Baker AB, speaker for the Graduate Engineering Council's Lecture Series for graduate students applying to faculty positions (F2011)
- Baker AB, speaker to new faculty at the Cockrell School of Engineering Orientation (F2011)
- Baker AB, speaker at symposium for research collaboration with Dell Children's Medical Center (SP2011)
- Baker AB, speaker at the Beta Mu Epsilon Honor Society meeting (F2010)
- Baker AB, panel speaker at a Graduate/Undergraduate Research Union (GURU) Pre-Graduate Lunch event (F2010)

PUBLICATIONS:

A. Refereed Archival Journal Publications

Published

1. Pottera S, Graves J, Drach B, Leahy T, Hammel C, Feng A, Baker AB, and Sacks MS, A Novel Small-Specimen Planar Biaxial Testing System with Full In-Plane Deformation Control. *J Biomech Eng*, 2017 (accepted; IF = 2.057).

2. Le C, Lee J, Chaterji S, Spencer A, Liu YL, Kim P, Yeh HC, Kim DH and Baker AB. Syndecan-1 in Mechanosensing of Nanotopological Cues in Engineered Materials. *Biomaterials*, 2017 (accepted; IF = 8.402).
3. Henderson K, Sligar AD, Le V, Lee J, Baker AB. Biomechanical Regulation of Mesenchymal Stem Cells for Cardiovascular Tissue Engineering. *Adv Healthc Mater,* 2017 (in press; IF = 5.76).
4. Monteforte A, Lam B, Sherman M, Henderson K, Sligar AD, Spencer A, Tang B, Dunn AK and Baker AB. Glioblastoma Exosomes for Therapeutic Angiogenesis in Peripheral Ischemia, *Tissue Engineering, Part A*, 2017 (ePub ahead of print; IF = 3.485).
5. Hsieh P-L, Rybalko V, Baker AB, Suggs LJ, Farrar RP. Recruitment and therapeutic application of macrophages in skeletal muscles following hind-limb ischemia. *Journal of Vascular Surgery*, 2017 (accepted; IF = 3.454).
6. Das S, Baker AB. Biomaterials and Nanotherapeutics for Enhancing Skin Wound Healing. *Front Bioeng Biotechnol* 4:82, eCollection, 2016.
7. Das S, Majid M, Baker AB. Syndecan-4 Enhances PDGF-BB Activity in Diabetic Wound Healing. *Acta Biomater* 15;42:56-65, 2016 (IF = 6.025).
8. Das S, Singh G, Majid M, Sherman MB, Mukhopadhyay S, Wright CS, Martin PE, Dunn AK and Baker AB. Syndesome Therapeutics for Enhancing Wound Healing in Diabetes. *Adv Healthc Mater* 5(17):2248-60*,* 2016 (IF = 5.797).
9. Monteforte AJ, Lam B, Das S, Mukhopadhyay S, Wright CS, Martin PE, Dunn AK, Baker AB. Glypican-1 nanoliposomes for potentiating growth factor activity in therapeutic angiogenesis. *Biomaterials* 94:45-56, 2016 (IF = 8.557).
10. Indolfi L, Ligorio M, Ting DT, Xega K, Tzafriri AR, Bersani F, Aceto N, Thapar V, Fuchs BC, Deshpande V, Baker AB, Ferrone CR, Haber DA, Langer R, Clark JW, Edelman ER. A tunable delivery platform to provide local chemotherapy for pancreatic ductal adenocarcinoma. *Biomaterials* 93:71-82, 2016 (IF = 8.557).
11. Das S, Monteforte AJ, Singh G, Majid M, Sherman MB, Dunn AK and Baker AB. Syndecan-4 Enhances Therapeutic Angiogenesis after Hind Limb Ischemia in Mice with Type 2 Diabetes. *Adv Healthc Mater* 5(9):1008-13, 2016 (IF = 5.797).
12. Spencer A, Baker AB. High Throughput Label Free Measurement of Cancer Cell Adhesion Kinetics Under Hemodynamic Flow. *Scientific Reports* 6, doi:10.1038/srep19854, 2016 (IF = 5.578).
13. Spencer A, Spruell C, Nandi S, Wong M, Creixell M, Baker AB. A high-throughput mechanofluidic screening platform for investigating tumor cell adhesion during metastasis. *Lab on a Chip* 16(1):142-152, 2015 (IF = 6.115).
14. Tu C, Das S, Baker AB, Zoldan J, Suggs LJ. Nanoscale strategies: treatment for peripheral vascular disease and critical limb ischemia. *ACS Nano* 9(4):3436-52, 2015 (IF = 12.881).
15. Le V, Johnson CG, Lee J, Baker AB. Murine Model of Femoral Artery Wire Injury with Implantation of a Perivascular Drug Delivery Patch. *Journal of Visualized Experiments* 96, 2015 (IF = 1.325).
16. Lee J, Baker AB. Computational Simulation of Fluid Flow within a Device for Applying Biaxial Strain to Cultured Cells. *Journal of Biomechanical Engineering* 137(5):051006*,* 2015 (IF = 2.085).

17. Voyvodic P, Min D, Liu R, Williams E, Chitalia V, Dunn A, Baker AB: Loss of Syndecan-1 Induces a Pro-Inflammatory Phenotype in Endothelial Cells with a Dysregulated Response to Atheroprotective Flow. *Journal of Biological Chemistry* 289(14):9547-59, 2014 (IF = 4.651).
18. Chaterji S, Lam C, Ho D, Gaddam N, Baker AB: Syndecan-1 Regulates Vascular Smooth Muscle Cell Phenotype. *PLoS One* 25;9(2):e89824, 2014 (IF = 3.730).
19. Chaterji S, Kim P, Choe SH, Tsui JH, Ho DS, Baker AB, Kim DH: Synergistic Effects of Matrix Nanotopography and Stiffness on Vascular Smooth Muscle Cell Function. *Accepted at Tissue Engineering, Part A*, 2014 (IF = 4.64).
20. Das S, Singh G, Baker AB: Overcoming Disease-Induced Growth Factor Resistance in Therapeutic Angiogenesis Using Recombinant Co-Receptors Delivered by a Liposomal System. *Biomaterials*, 35(1):196-205, 2014 (IF = 7.604).
21. Koskinas K, Chatzizisis Y, Papafaklis M, Coskun A, Baker AB, Jarolim P, Antoniadis A, Edelman E, Stone P, Feldman C: Synergistic Effect of Local Endothelial Shear Stress and Systemic Hypercholesterolemia on Coronary Atherosclerotic Plaque Progression and Composition in Pigs. *International Journal of Cardiology*, 169(6):394-401, 2013 (IF = 5.509).
22. Lee J, Wong M, Smith Q, Baker AB: A novel system for studying mechanical strain waveform-dependent responses in vascular smooth muscle cells. *Lab on a Chip*, 13(23):4573-82, 2013 (IF = 6.115).
23. Koskinas KC, Sukhova GK, Baker AB, Papafaklis MI, Chatzizisis YS, Coskun AU, Quillard T, Jonas M, Maynard C, Antoniadis AP, Shi P, Libby P, Edelman ER, Feldman CL, Stone PH: Thin-Capped Atheromata with Reduced Collagen Content in Pigs develop in Coronary Arterial Regions Exposed to Persistently Low Endothelial Shear Stress. *Arteriosclerosis, Thrombosis, and Vascular Biology*, 33(7):1494-504, 2013 (IF = 6.368).
24. Spruell C, Baker AB: Analysis of a High-Throughput Cone-and-Plate Apparatus for the Application of Defined Spatiotemporal Flow to Cultured Cells. *Biotechnology and Bioengineering*, 110(6):1782-93, 2013 (IF = 3.946).
25. Voyvodic P, Min D, Baker AB: A Multichannel Dampened Flow System for Studies on Shear Stress-Mediated Mechanotransduction. *Lab on a Chip* 12(18):3322-30, 2012 (IF = 6.620).
26. Indolfi L, Baker AB, Edelman ER: The Role of Scaffold Microarchitecture in the Regulation of Endothelial Cell-Mediated Immunomodulation. *Biomaterials* 33(29):7019-27, 2012 (IF = 7.882).
27. Baker AB, Gibson W, Kolachalama VB, Golumb M, Indolfi L, Spruell C, Zcharia E, Vlodavsky I, Edelman ER: Heparanase Regulates the Thrombosis in Vascular Injury and Stenting. *Journal of American College of Cardiology* 59(17):1551-60, 2012 (IF = 14.292).
28. Jang E, Abawadi H, Watkins M, Edelman ER, Baker AB: Syndecan-4 Proteoliposomes Enhance FGF-2 Induced Proliferation, Migration and Neovascularization of Ischemic Muscle. *Proceedings of the National Academy of Science* USA Jan 31;109(5):1679-84, 2012 (IF = 9.771).
29. Franses JW, Baker AB, Chitalia VC, Edelman ER: Stromal Endothelial Cells Directly Regulate Cancer Phenotype. *Science: Translational Medicine* 3(66):66ra5, 2011 (IF = 3.511).

