Elizabeth M. Cosgriff-Hernández, Ph.D.

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I. EDUCATION:

Ph.D.	Macromolecular Science and Engineering, August 2005 Case Western Reserve University, Cleveland, OH Dissertation: Biocompatibility and Biostability of Modified Polyurethane Elastomers
B.S.	Biomedical Engineering, May 2000 Case Western Reserve University, Cleveland, OH

II. RESEARCH OBJECTIVES

My lab specializes in the development of polymeric biomaterials to improve clinical outcomes of medical devices and regeneration strategies in the areas of orthopaedics, cardiovascular devices, chronic wound healing, and women's health. Synthesis of new biomaterials with targeted cell interactions is complemented by advanced fabrication strategies. In addition to providing improved medical devices and tissue grafts, these innovative biomaterials provide new tools to probe complex processes of tissue remodeling.

III. EMPLOYMENT

2017 -	**Professor** Department of Biomedical Engineering, The University of Texas at Austin Judson S. Swearingen Regents Chair in Engineering
2013 - 2017	**Associate Professor** Department of Biomedical Engineering, Texas A&M University
2007 - 2013	**Assistant Professor** Department of Biomedical Engineering, Texas A&M University
2005-2007	**Postdoctoral Research Associate** Department of Bioengineering, Rice University *High Porosity Tissue Engineering Scaffolds by Emulsion Templating*
2000-2005	**Graduate Research Assistant** Department of Macromolecular Science and Engineering, Case Western Reserve University *Biocompatibility and Biostability of Modified Polyurethane Elastomers*
1998-2000	**Undergraduate Research Assistant** Department of Macromolecular Science and Engineering, Case Western Reserve University
1998, 1999	**Internships at The Dow Chemical Company**

IV. HONORS AND AWARDS

Senior Member, National Academy of Inventors, 2025
***Acta Materialia* Mary Fortune Global Diversity Medal,** 2025
Fellow, Tissue Engineering and Regenerative Medicine International Society, 2024
Rosalind Franklin Society Award in Science, 2023
Fellow, American Chemical Society Division of Polymeric Materials: Science and Engineering, 2023
Fellow, Royal Society of Chemistry, 2021
Fellow, Biomedical Engineering Society, 2020
Fellow, International Union of Societies for Biomaterials Science and Engineering, 2020
Gilbreth Lecturer, National Academy of Engineering, 2020
Fellow, American Institute of Medical and Biological Engineering, 2017
Dean of Engineering Excellence Award, Texas A&M University, College of Engineering, 2015-2016
William Keeler Fellow, Texas A&M University, College of Engineering, 2014-2015
Charles H. Barclay Jr. '23 Fellow, Texas A&M University, College of Engineering, 2013-2014

TEES Select Young Faculty, Texas A&M University, College of Engineering, 2012-2013
Women's Progress Award, Texas A&M University, 2012
William O. and Montine P. Head Fellow, Texas A&M University, College of Engineering, 2011-2012
Women's Initiative Committee Appreciation Award, American Institute of Chemical Engineers, 2010

RESEARCH

I. GRANTS

Current

NIH/NICHD R01 HD116968, Cosgriff-Hernandez Model-directed Design of Vaginal Stents to Prevent Post-radiation Stenosis	12/16/24-11/30/29 $2,798,993.00
NIH/NHLBI R01 HL162741, Cosgriff-Hernandez, Razavi (Multi-PI) Injectable Hydrogel Electrodes to Prevent Ventricular Arrhythmias	01/05/23-12/31/26 $2,373,297.00
NIH/NHLBI R01 HL175284, Sacks, Cosgriff-Hernandez, Dasi (Multi-PI) Optimized development of novel leaflet biomaterials for replacement heart valves	08/05/25 – 05/31/29 $5,296,022.00
NIH/NHLBI R01 HL180615, Cosgriff-Hernandez, Allen (Multi-PI) Investigating sexual dimorphism of integrin-mediated endothelialization processes under complex mechanical microenvironments	07/01/26 - 03/31/30 $2,985,965.00

