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J. BRANDON DIXON
PROFESSOR
WOODRUFF SCHOOL OF MECHANICAL ENGINEERING

I. EARNED DEGREES

Texas A&M University, College Station, TX, B.S., Biomedical Engineering, 2001
Texas A&M University, College Station, TX, Ph.D., Biomedical Engineering, 2006

II. EMPLOYMENT HISTORY

01/23 – present	***Associate Chair for Undergraduate Studies:*** George C. Woodruff School of Mechanical Engineering, Georgia Institute of Technology
08/20 – present	***Professor:*** George C. Woodruff School of Mechanical Engineering, Georgia Institute of Technology
08/15 – 08/20	***Associate Professor***: George C. Woodruff School of Mechanical Engineering, Georgia Institute of Technology
08/09 – 08/15	***Assistant Professor***: George C. Woodruff School of Mechanical Engineering, Georgia Institute of Technology
06/06 – 07/09	***Post-doctoral Research Fellow***: Institute for Biomedical Engineering, Laboratory of Mechanobiology and Morphogenesis, Ecole Polytechnique Fedéralé de Lausanne (EPFL), Lausanne, Switzerland.
09/05-05/06	***Assistant Lecturer***: Department of Biomedical Engineering, Texas A&M University, College Station, TX
06/02-05/06	***Graduate Research Assistant***: Optical Biosensing Laboratory, Texas A&M University, College Station, TX
09/02-12/03	***Assistant Lecturer***: Department of Biomedical Engineering, Texas A&M University, College Station, TX
01/02-05/02	***Graduate Teaching Assistant***: Department of Biomedical Engineering, Texas A&M University, College Station, TX

III. HONORS AND AWARDS

A. NATIONAL/INTERNATIONAL AWARDS

1. Whitaker Foundation International Scholar Fellowship, 2006-2007
2. Microcirculatory Society Award for Excellence in Lymphatic Research, 2007
3. NIH Pathway to Independence Award, 2008
4. NSF Career Award, 2014
5. American Institute for Medical and Biological Engineering Fellow, 2021
6. Richard Skalak Award, ASME Bioengineering Division, 2022
7. LE&RN – GRC Career Achievement Award in Lymphatic Research, 2024

B. SCHOOL/INSTITUTE AWARDS

1. Texas A&M University Distinguished Graduate Student Award for Excellence in Teaching, 2006
2. CETL/BP Junior Faculty Teaching Excellence Award, Georgia Institute of Technology, 2014
3. Bioengineering Outstanding Advisor Award, Georgia Institute of Technology, 2015
4. Woodruff Faculty Fellow, 2016 – 2021

5. Petit Institute for Bioengineering and Bioscience, Above and Beyond Translational Research Award, 2018
6. Georgia CTSA Team Science Award of Distinction for Early Stage Research Teams, Georgia Clinical and Translational Science Alliance, 2022

IV. RESEARCH, SCHOLARSHIP, AND CREATIVE ACTIVITIES

A. PUBLISHED BOOKS, BOOK CHAPTERS, AND EDITED VOLUMES

A1. Refereed Book Chapters

1. Weiler, M. J. and Dixon, J. B., "Measurements of lymph flow", In E. Berardesca, H. Maibach and K. Wilhelm (Eds.), *Non Invasive Diagnostic Techniques in Clinical Dermatology*, Springer, New York, NY, 2014.

2. Mukherjee, A., Hooks, J., and Dixon, J. B., "Physiology: Lymph Flow", In B. Lee, S. Rockson, and J. Bergan (eds.), *Lymphedema: A Concise Compendium of Theory and Practice* 2nd Ed., Springer International Publishing, Cham, Switzerland, 2018.

3. Mukherjee, A. and Dixon, J. B., "Mechanobiology of Lymph Vessels", In M. Hecker and D. Duncker, *Mechanobiology of Vascular Disease*, Springer, New York NY, 2021.

B. REFEREED PUBLICATIONS AND SUBMITTED ARTICLES

B1. Published and Accepted Journal Articles

1. Wan Q., Dixon J. B., and Coté G.L., "Dual wavelength polarimetry for monitoring glucose in the presence of varying birefringence", *Journal of Biomedical Optics* 10(2), 24029(1-8), 2005.

2. Dixon J. B., Gashev A., Zawieja D. C., and Coté G. L., "Measuring microlymphatic flow using high speed video microscopy", *Journal of Biomedical Optics* 10(6), 064016(1-7), 2005.

3. Dixon J. B., Greiner S. T., Gashev A. A., Coté G. L., Moore Jr. J. E., and Zawieja D. C., "Lymph flow, shear stress, and lymphocyte velocity in rat mesenteric prenodal lymphatics", *Microcirculation* 13(7), 597-610, 2006.

4. Dixon J. B., Gashev A., Zawieja D. C., Moore J., and Coté G. L., "Image correlation algorithm for measuring lymphocyte velocity and diameter changes in contracting microlymphatics", *Annals of Biomedical Engineering*, 35(3), 387-396, 2007.

5. Dixon J. B., Raghunathan, S., and Swartz, M. A., "A tissue engineered model of the intestinal lacteal for evaluating lipid transport by lymphatics", *Biotechnology and Bioengineering*, 103(6), 1224-35, 2009.

6. Bonvin C., Overney J., Shieh A. C., Dixon J. B., Swartz M. A., "A multichamber fluidic device for 3D cultures under interstitial flow with live imaging: Development, Characterization, and Applications", *Biotechnology &*

Bioengineering, 105(5), 982-991, 2010.

7. Miteva D. O., Rutkowski, J. M., Dixon J. B., Kilarski, W., Shields, J. D., and Swartz, M. A., "Transmural Flow Modulates Cell and Fluid Transport Functions of Lymphatic Endothelium", *Circulation Research*, 106(5), 920-931, 2010.

8. Dixon, J. B., "Lymphatic lipid transport: Sewer of subway?", *Trends in Endocrinology and Metabolism*, 21(8), 480-487, 2010.*

9. Dixon, J. B., "Mechanisms of chylomicron uptake into lacteals", *Annals of the New York Academy of Sciences*, 1207, S1, E52-E57, 2010.*

10. Nipper, M. E. and Dixon, J. B., "Engineering the lymphatic system", *Cardiovascular Engineering and Technology,* 2(4), 296-308, 2011.*

11. Wan, W., Dixon, J.B., and Gleason, R.L., "Constitutive modeling of mouse carotid arteries using experimentally measured microstructural parameters", *Biophysical Journal* 102(12), 2916-2925, 2012.*

12. Weiler, M. J., Kassis, T., and Dixon, J.B., "Sensitivity analysis of functional near-infrared lymphatic imaging", *Journal of Biomedical Optics,* 17(16), 066019(1-11), 2012.*

13. Kassis, T., Kohan, A. B., Weiler, M., J., Nipper, M. A., Cornelius, R., Tso, P., and Dixon, J. B., "A dual channel in situ optical imaging system for quantifying lipid uptake and lymphatic pump function in vivo", *Journal of Biomedical Optics*, 17(8), 086005(1-13), 2012.*

14. Kornuta, J. A., Nipper, M. E., and Dixon, J. B., "Low-cost microcontroller platform for studying lymphatic biomechanics in vitro", *Journal of Biomechanics*, 46(1), 183-186, 2013.*

15. Weiler, M. J. and Dixon, J., B., "Differential transport function of lymphatic vessels in the rat tail model and the long term effects of Indocyanine Green as assessed with near-infrared imaging", *Frontiers in Vascular Physiology*, 4(215), 1-10, 2013.*

16. Reed, A.L., Rowson, S.A., and Dixon, J. B., "Demonstration of ATP-dependent transcellular transport of lipid across the lymphatic endothelium using an in vitro model of the lacteal", *Pharmaceutical Research*, 30(12), 3271-3280, 2013.*

17. Nelson, T. S., Akin, R. E., Weiler, M. J., Kassis, T., Kornuta, J. K., and Dixon, J.B., "Minimally invasive method for determining the effective lymphatic pumping pressure in rats using near infrared imaging", *American Journal of Physiology – Regulatory, Integrative, and Comparative Physiology*, 306(5), 281-290, 2014.*

18. Kornuta, J. A. and Dixon, J. B., "Ex-vivo lymphatic perfusion system for independently controlling pressure gradient and transmural pressure in isolated vessels", *Annals of Biomedical Engineering*, 42(8), 1691-1704, 2014.*

19. Kassis, T., Skelton, H. M, Lu, I. M., Moorhead, A. R., and Dixon, J. B., "An integrated in vitro imaging platform for characterizing filarial parasite behavior

within a multicellular microenvironment", *PLoS Neglected Tropical Diseases*, 8(11), e3305, 2014.*

20. Dixon, J. B and Weiler, M. J., "Bridging the divide between pathogenesis and detection in lymphedema", *Seminars in Cell and Developmental Biology*, 38, 75-82, 2015.*

21. Schudel, A., Kassis, T., Dixon, J. B., and Thomas, S. N., "S-nitrosated polypropylene sulfide nanoparticles for thiol-dependent transnitrosation and toxicity against adult female filarial worms", *Advanced Healthcare Materials*, 4(10), 1484-1490, 2015.*

22. Caulk, A., Nepiyushchikh, Z., Shaw, R., Dixon, J. B., and Gleason, R. L., "Quantification of the passive and active biaxial mechanical behavior and microstructural organization of rat thoracic ducts", *Journal of the Royal Society Interface*, 12(108), 20150280, 2015.*

23. Ciciliano, J. C., Sakurai, Y., Myers, D. R., Fay, M. E., Hechler, B., Meeks, S., Li, R., Dixon, J. B., Lyon, L. A., Gachet, C., and Lam, W. A., "Resolving the multifaceted mechanisms of the ferric chloride thrombosis model using an interdisciplinary microfluidic approach", *Blood*, 126(6), 817-824, 2015.

24. Savetsky, I. L., Albano, N. J., Cuzzone, D. A., Gardenier, J. C., Torrisi, J. S., Garcia Nores, G. G., Nitti, M. D., Hespe, G. E., Nelson, T. S., Dixon, J. B., and Mehrara, B. J., "Lymphatic function regulates contact hypersensitivity dermatitis in obesity", *Journal of Investigative Dermatology*, 135, 2742-2752, 2015.*

25. Kornuta, J. A., Nepiyushchikh, Z., Gasheva, O. Y., Mukherjee, A., Zawieja, D. C., and Dixon, J. B., "Effects of dynamic shear and transmural pressure on wall shear stress sensitivity in collecting lymphatic vessels", *American Journal of Physiology – Regulatory Integrative and Comparative Physiology*, 309(9), R1122-R1134, 2015.*

26. Kassis, T., Yarlagadda, S. C., Kohan, A., Breedveld, V., Tso P., and Dixon, J. B., "Post-prandial lymphatic pump function after a high-fat meal: a characterization of contractility, flow, and viscosity", *American Journal of Physiology – Gastrointestinal and Liver Physiology*, 310, G776 – G789, 2016.*

27. Caulk, A. W., Dixon, J. B., and Gleason, R. L., "A lumped parameter model of mechanically-mediated acute and long-term adaptations of contractility and geometry in lymphatics for characterization of lymphedema", *Biomechanics and Modeling in Mechanobiology*, 15(6), 1601-1618, 2016.*

28. Srinivasan, S., Vannberg, F., and Dixon, J. B., "Lymphatic transport of exosomes as a rapid route of information dissemination to the lymph node", *Scientific Reports*, 6, 24435, 2016.*

29. Cha, B., Geng, X., Mahamud, R., Fu, J., Mukherjee, A., Kim, Y., Jho, E., Kim, T. H., Xia, L., Dixon, J. B., Chen, H., and Srinivasan, R. S., "Mechanotransduction activates Canonical Wnt/β-catenin signaling to promote lymphatic vascular patterning and the development of lymphatic and lymphovenous valves", *Genes & Development*, 30(12), 1454-1469, 2016.*

30. Srinivasan, S., Su, M., Ravishankar, S., Moore, J., Head, P., Dixon, J. B., and Vannberg, F., "TLR-exosomes exhibit distinct kinetics and effector function", *Scientific Reports,* 7, 41623, 2017.*

31. Tian, W., Rockson, S. G., Jiang, X., Kim, J., Begaye, A., Shuffle, E. M., Tu, A. B., Cribb, M., Nepiyushchikh, Z., Feroze, A. H., Zamanian, R. T., Dhillon, G. S., Voelkel, N. F., Peters-Golden, M., Kitajewski, J., Dixon, J. B., and Nicolls, M. R., "Leukotriene B4 antagonism ameliorates experimental lymphedema", *Science Translational Medicine,* 9(389), 2017.*

32. Razavi, M., Nelson, T. S., Nepiyushchikh, Z., Gleason, R. L., and Dixon, J. B., "The relationship between lymphangion length and maximum pressure generation established through in vivo imaging and computational modeling", *American Journal of Physiology – Heart and Circulatory Physiology,* 313(6), H1249-60, 2017.*

33. Yahathugoda, C., Weiler, M. J., Rao, R., De Silva, L., Dixon, J. B., Weerasooriya, M., Weil, G., and Budge, P. J., "Use of a novel portable three-dimensional scanner to measure limb volume and circumference in patients with filarial lymphedema", *American Journal of Tropical Medicine and Hygiene,* 97(6), 1836-42, 2017.*

34. Zawieja, S. D., Castorena-Gonzalez, J. A., Dixon, J. B., and Davis, M. J., "Experimental models used to assess lymphatic contractile function", *Lymphatic Research and Biology*, 15(4), 331-342, 2017.

35. Lu, I. M., Kassis, T., Rogers, A. M., Schudel, A., Weil, J., Evans, C. C., Moorhead, A. R., Thomas, S. N., and Dixon, J. B., "Optimization of culture and analysis methods for enhancing long-term *B. malayi* survival, molting, and motility in vitro", *Parasitology Open,* 4(3), 2018.*

36. Ballard, M., Wolf, K. T., Nepiyushchikh, Z., Dixon, J. B., and Alexeev, A., "Probing the effect of morphology on lymphatic valve dynamic function", *Biomechanics and Modeling in Mechanobiology*, 3(7), 1500-14, 2018.*

37. Wu, H., Rahman, H. A., Dong, Y., Liu, X., Wen, A., Birsner, A., Bazinet, L., Wong, S., Song, K., Brophy, M., Mahamud, M. R., Chang, B., Pasula, S., Cai, X., Kwak, S., Xu, J., Beilenberg, D., Dixon, J. B., D'Amato, R., Srinivasan, S., and Chen, H., "Epsin deficiency promotes lymphangiogenesis through regulation of VEGFR3 degradation in diabetes", *Journal of Clinical Investigation*, 128(9), 4025-4043, 2018.

38. Gleason, R. L., Yigeremu, M., Debebe, T., Teklu, S., Zewdeneh, D., Weiler, M., Frank, N., Tolentino, L., Attia, S., Dixon, J. B., Kwon, C., Pokutta-Paskaleva, A., and Gleason, K., "A safe, low-cost, easy-to-use 3D camera platform to assess risk of obstructed labor due to cephalopelvic disproportion", *PLoS One*, 13(9): e0203865, 2018.

39. Hooks, J. S., Clement, C. C., Nguyen, H.D., Santambrogio, L., and Dixon, J. B., "In-vitro model reveals role for mechanical stretch in the remodeling response of lymphatic muscle cells", *Microcirculation*, e12512, 2018.

40. Cha, B., Geng, X., Mahamud, M. R., Zhang, J. Y., Chen, L., Kim, W., Jho, E., Kim, Y., Choi, D., Dixon, J. B., Chen, H., Hong, Y., Olson, L., Kim, T. H., Merrill, B., Davis, M., J., and Srinivasan, R. S., "Complementary Wnt sources regulate lymphatic vascular development via Prox-1 dependent/β-catenin signaling", *Cell Reports*, 25(3), 571-584, 2018.

41. Lu, I. M. and Dixon, J. B., "Assessment of upper-extremity swelling among breast cancer survivors with a commercial infrared sensor" *Lymphatic Research and Biology*, 17(4), 424-433, 2019.

42. Spier, E., Hawkins, C. M., Weiler, M. J., Briones, M., Swerdlin, R., Park., S., and Dixon, J. B., "Volumetric assessment of pediatric vascular malformations using a rapid, hand-held three-dimensional imaging system", *Journal of Digital Imaging*, 16(5), 1-9, 2019.