30. Chatzizisis YS*, Baker AB*, Beigel R, Jonas M, M, Coskun AU, Stone BV, Maynard C, Gerrity RG, Feldman CL, Stone PH, and Edelman ER: Augmented expression and activity of extracellular matrix-degrading enzymes in regions of low endothelial shear stress colocalize with coronary atheromata with thin fibrous caps in pigs. *Circulation* 123(6):621-30, 2011 (IF = 14.595).
31. Shazly TZ, Baker AB, Naber J, Bon A, Edelman ER: Doping with DOPA enhances the wet adhesion of hydrogel-based surgical sealants. *Journal of Biomedical Materials Research A* 95(4):1159-69, 2010 (IF = 3.044).
32. Baker AB, Chatzizisis YS, Beigel R, Jonas M, Stone BV, Coskun AU, Maynard C, Rogers C, Feldman CL, Stone PH and Edelman ER: Regulation of heparanase expression in coronary artery disease in diabetic, hyperlipidemic swine. *Atherosclerosis* 213(2):436-42, 2010 (IF = 4.086).
33. Koskinas KC, Feldman CL, Chatzizisis YS, Coskun AU, Jonas M, Maynard C, Baker AB, Edelman ER and Stone PH. Natural History of Experimental Coronary Atherosclerosis and Vascular Remodeling In Relation to Endothelial Shear Stress: A Serial, In-Vivo Intravascular Ultrasound Study. *Circulation* 121(19):2092-101, 2010 (IF = 14.595).
34. Koskinas KC, Chatzizisis YS, Baker AB, Edelman ER, Stone PH and Feldman CL: The role of low endothelial shear stress in the conversion of atherosclerotic lesions from stable to unstable plaque. *Current Opinion in Cardiology* 24(6):580-90, 2009 (IF = 2.736).
35. Artzi N, Shazly TZ, Baker AB, Bon A, Edelman ER. Aldehyde-Amine Chemistry Enables Modulated Biosealants with Tissue-Specific Adhesion. *Advanced Materials* 21, 3399–3403, 2009 (IF = 10.880).
36. Mobine HR, Baker AB, Wang L, Wakimoto H, Jacobsen KC, Seidman CE, Seidman JG, and Edelman ER: Pheochromocytoma-Induced Cardiomyopathy is Modulated by the Synergistic Effects of Cell-Secreted Factors. *Circulation: Heart Failure* 2:121-128, 2009 (IF = 4.315).
37. Baker AB, Groothuis A, Jonas M, Ettenson DS, Shazly T, Zcharia E, Vlodavsky I, Seifert P and Edelman ER: Heparanase Alters Arterial Structure, Mechanics and Repair Following Endovascular Stenting in Mice. *Circulation Research* 104(3):380-7, 2009 (IF = 9.504).
38. Chatzizisis YS, Jonas M, Beigel R, Coskun AU, Baker AB, Stone BV, Maynard C, Gerrity RG, Daley W, Edelman ER, Feldman CL, Stone PH: Attenuation of inflammation and expansive remodeling by Valsartan alone or in combination with Simvastatin in high-risk coronary atherosclerotic plaques. *Atherosclerosis* 203(2):387-394, 2009 (IF = 4.086).
39. Baker AB, Ettenson DS, Jonas M, Nugent MA, Iozzo RV, Edelman ER: Endothelial cells provide feedback control for vascular remodeling through a mechanosensitive autocrine TGF-beta signaling pathway. *Circulation Research* 103(3):289-97, 2008 (IF = 9.504).
40. Jonas M, Edelman ER, Groothuis A, Baker AB, Seifert P, and Roger C: Vascular neointimal formation and signaling pathway activation in response to stent injury in insulin-resistant and diabetic animals. *Circulation Research* 97(7):725-733, 2005 (IF = 9.504).
41. Sanders JE, Baker AB, and Golledge SL: Control of in vivo microvessel ingrowth by modulation of biomaterial local architecture and chemistry. *Journal of Biomedical Materials Research* 60(1):36-43, 2002 (IF = 3.044).
42. Baker AB and Sanders JE: Angiogenesis stimulated by mechanical loading. *Microvascular Research*, 60(2):177-181, 2000 (IF = 2.390).

43. Sanders JE, Zachariah SG, Baker AB, Greve JM, and Clinton C: Effects of changes in cadence, prosthetic componentry, and time on interface pressures and shear stresses of three trans-tibial amputees. *Clinical Biomechanics*, 15(9):684-694, 2000 (IF = 2.036).
44. Gerber MA, Schmidt AJ, Delegard CH, Silvers KL, Baker AB, Gano SR, and Thornton BM. Evaluation of the Magnesium Hydroxide Treatment Process for Stabilizing PFP Plutonium/Nitric Acid Solutions. PNNL-13330, Pacific Northwest National Laboratory, Richland, WA, 2000.
45. Baker AB and Sanders JE. Fluid mechanics analysis of a spring-loaded jet injector. *IEEE Transactions on Biomedical Engineering* 46(2):235-42, 1999 (IF = 1.782).
46. Sanders JE, Zachariah SG, Greve JM, Baker AB, and Clinton C: Interface mechanics in lower-limb prosthetics: Experimental measurements and finite element modeling. *Rehabilitation R&D Progress Reports*, pp. 28-29, 1997.

* indicates co-first authorship.

B. Refereed Conference Proceedings

1. Le VP, Lee J, Chaterji S, Spencer A, Liu YL, Kim P, Yeh HC, Kim DH and Baker AB. Syndecan-1 in Mechanosensing of Nanotopological Cues. Society for Biomaterials Conference, 2018 (podium talk).
2. Takematsu E, Austin J, Singh A, Chen PC, Canga S, Sherman M, DeGroot A, Dunn AK, Baker AB. Transmembrane Stem Cell Factor Protein Therapy for Peripheral Vascular Disease using Novel Lipid Carriers. Society for Biomaterials Conference, 2018 (podium talk).
3. Garcia GA, Spencer A, Baker AB. Mechanical Strain Increases Yap/Taz Nuclear Localization and Chemoresistance in Breast Cancer Cells. BUILDing SCHOLARS Symposium, 2017.
4. Spencer A, Lee J, Chavarria D, Choksi D, Baker AB. Cyclic Mechanical Strain Regulates Cancer Drug Resistance and Metastatic Potential. Innovations in Cancer Prevention and Research Conference, Cancer Prevention and Research Institution of Texas, 2017.
5. Lee J, Henderson K, Pablo M, Armenta-Ochoa M, Yoon E, Samarneh L, Veith A, Wong M, Dunn A, and Baker AB. Combined Biomechanical and Pharmacological Conditioning of Mesenchymal Stem Cells for Enhancing Therapeutic Angiogenesis. American Heart Association Scientific Sessions, 2017 (podium talk).
6. Sligar AD, Le V, Lee J, Deb C, Baker AB. Biomechanical Regulation of Stem Cell Differentiation for Vascularized Tissue Regeneration. NAVBO Vascular Biology Conference, 2017.
7. Lee J, Henderson K, Pablo M, Armenta-Ochoa M, Yoon E, Samarneh L, Veith A, Wong M, Dunn A, and Baker AB. Enhanced Therapeutic Angiogenesis of Mesenchymal Stem Cells Through Combined Mechanotransduction and Pharmacological Conditioning. NAVBO Vascular Biology Conference, 2017.
8. Garcia GA, Spencer A, Baker AB. In Vitro Effect of Mechanical Strain in Breast Cancer Cells. Biomedical Engineering Society Conference, 2017.
9. Spencer A, Lee J, Chavarria D, Lee K, Choksi D, and Baker AB. Biophysical Regulation of

Breast Cancer Metastasis. Biomedical Engineering Society Conference, 2017 (podium talk).

10. Lee J, Henderson K, Pablo M, Armenta-Ochoa M, Yoon E, Samarneh L, Veith A, Wong M, Dunn A, and Baker AB. Optimized Biomechanical and Pharmacological Conditioning of Mesenchymal Stem Cells for Enhancing Therapeutic Angiogenesis. Biomedical Engineering Society Conference, 2017 (podium talk).

11. Lee J, Henderson K, Pablo M, Armenta-Ochoa M, Yoon E, Samarneh L, Veith A, Wong M, Dunn A, and Baker AB. Biomechanical and Pharmacological Conditioning of Mesenchymal Stem Cells for Enhancing Therapeutic Angiogenesis. 7th NHLBI Cardiovascular Regenerative Medicine Symposium, 2017.

12. Sligar AD, Le V, Lee J, Deb C, and Baker AB. Biomechanical Regulation of Stem Cell Differentiation for Vascularized Tissue Regeneration. Biomaterials Day Conference of the Society for Biomaterials, 2017.

13. Spencer A, Lee J, Chavarria D, Lee K, Choksi D, and Baker AB. Biophysical Regulation of Breast Cancer Metastasis. Biomaterials Day Conference of the Society for Biomaterials, 2017.

14. Le V, Lee J, Chaterji S, SpencerA, Liu YL, Kim P, Yeh HC, Kim DH, and Baker AB. Syndecan-1 in Mechanosensing of Nanotopological Cues in Engineered Materials. Biomaterials Day Conference of the Society for Biomaterials, 2017.

15. Lee J, Deb C, Sligar A, Crosby C, and Baker AB. Biomechanical Regulation of Human Mesenchymal Stem Cell Differentiation into Vascular Phenotypes. International Society for Stem Cell Research Conference, 2016.

