BRENDAN A. HARLEY, SC.D.

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Dept. of Chemical and Biomolecular Engineering | Carl R. Woese Institute for Genomic Biology
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AFFILIATIONS

Department of Chemical and Biomolecular Engineering
Carl R. Woese Institute for Genomic Biology
Department of Materials Science and Engineering
Department of Bioengineering
Micro and NanoTechnology Laboratory
University of Illinois at Urbana-Champaign, Urbana, IL

RESEARCH INTERESTS

Biomaterial science, tissue engineering, & regenerative medicine
Musculoskeletal regeneration, stem cell engineering, & the tumor microenvironment
Spatially/temporally-patterned materials, bio-inspired composites, & cellular solids

EDUCATION

Sc.D. Mechanical Engineering, 2006.
Massachusetts Institute of Technology, Cambridge, MA.
Thesis title: *Cell-matrix interactions: Collagen-GAG scaffold fabrication, characterization, and measurement of cell migratory and contractile behavior via confocal microscopy*
Mentors: Lorna J. Gibson and Ioannis V. Yannas

M.S. Mechanical Engineering, 2002.
Massachusetts Institute of Technology, Cambridge, MA.
Thesis title: *Peripheral nerve regeneration through collagen devices with different in vivo degradation characteristics*
Mentor: Ioannis V. Yannas

S.B. Engineering Sciences (magna cum laude), 2000.
Harvard University, Cambridge, MA.
Thesis title: *Design and fabrication of a novel device to efficiently produce large arrays of fluid combinations using electro-fluidic control techniques.*

PROFESSIONAL EXPERIENCE

8/15 – present Associate Professor (with tenure), Dept. of Chemical and Biomolecular Engineering
University of Illinois at Urbana-Champaign, Urbana, IL 61801

6/15 – present Theme Leader, *Regenerative Biology and Tissue Engineering Theme*

8/08 – present Core faculty, *Regenerative Biology and Tissue Engineering Theme*
Carl. R. Woese Institute for Genomic Biology
University of Illinois at Urbana-Champaign, Urbana, IL 61801

8/08 – 07/15 Assistant Professor, Dept. of Chemical and Biomolecular Engineering
University of Illinois at Urbana-Champaign, Urbana, IL 61801

8/06 – 7/08	Postdoctoral fellow, Joint Program in Transfusion Medicine **Children's Hospital Boston (Harvard Medical School)**, Boston, MA 02115 Mentor: Leslie E. Silberstein
6/06 – 8/06	Postdoctoral fellow, Dept. of Materials Science and Engineering **Massachusetts Institute of Technology**, Cambridge, MA 02139 Mentor: Lorna J. Gibson
1/05 – 11/09	Co-Founder; Member, Scientific Advisory Board **Orthomimetics, Ltd.**, Cambridge, U.K.
9/00 – 6/06	Graduate Research Assistant, Dept. of Mechanical Engineering **Massachusetts Institute of Technology**, Cambridge, MA 02139 Mentors: Lorna J. Gibson, Ioannis V. Yannas
5/97 – 8/99	Undergraduate Research Assistant, Center for Blood Research, Inc. **Harvard Medical School**, Cambridge, MA 02115 Advisor: Richard Van Etten

AWARDS AND HONORS

2016 – 2019	Schaefer Faculty Scholar, University of Illinois.
2015 – 2016	I.C. Gunsalus Scholar, University of Illinois.
2015 – 2016	Fellow, Center for Advanced Study, University of Illinois.
2015	Campus Distinguished Promotion Award, University of Illinois.
2015	Rising Star Award, Biomedical Engineering Society CMBE Annual Meeting.
2014	Fellow, American Association for the Advancement of Science (AAAS).
2014	Young Investigator Award, Society for Biomaterials.
2014	Everitt Award for Teaching Excellence; College of Engineering, University of Illinois.
2014	Collaborative Research Travel Grant, Burroughs Wellcome Fund.
2013	NSF Invited Member, U.S.-Japan Young Researchers' Exchange Program for Bio-Nano-Micro Technology application areas (Dec. 7 – 14, 2013 in Japan).
2013	NSF CAREER award, 2013 – 2018.
2013	Best Junior Faculty Poster, *Biomaterials & Tissue Engineering* Gordon Research Conference, Holderness, NH.
2011	President's Award for Research; American Cancer Society of Illinois.
2011	Engineering Council Award for Excellence in Advising; College of Engineering, University of Illinois.
2010	Short-Term Fellowship, Human Frontier Science Program.
2009 – present	Teachers Ranked as Excellent, University of Illinois (F'09, S'10, F'10, S'11, F'11, F'12, S'14, F'14).
2006 – 2008	Kirschstein National Research Service Award T32 Postdoctoral Fellowship, NIH.
2006	John C. and Elizabeth J. Chato Award for Excellence in Bioengineering, Department of Mechanical Engineering, MIT.
2003 – 2005	MIT-Whitaker Health Science Fund Fellowship.
2000 – 2001	DuPont/MIT Alliance Fellowship. Department of Mechanical Engineering, MIT.
1997 – 2000	Harvard College Scholarship.

PEER REVIEWED PUBLICATIONS (trainees underlined)

62. D.W. Weisgerber, K. Erning, C. Flanagan, S.J. Hollister, B.A.C. Harley, 'Evaluation of multi-scale mineralized collagen-polycaprolactone composites for bone tissue engineering,' in press, *J. Mech.*

Behav. Biomed. Mater., 2016.

61. X. Ren, V. Tu, D. Bischoff, D.W. Weisgerber, M.S. Lewis, D.T. Yamaguchi, T.A. Miller, B.A.C. Harley, J.C. Lee, 'Nanoparticulate mineralized collagen scaffolds induce in vivo bone regeneration independent of progenitor cell loading or exogenous growth factor stimulation,' in press, *Biomaterials*, 2016.
60. L.C. Mozdzen, R. Rodgers, J.M. Banks, R.C. Bailey, B.A.C. Harley, 'Increasing the strength and bioactivity of collagen scaffolds using customizable arrays of 3D-printed polymer fibers,' *Acta Biomater.*, 2016. DOI: 10.1016/j.actbio.2016.02.004.
59. R.A. Hortensius, J.H. Ebens, B.A.C. Harley, 'Immunomodulatory effects of amniotic membrane matrix incorporated into collagen scaffolds,' *J. Biomed Mater. Res.*, 2016. DOI: 10.1002/jbm.a.35663.
58. J.-S. Choi, B.A.C. Harley, 'Challenges and opportunities to harnessing the (hematopoietic) stem cell niche,' *Curr. Stem Cell Rep.*, 2016. DOI: 10.1007/s40778-016-0031-y. PMCID: TBA. NIHMSID: NIHMS755838. [INVITED REVIEW].
57. Y. Ilin, J.-S. Choi, B.A.C. Harley, M.L. Kraft, 'Identifying states along the hematopoietic stem cell differentiation hierarchy with single cell specificity via Raman spectroscopy,' *Anal. Chem.*, 87(22):11317-24, 2015. PMCID: PMC4687963.
56. T. Yokohama-Tamaki, K. Otsu, H. Harada, S. Shibata, N. Obara, K. Irie, A. Taniguchi, T. Nagasawa, K. Aoki, S.R. Caliari, D.W. Weisgerber, B.A.C. Harley, 'CXCR4/CXCL12 signaling impacts enamel progenitor cell proliferation and motility in the dental stem cell niche,' *Cell Tissue Res.*, 362(3):633-42, 2015. PMCID: PMC4679681.
55. W. Chen, K.D. Long, J. Kurniawan, M. Hung, H. Yu, B.A. Harley, B.T. Cunningham, 'Planar photonic crystal biosensor for quantitative label-free cell attachment microscopy,' *Adv. Optical Mater.*, 3(11):1623-32, 2015. PMCID: TBA. NIHMS: 720958.
54. B.P. Mahadik, S. Pedron Haba, L.J. Skertich, B.A.C. Harley, 'The use of covalently immobilized stem cell factor to selectively affect hematopoietic stem cell activity within a gelatin hydrogel,' *Biomaterials*, 67:297-307, 2015. PMCID: PMC4550539.
53. J.M. Banks, B.A.C. Harley, R.C. Bailey, 'Tunable, photoreactive hydrogel system to probe synergies between mechanical and biomolecular cues on adipose-derived mesenchymal stem cell differentiation,' *ACS Biomater. Sci. Eng.*, 1(8):718-25, 2015.
52. J.S. Choi, B.P. Mahadik, B.A.C. Harley, 'Engineering the hematopoietic stem cell niche: frontiers in biomaterial science,' *Biotechnol. J.*, 10(10):1529-45, 2015. PMCID: PMC4724421. [INVITED REVIEW].

    News: This article was featured as the cover of the special issue on Stem Cell Engineering.
51. K.R.C. Kinneberg, A. Nelson, M. Stender, A.H. Aziz, L.C. Mozdzen, B.A.C. Harley, S.J. Bryant, V.L. Ferguson, 'Reinforcement of mono- and bi-layer poly(ethylene glycol) hydrogels with a fibrous collagen,' *Ann. Biomed. Eng.*, 43(11):2618-29, 2015. PMCID: PMC4618187.
50. J.C. Pence, K.B.H. Clancy, B.A.C. Harley, 'The induction of pro-angiogenic processes within a collagen scaffold via exogenous estradiol and endometrial epithelial cells,' *Biotechnol. Bioeng.*, 112(10):2185-94, 2015. PMCID: PMC4570584.