43. Mukherjee, A., Hooks, J., Nepiyushchikh, Z., and Dixon, J. B., "Entrainment of lymphatic contraction to oscillatory flow", *Scientific Reports*, 9(1), p.5840, 2019.

44. Doan, T. N., Bernard, F. C., McKinney J. M., Dixon, J. B., and Willett, N. J., "Endothelin-1 inhibits clearance of different sized nanoparticles from intra-articular injection into rat knee", *Acta Biomateriala*, 93, 270-281, 2019.

45. Tolentino, L., Yigeremu, M., Teklu, S., Attia, S., Weiler, M., Frank, N., Dixon, J., B., Gleason, R. L., "Three dimensional camera anthropometry to assess risk of cephalopelvic disproportion- related obstructed labor in Ethiopia", *Interface Focus Journal of the Royal Society*, 9(5), 20190036, 2019.

46. Weiler, M. J., Cribb, M. T., Nepiyushchikh, Z., Nelson, T. S., and Dixon, J. B., "A novel mouse tail lymphedema model for observing lymphatic pump failure during lymphedema development", *Scientific Reports*, 9(1), 10405, 2019.

47. Lu, I., Weiler, M., Frank, N, Jordi, J., and Dixon, J. B., "Monitoring leg lymphedema over the course of therapy using an infrared imaging system", *Lymphatic Research and Biology*, lrb.2019.0036, 2019.

48. Nelson, T. S., Nepiyushchikh, Z., Hooks, J. S., Razavi, M. S., Lewis, T., Clement, C. C., Thoresen, M., Cribb, M. T., Ross, M. K., Gleason, R. G., Santambrogio, L., Peroni, J. F., Dixon, J. B., "Lymphatic remodeling in response to lymphatic injury in the hind limbs of sheep", *Nature Biomedical Engineering*, 4, 649-661, 2020.

49. Binkley, J., Weiler, M., Frank, N., Bober, L., Dixon, J. B., and Stratford, P. W., "Assessing Arm Volume in People During and After Treatment for Breast Cancer: Reliability and Convergent Validity of the LymphaTech System." *Physical Therapy*, 68(3), 7-467, 2020.

50. Razavi, M. S., Leonard-Duke, J., Hardia, B., Dixon, J. B., and Gleason, R. L., "Axial stretch regulates rat tail collecting lymphatic vessel contractions", *Scientific Reports*, 10(1), 5918, 2020.

51. Jiang, X., Tian, W., Granucci, E., Tu, A. B., Kim, D., Dahms, P., Pasupneti., S., Peng. G., Kim, Y., Lim, A., Espinoza, F. H., Cribb M., Dixon, J. B., Rockson, S. G., Semenza, G. L., and Nicolls, M. R., "Decreased lymphatic HIF-2α accentuates lymphatic remodeling in lymphedema", *Journal of Clinical Investigation*, 130(10), 5562-5575, 2020.

52. Razavi, M. S., Dixon, J. B., and Gleason, R. L., "Characterization of rat tail lymphatic contractility and biomechanics: incorporating nitric oxide-mediated vasoregulation", *Journal of the Royal Society Interface*, 17(170): 20200598, 2020.

53. White, B. N., Lu, I. M., Kao, L. S., Dixon, J., B., Weiler, M. J., Frank, N. D., Binkley, J., Subhedar, P., Okoli, J., Buhariwalla, D. O., Suarez-Logon, A., Gabram. S. G., "An infrared 3D scanning device as a novel limb volume measurement tool in breast cancer patients", *World Journal of Surgical Oncology*, 18(1): 278, 2020.

54. Mukherjee, A., Nepiyushchikh, Z., Michalaki, E., and Dixon, J. B., "Lymphatic injury alters the contractility and mechanosensitivity of collecting lymphatics to intermittent pneumatic compression", *The Journal of Physiology*, 599(10), 2699-2721, 2021.

55. White, B. N., Okoli, J., Dixon, J. B., Liu, Y., Yang, S., and Gabram-Mendola, S. G. A., "Use of a portable infrared 3D scanning device to measure limb volume in a safety net hospital breast clinic", *Breast Journal*, 27(6), 559-561, 2021.

56. Wolf, K. T., Dixon, J. B., and Alexeev, A., "Fluid pumping of peristaltic vessel fitted with elastic valves", *Journal of Fluid Mechanics,* 918:A28, 2021.

57. Atalis, A., Dixon, J. B., and Roy, K., "Soluble and microparticle-based delivery of TLR4 and TLR9 agonists differentially modulate chemotaxis of bone marrow-derived dendritic cells", *Advanced Health Care Materials*, 10(15), e2001899, 2021.

58. Cribb, M. T., Sestito, L. F., Rockson, S. G., Nicolls, M. N., Thomas, S. N., and Dixon J. B., "The kinetics of lymphatic dysfunction and leukocyte expansion in the draining lymph node during LTB4 antagonism in a mouse model of lymphedema", *International Journal of Molecular Sciences,* 22(9), 4455, 2021.

59. Bernard, F. C., Kaiser, J., Raval, S., Nepiyushchikh, Z., Doan, T., Willett, N., and Dixon, J., B., "Multichromatic near-infrared imaging to assess interstitial lymphatic and venous uptake in vivo", *Journal of Biomedical Optics*, 26(12), 126001, 2021.

60. Michalaki, E., Nepiyushchikh, Z., Bernard, F. C., Rudd, J. R., Mukherjee, A., McKinney, J. M., Doan, T. N., Willett, N. J., and Dixon, J. B., "Effect of human synovial fluid from osteoarthritis patients and healthy individuals on lymphatic contractility", *Journal of Biomechanical Engineering*, 144(7), 071012, 2022.

61. Hooks, J. S., Cruz-Acuña, R., Bernard, F., Nepiyushchikh, Z., Gonzalez-Vargas, Y., Hawkins, C. M., Garcia, A., and Dixon, J. B., "Synthetic hydrogels engineered to promote collecting lymphatic vessel sprouting in health and disease", *Biomaterials*, 284, 121483, 2022.

62. Michalaki, E., Rudd, J. M., Liebman, L., Wadhwani, R., Wood, L. B., Willett, N. J., and Dixon, J. B., "Lentiviral overexpression of VEGFC in transplanted MSCs leads to resolution of swelling in a mouse tail lymphedema model", *Microcirculation*, 30(2-3), e12791, 2022.

63. Kuzminich, Y. and Dixon, J. B., "Evaluation of longitudinal lymphatic function changes upon injury in the mouse tail with photodynamic therapy", *Cardiovascular Engineering and Technology*, 14, 204-216, 2023.

64. Liu, X., Cui, K., Wu, H., Li, K. S., Peng, Q., Wang, D., Cowan, D., Dixon , J. B., Srinivasan, R. S., Bielenberg, D. R., Chen, K., Wang, D., Chen, Y., and Chen, H., "Promoting lymphangiogenesis and lymphatic growth and remodeling to treat cardiovascular and metabolic diseases", *Arteriosclerosis, Thrombosis, and Vascular Biology*, 43(1), e1-e10, 2023.

65. Sestito, L. F., To, K. H. T., Cribb, M. T., Archer, P., Thomas, S. T., and Dixon, J. B., "Lymphatic-draining nanoparticles deliver Bay K8644 to lymphatic vessels and enhance their pumping function", *Science Advances,* 9(8), eabq0435, 2023.

66. Wolf, K. T., Poorghami, A., Dixon J. B., and Alexeev, A., "Effect of valve spacing on peristaltic pumping", *Bioinspiration and Biomimetics*, 18, 035002, 2023.

67. Kim, D., Tian, W., Wu, T., Xiang, M., Vinh, R., Chang, J., Gu, S., Lee, S., Zhu, Y., Guan, T., Schneider, E. C., Bao, E., Dixon, J. B., Kao, P., Pan, J., Rockson, S., Jiang, X., and Nicolls, M., "Abnormal lymphatic S1P signaling aggravates lymphatic dysfunction and tissue inflammation", *Circulation*, 148, 1231 - 1249, 2023.

68. Sedaghati, F., Dixon, J. B., and Gleason, R. L., "A 1D model characterizing the role of spatiotemporal contraction distributions on lymphatic transport", *Scientific Reports*, 13(1), 21241, 2023.

69. Kaiser, J., Bernard, F. C., Pucha, K., Raval, S., Eng, T., Fulton, T., Anderson, S., Allen, K., Dixon, J. B., and Willet, N. K., "Mild exercise expedites joint clearance and slows joint degradation in a joint instability model of osteoarthritis is male rats", *Osteoarthritis and Cartilage*, in press, 2024.

B2. Conference Presentation with Proceedings (Refereed)

1. Ericson, M.N., Ibey, B.L., Cote, G.L., Baba, J.S., Dixon, J.B., Hileman, M.S., Britton, C.L., and Wilson, M.A., "In vivo application of a minimally invasive oximetry based perfusion sensor", Proceedings of the Second Joint Engineering in Medicine and Biology/Biomedical Engineering Society Conference, 3, 1789-1790, 2002.

2. Dixon, J. B., Ibey, B. L., Ericson, M. N., Wilson, M. A., and Coté, G. L., "Monte Carlo modeling for perfusion monitoring", Proc. SPIE, 4965(7), 2003.

3. Dixon, J. B., Zawieja, D. C., Greiner, S. T., Gashev, A. A., and Coté, G. L., "Measuring microlymphatic flow using fast video microscopy", Proc. SPIE, 5701(9), 2005.

4. Dixon, J. B., Wan, Q., and Coté, G. L., "Motion compensation for detecting glucose through dual wavelength polarimetric system", Proc. SPIE, 5702(3), 15-22, 2005.

5. Dixon, J. B., Cote, G. L., Gashev, A. A., Greiner, S. T., Moore, J. E., and Zawieja, D C., "Image correlation method for measuring flow and diameter changes in contracting mesenteric microlymphatics in situ", Proc. SPIE, 6088(33), 2006.

6. Kassis, T., Weiler, M. J., and Dixon, J. B., "An in vivo optical imaging system for measuring lipid uptake, vessel contraction, and lymph flow in small animal lymphatic vessels", Proc. SPIE, 8229A(8), 2012.*

7. Weiler, M. J., Kassis, T., and Dixon, J. B., "Sensitivity analysis of near-infrared functional lymphatic imaging system", SPIE BIOS Proc. SPIE, 8229A(9), 2012.*

B3. Submitted Journal Articles (with date of submission)

1. Liebman, L., Shen, Y., Buchwald, Z., Nepiyushchikh, Z., Garcia, A. J., and Dixon, J. B., "Lymphatic vessel network injury reduces local tumor control despite preservation of the tumor-draining lymph node", *Scientific Reports*, submitted 1/16/2024.

2. Doan, T. N., Bernard, F., Dixon, J. B., and Willett, N., "Osteoarthritis Early-, Mid- and Late-Stage Progression in the rat medial meniscus transection model", *Journal of Orthopedic Research*, submitted 11/9/23, in revision.

C. OTHER PUBLICATIONS AND CREATIVE PRODUCTS

1. Dixon, J. B., Hubbell, J. A., O'Neil, C. P., Swartz, M., and Velluto, D., "Block copolymers and uses thereof", US Patent: US20110223217 A1, 2011.

2. Dixon, J. B., "Engineering technologies to shed insight on disease progression and risk in lymphedema", LymphLink, Vol. 26, No. 3, 2014, Invited Research Perspectives Article.

3. Akin, R. A., Dixon, J. B., Nelson, T. S., and Weiler, M. J., "Apparatus, system, and method for measuring lymphatic pressure and performance in vivo", Patent Application 61/936,926, 2015.

4. Dixon, J. B., Kassis, T., and Weiler, M. J., "Lymphedema diagnostic and monitoring tool using 3D imaging", Patent Application 2016/0235354, 2/12/2016.

5. Dahlman, J., Dixon, J. B., Michalaki, R., "Lymphatic-specific lipid nanoparticle and uses thereof", Patent Application PCT/US2023/077442, filed 10/20/2023.

D. PRESENTATIONS

D1. Invited Talks

1. Dixon, J. B., "Exploring mechanisms of lipid uptake and transport in lymphatic endothelial cells", National Institute of Diabetes and Digestive and Kidney Diseases Workshop on Lymphatics in the Digestive System: Physiology, Health, and Disease, NIH, Bethesda, MD, Nov 3-4, 2009.

2. Dixon, J. B., "Evidence of active regulation of lipid transport by lymphatics", National Heart, Lung, and Blood Institute, Individual K Awardees Meeting, NIH, Bethesda, MD, March 8-9, 2011.

3. Dixon, J. B., "Engineering new approaches for lymphatic research and patient care", 16th State of Georgia Lymphedema Education & Awareness Program, Atlanta, GA, October 12, 2013.

4. Dixon, J., B., "Physiology and biomechanics of lymphedema", Lymphedema: A Physicians Intensive, Lighthouse Lymphedema Network, Atlanta, GA, February 27, 2014.

5. Dixon, J. B., "Mechanical regulation of lymphatic pump function", Smooth Muscle Under Ground, San Diego, CA, April 25, 2014.

6. Dixon, J. B. and Kornuta, J. A., "Utilization of a feedback controlled lymphatic perfusion system for determining effects of shear rate and pressure on lymphatic wall shear stress sensitivity" 7th World Congress of Biomechanics, Boston, MA, July 6-11, 2014.

7. Dixon, J. B., "Lymphatic remodeling: Implications for organ health and disease", NIDDK Lymphatics Initiative Investigators Meeting, NIH, Bethesda, MD, November 10, 2014.

8. Dixon, J. B., "Imaging and experimental platforms for assessing worm and lymphatic function", Macrofilaricide Experts Group Meeting, Bill & Melinda Gates Foundation, Washington D.C., November 17-18, 2014.

9. Dixon, J. B., "Integrating imaging and biomechanics for exploring lymphatic pump failure in lymphedema, Lymphatic Education and Research Network Livestream Symposium, June 10, 2015.

10. Dixon, J. B., "Exploring lymphatic pump failure with animal models of lymphedema", 18th State of Georgia Lymphedema Education & Awareness Program, Atlanta, GA, October 23, 2015.

11. Dixon, J. B., "Bioengineered approaches towards understanding lymphedema", Taskforce for Global Health, Decatur, GA, November 23, 2015.

12. Dixon, J. B., "Quantifying and modeling lymphatic transport in health and disease", 8th International Bio-Fluid Symposium, Pasadena, CA, February 12-14, 2016.

13. Dixon, J. B., "Lymphatic remodeling as a driving force in collecting vessel pump failure in lymphedema", Gordon Research Conference on Lymphatics, Venture, CA, March 20-25, 2016.

14. Dixon, J. B. and Carlson, G., "Evaluation of lymphatic pump function and pressure generation as a metric of lymphedema risk", Glen Family Breast Cancer retreat, Emory University, Atlanta, GA, June 23, 2017.

15. Weiler, M. J. and Dixon, J. B., "Engineering lymphatic technologies: from laboratory to clinical implementation", National Lymphedema Network Annual Meeting, Orlando, FL, October 11-14, 2017.

16. Dixon, J. B., "Near infrared imaging as a lymphatic diagnostic in health and disease", Nanofans Forum, Atlanta, GA, May 9, 2018.

17. Dixon, J. B., "Low-cost quantitative limb volume scanner of lymphedema assessment", NIHR Global Health Research Unit Annual Meeting, Addis Adaba, Ethiopia, September 22, 2018.

18. Dixon, J. B., "Lymphatic malformations", Medical, Surgical, and Minimally Invasive Management of Vascular Anomalies and Overgrowth Syndromes, Atlanta, GA, September 28-29, 2018.

19. Dixon, J. B., "Engineering a tissue's drainage system: lessons learned from the lymphatics", Soft Matter Symposium 2018: Soft Matter Manufacturing, Gainesville, FL, October 17-18, 2018.

20. Dixon, J. B., "Lymphatic pump physiology in health and disease", 2018 American College of Phlebology Annual Congress, Nashville, TN, November 8-11, 2018.

21. Dixon, J. B., "Growth and remodeling in collecting lymphatic vessels and the consequence to function", Lymphatic Forum 2019, Austin, TX, May 30 – June 1, 2019.

22. Dixon, J. B., "Bringing technology to the monitoring, diagnosis, and treatment of lymphedema", Lighthouse Lymphedema Network Annual Meeting, October 19, 2019.