16. Spencer A, Lee J, Lee L, Choksi D, Wang J, Spruell C, and Baker AB. Biomechanical Regulation of Breast Cancer Metastasis. Engineering and Physical Sciences in Oncology, American Society for Cancer Research Conference, 2016.

17. Monteforte AJ, Lam B, Das S, Mukhopadhyay S, Wright CS, Martin PE, Dunn AK, Baker AB. Glypisomes, a novel construct for enhancing angiogenic response to delivered growth factors, 10th World Biomaterials Congress, 2016 (podium talk).

18. Lee J, Deb C, Sligar A, Crosby C, and Baker AB. Biomechanical Regulation of Human Mesenchymal Stem Cell Differentiation into Vascular Phenotypes. International Society for Stem Cell Research Conference, 2016.

19. Shearer A, Le V, Spruell C, Nandi S, Creixell M, Baker AB. Mesofluidic Platform for High Throughput Screening for Inhibitors of Metastasis. American Society for Cancer Research Conference, 2015.

20. Das S, Singh G, Monteforte AJ, Martinez ME, Wright C, Martin P, Dunn AK, Baker AB. Syndesome-Based Dressings for Enhanced Wound Healing in Diabetic Ulcers. Atherosclerosis, Thrombosis and Vascular Biology Conference, 2015 (podium talk).

21. Das S, Singh G, Monteforte AJ, Martinez ME, Wright C, Martin P, Dunn AK, Baker AB. A Syndecan-4 Based Therapeutic for Effective Revascularization in Peripheral Ischemia in Diabetes. Atherosclerosis, Thrombosis and Vascular Biology Conference, 2015.

22. Das S, Singh G, Monteforte AJ, Martinez ME, Dunn AK, Baker AB. Syndesome-Based Alginate Dressings for Enhanced Wound Healing in a Diabetic Mouse Model. Wound

Healing Society Conference, 2015 (podium talk).

23. Das S, Singh G, Monteforte AJ, Martinez ME, Dunn AK, Baker AB. Syndesome-Based Alginate Dressings for Enhanced Wound Healing in a Diabetic Mice Model. Society for Biomaterials Conference, 2015 (podium talk).
24. Das S, Singh G, Monteforte AJ, Martinez ME, Dunn AK, Baker AB. Syndesomes Microencapsulated in Alginate for Revascularization in Peripheral Ischemia. Society for Biomaterials Conference, 2015 (accepted for podium talk).
25. Monteforte AJ, Lam B, Dunn A, Baker AB. Glypisomes: A Novel Construct for Enhancing Angiogenic Activity of Delivered Growth Factors. Society for Biomaterials Conference, 2015 (accepted for podium talk).
26. Das S, Singh G, Monteforte AJ, Martinez ME, Dunn AK, Baker AB. Syndesomes: Novel Therapeutics for Chronic Ulcers and Peripheral Ischemia. American Heart Association Scientific Sessions, 2014.
27. Chaterji S, Kim P, Lee HJ, Gupta K, Lee J, Baker AB, Kim DH, The Combined Effect of Matrix Stiffness and Nanotopography on the Regulation of Vascular Smooth Muscle Cell Function. Biomedical Engineering Society Conference, 2014.
28. Yu P, Liu YL, Hsu A, Voyvodic PL, Baker AB, Yeh HC. High Resolution Particle-Tracking Microrheology In Endothelial Cells And Glycocalyx Layer. Biomedical Engineering Society Conference, 2014.
29. Singh G, Das S, Martinez M, Dunn AK, Baker AB. Syndesomes Enhance Cutaneous Wound Healing in Diabetic Mice. Biomedical Engineering Society Conference, 2014.
30. Mahajan S, Singh G, Nunez E, Das S, Baker AB. The Role of Heparanase in a Diabetic Mouse Model. Biomedical Engineering Society Conference, 2014.
31. Ilbeig S, Singh G, Das S, Baker AB. Effect of C-Kit And KDR Stem Cell Markers on PDGFR-α in a Diabetic Mouse Myocardium. Biomedical Engineering Society Conference, 2014.
32. Lee J, Smith Q, Baker AB. Computational Model of Fluid Flow During Cyclic Mechanical Loading of Cultured Cells. Biomedical Engineering Society Conference, 2014.
33. Lee J, Jansson J, Smith Q, Wong M, Yoon E, Baker AB. HT-MBOSS: A High-Throughput System for Studying Cellular Mechanobiology. Biomedical Engineering Society Conference, 2014.
34. Shearer A, Le V, Spruell C, Nandi S, Creixell M, Baker AB. A High Throughput Platform for Assaying Cancer Cell Adhesion under Physiologic Flow. Biomedical Engineering Society Conference, 2014.
35. Das S, Monteforte A, Singh G, Martinez ME, Dunn A, Baker AB. Syndesomes: A Novel Therapy For Peripheral Ischemia. Biomedical Engineering Society Conference, 2014 (podium talk).
36. Das S, Singh G, Martinez ME, Dunn A, Baker AB. Syndesomes-Based Therapeutic for Enhanced Wound Healing in Diabetic Mice. Biomedical Engineering Society Conference, 2014 (podium talk).

37. Monteforte AJ, Lam B, Dunn A, Baker AB. Glypisomes: A Novel Construct for Enhancing of Growth Factor Activity for Therapeutic Angiogenesis. Biomedical Engineering Society Conference, 2014 (podium talk).
38. Le V, Baker AB. The Role of Heparanase in Aneurysm Development and Cardiac Function. Biomedical Engineering Society Conference, 2014 (podium talk).
39. Voyvodic PL, Williams E, Liu R, Min D, and Baker AB. Syndecan-1 Mediates Endothelial Shear Mechanotransduction Response and Inflammatory Phenotype. Biomedical Engineering Society Conference, 2014.
40. Monteforte AJ, Lam B, Dunn A, Baker AB. Glypisomes: Novel Construct for Enhancing the Angiogenic Effect of Delivered Growth Factors. Biomaterials Day, Society for Biomaterials Regional Conference, 2014 (podium talk).
41. Das S, Singh G, Martinez ME, Dunn A, Baker AB. Syndesome-Based Dressings for Enhanced Wound Healing in Diabetic Mice. Biomaterials Day, Society for Biomaterials Regional Conference, 2014 (podium talk).
42. Das S, Monteforte A, Singh G, Martinez ME, Dunn A, Baker AB. Syndesomes: Novel Strategy to Treat Peripheral Ischemia. Biomaterials Day, Society for Biomaterials Regional Conference, 2014 (podium talk).
43. Indolfi L, Iaconetti C, Monteforte A, Dunn A, Baker AB, Indolfi C, Edelman ER. Harnessing Cell:Materials Interactions to Develop Innovative Strategy for the Recruitment of Progenitor Cells. Society for Biomaterials, 2014 (podium talk).
44. Das S, Singh G, Martinez ME, Baker AB. Syndecan-4 Proteoliposomes Enhance Cutaneous Wound Healing and Induce Neovascularization in Ischemic Limb in a Diabetic Hyperlipidemic Mouse. Society for Biomaterials, 2014 (podium talk).
45. Voyvodic P, Min D, Liu R, Williams E, Baker AB. Syndecan-1 Modulates the Endothelial Shear Mechanotransduction Response and Inflammatory Phenotype. Society for Biomaterials, 2014.
46. Lee J, Wong M, Smith Q, and Baker AB, Graduate and Industry Networking (GAIN) Conference, UT Austin, 2014.
47. Chaterji S, Gaddam NG, Atyam N, Ho DS, Baker AB. Synstatin: A Peptide-Based Switch to Alter the Phenotype of Vascular Smooth Muscle Cells. American Heart Association Conference, 2013.
48. Johnson CG, Bondada V, Yeager D, Emelianov S, Baker AB. Heparanase Alters Endothelial Phenotype, Leukocyte Attachment and Atherosclerotic Plaque Formation. Rice Undergraduate Symposium, 2013.
49. Chaterji S, Gaddam NG, Atyam N, Ho DS, Baker AB. The Edge Effect: How Syndecan-1 Can Increase the Therapeutic Efficacy of Vasoregulatory Drugs and Growth Factors. Arteriosclerosis, Thrombosis, and Vascular Biology Conference, 2013.
50. Johnson CG, Bondada V, Yeager D, Emelianov S, Baker AB. Heparanase Alters Endothelial Phenotype, Leukocyte Attachment and Atherosclerotic Plaque Formation. Arteriosclerosis, Thrombosis, and Vascular Biology Conference, 2013.
51. Voyvodic PL, Min D, Liu R, Williams E, Baker AB. Syndecan-1 Regulates Mechanotransduction Pathways in Endothelial Cells in Response to Shear Stress. Frontiers in Bioengineering Workshop, Georgia Institute of Technology, 2013.

