Daria A. Narmoneva

CURRICULUM VITAE

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A. EMPLOYMENT AND EDUCATION HISTORY

Academic Appointments

2011 – present	Associate Professor (with tenure), Department of Biomedical Engineering, University of Cincinnati, Cincinnati, OH.
2011 – present	Associate Professor (adjunct) in Center for Molecular Fetal Therapy within Division of Pediatric, General and Thoracic Surgery, Cincinnati Children's Hospital Medical Center, Cincinnati, OH.
2005 – 2010	Assistant Professor, Department of Biomedical Engineering, University of Cincinnati, Cincinnati, OH.
2002 – 2004	Research Fellow, Cardiovascular Division, Brigham & Women's Hospital, Harvard Medical School, Boston, MA.
2001 – 2003	Postdoctoral Associate, Department of Biological Engineering, Massachusetts Institute of Technology, Cambridge, MA.
2001	Research Fellow, Department of Vascular Surgery, Massachusetts General Hospital, Boston, MA.
1995 – 2000	Graduate Research Assistant, Department of Biomedical Engineering, Duke University, Durham, NC.
1991 – 1994	Research Assistant, Laboratory for Liquid Helium Studies, Kapitza Institute for Physical Problems, Moscow, Russia.

Education

Brigham & Women's Hospital, Division of Cardiovascular Research, Boston, MA

- Postdoctoral Training, July 2002 – June 2004.
  Field: "Cardiac tissue engineering". Studied the role of endothelial-cardiomyocyte interactions on angiogenesis in vitro and in vivo.
  Mentor: Prof. **Richard T. Lee**.

Massachusetts Institute of Technology, Cambridge, MA

- Postdoctoral Training, January 2001-June 2003.
  Field: "Development of novel angiogenic scaffold". Developed a novel system for in vitro and in vivo angiogenesis studies and tissue engineering applications.
  Mentor: Prof. **Roger D. Kamm**.

Massachusetts General Hospital, Department of Vascular Surgery, Boston, MA

- Postdoctoral Training, January – December 2001.
  Field: ”Effects of shear stress on arteriogenesis”. Studied the effect of sheer stress on expression of angiogenesis- and arteriogenesis-related genes in human endothelial cells.
  Mentors: Prof. **Roger D. Kamm** (MIT) and Dr. **William M. Abbott** (MGH).

Duke University, Durham, NC

- Ph.D. in Biomedical Engineering, December 2000.
  Thesis:”Material Property Determination for Normal and Osteoarthritic Articular Cartilage Using a Triphasic Mechano-Chemical Theoretical Model of Osmotic Loading”. Developed a new method to quantify articular cartilage degeneration with osteoarthritis.
  Advisor: Prof. **Lori A. Setton**.

Moscow Institute of Physics and Technology, Moscow, Russia

- M.S. in Condensed Matter & Low Temperature Physics, June 1993.
  Thesis: ”Phonon Interaction with Aluminum Single Crystal in Superconducting and Normal States”. Developed a novel experimental method to study interaction of acoustic quanta (phonons) with single crystals.
  Advisor: Prof. **K.N. Zinov’eva**.

B. ACADEMIC AND PROFESSIONAL DISTINCTIONS

Honors and Awards

2016	College of Engineering and Applied Science Master Educator award.
2015-2016	Fellow, Executive Leadership in Academic Technology and Engineering (ELATE) 2015/2016 program.
2015-current	Member, Federal Adivisory Committee and RR&D scientific merit review board, VA
May 2015	Translational Research award, the Wound Healing Society.
March 2014	Laboratory research on novel wound healing therapy is featured on the NSF webpage:http://www.nsf.gov/news/news_summ.jsp?cntn_id=130755&org=NSF&from=newsField.
January 2014	The University of Cincinnati NSF ADVANCE “UC LEAF” (Leadership, Empowerment, Advancement for Women in Stem Faculty) – Research seed award.
May 2013	Anita Roberts award from the Wound Healing Society for the best research article published in the journal Wound Repair and Regeneration by trainee, Swathi Balaji.
November 2011	Nominated for the George S. Barbour Award for Promoting Good Student-Faculty Relations (nominations by students/alumni only).
2007-2013	Who’s Who in Science and Engineering
August 2010	Mentor Recognition Award, NSF Research Experience for Undergraduates program, University of Cincinnati.

August 2008	Mentor Recognition Award, NSF Research Experience for Undergraduates program, University of Cincinnati.
August 2007	Mentor Recognition Award, NSF Research Experience for Undergraduates program, University of Cincinnati.
2002 – 2004	American Heart Association Postdoctoral Fellow; "A new three-dimensional culture system for in vitro angiogenesis and cardiac tissue engineering".

Professional Distinctions and Activities

2016	Session organizer and chair, International Wound Healing Society Annual Meeting, April 2017.
2014-2015	Chair/Organizer of the Regenerative Medicine Track for the Global Biotechnology Congress 2015.
2014 - present	Member, Wound Healing Society Program Committee.
2014 – present	Chief Editor, Series on "Tissue Engineering and Wound Healing Applications" by World Scientific Publishing Co.
2013 – present	VA SPiRE (Small Projects in the Office of Research and Development's Rehabilitation Research and Development Service) panel
2013 - present	Editorial Board Member, Austin Journal of Biomedical Engineering
March, Aug 2016	Reviewer, NIH STTR/SBIR panel on wound healing.
Mar 2015	Reviewer, NIH 201505_ZDK1 GRB-1 (M6)_283753 review panel.
	Reviewer, NIH 2015/01 ZRG1 BST-F (80) Academic Research Enhancement Award (R15) panel.
Nov 2, 2014	Invited symposium talk at the 2014 Annual Meeting of the American Association of Pharmaceutical Scientists, San Diego, CA.
Mar 2014	Reviewer, NIH IRG/SRG: ZDK1 GRB-1 (M7)S review panel.
2013	Reviewer, NIH Special Emphasis Panel ZDK1-GRB (04).
2013	Reviewer, NIH/NIDDK review panel ZRG1 MOSS-T (12).
2012	Reviewer, NIH/NIDDK review panel ZNR REV-T 11.
2012	Reviewer, NIH/NIDDK review panel ZDK1 GRB-SM4 S.
May 2011	Reviewer, NIH/NIDDK review panel ZDK1 GRB-S O4.
2011	Grant reviewer, Netherlands Organization for Scientific Research
2010 – February 2011	Chair of the PhD Student Competition Committee, American Society of Mechanical Engineers, Bioengineering Division.
May – June 2009	Ad-hoc member, NIH ARRA Bioengineering Sciences and Technologies Integrated Review Group.
June 2009 – May 2010	Chair of the MS Student Competition Committee, American Society of Mechanical Engineers, Bioengineering Division.

February – October 2009	Orthopedic Biomaterials Session Organizer and Chair, Annual meeting of the Biomedical Engineering Society, October 2009, Pittsburg, PA.
June 2008 – May 2009	Chair of the Undergraduate Student Competition Committee, American Society of Mechanical Engineers, Bioengineering Division.
January - April 2008	Co-chair of the Organizing Committee (with Dr. Jason Shearn), Midwestern Tissue Engineering Consortium Meeting, April 10-12, Cincinnati, OH.
June 2007	Session co-chair, Summer Bioengineering Conference, American Society of Mechanical Engineers, Bioengineering Division.

Patents

DA Narmoneva, AB Kogan, T Taghian: "Therapeutic Modulation of Cell Function By An Electric Field". Invention disclosure filed May 12, 2015, UOC-15115P.