23. Dixon, J. B., "Lymphatic Tissue Engineering", Gordon Research Conference on Lymphatics, Ventura, CA, March 1-6, 2020.

24. Dixon, J. B., "3D tissue organoid models of the lymphatic vasculature in health and disease", LGDA/LMI International Conference on Complex Lymphatic Anomalies, October 2-3, 2021.

25. Dixon, J. B., "Engineering solutions for lymphedema treatment and diagnostics", Boston Lymphatic Symposium, November 5-6, 2021.

26. Dixon, J. B., "Experimental models of lymphatic pump failure", Virtual Lymphatic Summit 2021, November, 12-13, 2021.

27. Dixon, J. B., "Targeted Therapies for Enhancing Lymphatic Function in Lymphedema", Lymphatic Gordon Conference, Barga, Italy, October 30 – November 4, 2022.

28. Gonzalez-Vargas, Y., Hiehle, G., Spangle, J. M., Hong, A., Hawkins, C. M., and Dixon, J. B., "Bioengineered 3D in vitro strategies to investigate phenotypic and genotypic differences in lymphatic malformation sprouting", NAVBO (North American Vascular Biology Organization) InFocus – Vascular Malformations, December 15, 2022.

29. Dixon, J. B., "Engineering the lymphatics: Understanding and treating lymphatic dysfunction as a therapeutic target in disease", Chang Gung Memorial Hospital, Linkou, Taiwan, August 11, 2023.

30. Dixon, J. B., "Leveraging tissue engineered lymphatic malformation models", International Scientific Conference on Complex Lymphatic Anomalies, Grapevine, TX, September 29 – 30, 2023.

31. Dixon, J. B., "Utilization of nanomedicine for targeting calcium channels to enhance lymphatic pumping in lymphedema", BMES Annual Meeting, Seattle, WA, Oct 11-14, 2023.

D2. Conference Podium Presentations

1. Dixon, J. B., Cote, G. L., Gashev, A. A., Moore Jr., J. E., and Zawieja, D. C., "Fluid response to lymphatic contractile function: an engineering approach", 1st Annual Cardiovascular Research Institute Retreat, Temple, TX, October 27-28, 2005.

2. Dixon, J. B., Cote, G. L., Gashev, A. A., Moore Jr., J. E., and Zawieja, D. C., "Estimating wall shear stress in contracting mesenteric microlymphatics", 5th World Congress of Biomechanics, Munich, Germany, July 29th – August 4th, 2006, (*invited talk)*.

3. Swartz, M. A., Rutkowski, J. M., Miteva, D., Issa, A., and Dixon, J. B., "Molecular and Biophysical Regulators of Lymphatic Transport", Experimental Biology 2008, San Diego, CA, April 5-9, 2008.

4. Cioffi, M., Bottan, S., Haessler, U., Dixon, J. B., Swartz, M. A., and Boschetti, F., "Computational models of dendritic cell chemotaxis in tissue engineered microenvironments", 8th World Congress on Computational Biomechanics, Venice, Italy, June 30 – July 5, 2008.

5. Cioffi, M., Bottan, S., Haessler, U., Dixon, J. B., Swartz, M. A., and Boschetti, F., "Modeling of dendritic cell chemotaxis in tissue engineered microenvironments", 16th Congress of the European Society of Biomechanics, Lucerne, Switzerland, July 6-9, 2008.

6. Dixon, J. B., Raghunathan, S., and Swartz M. A., "A tissue engineered model of intestinal lacteals for characterizing lipid and nanoparticle uptake and transport", TERMIS-NA 2008, San Diego, CA, Dec 7-10, 2008.

7. Dixon, J. B., Rutkowski, J. M., Randolph, G., and Swartz, M. A., "Active regulation of lipid transport and metabolism by lymphatics: complimentary in vivo and in vitro studies." Experimental Biology 2009, New Orleans, LA, April 18-22, 2009.

8. Dixon J. B., "Quantifying the Functional Transport of Lipoproteins by Lymphatic Endothelial Cells", Keystone Conference: Molecular/Cell Biology and Physiology of Triglyceride Synthesis and TG-Rich Lipoprotein Assembly and Secretion, Big Sky, MT, Jan 9-14, 2010.*

9. Dixon, J. B., "Engineering Tools for Studying the Interplay Between Mechanics and Biology in Lymphatic Lipid Transport", ASME Summer Bioengineering Conference, Naples, FL, June 16-19, 2010.*

10. Dixon, J. B., Kornuta, J., and Kassis, T., "Bioengineered tools for quantifying lymphatic function in lipid transport", BMES Conference, Austin, TX, October 2-9, 2010.*

11. Faulkner, M. F., Huffman, J., and Dixon, J. B., "An in vitro model of targeting orally delivered drugs on lymphatics and avoiding first-pass metabolism", Georgia Tech Industrial Partners Symposium, Atlanta, GA, October 21, 2010.*

12. Faulkner, M. F., Dixon, J. B., "An in vitro model to study lipid uptake and transport", Institute of Biological Engineering, Atlanta, GA, March 3-5, 2011.*

13. Dixon, J. B., Weiler, M., and Faulkner, M. F., "Quantifying the molecular mechanisms in vitro of lymphatic uptake of lipoproteins from the intestine", 23rd International Congress of Lymphology, Malmö, Sweden, September 19-23, 2011.*

14. Weiler, M. and Dixon, J. B., "Long-term effects of indocyanine green on lymphatic pump function in vivo", Experimental Biology, Presidents Symposium II: Young Investigator Novel Trends, San Diego, CA, April 21-25, 2012.*

15. Kornuta, J. A. and Dixon, J. B., "Isolated lymphatic vessel perfusion system for independently controlling hoop stress and shear stress", ASME Summer Bioengineering Conference, Fajardo, Puerto Rico, June 20-23, 2012.*

16. Parsons, K. D., Kassis T., and Dixon, J. B., "Design of an in vitro migration chamber for quantifying the homing patterns of parasitic worms", ASME Summer Bioengineering Conference, Fajardo, Puerto Rico, June 20-23, 2012.*

17. Kassis, T., Cornelius, R., and Dixon, J. B., "In situ quantification of lipid concentration effects on lymphatic pump function" BMES Conference, Atlanta, GA, October 24-27, 2012.*

18. Nipper, M. E., Kornuta, J. A., and Dixon, J. B., "Exploring the roles of biomechanics in lymphatic endothelial function", BMES Conference, Atlanta, GA, October 24-27, 2012.*

19. Weiler, M. J. and Dixon J. B., "Characterization of Near-Infrared Functional Lymphatic Imaging in the Rat Tail Model", ASME Summer Bioengineering Conference, Sun River, Oregon, June 26-29, 2013.*

20. Dixon, J. B., Akin, R. E., Weiler, M. J., and Kassis, T., "Non-Invasive Assessment of Lymphatic Pumping Pressure in a Rat Tail Model Utilizing Near-Infrared Imaging", ASME Summer Bioengineering Conference, Sun River, Oregon, June 26-29, 2013.*

21. Dixon, J. B., Weiler, M. J., and Nelson, T. S., "Non-invasive quantification of nitric oxide effects on lymphatic pumping *in vivo",* Vascular Biology 2013, Hyannis, Massachusetts, October 20-24, 2013.*

22. Dixon J. B., Nelson, T. S., and Weiler, M. J., "In vivo quantification of perturbations to lymphatic pump function and their consequence to lymph transport", Gordon Research Conference on Molecular Mechanisms in Lymphatic Function and Disease, Barga, Italy, March 9-14, 2014.*

23. Kassis, T. and Dixon, J. B., "Role of Mesenteric Lymphatic Vessels in Lipid Transport and Their Response to Increased Mechanical Load, Gordon Research Symposium on Molecular Mechanisms in Lymphatic Function and Disease, Barga, Italy, March 8-9, 2014.*

24. Dixon, J. B., Weiler, M. J., Nelson, T. S., Kornuta, J. A., and Nepiyushchikh, Z., "Characterizing the regeneration of lymphatic pump function in vivo", Regenerative Engineering and Medicine Retreat, Athens, GA, August 12, 2014.

25. Nepiyushchikh, Z.V., Caulk, A.W., Pokutta-Paskaleva, A.P., Gleason, R. L., Dixon, J.B., "Effect of axial stretch on lymphatic vessel contractility", Vascular Biology 2014, Monterey, CA, October 19-23, 2014.*

26. Dixon, J. B., Srinivasan, S., and Vannberg, F., "Characterization of the kinetics of lymphatic transport of exosomes to the lymph node", Vascular Biology 2014, Monterey, CA, October 19-23, 2014.*

27. Caulk, A. W., Nepiyushchikh, A., Shaw, R., Dixon, J. B., and Gleason, R. L., "Quantification of mechanical properties of rat thoracic duct for long-term prediction of mechanically-mediated growth and remodeling", Summer Biomechanics, Bioengineering, and Biotransport Conference, Snowbird, UT, June 17-20, 2015.

28. Weiler, M. J., Nelson, T. S., and Dixon, J. B., "Reduced lymphatic function correlates with disease progression in a novel single vessel ligation model of lymphedema", Summer Biomechanics, Bioengineering, and Biotransport Conference, Snowbird, UT, June 17-20, 2015.

29. Nelson, T. S., Weiler, M. J., Savetsky, I., Liu, X., Mehrara, B. J., Chen, H., and Dixon, J. B., "Lymphatic disease phenotyping with near-infrared imaging", Summer Biomechanics, Bioengineering, and Biotransport Conference, Snowbird, UT, June 17-20, 2015.

30. Dixon, J. B., Nelson, T. S., and Peroni, J., "Development of a lymphedema model in sheep for regenerative muscle cell therapy", Regenerative Engineering and Medicine Retreat, Atlanta, GA, August 7, 2015.

31. Schudel, A., Kassis, T., Dixon, J. B., and Thomas, S. N., "S-Nitrosated Poly(Propylene Sulfide) Nanoparticles Exhibit Thiol-Dependent Transnitrosation and Toxicity Against Adult Female B. malayi Filarial Worms", BMES Conference, Tampa Bay, FL, October 7-10, 2015.

32. Hooks, J., Nelson, T. S., Weiler, M. J., and Dixon, J. B., "In vitro platform to explore the role of microenvironment mechanics on lymphatic muscle cell phenotype", Vascular Biology 2015, Hyannis, MA, October 18-22, 2015.

33. Caulk, A., Ballard, M., Nepiyushchikh, Z., Dixon, J. B., and Alexeev, A., "Fluid-solid modeling of lymphatic valves", 68th Annual Meeting of the APS Division of Fluid Dynamics", Boston, MA, November 22-24, 2015.

34. Razavi, M., Nelson, T., S., Gleason, R. L., and Dixon, J. B., "Investigation of the pressure-length relationship along a lymphatic chain with modeling and experiments", Summer Biomechanics, Bioengineering, and Biotransport Conference, National Harbor, MD, June 29 – July 2, 2016.

35. Wolf, K., Ballard, M., Nepiyushchikh, Z., Razavi, M., Dixon, J. B., and Alexeev, A., "Fluid-structure model of lymphatic valve and vessel", American Physical Society March Meeting, New Orleans, LA, March 13-17, 2017.

36. Lu, I. M., Weiler, M. J., Frank, N., D., Jordi, J., and Dixon, J. B., "Automated leg lymphedema assessment using the Kinect system", 26th World Congress of Lymphology, Barcelona, Spain, September 25-29, 2017.

37. Hooks, J., Cruz-Acuña, R., Nepiyushchikh, Z., Garcia, A., and Dixon, J. B., "Characterization and implementation of a novel synthetic hydrogel for lymphatic regeneration", Lymphatics Gordon Research Symposium, Barga, Italy, March 10-11, 2018.

38. Dixon, J. B., Nelson, T., Nepiyushchikh, Z., Hooks, J. S., Clement, C., Lewis, T., Razavi, M., Thorsen, M., Cribb, M. T., Ross, M. K., Gleason, R., Santambrogio, L., and Peroni, J., "Lymphatic function and remodeling responses compensate for loss of fluid return pathways", Lymphatics Gordon Conference, Barga, Italy, March 11-16, 2018.

39. Doan, T. N., Agarwal, R., Bernard, F. C., McKinney, J. M., Liu, A., Guldberg, R. E., Garcia, A. J., Dixon, J. B., and Willet, N., J., "Biomaterial-based therapies for improved lymphatic function and the resolution of chronic inflammation in post-traumatic osteoarthritis", 2018 Regenerative Medicine Workshop at Charleston, Charleston, SC, March 21-24, 2018.

40. Dixon, J. B., "The relationship between lymphatic pump function and tissue swelling in lymphedema", 8th World Congress of Biomechanics, Dublin, Ireland, July 8-12, 2018.

41. Mukherjee, A., Hooks, J. S., and Dixon, J. B., "Entrainment of Lymphangions to Oscillatory Shear Stress is Determined by Their Intrinsic Contractility and Shear Sensitivity", BMES Annual Meeting, Atlanta, GA, October 17-20, 2018.

42. Bernard, F., Doan, T., McKinney, J., Dixon, J. B., and Willett, N., "Endothelin-1 inhibits clearance of nanoparticles from rat knees", BMES Annual Meeting, Atlanta, GA, October 17-20, 2018.

43. Gleason, R., Yigeremu, M., Debebe, T., Teklu, S., Zewdeneh, D., Tolentino, L., Weiler, M., Frank, N., Attia, S., Dixon, J. B., Kwon, C., Pokutta-Paskaleva, A., Gleason, K., "A safe, low-cost, easy-to-use 3D-camera platform to assess risk of obstructed labor due to cephalopelvic disproportion", BMES Annual Meeting, Atlanta, GA, October 17-20, 2018.

44. Wolf, K. T., Dixon, J. B., and Alexeev, A., "Investigation of lymphatic filariasis via computational modeling.", American Physical Society March Meeting, Boston, MA, March 4 – 8, 2019.

45. Mukherjee, A., Nepiyushchikh, Z., and Dixon J. B., "Nano Talk: Ex vivo and in vivo entrainment of lymphatic contractions to oscillatory pressure gradients", Lymphatic Forum 2019, Austin, TX, May 30 – June 1, 2019.

46. To. K., Sestito, L., Thomas, S. N., and Dixon, J. B., "Nano Talk: Lymphatic-targeting nanoparticles for mechanistically enhancing contractions of collecting lymphatic vessels", Lymphatic Forum 2019, Austin, TX, May 30 – June 1, 2019.

47. Sestito, L., To. K., Dixon, J. B., and Thomas, S. N., "Nano Talk: Nanoparticles for lymphatic-targeted nitric oxide delivery", Lymphatic Forum 2019, Austin, TX, May 30 – June 1, 2019.

48. Nepiyushchikh, Z., Lobov, G. I., Dixon, J. B., and Zawieja, D. C., "Nano Talk: Role of calcineurin/NFAT inhibitors on contractility of collecting lymphatic vessels", Lymphatic Forum 2019, Austin, TX, May 30 – June 1, 2019.

49. Dixon, J. B., "Acquired lymphatic pump failure and therapeutic restoration in a mouse model of lymphedema", 9th International Lymphoedema Framework Conference, Chicago, IL, June 13-15, 2019.

50. Razavi, M. S., Leonard-Duke, J., Hardie, R., Dixon, J. B., and Gleason, R. L., "Axial stretch modulates lymphatic contractility: an experimental-computational approach in a novel rat tail model", 2019 Summer Biomechanics, Bioengineering, and Biotransport Conference, Seven Springs, PA, June 25-28, 2019.

51. Mukherjee, A. and Dixon, J. B., "Entrainment of in vivo lymphatic contractility to imposed oscillatory pressure", BMES 2019 Annual Meeting, 2019. Philadelphia, PA, October 16-19, 2019.

52. Wolf, K. T., Dixon, J. B., and Alexeev, A., Modeling filarial worm migration in lymphatic system", American Physical Society 72nd Annual Meeting of the Division of Fluid Dynamics, Seattle, WA, November 23-26, 2019.

53. Wolf, K. T., Dixon, J. B., and Alexeev A., "Modeling fluid flow in a lymphatic vessel", 9th International Bio-Fluid Mechanics and Vascular Mechano-Biology Symposium, Tucson, AZ, February 13 – 16, 2020.

54. Cribb, M., Suarez A., and Dixon, J. B., "Leukotriene B4 inhibits lymphatic drainage during lymphedema progression, leading to reduced leukocyte proliferation in draining lymph nodes", BMES 2020 Annual Meeting, 2020, Virtual, October 14 – 17, 2020.