52. Indolfi L, Das S, Jang E, Albadawi H, Watkins MT, Edelman ER and Baker AB. Engineering Effective Revascularization Technologies for Ischemia in Diseased States. Massachusetts Institute of Technology (MIT) Sloan Bioinnovations Conference, 2013.
53. Baker AB, Syndecan-1 as a Mediator of Vascular Mechanobiology, Vascular Biology Symposium of Instituto do Coração, Brazil, 2013.
54. Baker AB, Syndecan-1 as a Mediator of Vascular Mechanobiology, Federacao de Sociedades de Biologia Experimental (FeSBE), Brazil, 2013.
55. Singh G, Das S, Baker AB, Analysis of the Angiogenic Pathway in a Diseased State. Intellectual Entrepreneurship Pre-Grad internship poster competition, UT Austin, 2013.
56. Singh G, Das S, Baker AB, Analysis of the Angiogenic Pathway in a Diseased State. Poster Exhibition and Engineering Research Symposium (PEERS), UT Austin, 2013.
57. Lee JD, Baker AB, Local Drug Delivery of Heparanase Inhibitors via a Perivascular Cuff. University of Texas System MD-PhD Retreat, 2013.
58. Das S, Singh G, Baker AB, Alleviation of Disrupted Growth Factor Signaling in a Diabetic Mouse Model. Biomedical Engineering Society Conference, 2013.
59. Baker AB, Reengineering Growth Factor Signaling in Ischemic Disease, Biomaterials Day, Society for Biomaterials Regional Conference, 2013.
60. Voyvodic P, Min D, Liu R, Williams E, Baker AB. Syndecan-1 Regulates Mechanotransduction Pathways in Endothelial Cells in Response to Shear Stress. Biomedical Engineering Society Conference, 2013.
61. Monteforte A, Baker AB, Glypican-1 Proteoliposomes Enhance Angiogenic Activity of Delivered Growth Factors. Biomedical Engineering Society Conference, 2013.
62. Lee J, Wong M, Smith Q, Baker AB. A Flexible System for Studying Mechanical Stretch Waveform-Mediated Signaling in Vascular Cells. Biomedical Engineering Society Conference, 2013.
63. Chaterji S, Kim P, Lee HJ, Gupta K, Lee J, Baker AB, and Kim DH. The combined effect of matrix stiffness and nanotopography on the regulation of vascular smooth muscle cell function. Biomedical Engineering Society Conference, 2013.
64. Singh G, Das S, Baker AB, Analysis of the Angiogenic Pathway in a Diseased State. Undergraduate Research Symposium, UT Austin, 2013.
65. Baker AB, Reengineering Growth Factor Signaling in Ischemic Disease. NIH Director's Pioneer Award Symposium, 2012.
66. Voyvodic PL, Min D, Liu R, Williams E, Baker AB, Syndecan-1 Regulates Shear Stress-induced Mechanotransduction Pathways in Endothelial Cells, Biomedical Engineering Conference, 2012.
67. Voyvodic PL, Min D, Baker AB, Syndecan-1 Regulates Shear Stress-Induced Alterations in Endothelial Cell Morphology and Cytoskeletal Rearrangement, Southern Biomedical Engineering Conference, 2012.
68. Papafaklis MI, Koskinas KC, Antoniadis AP, Baker AB, Sukhova GK, Coskun AU, Takahashi S, Stone PH, Feldman CL, Edelman ER, Early inhibitory drug effect on the expression of pro-inflammatory and pro-oxidant genes in coronary regions of low endothelial shear stress: an in vivo study in diabetic hyperlipidemic juvenile swine, European Society of Cardiology Congress, 2012.

69. Koskinas KC, Chatzizisis YS, Papafaklis MI, Baker AB, Coskun AU, Jonas M, Antoniadis A, Edelman ER, Feldman CL, Stone PH. Incremental effect of hypercholesterolemia on coronary plaque progression and high-risk composition despite similarly low local endothelial shear stress (ESS), European Society of Cardiology Congress, 2012.
70. Antoniadis AP, Papafaklis MI, Chatzizisis YS, Sukhova GK, Baker AB, Coskun AU, Takahashi S, Edelman ER, Stone PH, Feldman CL, Adventitial inflammation is associated with thin-cap atheromas and expression of matrix-degrading enzymes and occurs in coronary regions exposed to low endothelial shear stress, European Society of Cardiology Congress, 2012.
71. Papafaklis MI, Koskinas KC, Sukhova GK, Baker AB, Antoniadis AP, Coskun AU, Franses JW, Takahashi S, Edelman ER, Stone PH, Feldman CL. Early drug-induced inhibition of proatherogenic genes in coronary regions of low endothelial shear stress in diabetic hyperlipidemic juvenile swine. Arteriosclerosis, Thrombosis, and Vascular Biology Conference, 2012.
72. Chaterji S, Lam C, Goel R, and Baker AB, Loss of Syndecan-1 Results in De-differentiation of Vascular Smooth Muscle Cells, AHA Scientific Sessions, 2012.
73. Johnson CG, Graf IM, Emelianov S, Baker AB. Role of Heparanase in Atherosclerotic Plaque Formation, Arteriosclerosis, Thrombosis, and Vascular Biology Conference, 2012.
74. Baker AB, Gibson WJ, Kolachalama VB, Golomb M, Indolfi L, Edelman ER. Heparanase Regulates the Thrombotic Potential of Vascular Injury and Stent Placement. Arteriosclerosis, Thrombosis, and Vascular Biology Conference, 2012.
75. Koskinas KC, Papafaklis MI, Baker AB, Chatzizisis YS, Coskun AU, Jonas M, Edelman ER, Feldman CL, Stone PH. Pronounced Smooth Muscle Cell Apoptosis in Coronary Regions of Low Endothelial Shear Stress Co-localizes with Features of Atherosclerotic Plaque Vulnerability: A Natural History Study in Diabetic, Hypercholesterolemic Pigs. Arteriosclerosis Thrombosis and Vascular Biology Conference, 2011.
76. Das S, Jang E, Albadawi H, Watkins MT, Edelman ER, Baker AB. Syndecan-4 Proteoliposomes Enhance FGF-2 Induced Proliferation, Migration and Neovascularization of Ischemic Muscle, American Heart Association Scientific Sessions, 2011.
77. Voyvodic P and Baker AB. Syndecan-1 Mediates Endothelial Cell Mechanotransduction in Response to Shear Stress. Biomedical Engineering Society Conference, 2011.
78. Das S, Baker AB. Engineering effective revascularization technologies for ischemia in diseased states. Biomedical Engineering Society Conference, 2011.
79. Indolfi L, Baker AB, Edelman ER. Endothelial Cell -Substratum Interactions Control Monocyte Adhesion through an Src and MCP-1 Mediated Pathway. Society for Biomaterials Annual Conference, 2011.
80. Koskinas KC, Sukhova GK, Baker AB, Chatzizisis YS, Papafaklis MI, Coskun AU, Jonas M, Shi GP, Libby P, Edelman ER, Stone PH, Feldman CL. Coronary Thin-Capped Atheromata Exhibit Increased Expression of Interstitial Collagenases in Regions of Persistently Low Endothelial Shear Stress: A Serial, in vivo Natural History Study in Pigs. American Heart Association Scientific Sessions, Nov., 2010.
81. Chatzizisis YC, Baker AB, Sukhova GK, Koskinas KC, Jonas M, Beigel R, Coskun A, Maynard C, Shi GP, Libby P, Edelman ER, Stone P, Feldman C. Local hemodynamic,

histopathologic and molecular mechanisms responsible for the evolution of atheromata with thin fibrous caps. Arteriosclerosis, Thrombosis and Vascular Biology, 2010.

82. Koskinas KC, Baker AB, Chatzizisis YS, Coskun AU, Jonas M, Papafaklis MI, Edelman ER, Stone PH, Feldman CL. Augmented vascular smooth muscle cell dedifferentiation in coronary regions of persistently low endothelial shear stress co-localize with thin cap fibroatheromata in pigs, European Society of Cardiology, 2010.
83. Baker AB, Chitalia V, Steyer B, Hirji S, Edelman ER. The role of syndecan-1 in arterial mechanotransduction. Experimental Biology Meeting, 2010.
84. Chatzizisis YS, Baker AB, Sukhova G, Koskinas K, Jonas M, Beigel R, Coskun AU, Stone BV, Maynard C, Shi GP, Libby P, Edelman ER, Stone PH, Feldman CL. Local hemodynamic, histopathologic and molecular mechanisms responsible for the evolution of atheromata with thin fibrous caps. Arteriosclerosis Thrombosis and Vascular Biology Conference, 2010.
85. Koskinas KC, Baker AB, Sukhova G, Chatzizisis YA, Coskun AU, Papafaklis M, Jonas M, Stone PH, Feldman CL, Edelman ER. Persistently Low Endothelial Shear Stress Promotes Smooth Muscle Cell Dedifferentiation and High-Risk Coronary Plaque Formation: A Serial, Intravascular Ultrasound and Histopathology Natural History Study. Arteriosclerosis Thrombosis and Vascular Biology Conference, 2010.
86. Baker AB, Gibson W, Kolachalama VB, Golumb M, Indolfi L, Zcharia E, Vlodavsky I, Edelman ER. Heparanase Regulates the Thrombosis in Vascular Injury and Stenting. American Heart Association Scientific Sessions. 2009 (podium talk).
87. Koskinas KC, Coskun AU, Chatzizisis YS, Jonas M, Baker AB, Edelman ER, Stone PH, Feldman CL. Combined in-vivo Assessment of Endothelial Shear Stress and Arterial Remodeling for the Prediction of High-Risk Plaque Formation: A Serial, Natural History IVUS Study. American Heart Association Scientific Sessions, 2009.
88. Koskinas KC, Chatzizisis YS, Coskun AU, Jonas M, Baker AB, Edelman ER, Feldman CL, Stone PH. Arterial Remodeling Determines the Local Hemodynamic Environment and Subsequent Progression of Coronary Atherosclerotic Plaques: A Serial, Natural History Intravascular Ultrasound Study. American Heart Association Scientific Sessions, 2009.
89. Chatzizisis YS, Baker AB, Sukhova GK, Beigel R, Jonas M, Coskun AU, Libby P, Feldman CL, Stone PH, Edelman ER. Augmented expression of extracellular matrix-degrading enzymes by low endothelial shear stress (ESS) promotes the formation of coronary atheromata with thin fibrous caps. European Society for Cardiology, 2009.
90. Chatzizisis YS, Koskinas K, Jonas M, Coskun AU, Baker AB, Edelman ER, Stone PH, Feldman CL. Synergistic role of local Endothelial Shear Stress (ESS) with hyperlipidemia in the formation and progression of atherosclerotic lesions. European Society for Cardiology, 2009.
91. Baker AB, Chatzizisis YS, Beigel R, Jonas M, Stone BV, Coskun AU, Daley W, Maynard C, Gerrity RG, Rogers C, Feldman CL, Stone PH, Edelman ER, Heparanase expression in the development of thin cap fibroatheromas (TCFAs): effects of plaque stage, endothelial shear stress, and pharmacologic interventions. Arteriosclerosis, Thrombosis and Vascular Biology Annual Conference, 2008.
92. Chatzizisis YS, Baker AB, Beigel R, Jonas M, Coskun AU, Stone BV, Maynard C, Gerrity R, Edelman ER, Stone PH, Feldman CL, Low endothelial shear stress upregulates extracellular matrix degrading enzymes and promotes the formation of thin cap