    News: A video highlight of this article was featured by Biotechnology and Bioengineering.
49. J.C. Lee, C. Pereira, X. Ren, W. Huang, D.W. Weisgerber, D.T. Yamaguchi, B.A. Harley, T.A. Miller, 'Optimizing collagen scaffolds for bone engineering: effects of crosslinking and mineral content on structural contraction and osteogenesis,' *J. Craniofac. Surg.*, 26(6):1992-6, 2015.
48. R.A. Hortensius, J.R. Becraft, D.W. Pack, B.A.C. Harley, 'The effect of glycosaminoglycan content on polyethylenimine-based gene delivery within three-dimensional collagen-GAG scaffolds,' *Biomater. Sci.*, 3(4):645-54, 2015. PMCID: PMC4469389.
47. X. Ren, D. Bischoff, D.W. Weisgerber, M.S. Lewis, V. Tu, D.T. Yamaguchi, T.A. Miller, B.A.C. Harley, J.C. Lee, 'Osteogenesis on nanoparticulate mineralized collagen scaffolds via autogenous activation of the canonical BMP receptor signaling pathway,' *Biomaterials*, 50:107-14, 2015. PMCID: PMC4364277.

46. S.R. Caliari, W.K. Grier, D.W. Weisgerber, Z. Mahmassani, M.D. Boppart, B.A.C. Harley, 'Collagen scaffolds incorporating coincident gradations of instructive structural and biochemical cues for osteotendinous junction engineering,' *Adv. Healthc. Mater.*, 4(6):831-7, 2015. PMCID: PMC4409544.
45. D.W. Weisgerber, S.R. Caliari, B.A.C. Harley, 'Mineralized collagen scaffolds induce hMSC osteogenesis and matrix remodeling,' *Biomater. Sci.*, 3(3):533-42, 2015. PMCID: PMC4412464.
44. S. Pedron, E. Becka, B.A.C. Harley, 'Spatially-gradated hydrogel platform as a three-dimensional engineered tumor microenvironment,' *Adv. Mater.*, 27(9):1567-72, 2015.

    News: This article was featured on the inside back cover of Advanced Materials.
43. S.R. Caliari, E.A. Gonnerman, W.K. Grier, D.W. Weisgerber, J.M. Banks, A.T. Alsop, J.-S. Lee, R.C. Bailey, B.A.C. Harley, 'Collagen scaffold arrays for combinatorial screening of biophysical and biochemical regulators of cell behavior,' *Adv. Healthc. Mater.*, 4(1):58-64, 2015. PMCID: PMC4282613.
42. W. Chen, K.D. Long, H. Yu, Y. Tan, J.S. Choi, B.A.C. Harley, B.T. Cunningham, 'Enhanced live cell imaging via photonic crystal enhanced fluorescence microscopy,' *Analyst*, 139(22):5954-63, 2014. PMCID: PMC4198496.
41. J.M. Banks, L.C. Mozdzen, B.A.C. Harley[§], R.C. Bailey[§], 'The combined effects of matrix stiffness and growth factor immobilization on the bioactivity and differentiation capabilities of adipose-derived stem cells,' *Biomaterials*, 35(32):8951-9, 2014. [§] co-corresponding authors. PMCID: PMC4364030.
40. A.T. Alsop, J.C. Pence, D.W. Weisgerber, B.A.C. Harley, R.C. Bailey, 'Photopatterning of VEGF within collagen-GAG scaffolds can induce a spatially confined response in human umbilical vein endothelial cells,' *Acta Biomater.*, 10(11):4715-22, 2014.
39. J.C. Pence, E.A. Gonnerman, R.C. Bailey, B.A.C. Harley, 'Strategies to balance covalent and non-covalent biomolecule attachment within collagen-GAG biomaterials,' *Biomater. Sci.*, 2(9):1296-1304, 2014. PMCID: PMC4136535.
38. S.R. Caliari, B.A.C. Harley, 'Collagen-GAG scaffold biophysical properties bias MSC lineage choice in the presence of mixed soluble signals,' *Tiss. Eng. A*, 20(17-18):2463-72, 2014. PMCID: PMC4161190.
37. S.R. Caliari, B.A.C. Harley, 'Structural and biochemical modification of a collagen scaffold to selectively enhance MSC tenogenic, chondrogenic, and osteogenic differentiation,' *Adv. Healthc. Mater.*, 3(7):1086-96, 2014. PMCID: PMC4107041.
36. S.R. Caliari, L.C. Mozdzen, O.E. Armitage, M.L. Oyen, B.A.C. Harley, 'Periodically-perforated core-shell collagen biomaterials balance cell infiltration, bioactivity, and mechanical properties,' *J. Biomed. Mater. Res. Pt. A*, 102(4):917-27, 2014. PMCID: PMC4083680.
35. B.P. Mahadik, T.D. Wheeler, L.J. Skertich, P.J.A. Kenis, B.A.C. Harley, 'Microfluidic generation of gradient hydrogels to modulate hematopoietic stem cell culture environment,' *Adv. Healthc. Mater.*, 3(3):449-458, 2014.

    News: This article was featured by Materials Views.
34. W. Chen, K.D. Long, M. Lu, V. Chaudhery, H. Yu, J.S. Choi, J. Polans, Y. Zhuo, B.A.C. Harley, B.T. Cunningham, 'Photonic crystal enhanced microscopy for imaging of live cell adhesion,' *Analyst*, 138(20):5886-94, 2013.

    News: This article was featured on the back cover of this issue of Analyst.
33. D.W. Weisgerber, D.O. Kelkhoff, S.R. Caliari, B.A.C. Harley, 'The impact of discrete compartments of a multi-compartment collagen-GAG scaffold on overall construct biophysical properties,' *J. Mech. Behav. Biomed. Mater.*, 28:26-36, 2013. PMCID: PMC3960919.
32. R.A. Hortensius, B.A.C. Harley, 'The use of bioinspired alterations in the glycosaminoglycan content of collagen-GAG scaffolds to regulate cell activity,' *Biomaterials*, 34(31):7645-52, 2013. PMCID: PMC4090944.
31. S. Pedron, E. Becka, B.A.C. Harley, 'Regulation of glioma cell phenotype in 3D matrices by hyaluronic acid,' *Biomaterials*, 34(30):7408–17, 2013.

    News: This article was featured by the Illinois News Bureau and AAAS EurekaAlert.

30. N.P. Gabrielson, A.V. Desai, B. Mahadik, M.-C. Hofmann, P.J.A. Kenis, B.A.C. Harley, 'Cell-laden hydrogels in integrated microfluidic devices for long-term cell culture and tubulogenesis assays,' *Small*, 9(18):3076-81, 2013.
29. S. Pedron, B.A.C. Harley, 'The impact of the biophysical features of a 3D gelatin microenvironment on glioblastoma malignancy,' *J. Biomed. Mater Res. Pt. A*, 101(12):3404-15, 2013.
28. S.R. Caliari, B.A.C. Harley, 'Composite growth factor supplementation strategies to enhance tenocyte bioactivity in aligned collagen-GAG scaffolds,' *Tiss. Eng. A*, 19(9-10):1100-12, 2013. PMCID: PMC3609632.
27. E.A. Gonnerman, D.O. Kelkhoff, L.M. McGregor, B.A.C Harley, 'The promotion of HL-1 cardiomyocyte beating using anisotropic collagen-GAG scaffolds,' *Biomaterials*, 33(34):8812-21, 2012.
26. J.F. Frisz, J.S. Choi, R.L. Wilson, B.A.C. Harley, M.L. Kraft, 'Identifying differentiation stage of individual primary hematopoietic cells from mouse bone marrow by multivariate analysis of TOF-secondary ion mass spectrometry data,' *Anal. Chem.*, 84(10):4307-13, 2012. PMCID: PMC3953139.
25. J.S. Choi, B.A. Harley, 'The combined influence of substrate elasticity and ligand density on the viability and biophysical properties of hematopoietic stem and progenitor cells,' *Biomaterials*, 33(18):4460-4468, 2012.
24. S.R. Caliari, D.W. Weisgerber, M.A. Ramirez, D.O. Kelkhoff, B.A.C. Harley, 'The influence of collagen-glycosaminoglycan scaffold relative density and microstructural anisotropy on tenocyte bioactivity and transcriptomic stability,' *J. Mech. Behav. Biomed. Mater.*, 11:27-40, 2012. PMCID: PMC3947516.
23. S.R. Caliari, M. Ramirez, B.A.C. Harley, 'The development of collagen-GAG scaffold-membrane composites for tendon tissue engineering,' *Biomaterials*, 32(34):8990-8998, 2011. PMCID: PMC3947519.

    News: This article was highlighted in MIT SCOPE magazine.
22. S.R. Caliari, B.A.C. Harley, 'The effect of anisotropic collagen-GAG scaffolds and growth factor supplementation on tendon cell recruitment, alignment, and metabolic activity,' *Biomaterials*, 32(23):5330-40, 2011. PMCID: PMC3947515.
21. T. Martin, S.R. Caliari, P. Williford, B.A. Harley§, R.C. Bailey§, 'The generation of biomolecular patterns in highly porous collagen-GAG scaffolds using direct photolithography,' *Biomaterials*, 32(16):3949-57, 2011. § co-corresponding authors. PMCID: PMC3947768.