DA Narmoneva, AB Kogan, AQ Sheikh, T Taghian: "METHOD AND DEVICE FOR TREATING A TISSUE WITH A HIGH FREQUENCY ELECTROMAGNETIC FIELD", U.S. Provisional Patent Application Serial No.: 61/879,268, filed 09-18-2014.

DA Narmoneva, AB Kogan, AQ Sheikh, "Electromagnetic field for wound healing therapy", Provisional Patent filed September 12, 2012; September 18, 2013.

DA Narmoneva, AB Kogan, "Effects of high-frequency EMF on angiogenic signaling", Invention disclosure filed June 5, 2009; renewed June 14, 2010.

DA Narmoneva, TM Crombleholme, "Chronic and diabetic wound healing with peptide nanoscaffolds and related compositions and methods of use thereof", Invention disclosure UC 108-101 filed May13, 2008.

RT Lee, RD Kamm, DA Narmoneva, S Zhang, "Angiogenesis and cardiac tissue engineering with peptide hydrogels and related compositions and methods of use thereof", US 20040242469.

Invited Lectures

1. "Bioengineered microenvironment for myocardial regeneration in diabetic cardiomyopathy". Bridging the Outcome from TERM (Tissue Engineering and Regenerative Medicine) to Childhood Diseases Symposium, Cincinnati, OH, August 29-30, 2016.
2. "Vascular tissue regeneration: a biophysical perspective on the role of mechanical, molecular and electric interactions". Global Biotechnology Congress, Boston, MA, August 21-25, 2015.
3. "Wound healing: Approaches for Tissue Engineering and Regeneration". Invited symposium talk at the 2014 Annual Meeting of the American Association of Pharmaceutical Scientists, San Diego, CA, November 2-4, 2014.
4. "Wound as a biophysical system: therapies to stimulate mechanical, molecular and electric interactions". The Center for Regenerative Medicine and Cell Based Therapies, 3rd Annual Retreat at Mohican State Lodge and Conference Center, August 1-3, 2014.
5. "Vascular cell within a biophysical system: The effects of mechanical, molecular and electric interactions" University of Cincinnati Systems Biology & Physiology Annual Retreat, January 17, 2014.

6. "Engineered Microenvironments for Regenerative Wound Healing". The Center for Regenerative Medicine and Cell Based Therapies, 2nd Annual Retreat at Mohican State Lodge and Conference Center, July 26-27th, 2013.
7. "Nanofiber microenvironment and diabetic wound healing ", Trans-NIH Angiogenesis Workshop, Lister Hill, NIH Main Campus, 9000 Rockville Pike, Bethesda, MD 20892, May 20-21, 2013.
8. "Regulation of endothelial activation and angiogenesis by extracellular microenvironment", Department of BioEngineering, University of Pennsilvania, April 07, 2011.
9. "Electromagentic field as a regulator of MAPK/ERK pathway in angiogenesis", Vascular Club, Division of Pulmonary Biology, Cincinnati Children's Hospital Medical Center, April 2010.
10. "Regulation of angiogenesis by extracellular microenvironment", University of Cincinnati College of Medicine, Department of Molecular and Cellular Physiology, February 2010.
11. "Cell-Cell & Cell-Matrix Interactions In Vascular Tissue Engineering", Cincinnati Children's Hospital Research Foundation, Department of Pediatrics and Pulmonary Biology, September 2008.
12. "Vascular Tissue Engineering Using Self-Assembling Peptide Nanoscaffold", University of Cincinnati College of Medicine, Division: Nephrology & Hypertension, November 2007.
13. "Endothelial cell – fibroblast interactions in vascular tissue engineering", Vascular Club, Division of Pulmonary Biology, Cincinnati Children's Hospital Medical Center, October 2007.
14. "Self-Assembling peptide nanoscaffolds: a novel system for angiogenesis and vascular tissue engineering", Department of Biomedical Engineering, University of Cincinnati, June 2004.
15. "A novel culture system for in vitro angiogenesis and tissue engineering", Cardiovascular Division Work-In-Progress Research Seminar, Brigham & Women's Hospital, Harvard Medical School, February 2002.
16. "A non-contacting method for material property determination for articular cartilage from osmotic loading", Seminar Series in Fluid Mechanics, Massachusetts Institute of Technology, February 2001.
17. "Osteoarthritis-related alterations in cartilage structure and mechanical properties detected using a novel osmotic-loading technique", Molecular cell bioengineering laboratory, Massachusetts Institute of Technology, May 2000.
18. "Nonuniform swelling strains in full-thickness articular cartilage", Seminars in Cellular and Biosurface Engineering, Duke University, March 1997.

Membership in the Professional Organizations

Wound Healing Society, Biomedical Engineering Society, American Heart Association, American Society of Mechanical Engineering (Bioengineering Division).

Manuscripts review

Acta Biomaterialia (Impact Factor 5.2), Advances in Wound Care, Bioelectromagnetics (Impact Factor 2.76), Biomaterials (Impact Factor 7.8), Biomedical Materials (Impact Factor 2.174), Cells, Tissues, Organs; Journal of Biomechanics (Impact Factor 3.44), Diabetes (Impact Factor 6), Journal of Biomechanical Engineering (Impact Factor 1.64), Journal of Royal Society Interface (Impact Factor 4.5), Langmuir (Impact Factor 4.1), PlosOne (Impact Factor 4.3), Theory in Biosciences (Impact Factor 0.925), Ultrasound in Medicine and Biology (Impact Factor 2.021).

Book review: "Topics in Tissue Engineering", Institute of Biomaterials, Tampere University of Technology, Finland (2005).

C: UNIVERISTY AND COLLEGE SERVICE

University and College of Engineering and Applied Science (CEAS) Committees

2016 -	Member, CEAS workgroup on Improving quality of students.
2015-2016	selected as a Fellow for the Executive Leadership in Academic Technology and Engineering (ELATE) program.
2015 – present	Member, BME strategic development committee.
2015 – present	ABET coordinator
2016 – present	BME Department Head search committee.
2015 – present	Member, CCHMC-CEAS Tissue Engineering & Regenerative Medicine working group.
2015-2016	Member, Faculty Hiring Committee: Chemical engineering.
2013 - 2016	Member, Faculty Senate Research and Scholarship Committee
2007-2011, 2014-present	Member, CEAS Awards Committee.
2007 – present	Member, BME Graduate Committee.
2010 – present	Member, BME Curriculum Committee.
2014 - 2015	Chair, CEAS Cluster Hiring Committee – Health Cluster.
2010 – 2013	Member, BCEE Department Policy & Procedures Committee.
2013 - 2014	Member, BCEE Department Chair search committee
2012 – 2013	UCBME ABET coordinator (Research Track)
2012 – 2013	Member, BME endowed chair search committee
2012 – 2013	Member, ChemE endowed chair search committee
April –October 2012	Member, CEAS Institute of Materials Science and Engineering Committee
March –August 2012	Member, Search Committee for the permanent Director of the School of Energy, Environmental, Biological and Medical Engineering (SEEBME)
2009 – 2012	Member, University Research Council Committee on Life Sciences
2009	UC BME web site committee member.
2009	BME Chair Search Committee member.
2007	Tissue Engineering subcommittee for graduate student recruitment.
2005 - 2010	Tissue engineering/biomechanics curriculum committee.

Other UC and CEAS Service Activities

- NSF REU program (2010-present) (Director Dr. Kukreti): deliver lectures, serve as a student advisor and judge;

- UC WISE - Women in Science and Engineering program (2008-present) (Director Dr. Urmila Ghia): serve as student advisor and judge;
- Women in Engineering activities;
- Undergraduate and Graduate Student Research Forums 2007-2015: serve as student advisor and judge.