fibroatheromas in the coronary arteries. Arteriosclerosis Thrombosis and Vascular Biology Conference, 2008.

93. Chatzizisis YS, Beigel R, Baker AB, Jonas M, Coskun AU, Stone BV, Maynard C, Gerrity R, Edelman ER, Feldman CL, Stone PH, Attenuation of the expression of matrix proteases and expansive remodeling in coronary atherosclerotic plaques by valsartan (V) alone or in combination with simvastatin (S). Arteriosclerosis Thrombosis and Vascular Biology Conference, 2008.

94. Beigel R, Jonas M, Chatzizisis Y, Baker AB, Coksun U, Rogers C, Daley W, Feldman C, Stone P, Edelman ER, Attenuation of the Expression of Matrix Metalloproteinases (MMPs) in Coronary Thin Cap Fibroatheromas (TCFAs) by Valsartan Alone or in Combination with Simvastatin. The 55th Annual Conference of the I.H.S and the I.S.C.S, Haifa, Israel, 2008.

95. Baker AB, Ji A, Edelman ER. Intracellular Translocation and Cytoskeletal Association of Syndecan-1 in Response to Mechanical Strain. American Society for Cellular Biology (ASCB) annual meeting, 2007.

96. Ji A, Baker AB, Edelman ER. Intracellular Translocation and Cytoskeletal Association of Syndecan-1 in Response to Mechanical Strain. Amgen Undergraduate Research Symposium, Cambridge, MA, 2007.

97. Baker AB, Ji A, Edelman ER. Intracellular Translocation and Cytoskeletal Association of Syndecan-1 in Response to Mechanical Strain. Merck-BMES poster session, Cambridge, MA, 2007.

98. Baker AB, Jonas M, Ettenson DS, Edelman ER. Heparanase Expression Governs Arterial Remodeling in Normal and Disease States. American Society for Cellular Biology (ASCB) annual meeting, 2006.

99. Baker AB, Ettenson DS, Jonas M, Edelman ER, Endothelial Control of Vascular Remodeling in Hypertension, 60th Annual Fall Conference and Scientific Sessions of the Council for High Blood Pressure Research in association with the Council on the Kidney in Cardiovascular Disease, San Antonio TX, 2006.

100. Jonas M, Edelman ER, Baker AB, Spognardi A, Groothuis A, Philip Seifert, and Campbell Rogers, Differential Response to Vascular Stenting in Control Vs Insulin-Treated Diabetic Pigs: Analysis of Carotid, Renal and Coronary Bare Metal Stents (BMS) and Coronary Sirolimus Eluting Stents (SES), American Heart Association Conference, Circulation 114:II; 392, 2006.

101. Jonas M, Edelman ER, Groothuis A, Baker AB, Seifert P, Rogers C. Vascular neointimal formation and signaling pathway activation in response to stent injury in insulin resistant and diabetic animals. American Heart Association Conference. Circulation 112:17; U82, 2005.

102. Baker AB, Edelman ER, Extracellular Matrix and Mechanical Load Dependent Modulation of Endothelial Intracellular Communication and Response to Growth Factor Delivery, Whitaker Foundation Biomedical Engineering Research Conference, LaJolla, CA, 2002.

103. Baker AB and Sanders JE: A method for controlling angiogenesis in porous non-woven biomaterials. Proceedings of the 1999 Bioengineering Conference, American Society of Mechanical Engineers (ASME), Big Sky, MT, 1999.

104. Sanders JE, Zachariah SG, Goldstein BS, Greve JM, Baker AB, Clinton C, Okumura R, and Dralle AJ: Prosthetic engineering and skin adaptation. Bioengineering Consortium (BECON) poster presentation, National Institutes of Health, Bethesda, Maryland, 1998 (invited).

105. Baker AB and Sanders JE: A method for promoting angiogenesis in nonwoven porous biomaterials. Undergraduate Research Symposium, University of Washington, p. 19, 1998.

106. Greve JM, Baker AB, Bell D, and Sanders JE: Interface stresses more effected by day-to-day variations than changes in prosthetic alignment, walking rate, or prosthetic componentry. Biomedical Engineering Society Annual Fall Meeting, San Diego, California, October, 1997. Published in the Annals of Biomedical Engineering, vol. 25 (suppl. 1), p. S-86, 1997.

C. Books, Book Chapters

1. Baker AB. "Role of Proteoglycans in Vascular Mechanotransduction." *Mechanosensitivity in Cells and Tissues* Vol. 4 Eds. Andre Kamkin and Irina Kiseleva, Springer, pgs. 219-236, 2011.

D. Reviews

1. Henderson K, Sligar AD, Le V, Lee J, Baker AB. Biomechanical Regulation of Mesenchymal Stem Cells for Cardiovascular Tissue Engineering. *Adv Healthc Mater,* 2017 (in press; IF = 5.76).
2. Das S, Baker AB. Biomaterials and Nanotherapeutics for Enhancing Skin Wound Healing. *Front Bioeng Biotechnol* 4:82, eCollection, 2016.
3. Tu C, Das S, Baker AB, Zoldan J, Suggs LJ. Nanoscale strategies: treatment for peripheral vascular disease and critical limb ischemia. *ACS Nano* 9(4):3436-52, 2015 (IF = 12.881).
4. Konstantinos K, Chatzizisis YS, Baker AB, Edelman ER, Stone PH and Feldman CL: The role of low endothelial shear stress in the conversion of atherosclerotic lesions from stable to unstable plaque. Current Opinion in Cardiology 24(6):580-90, 2009 (IF = 2.736).

E. Editorials

1. Baker AB: Editors' Choice: TRIPpin' on a Fat Cell, Science Translational Medicine, February, February 2013 5:172ec27, 2013 (IF = 10.757).
2. Baker AB: Editors' Choice: Remaking the Brain with Stem Cells. Science Translational Medicine, January 5:168ec10, 2013 (IF = 10.757).
3. Baker AB: Editors' Choice: Warranted Wiretapping: Listening in on Cancer's Conversations. Science Translational Medicine, December 4:164ec224, 2012 (IF = 10.757).
4. Baker AB: Editors' Choice: Calling All Satellite Cells! Science Translational Medicine, November 4:160ec206, 2012 (IF = 10.757).
5. Baker AB: Editors' Choice: Come Together: Antibody Linkers to Combat Hemophilia. Science Translational Medicine, October 4:156ec186, 2012 (IF = 10.757).
6. Baker AB: Editors' Choice: Restoring Rhythm in the Broken Heart. Science Translational Medicine, September 4:152ec168, 2012 (IF = 10.757).

7. Baker AB: Editors' Choice: Cutting the Supply Lines in Cancer and Retinal Disease. Science Translational Medicine, August 4:147ec145, 2012 (IF = 10.757).
8. Baker AB: Editors' Choice: Bridging the Gap for Small-Diameter Vascular Grafts. Science Translational Medicine, July 4:144ec130, 2012 (IF = 10.757).
9. Baker AB: Editors' Choice: A New Trick of the Light: Saving the Heart from Ischemia. Science Translational Medicine, June 4:140ec111, 2012 (IF = 10.757).
10. Baker AB: Editors' Choice: Calming RAGE in Alzheimer's Disease. Science Translational Medicine, May 4:132ec75, 2012 (IF = 10.757).
11. Baker AB: Editors' Choice: To Serve and Neuro-Protect. Science Translational Medicine, May 4:136ec93, 2012 (IF = 10.757).
12. Baker AB: Editors' Choice: T-Cells Gone Bad in Heart Disease. Science Translational Medicine, April 4;4:128ec56, 2012 (IF = 10.757).
13. Baker AB: Editors' Choice: Stent Today, Gone Tomorrow. Science Translational Medicine, March 4:124ec39, 2012 (IF = 10.757).