From graduate and postdoctoral period:

20. C. Nombela-Arrieta, G. Pivarnik, B. Winkel, K.J. Canty, B.A.C. Harley, J.E. Mahoney, J. Lu, A. Protopopov, L.E. Silberstein, 'Quantitative imaging of hematopoietic stem and progenitor cell localization and hypoxic status in the bone marrow microenvironment,' *Nat. Cell Biol.*, 15(5):533-543, 2013. PMCID: PMC4156024.
19. S.-Y. Park, P. Wolfram, K. Canty, B.A. Harley, C. Nombela-Arrieta, G. Pivarnik, J. Manis, H.E. Beggs, L.E. Silberstein, 'Focal adhesion kinase regulates the localization and retention of pro-B Cells in bone marrow microenvironments,' *J. Immunol.*, 190(3):1094-102, 2013. PMCID: PMC3552136.
18. A. Sannino, L. Silvestri, M. Madaghiele, B. Harley, I.V. Yannas, 'Modeling the fabrication process of micropatterned macromolecular scaffolds for peripheral nerve regeneration,' *J. App. Polym. Sci.*, 116(4):1879-1888, 2010.
17. I.V. Yannas, D.S. Tzeranis, B.A Harley, P.T.C. So, 'Biologically active collagen-based scaffolds: Advances in processing and characterization,' *Philos. Transact. A Math Phys. Eng. Sci.,* 368(1917):2123-39, 2010. PMCID: PMC2944393.
16. B.A. Harley, A.K. Lynn, Z. Wissner-Gross, W. Bonfield, I.V. Yannas, L.J. Gibson, 'Design of a multiphase osteochondral scaffold III: Fabrication of layered scaffolds with continuous interfaces,' *J. Biomed. Mater. Res. Part A*, 92(3):1078-93, 2010.

    News: This article was featured by MIT News, Bionity, Forbes Magazine, & the New York Times.

15. B.A. Harley, A.K. Lynn, Z. Wissner-Gross, W. Bonfield, I.V. Yannas, L.J. Gibson, 'Design of a multiphase osteochondral scaffold II: Fabrication of a mineralized collagen-GAG scaffold,' *J. Biomed. Mater. Res. Part A*, 92(3):1066-77, 2010.
14. A.K. Lynn, S.M. Best, R.E. Cameron, B.A. Harley, I.V. Yannas, L.J. Gibson, W. Bonfield, 'Design of a multiphase osteochondral scaffold I: Control of chemical composition,' *J. Biomed. Mater. Res. Part A*, 92(3):1057-65, 2010.
13. B.A. Harley, H.-D. Kim, M.H. Zaman, I.V. Yannas, D.A. Lauffenburger, L.J. Gibson, 'Micro-architecture of three-dimensional scaffolds influences cell migration behavior via junction interactions,' *Biophys. J.*, 95(8):4013-24, 2008. PMCID: PMC2553126.
12. B.A.C. Harley and L.J. Gibson, 'In vivo and in vitro applications of collagen-GAG scaffolds,' *Chem. Eng. J.*, 137:102-121, 2008. [INVITED REVIEW]
11. K.H. Kim, T. Ragan, K. Bahlmann, M.J.R. Previte, B.A. Harley, D.M. Wiktor-Brown, C.A. Hendricks, B.P. Engelward, M.S. Stitt, K.H. Almeida, P.T.C. So, 'Three-dimensional tissue cytometer based on high-speed multiphoton microscopy,' *Cytometry A*, 71(12):991-1002, 2007.
10. Y. Le, B. Zhu, B. Harley, S.-Y. Park, J.P. Manis, H.R. Luo, A. Yoshimura, L. Hennighausen, L.E. Silberstein, 'SOCS3 protein developmentally regulates the chemokine receptor CXCR4-FAK signaling pathway during B lymphopoiesis,' *Immunity*, 27(5):811-823, 2007.
9. B.A. Harley, T.M. Freyman, M.Q. Wong, L.J. Gibson, 'A new technique for calculating individual dermal fibroblast contractile forces generated within collagen-GAG scaffolds,' *Biophys. J.*, 93(8):2911-2922, 2007. PMCID: PMC1989727.
8. B.A. Harley, J.H. Leung, E. Silva, L.J. Gibson, 'Mechanical characterization of collagen-glycosaminoglycan scaffolds,' *Acta Biomater.*, 3(4):463-474, 2007.
7. F.J. O'Brien, B.A. Harley, M.A. Waller, I.V. Yannas, L.J. Gibson, P.J. Prendergast, 'The effect of pore size on permeability and cell attachment in collagen scaffolds for tissue engineering,' *Technol. Health Care*, 15(1):3-17, 2007.
6. B. Harley and I.V. Yannas, 'Induced peripheral nerve regeneration using scaffolds,' *Minerva Biotecnologica*, 18(2):97-120, 2006. [INVITED REVIEW]
5. E. Farrell, F.J. O'Brien, E. Byrne, P. Doyle, J. Fischer, I.V. Yannas, B.A. Harley, B. O'Connell, P.J. Prendergast, V.A. Campbell, 'A collagen-glycosaminoglycan scaffold supports adult rat mesenchymal stem cell differentiation along the osteogenic and chrondrogenic routes,' *Tiss. Eng.,* 12(3):459-468, 2006.
4. B.A. Harley, A.Z Hastings, I.V. Yannas, A. Sannino, 'Fabricating tubular scaffolds with a radial pore size gradient by a spinning technique,' *Biomaterials*, 27(6):866-874, 2006.
3. F.J. O'Brien, B.A. Harley, I.V. Yannas, L.J. Gibson, 'The effect of pore size and structure on cell adhesion in collagen-GAG scaffolds,' *Biomaterials*, 26(4):433-441, 2005.
2. B.A. Harley, M.H. Spilker, J.W. Wu, K.A. Asano, H.-P. Hsu, M. Spector, I.V. Yannas, 'Optimal degradation rate for collagen chambers used for regeneration of peripheral nerves over long gaps,' *Cells Tissues Organs*, 176(1-3):153-165, 2004.
1. F.J. O'Brien, B.A. Harley, I.V. Yannas, L.J. Gibson, 'Influence of freezing-rate on pore structure in freeze-dried collagen-GAG scaffolds,' *Biomaterials*, 25(6):1077-1086, 2004.

Books:

2. A. J. Wagoner Johnson and B.A.C. Harley (eds.), 'Mechanobiology of cell-cell and cell-matrix interactions,' *Springer*, 2011.
1. L.J. Gibson, M.F. Ashby, B.A. Harley, 'Cellular materials in nature and medicine,' *Cambridge University Press*, 2010.

Book Chapters:

7. R.A. Hortensius, L.C. Mozdzen, B.A.C. Harley, 'Biomaterial scaffolds for tendon tissue engineering,' in M.E Gomes, M.T. Rodrigues, and R.L. Reis (eds.) *Tendon Regeneration*, Elsevier, 2015.

6. A.J. Turgeon, B.A. Harley, R.C. Bailey, 'Benzophenone-based photochemical micropatterning of biomolecules to create model substrates and instructive biomaterials,' in M. Piel and M. Théry (eds.) *Micropatterning in Cell Biology – Part C*, Elsevier, 2014.
5. B.A.C. Harley and I.V Yannas, 'In vivo synthesis of tissues and organs,' in R. Lanza, R. Langer, and J.P. Vacanti (eds.) *Principles of Tissue Engineering*, 4rd Edition, New York: Elsevier, 2013.
4. D.W. Weisgerber, S.R. Caliari, B.A.C. Harley, 'Synthesis of layered, graded bioscaffolds,' in S. Thomopoulos, G. Genin, V. Birman (eds.) *Structural interfaces and attachments in biology*, Springer, 2012.
3. S.R. Caliari and B.A. Harley, 'Collagen-GAG materials,' in P. Ducheyne (ed.) *Comprehensive Biomaterials*, Kidlington (UK): Elsevier, 2011.
2. B.A. Harley and I.V Yannas, 'In vivo synthesis of tissues and organs,' in R. Lanza, R. Langer, and J.P. Vacanti (eds.) *Principles of Tissue Engineering*, 3rd Edition, New York: Elsevier, 2007.
1. B.A. Harley and I.V. Yannas, 'Skin: Tissue engineering for regeneration,' in J.G. Webster (ed.) *The Encyclopedia of Medical Devices and Instrumentation*, 2nd Edition, New York: Wiley, 2006.

Patents:

9. R.C. Bailey, B.A. Harley, T.A. Martin, S.R. Caliari, *Biomolecular patterning of three dimensional tissue scaffolds*, U.S. Patent Office Provisional Application 14/001,327, 8/23/2013.
8. S.R. Caliari, M.A. Ramirez, B.A. Harley, *Membrane-scaffold composites for tissue engineering applications*. International (PCT) Patent Application PCT/US2012/40368, November 26, 2013. U.S. Patent Office Application, US 2014/0309738, October 16, 2014.

   News: This work was a finalist in the 2012 UI Innovation Discovery Award competition.
7. Z. Wissner-Gross, B.A. Harley, A.K. Lynn, W. Bonfield, I.V. Yannas, L.J. Gibson, *Layered, collagen-based scaffolds produced by solid-phase co-synthesis and solid-liquid co-synthesis*, U.K. Patent Application GB06/16026.1, Aug. 11, 2006.
6. I.V Yannas, H.K. Reddy, C.J. Zagorski, B.A. Harley, *Gradient template for angiogenesis during large organ regeneration*, U.S. Patent Office Provisional Application 60/733,803, November 7, 2005.
5. B.A. Harley, C.J. Zagorski, H.K Reddy, I.V Yannas, *Processing of angiogenic scaffolds for large organ replacement*, U.S. Patent Office Provisional Application 60/730,880, October 28, 2005.
4. C.J. Zagorski, I.V Yannas, H.K. Reddy, B.A. Harley, *Invaginated angiogenic scaffolds for regeneration of large organs*, U.S. Patent Office Provisional Application 60/675,481, April 28, 2005.
3. A. Sannino, B.A. Harley, A.Z Hasting, I.V. Yannas, *A novel technique to fabricate cylindrical and tubular structures with a patterned porosity*, International (PCT) Patent Application PCT/US2005/039024, October 27, 2005.
2. A.K. Lynn, B.A. Harley, L.J. Gibson, I.V. Yannas, W. Bonfield, *Biomaterial*, U.K. Patent Application GB05/04673.5, March 7, 2005.
1. I.V. Yannas, L.J. Gibson, F.J. O'Brien, B.A. Harley, R.R. Brau, S. Samouhos, M. Spector, *Gradient scaffolds and methods of producing the same*, U.S. Patent Office Provisional Application 60/611,266, 2004.