High school outreach

- Marissa Ruzga, a junior high school student (WHHS), June-July 2016.
- Caroline Schmerge. a junior high school student (Cincinnati Country Day), June-July 2016.
- Logan Groneck, a junior high school student (Cincinnati), worked in the lab during May-July 2014.
- Akshay Roy-Chaudhury, a junior student from Lacota High School (Cincinnati); worked in the lab during July-August 2009.
- Anna Hutchinson, a science teacher from Hughes High School (Cincinnati); worked in the laboratory with the goal to develop science labs for 10-11 grade students using histological analysis of mouse wound tissue.

D. RESEARCH SUPPORT

Current Research Support

University of Cincinnati Technology Commercialization Accelerator
08/01/2016 – 08/31/2017
Role: PI. Co-Investigator: Dr. Andrei Kogan, Physics Department, College of Arts & Sciences, UC
An Innovative Approach for Non-invasive Wound Healing Therapy.

UC Heart, Lung and Vascular Institute: Seed grant
07/01/2014 – 06/30/2016
Role: PI. Co-investigator: Dr. YiGang Wang, Dept. of Pathology, UC COM.
Bioengineering Microenvironment for Myocardial Regeneration and Diabetic Cardiomyopathy.

University of Cincinnati NSF ADVANCE IT, "UC LEAF"
(Leadership, Empowerment, Advancement for Women in Stem Faculty) –award to support professional development.
09/01/2015 – 08/31/2016
Role: PI.
Cardiac Cell Interactions In Diabetes: A Pilot Study.

The Procter & Gamble Company, Hair Biology Group, Beauty Technology Division.
01/25/2015 – 2/12/2016.
Role: PI. Collaboration with: Dr. Mike Davis, Principal Scientist at P&G.
A novel 3D system for hair growth and regeneration.

NIH 2R01HL087861 (PI: Guo-Chang Fan, Dept. of Pharmacology and
Cell Biophysics, University of Cincinnati College of Medicine, Cincinnati, OH)
07/26/2013 – 06/30/2018
Role: Co-Investigator (5% effort).
Roles of HSP20-exosomes in myocardial angiogenesis.

Completed Research Support

American Heart Association Research Fellowship (PI: Narmoneva)
08/01/02 – 07/31/04
A new three-dimensional culture system for in vitro angiogenesis and cardiac tissue engineering.

Startup funds from the Department of Biomedical Engineering, University of Cincinnati
03/2005 – 08/2009

NSF IGERT predoctoral research traineeship for Jennifer Hurley
Bioapplications of Membrane Science and Technology, PI: Dr. Joel Fried
06/01/2006 – 05/31/2009

American Heart Association Beginning-Grant-in-Aid (PI: Narmoneva)
07/01/07 – 02/28/10 0765425B
Endothelial-Fibroblasts Interactions In Vascular Tissue Engineering.

NIH/NIDDK 1R21DK078814-01A1 (PI: Narmoneva,)
07/15/2008 – 06/30/2012 (no cost extension)
Angiogenic Peptide Scaffolds to Enhance Diabetic Wound Healing.

American Heart Association
0815371D (predoctoral fellowship for Swathi Balaji; Sponsor: Narmoneva)
07/01/2008 – 06/30/2010
Angiogenic microenvironment to augment diabetes-associated deficiency in vascularization in the db/db mouse model.

NIH/NIDDK ARRA 3R21DK078814-01A1S1 (PI: Narmoneva)
06/20/2009 – 09/10/2010

American Heart Association
GRA09PRE2150073 (predoctoral fellowship for Jennifer Hurley; Sponsor: Narmoneva)
07/01/2009 – 06/30/2011
Peptide nanoscaffold for MMP delivery and cardiac remodeling in diabetic cardiomyopathy.

The Institute for Nanoscale science and Technology, University of Cincinnati
01/01/2009 – 12/31/2009 (PI: Kogan, Physics, co-PI: Narmoneva, BME)
Effects of high-frequency electromagnetic fields on capillary cell-cell communication.

American Heart Association
09PRE2230162 (predoctoral fellowship for Varun Krishnamurthy; Sponsor: Hinton, co-Mentor: Narmoneva)
07/01/2009 – 06/30/2012
Elastin haploinsufficiency as a model of progressive aortic valve disease.

American Heart Association
11PRE7420008 (predoctoral fellowship for Hongkwan Cho; Sponsor: Narmoneva)
07/01/2011 – 06/30/2012
Mechanistic studies of increased neovascularization in the murine diabetic wound treated with peptide nanofibers.

University Research Council Interdisciplinary Faculty Research Support Grant
(PI: Narmoneva, Co-Investigator: Kogan, Co-Investigator: Crombleholme)
07/01/2011 – 12/31/2012
Low-intensity electromagnetic field for wound healing therapy.

University of Cincinnati NSF ADVANCE IT, "UC LEAF"
(Leadership, Empowerment, Advancement for Women in Stem Faculty) – seed award.
01/01/2014 – 12/31/2015
Role: PI.
Cardiac Cell Interactions In Diabetes: A Pilot Study.

E. PUBLICATIONS

Journal Publications

P1. Knorr JM, Jackson J, Batie MR, **Narmoneva DA**, Jones DC: "Application of strain and calibration of FRET emission for *in vitro* live cell response to cytoskeletal deformation". *J Biomechanics*, 2016 Aug 24. pii: S0021-9290(16)30940-X. doi: 10.1016/j.jbiomech.2016.08.023. [Epub ahead of print]

P2. Cho H, Balaji S, Hone NL, Moles CM, Sheikh AQ, Crombleholme TM, Keswani SG, **Narmoneva DA**: "Diabetic wound healing in a MMP9-/- mouse model." *Wound Repair Regen.* 2016 Jun 13. doi: 10.1111/wrr.12453. [Epub ahead of print] PMID:27292154.

P3. Zafar F, Hinton RB, Moore RA, Baker RS, Bryant R 3rd, **Narmoneva DA**, Taylor MD, Morales DL: "Physiological Growth, Remodeling Potential, and Preserved Function of a Novel Bioprosthetic Tricuspid Valve: Tubular Bioprosthesis Made of Small Intestinal Submucosa-Derived Extracellular Matrix." *J Am Coll Cardiol.* 2015 Aug 25;66(8):877-88. doi: 10.1016/j.jacc.2015.06.1091. PMID: 26293756.

P4. Taghian, T; Sheikh, AQ; Cho, H; Kogan, AB; **Narmoneva, DA**:" A novel contact electric field therapy to enhance angiogenesis and wound healing". *Wound Repair Regen.* 2015;23(2):A41.

P5. Taghian T, **Narmoneva** DA, Kogan AB: "Modulation of cell function by electric field: a high-resolution analysis". *J R Soc Interface.* 2015 Jun 6;12(107). pii: 20150153. doi: 10.1098/rsif.2015.0153.

P6. Krishnamurthy VK, Godby RC, Liu GR, Smith JM, Hiratzka LF, **Narmoneva DA**, Hinton RB: "Review of Molecular and Mechanical Interactions in the Aortic Valve and Aorta: Implications for the Shared Pathogenesis of Aortic Valve Disease and Aortopathy." *J Cardiovasc Transl Res. 2014* Nov 20. [Epub ahead of print]. PMID: 25410134.

P7. Krishnamurthy VK, Evans AN, Wansapura JP, Osinska H, Maddy KE, Biechler SV, **Narmoneva DA**, Goodwin RL, Hinton RB: "*Asymmetric cell-matrix and biomechanical abnormalities in elastin insufficiency induced aortopathy*." Ann Biomed Eng. 2014 Oct;42(10):2014-28. PMID: 25099772.