ORAL PRESENTATIONS:

Invited Talks

1. Baker AB. High Throughput Platforms for Studying Cancer Mechanobiology, Livestrong Cancer Institute Retreat, Austin, TX 2017
2. Baker AB. Biomechanical Regulation of Stem Cell Differentiation for Vascularized Tissue Regeneration, University of Texas at San Antonio, San Antonio, TX 2017
3. Baker AB. The Future is Now: Innovations and Challenges in a New Era of Translational Medicine. AAAS Keynote Speaker at the AAAS Special Event Reception at the Medical Library Association Conference, Austin, TX 2015
4. Baker AB. Reengineering Growth Factor Therapies for Ischemia and Wound Healing, Science Undergraduate Research Group (SURGe), UT Austin, 2014
5. Baker AB. Reengineering Growth Factor Signaling in Ischemic Disease. Lynn W. McCraw Lecture, Department of Kinesiology and Health Education, UT Austin, 2014
6. Baker AB, Advances in Atherosclerosis Prevention and Therapies for Blood Vessel Regrowth, UT Forum, Osher Lifelong Learning Institute, 2013
7. Baker AB, Reengineering Growth Factor Signaling in Ischemic Disease, Biomaterial's Day, Society for Biomaterials Regional Conference, 2013
8. Baker AB, Syndecan-1 as a Mediator of Vascular Mechanobiology, Vascular Biology Symposium of Instituto do Coração, Brazil, 2013
9. Baker AB, Syndecan-1 as a Mediator of Vascular Mechanobiology, Federacao de Sociedades de Biologia Experimental (FeSBE), Brazil, 2013
10. Baker AB, Reengineering Growth Factor Signaling in Ischemic Disease. NIH Director's Pioneer Award Symposium, 2012
11. Voyvodic PL, Min D, Liu R, Williams E, Baker AB, Syndecan-1 Regulates Shear Stress-induced Mechanotransduction Pathways in Endothelial Cells. Biomedical Engineering Society Conference, 2012

12. Baker AB, Heparanase Mediates Arteriothrombosis Following Vascular Injury or Endovascular Stenting. Arteriosclerosis, Thrombosis, and Vascular Biology (ATVB) Scientific Sessions, 2012
13. Baker AB, Living on the Edge: Syndecan-1 as a Mediator of Vascular Mechanobiology, Institute for Cell and Molecular Biology, University of Texas at Austin, 2012
14. Voyvodic PL, Min D, Baker AB, Syndecan-1 Regulates Mechanotransduction from Shear Stress in Endothelial Cells. Southern Biomedical Engineering Conference, MD Anderson, 2012
15. Papafaklis MI, Koskinas KC, Antoniadis AP, Baker AB, Sukhova GK, Coskun AU, Takahashi S, Stone PH, Feldman CL, Edelman ER, Early inhibitory drug effect on the expression of pro-inflammatory and pro-oxidant genes in coronary regions of low endothelial shear stress: an in vivo study in diabetic hyperlipidemic juvenile swine. European Society of Cardiology Congress, 2012
16. Koskinas KC, Chatzizisis YS, Papafaklis MI, Baker AB, Coskun AU, Jonas M, Antoniadis A, Edelman ER. Feldman CL, Stone PH. Incremental effect of hypercholesterolemia on coronary plaque progression and high-risk composition despite similarly low local endothelial shear stress (ESS). European Society of Cardiology Congress, 2012
17. Antoniadis AP, Papafaklis MI, Chatzizisis YS, Sukhova GK, Baker AB, Coskun AU, Takahashi S, Edelman ER, Stone PH, Feldman CL, Adventitial inflammation is associated with thin-cap atheromas and expression of matrix-degrading enzymes and occurs in coronary regions exposed to low endothelial shear stress. European Society of Cardiology Congress, 2012
18. Baker AB, guest lecturer in BME 314: Engineering Foundations of BME, Spring Semester, 2012
19. Baker AB, guest lecturer for UGS 303: Biotechnology & World Health, Fall Semester 2012
20. Baker AB, speaker for the Graduate Engineering Council's Lecture Series for graduate students applying to faculty positions (SP2012)
21. Baker AB, speaker to new faculty at the Cockrell School of Engineering Orientation (F2012)
22. Baker AB, speaker at the TriBeta Biology student honors society (F2012)
23. Baker AB, speaker at T32 grant seminar for graduate students considering a postdoctoral position (F2012)
24. Baker AB, panel speaker at Texas 4000 Cancer Speaker Series (F2012)
25. Baker AB, speaker at Texas 4000 Foundation student meeting (F2012)
26. Baker AB, speaker at meeting for investors from Remeditex Ventures (F2012)
27. Baker AB, guest lecturer in BME 314: Engineering Foundations of BME, Spring Semester, 2011
28. Baker AB, guest lecturer for two lectures in BME 344: Biomechanics, Spring Semester, 2011
29. Baker AB, speaker to parents at the UT Family Weekend (F2011)
30. Baker AB, speaker for the Graduate Engineering Council's Lecture Series for graduate students applying to faculty positions (F2011)

31. Baker AB, speaker for the Graduate Engineering Council's Lecture Series for graduate students applying to faculty positions (SP2011)
32. Baker AB, speaker to new faculty at the Cockrell School of Engineering Orientation (F2011)
33. Baker AB, speaker at symposium for research collaboration with Dell Children's Medical Center (SP2011)
34. Baker AB, guest lecturer in BME 314: Engineering Foundations of BME, Spring Semester, 2010
35. Baker AB, speaker at the Beta Mu Epsilon Honor Society meeting (F2010)
36. Baker AB, panel speaker at a Graduate/Undergraduate Research Union (GURU) Pre-Graduate Lunch event (F2010)
37. Baker AB, Department of Biomedical Engineering, University of California, Irvine, CA, 2010
38. Baker AB, Department of Biomedical Engineering, Vanderbilt University, Nashville, TN, 2010
39. Baker AB, Department of Bioengineering, Pennsylvania State University, University Park PA, 2010
40. Baker AB, Department of Biomedical Engineering, University of Texas at Austin, Austin TX, 2010
41. Baker AB, Whitaker Cardiovascular Institute of Boston University Medical Center, Boston MA, 2010
42. Baker AB, American Heart Association Scientific Sessions, Orlando FL, 2009
43. Baker AB, Cardiovascular Division of Medicine, Brigham and Women's Hospital, Boston MA, 2009
44. Baker AB and Sanders JE, Biomedical Engineering Society (BMES), USA. Big Sky, MT, 1999

PATENTS:

1. Lee J and Baker AB: Biochemical and Biomechanical Conditioning for Enhancing Personalized Mesenchymal Stem Cell Therapies (Disclosed to UT OTC, UT Tech ID #7115 BAK; filed for provisional patent).
2. Das D and Baker AB: Syndecan-4 Proteoliposomes for Enhanced Cutaneous Wound Healing and Minimized Inflammatory Immune Response (Disclosed to UT Austin OTC, UT Tech ID # 6603 BAK; filed for provisional patent).
3. Monteforte A and Baker AB: Glypican-1 Proteoliposomes as an Enhancer of Growth Factor Activity (Disclosed to UT Austin OTC, UT Tech ID #6424 BAK, filed for U.S. patent).
4. Spruell C and Baker AB: High-Throughput Cone-and-Plate Apparatus for the Application of Defined Spatiotemporal Flow to Cultured Cells (Disclosed to UT Austin OTC, UT Tech ID #6182 BAK, filed for U.S. patent).
5. Wong M and Baker AB. A High-Throughput and Flexible System for Integrating Mechanobiology with Drug Development and Toxicity Screening (Disclosed to UT Austin OTC, UT Tech ID #6114 BAK, filed for U.S patent).

6. Voyvodic P and Baker AB: A device for reducing pulsation in high throughput flow systems (Disclosed to UT Austin OTC, UT Tech ID #6051 BAK).
7. Baker AB and Edelman ER: Simultaneous Delivery of Receptors and/or Co-Receptors for Growth Factor Stability and Activity. (Patent Application 12/389,765).
8. Baker AB and Sanders JE: Structures having coated indentations (Patent 6,558,422 issued May 6, 2003).