EDITORIAL POSITIONS

1. Special Issue Associate Editor (with F.J. O'Brien, RCSI, Ireland), *Journal of Mechanical Behavior of Biomedical Materials*, Special Issue on Tissue Engineering, 2011.
2. Guest Editor (with H.H. Lu, Columbia University, USA), *Acta Biomaterialia*, Special Issue on Spatially and Temporally Instructive Biomaterials, 2016.
3. Editorial Board, *Tissue Engineering*, 2015 – 2018.

INVITED LECTURES (Seminars, Conferences, Workshops)

1. B.A. Harley, '*Collagen-GAG scaffolds: Fabrication, characterization, application*,' University of Lecce, Dept. of Innovation Engineering, Italy, 7/2005.
2. B.A.C. Harley, '*Cell-matrix mechanics: Matrix characterization and cell behavior*,' Northwestern University, Dept. of Mechanical Engineering and Biomedical Engineering, 2/2006
3. B.A.C. Harley, '*Cell-matrix mechanics: Matrix characterization and cell behavior*,' U. of Illinois at Urbana-Champaign, Dept. of Chemical and Biomolecular Engineering, 3/2006.
4. B.A.C. Harley, '*Cell-matrix mechanics: Matrix characterization and cell behavior*,' University of Colorado at Boulder, Dept. of Mechanical Engineering, 3/2006.
5. B.A.C. Harley, '*Cell-matrix mechanics: Matrix characterization and cell behavior*,' Harvard University, School of Engineering and Applied Sciences, 3/2006.
6. B.A.C. Harley, '*Cell-matrix mechanics: Matrix characterization and cell behavior*,' Yale University, Dept. of Biomedical Engineering, 3/2006.
7. B.A.C. Harley, '*Cell-matrix mechanics: Matrix characterization and cell behavior*,' Cambridge University (UK), Cambridge Centre for Medical Materials, 7/2006.
8. B.A.C. Harley, '*Cell-matrix mechanics: Matrix characterization and cell behavior*,' Trinity College, Dept. of Mechanical Engineering, 7/2006.
9. B.A.C. Harley, '*Cell-matrix interactions: Cell behavior, stem cell niches, and tissue engineering*,' National University of Singapore, Dept. of Bioengineering, 1/2007.
10. B.A.C. Harley, '*Image cytometry analysis of HSC niches and B-cell development in the bone marrow*,' Harvard Medical School, Fellowship Program in Transfusion Medicine, 12/2007.
11. B.A.C. Harley, '*Engineering-based approaches towards hematopoietic stem cell analogs*,' Institute of Stem Cell Research, Munich, Germany, 9/2008.
12. B.A.C. Harley, '*Image cytometry analysis and engineering-based approaches towards hematopoietic progenitor cell niche analogs*,' Northwestern University, Drug Discovery and Biomarker Development Technology Seminar, Chicago, IL, 11/2008.
13. B.A.C. Harley, '*Engineering cellular microenvironments and microstructures*,' University of Illinois at Urbana-Champaign, Dept. of Mechanical Science and Engineering, 4/2009.
14. B.A.C. Harley, '*Lyophilization for wound care applications*,' International Society of Lyophilization (Midwest Chapter) - Freeze Drying Annual Meeting, Chicago, IL, 4/2010.
15. B.A. Harley, '*Engineering cellular microenvironments and microstructures*,' CHI PepTalk, San Diego, CA, 1/2011.
16. B.A.C. Harley, '*Spatially patterned collagen-GAG scaffolds for orthopedic tissue engineering*,' Greater Los Angeles VA Healthcare System, Los Angeles, CA, 1/2011.
17. B.A.C. Harley, '*Patterning biomaterials for regenerative medicine and stem cell engineering*,' University of Notre Dame, Dept. of Mechanical Engineering, South Bend, IN, 5/2011.
18. B.A.C. Harley, '*Patterning biomaterials for regenerative medicine and stem cell engineering*,' Washington University in St. Louis, Dept. of Mechanical Engineering & Materials Science, St. Louis, MO, 9/2011
19. B.A.C. Harley, '*Patterning biomaterials for regenerative medicine and stem cell engineering*,' Virginia Tech, Dept. of Chemical, Biomedical Engineering, Blacksburg, VA, 9/2011.
20. B.A.C. Harley, '*Patterning biomaterials to engineer cell fate*,' AIChE Annual Meeting, Minneapolis, MN, 10/2011.
21. B.A.C. Harley, '*Patterning biomaterials for tissue engineering*,' Purdue University Biomaterials Day, West Lafayette, IN, 10/2011.
22. B.A.C. Harley, '*Engineering approaches to assess biophysical regulation of hematopoietic stem cell fate decisions*,' NIH NIDDK Workshop: *Regulatory Determinants of Hematopoietic Stem Cell Self-Renewal, Lineage Commitment, and Terminal Differentiation*, Washington, DC, 2/2012.
23. B.A.C. Harley, '*Patterning biomaterials for regenerative medicine and stem cell engineering*,' University of Illinois at Chicago, Center for Wound Healing & Tissue Regeneration, Chicago, IL,

5/2012.

24. B.A.C. Harley, '*Patterning biomaterials for regenerative medicine and stem cell engineering*,' Cambridge University Engineering Department, Cambridge, UK, 9/2012.
25. B.A.C. Harley, '*Patterning biomaterials for regenerative medicine and stem cell engineering*,' Queen Mary University of London, School of Engineering and Materials Science, London, UK, 9/2012.
26. B.A.C. Harley, '*Patterning biomaterials for regenerative medicine and stem cell engineering*,' Allosource, Innovation Lecture Series, Centennial, CO, 11/2012.
27. B.A.C. Harley, '*Brain-mimetic hydrogel platforms to explore biophysical regulation of glioblastoma invasion and malignancy*,' Materials Research Society Fall Meeting, Boston, MA, 12/2012.
28. B.A.C. Harley, '*Biomaterial platforms to explore cancer and stem cell engineering*,' Mayo Clinic, Dept. of Radiation Oncology, Rochester, MN, 7/2013.
29. B.A.C. Harley, '*Biomaterial platforms to explore cancer and stem cell engineering*,' University of Illinois at Urbana-Champaign, Dept. of Chemistry, Urbana, IL, 9/2013.
30. B.A.C. Harley, '*Biomaterial platforms to explore cancer and stem cell engineering*,' Pennsylvania State University, Dept. of Bioengineering, State College, PA, 9/2013.
31. B.A.C. Harley, '*Biomaterial platforms to explore cancer and stem cell engineering*,' University of Wisconsin, Dept. of Bioengineering, Madison, WI, 9/2013.
32. B.A.C. Harley, '*Biomaterial platforms to explore cancer and stem cell engineering*,' Institute for Systems Biology, Seattle, WA, 9/2013.
33. B.A.C. Harley, '*Biomaterial platforms to explore regenerative medicine and stem cell engineering*,' UCSF, Dept. of Orthopedic Surgery, San Francisco, CA, 11/2013.
34. S. Pedron-Haba, E. Becka, B.A.C. Harley (podium), '*Gradient hydrogel platforms to analyze glioma malignancy*,' Materials Research Society Fall Meeting, Boston, MA, 12/2013.
35. B.A.C. Harley, '*Instructive biomaterials for regenerative medicine and stem cell engineering*,' Boston University, Dept. of Biomedical Engineering, Boston, MA, 12/2013.
36. B.A.C. Harley, '*Instructive biomaterials for regenerative medicine and stem cell engineering*,' US-Japan Nano-Bio Workshop, Tsukuba/Kyoto, Japan, 12/2013.
37. B.A.C. Harley, '*Instructive biomaterials for regenerative medicine and stem cell engineering*,' University of California Santa Barbara, Dept. of Chemical Engineering, 2/2014.
38. B.A.C. Harley, '*Opportunities and challenges for engineered tumor microenvironments*,' NIH National Cancer Institute Strategic Workshop: *Biomimetic Tissue Engineered Systems for Advancing Cancer Research*, Gaithersburg, MD, 2/2014.
39. B.A.C. Harley, '*Instructive biomaterials for regenerative medicine and stem cell engineering*,' University of Pennsylvania, Dept. of Bioengineering, Philadelphia, PA, 2/2014.
40. B.A.C. Harley, '*Biomaterials to replicate the form and function of inhomogeneous structures in the body*,' University of Kansas, Dept. of Bioengineering, Lawrence, KS, 3/2014.
41. B.A.C. Harley (Young Investigator Awardee address), '*Biomaterials to replicate the form and function of inhomogeneous structures in the body*,' Soc. for Biomaterials Annual Meeting, Denver, CO, 4/2014.
42. B.A.C. Harley, '*Biomaterials to replicate the form and function of inhomogeneous structures in the body*,' University of California Berkeley, Dept. of Bioengineering, Berkeley, CA, 5/2014.
43. B.A.C. Harley, '*Microfluidic-templated gelatin hydrogels as in vitro models of physiology and disease*,' 5th Aegean International Conference on Tissue Engineering, Kos, Greece, 6/2014.
44. B.A.C. Harley, '*Biomaterials to replicate the form and function of complex structures in the body*,' Cornell University, Dept. of Chemical and Biomolecular Engineering, Ithaca, NY, 9/2014.
45. B.A.C. Harley, '*Instructive biomaterials for regenerative medicine and stem cell engineering*,' Ohio State University, Dept. of Mechanical Engineering, Columbus, OH, 12/2014.
46. B.A.C. Harley, '*Instructive biomaterials for regenerative medicine and stem cell engineering*,' Georgia Tech, Dept. of Biomedical Engineering, Atlanta, GA, 12/2014.