P8. Taghian T, Sheikh AQ, Kogan AB, **Narmoneva DA**: "*Harnessing Electricity in Biosystems - A Functional Tool for Tissue Engineering Applications*". *Austin Journal of Biomedical Engineering*, 2014; 1(5): 5.

P9. Sheikh AQ, Kuesel C, Taghian T, Hurley JR, Huang W, Wang Y, Hinton RB, **Narmoneva DA**: "Angiogenic microenvironment augments impaired endothelial responses under diabetic conditions." *American Journal of Physiology – Cell Physiology*, 2014, 306(8):C768-78. PMID 24573084.

P10. Hurley JR, Cho H, Sheikh AQ, Balaji S, Keswani SG, Crombleholme TM, **Narmoneva DA**: "Nanofiber Microenvironment Effectively Restores Angiogenic Potential of Diabetic Endothelial Cells". *Advances in Wound Care*, 2014 Nov 1;3(11):717-728.

P11. Yao J, Liu GR, **Narmoneva DA**., Hinton RB, Zhang Z-Q: "Immersed smoothed finite element method for fluid-structure interaction simulation of aortic valves". *Computational Mechanics*, 2013, 50(6) :789-804.

P12. Sheikh AQ, Taghian T, Hemingway B, Cho H, Kogan AB, **Narmoneva DA**: "Regulation of endothelial MAPK/ERK signaling and capillary morphogenesis by low amplitude electric field". *Journal of the Royal Society Interface*. 2013 Jan 6;10(78):20120548. doi: 10.1098/rsif.2012.0548.

P13. Sheikh AQ, Hurley J, Huang W, Taghian T, Cho H, Kogan AB, Wang Y, **Narmoneva D**: "Diabetes alters intracellular calcium transients in cardiac endothelial cells". *PLoS One*, 2012;7(5):e36840. Epub 2012 May 9.

P14. Hurley JR, Sheikh AQ, Huang W, Wang Y, **Narmoneva DA:** "Effects of diabetes on matrix protein expression and response to cyclic strain by cardiac fibroblasts". *Cellular and Molecular Bioengineering*, 2012;5(2), Pages 173-183.

P15. Hurley JR, Sheikh AQ, Huang W, Wang Y, **Narmoneva DA**: "Self-assembling peptide nanofibers for MMP delivery and cardiac regeneration in diabetes." *Journal of Bioengineering and Biomedical Sciences*, 2012, special issue on "*Emerging bioengineering technologies"*, *doi: 10.4172/2155-9538. S5-003*.

P16. Krishnamurthy VK, Opoka AM, Kern CB, Guilak F, **Narmoneva DA**, Hinton RB: "Maladaptive Matrix Remodeling and Regional Biomechanical Dysfunction in a Mouse Model of Aortic Valve Disease". *Matrix Biology*, 2012;31 (3) , pp. 197-205

P17. Cho H, Balaji S, Sheikh AQ, Hurley JR, Tian YF, Collier JH, Crombleholme TM, **Narmoneva** DA: "Regulation of endothelial cell activation and angiogenesis by injectable peptide nanofibers." *Acta Biomaterialia*, 8 (2012) 154–164.

P18. Balaji S, Vaikunth SS, Lang SA, Sheikh AQ, Lim FY, Crombleholme TM, **Narmoneva** DA: "Tissue engineered provisional matrix as a novel approach to enhance diabetic wound healing." *Wound Repair and Regeneration*, 2012 Jan;20(1):15-27.

P19. Karunakaran CP, SM Rudich, A Alqadah, MT Burgess, **DA Narmoneva**, DT Mast: "Histologic analysis of rabbit liver cancer treated by bulk ultrasound ablation." *AIP Proceedings* 10 (2012); 1481:162-168.

P20. Wang Y, Xiang J, Vannest J, Holroyd T, **Narmoneva DA**, Horn P, Liu Y, Rose D, Ton deGrauw, Holland S: "Electromagnetic fields induced by word processing in Bilinguals and Monolinguals". *Clinical Neurophysiology*, 2011 Sep;122(9):1706-17.

P21. Krishnamurthy VK, Guilak F, **Narmoneva DA**, Hinton RB: "Regional structure-function relationships in mouse aortic valve tissue". *Journal of Biomechanics.* 2011 Jan 4;44(1):77-83.

P22. Hinton RB, Adelman-Brown J, Witt S, Krishnamurthy VK, Gruber MJ, Osinska H, Sakthivel B, **Narmoneva DA**, Mecham RP, Benson DW: "Elastin Haploinsufficiency Results in Latent Progressive Aortic Valve Disease in a Mouse Model." *Circulation Research.* Circ Res. 2010 Aug 20;107(4):549-57.

P23. Hurley JR, Balaji S, **Narmoneva DA**: Complex temporal regulation of capillary morphogenesis by fibroblasts. *American Journal of Physiology: Cell Physiology.* 2010 Aug;299(2):C444-53.

P24. **Narmoneva DA**, Oni O, Sieminsky A, Zhang S, Gertler JP, Kamm RD, and Lee RT: Self-Assembling Peptides as a Novel Biomaterial for Promoting Angiogenesis. *Biomaterials. 2005 Aug;26(23):4837-46.*

P25. Hsieh PCH, Resta LP, Davis ME, **Narmoneva DA**, and Lee RT: Cardiomyocyte-endothelial interactions in cardiac regeneration. *Nova Acta Leopoldina, NF* 92(343):61-72, 2005.

P26. Davis ME, Motion JP, **Narmoneva DA**, Takahashi T, Hakuno D, Kamm RD, Zhang S, Lee RT: Injectable self-assembling peptide nanofibers create intramyocardial microenvironments for endothelial cells. *Circulation. 2005;111(4):442-50.*

P27. **Narmoneva DA**, Vukmirovic R, Davis ME, Kamm RD, and Lee RT: Endothelial Cells Promote Cardiac Myocyte Survival and Spatial Reorganization: Implications for Cardiac Regeneration. *Circulation. 2004 Aug 24;110(8):962-8.*

P28. **Narmoneva DA**, Howell DS, Cheung HS, Wang JY and Setton LA: Altered swelling behavior of femoral cartilage following joint immobilization in a canine model, *Journal of Orthopaedic Research*, 20(1):83-91, 2002.

P29. Elliott DM, **Narmoneva DA** and Setton LA: Direct measurement of the Poisson's ratio of human patellar cartilage in tension. *Journal of Biomechanical Engineering*, 124(2):223-8, 2002.

P30. Flahiff CM, **Narmoneva DA**, Huebner JL, Kraus VB, Guilak F, and Setton LA: Osmotic loading to determine the intrinsic material properties of guinea pig knee cartilage, *Journal of Biomechanics. 2002 Sep;35(9):1285-90.*

P31. **Narmoneva DA**, Wang JY and Setton LA: A non-contacting method for material property determination for articular cartilage from osmotic loading. *Biophysical Journal* 81(6):3066-76, 2001.

P32. **DA**, Wang JY and Setton LA: A new method for determination of the tensile modulus of articular cartilage in situ in a free swelling configuration, *ASME Advances in Bioengineering*, BED-43:31-32, 1999.

P33. **Narmoneva DA**, Wang JY and Setton LA: Nonuniform swelling-induced residual strains in articular cartilage. *Journal of Biomechanics* 41:401-408, 1999.

P34. **Narmoneva DA**, Wang JY, Patel SS, Howell DS, and Setton LA: Altered swelling–induced strain fields in articular cartilage following periods of immobilization. *ASME Advances in Bioengineering*, BED-36:125-126, 1997.