55. Kaiser, J., Bernard, F., Pucha, K., Raval, S., Fulton, T., Anderson, S., Dixon, B., and Willett, N., "Mild exercise alleviates post-traumatic osteoarthritis in part by expediting lymphatic joint clearance", ORS Annual Meeting, Virtual, February 13 – 16, 2021.

56. Cribb, M., Sestito, L., Thomas, S., Rockson, S., Nicolls, M., and Dixon, J. B., "The kinetics of lymphatic dysfunction and leukocyte expansion in the draining lymph node during LTB4 antagonism in a mouse model of lymphedema", Lymphatic Forum, May 31 – June 5, 2021.

57. Mukherjee, A., Nepiyushchikh, Z., and Dixon J. B., "Lymphatic mechanosensitivity to intermittent pneumatic compression is altered by a unilateral collecting lymphatic injury", Lymphatic Forum, May 31 – June 5, 2021.

58. Michalaki E., Pulliam A., LaPlaca M.C., J. Dixon B. "Investigation of glymph to lymph drainage in a TBI rat model". 39th Annual Symposium National Neurotrauma Society; Atlanta, GA, USA, Jun 26-29, 2022.

59. Sedaghati, F., Dixon, J. B., and Gleason, R., "A 1d model characterizing the role of spatiotemporal contraction distribution on lymph transport", 9th World Congress of Biomechanics, Taipei, Taiwan, July 10-14, 2022.

60. Gonzalez-Vargas, Y., Hiehle, G., Spangle, J. M., Hong, A., Hawkins, C. M., and Dixon, J. B., "Bioengineered 3D in vitro Strategies to Investigate Phenotypic and Genotypic Differences in Lymphatic Malformation Sprouting", 2022 Southeast Biomaterials Day, Atlanta, GA, September 16, 2022.

61. Nepiyushchikh, Z. V., Chin, R., Mavris, S., Jang, Y. C., and Dixon, J. B., "Impact of Lymphatic Injury on Contractility and Mitochondrial Bioenergetics of Lymphatic Vessels", International Vascular Biology Meeting, Oakland, CA October 13-17, 2022.

32. Gonzalez-Vargas, Y., Hiehle, G., Spangle, J. M., Hong, A., Hawkins, C. M., and Dixon, J. B., "Bioengineered 3D in Vitro Platform Promotes Lymphatic Network Sprouting from a Primary Cell-Based Spheroid Model of the Collecting Vessel and Lymphatic Malformations", Lymphatic Gordon Research Symposium, Barga, Italy, October 29 – October 30, 2022.

33. A Poorghani, A Alexeev, B Dixon, Z Nepiyushchikh. "Effect of contraction wave shape in the secondary lymphatic vessel on pumping performance." American

Physical Society Division of Fluid Dynamics Meeting, Indianapolis, November 22, 2022.

34. Ryu, Y. J., Mavris, S., Nepiyushchikh, Z., Gleason, R. L., and Dixon, J. B., "Dynamic response characterization of sheep lymphatic pumping during growth and remodeling", Summer Biomechanics, Bioengineering, and Biotransport Conference, Vail, CO, June 5-8, 2023.

35. Mavris, S., Nepiyushchikh, Z., Dixon, J. B., and Gleason, R. L., "Mechanical characterization of sheep lymphatic growth and remodeling", Summer Biomechanics, Bioengineering, and Biotransport Conference, Vail, CO, June 5-8, 2023.

36. Sedaghati, F., Dixon, J. B., and Gleason, R. L., "A 1D Model Characterizing the Role of Spatiotemporal Contraction Distributions on Lymph Transport", Summer Biomechanics, Bioengineering, & Biotransport Conference, Vail, Colorado, June 5-8, 2023.

37. Gonzalez-Vargas, Y., Hiehle, G., Spangle, J. M., Hong, A., Hawkins, C. M., and Dixon, J. B., "Reverse engineered lymphatic malformation organoids from patient-derived tissue explants highlights heterogeneity of lymphatic disease and response to treatment", Cellular and Tissue Engineering Symposium, Atlanta, GA, June 8, 2023.

38. Michalaki, E., Pulliam, A., Dixon, J. B., and LaPlaca, M. C., "Investigation of glymph to lymph drainage in a rat model of mild traumatic brain injury", Lymphatic Forum, Banff, Canada, June 13-17, 2023.

39. Ryu, Y., Mavris, S., Nepiyushchikh, Z., Gleason, R., Dixon, J.B. , "Time-dependent Mechanisms of Lymphatic Growth and Remodeling for Alleviating Flow Obstruction in Response to Injury: Insights from a Large Animal Model of Vessel Ligation", Lymphatic Forum, Banff, Canada, June 13-17, 2023

40. A Poorghani, A Alexeev, M Brandenbourger, B Dixon. "Pumping in Lymphatic Vessels with Standing and Traveling Waves." American Physical Society Division of Fluid Dynamics Meeting, Washington D. C., November 19, 2023.

D3. Conference Poster Presentations

1. Dixon, J. B., Coté, G. L., Gashev, A. A., Greiner, S. T., Moore, J. E., and Zawieja, D. C., "Measurement of flow in contracting mesenteric microlymphatic vessels in situ", XXXV International congress of physiological sciences, Abstract #4735, San Diego, CA: March 31-April 5, 2005.

2. Dixon, J. B., Coté, G. L., Gashev A. A., Greiner, S. T., Zawieja, D. C., and Moore, J. E., "Estimation of wall shear stress in contracting microlymphatic vessels", USNCB Symposium on Frontiers in Biomechanics, Vail, CO: June 20-21, 2005.

3. Dixon, J. B., Gashev, A., Greiner, S., Zawieja, D., Moore, J., and Cote, J., "Image correlation method for measuring flow in contracting mesenteric microlymphatics", BMES Conference, Baltimore, MD: Sept 28 – Oct 1, 2005.

4. Dixon J.B. and Swartz M.A., “Novel in vitro and in vivo models for studying the role of lymphatics in lipid transport and metabolism”, Gordon Conference on Cellular and Molecular Biology of Lipids, Waterville Valley, NH: July 22-27, 2007.

5. Dixon, J. B. and Swartz, M.A., “The role of lymphatics in lipid trafficking: novel in vitro and in vivo models”, BMES Conference, Los Angeles, CA: Sept 26-29, 2007.

6. Dixon, J. B., Raghunathan, S., and Swartz, M. A., “"Engineering the intestinal microenvironment for optimizing nanoparticle drug delivery”, CHUV Conference on Regenerative Medicine, Lausanne, Switzerland, Jan 17, 2008.

7. Dixon, J. B., Raghunathan S., and Swartz M. A., “Exploring the active regulation of lipid transport by lymphatics with a novel in vitro model”, Gordon Research Conference on Molecular Mechanisms in Lymphatic Function and Disease, Ventura, California, March 2-7, 2008.

8. Miteva, D., Dixon, J. B., Rutkowski, J., Kilarski, W., Shields, J., and Swartz, M. A., “Transmural flow modulates cell and fluid transport functions of lymphatic endothelium: An early indicator of injury and inflammation?”, Joint Meeting 2009 of the Society for Microcirculation and Vascular Biology and the Swiss Society for Microcirculation, Bern, Switzerland, October 8-10, 2009.

9. Raghunathan S., Dixon, J. B., and Swartz, M.A., An in vitro model of the intestinal lymphatics for transport studies of lipid and drug carriers”, Joint Meeting 2009 of the Society for Microcirculation and Vascular Biology and the Swiss Society for Microcirculation, Bern, Switzerland, October 8-10, 2009.

10. Faulkner, M. F. and Dixon, J. B., “Quantifying the functional transport of lipoproteins by lymphatic endothelial cells”, Keystone Conference: Obesity, Keystone, CO, January 12-17, 2011.*

11. Faulkner, M. F. and Dixon, J. B., “Engineered model of the intestine suggests active transport of lipid by lymphatics”, ASME Summer Bioengineering Conference, Farmington, PA, June 22-25, 2011.*

12. Kornuta, J., A., Nipper, M. E., Korneva, A., and Dixon, J. B., “An in vitro model to quantify the effects of fluid shear stress on lymphatic pump function”, ASME Summer Bioengineering Conference, Farmington, PA, June 22-25, 2011.*

13. Dixon, J. B., Kassis, T., and Weiler, M., “Imaging platforms for evaluating lymphatic pump function in vivo”, Gordon Research Conference on Molecular Mechanisms in Lymphatic Function and Disease, Ventura, California, March 4-9, 2012.*

14. Akin, R., Weiler, M., Dixon, J. B., "Non-Invasive quantification of lymphatic vessel pumping pressure in a rat tail", BMES Conference, Atlanta, GA, October 24-27, 2012.*

15. Reed, A. L., Rowson, S. A., and Dixon, J. B., "ATP-dependent transport plays a pivotal role in movement of lipid across the lymphatic endothelium", BMES Conference, Atlanta, GA, October 24-27, 2012.*

16. Kornuta, J. A., Salazar, E., Danielak, Z., and Dixon, J. B., "Low-cost microcontroller platform for real-time control of an isolated lymphatic vessel perfusion device," BMES Conference, Atlanta, GA, October 24-27, 2012.*

17. Weiler, M. and Dixon, J. B., "Advances in near-infrared lymphatic imaging and long-term effects of indocyanine green (ICG)", BMES Conference, Atlanta, GA, October 24-27, 2012.*

18. Skelton, H. M., Kassis, T., and Dixon, J. B., "Automated multi-dimensional microscopy for biomedical imaging", BMES Conference, Atlanta, GA, October 24-27, 2012.*

19. Rowson, S. A., Reed, A. L., and Dixon, J. B., "Relative importance of active transport in transcellular and paracellular lymphatic lipid transport", BMES Conference, Atlanta, GA, October 24-27, 2012.*

20. Nelson, T. S., and Dixon, J. B., "Effects of nitric oxide and lymphangion chain length on lymphatic pumping pressure in vivo" 7th World Congress of Biomechanics, Boston, MA, July 6-11, 2014.*

21. Caulk, A. W., Dixon, J. B. and Gleason, R. L., "Incorporation of Stress Analysis into a Model of Lymph Transport Through a Single Lymphangion" 7th World Congress of Biomechanics, Boston, MA, July 6-11, 2014.*

22. Hooks, J., Caulk, A.W., Chakraborty, S., Muthuchamy, M., Gleason, R. L., and Dixon, J. B, "The effects of substrate stiffness of lymphatic muscle cell phenotype *in vitro*" North American Vascular Biology, Monterey, CA, October 19-23, 2014

23. Spencer, T. S., Moorhead, A., and Dixon, J. B., "Filariasis millifluidic platform for minimizing blood volume during mosquito feeding", BMES Conference, San Antonio, TX, October 22-25, 2014.*

24. Atalis, A., Leleux, J., Kassis, T., Dixon, J. B., and Roy, K., "Tracking dendritic cell activation and migration through lymphatics using microfluidics based 'vaccination-on-a-chip'", BMES Conference, Tampa Bay, FL, October 7-10, 2015.

25. Ross, M., Nelson, T. S., and Dixon, J. B., "Optimization and characterization of IRPEG for use in NIR imaging of the lymphatic system", BMES Conference, Tampa Bay, FL, October 7-10, 2015.

26. Hooks, J., Nelson, T., Nepiyushchikh, Z., Nguyen, H., and Dixon, J. B., "Characterization of lymphatic muscle cell mechanosensitivity in a large animal lymphedema model", Gordon Research Conference on Lymphatics, Ventura, CA, March 20-25, 2016.

27. Nepiyushchikh, Z., Hooks, J., Nelson, T., Mukherjee, A., Walsh M., and Dixon, J. B., "Mechanosensitivity of isolated collecting lymphatic vessels from different

animal species and human", Gordon Research Conference on Lymphatics, Ventura, CA, March 20-25, 2016.

28. Nelson, T., Nepiyushchikh, Z., Hooks, J., Peroni, J., and Dixon, J. B., "The effects of lymphatic injury on lymphatic pump function in sheep", Gordon Research Conference on Lymphatics, Ventura, CA, March 20-25, 2016.

29. Srinivasan, S., Su, M., Head, P. S., Ravishankar, S., Vannberg, F., and Dixon, J. B., "Lymphatic transport of exosomes as a rapid route of information dissemination to the lymph node", Gordon Research Conference on Lymphatics, Ventura, CA, March 20-25, 2016.

30. Bernard, F. C., Doan, T. N., Dixon, J. B., and Willett, N. J., "Using near infrared tracers to assess lymphatic clearance in rat knees", National Institute of Biomedical Imaging and Bioengineering Training Grantees Meeting, Bethesda, MD, July 11-12, 2016.

31. Mukherjee, A., Hooks, J., Nepiyushchikh, Z., Dixon J. B. "Analysis of Mechanical Contractility of Lymphatic Vessels Under Varying Flow Conditions", BMES Annual Meeting, Minneapolis, MN, October 5-8, 2016.

32. Bernard, F. C., Doan, T. N., Dixon, J. B., and Willett, N. J., "Using Near-Infrared Imaging to Assess Knee Clearance in Rats", Fifth Annual Symposium on Regenerative Rehabilitation, Atlanta, GA, Oct 14-16, 2016.

33. Bernard, F. C., Doan, T. N., Dixon, J. B., and Willett, N. J., "Using Near-Infrared Imaging to Assess Knee Clearance in Rats", Southeast Biomaterials Day, Atlanta, Georgia, Oct 14, 2016.

34. Cribb, M., Nelson, T., S., and Dixon, J. B., "Optimization and Repeatability of Lymphatic Pumping Pressure Measurement in Mice Tail Model", 19th International Vascular Biology Meeting, Boston, MA, October 30 – November 3, 2016.

35. Nepiyushchikh, Z., Nelson, T. S., Hooks, J., Razavi, M., Peroni, J., Dixon, J. B., "Post-Effect of Surgical Intervention on Isolated Sheep Popliteal Lymphatic Vessels Contractility", 19th International Vascular Biology Meeting, Boston, MA, October 30 – November 3, 2016.

36. Hooks, J., Cruz R., Garcia, A., Dixon, J.B., "Response of Lymphatic Collecting Vessels to PEG Hydrogels with Tunable Properties", BMES Cellular and Molecular Bioengineering Conference, Hapuna Beach Resort, Hawaii, January 23-28, 2017.

37. Cribb, M. T., Tian, A., Nicolls, M., Rockson, S., Dixon, J. B., "Effect of bestatin on lymphatic system function in single vessel ligation lymphedema model in mice", NAVBO Lymphatic Forum, Chicago, IL, June 8 – 10, 2017.

38. Nepiyushchikh, Z., Mukherjee, A., Razavi, M. S., and Dixon, J. B., "Role of reactive oxygen species in regulation of contractility of isolated lymphatic vessels", Vascular Biology 2017, Monterey, CA, October 15-19, 2017.

39. Nelson, T. S., Nepiyushchikh, Z., and Dixon, J. B., "Obesity impacts lymphatic function in lymphedema through a loss in pumping pressure", Vascular Biology 2017, Monterey, CA, October 15-19, 2017.

40. Atalis, A., Pradhan, P., Dixon, J. B., and Roy, K., "Modulating 3D dentritic cell migration toward lymphatic chemokines using multiple vaccine adjuvants on polymeric microcarriers", Lymphatics Gordon Conference, Barga, Italy, March 11-16, 2018.

41. Cribb, M., Nelson, T., Weiler, M. J., and Dixon, J. B., "Swelling correlates with lymphatic dysfunction in a comparison of heterogeneous populations of mice and surgical severity using a single vessel ligation model", Lymphatics Gordon Conference, Barga, Italy, March 11-16, 2018.

42. Hooks, J., Cruz-Acuña, R., Nepiyushchikh, Z., Garcia, A., and Dixon, J. B., "Characterization and implementation of a novel synthetic hydrogel for lymphatic regeneration", Lymphatics Gordon Conference, Barga, Italy, March 11-16, 2018.

43. Mukherjee, A., Hooks, J., Dixon, J. B., "Mechanosensitivity of lymphangions determine their synchronization to oscillatory flow", Lymphatics Gordon Conference, Barga, Italy, March 11-16, 2018.