47. B.A.C. Harley, '*Instructive biomaterials that harness niche concepts for stem cell engineering*,' Gordon Research Conference: Biomaterials & Tissue Engineering, Girona, Spain, 7/2015.
48. B.A.C. Harley, '*Instructive biomaterials for regenerative medicine and stem cell engineering*,' Fraunhofer Institute for Interfacial Engineering and Biotechnology, Stuttgart, Germany, 7/2015.
49. B.A.C. Harley, '*Harnessing niche concepts for regenerative medicine*,' Royal College of Surgeons in Ireland, Dublin, Ireland, 8/2015.
50. B.A.C. Harley, '*Harnessing niche concepts for regenerative medicine*,' Wake Forest Institute for Regenerative Medicine, Wake Forest University, Winston-Salem, NC, 2/2016.
51. B.A.C. Harley, '*Harnessing niche concepts for regenerative medicine*,' US Army Research Lab, Aberdeen, MD, 2/2016.
52. B.A.C. Harley, '*Engineering niches*,' Keynote – Molecular, Cell and Tissue Bioengineering Symposia, Arizona State University, Tempe, AZ, 4/2016
53. B.A.C. Harley, *TBD*, Depts. of Chemical Engineering and Bioengineering, University of Missouri, Columbia, MO, 4/2016.
54. B.A.C. Harley, '*Harnessing niche concepts for regenerative medicine and stem cell engineering*,' Ottawa Hospital Research Institute, Ottawa, Canada, 5/2016.
55. B.A.C. Harley, '*Harnessing the biology of the placenta and endometrium in biomaterial design*,' Gordon Research Conference: Signal Transduction by Engineered Extracellular Matrices, Biddeford, ME, 6/2016.

RESEARCH SUPPORT

Current:

Brendan A. Harley (PI); William Stanford (Ottawa Hospital Research Institute; Co-Investigator)
R01 DK099528, National Institutes of Health
'*Gradient biomaterials to investigate niche regulation of hematopoiesis*'
8/2014 – 7/2019, $1,676,482 (total)

Brendan A. Harley (PI); Jann Sarkaria and Ian Parney (Mayo Clinic, Co-Investigators); Steven George (Washington University in St. Louis, Co-Investigator).
R01 CA197488, National Institutes of Health
'*Biomimetic hydrogel niches to study the malignant phenotype of glioblastoma multiforme*'
3/2016 – 2/2021, $1,808,789 (total)

Brendan A. Harley (PI); Marni Boppart (UIUC; Co-Investigator)
R21 AR063331, National Institutes of Health
'*Patterning instructive biomolecular cues into collagen scaffolds for tendon insertion regeneration*'
7/2013 – 6/2016, $359,195 (total)

Brendan A. Harley (PI); Mary Kraft, Brian Cunningham (UIUC; Co-Investigators)
R21 EB018481, National Institutes of Health;
'*Label-free interrogation of heterogeneities in HSC fate decision signatures*'
4/2015 – 1/2017, $420,152 (total)

Brendan A. Harley (PI)
R03 AR062811, National Institutes of Health
'*Biomimetic scaffold anisotropy and biomolecule conjugation to direct tendon regeneration*'
7/2013 – 6/2016, $212,127 (total)

Brendan A. Harley (PI); Bruce Hannon (UIUC; Co-Investigator)
CBET 1547811, National Science Foundation
'*EAGER: Biomanufacturing the hematopoietic stem cell niche*'
9/2015 – 8/2017, $299,578 (total)

Brendan A. Harley (PI)
CBET 1254738, National Science Foundation

'*CAREER: Building bone marrow*'
3/2013 – 2/2018, $400,000 (total)

Brendan A. Harley (PI); Matthew Wheeler (UIUC; Co-Investigator); Scott Hollister (U. Michigan; Co-Investigator)
S-14-54H, AO Foundation
'*Multi-scale PCL-collagen composites for large bone defect repair*'
7/2014 – 6/2016, $123,266 (total)

Brendan A. Harley (PI); Matthew Wheeler (UIUC; Co-Investigator); Scott Hollister (U. Michigan; Co-Investigator)
USAMRMC 14164004, U.S. Army Medical Research and Materiel Command
'*Polycaprolactone-collagen composite biomaterials for mandible regeneration*'
4/2016 – 10/2018, $800,000 (total)

Brendan A. Harley (PI); Jann Sarkaria, Daniel Ma (Mayo Clinic; Co-Investigators)
Challenge C, Mayo Clinic-University of Illinois Alliance
'*Chip-based engineered tumor microenvironments for glioma therapy*'
8/2014 – 7/2016, $80,000 (direct)

Past:

Timothy Miller (UCLA; PI); **Brendan A. Harley** (Co-Investigator)
I01 BX001367, Dept. of Veterans Affairs
'*Bone tissue engineering using mineralized collagen-GAG scaffolds*'
10/2012 – 9/2015, $442,820 (total)

Brendan A. Harley (PI); Ryan Bailey (UIUC; Co-PI)
DMR 1105300, National Science Foundation
'*Catch and release: Biomolecular ligation and cleavage strategies for generating instructive and dynamically responsive 3D biomaterials*'
9/2011 – 9/2014, $450,000 (total)

Brendan A. Harley (PI)
Basic Research Grant 189782, American Cancer Society, Illinois Division
'*Biophysical regulation of hematopoietic stem cells*'
6/2011 – 5/2012, $100,000 (total)

Brendan A. Harley (PI)
Proof-of Concept Research Grant, University of Illinois, Institute for Genomic Biology
'*Spatially-patterned composite collagen biomaterial for improved clinical treatment of tendon defects'*
4/2011 – 3/2012, $75,000 (direct)

Matthew Stewart (UIUC; PI); **Brendan A. Harley** (Co-Investigator)
Research Grant, Grayson Jockey Club Research Foundation
'*Developing eqBMP-2 for bone and cartilage repair in horses*'
4/2009 – 3/2011, $87,286 (total)

Brendan A. Harley (PI)
Basic Research Grant 160673, American Cancer Society, Illinois Division
'Engineering approaches towards hematopoietic progenitor cell niche analogs'
12/2009 – 11/2010, $100,000 (total)

Leslie A. Silberstein (Childrens Hospital Boston; PI); **Brendan A. Harley** (Consultant)
R21 HL094923, National Institutes of Health
'Spatial analysis of hematopoietic stem and progenitor cells in the bone marrow'
3/2009 – 11/2011, $469,959 (total)

PREDOCTORAL TRAINEES SUPERVISED (alphabetical order)

Current graduate trainees

Jee-Wei (Emily) Chen. Chemical and Biomolecular Engineering (UIUC); 10/2014 – present.
Ph.D.: Expected 5/2019.

Aidan Gilchrist. Materials Science and Engineering (UIUC); 9/2015 – present.
Ph.D.: Expected 5/2020.

William Grier. Chemical and Biomolecular Engineering (UIUC); 10/2012 – present.
Ph.D.: Expected 5/2017.

Rebecca Hortensius. Bioengineering (UIUC); 8/2011 – present.
Ph.D.: Expected 8/2016.

Laura Mozdzen. Chemical and Biomolecular Engineering (UIUC); 10/2011 – present.
M.S.: *Differential human mesenchymal stem cell responses across multi-compartment scaffolds for tendon-bone regeneration*, 5/2014. Link.
Ph.D.: Expected 6/2016.

Mai Ngo. Chemical and Biomolecular Engineering (UIUC); 10/2015 – present.
Ph.D.: Expected 5/2020.

Jacquelyn Pence. Chemical and Biomolecular Engineering (UIUC); 10/2010 – present.
M.S.: *Control of covalent and non-covalent presentation of biomolecules within collagen-GAG scaffolds*, 12/2012. Link.
Ph.D.: Expected 12/2015.

Previously supervised graduate trainees

Dr. Steven Caliari, Ph.D. Chemical and Biomolecular Engineering (UIUC); 10/2008 – 9/2013.
M.S.: *Design and characterization of an aligned collagen-GAG scaffold-membrane composite with soluble factor presentation for tendon tissue engineering*, 12/2010. Link.
Ph.D.: *The influence of collagen-GAG scaffold architectural and biological cues on tenocyte and mesenchymal stem cell bioactivity for musculoskeletal tissue engineering*, 7/2013. Link.
Current: NIH F32 post-doctoral research associate, Dept. of Bioengineering, University of Pennsylvania (Mentor: Jason Burdick).

Dr. Ji Sun (Sunny) Choi, Ph.D. Chemical and Biomolecular Engineering (UIUC); 10/2008 – present.
M.S.: *Substrate elasticity regulates the biophysical properties of hematopoietic stem and progenitor cells*, 12/2011. Link.
Ph.D.: *Single-cell approaches to assess hematopoietic stem cell response to matrix cues*, 5/2014. Link.
Current: Post-doctoral fellow, Dept. of Chemical and Biomolecular Engineering, University of Illinois at Urbana-Champaign (Harley Lab).

Emily Gonnerman, M.S. Chemical and Biomolecular Engineering (UIUC); 10/2009 – 5/2012.
M.S.: *Collagen-glycosaminoglycan scaffold systems to assess HL-1 cardiomyocyte beating and alignment*, 12/2011. Link.
Current: Manufacturing Engineer, TSI, Inc., MN.