P35. Zinov'eva KN, **DA Narmoneva** and AS Semenov: Effect of the transition from the normal state to the superconducting state on the phonon transmission through liquid 4 He-metal interface, *Letters to the Journal of the Experimental and Theoretical Physics* 59(2):124-129, 1994.

P36. Zinov'eva KN, **DA Narmoneva** and AS Semenov: Resonant acoustic modes at a liquid 4 He–copper interface, *Journal of the Experimental and Theoretical Physics* 78(5):690-705, 1994.

P37. Zinov'eva KN, **DA Narmoneva** and AS Semenov: Interaction of acoustic waves with metal crystal surfaces", *Springer Series in Solid-State Sciences*, VII:385, 1993.

Proceedings and Journal Abstracts (cited in *PubMed, Web of Science* and/or *Scopus* databases)

P38. McWhorter ED, Huang W, Stumpf E, Tolpadi A, **Narmoneva DA**, Wang Y: "In situ microenvironment for diabetic myocardium repair following injury". *Wound Repair Regen.* 2016;24(2):A17.

P39. Taghian T, Sheikh AQ, **Narmoneva DA**, Kogan A. A novel non-contact electric field therapy to enhance angiogenesis and wound healing. *Wound Repair and Regeneration*. 23(2): A41, 2015.

P40. Knorr, J. M., **Narmoneva, D. A**., and Jones, D. C., "Application of Strain and Calibration of FRET Emission for in vitro Live Cell Response to Cytoskeletal Deformation," *Biophysical Journal*;108(2):328a, 2015.

P41. Zgheib C., Sheikh A.Q., Balaji S., Xu J., Keswani S.G., Liechty K.W., Narmoneva D.A. Nanofiber Treatment Attenuates Diabetic Wound Inflammation by Regulating miR-146a Expression. *Wound Repair and Regeneration*; 22(2): A71, 2014.

P42. Taghian T, Sheikh AQ, **Narmoneva DA**, Kogan A. Theoretical-Experimental Studies of Electric Field-Induced Cell Responses. *Biophysical Journal*;104(IS 2):678A, 2013.

P43. A. Sheikh, W. Huang, S. Shahrestani, H. Cho, S. Balaji, Y-G. Wang, **D.A. Narmoneva**: "Novel microenvironment for stimulation of diabetic heart repair following injury". *Wound Repair and Regeneration* 21(2): A43, 2013.

P44. Cho, H.; Balaji, S.; Hone, N., Sheikh, AQ, S. Keswani, T.M. Crombleholme, **D.A. Narmoneva**: "Diabetic wound neovascularization and healing in an MMP9-/- mouse model". *Wound Repair and Regeneration* 21(2): A19, 2013.

P45. Taghian, T, Sheikh, AQ, **Narmoneva DA**, Kogan AB: "The Theoretical-Experimental Studies of Electric Field-Induced Cell R`esponses". *Biophysical Journal* 104(2), S1:687A, 2013.

P46. Cho H; Hone N; Beckenhaupt M; Balaji S; Keswani S; Crombleholme TM; **Narmoneva DA**:"Pro-inflammatory effect of stem cell factor negates EPC-dependent healing of nanofiber-treated diabetic wounds". *Wound Repair and Regeneration* 20(2): A18, 2012.

P47. Krishnamurthy, Varun; Wansapura, Janaka; Evans, Ashlie; **Narmoneva, DA**, Hinton, RB: "Cardiac neural crest-specific vascular smooth muscle cell dysregulation results in regional proteoglycan misexpression and biomechanical dysfunction in a mouse model of aortopathy". *Glycobiology* 22(11): 1560, 2012.

P48. Balaji S, Herbig B, Cho H, King BA, Lim FY, Crombleholme TM, **Narmoneva DA**: In situ tissue engineered provisional matrix provides permissive environment for a neovascularization-driven accelerated wound healing in db/db mice. *Wound Repair and Regeneration* 19(2): A11, 2011.

P49. Sheikh A, JR Hurley and **Narmoneva DA**, "Diabetes alters intracellular calcium transients in cardiac endothelial cells", *Proceedings of the ASME Summer Bioengineering Conference*, SBC2011-53797, 2011.

P50. JR Hurley, AQ Sheikh, M Beckenhaupt, C Ingram, A Mutchler, **Narmoneva DA**, "Self-Assembling Peptide Nanofibers for MMP Delivery and Cardiac Regeneration in Diabetes", *Proceedings of the ASME Summer Bioengineering Conference* SBC2011-53761, 2011.

P51. Balaji S, King BA, Sheikh AQ, Cho H, Bloomer M, Lim FY, Crombleholme TM, **Narmoneva DA**: Improved wound healing in angiogenic provisional matrix occurs in the absence of increased TGF-beta expression. *Wound Repair and Regeneration* 18(2): A19, 2010.

P52. Cho H, Balaji S, Sheikh AQ, Bloomer M, King BA, Nolan K, Lim FY, Crombleholme TM, **Narmoneva DA**: Pro-angiogenic microenvironment restores angiogenic potential of diabetic endothelial cells. *Wound Repair and Regeneration* 18(2): A22, 2010.

P53. Cho H, Sheikh AQ, **Narmoneva DA**: Non-specific endothelial cell interactions with the substrate result in cell activation and angiogenesis in vitro. *Proceedings of the ASME Summer Bioengineering Conference*, SBC2010, pp511-512, 2010.

P54. Balaji S, Sheikh AQ, Vaikunth SS, Parvadia JK, Lim FY, Crombleholme TM, **Narmoneva DA**: Wound treatment with angiogenic provisional matrix enhances wound neovascularization and improves healing in db/db mice, *Wound Repair and Regeneration* 17(2): A15, 2009.

P55. Sheikh AQ, Kogan AB, **Narmoneva DA**: Electromagnetic field mediates capillary-like network formation va MAPK/ERK sgnaling cascade. *Proceedings of the ASME Summer Bioengineering Conference* SBC2009 (PART B), pp. 853-854, 2009.

P56. Balaji S, Sheikh AQ, Morris L, Lim FY, Crombleholme TM, **Narmoneva DA**: Angiogenic nanoscaffold accelerates diabetic wound healing and improves wound tissue strength in DB/DB mice. *Proceedings of the ASME Summer Bioengineering Conference SBC2009* (PART B), pp. 1173-1174, 2009.

P57. Hurley JR, **Narmoneva DA**: Endothelial-fibroblast interactions in angiogenesis and matrix remodeling . *Proceedings of the ASME Summer Bioengineering Conference* SBC2009 (PART A), pp. 413-414, 2009.

P58. Johnson JD, Privitera MB, **Narmoneva DA**, and Haridas B: Design and Experimental Capstone: An Integrated Experience. *Proceedings of the Annual meeting of the American Society for Engineering Education*: 74008, 2008.

P59. Gruber M., Krishnamurthy V., **Narmoneva DA**, Hinton Jr RB: Elastin haploinsufficiency results in progressive aortopathy and altered interstitial cell phenotype. *Proceedings of the ASME summer bioengineering conference 2008, parts A and B*: 501-502, 2008.

P60. Hurley JR, Balaji S, **Narmoneva DA**: Fibroblasts induce mechanical changes in the extracellular environment and enhance capillary-like network formation. *Proceedings of the ASME summer bioengineering conference 2008, parts A and B*: 641-642, 2008.

P61. Balaji S, Parvadia J, Vaikunth SS, Crombleholme TC, and **Narmoneva DA**: In situ tissue engineering using angiogenic nanoscaffold enhances diabetic wound healing in db/db mouse model. *Proceedings of the ASME summer bioengineering conference 2008, parts A and B*: 223-224, 2008.