44. Hooks, J. T., Cruz-Acuña, R., Garcia, A., and Dixon, J. B., "Tunable synthetic PEG hydrogels for supporting lymphangion sprouting lymphangiogenesis", Society for Biomaterials Annual Meeting, Atlanta, GA, April 11- April 14, 2018.

45. Nepiyushchikh, Z., Mukherjee, A., Razavi, M., and Dixon, J. B., "Imbalance in reactive oxygen and nitrogen species lead to impaired contractility and remodeling of collecting lymphatic vessels", Lymphatics Gordon Conference, Barga, Italy, March 11-16, 2018.

46. To. K., Nelson, T., Chen, H., and Dixon, J. B., "Epsin 1 and 2, regulators of VEGFR3 recycling, play a role in lymphatic function", Lymphatics Gordon Conference, Barga, Italy, March 11-16, 2018.

47. Dixon, J. B., Lu, I., Frank, N., and Weiler, M. J., "Utilization of NIR depth sensors for quantification of volume in various lymphedema pathologies", First International Podoconiosis Conference, Addis Ababa, Ethiopia, September 23, 2018.

48. Nepiyushchih, Z., Mukherjee, A., Razavi, M., and Dixon, J. B., "Imbalance in reactive oxygen and nitrogen species lead to impaired contractility and remodeling of collecting lymphatic vessels", BMES Annual Meeting, Atlanta, GA, October 17-20, 2018.

49. Lee, Y., Wen, A., Rahman, H. N. A., Wu, H., Dong, Z., Song, K., Zhang, K., Cribb, M. T., Dixon, J. B., Srinivasan, S., Bielenberg, D., and Chen, H., "Enhanced lymphangiogenesis and lymphatic function protects diet-induced obesity and insulin resistance", Experimental Biology 2019, Orlando, FL, April 6-9, 2019.

50. Bernard, F., Doan, T., Nepiyushchikh, Z., McKinney, J. M., Dixon, J. B., and Willett N., "Ex vivo and in vivo assessment of femoral lymphatic vessel function in rats", Lymphatic Forum 2019, Austin, TX, May 30 – June 1, 2019.

62. Hooks, J. T., Bernard, F., Nepiyushchikh, Z., Garcia A., Hawkins, M., and Dixon, J. B., "Implementing synthetic PEG hydrogels for culture of lymphatic malformations and lymphatic transplatation", Lymphatic Forum 2019, Austin, TX, May 30 – June 1, 2019.

63. Cribb, M., Tian, A., Nicolls, M., Rockson, S., and Dixon, J. B., "Effect of bestatin on lymphatic system function in single vessel ligation lymphedema model in mice", Lymphatic Forum 2019, Austin, TX, May 30 – June 1, 2019.

64. Razavi, M., Leonard-Duke, J., Hardia, R., Dixon, J. B., and Gleason, R., "A combined experimental-computational approach to quantify the role of biaxial loading on the contractile function or rat tail lymphatic vessels, BMES 2019 Annual Meeting, Philadelphia, PA, October 16-19, 2019.

65. Suarez, A., Cribb, M. T., Dixon, J. B., "Recruitment of immune cells during lymphedema progression", BMES 2019 Annual Meeting, Philadelphia, PA, October 16-19, 2019.

66. Nepiyushchikh, Z. V., Dixon, J., B., Zawieja, D. C., and Lobov, G I., "Role of calcineurin/NFAT inhibition on contractility of the lymph node capsule", NAVBO Vascular Biology 2019, Monterey, CA, October 27-31, 2019.

67. Cribb, M., Suarez, A., and Dixon, J. B., "Investigating lymph-node resident immune cell response to interstitial drainage during lymphedema progression", NAVBO Vascular Biology 2019, Monterey, CA, October 27-31, 2019.

68. Kaiser, J., Bernard, F. C., Raval, S., Dixon, J., B., and Willett, N. J., "Mild exercise expedites restoration of synovial fluid homeostasis through increased lymphatic clearance", 2020 ORS Annual Meeting, Phoenix, AZ, February 8-11, 2020.

69. Doan, T. N., Bernard, F. C., Shaver, J. C., McKinney, J., Dixon, J. B., and Willett, N. J., "In vivo clearance of hyaluronan from the rat knee", 2020 ORS Annual Meeting, Phoenix, AZ, February 8-11, 2020.

70. Bernard, F. C., Kaiser J. M., Doan, T. N., Nepiyushchikh, Z., Raval, S. K., McKinney J., M., Dixon, J. B., and Willett, N. J., "Integrated bioengineering techniques investigating the relationships between lymphatic function and osteoarthritis progression", 2020 Military Health System Research Symposium HSRS, July 2020.

71. Kaiser, J., Raval, S., Bernard, F., MCKinney, J., Pucha, K., Sok, D., Dixon, B., Willet N., "Exercise may mediate post-traumatic osteoarthritis through restoration of joint homeostasis", American Society of Biomechanics, Virtual Meeting, August 4-7, 2020.

72. Paljug, E., Yigeremu, M., Teklu, S., Tolentino, l., Weiler, M., Frank, N., Dixon, J. B., and Gleason, R., "Precision of 3D image anthropometry for evaluating risk of

cephalopelvic disproportion in Ethiopia", BMES 2020 Annual Meeting, 2020, Virtual, October 14 – 17, 2020.

73. Jaidev Sharma, Mahir Mohiuddin, Rachel Chin**,** Gennady I. Lobov, Young C. Jang J., Brandon Dixon, David. C. Zawieja, Zhanna V. Nepiyushchikh, "Effect of Rapamycin on Contractility of Lymphatic Vessel and Energy Metabolism of Lymphatic Muscle Cells", Experimental Biology, April 27-30, 2021.

74. Michalaki E., Nepiyushchikh, Z., Bernard, F.C., Rudd, J.M., Mukherjee, A., McKinney, J.M., Doan, T.N., Willett N.J., and J. Dixon, B. "Effect of human synovial fluid from osteoarthritis patients and healthy individuals on lymphatic contractility", Lymphatic Forum 2021, May 31 - June 5, 2021.

75. Zhanna V. Nepiyushchikh, Rachel Chin**,** Jaidev Sharma, Mahir Mohiuddin, Gennady I. Lobov, David. C. Zawieja, Young C. Jang, J. Brandon Dixon., "Effect of Immunosuppressants-FKBP interaction on Mitochondrial Function and Energy Metabolism of Lymphatic Muscle and Endothelial Cells", Lymphatic Forum 2021, May 31 - June 5, 2021.

76. Gonzalez-Vargas, Y., Nepiyushchikh, Z., Dixon, J.B., "Bioengineered 3D in vitro platform for lymphatic network sprouting", Lymphatic Forum 2021, May 31 - June 5, 2021.

77. Gonzalez-Vargas, Y., Nepiyushchikh, Z., Dixon, J.B., "Bioengineered 3D in vitro platform for lymphatic network sprouting", Biomedical Engineering Society (BMES) Annual Conference 2021, Orlando, FL, October 6 – 9, 2021.

78. Michalaki, E., Chin, R., Jeong, K., and Dixon, J. B., "Screening lipid nanoparticle libraries *in vivo* for lymphatic-targeted gene therapy", 2022 Southeast Biomaterials Day, September 16, 2022, Atlanta, GA.

79. Rodriquez, E., Gonzalez-Vargas, Y., Michalaki, E., and Dixon, J. B,. "Testing lipid nanoparticles for targeted delivery to lymphatic endothelial cells in vitro, Biomedical Engineering Society (BMES) Annual Conference, San Antonio, TX, October 12-15, 2022.

80. Gonzalez-Vargas, Y., Hiehle, G., Spangle, J. M., Hong, A., Hawkins, C. M., and Dixon, J. B., "Bioengineered 3D *in vitro* strategies to investigate phenotypic and genotypic differences in lymphatic malformation sprouting", International Vascular Biology Meeting, October 13-17, 2022, Oakland, CA.

81. Michalaki, E., Chin, R., Jeong, K., Schrader Echeverri E., Paunovska K., Dahlman J.E., Santangelo P.J., and Dixon, J. B., "Engineering approaches for enhancing VEGFC therapies in lymphedema", Lymphatic Gordon Conference, October 30 – November 4, 2022, Barga, Italy.

82. Gonzalez-Vargas, Y., Hiehle, G., Spangle, J. M., Hong, A., Hawkins, C. M., and Dixon, J. B., "Bioengineered 3D in vitro platform promotes lymphatic network sprouting from a primary cell-based spheroid model of the collecting vessel and lymphatic malformations", Lymphatic Gordon Conference, October 30 – November 4, 2022, Barga, Italy.

83. Gonzalez-Vargas, Y., Hiehle, G., Spangle, J. M., Hong, A., Hawkins, C. M., and Dixon, J. B., "Reverse engineered lymphatic malformation organoids from patient-derived tissue explants highlights heterogeneity of lymphatic disease and response to treatment", Southeast Regional Clinical & Translational Science Conference, Pine Mountain, GA, March 1 – March 3, 2023.

84. Gonzalez-Vargas, Y., Hiehle, G., Spangle, J. M., Hong, A., Hawkins, C. M., and Dixon, J. B., "Reverse engineered lymphatic malformation organoids from patient-derived tissue explants highlights heterogeneity of lymphatic disease and response to treatment", Lymphatic Forum, Banff, Canada, June 13 – June 17, 2023.

85. Mavris S, Chin R., Jang Y. C., Gleason RL, Dixon, J. B., and Nepiyushchikh ZV. Inflammation-driven oxidative stress affects contractility and mitochondrial bioenergetics of collecting lymphatic vessels. The Lymphatic Forum, Banff, Canada, June 13-17, 2023.

D4. Departmental Seminars

1. Department of Cellular Biology, University of Georgia, Dixon, J. B., "Engineering tools for studying the interplay between mechanics and biology in lymphatic lipid transport", Athens, GA, September 7, 2010.*

2. Division of Cardiology, Department of Medicine, Emory University, Dixon, J. B., "Engineering tools for studying the interplay between mechanics and biology in lymphatic lipid transport", Atlanta, GA, November 1, 2010.*

3. Institute for Bioengineering and Bioscience, Georgia Institute of Technology, Breakfast Club Seminar Series, Dixon, J. B., "Exploring Lymphatic Function: An Engineered Toolbox to Shed Light on Nature's Invisible Vessels", Atlanta, GA, January 8, 2013.*

4. Department of Biomedical Engineering, Texas A&M University, Dixon, J. B., "Exploring Lymphatic Function: An Engineered Toolbox to Shed Light on Nature's Invisible Vessels", College Station, TX, January 14, 2013.*

5. Department of Medical Physiology, Texas A&M Health Science Center, Dixon, J. B., "Exploring Lymphatic Function: An Engineered Toolbox to Shed Light on Nature's Invisible Vessels", Temple, TX, January 16, 2013.*

6. Institute of Bioengineering, Ecole Polytechnique Federale de Lausanne, Dixon, J. B., "Exploring lymphatic function: an engineered toolbox to shed light on nature's invisible vessels", Lausanne, Switzerland, March 17, 2014.*

7. Cardiovascular Biology Research Program, Oklahoma Medical Research Foundation. Dixon J. B., "Elucidating factors regulating lymphatic function across multiple length scales", Oklahoma City, OK, August 7, 2014.*

8. Department of Molecular Medicine, College of Veterinary Medicine, Cornell University. Dixon J. B., “Elucidating factors regulating lymphatic function across multiple length scales”, Ithaca, NY, September 22, 2014.

9. School of Biology, Georgia Institute of Technology, Dixon, J. B., “Integrating imaging and biomechanics for exploring lymphatic function”, Atlanta, GA, September 3, 2015.

10. Vascular Biology Program, Boston Children’s Hospital, Dixon, J. B., “Synergy between computational modeling and in vivo imaging reveals insight into mechanisms of pump failure in lymphatic disease”, November 4, 2016.

11. Department of Infectious Disease, University of Georgia College of Veterinary Medicine, Dixon, J. B., “Engineered tools for studying lymphatic microenvironments in vitro and in vivo: Implications for infection and immunity”, November 7, 2016.

12. Department of Biomedical Engineering, University of Virginia, Dixon, J. B., “Experimental and computational approaches of growth and remodeling in lymphatic physiology”, February 10, 2017.

13. Department of Bioengineering, Imperial College of London, Dixon, J. B., “Experimental and computational approaches of growth and remodeling in lymphatic physiology”, November 1, 2017.

14. Department of Mechanical and Aerospace Engineering, Notre Dame University, Dixon, J. B., “Growth and remodeling in lymphatics: the forgotten second circulatory system”, October 9, 2018.

15. Department of Mechanical Engineering, University of Colorado Boulder, Dixon J. B., “Growth and remodeling in lymphatics: the forgotten second circulatory system”, July 12, 2019.

16. Department of Biomedical Engineering, Texas A&M University, Annual Research Symposium Keynote Seminar, Dixon, J. B., “Integrating optics, mechanics, and biology through bioengineering to better understand and regenerate lymphatic function”, August 21, 2019.

17. Department of Medical Physiology, Texas A&M Health Science Center, Dixon, J. B., “Mechanosensitivity and mechanically mediated remodeling of lymphatics in health and disease”, August 22, 2019.

18. Stanford Visiting Professorship, Department of Pulmonary, Allergy & Critical Care Medicine, Dixon, J. B., “Growth & Remodeling in Lymphatics: The Neglected Third Circulation”, November 16, 2019.

19. Dixon, J. B., “Utilization of nanomedicine for targeting calcium channels to enhance lymphatic pumping in lymphedema”, Department of Surgery, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung, Taiwan, August 7, 2023.

20. Dixon, J. B., "Utilization of nanomedicine for targeting calcium channels to enhance lymphatic pumping in lymphedema", Department of Surgery, Chang Gung Memorial Hospital, Linkou, Taiwan, August 7, 2023.

21. Dixon, J. B,. "Understanding the structure-function relationships of lymphatics and mechanisms of remodeling in lymphedema", Division of Plastic Reconstructive Microsurgery, Chang Gung Memorial Hospital, Linkou, Taiwan, August 9, 2023.

22. Dixon, J. B., "Utilization of nanomedicine for targeting calcium channels to enhance lymphatic pumping in lymphedema", Department of Bioengineering, University of Maryland, College Park, MD, September 15, 2023.

23. Dixon, J. B., "Utilization of nanomedicine for targeting calcium channels to enhance lymphatic pumping in lymphedema", Cardiovascular Biology Seminar Series, Division of Cardiology, Emory School of Medicine, Atlanta, GA, October 30, 2023.

24. Dixon, J. B., "Leveraging biomaterials to enhance lymphatic formation and function", Department of Biomedical Engineering, UNC/ NC State, Chapel Hill, NC, November 3, 2023.

25. Dixon, J. B., "Understanding the structure-function relationships of lymphatics and mechanisms of maladaptive remodeling in lymphedema", Division of Vascular Surgery, Emory School of Medicine, Atlanta, GA, November 14, 2023.