Dr. Bhushan Mahadik, Ph.D. Chemical and Biomolecular Engineering (UIUC); 10/2008 – present.
M.S.: *Multigradient hydrogels to decode extrinsic regulation of hematopoietic stem cell fate*, 12/2010. Link.
Ph.D.: *Hydrogel platform to investigate the coordinated impact of niche signals on hematopoietic stem cell fate*, 7/2014. Link.
Current: Post-doctoral fellow, Dept. of Chemical and Biomolecular Engineering, University of Illinois at Urbana-Champaign (Harley Lab).

Dr. Daniel Weisgerber, Ph.D. Materials Science and Engineering (UIUC); 8/2009 – present.
Ph.D.: *Design, characterization, and reinforcement of mineralized collagen-glycosaminoglycan scaffolds for orthopedic wound repair*, 11/2015. Link.
Current: Post-doctoral fellow, Dept. of Chemical and Biomolecular Engineering, University of Illinois at Urbana-Champaign (Harley Lab).

POSTDOCTORAL TRAINEES SUPERVISED (alphabetical order)

Current

Dr. Ji Sun Choi. Postdoc, Chemical and Biomolecular Engineering (UIUC); 2014 – present.
Project: *Label-free analysis of hematopoietic stem cell fate decisions*

Dr. Bhushan Mahadik. Postdoc, Chemical and Biomolecular Engineering (UIUC); 2014 – present.
Project: *Advanced microfluidic platforms to evaluate stem cell fate decisions*

Dr. Sara Pedron Haba. Postdoc, Carl R. Woese Institute for Genomic Biology (UIUC); 2011 – present.
Project: *Regulation of glioma cell phenotype in 3D matrices by hyaluronic acid*

Daniel Weisgerber. Chemical and Biomolecular Engineering (UIUC); 2016 – present.
Project: *Multi-scale biomaterial composites for mandible regeneration*

Previous

Dr. Seema Ehsan. Postdoc, Carl R. Woese Institute for Genomic Biology (UIUC); 2014 – 2015.
Project: *Biomimetic tissue engineering platforms for cancer*
Current: Regulatory Affairs, Genentech, San Francisco, CA.

Dr. Nathaniel Gabrielson. Postdoc, Institute for Genomic Biology (UIUC); 2011 – 2012.
Project: *Cell-laden hydrogels in integrated microfluidic devices for long-term cell culture*
Current: Lecturer, Dept. of Materials Science and Engineering, UIUC.

Dr. Tamaki Yokohama-Tamaki. Visiting scholar, Institute for Genomic Biology (UIUC); 2011 – 2012.
Project: *CXCR4/CXCL12 signaling in the dental epithelial stem cell niche.*
Current: Research Scientist, Hokkaido University, Sapporo, Japan.

AWARDS WON BY TRAINEES

Dr. Steven Caliari

2010 – 2012	Fellow, NIH Chemistry-Biology Interface training program, University of Illinois.
2012 – 2013	Drickamer Graduate Fellow (top senior graduate student), Dept. of Chemical and Biomolecular Engineering, University of Illinois.
2012 – 2013	Mavis Future Faculty Fellow, University of Illinois.
2012	1st Prize, AIChE Bionanotechnology (Area 22b) Graduate Student Awards, 2012 AIChE Annual Meeting.
2013	Distinguished Young Scholars Summer Seminar Series, Dept. of Chemical Engineering, University of Washington.
2014	Young Investigator Council, *Tissue Engineering* (journal; 6 chosen worldwide).

Emily Gonnerman

2012	National Science Foundation Graduate Research Fellowship, 2012 – 2015 (declined).

William Grier

2013 – 2015 Fellow, NIH Chemistry-Biology Interface training program, University of Illinois.

Rebecca Hortensius

2010 – 2013 National Science Foundation Graduate Research Fellowship, 2010 – 2013.

2014 – 2016 Mavis Future Faculty Fellow, University of Illinois.

2015 Graduate Student Travel Award (podium presentation), BMES CMBE Conference.

2015 NextProf fellow, University of Michigan.

2015 – 2016 Dissertation Completion Fellowship, University of Illinois Graduate College.

Laura Mozdzen

2011 – 2013 Fellow, NSF Cellular and Molecular Mechanics and BioNanotechnology IGERT, University of Illinois.

2013 – 2015 SURGE Fellowship, University of Illinois.

2014 – 2015 DuPont Science and Engineering Fellow, Dept. of Chemical and Biomolecular Engineering, University of Illinois.

Daniel Weisgerber

2010 – 2012 Fellow, NSF Cellular and Molecular Mechanics and BioNanotechnology IGERT, University of Illinois.

2011 3rd Place, PhD Student Paper Competition (Biomaterial/Nanotechnology), ASME Summer Bioengineering Conference.

DOCTORAL DISSERTATION COMMITTEES (alphabetical order)

1. M. Yakut Ali, UIUC Mechanical Science & Engineering (Saif), 1/2014 – 4/2015.
2. Aurora Alsop, UIUC Chemistry – Analytical (Bailey), 9/2011 – 5/2015.
3. Khaldoon Altahhan, UIUC Mechanical Science and Engineering (Insana), 8/2014 – 1/2015.
4. Jessica Banks, UIUC Chemistry – Analytical (Bailey), 9/2010 – 5/2015.
5. Ran Chao, UIUC ChBE (Zhao), 10/2014 – present.
6. Wuang Shy Chyi, NUS-UIUC ChBE, 3/2010.
7. Arkaprava Dan, UIUC ChBE (Leckband), 10/2014 – present.
8. Russell Emmons, UIUC Kinesiology and Community Health (De Lisio), 1/2016 – present.
9. Dawn Ericksen, UIUC ChBE (Zhao), 5/2013 – 5/2014.
10. Edzna Garcia, UIUC Chemistry (Zimmerman), 2/2016 – present.
11. Sachit Goyal, UIUC ChBE (Kenis), 5/2012 – 1/2014.
12. Kalyn Herzog, UIUC Veterinary Clinical Medicine (Stewart), 12/2015 – present.
13. Adam Hollinger, UIUC ChBE (Kenis), 9/2010 – 4/2012.
14. Yelena Ilin, UIUC ChBE (Kraft), 7/2014 – present.
15. Haley Klitzing, UIUC Chemistry – Analytical (Kraft), 12/2010 – present.
16. Daria Khvostichenko, UIUC ChBE (Kenis), 11/2011 – 11/2012.
17. Samantha Knoll, UIUC Mechanical Science and Engineering (Saif), 9/2015 – 3/2016.
18. Santosh Koirala, UIUC ChBE (Rao), 5/2013 – 10/2015.
19. Amit Kumar, UIUC ChBE (Higdon), 5/2009 – 2/2010.
20. Mihael Lazebnik, UIUC ChBE (Pack), 8/2014 – 9/2015.
21. Jing Liang, UIUC ChBE (Zhao), 11/2012 – 3/2014.
22. Erich Lidstone, UIUC Bioengineering (Cunningham), 10/2011 – 10/2012.

23. Pedro Omar López-Montesinos, UIUC ChBE (Kenis), 10/2010 – 3/2011.
24. Jan Lumibao, UIUC Division of Nutritional Sciences (Gaskins), 1/2016 – present.
25. Aaron Maki, UIUC Animal Sciences (Wheeler), 3/2012 – 4/2013.
26. Teresa Martin, UIUC Chemistry (Bailey), 11/2010 – 2/2011.
27. Ritika Mohan, UIUC ChBE (Kenis), 10/2012 – 1/2014.
28. Robert Morgan, UIUC ChBE (Masel), 9/2010 – 5/2011.
29. Jonathan Ning UIUC ChBE (Zhao), 2/2015 – present.
30. Sarah Perry, UIUC ChBE (Kenis), 12/2008 – 8/2010.
31. Michael Poellmann, UIUC Mechanical Science & Engineering (Wagoner Johnson), 7/2011 – 6/2013.
32. Yeh Chuin Poh, UIUC Mechanical Science and Engineering (Wang), 5/2012 – 5/2013.
33. Brian Rosen, UIUC ChBE (Masel), 10/2011 – 4/2013.
34. Lawrence Rustom, UIUC BioE (Wagoner Johnson), 6/2014 – present.
35. Kara Smith, UIUC ChBE (Pack), 9/2010 – 7/2011.
36. Tong Si, UIUC ChBE (Zhao), 5/2013 – 8/2014.
37. Sun Wei, National University of Singapore, Bioengineering, 11/2010.
38. Yujie Xia, UIUC ChBE (Pack), 8/2012 – 8/2013.
39. Ashley Yeager, UIUC ChBE (Kraft), 10/2014 – present.
40. Douglas Zhang, UIUC Materials Science and Engineering (Kilian), 4/2015 – present.
41. Yue Zhuo, UIUC Bioengineering (Cunningham), 12/2013 – 4/2015.

External Examiner, Doctoral Thesis Committees:

1. Ciara Murphy, Royal College of Surgeons in Ireland, 6/2010.
2. Rosanne Raftery, Royal College of Surgeons in Ireland, 8/2015.