P62. Vaikunth SS, Balaji S, Maldonado A, Parvadia J, Lim FY, Crombleholme TM, **Narmoneva DA**: In situ tissue engineering using self-assembling peptide improves wound healing and neovascularization in a diabetic mouse model, *Wound Repair and Regeneration* 15(2): A43, 2007.

P63. Balaji S, Marcotte KE, R. Helton, and **Narmoneva DA**: Novel peptide scaffold promotes cell migration and angiogenesis through enhanced expression of angiogenic factors. *Thrombosis and Haemostasis*, 4(Suppl I):69 (ID: 323), 2006.

P64. **Narmoneva DA**, Vukmirovic R, Davis ME, Kamm RD, and Lee RT: Endothelial cells promote cardiac myocyte survival and spatial reorganization in engineered cardiac tissue. *Circulation*, 108(17): IV165-165, 2003.

Peer-Reviewed Abstracts

A1. Taghian T., Sheikh AQ., Narmoneva D., Kogan A., "Regulation of cellular function via electromagnetic field frequency and extracellular environment: A theoretical- experimental approach" American Physical Society Annual Meeting, MAR15-2014-001611, San Antonio, TX, March 2015.

A2. Taghian T., Sheikh AQ., Narmoneva D., Kogan A., "Regulation of cell function via extracellular biophysical environment: A theoretical- experimental approach" Biophysical Society Annual Meeting, 15-A-1970-BPS, Baltimore, MD, February 2015.

A3. Taghian T., Sheikh AQ., Narmoneva D., Kogan A., "Co-regulation of cell behavior by electromagnetic stimulus and extracellular environment" American Physical Society Annual Meeting, MAR14-2013-004337, Denver, CO, March 2014.

A4. Taghian T., Sheikh AQ., Narmoneva D., Kogan A., "The role of extracellular environment in regulation of cellular response to electric field" Biophysical Society Annual Meeting, 14-A-1308-BPS, San Francisco, CA, February 2014.

A5. Taghian T., Sheikh AQ., Narmoneva D., Kogan A., "Frequency-dependent cell responses to an electromagnetic stimulus" American Physical Society Annual Meeting, MAR13-2012-005918, Baltimore, MD, March 2013.

A6. Taghian T., Sheikh AQ., Narmoneva D., Kogan A., "Theoretical-experimental studies of electric field-induced cell responses", Biophysical Society Annual Meeting, 13-A-2406-BPS, Philadelphia, PA, February 2013.

A7. Taghian T., Sheikh AQ., Narmoneva D., Kogan A., "Numerical simulation and experimental studies of electric field- induced vascular cell responses", Biomedical Engineering Society Annual Meeting, P-Fri-B-78, Atlanta, GA, October 2012.

A8. Sheikh AQ, Nolan K, Cho H, Balaji S, Bloomer M, **Narmoneva DA**: "Diabetes-associated endothelial deficiency is improved by pro-angiogenic microenvironment". *Transactions of the Biomedical Engineering Society*, October 2010.

A9. Krishnamurthy VK, Adelman-Brown J, Nielsen R, Guilak F, **Narmoneva DA**, Hinton RB: "Regional Aortic Valve Biomechanics in a Mouse Model of Aortic Valve Disease". 4th Biennial Heart Valve Biology and Tissue Engineering Meeting, Mar 7-10, Hilton Head Island, South Carolina, 2010.

A10. Sheikh AQ, Kogan AB, **Narmoneva DA**: "Nanosecond electromagnetic field mediates capillary-like network formation via MAPK/ERK pathway". *Transactions of the Biomedical Engineering Society*, October 2009, p. 71. (Podium)

A11. Hurley JR, Balaji S, King B, Nolan K, Jiang S, Haider KH, Wang Y, Ashraf M, **Narmoneva DA**: "Self-assembling peptide nanoscaffold for MMP delivery and cardiac regeneration in the diabetic heart". *Transactions of the Biomedical Engineering Society*, October 2009, p. 76. (Poster)

A12. Cho H, Sheikh AQ, **Narmoneva DA**: "Peptide nanoscaffold mediates angiogenesis via non-specific interactions with endothelial cells." *Transactions of the Biomedical Engineering Society*, October 2009, p. 58. (Poster)

A13. Krishnamurthy VK, Johnson A, Guilak F, **Narmoneva DA**, Hinton RB: " Micorpipette aspiration as a nove approch for biomechanical testing of heart valve tissue". *Transactions of the Biomedical Engineering Society*, October 2009, p. 117. (Poster)

A14. Hurley JR, Balaji S, **Narmoneva DA**: "Dual role of fibroblasts as mediators of angiogenesis in the peptide nanoscaffold microenvironment". *Transactions of the International Society for Heart Research* (North American Section), Baltimore, MD, 2009. (Poster)

A15. Hurley JR, Balaji S, King B, Nolan K, Jiang S, Haider KH, Ashraf M, **Narmoneva DA:** "Peptide Nanoscaffold for MMP Delivery and Cardiac Remodeling in Diabetic Cardiomyopathy", *Midwest Tissue Engineering Consortium*, Pittsburgh PA, April 2009. (Podium)

A16. Cho H, Sheikh QA, **Narmoneva DA:** "The RAD16-II Peptide Nanoscaffold Enhances Capillary-Like Network Formation By Non-Specific Interactions With Endothelial Cells", *Midwest Tissue Engineering Consortiu*m, Pittsburgh, PA, 2009. (Podium)

A17. S. Balaji**,** A.Q. Sheikh, L. Morris, F.Y. Lim, T.M. Crombleholme, and **D.A. Narmoneva**: "Angiogenic nanoscaffold enhances neovascularization and improves wound healing and repair tissue strength in db/db mice". *Midwest Tissue Engineering Consortium*, Pittusburg, PA, April 2009. (Podium)

A18. Hurley JR, **Narmoneva DA:** "Matrix Remodeling by Fibroblasts Supports Angiogenesis in the Peptide Nanoscaffold Microenvironment", *Midwest Tissue Engineering Consortium*, Pittsburgh PA, April 2009. (Podium)

A19. Zimnicki T, **Narmoneva DA:** "Fibroblast Cells Promote Capillary-Like Network Formation by Endothelial Cells via Vascular Endothelial Growth Factor-Dependent Mechanism". 19TH Annual Argonne symposium for undergraduates in science, engineering and mathematics, Argonne National Laboratory, Argonne, IL, November, 2008. (Poster)

A20. Sheikh A, Kogan AB, **Narmoneva DA**: "Electromagnetic field stimulation of capillary assembly in RAD16 nanoscaffold for angiogenic therapy". *Transactions of the Biomedical Engineering Society,* October 2008. (Poster)

A21. Hurley J, Zimnicki T, **Narmoneva DA**: Regulation of angiogenesis via fibroblast-mediated matrix remodeling. *Transactions of the Biomedical Engineering Society,* October 2008. (Podium)

A22. Krishnamurthy V., Gruber M., **Narmoneva DA**, Hinton Jr RB: Elastin haploinsufficiency leads to altered interstitial cell phenotype and progressive aortopathy. *Transactions of the Biomedical Engineering Society,* October 2008. (Poster)

A23. Balaji S, Parvadia J, Vaikunth SS, Lim FY, Crombleholme TC, and **Narmoneva DA**: Peptide nanoscaffold treatment enhances endothelial and progenitor cell recruitment and improves wound healing in db/db mice. *Symposium on the Advanced Wound Care,* April 2008. (Poster)