E. GRANTS AND CONTRACTS

E1. AS PRINCIPAL INVESTIGATOR

1. Title of Project: "Quantification of lipid uptake in mesenteric lymphatics"
Agency/Company: Institute of International Education
Total Dollar Amount: $43,000
Role: Postdoctoral Fellowship
Collaborators: Melody Swartz (mentor)
Period of Contract: 7/1/2006 – 9/30/2007
Candidate's Share: $43,000

2. Title of Project: "K99 - Quantifying the role of lymphatics in lipid metabolism and transport"
Agency/Company: National Institute of Health - NHLBI
Total Dollar Amount: $89,000
Role: Postdoctoral Fellowship
Collaborators: Melody Swartz (mentor)
Period of Contract: 7/1/2008 – 6/30/2009
Candidate's Share: $89,000

3. Title of Project: "R00 - Quantifying the role of lymphatics in lipid metabolism and transport"
Agency/Company: National Institute of Health - NHLBI
Total Dollar Amount: $715,950

Role: PI
Collaborators: None
Period of Contract: 9/1/2009 – 8/31/2012
Candidate's Share: $715,950

4. Title of Project: "Multi-model imaging system for non-invasively assessing disease risk is in an animal model of post-masectomy related lymphedema"
Agency/Company: Emory Molecular and Translational Imaging Research Center Pilot Project Grant
Total Dollar Amount: $12,800
Role: PI
Collaborators: none
Period of Contract: 7/1/2012 – 6/30/2013
Candidate's Share: $12,800

5. Title of Project: "Dermal delivery of endothelin-1 and nitric oxide inhibitors to regenerate lymphatic pumping in a novel lymphedema model"
Agency/Company: Georgia Tech/ Emory Regenerative Engineering and Medicine Center
Total Dollar Amount: $50,000
Role: PI
Collaborators: Mark Prausnitz (GT, ChBE)
Period of Contract: 9/1/2012 – 6/30/2013
Candidate's Share: $44,000

6. Title of Project: "Lymphatic on a chip as a model host for lymphatic filariasis parasites"
Agency/Company: Bill & Melinda Gates Foundation
Total Dollar Amount: $100,000
Role: PI
Collaborators: None
Period of Contract: 5/1/2013 – 10/31/2014
Candidate's Share: $100,000

7. Title of Project: "Quantifying the role of load-induced remodeling in lymphedema progression"
Agency/Company: National Institutes of Health - NHLBI
Total Dollar Amount: $2,243,404
Role: PI
Collaborators: Rudy Gleason (GT, ME), Mari Muthuchamy (Texas A&M Health Science Center, Medical Physiology)
Period of Contract: 8/1/2013 – 5/31/2018
Candidate's Share: $1,899,500

8. Title of Project: "CAREER: Multi-scale approaches to quantify biomechanical control of lymphatic pump function"
Agency/Company: National Science Foundation
Total Dollar Amount: $400,000
Role: PI
Collaborators: None
Period of Contract: 7/1/2014 – 6/30/2019
Candidate's Share: $400,000

9. Title of Project: "LymphaTech: GRA Ventures Phase Ia Proposal"
Agency/Company: Georgia Research Alliance
Total Dollar Amount: $52,197
Role: PI
Collaborators: None
Period of Contract: 6/1/2015 – 12/31/2015
Candidate's Share: $52,197

10. Title of Project: "Low-cost, High-Accuracy Lymphedema Monitoring Device"
Agency/Company: Georgia Research Alliance, Phase 1b
Total Dollar Amount: $30,000
Role: PI
Collaborators: None
Period of Contract: 5/1/2016 – 10/31/2016
Candidate's Share: $30,000

11. Title of Project: "Activating calcium channels to improve lymphatic function in vivo using nanotechnology as a therapeutic for ameliorating local adipose deposition"
Agency/Company: Lipedema Foundation
Total Dollar Amount: $142,780
Role: Investigator, Post-doctoral Mentor (for Kim To)
Collaborators: Kim To (postdoctoral award recipient)
Period of Contract: 12/1/2017 – 11/30/2019
Candidate's Share: $142,780

12. Title of Project: "Tissue Engineered Lymphatic Malformation on a Chip for Screening Therapeutics"
Agency/Company: Orphan Disease Center Grant
Total Dollar Amount: $80,185
Role: PI
Collaborators: Matthew Hawkins, M.D., CHOA
Period of Contract: 1/1/2018 – 08/31/2019
Candidate's Share: $80,185

13. Title of Project: "Low-cost, High-Accuracy Lymphedema Monitoring Device"
Agency/Company: Georgia Research Alliance, Phase 2
Total Dollar Amount: $122,583
Role: PI
Collaborators: None
Period of Contract: 7/1/2018 – 5/31/2020
Candidate's Share: $122,583

14. Title of Project: "Exploring genotype-phenotype correlations in patient-derived lymphatic malformation organoids"
Agency/Company: Pediatric Technology Center Endowment Seed Grant
Total Dollar Amount: $50,000
Role: PI
Collaborators: Matt Hawkins, CHOA; Jenn Spangle, Emory
Period of Contract: 1/1/2022 – 7/1/2024

Candidate's Share: $50,000

E2. AS CO-PRINCIPAL INVESTIGATOR

15. Title of Project: "Non-invasive NIR imaging towards establishing a role for lymphatic trafficking of exosomes in vivo"
Agency/Company: Petit Institute for Bioengineering and Bioscience
Total Dollar Amount: $100,000
Role: co-PI
Collaborators: Fredrick Vannberg (GT, Biology)
Period of Contract: 7/1/2012 – 6/30/2014
Candidate's Share: $50,000

16. Title of Project: "The development of a large animal model and lymphatic muscle cell therapy approach for treating secondary lymphedema"
Agency/Company: Institute for Regenerative Engineering and Medicine
Total Dollar Amount: $140,000
Role: co-PI
Collaborators: John Peroni (Univ of Georgia, Veterinary Medicine)
Period of Contract: 10/1/2014 – 6/30/2016
Candidate's Share: $70,000

17. Title of Project: "Engineered mesenchymal stromal cells for enhancing lymphangiogenesis as a therapeutic for osteoarthritis"
Agency/Company: GT/Emory Center for Immunoengineering
Total Dollar Amount: $50,000
Role: co-PI
Collaborators: Nick Willett (Orthopedics, Emory); Rebecca Levitt (Cardiology, Emory)
Period of Contract: 10/1/2015 – 6/30/2016
Candidate's Share: $25,000

18. Title of Project: "Molecular mechanisms controlling lymphatic vascular function in health and disease"
Agency/Company: National Institutes of Health
Total Dollar Amount: $3,794,049
Role: MPI
Collaborators: Hong Chen (Boston Children's, Harvard) and Sathish Srinivasan (OMRF)
Period of Contract: 7/1/2016 – 5/31/2020
Candidate's Share: $704,326

19. Title of Project: "Probing lymphatic valve biomechanics with computational and experimental approaches"
Agency/Company: National Science Foundation
Total Dollar Amount: $449,999
Role: co-PI
Collaborators: Alex Alexeev (co-PI)
Period of Contract: 9/1/2016 – 8/31/2019
Candidate's Share: $225,000

20. Title of Project: "Engineered biomaterials-based therapies for improved lymphatic function and the resolution of chronic inflammation in post-traumatic osteoarthritis"
Agency/Company: CDMRP
Total Dollar Amount: $2,367,000
Role: co-PI
Collaborators: Nick Willet & Andres Garcia
Period of Contract: 10/1/2018 – 8/14/2022
Candidate's Share: $900,000

21. Title of Project: "R01: Multi-scale modeling of lymphatic vasculature growth and adaptation"
Agency/Company: NIH
Total Dollar Amount: $2,249,172
Role: MPI
Collaborators: Alex Alexeev (MPI) and Rudy Gleason (MPI)
Period of Contract: 3/1/2020 – 2/28/2025
Candidate's Share: $1,080,000

22. Title of Project: "Lymphatic function as a therapeutic target for enhancing the abscopal effect in melanoma"
Agency/Company: GT/Emory Center for Regenerative Engineering and Medicine
Total Dollar Amount: $100,000
Role: co-PI
Collaborators: Zach Buchwald (co-PI)
Period of Contract: 9/1/2021 – 6/30/2021
Candidate's Share: $50,000

23. Title of Project: "Molecular mechanisms controlling lymphatic vascular function in health and disease" (renewal)
Agency/Company: NIH
Total Dollar Amount: $3,540,402
Role: MPI
Collaborators: Hong Chen, Sathish Srinivasan, Da-Zhi Wang (MPI)
Period of Contract: 6/1/2022 – 5/31/2026
Candidate's share: $380,000

24. Title of Project: "Lymphedema therapy via targeted drug delivery"
(NOA pending, 5% priority score)
Agency/Company: NIH
Total Dollar Amount: $2,519,351
Role: MPI
Collaborators: Susan Thomas (MPI)
Period of Contract: 4/1/2024 – 3/31/2029
Candidate's share: $1,250,000

E3. AS SENIOR PERSONNEL OR CONTRIBUTOR

24. Title of Project: "Development and testing of a low-cost, portable technology to assess the risk of obstructive labor in Ethiopia"
Agency/Company: Saving Lives at Birth Initiative

Total Dollar Amount: $298,000
Role: Investigator
Collaborators: Rudy Gleason, PI, (ME, Georgia Tech)
Period of Contract: 1/1/2016 – 12/31/2017
Candidate's Share: $21,000

25. Title of Project: "A critical role for leukotriene B4 in lymphedema"
Agency/Company: NIH
Total Dollar Amount: $2,000,000
Role: co-Investigator
Collaborators: Mark Nichols (PI)
Period of Contract: 4/1/2018 – 3/31/2023
Candidate's Share: $370,000

26. Title of Project: "Molecular mechanisms regulating neuropilin 2 in lymphangiogenesis"
Agency/Company: NIH
Total Dollar Amount: $2,000,000
Role: co-Investigator
Collaborators: Diane Bielenberg (PI)
Period of Contract: 4/1/2018 – 3/31/2023
Candidate's Share: $182,000

27. Title of Project: "A critical role for microvasculature in airway transplantation"
Agency/Company: NIH
Total Dollar Amount: $2,000,000
Role: co-Investigator
Collaborators: Mark Nichols (PI)
Period of Contract: 7/1/2019 – 6/30/2024
Candidate's Share: $124,068

28. Title of Project: "Preventing maternal mortality from obstructed labor"
Agency/Company: NIH
Total Dollar Amount: $3,000,000
Role: co-Investigator
Collaborators: Rudy Gleason (PI)
Period of Contract: 1/1/2021 – 12/31/2025
Candidate's Share: $100,000

29. Title of Project: "Georgia Clinical and Translational Science Alliance"
Agency/Company: NIH
Total Dollar Amount: $60,286,442
Role: Research Education Programs Co-director
Collaborators: Robert Taylor (PI)
Period of Contract: 9/1/2017 – 9/30/2027

E4. PENDING PROPOSALS

F. OTHER SCHOLARLY AND CREATIVE ACCOMPLISHMENTS

1. LymphaTech – start-up company was launched in 2014 out of our work in lymphedema diagnostic technologies. The company has raised over $10M in investment, licensing, and commercialization revenue.

G. SOCIETAL AND POLICY IMPACTS

1. $2 million dollar NIH grant featured in Atlanta Magazine, 9/23/2013
2. Part of a key focus discussion of outside experts at the NIDDK (NIH) on expanding lymphatic research in the digestive track, 11/3-11/4, 2009. Several Funding Opportunity Announcements came out of this effort (PAR-12-2598, -259, -260).
3. Organized and hosted the first ever lymphedema conference at Georgia Tech, which included 50+ patients from the state of Georgia as participants, 10/12/2013.
4. Was the key research speaker at Atlanta's first "Lymphedema Intensive" educational workshop for physicians on lymphedema, over 30 physicians from the Atlanta-area attended this event, 2/27/2014.
5. Was the key research speaker at a "Lymphedema Intensive" educational workshop for physicians on lymphedema, over 40 physicians from the Augusta-area attended this event, 2/25/2016.
6. Was featured in an interview on Atlanta 11's The Biz, to discuss my work in collaboration with the Taskforce for Global Health to support lymphedema evaluation at 7 different clinical sites in 7 different countries. The show aired on 4/14/2019.
7. LymphaTech scanning technology is being used in the LeDoxy and Take-off clinical trails as one of the primary outcome measures to evaluate the efficacy of doxycycline for morbidity management in lymphatic filariasis.
8. I was an invited panel expert for an event put on by the Taskforce for Global Health titled "Mobile to Multiplex: Accelerating Innovation in Global Health Diagnostics" to discuss the leveraging of technology to address global health challenges in resource limited areas.

V. EDUCATION

A. COURSES TAUGHT

Semester, Year	Course Number	Course Title	# of Students
Spring 2023	ME 3340	Fluid Mechanics	40
Fall 2022	BMED/ME 4757	Biofluid Mechanics	3
Spring 2022	ME 3340	Fluid Mechanics	47
Fall 2021	BMED/ME 4757	Biofluid Mechanics	28
Summer 2021	ME 3340	Fluid Mechanics	36
Spring 2021	ME 3340	Fluid Mechanics	45
Fall 2021	BMED/ME/CHBE 4757	Biofluid Mechanics	20
Spring 2020	ME 3340	Fluid Mechanics	30
Spring 2020	BMED/ME 4758	Biosolid Mechanics	13
Fall 2019	BMED/ME/CHBE 4757	Biofluid Mechanics	24
Spring 2019	BMED/ME 4758	Biosolid Mechanics	24
Fall 2018	ME 3340	Fluid Mechanics	48
Spring 2018	ME 3340	Fluid Mechanics	10
Fall 2017	ME 3340	Fluid Mechanics	18
Spring 2017	BMED/ME 4758	Biosolid Mechanics	20

Fall, 2016	ME 3340	Fluid Mechanics	47
Spring, 2016	ME/BMED 6720	Biotransport	18
Spring, 2016	ME 3340	Fluid Mechanics	65
Fall, 2015	ME/BMED 4758/6743	Tissue Mechanics	29
Spring, 2015	ME 8873/ BMED 6720	Biotransport	13
Fall, 2014	ME 3340	Fluid Mechanics	63
Spring, 2014	ME 3340	Fluid Mechanics	46
Spring, 2014	ME 8873/ BMED 6720	Biotransport	17
Fall, 2013	ME 3340	Fluid Mechanics	68
Summer, 2013	ME 3340	Fluid Mechanics	78
Spring, 2013	ME 2016	Computational Tech.	64
Spring, 2013	ME 8873/ BMED 6720	Biotransport	9
Fall, 2012	ME 3340	Fluid Mechanics	89
Spring, 2011	ME 8873/ BMED 8813	Biotransport	15
Fall, 2011	ME 3340	Fluid Mechanics	65
Fall, 2010	ME 3340	Fluid Mechanics	93
Fall, 2009	ME 3340	Fluid Mechanics	96

B. INDIVIDUAL STUDENT GUIDANCE

B1. Ph.D. Students

In Progress

1. Yarelis Gonzalez-Vargas
   Major: Biomedical Engineering
   Semester Advisement Began: Fall 2019
   Current Progress: Passed PhD Proposal, June 2022
   Tentative Thesis Project: "Exploring molecular mechanisms of sprouting lymphangiogenesis with hydrogels"
   NIH Diversity Supplement Trainee
   Expected Graduation: May 2024

2. Young Jae Ryu
   Major: Bioengineering
   Semester Advisement Began: Fall 2020
   Current Progress: Passed Qualifying Exam Winter 2022
   Tentative Thesis Project: "Computational modeling of wall shear stress sensitivity and consequences to lymphatic growth and remodeling"
   NIH F31 Fellowship Recipient
   Expected Graduation: May 2025

3. Nishone Thompson
   Major: Biomedical Engineering (MD/PhD)
   Semester Advisement Began: Fall 2022
   Current Progress: Passed Qualifying Exam Winter 2021
   Tentative Thesis Project: "Organoid models of lymphatic sprouting in health and disease"
   Expected Graduation: May 2025

4. Shao Yun Hsu
   Major: Applied Physiology

Semester Advisement Began: Fall 2022
Current Progress:
Tentative Thesis Project: "Biomaterials for enhancing engraftment in autologous lymph node transplantation"
Expected Graduation: May 2026

Completed

1. Kornuta, Jeff
   Major: Mechanical Engineering
   Advised: 2009-2014
   Graduation Date: August 2014 (defended thesis 4/1/14)
   Thesis title: "Characterization of Lymphatic Pump Function in Response to Mechanical Loading"
   NSF Fellowship Recipient, Spring 2010
   Current Position: Associate, Exponent

2. Caulk, Alex
   Major: Bioengineering
   Co-Advised: 2013 – 2015
   Co-Advisor name: Rudy Gleason, Mechanical Engineering
   Graduation date: August 2015 (defended thesis 4/8/15)
   Thesis title: "Biomechanics and modeling methods for quantifying mechanically-mediated disease progression in neglected populations"
   Current Position: Senior Biomedical Engineer, Medtronic

3. Weiler, Mike
   Major: Bioengineering
   Advised: 2010-2015
   Graduation Date: August 2015 (defended thesis 4/23/15)
   Thesis title: "Design and Optimization of Near-Infrared Functional Lymphatic Imaging in Health and Lymphedema"
   CD4 GANN Fellowship Recipient, 2011-2012
   NSF Fellowship Recipient, Spring 2012
   TI:GER PhD Fellow, Sept 2012 – Aug 2014
   Current Position: LymphaTech, CEO & President

4. Kassis, Timothy
   Major: Bioengineering
   Advised: 2009-2015
   Graduation Date: August 2015 (defended thesis 5/26/2015)
   Thesis title: "Quantifying the Role of Lymphatics in Lipid Transport and Lymphatic Filariasis using Novel Engineering Approaches"
   STEP Teaching Fellow, Sept 2010 – Aug 2011
   NIH CTEng Trainee, Jan 2011 – Dec 2012
   American Heart Association Predoctoral Fellowship, Jan 2013 – Dec 2014
   Current Position: Lead Machine Learning Engineer, Matterworks Inc