UNDERGRADUATE, HIGH SCHOOL STUDENTS SUPERVISED (alphabetical order)

Current:

1. Matthew Au, Chemical and Biomolecular Engineering (UIUC). 2014 – present.
2. Audrey Blazek, Bioengineering (UIUC). 2015 – present.
3. Amber Boyce, Chemical and Biomolecular Engineering (UIUC). 2015 – present.
4. Lillian Buescher, Chemical and Biomolecular Engineering (UIUC). 2013 – present.
5. Hannah Chait, Chemical and Biomolecular Engineering (UIUC). 2015 – present.
6. Jill Ebens, Chemical and Biomolecular Engineering (UIUC). 2014 – present.
7. Kevin Erning, Chemical and Biomolecular Engineering (UIUC). 2013 – present.
8. Michael Foley, Chemical and Biomolecular Engineering (UIUC). 2015 – present.
9. Allison LaHood, Bioengineering (UIUC). 2015 – present.
10. Ashley Moy, Bioengineering (UIUC). 2013 – present.
    Awards: Illinois Students in Undergraduate Research (ISUR) fellowship, 2014 – 2015.
11. Amanda Pritchard, Chemical and Biomolecular Engineering (UIUC). 2014 – present.
12. Matthew Ramsey, Bioengineering (UIUC). 2015 – present.
13. Ryan Rodgers, Agricultural and Biological Engineering (UIUC). 2013 – present.
14. Shayta Roy, Chemical and Biomolecular Engineering (UIUC). 2015 – present.
15. Erik Steinbrenner, Chemical and Biomolecular Engineering (UIUC). 2014 – present.
16. Jessica Vargas, Integrative Biology (UIUC). 2015 – present.
17. Alan Vucetic, Chemical and Biomolecular Engineering (UIUC). 2015 – present.

Supervised Senior Honors Thesis:

1. Eftalda Becka, Chemical and Biomolecular Engineering (UIUC). 2012 – 2013.
   Current: Graduate student, Chemical Engineering, U. Colorado.
2. Jacob Becraft, Chemical and Biomolecular Engineering (UIUC). 2012 – 2013.
   Current: Graduate student, Chemical Engineering, MIT.
3. Roxanne De Leon, Chemical and Biomolecular Engineering (UIUC). 2011 – 2013.
4. Douglas Kelkhoff, Materials Science and Engineering (UIUC). 2010 – 2012.
   Current: Graduate student, Bioengineering, University of California Berkeley.
5. Tyler Leonard, Chemical and Biomolecular Engineering (UIUC). 2009 – 2010.
6. Manuel Ramirez, Bioengineering (UIUC). 2009 – 2012.
   Current: Graduate student, Biomedical Engineering, U. Rochester.
7. Peter Rapp, Chemical and Biomolecular Engineering (UIUC). 2010 – 2011.
   Current: Graduate student, Chemical Engineering, CalTech.
8. Luke Skertich, Bioengineering (UIUC). 2010 – 2014.
9. Nicholas Skertich, Chemical and Biomolecular Engineering (UIUC). 2009 – 2010.
   Current: Medical student, Case Western Reserve University.

Supervised Research Project:

1. Lisa Alvin, Chemical and Biomolecular Engineering (UIUC). 2009 –2011.
2. Lindsey Beyer, Chemical and Biomolecular Engineering (UIUC). 2011 – 2013.
3. Marco Colamonici, Chemical and Biomolecular Engineering (UIUC). 2011 – 2012.
4. Jessica DiLiberto, Biological Engineering (UIUC). 2010.
5. Casey Fee, Chemical and Biomolecular Engineering (UIUC). 2012.
6. Martina Gabra, Molecular and Cellular Biology (UIUC). 2011.
7. Jacob Hanselman, Bioengineering (UIUC). 2012 – 2014. American Cancer Society Summer High School Research Program (Monticello High School, IL), 2011.
   Awards: *Most innovative and industry impactful study in health and well-being*. 2014 UIUC Undergraduate Research Symposium.
8. Ehiremen (Martins) Iyoha, Biology (University of Georgia). UIUC EBICS/SROP 2014.
9. Joseph Katsiroubas, Chemical and Biomolecular Engineering (UIUC). 2011.
10. Jaime Kelleher, Materials Science and Engineering (UIUC). 2012 – 2013.
    Current: Graduate student, Mechanical Engineering, U. Colorado.
11. Mudassir Khan, Bioengineering (UIUC). 2013 – 2014.
12. Asha Kirchoff, Bioengineering (UIUC). 2012 – 2013.
13. Jessica Kramer, Animal Science (UIUC). 2011.
14. Sarah Laken, Bioengineering (UIUC). 2013 – 2015.
    Awards: *Most innovative and industry impactful study in health and well-being*. 2014 UIUC Undergraduate Research Symposium.
    1st prize, Undergraduate Poster Competition, 2014 The Society for Women Engineers Annual Meeting, Los Angeles, CA
15. Blandine Landrieu, Bioengineering, (Ecole Centrale de Lille, France). 2011.
    Current: Graduate student, Bio-informatics, Doshisha University, Kyoto, Japan.
16. Lisa McGregor, Bioengineering (UIUC). 2010 – 2012.
17. Ayesha Mumtaz, Chemical and Biomolecular Engineering (UIUC). 2013.
18. Kwaku Okraku, Chemical and Biomolecular Engineering (UIUC). 2009 – 2010.
19. Ann Pataky, Chemical and Biomolecular Engineering (UIUC). 2010.
    Graduate studies: M.S., Food Science, University of Minnesota (2013).

20. Erica Peterson, Chemical and Biomolecular Engineering (UIUC). 2013 – 2014.
21. Harshita Polishetty, Chemical and Biomolecular Engineering (UIUC). 2013 – present.
22. Ricardo Jimenez Ramos, Chemical Engineering (U. Puerto Rico, Mayaguez). 2009.
23. Ryan Rodgers, Monticello High School (Monticello, IL); American Cancer Society Summer High School Research Program, 2012.
24. Megan Schierer, Chemical and Biomolecular Engineering (UIUC). 2013.
25. Farhaan Shaihk, Chemistry (UIUC). 2009 – 2010.
26. Lucas Tan, Chemical and Biomolecular Engineering (UIUC). 2013 – 2014.
27. Paul Williford, Chemical and Biomolecular Engineering (UIUC). 2009 – 2010.
28. Kelvin Yang, Bioengineering (UIUC). 2013 – 2014.
29. Jaclyn Yu, Bioengineering (UIUC). 2012 – 2013.

SERVICE ACTIVITIES (DISCIPLINE)

Professional Associations:

AAAS; American Institute of Chemical Engineers; American Society of Mechanical Engineers; Biomedical Engineering Society; International Association for Biological and Medical Research; Materials Research Society; Orthopedic Research Society; Sigma Xi; Society for Biomaterials; Tissue Engineering and Regenerative Medicine International Society

Offices Held in Professional Societies:

1. Vice Chair, *Tissue Engineering* Special Interest Group (SIG), Soc. for Biomaterials, 2011 – 2013.
2. Program Chair, *Engineering Cells and Their Microenvironment* SIG, Soc. for Biomaterials, 2011 – 2013.
3. Chair, *Engineering Cells and Their Microenvironment* SIG, Soc. for Biomaterials, 2013 – 2015.
4. Area Chair, *Biomaterials (8b),* Materials Science and Engineering Division, *2014 AIChE Annual Meeting*, Atlanta, GA.
5. *Special Interest Group* Representative, Society for Biomaterials, 2015 – 2017.
6. Member of the *Board of Directors* and *Governing Council* of the Society for Biomaterials, 2015 – 2017.

Conference Organizer

1. Gordon Research Conference: *Biomaterials & Tissue Engineering*. Vice Chair (with Jennifer West), 7/2017; Holderness, NH. Chair (with Jennifer West), 7/2019; Location TBD.

Organization of Sessions and Symposia:

1. Session Co-chair, 'Structural and Biomechanical Characterization,' *Regenerate: World Congress on Tissue Engineering and Regenerative Medicine*, Pittsburgh, PA, 5/2006.
2. Symposium Co-organizer and Co-chair, 'Microstructure and Properties of Natural and Synthetic Biomaterials, Biocomposites, and Interfaces,' *Society of Engineering Science 45th Annual Technical Meeting*, Urbana, IL, 10/2008.
3. Symposium Co-organizer and Co-chair, 'Mechanobiology of Cell-Extracellular Matrix Interactions,' *Society of Engineering Science 45th Annual Technical Meeting*, Urbana, IL, 10/2008.
4. Session Co-chair: Stem Cells and Tissue Engineering, *BMES Annual Meeting*, Austin, TX, 10/2010.
5. Organizing Committee, *UIC-UIUC Workshop on Regenerative Biology and Tissue Engineering*, Champaign, IL, 10/2010.
6. Session Co-organizer: Novel Biomaterials for Cell and Tissue Engineering, *241st ACS National Meeting*, Anaheim, CA, 3/2011.
7. Symposium Co-organizer: Engineering instructive cues into biomaterials, *Soc. for Biomaterials*

Annual Meeting, Orlando, FL, 4/2011.

8. Session Co-chair, *4th International Conference on Tissue Engineering*, Crete, Greece, 6/2011.
9. Symposium Co-organizer: Mechanical behaviour of cells, scaffolds, and engineered tissues; *TERMIS-EU Annual Meeting*, Granada, Spain, 6/2011.
10. Organizing Committee, *4th Illinois Workshop on Regenerative Biology and Tissue Engineering*, Urbana, IL, 11/2011.
11. Session Co-chair: Regenerative medicine & tissue engineering; *4th International Conference on the Mechanics of Biomaterials and Tissues,* Waikola, Hawaii, 12/2011.
12. Session Co-organizer: Stem Cells and Tissue Engineering: Adult stem cells, *243rd ACS National Meeting*, San Diego, CA, 3/2012.
13. Session Co-organizer, Chair: 8-4: Mechanics and Synthesis of Biological Interfaces, *2012 ASME Summer Bioengineering Conference*, Fajardo, Puerto Rico, 6/2012.
14. Session Co-chair: Stem Cell Engineering, *2012 BMES Annual Meeting*, Atlanta, GA, 10/2012.
15. Session Co-chair: Stem Cells in Tissue Engineering (15D04), *2012 AIChE Annual Meeting*, Pittsburg, PA, 11/2012.
16. Session Co-chair: Biomaterials for Stem Cell Expansion and Differentiation (08B11), *2012 AIChE Annual Meeting*, Pittsburg, PA, 11/2012.
17. Session Co-chair: Engineering Cells and Their Microenvironment, *2013 Soc. For Biomaterials Annual Meeting*, Boston, MA, 4/2013.
18. Session Co-chair: Musculoskeletal Tissue Engineering II - Scaffolds and ECM, *2013 BMES Annual Meeting*, Seattle, WA, 9/2013.
19. Session Co-chair: Cell Responses to Engineered Matrices, *2013 TERMIS-AM Annual Meeting*, Atlanta, GA, 11/2013.
20. Symposia Co-organizer: Symposium W: Functional Biomaterials for Regenerative Engineering, *2014 MRS Spring Meeting*, San Francisco, 4/2014.
21. Session Co-organizer: Enabling Technologies (cellular), *5th Aegean International Conference on Tissue Engineering*, Kos, Greece, 6/2014.
22. Symposia Co-organizer: Engineering Tissue Interfaces, *Soc. for Biomaterials Annual Meeting*, Charlotte, NC, 4/2015.
23. Track Chair, Biomaterials, *Biomedical Engineering Society Annual Meeting*, Minneapolis, MN, 10/2016.