A24. Gruber M., Krishnamurthy V., **Narmoneva DA**, Hinton Jr RB: Elastin haploinsufficiency is associated with altered interstitial cell phenotype and progressive aortopathy. *Midwest Tissue Engineering Consortium,* April 2008, Cincinnati, OH. (Poster)

A25. Hurley JR, Marcotte KE, **Narmoneva DA**: "Fibroblasts Regulate the Extracellular Mechanical Environment and In Vitro Capillary-Like Network Formation. *Midwest Tissue Engineering Consortium,* April 2008, Cincinnati, OH. (Podium)

A26. Balaji S, Parvadia J, Vaikunth SS, Lim FY, Crombleholme TM, **Narmoneva DA**: In Situ Tissue Engineering Improves Neovascularization And Wound Healing In Db/Db Mice. *Midwest Tissue Engineering Consortium,* April 2008, Cincinnati, OH. (Podium)

A27. Sheikh A, Kogan AB, **Narmoneva DA**: Microwave field enhances capillary-like network assembly by microvascular endothelial cells. *Midwest Tissue Engineering Consortium,* April 2008, Cincinnati, OH. (Poster)

A28. Hurley JR, Balaji S, Marcotte KE, **Narmoneva DA**, "Fibroblasts Facilitate In Vitro Angiogenesis via Regulation of Chemical and Mechanical Environments", *Transactions of the Biomedical Engineering Society*, September 2007. (Podium)

A29. Balaji S, Parvadia J, Vaikunth SS, Crombleholme TM, **Narmoneva DA**: Angiogenic scaffold promotes neovascularization and wound healing in murine model of type II diabetes, *Transactions of the Biomedical Engineering Society*, September 2007. (Poster)

A30. Balaji S, Vaikunth SS, Maldonado AM, Parvadia J, Lim FY, Crombleholme TM, **Narmoneva DA**: Angiogenic Scaffold Enhances Wound Healing In Murine Model of Type II Diabetes. *Midwest Tissue Engineering Consortium,* April 2007, Ann Arbor, MI. (Poster)

A31. Marcotte KE, Balaji S and **Narmoneva DA**: Peptide scaffold promotes endothelial cell-fibroblast interactions and angiogenesis in vitro. *Transactions of the Biomedical Engineering Society,* October 2006. (Poster)

A32. Harmon M, **Narmoneva DA**: "Effects of Scaffold Mechanical Properties on Endothelial Cell Network Formation", *Surfaces in Biomaterials* regional conference, Minneapolis, October 2005. (Poster)

A33. **Narmoneva DA**, Lee RT and Kamm RD: Effect of scaffold material properties on capillary formation by human endothelial cells. *Transactions of the Biomedical Engineering Society*, October 2004. (Podium)

A34. **Narmoneva DA,** Lee RT, Gertler JG, and Kamm RD: Self-assembling peptide scaffold promotes angiogenesis and network formation in three-dimensional culture of human microvascular endothelial cells. *Transactions of the International Society of Biomechanics* XVIII Congress, Calgary, Canada, 2002. (Podium)

A35. Flahiff CM, **Narmoneva DA**, Kraus VB, Huebner JL, Wang JY, Guilak F, Setton LA: Cartilage mechanics in the guinea pig model of osteoarthritis. *Transactions of the Orthopaedic Research Society*, 26:59, 2001. (Podium)

A36. **Narmoneva DA**, Wang JY and Setton LA: An inhomogeneous model describes the nonuniform swelling behaviors of human patellar cartilage. *Transactions of the Orthopaedic Research Society* 25:882, 2000. (Poster)

A37. Leddy HA, **Narmoneva DA**, Kraus VN, Huebner JL, Guilak F, Wang JY and Setton LA: Quantitative swelling for material property determinations in guinea pig cartilage. *Transactions of the Orthopaedic Research Society* 25:108, 2000. (Podium)

A38. Setton LA, **Narmoneva DA**, Leddy H, Guilak F and Kraus VB: Quantitative swelling for cartilage property determinations in small animal joints. *Transactions of the International Society of Biomechanics* XVII Congress, p.21, 1999. (Podium)

A39. **Narmoneva DA**, Guilak F, Vail TP, and Setton LA: Quantitation of swelling effects in articular cartilage following meniscectomy in a canine model. *Transactions of the Orthopaedic Research Society* 23:480, 1998. (Podium)

A40. **Narmoneva DA** and Setton LA: Measurement of nonuniform swelling strains in full–thickness articular cartilage. *Transactions of the Orthopaedic Research Society* 22:81, 1997. (Podium)

F: TEACHING

Courses taught

- Statistical Experimental Design (3 cr.hr. **BME3010**: Winter & Spring 2011, Winter & Spring 2012, Spring 2013, Spring 2014, Spring 2015).
- Research Capstone I-II (6 cr.hr. each, **BME5001**: Fall 2005-2012, Fall 2014-2015; **BME5002**: Winter 2006-2013, Spring 2014, Spring 2015, Fall 2015 – Spring 2016).
- BME Research Design (3 cr.hr., **BME705**: Fall 2009).
- Tissue Mechanics Lab (3 cr.hr., **BME521**, Fall 2007).
- Tissue Biomechanics (**BME621**, Fall 2005, 2006, 2007, 2008) – taught *Biomechanics of Blood Vessels* part of each of the course.
- Functional Tissue Engineering (**BME631)**. Summer 2005, Spring 2007, 2011 – taught *Vascular Tissue Engineering* part of the course).
- Biomedical Engineering Survey (3 cr.hr., **BME701)**. 2005-2015.
- Biomedical Engineering Seminar (1 cr.hr., **BME601**). Winter 2006, 2008, 2011.

Teaching-related publication

Johnson JD, Privitera MB, **Narmoneva DA**, and Haridas B: Design and Experimental Capstone: An Integrated Experience. *Proceedings of the Annual meeting of the American Society for Engineering Education*: 74008, 2008.

Graduate Student Advising

Defended PhD:

- Swathi Balaji (joined lab in June 2006); defended her PhD thesis in September 2010.
- Philip Jung (Philip started his PhD at the University of Cincinnati in 2005 with Dr. Joel Collier, who moved to University of Chicago in 2007. Philip continued his work at Chicago with Dr. Collier as his primary advisor, and I served as Chair of Philip's PhD committee at UC until Philip's defense in July 2010).
- Jennifer Hurley (joined lab in June 2007), defended her PhD thesis in October 2011.
- Hongkwan Cho (joined lab in June 2008), defended his PhD thesis in October 2012.
- Abdul Sheikh (joined lab in September 2007), defended his PhD thesis in October 2012.

- Varun Krishnamurthy (BME Ph.D. candidate, joined lab in November 2007, co-advising with Dr. Robert Hinton, Pediatrics at CCHMC), defended his PhD thesis in September 2012.
- Hodari James: graduated in December 2014.
- Toloo Taghian (Physics Ph.D. candidate, Co-advise with Dr. Andrei Kogan, UC Physics; joined lab since 2009), graduated in December 2015.

MS students supervised:

- Elisabeth McWhorter: current MS student (2015-2017).
- Arielle Waller – an intern from Kennesaw State University, Kennesaw, GA. August 2016-August 2017 (expected).
- Emeka Chikelu: MS student; worked in the lab 2014-2016; defended May 2016.
- Hua Gao: current ACCEND (MS) student.
- Courtney Kuesel: worked in the lab in 2013; graduated in June 2013; her results contributed to the full-length manuscript where she is the 2nd author.
- Ti'Air Riggins: MS project August-December 2013.