GRANTS AND CONTRACTS:

Role	Title	Agency	Portion	Grant Total	Grant Period
PI	Mechanical Conditioning of Mesenchymal Stem Cells for Enhanced Recellularized Vascular Grafts (R01 Pending Council Review NHLBI, 14th Percentile)	NIH	Pending	Pending	Pending
PI	Glycocalyx Mimetic Polysaccharides as Therapeutics for Atherosclerosis	NIH	$430,375	$430,375	9/15/17-9/15/19
PI	Syndecan-1 in Mechanosensing of Engineered Microenvironments	NIH	$430,375	$430,375	7/15/17-7/15/19
PI	Nanodisc Therapeutics for Peripheral ischemia in Diabetes	AHA	$150,000	$150,000	1/1/17-12/31/18
PI	Development of an Advanced Injectable Therapy for Ischemic Vascular Disease	DOD CDMRP	$2,360,646	$2,360,646	9/30/16-9/30/19
PI	Flexible Regenerative Nanoelectronics for Advanced Peripheral Neural Interfaces	DOD CDMRP	$750,000	$1,495,101	9/30/16-9/30/19
PI	Design-Based Laboratory Modules for Integrative Engineering Education Incorporating The Longhorn Maker Studio Resources	UT Austin	$51,327	$51,327	10/1/16-10/1/17
PI	Nanodisc-Based Delivery of Membrane Protein Therapeutics	Welch Fnd.	$180,000	$180,000	6/1/14-5/31/17
PI	Engineering Effective Revascularization Strategies for Ischemia in Disease States	NIH	$2,314,500	$2,314,500	9/30/11-06/30/16
PI	Development of High Throughput Screening Assays for Cancer Metastasis	Texas 4000 Fnd.	$25,000	$25,000	8/01/11-8/01/12
PI	The Role of Heparanase and Syndecan-1 in Vascular Remodeling	AHA	$308,000	$308,000	1/01/10-12/31/14
Sub.	Matrix Embedded Endothelial Cells in Ischemic disease	Universita Magna Graecia-MIT	$4,034	$4,034	9/17/13-10/31/13
PI	The Role of Heparanase in Atherosclerosis and Vascular Inflammation (Undergraduate Student Research Program)	AHA	$4,000	$4,000	6/01/13-8/31/13

PI	Undergraduate Research Fellowship (Darshil Choksi)	UT Austin	$1,000	$1,000	11/1/16-8/30/16
PI	Undergraduate Research Fellowship (Marjan Majid)	UT Austin	$1,000	$1,000	2/1/15-8/30/16
PI	Undergraduate Research Fellowship (Shih-Ming Wang)	UT Austin	$1,000	$1,000	2/1/15-8/30/16
PI	Undergraduate Research Fellowship (Selena Ilbeig)	UT Austin	$1,000	$1,000	10/1/14-2/1/14
PI	Undergraduate Research Fellowship (Eun Yoon)	UT Austin	$1,000	$1,000	10/1/14-2/1/14
		Totals	**$7,013,257**	**$7,758,358**	

PH.D. SUPERVISIONS COMPLETED:

Subhamoy Das, Biomedical Engineering, 2014
Peter Voyvodic, Biomedical Engineering, 2015
Jason Lee, Biomedical Engineering, 2016
Anthony Monteforte, Biomedical Engineering, 2016

M.S. SUPERVISIONS COMPLETED:

None.

PH.D. IN PROGRESS:

A. Students admitted to candidacy

Adrianne Shearer, Biomedical Engineering, 2013 – Present
Victoria Le, Biological Sciences, 2013 – Present
Eri Takematsu, Biomedical Engineering, 2015 – Present
Kayla Henderson, Biomedical Engineering, 2015 – Present
Andrew Sligar, Biomedical Engineering, 2016 – Present
Austin Veith, Biomedical Engineering, 2016 – Present

B. Students preparing to take Ph.D. qualifying exam

Lei Mei, Biomedical Engineering, 2017 – Present
Nikita Patil, Biomedical Engineering, 2017 – Present
Daniel Chavarria, Biomedical Engineering, 2017 – Present

M.S. IN PROGRESS

None.

OTHER GRADUATE ADVISING

Kristen Feaver, Biomedical Engineering, Faculty Mentor for NIH T32 Grant Training Program, 2013 – 2015

Thaís Girão da Silva, FeSBE Visiting Graduate Student, Laboratory for Genetics and Molecular Cardiology, Heart Institute (InCor)-University of Sao Paulo Medical School, Brazil, 2017

Sharanya Sankar, Fulbright Scholar, Research Scholar, Indian Institute of Technology, Hyderabad, India, 2017 – Present

DISSERTATION COMMITTEES:

Jitanan Laosiripisan, Ph. D. Candidate, Kinesiology and Health Education, 2016
Zachary Imam, Ph. D. Candidate, Biomedical Engineering, 2016
Emanual Lissek, Ph. D. Candidate, Physics, 2015
Melissa Merscham, Ph. D. Candidate, Kinesiology, 2015
David Giles, Ph. D. Candidate, Biomedical Engineering, 2015
Wilton Snead, Ph. D. Candidate, Biomedical Engineering, 2014
Michael Himmelsbach. Ph. D. Candidate, Physics, 2014
Taejeong Song, Ph. D. Candidate, Kinesiology, 2014
Rachel Sammons, Ph. D. Candidate, Biomedical Engineering, 2014
Sepideh Khoshnevis, Ph.D. Candidate, Biomedical Engineering, 2014
Rachel Buchanan, Ph.D. Candidate, Biomedical Engineering, 2014
Doug Yeager, Ph.D. Candidate, Biomedical Engineering, 2013
Diane Forbes, Ph.D. Candidate, Chemical Engineering, 2013
Stephanie Steichen, Ph.D. Candidate, Biomedical Engineering, 2013
Sahar Elahi, Ph.D. Candidate, Biomedical Engineering, 2012
Laura M. Ricles, Ph.D. Candidate, Biomedical Engineering, 2012
Yue Shi, Ph.D. Candidate, Biomedical Engineering, 2011
Hieu Nguyen, Ph.D. Candidate, Biomedical Engineering, 2011
Xia Zhen, Ph.D. Candidate, Biomedical Engineering, 2011
Julie Rytlewski, Ph.D. Candidate, Biomedical Engineering, 2011
Ryan Nagao, Ph.D. Candidate, Biomedical Engineering, 2010

UNDERGRADUATE STUDENT ADVISING:

Undergraduate Student Researchers

Gabriel Garcia, BUILDing Scholars REU Student, UT El Paso (SU2017)
Aditya Singh, Biomedical Engineering (Fall2016 – Present)
Jeff Auster, Chemical Engineering (SU2016-Present)
Aris Maguddayao, Biomedical Engineering (SU2016 – SP2017)
Nicholas Pattie, Biomedical Engineering (SU2016 – Present)
Varsha Karanam, Chemical Engineering (SU2016 – Present)
Miguel Armenta, Biomedical Engineering (F2014-Present)
Daniel Chavarria, BUILDing Scholars REU Student, UT El Paso (SU2016)
Shih-Ming Wang, Electrical Engineering (Spring 2015 – Present)
HooWon Lee, Biomedical Engineering (Fall 2014 – Present)
Ahmed Abdulrahman Alzahrani, UC Davis, King Abdullah University of Science and Technology (KAUST) Gifted Summer Research Program (SU2016)
Marjan Majid, Biomedical Engineering, Texas Research Experience (TREX) Student (F2014 – Present)
Krysta Amezcua, MARC Undergraduate Student Training in Academic Research (U-STAR) Award (T34) Student Fellow, UT San Antonio (SU2015)
Shreya Gupta, Indian Institute of Technology, Khorana Program, Indo-US Science and Technology Forum (SU2015)
Zhiying Zhu, REU Student (SU2015)
Chaarushena Deb, Biological Engineering, MIT (SU2015)
Darshil Choksi, Biomedical Engineering (SU2014 – Present)

Cody Heiser, Biomedical Engineering (SU2014 – Present)
Smridhi Mahajan, Biomedical Engineering (SU2014 – Present)
Selena Ilbeig, Biomedical Engineering (SU2014 – Present)
Varun Koneru, Biomedical Engineering (SP2014 – Present)
Colton Andrews, Biomedical Engineering (SP2014 – F2015)
Ameya Bhat, Biomedical Engineering (SP2014 – F2015)
Brian Lam, Biomedical Engineering (SU2013 – Present)
John Rector, Biomedical Engineering (SP2014 – Present)
Seema Nandi, Biomedical Engineering (SP2014 – Present)
Divya Rayapati, Wash. U. St. Louis (SU2014)
Aswin Ramaswami, Biomedical Engineering (F2013– Present)
Eun Yoon, Biomedical Engineering (SP2012 – Present)
Daniel Min, Biomedical Engineering (F2011 – Present)
Robert Liu, Biomedical Engineering (SP2012 – Present)
Evan Williams, Biomedical Engineering (SP2012 – Present)
Gunjan Singh, Biomedical Engineering (SP2012 – Present)
Joseffin Jansson-Edquist, Biomedical Engineering (F2013 – SP2014)
Stephanie Yarborough, Biomedical Engineering (F2012 – SP2013)
Kenneth Lee, Biomedical Engineering (F2012 – SP2013)
Vivek Sreeram, Biomedical Engineering (SP2013)
Rishi Doctor, Biomedical Engineering (SP2012 – F2013)
Seung Choe, Biomedical Engineering (SP2012 – F2013)
Quentin Smith, Biomedical Engineering (SP2013 – SP2014)
Collin Johnson, Human Biology (F2012 – SP2014)
Vidya Bondada, Human Biology (F2012 – SP2014)
Rachel (Xue) Yan, Biomedical Engineering (F2012 – SP2014)
Matthew Edward Martinez, Biomedical Engineering (SP2012 – SP2014)
Emmanuel Nunez, Biomedical Engineering (SP2012 – SP2014)
Vittoria Rossi, Human Biology, (F2012 – SP2013)
David Chimene, Biomedical Engineering, (F2012 – SP2013)
Rishi Goel, Biomedical Engineering (SP 2012), transferred to Harvard University
Christoffer Lam, Chemistry (SP2012 – F2013)
Tuan Tang, Biomedical Engineering (SP2012 – F2013)
Kimberly Pham, Biomedical Engineering (F2012 – F2013)
Neha Gaddam, Biomedical Engineering (SP2012 – F2013)
Neha Atyam, Biomedical Engineering (SP2012 – F2013)
Derek Ho, Biomedical Engineering (F2012 – F2013)
Alex Zhou, Biomedical Engineering (F2012 – F2013)
Benjamin Warren, B.S. 2012, Biomedical Engineering (SP2011 – SP2012)
Dominic Nguyen, B.S. 2012, Biomedical Engineering (SP2011 – SP2012)
Dienhong Tran, B.S. 2012, Biomedical Engineering (SP2011 – SP2012)
Mitchell Wong, Biomedical Engineering (F2010 – SP2014)
Christopher Spruell, B.S. 2012, Biomedical Engineering (F2010 – SP2012)