Reviewer for Journals:

Acta Biomaterialia; Advanced Materials; Advanced Healthcare Materials; Annals of Biomedical Engineering; Biofabrication; Biomacromolecules; Biomaterials; Biomaterials Science; Biomedical Materials; Biomedical Microdevices; Biomicrofluidics; Biophysical Journal; Biotechnology Letters; BMC Musculoskeletal Disorders; British Journal of Haematology; Cell Adhesion and Migration; Cells Tissues Organs; Cellular and Molecular Bioengineering; European Journal of Cell Biology; Experimental Biology and Medicine; FASEB J; Integrative Biology; Journal of Biomaterials Applications; Journal of Biomedical Materials Research: Part A; Journal of Biomedical Materials Research: Part B – Applied Biomaterials; Journal of Controlled Release; Journal of Materials Science: Materials in Medicine; Journal of the Mechanical Behavior of Biomedical Materials; Journal of the Royal Society Interface; Mechanics of Materials; PLoS ONE; Regenerative Biomaterials; Scientific Reports; Small; Stem Cells; Tissue Engineering.

Reviewer for Funding Agencies:

- NSF CBET BBBE (Panel).
- NSF CBET BBBE, BME CAREER (Panel).
- NSF CLP CAREER (Mail).
- NSF DMR BMAT (Panel).

- NSF (CBET)-NIH (NCI) Physical and Engineering Science in Oncology (Panel).
- NIH Hematopoiesis Study Section (Mail).
- NIH NIDDK Special Emphasis Panel (Mail).
- Dept. of Veterans Affairs (Panel).
- Dept. of Veteran Affairs Federal Advisory Committee (Council), 2016 – 2019.
- North Carolina Biotechnology Center (Mail).
- South Carolina EPSCoR/IDeA (Mail).
- Dutch Technology Foundation, Open Technology Program (Mail).
- Israel Science Foundation, External Review Panel (Mail).
- Qatar National Research Fund (Mail).
- The Ohio State University, Materials Research Seed Grant Program (Mail).
- New Zealand Ministry of Business, Innovation & Employment (Mail).

Reviewer for Conferences:

- ASME Summer Bioengineering Conference, 2010 – 2013.
- BMES Annual Meeting (Tissue Engineering Track, 2010; Stem Cell Engineering Track, 2012; Nano and Micro Technologies Track, 2013; Orthopedic and Rehabilitation Engineering Track, 2013)
- Soc. For Biomaterials (2013, 2014)
- TERMIS-EU (European Union) Annual Meeting, 2011.
- TERMIS-NA (North America) Annual Meeting, 2011, 2013, 2014.

SERVICE ACTIVITIES (CAMPUS)

Department of Chemical and Biomolecular Engineering:

- Administrative Committee (2008 – 2011), Advisory Committee (2011 – present)
- Undergraduate Advising Committee (2008 – present).
- Undergraduate Program/Curriculum Committee (2011 – present).
- Undergraduate Awards/Scholarships Committee (2012 – present).
- Shared Equipment Facility Committee (2014 – present).
- Publicity Committee (2011 – 2013).
- Graduate Program Committee (2011 – 2014).
- Chair, Undergraduate Organizations Committee (2008 – 2013).
- Biomolecular Courses Advisory Committee, Ad Hoc (2009 – 2010).
- Search Committee, Lecturer, Ad Hoc (2009 – 2010).

UIUC Campus:

- Lesbian Gay Bisexual Transgender (LGBT) Ally Network (2011 – present).
- Chancellor/Provost Faculty Consultation Group (2015 – 2016).
- Faculty Senate of the Urbana-Champaign Campus (2015 – 2016).

College of Engineering:

- Faculty recruitment committee, Dept. of Bioengineering (2010 – 2011).

College of Liberal Arts and Sciences:

- Faculty recruitment committee, Dept. of Cell and Developmental Biology (2013 – 2014).
- Awards Committee, College of Liberal Arts and Sciences (2015 – 2017).

School of Chemical Sciences (SCS):

- Faculty advisor, National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE), University of Illinois at Urbana-Champaign Chapter, 2010 – 2013.

- Faculty advisor, American Institute of Chemical Engineers (AIChE) Student Chapter, University of Illinois at Urbana-Champaign Chapter, 2008 – 2013.

Carl R. Woese Institute for Genomic Biology:

- Organizing Committee, *4th Illinois Workshop on Regenerative Biology & Tissue Engineering*, Urbana, IL, 11/2011.
- IGB 10th Anniversary Advisory Committee.
- Leader, *Regenerative Biology and Tissue Engineering* theme (> 20 faculty), 6/2015 – date.

SERVICE ACTIVITIES (PUBLIC OUTREACH)

Keynote Presentations:

- Speaker, American Cancer Society 2010 Relay For Life of Coles County, Mattoon, IL, 9/2010.
- Keynote, American Cancer Society 2011 Regional Relay for Life Academy, Champaign, IL, 11/2010.
- Speaker, American Cancer Society 2011 Relay For Life of Champaign County, Urbana, IL, 4/2011.
- Keynote, American Cancer Society 2011 Clay County Survivor's Event, Louisville, IL
- Speaker, American Cancer Society Illinois Division Relay for Life Leadership Summit, Chicago, IL, 9/2011.
- Speaker, Illini Rebounders Luncheon: Coaches vs. Cancer, Urbana, IL, 12/2011.
- Panelist, University High School Coaches vs. Cancer Roundtable, Urbana, IL, 1/2012.
- Panelist, Cancer Community at Illinois Annual Symposium, Champaign, IL, 4/2012.
- Speaker, American Cancer Society 2012 Relay For Life of Champaign County, Champaign, IL, 6/2012.
- Keynote, American Cancer Society 2013 Black and White Ball, Lombard, IL, 3/2013.
- Keynote, UIUC College of Liberal Arts and Sciences Alumni Event, Two Brothers Brewery, Aurora, IL, 4/2014.
- University of Illinois 2014 Campus Insight Lecture to Board of Trustees, President, Chancellor, 9/2014 (video). Link.

Media Features:

- WCIA 3 (Champaign, IL), 5/20/2011. Feature story (TV), 'UI Cancer Researcher'
- Connect 93.5FM (Champaign, IL), 7/18/2011. On-air interview (radio), 'American Cancer Society Summer High School Research Program'
- The News Gazette (Champaign, IL), 7/25/2011. Feature article (print), 'Monticello high school student helps on cancer research at UI.'
- The Piatt County Journal Republican (Monticello, IL), 7/27/2011. Feature article (print), 'Monticello high school student helps on cancer research at UI.'
- The Decatur Herald & Review (Decatur, IL), 8/16/2011. Feature article (print), 'High schoolers get hands on experience in cancer research with summer program.'
- WCIA 3 (Champaign, IL), 10/7/2011. On-air interview (TV), 'Cancer Researcher.'
- The Daily Illini (Urbana, IL), 11/17/2011. Feature article (print), 'UI's Harley honored by American Cancer Society.'
- Cancer Breakthroughs at Illinois, 12/14/2011. 'American Cancer Society Honors Illinois professor.'
- UIUC President's blog, 1/4/2012. 'Prof honored for aiding battle against cancer.'
- IGERT News Release. 'American Cancer Society Honors Illinois IGERT-CMMB Professor.'
- WCIA 3 (Champaign, IL), 5/6/2013. Feature story (TV), 'Professor shares story of hope.'
- WILL Focus 580, Illinois Public Media (Urbana, IL), 5/21/2013. On-air interview (radio), 'Bone Marrow Transplants.'
- LASNews, UIUC College of Liberal Arts and Sciences Alumni Magazine, Spring, 2014 (print). 'Flesh and Bone.'

TEACHING

Instructor, *Momentum and Heat Transfer*, ChBE 421, Dept. of Chemical and Biomolecular Engineering, University of Illinois. Fall 2008, 2009[§], 2010[§], 2011[§], 2012[§], 2013, 2014[§]. Spring 2015.

Instructor, *Tissue Engineering*, ChBE 475/594, Dept. of Chemical and Biomolecular Engineering, University of Illinois. Spring 2010[§], 2011[§], 2012, 2013, 2014[§].

[§] List of teachers ranked as excellent, University of Illinois at Urbana-Champaign

SHORT COURSES

Instructor, *Mechanobiology,* BioNanotechnology Summer Institute, University of Illinois. July 2011.

Instructor, *Biomimicry*, Girls Adventures in Math, Engineering, and Science (GAMES) camp, University of Illinois. July 2012, 2013, 2014.

Instructor, *Biomimicry*, Explore Bioengineering camp, University of Illinois. July 2015.