5. Srinivasan, Swetha
   Major: Biology
   Advised: 2012 - 2016

Co-Advisor Name: Fredrik Vannberg, Biology
Graduation Date: August 2016 (defended thesis 6/20/2016)
Thesis Title: "Understanding immune effector functions of exosome pre and post exposure to bacterial and viral ligands"
TI:GER PhD Fellow, Sept 2013 – Aug 2015
Current Position: Senior Scientist, Abbvie

6. Nelson, Tyler
Major: Bioengineering
Advised: 2012 - 2017
Graduation Date: May 2018 (defended thesis 11/27/2017)
Thesis Title: "The effects of inflammation on lymphatic function during secondary lymphedema"
TI:GER PhD Fellow, Sept 2014 – Aug 2016
AHA Fellowship Recipient, Jan 2016
Current Position: Clinical Education Specialist - MitraClip, Abbott

7. Hooks, Joshua
Major: Bioengineering
Advised: 2013-2019
Graduation date: August 2019 (defended thesis 4/19/19)
Thesis Title: "Role of mechanical microenvironment on the regulation of lymphatic function and health"
NIH Diversity Supplement Trainee
Current Position: Postdoctoral Fellow, Johns Hopkins

8. Lu, Iris
Major: Bioinformatics
Advised: 2013 - 2019
Graduation Date: August 2019 (defended thesis 4/9/19)
Thesis Title: "Assessment of 3D imaging tool for tracking limb volume and improving patient outcomes breast cancer related lymphedema"
NSF Fellowship Recipient, Spring 2015
Current Position: Consultant, Boston Consulting Group

9. Mohammad Razavi
Major: Bioengineering
Advised: 2015 - 2019
Co-Advisor Name: Rudy Gleason, Mechanical Engineering
Graduation Date: December 2019 (defended thesis 10/3/19)
Thesis Title: "Computational models of growth and remodeling of lymphatics in lymphedema"
AHA Predoctoral Fellowship Recipient
Current Position: Postdoctoral Fellow, Mass General Hospital, Harvard

10. Anish Mukherjee
Major: Bioengineering
Advised: 2014 - 2020
Graduation Date: December 2020 (defended thesis 10/23/20)

Thesis Title: "Mechanomodulation of lymphatic vessel contractility using oscillatory pressure waveforms"
AHA Predoctoral Fellowship Recipient, 2018
Current Position: Postdoctoral Fellow, University of Chicago

11. Alexandra Atalis
Major: Biomedical Engineering
Semester Co-Advisement Began: Fall 2014
Co-Advisor Name: Krish Roy, Biomedical Engineering
Graduation Date: May 2021 (defended thesis 2/12/2021)
Thesis Title: "Evaluating the Effects of Particle-Delivered Combination Adjuvants on Antigen Presenting Cells"
NIH CTEng Trainee
NSF Fellowship Recipient
Current Position: Scientist I, Bluebird Bio

12. Fabrice Bernard
Major: Biomedical Engineering
Semester Co-Advisement Began: Fall 2015
Co-Advisor Name: Nick Willett, Orthopedics, Emory
Graduation Date: August 2021 (defended thesis 4/26/2021)
Thesis Title: "Role of microvascular clearance in the progression of osteoarthritis"
NIH Biomaterials Training Grant Trainee, 2015
NIH Diversity Supplement Trainee
Current Position: Consultant, Clearview Healthcare Partners

13. Matthew Cribb
Major: Bioengineering
Semester Advisement Began: Spring 2016
Graduation Date: May 2022 (defended thesis 12/1/2021)
Thesis Title: "Investigation of functional lymphatic changes and the immune response during lymphedema development"
NIH F31 Fellowship Recipient
Current Position: Post-doc, MD Anderson Cancer Center

14. Lauren Liebman
Major: Biomedical Engineering
Semester Advisement Began: Fall 2018
Graduation Date: May 2024 (defended thesis 11/30/2023)
Thesis Title: "Targeting the draining lymphatic network as a regulator of melanoma growth"
CTeng Training Grant Trainee, 2019
Current Position: pending

B2. M.S. Students

<u>Completed</u>

1. Huffman, Jamie
Advised: Summer 2010 – Fall 2011
Thesis title: "Design of a microfluidic device for lymphatic biology"

Graduation Date: December 2011 (thesis option)
Current position: Sr. Manager, Vehicle Operations and Software Automation, SpaceX

2. Akin, Ryan
Advised: Spring 2012 – Spring 2013
Thesis title: "Minimally invasive assessment of lymphatic pumping pressure using functional near infrared imaging"
Graduation Date: May 2013 (thesis option)
Current position: Development Manager, Columbia Ventures

3. Yanina Kuzminich
Major: Bioengineering
Advised: 2018 – 2020
Thesis Title: "Non-invasive imaging of lymphatic remodeling in response to injury through photodynamic therapy"
Graduation Date: December 2020 (thesis option)
Current position: PhD student, Georgia Tech

B3. Undergraduate Students

In Progress

1. Greta Hiehle
Major: Biomedical Engineering, Georgia Tech
Semester Advisement Began: Spring 2021
Project Title: Lymphatic organoids for tissue engineering

2. Kiyoung Jeong
Major: Biomedical Engineering, Georgia Tech
Semester Advisement Began: June 2022
Project Title: Engineering lymphatic lipid nanoparticles

3. Zhiming (Joshua) Qi
Major: Biomedical Engineering, Georgia Tech
Semester Advisement Began: May 2022
Project Title: Collecting cell IHC to assess LNP targeting

4. Mitchell Rice
Major: Mechanical Engineering, Georgia Tech
Semester Advisement Began: Fall 2023
Project Title: Fabrication of automated methods to assess lymphatic function

5. Sophia Schumaecker
Major: Biomedical Engineering, Georgia Tech
Semester Advisement Began: Fall 2023
Project Title: Lymphatic endothelial cell spheroid engineering

Completed

1. Tzin, Henry

Major: Biomedical Engineering
Advised: Summer 2010, Georgia Tech
Project title: "Characterizing flow through a microfluidic model of the intestinal lacteal using Comsol"

2. Daugherty, Taylor
Major: Biomedical Engineering, Georgia Tech
Advised: Spring 2011
Project title: "Development of image processing algorithms for quantifying lymphatic function with NIR imaging"

3. Blackburn, Christopher
Major: Mechanical Engineering, Georgia Tech
Advised: Spring 2011
Project title: "Design and construction of a CO2 incubation chamber for live-cell imaging applications"

4. Tyler O'Malley
Major: Biology
Advised: Spring 2011 – Fall 2011
Project title: "Quantifying the effects of hyperlipidemia on lymphatic cancer metastasis"
Pettit Undergraduate Scholar, 2011

5. Emilio Salazar
Major: Biomedical Engineering, Georgia Tech
Advised: Spring 2012
Project title: ""Implementation of a PIC32-based real-time controller for an isolated lymphatic vessel perfusion system"
Position after lab: Ph.D. student, Neuroscience, Yale University

6. Zack Danielack
Major: Biomedical Engineering, Georgia Tech
Advised: Spring 2012
Project title: "Labview interface to control an isolated lymphatic vessel perfusion system"

7. Arina Korneva
Major: Biomedical Engineering, Georgia Tech
Advised: Spring 2010 – Spring 2012
Project title: "Design and implementation of a stretch device for studying the molecular response of lymphatic endothelial cells to mechanical stretch"
Petit Undergraduate Scholar, 2010
PURA Undergraduate Research Fellowship Recipient, 2011
Position after lab: Ph.D. Student, Biomedical Engineering, Yale University

8. Kevin Parsons
Major: Mechanical Engineering, Georgia Tech
Advised: Spring 2011 – Summer 2012

Project title: "Development of a micofluidic model of the initial lymphatic environment for studying filarial worm migration"
Petit Undergraduate Scholar, 2011
PURA Travel Award recipient, 2012

9. Destiny Cobb
Major: Biomedical Engineering, Georgia Tech
Advised: Summer 2012
Project title: "Elucidating filarial worm lymphatic homing mechanisms"

10. Hudson Chancy
Major: Biomedical Engineering, Georgia Tech
Advised: Summer 2012
Project title: "Design and construction of instrumentation housing for microcontroller platform"

11. Phillip Johnston
Major: Electrical Engineering, Georgia Tech
Advised: Summer 2012
Project title: "Hardware verification of a real-time control platform for an isolated lymphatic vessel perfusion system"

12. Victor Yusuf
Major: Electrical Engineering
Advised: Summer 2012
Project title: "Intuitive graphical tool for interfacing a real-time controller with a PC"

13. Alex Cardwell
Major: Biomedical Engineering, Georgia Tech
Advised: Summer 2012
Project title: "Non-invasive brain computer interface for hardware control"

14. Sydney Rowson
Major: Biomedical Engineering, Georgia Tech
Advised: Fall 2011 – Fall 2012
Project title: "Investigation of the cytoskeleton and energy-dependent processes as mechanisms of lipid transport across the lymphatic endothelium"
Pettit Undergraduate Scholar, 2012
Position after lab: Ph.D. student, Pharmacology, Emory University

15. Rachel Cornelius
Major: Biomedical Engineering, Georgia Tech
Advised: Spring 2012 – Fall 2012
Project title: "Quantification of lipid uptake and transport, and its effects on lymphatic pump function in healthy and diseased states."

16. Laurissa Rybacki
Major: Biomedical Engineering, Georgia Tech
Advised: Spring 2012 – Fall 2012

Project title: "Lymphatic endothelial cell response to components of oscillatory shear stress"

17. Curran Sidhu
    Major: Biomedical Engineering, Georgia Tech
    Advised: Summer 2012 – Fall 2012
    Project title: "Characterizing the role of cyclic strain on lymphatic pump function"

18. Dennis Andre Norfleet
    Major: Biomedical Engineering, Univ of Tenessee
    Advised: Summer 2014
    Project title: Software interface for lymphatic perfusion system
    SURE REU Fellowship Recipient, 2014
    Position after lab: Ph.D. student, Georgia Tech

19. Carden Bagwell
    Major: Electrical and Computer Engineering, Georgia Tech
    Advised: Fall 2014
    Project title: Limb volume detection with a commercial depth sensor

20. Thomas Spencer
    Major: Mechanical Engineering, Georgia Tech
    Advised: Fall 2013 – Fall 2014
    Project title: Development of a microfluidic mosquito feeding platform for maintaining the *brugia malayi* lifecycle
    Air Products ME Undergraduate Research Award Recipient, Spring 2014
    Air Products Poster Competition, 1st Place, 2014
    PURA Award Recipient, Fall 2014
    Position after lab: Ph.D. student, Georgia Tech

21. Joi-Chi Chok
    Major: Mechanical Engineering, Georgia Tech
    Advised: Summer 2014 – Fall 2014
    Project title: Design and fabrication of a lymphatic vessel isolation device

22. Kevin Han
    Major: Computer Science, Georgia Tech
    Advised: Fall 2014 – Summer 2015
    Project title: Limb volume detection with a commercial depth sensor

23. Matthew Cribb
    Major: Mechanical Engineering, Georgia Tech
    Advised: Fall 2014 – Fall 2015
    Project title: Method to control pressure within a pressure cuff using a DC motor pump and a solenoid valve
    Position after lab: PhD student, Georgia Tech

24. Mari Nguyen
    Major: Material Science Engineering, Georgia Tech
    Advised: Fall 2015
    Project title: *B. malayi* encapsulation for studying parasite migration

25. Jack Corelli
    Major: Biomedical Engineering, Georgia Tech
    Advised: Spring 2016
    Project Title: Shoulder Joint Detection for 3D Volumetric Imaging and Measurement of Lymphedema Patients

26. Jimmy Nguyen
    Major: Biomedical Engineering & Computer Science, Georgia Tech
    Advised: Spring 2016
    Project Title: Image Acquisition API and Database Development for 3D Volumetric Imaging and Measurement of Lymphedema Patients

27. Anugrah Vijay
    Major: Computer Science, Georgia Tech
    Advised: Spring 2016
    Project Title: User Interface Development and Software Integration for 3D Volumetric Imaging and Measurement of Lymphedema Patients

28. Noah Schimmel
    Major: Biomedical Engineering
    Advised: Fall 2015 – Spring 2016
    Project Title: Regulation of LMC Contractile Genotype by Matrix Stiffness

29. Hoang-Dung Ngyuen
    Major: Biomedical Engineering
    Advised: Fall 2015 – Spring 2016
    Project Title: Regulation of LMC Growth and Function by Stretch

30. Mindy Ross
    Major: Biochemistry, Georgia Tech
    Advised: Fall 2013 – December 2016
    Project title: Optimization of NIR tracer probes for measuring lymphatic permeability in vivo
    Petit Undergraduate Scholar 2016

31. Christopher Tossas
    Major: Mechanical Engineering, Georgia Tech
    Advised: Fall 2016 – Summer 2017
    Project Title: Migration of computational lymphangion lumped parameter model to the PACE cluster
    Position after lab: PhD student, University of Michigan

32. Shehab Attia
    Major: Biomedical Engineering & Computer Science, Georgia Tech
    Advised: Spring 2016 – Spring 2017
    Project Title: Lower Limb Joint Detection and Segmentation for 3D Volumetric Imaging and Measurement of Lymphedema Patients

33. Jerry Lin
    Major: Biomedical Engineering & Computer Science, Georgia Tech

Advised: Spring 2016 – Spring 2017
Project Title: Upper Limb Segmentation for 3D Volumetric Imaging and Measurement of Lymphedema Patients

34. Likhit Nayak
Major: Biomedical Engineering & Computer Science, Georgia Tech
Advised: Spring 2016 – Spring 2017
Project Title: Wrist Joint Detection for 3D Volumetric Imaging and Measurement of Lymphedema Patients

35. Rachel Boutom
Major: Biomedical Engineering, Georgia Tech
Advised: Fall 2016 – Spring 2017
Project Title: Analysis of protein synthesis of lymphatic muscle cells in response to stretch in vitro

36. Jonah Weil
Major: Chemical and Biomolecular Engineering, Georgia Tech
Advised: Fall 2015 – Spring 2017
Project title: Platform development for investigating the lymphatic environment's role in *B. malayi* survival
PURA Undergraduate Research Fellowship Recipient

37. Madhu Baskaran
Major: Biomedical Engineering, Georgia Tech
Advised: Spring 2017 – Fall 2017
Project Title: Microfluidic in-vitro platform to study b. malayis motility response to dynamic flow waveforms
PURA Undergraduate Research Fellowship Recipient

38. Stephen Arjanto
Major: Biomedical Engineering, Georgia Tech
Advised: 2016 - 2018
Project Title: Microfluidic in-vitro platform to study the effect of stretch on lymphatic endothelial cell calcium dynamics

39. Joy Brown
Major: Biomedical Engineering, Georgia Tech
Advised: Spring 2017 – Fall 2018
Project Title: Optimization of stretch device for in vitro study of lymphatic muscle cells
PURA Undergraduate Research Fellowship Recipient, 2019

40. Aileen Suarez
Major: Biomedical Engineering, Georgia Tech
Advised: Summer 2019 – Fall 2019
Project Title: Tissue histology for phenotyping immune cell infiltration in mouse lymphedema
SURE REU Fellowship Recipient, 2019

41. Joe Shaver

Major: Chemistry, Georgia Tech
Advised: Spring 2017 – Spring 2020
Project Title: Optimization of NIR tracers of varying molecular weight for evaluation of joint clearance dynamics
Petit Undergraduate Scholar 2019

42. Jackson Smith
Major: Computer Engineering, Georgia Tech
Advised: Spring 2019 – Summer 2019
Project Title: Enhancing feedback control for isolated vessel testing

43. Andrew Inman
Major: Biomedical Engineering, Georgia Tech
Advised: Summer 2019 – Spring 2020
Project Title: Improvements to automated device for measuring lymphatic pumping pressure

44. Josephine Rudd
Major: Biochemistry, Georgia Tech
Advised: Summer 2018 – Spring 2021
Project Title: Effect of stretch and wall shear stress on lymphatic endothelial cells
PURA Undergraduate Research Fellowship Recipient, 2019

45. Sean Crowley
Major: Biomedical Engineering, Georgia Tech
Advised: Summer 2021 – Fall 2021
Project Title: Bioengineered 3D in vitro platform for lymphatic network sprouting

46. Enrique Rodriguez
Major: Biomedical Engineering, Tufts University
Advised: Summer 2022
Project Title: Testing Lipid Nanoparticle Formulations for Targeted Delivery to Lymphatic Endothelial cells in vitro
SURE REU Fellowship Recipient, 20223.