BME371 – Senior Project Design Team (2016)
Sarah Koch
Siva Manda
Amit Narawane
Lara Samarneh

BME371 – Senior Project Design Team (2015)
Sarah Poletti
Laura Strong
Evan Williams
Anum Syed

BME371 – Senior Project Design Team (2014)
Jacob Sacks
Rohan Diora
Daniyal S. Malik
Joshua Bantseev

BME371 – Senior Project Design Team (2013)
Jayvee Abella
Hyemin Kim
Shannah Leal
David Yang

BME371 – Senior Project Design Team (2012)
Howard Lin
Huy Nguyen
Mitchell Wong
Laura Fuentes

BME371 – Senior Project Design Team (2011)
Robert Chou
Shweta Kumar
Jacob McCollum
Marcela Mendoza

BME371 – Senior Project Design Team (2010)
Long Cao
Shivani Gupta
Thomas Mathews
Josh Heinrich

Keshav Poddar, Plan II Honors Mentor, (SP2011 – SP2012)
Katherine Young, Honor Thesis Mentor, (F2015 – SP2016)

MEDICAL STUDENT ADVISING:
Hao Liu, Medical Student, University of Texas Health Science Center at San Antonio (SP2011 – SP2013)

POSTDOCTORAL FELLOW/ASSOCIATE ADVISING:
Jason Lee, Ph.D., Postdoctoral Fellow (Sp2016 – Present)
Subhamoy Das, Ph.D., Postdoctoral Fellow (Sp2015 – Sp2016)
Somali Chatterj, Ph.D., Postdoctoral Fellow (F2011 – F2013)
Shuang Niu, M.D., Ph.D., Postdoctoral Fellow (F2012 – SP2013)

Mar Creixell, Ph.D., Postdoctoral Fellow (F2012 – SP2013)

ROTATION STUDENTS ADVISING:

Lei Mei, Biomedical Engineering, 2017
Nikita Patil, Biomedical Engineering, 2017
Daniel Chavarria, Biomedical Engineering, 2017
Shaun Engelmann, Biomedical Engineering, 2017
Austin Veith, Biomedical Engineering, 2016
Danyang Li, Cell and Molecular Biology, 2016
Andrew Sligar, Biomedical Engineering, 2015
Eri Takematsu, Biomedical Engineering, 2015
Kayla Henderson, Biomedical Engineering, 2015
Christopher Riley, Biological Sciences, 2013
Jonathan Lee, UT Medical Branch M.D.-Ph.D. Program, 2013

TEACHING ACTIVITIES:

2010 – Present Instructor for *BME 382J. Cellular and Molecular Biomechanics* at UT Austin
2010 – Present Instructor for *BME 353. Transport Phenomena in Living Systems* at UT Austin
2015 – Present Guest lecturer for *BME 344. Biomechanics* at UT Austin
2016 Guest lecturer for NIH T32 students seminar, taught class on writing a scientific paper.
2015 Guest lecturer for *BME382J. Biomimetic Design and Engineering* at UT Austin
2013 Faculty Mentor for BME 370/BME 371 Senior Design Team
2013 Guest lecture for *BME 314. Engineering Foundations of Biomedical Engineering* at UT Austin
2012 Instructor for *BME 353. Transport Phenomena in Living Systems* at UT Austin
2012 Guest lecturer for *BME 314. Engineering Foundations of Biomedical Engineering* at UT Austin
2012 Guest lecturer for UGS 303: Biotechnology & World Health, Fall Semester 2012
2012 Advised a student group in *UGS 303: Research Methods and Originality in the Arts and Sciences* who were developing a research proposal or non-profit organization to combat sudden cardiac death in teenagers
2012 Faculty Mentor for BME 370/BME 371 Senior Design Team
2012 Judge at the Engineering Poster Exhibition hosted by the Student Engineering Council
2011 Guest lecture for two classes in *BME 377T. Biomechanics* at UT Austin
2011 Guest lecture for *BME 314. Engineering Foundations of Biomedical Engineering* at UT Austin
2011 Designed and taught a new graduate course entitled *BME 382J. Cellular and Molecular Biomechanics,* at UT Austin
2011 Faculty Mentor for BME 370/BME 371 Senior Design Team
2010 Guest lecture for *BME 314. Engineering Foundations of Biomedical Engineering* at UT Austin
2010 Faculty Mentor for BME 370/BME 371 Senior Design Team
2003 Teaching Assistant for *Biological Engineering 310: Biomechanics* taught in the Biological Engineering Department at MIT
1999 Lecturer in the University of Washington Engineered Biomaterials UWEB Course for Industrial Partners

Qualifying Exam Committees

2017 Committee member on four UT BME Doctoral Qualifying Exams
2016 Committee member on eight UT BME Doctoral Qualifying Exams
2015 Committee member on four UT BME Doctoral Qualifying Exams
2014 Committee member on five UT BME Doctoral Qualifying Exams
2014 Committee member on one Interdisciplinary Doctoral Comprehensive Exam (UT Kinesiology Department)
2013 Committee member on three UT BME Doctoral Qualifying Exams
2013 Committee member on two Interdisciplinary Doctoral Comprehensive Exams (UT Kinesiology Department)
2012 Committee member on three UT BME Doctoral Qualifying Exams
2011 Committee member on four UT BME Doctoral Qualifying Exams

MEDIA COVERAGE:

Treatments for Treatments for Ischemia:

- https://www.technologyreview.com/s/601416/injectable-gel-generates-new-blood-vessels/
- http://www.dailytexanonline.com/2016/05/06/biomedical-engineers-receive-grant-for-regenerating-blood-vessels-0
- http://www.utexas.edu/news/2012/02/10/aaron_baker_heart_disease_treatment/
- http://www.biotechniques.com/news/New-Innovator-Aaron-Baker-Biomedical-Engineer/biotechniques-323528.html
- http://in.news.yahoo.com/breakthrough-grow-blood-vessels-heart-095951782.html
- http://www.gizmag.com/blood-vessel-regrowth-u-texas/21520/
- Work featured in the newsletters of the American Heart Association and the Texas Comptroller's Office
- http://www.bme.utexas.edu/news/982-baker-dod-grant
- http://www.bme.utexas.edu/news/1068-using-nanodiscs-to-deliver-drugs-for-ischemia-treatment

Cancer Drug Screening:

- http://www.engr.utexas.edu/features/breast-cancer-research
- http://www.bme.utexas.edu/news/318-texas-4000-presents-gift-at-annual-welcome-gathering
- http://www.engr.utexas.edu/news/releases/tx4000ride
- http://prezi.com/8mj2fft6236r/tex-talks/
- https://vimeo.com/104406945

NIH New Innovator Award:

- http://www.biotechniques.com/news/New-Innovator-Aaron-Baker-Biomedical-Engineer/biotechniques-323528.html
- http://web5.cns.utexas.edu/news/2011/09/nih-grants/
- http://www.nih.gov/news/health/sep2011/od-20.htm

NeoCore Therapeutics:

- http://www.collegemogul.com/10/20/08/NeoCore-Therapeutics-An-Alternative-Approach-To-Cancer
- http://boston.bizjournals.com/boston/stories/2008/05/26/story14.html

- http://media.www.mitsloanfifteen.com/media/storage/paper766/news/2008/04/08/News/Contestants.Pumped.Up.As.Mit.100k.Entrepreneurship.Competition.Hits.Record.Numbe-3317395.shtml

Surgical Adhesives:
- http://www.nature.com/nm/journal/v15/n9/full/nm0909-978c.html
- http://web.mit.edu/newsoffice/2009/glue-0709.html

Cancer Therapeutics
- http://www.nature.com/nature/journal/v469/n7331/full/469447b.html
- http://web.mit.edu/press/2011/cancer-therapy-0120.html
- http://www.engr.utexas.edu/features/breast-cancer-research
- http://news.mit.edu/2016/implantable-device-targets-pancreatic-cancer-0414

Biomaterials:
- http://web.mit.edu/newsoffice/2012/success-of-engineering-tissue-depends-on-where-its-grown-0815.html
- http://www.healthnewsdigest.com/news/Research_270/Success_of_Engineered_Tissue_Depends_on_Where_It_s_Grown.shtml

Neuroelectronics:
- https://www.bme.utexas.edu/news/988-baker-and-xie-combine-technologies-to-create-designer-neurovascular-interfaces

Education/Teaching:
- https://www.bme.utexas.edu/news/1000-new-academic-development-grant-will-optimize-undergraduate-design-lab-education

Stem Cells:
- http://www.bme.utexas.edu/news/1070-new-review-paper-examines-biomechanical-influence-on-cardiovascular-tissue-engineering