PhD Committee Member:

- Sharina Palencia Desai (Ph.D. defended June 2013, Advisor: Dr. Sumanas, Molecular and Developmental Biology, Cincinnati Children's Hospital Medical Center)
- John Vennemeyer (BME Ph.D. candidate, PhD thesis defended in August 2012, Advisor: Dr. Pixley)
- Kyle Rich (BME Ph.D. candidate, PhD thesis defended in 2012, Advisor: Dr. Mast)
- Stephen Perrin (BME Ph.D. candidate, Advisor: Dr. Holland)
- Kirthi Radhakrishnan (BME Ph.D. candidate, Advisor: Dr. Holland)
- Matthew Gruber (BME Ph.D. candidate, Advisor: Dr. Holland)
- Adeola Adeyemo (Ph.D. candidate at the Department of Pharmacology and Cell Biophysics, Advisor: Dr. Jo El Schultz; defended Spring 2016).
- Chandra Karunakan (BME, PhD thesis defended in August 2011, Advisor: Dr. Mast).
- Jonathan Kopechek (BME, PhD thesis defended in August 2011, Advisor: Dr. Holland).
- Kate Hitchcock (BME, Ph.D thesis defended in May 2010, Advisor: Dr. Holland).
- Dahai Gao (Ph.D. candidate at the Department of Chemical & Materials Engineering, Advisor Dr. Chia-Chi Ho).
- Balakumar Rajendran (M.S. student at the Department of Electrical and Computer Engineering, Advisor Dr. Carla Purdy, MS thesis defended in December 2008).

Undergraduate Student Advising

Undergraduate students working on research projects in the lab (not including REU):

- Emma Stumpf (BME class of 2017) – independent study, Fall 2014, Summer 2015; research coop-Fall 2016; independent study – July –August 2016; Research Capstone – Fall 2016-Spring 2017.

- Hua Gao (BME class of 2016) – research coop: January-August 2015; research project (P&G): September 2015-February 2016; Research Capstone – Fall 2015-Spring 2016.
- Tugba Erden (BME class of 2016) – independent study, January-August 2013, Senior Capstone 2015-2016.
- Luke Knudson (BME class of 2016): Research Capstone Fall 2015-Spring 2016; independent study: May-July 2016.
- Joshua Jackson (BME class of 2016) – REU program: January-May 2015; Senior Capstone 2015-2016.
- Jacob Knorr (BME class of 2016) – collaboration with Dr. Donna Jones (CCHMC); Fall 2014-May 2016. Jacob is the 1st author on the paper in Journal of Biomechanics that is currently in print (2016).
- Timothy Carter (BME class of 2013) – worked on the Research Capstone project during 2012/2013 year.
- Sameam Shahrestani (BME class of 2013) – worked on the Research Capstone project during 2012/2013 year.
- Samantha Staubach (BME class of 2013) – worked on the Research Capstone project during 2012/2013 year.
- Meredith Beckenhaupt (BME class of 2012) – worked on the Research Capstone project during 2011/2012 year.
- Zachary Sheppard (BME class of 2012) – worked on the Research Capstone project during Fall 2011.
- Cameron Ingram (BME class of 2013) – worked as independent study student during Spring 2010; also worked as REU student during fall 2010-winter 2011.
- Andrew Mutchler (BME class of 2011) – worked on NIH-sponsored project during summer 2010.
- Laura DeMott (BME class of 2013) – worked as independent study student during Spring 2010 and as a WISE student during summer 2010.
- Shawn Rockey (BME class of 2010) - worked on Research Capstone project during fall 2009 and winter 2010, and on independent study project during spring 2010.
- Michele Bloomer (CME class of 2012) – worked in WISE program, June-September 2009.
- Kristof Nolan (BME class of 2011) – worked on independent study projects during winter/spring 2009, Research Capstone during fall/winter/spring 2010.
- Brad King (BME class of 2010) – did a research coop in the lab during winter 2009, and worked on the NIH AARP grant during June-September 2009.
- Kathryn Kadasia (BME class of 2012, Purdue University) –research assistant, July-August 2009.
- Andrew Reckers (BME class of 2009) – did Research Capstone project, fall 2008 and winter 2009.
- Adam Hoenle (BME class of 2010) – did Research Capstone project, fall 2008 and winter 2009.
- Brent Huxel (BME class of 2008) –independent study project, winter and spring of 2008.
- Shaan Sethi (BME class of 2008) – worked on independent study project, spring quarter of 2008.
- Matt Gruber (Physics undergraduate, class of 2008) – did a research coop in the lab during spring-summer 2007, and continued with independent study project during winter quarter of 2008. Matt's research was presented as a poster at titled "Elastin haploinsufficiency is associated with altered interstitial cell phenotype and progressive aortopathy" at the Midwest Tissue Engineering

Consortium Meeting in April 2008 in Cincinnati, and at the ASME Summer Bioengineering Conference in June 2008.

- Maya Harmon (BME Undergraduate, class of 2008) –WISE program, June-September 2005; Independent Study, Fall 2005, Winter 2006, Fall 2006). Maya's research was presented as a poster titled "Effects of Scaffold Mechanical Properties on Endothelial Cell Network Formation" at the "Surfaces in Biomaterials" conference in Minneapolis in October 2005.
- Karen Marcotte (UC BME research coop, Spring - Summer 2006). Karen's work was presented at the Biomedical Engineering Society Annual Meeting, Chicago, IL, October 2006, and published in the *Journal of the International Society on Thrombosis and Haemostasis* in 2006.
- Ashley Wheeler (BME Undergraduate, WISE program, June-September 2006).
- Theresa Wu (BME undergraduate, Independent Study Winter 2005, Fall - Winter 2006).
- Rick Helton (UC Biotechnology Program, Raymond Walters College, Independent Study, Summer 2006).

NSF Research for undergraduates (REU) program:

- Aniket Tolpadi – REU student from Rice; worked in the lab during June-August 2015.
- Joshua Jackson (Biomedical Engineering, UC) – REU student during Fall 2014-Spring 2015.
- Meredith Beckenhaupt (Biomedical Engineering, UC) – worked as REU student during fall 2010-winter 2011.
- Cameron Ingram (Biomedical Engineering, UC) – worked as REU student during fall 2010-winter 2011.
- Brad Herbig (Department of Chemical Engineering, Rose-Hulman Institute of Technology, Terre Haute, Indiana, June-August 2010). Brad won the 1st place in the 2010 REU program and received $500 travel award to present his research at the Sigma Xi meeting on November 11-14 2010 in Raleigh NC.
- Danielle L. Bourgeois (Department of Biomedical Engineering, University of Oklahoma, June-August 2009). Danielle's project won the first place in the 2009 Program. She was a recipient of a 2010 NSF Engineering Education Programs Conference (EEC) travel scholarship in Reston, VA.
- Thea Zimnicki (Department of Biomedical Engineering, Columbia University, New York, June-August 2008). Thea's project won the second place in the program, and was selected for a presentation at the 19TH Annual Argonne symposium for undergraduates in science, engineering and mathematics, Argonne National Laboratory, Argonne, IL in November, 2008.
- Hoi (Justin) Wong (Department of Biomedical Engineering, Ohio State University, summer 2007).
- Sonia Merritt (Department of Biomedical Engineering, Case Western University, May-August 2006).
- Cathy Pham (Department of Biomedical Engineering, Ohio State University, summer 2006).
- Lauren Taylor (Department of Chemistry, UT Martin, summer 2005).

High school outreach

- Marissa Ruzga, a junior high school student (WHHS), June-July 2016.
- Caroline Schmerge, a junior high school student (Cincinnati Country Day), June-July 2016.
- Logan Groneck, a junior high school student (Cincinnati), worked in the lab during May-July 2014.

- Akshay Roy, a junior high school student (Lakota HS, Cincinnati), worked in the lab during summer 2014.