47. Rahul Radhwani
Major: Neuroscience, Georgia Tech
Advised: Fall 2020 – Spring 2022
Project Title: Lymphatic targeting with nanoparticle library screens

48. Jaidev Sharma
Major: ISYE, Georgia Tech
Advised: Fall 2019 - Fall 2022
Project Title: Effect of immunosuppressive drugs on the survival and proliferative rate of lymphatic endothelial cells from different regions of the body

49. Rachel Chin
Major: Biology, Georgia Tech
Advised: Fall 2020 – Spring 2023
Project Title: Characterization of mitochondrial activity in lymphatic muscle cells
Petit Undergraduate Scholar 2021 – 2022

PURA Research Fellow, 2023

B4. Service on thesis or dissertation committees

In Progress

1. Keawepono Wong (PhD, BME)
2. Tara Urner (PhD, BME)
3. Sydney Ginn (PhD, BME)
4. Sophia Sakers (PhD, BME)
5. Carolina Filan (PhD, Medical Physics)
6. Likhit Nayak (PhD, BioE)
7. Bharat Kanwar (PhD, Robotics)
8. Samuel Lucus (PhD, BME)
9. Sophia Mavris (PhD, BME)
10. Elisa Schrader (PhD, BME)

Completed

1. Julianty Angsana (PhD, BME)
2. Micheal Zaucha (PhD, BioE)
3. Andrew Siefert (PhD, BioE)
4. Chris Edens (PhD, BME)
5. Melissa Kinney (PhD, BME)
6. Roy Wang (PhD, BioE)
7. Nduka Emenchukwu (PhD, BioE)
8. Marco Pisano (PhD, EPFL, Switzerland)
9. Maria Restrepo (PhD BioE)
10. Qingfen Pan (PhD BioE)
11. Matt Futterman (Masters, ME)
12. Jaeho Oh (Masters, BioE)
13. Brain Jun (Masters, BIOE)
14. Eleanor DeHitta (Undergrad thesis option, BME)
15. Drew Owen (PhD BioE)
16. Joav Birjiniuk (PhD, BME)
17. Reggie Tran (PhD, BME)
18. Mike Tree (PhD, BioE)
19. Candice Hovell (PhD BME)
20. Faisal Ahmed (PhD BioE)
21. Jordan Cicilliano (PhD, BioE)
22. Patricia Yang (PhD, ME)
23. Alex Schudel (PhD, BioE)
24. In-Cheol Sun (PhD, BME)
25. Daryll Vanover (PhD, BME)
26. Yoshitaka Sei (PhD, BioE)
27. Mahdi Hasani-Sadrabadi (PhD, BioE)
28. In-Cheol Sun (PhD, BME)
29. Phillip Trusty (PhD, BioE)
30. Michael Nelson, (PhD, BME)
31. Stephen Schwaner (PhD, BioE)
32. Jungo Ahn (PhD, GT-SNU)
33. Bailey Hannon (PhD, BioE)

34. Dillon Brown (PhD, BioE)
35. Steven Yarmoska (PhD, BME)
36. Kevin Lindsay (PhD, BME)
37. Lauren Sestito (Phd, BioE)
38. Ki Tae Wolf (PhD, ME)
39. Navdeep Dahiya (PhD, ECE)
40. Vidisha Goyal (Masters, BioE)
41. Eashani Sathialingam (PhD, BME)
42. Angelica Connor (PhD, ME)
43. Paul Archer (PhD, BioE)
44. Derek Jang (PhD, BME)
45. Abdi Samuel (PhD, University of Sussex)
46. Mighten Yip (PhD, BioE)
47. Shelley Gooden (PhD, BioE)
48. Afsane Radmandaghkand (PhD, BioE)
49. Alexandra Zamitalo (Masters, BME)
50. Juan Luis Mena Lapaix (PhD, ChBE)
51. Jimmy Ding (PhD, BioE)
52. Kathryn Castro-Quilang (MS, BME)
53. Krishna Sivakumar (PhD, BioE)
54. Farbod Sedaghati (PhD, BioE)

B5. Mentorship of postdoctoral fellows, research faculty or visiting scholars

In Progress

1. Zhanna Nepiyushchikh
   Position: Senior Research Scientist
   Semester Advisement Began: Spring 2014
   Project title: "Growth and remodeling in isolated lymphatic vessels in response to sustained elevated mechanical loading"

Completed

1. Faulkner, Matthew
   Advised: June 2010 – July 2011
   Project title: "Mechanisms of chylomicron uptake using a tissue engineered model of the intestinal lacteal"
   Current Position: Senior Research Scientist, Pacific Vet Group

2. Nipper, Matthew
   Advised: January 2011 – January 2013
   Project Title: "Biomechanical control of isolated contractile lymphatics"
   Current Position: Director of Product Development, Laser Light Technologies Inc.

3. Reed, Alana
   Advised: October 2011 – November 2013
   Project Title: "Mechanisms of active lipoprotein and lipid transport by lymphatic endothelial cells"
   Current Position: Medical Writer, ArticulateScience

4. Kim To
   Position: Post-doc

Advised: May 2017 – July 2020
Project title: "Activating calcium channels to improve lymphatic function in vivo using nanotechnology as a therapeutic for ameliorating local adipose deposition"
Lipedema Foundation Postdoctoral Fellowship Recipient, 2017-2019

5. Eleftheria Michalaki
   Position: Post-doc
   Semester Advisement Began: October 2019 – September 2023
   Project title: "Lipid nanoparticles for mRNA delivery to lymphatic endothelial cells"
   AHA Postdoctoral Fellowship Recipient, 2021 - 2023

C. EDUCATIONAL INNOVATIONS AND OTHER CONTRIBUTIONS

1. Fall 2010 – Class of 1969 Teaching Fellow

2. Fall 2010 – Taught an advanced confocal workshop for the BBUGS graduate student group in IBB

3. Spring 2011 – Developed several modules on lymphatics, interstitial fluid transport, cell adhesion, and mechnotransduction to be incorporated into the graduate course, ME8803/BMED8813 – Biotransport

4. Spring 2011 – Wrote and delivered a two lecture module on optical imaging in turbid media and biological tissue for Dr. Forest's Optics course.

5. Spring 2014 – Developed and delivered a lecture on lymphatic physiology for BMED 3100 – Systems Physiology

6. Summer 2015 – Hosted a high school teacher in the lab through the NSF Prime program

7. Fall 2014 – Delivered a lecture on lymphatics to head & neck surgery residents at Emory.

8. Fall 2015 – Delivered a lecture on lymphatics to physical medicine and rehabilitation residents at Emory.

9. Fall 2015 – Delivered a lecture on lymphatics to Ph.D. students in the advanced seminar for Cardiovascular Biomechanics students

10. Fall 2105 – Developed several instructional modules on lymphatics and growth and remodeling for students in ME/BMED/4758/6743.

11. Fall 2015 – Woodruff Teaching Fellow

12. Fall 2018 – Developed a module for the PhD practicum on preparing your first course to teach and have delivered this almost every semester since this time

VI. SERVICE

A. PROFESSIONAL CONTRIBUTIONS

1. Editorial Board Member, Technical Journals
    1. *Frontiers in Vascular Physiology*, Review Editor, 2011 – present
    2. *Scientific Reports*, 2019 - present

2. Guest Editor, *Proceeding of the National Academy of Sciences*, October 2015
3. Reviewer, Technical Journals
    1. *Aging and Disease*
    2. *American Journal of Physiology – Endocrinology and Metabolism*
    3. *American Journal of Physiology – Heart and Circulatory Physiology*
    4. *American Journal of Physiology – Regulatory, Integrative, and Comparative Physiology*
    5. *Annals of Biomedical Engineering*
    6. *BMC Physiology*
    7. *Bioengineering and Biotechnology*
    8. *Biomechanics in Modeling and Mechanobiology*
    9. *Circulation Research*
    10. *Comprehensive Physiology*
    11. *IEEE Journal on Selected Areas in Communications - Series on Molecular, Biological, and Multi-Scale Communications*
    12. *Journal of Biological Methods*
    13. *Journal of Biomechanical Engineering*
    14. *Journal of Biomechanics*
    15. *Journal of Biomedical Optics*
    16. *Journal of Clinical Investigation*
    17. *Journal of Lipid Research*
    18. *Journal of Molecular Imaging*
    19. *Lymphatic Research and Biology*
    20. *Microcirculation*
    21. *Microvascular Research*
    22. *Molecular and Cellular Biology of Lipids*
    23. *Pharmaceutical Research*
    24. *Proceedings of the National Academy of Sciences*
    25. *PLoS Computational Biology*
    26. *PLOS One*
    27. *Royal Society Interface*
    28. *Science Translational Medicine*
    29. *Scientific Reports*
    30. *Nature*

4. Reviewer, Grant Proposals and Panels
    1. Natural Sciences and Engineering Research Council of Canada – Chemical, Biomedical, and Materials Science Engineering Scholarships & Fellowships Selection Committee (2012-2015)
    2. NSF Biomechanics and Mechanobiology Program (5/2013, 11/2014, 1/2016, 6/2018)
    3. NIH Special Emphasis Panel on Lymphatics in Health and Disease in the Digestive, Urinary, Cardiovascular and Pulmonary Systems (11/2013, 3/2014)
    4. American Heart Association, Bioeng BSc3, 2014 – 2017

5. Natural Sciences and Engineering Research Council of Canada, External Reviewer (11/2016)
6. NIH Microcirculation & Hypertension Study Section, (Ad-hoc member 10/2016)
7. NIH, NHLBI R13 Review Panel (12/2018)
8. Florida Department of Health, External Grant Reviewer, (12/2019)
9. University of Cyprus, External Grant Reviewer, (9/2019)
10. American Heart Association, Fellowship Bioeng Basic Sciences Review Panel, (10/2019)
11. NIH, Special Emphasis Panel Catalyze Program Review, (08/2020)
12. NIH, Early Independence Award (DP5) Panel, (12/2020)
13. NIH, MCBS K-Award Panel, (10/2021)
14. NIH, New Innovator Award Program (DP2) Panel, (12/2021)
15. NIH, 2022/05 ZAG1 ZIH-8 (M2) Special Emphasis Panel (2/2022)

5. Reviewer, Other
   1. *Wiley Publishers, textbook proposal review (1)*
   2. *ASME Summer Bioengineering Conference Abstract Reviewer, 2010-2020*
   3. *BMES Conference Abstract Reviewer, 2012-2020*
   4. *TERMIS Conference Abstract Reviewer, 2013*

6. Society Memberships
   - *Biomedical Engineering Society*
   - *Microcirculatory Society*
   - *Tissue Engineering and Regenerative Medicine Society*
   - *American Society of Mechanical Engineers*
   - *American Physiologic Society*
   - *American Institute for Medical and Biological Engineering*

7. Society Administrative Duties
   - *Microcirculatory Society Programs and Meetings Committee*, 2012 - 2016

8. Conference Organizing Committees
   - *ASME Summer Bioengineering Conference* – Fluid Mechanics, 2010-2020
   - *ASME Summer Bioengineering Conference* – Cellular and Tissue Engineering, 2010-2020
   - *16th State of Georgia Lymphedema Education & Awareness Program*, "Emerging Technologies in Lymphatic Research and Care", hosted by the Institute of Bioengineering and Bioscience at Georgia Tech, 2013
   - *7th World Congress of Biomechanics* – Symposium on Lymphatic Physiology and Biomechanics, 2014
   - *Lymphatic Forum 2019* – Steering Committee Member
   - *Lymphatic Forum 2023* – Steering Committee Member

9. Conference Session Chairs
   - *ASME Summer Bioengineering Conference* – Model Systems and the Pericellular Environment, June 2011
   - *SPIE Photonics West BIOS* – Optical Imaging Systems for Cell and Lymph Analysis, January 2012
   - *ASME Summer Bioengineering Conference* – Microscale Fluid Mechanics, June 2012
   - *BMES Annual Meeting* – Lymphatic System Biomechanics, October 2012

- *BMES Annual Meeting* – Engineered Tissue Models for Drug Discovery and Disease, October 2012
- *7th World Congress of Biomechanics* – Symposium on Lymphatic Physiology and Biomechanics, 2014
- *BMES Annual Meeting* – Cell and Tissue Biomechanics I, October 2015
- *8th World Congress on Biomechanics* – Lymphatics and Ocular Fluid Mechanics, 2018
- *Lymphatic Forum 2019* – Lymphatic Muscle and Lymph Flow, 2019
- *Summer Bioengineering, Biomechanics, & Biotransport Conference (SB3C)* – Multiscale Biotransport in Hemodynamics and Lymphatics, 2019

10. Conference Theme Chair
    - *Summer Bioengineering, Biomechanics, & Biotransport Conference (SB3C)* – Fluids: Biological Flows, August 2011 – August 2016

11. Conference Chair and Organizer
    - 2021 Lymphatic Forum, May 31 – June 5, 2021

B. PUBLIC AND COMMUNITY SERVICE

1. CEISMC seminar - Invited talk to HS teachers about interfacing science and mathematics in the classroom, 12/6/2010
2. KITES Science and Engineering Festival, Scott Elementary School – Ran a half-day workshop with a few of the undergrads from the lab providing hands on bioengineering demonstrations and a local elementary school, 4/27/2012
3. Summer 2014 – Hosted 2 high-school students in the lab to provide them exposure to biomedical engineering research
4. Hosted URM high school students in the lab through Project ENGAGES, 2014-2015

C. INSTITUTE CONTRIBUTIONS

Leadership Positions

1. Bioengineering Research Area Group Chair, Woodruff School of Mechanical Engineering, 2018 – 2022
2. Provost's Emerging Leaders Program, 2019-2020 Cohort, Georgia Tech
3. Institute Graduate Curriculum Committee, Vice-Chair, 2019 – 2021
4. ME Qualifying Exam Transition Committee, Co-Chair, 2020 – 2021
5. Institute Graduate Curriculum Committee, Chair, 2021 – 2022
6. Georgia Clinical Translation Science Alliance Research Education Programs, Co-director, 2021 – present
7. Associate Chair for Undergraduate Studies, Woodruff School of Mechanical Engineering, 2023 - present

Service Committees

1. Mechanical Engineering Faculty Awards Committee, 2009 –2012
2. Biomedical Engineering Graduate Committee, 2010 – 2014
3. Mechanical Engineering Academic Advising Committee, 2012 – 2016
4. Mechanical Engineering Faculty Advisory Committee, 2014 – 2016
5. Bioengineering Program Graduate Committee, 2014 – 2017

6. Biomedical Engineering Faculty Search Committee, 2015 – 2016
7. Institute Graduate Curriculum Committee, 2016 – 2022
8. Mechanical Engineering Graduate Student Development Committee, 2016 – 2022
9. COE Assistant to Associate Professor RPT Committee, 2016 – 2017
10. ME Periodic Peer Review Base Committee, 2018-2019
11. Institute Graduate Student Faculty Council, 2019 – 2022
12. Institute IACUC Committee, 2019 – 2022
13. IBB Faculty Steering Committee 2018 - 2022
14. Institute Faculty Senate, 2019 - 2023
15. Biomedical Engineering PPR Committee, 2020 – 2023
16. Mechanical Engineering Diversity, Equity, and Inclusion Committee, 2020 – 2022
17. Vice-provost's office ad-hoc Committee on Graduate Employment, 2021 – 2022
18. Woodruff School of Mechanical Engineering RPT Committee 2022 - 2023

Qualifying Exam Committees

1. BioE Exam, Bioengineering Program, Spring 10 – present
2. BME Exam, Biomedical Engineering Ph.D. Program, Spring 10 – present
3. ME Exam, Mechanical Engineering Ph.D. Program, 2010 – present

Campus Events

1. Judge, Inventure Competition
2. Judge, Georgia Tech Innovation and Research Conference
3. Spoke at the Biomedical Engineering Faculty Retreat on lab culture, 8/10/2018
4. Host a monthly "Future Faculty Members Breakfast Club" for PhD students in Mechanical Engineering, 2019 – 2020, 2021 – 2022