Completed

BRIGE: Biomedical Applications of High Internal Phase Emulsions (PI) NSF/EEC (0926824)	09/01/09 – 08/31/12
Cell Responsive Biomaterials as Tissue Engineering Scaffolds (PI) NSF/BMAT (0907067)	06/15/09 – 06/14/13
Injectable, High Porosity Bone Scaffolds by Emulsion Templating (PI) NIH/NIAMS (R21 AR057531)	07/01/10 – 06/30/14
Development of Pickering Emulsions as Injectable Bone Grafts (PI) NIH/NIBIB (R21 EB016393)	09/01/13 – 07/15/17
Shape Memory Polymer Embolic Foams for Treating Cerebrovascular Aneurysms (PI - Maitland) NIH (U01 NS089692)	03/15/15 – 03/01/18
Multilayer Vascular Grafts Based on Collagen-Mimetic Hydrogels (Multi-PI) NIH/NIBIB (R01 EB013297)	04/01/12 – 12/15/17
Multi-functional Meshes that Prevent Intestinal Anastomotic Leakage and Surgical Adhesions (PI) CST*R Pilot Grant, Texas A&M University	02/01/17 – 01/30/18
Effect of Improved Graft Compliance Matching on Intimal Hyperplasia (PI) NIH/NIBIB (R21 EB020978)	07/15/15 – 06/30/18
NSF/DMR-BSF, 1822196 Cosgriff-Hernandez, Silverstein Nanoparticle-stabilized polyHIPEs that promote integrin-mediated osteogenesis	07/01/17 – 06/30/21
NIH R03 AI136060, Cosgriff-Hernandez Electrospun Gelatin Meshes with Multifactor Release to Promote Bone Regeneration and Prevent Infection	05/17/18 – 04/30/21
NIH R01HL130436, Jacot Pre-Vascularized and Degradable Patches for Correction of Congenital Heart Defects	02/01/16 – 05/31/22
NIH/NIAMS R21 AR076107, Cosgriff-Hernandez Antimicrobial Hydrogel Foam Dressings for Infected Chronic Wounds	03/12/20 – 02/28/23
NIH/NIAMS R21 AR076708, Cosgriff-Hernandez In situ BMSC Seeding of 3D Printed Scaffolds Using Cell-releasing Hydrogels	07/06/20 – 06/30/24 $360,550.00
NIH/NICHD R21 HD104059, Cosgriff-Hernandez Resorbable, Shape-memory Stents to Prevent Vaginal Fibrosis	08/01/2021-07/31/2025 $444,811.00

II. SCHOLARLY ACCOMPLISHMENTS

BOOK CHAPTERS

7. P. Dhavalikar, Z. Lan, R. Kar, K. Salhadar, A. Gaharwar, E**. Cosgriff-Hernandez**, "Biomedical Applications of Additive Manufacturing" in Biomaterials Science, Fourth Edition., W. Wagner, S. Sakiyama-Elbert, G. Zhang, M. Yaszemski., Eds., Academic Press, Elsevier, London, 2020.
6. T. Touchet, **E. M. Cosgriff-Hernandez**, "Hierarchical Structure-Property Relationships of Segmented Polyurethanes" in Advances in Polyurethane Biomaterials, S. Cooper, Ed., Woodhead Publishing, Elsevier, Cambridge, 2016.
5. N. Sears, T. Touchet, **E. M. Cosgriff-Hernandez**, "Ligament and Tendon Tissue Engineering" in The Biomedical Engineering Handbook, 4th Ed. CRC Press, Taylor and Francis Group, Boca Raton, 2014.
4. S. Buffington, M.B. Browning, **E. M. Cosgriff-Hernandez**, "Clinically Applied Biomaterials - Soft Tissue" in Handbook of Biomedical Technology, 2nd Ed. CRC Press, Taylor and Francis Group, Boca Raton, 2013.
3. D.K. Dempsey, H.A. Benhardt, **E.M. Cosgriff-Hernandez**, "Resorbable Polyurethanes" in Szycher's Handbook of Polyurethanes, 2nd Ed. M. Szycher, Ed., CRC Press, Taylor and Francis Group, Boca Raton, 2012.
2. N. Sears, T. Touchet, **E. M. Cosgriff-Hernandez**, "Ligament and Tendon Tissue Engineering" in Tissue Engineering: Principles and Practices. CRC Press, Taylor and Francis Group, Boca Raton, 2012.
1. **E. M. Cosgriff-Hernandez,** "Emulsion Templating," in The Handbook of Intelligent Scaffolds for Regenerative Medicine, G. Khang, Ed., Pan Stanford Publishing, New Jersey, 2011.

PATENTS/PATENT APPLICATIONS

11. E. Cosgriff-Hernandez, M. Laude, "Suspension-based fabrication of decellularized tissue," U.S. Provisional Application No. 63/931,083 filed December 4, 2025

10. E. Cosgriff-Hernandez, D. Bashe, "Hydrogel-Mediated Tissue Ablation Apparatus, Methods of Making, and Methods of Use Thereof" U.S. Provisional Application No. 64/033,018 filed April 8, 2026

9. J. Hakim, **E. Cosgriff-Hernandez,** M. Grunlan, "Devices of Resorbable, Drug-eluting Shape Memory Foam" International Patent Application **WO2023196331A1**.

8. E. Cosgriff-Hernandez, M. John, A. Post, T. Williams, M. Chwatko, A. Rook, M. Razavi "Electrically Conductive Hydrogels Usable as Pacemaker Lead Extensions, Apparatus for Delivery of a Hydrogel into the Venous System, and Methods of Treating Ventricular Arrhythmia with Electrically Conductive Hydrogels Injected in the Venous System," International Patent Application. **WO2021046441A1**

7. D. Maitland, **E. Cosgriff-Hernandez,** Todd Landsman, Tyler Touchet, The Texas A&M University System, assignee. "Hemorrhage Management System," Patent **US10265433B2**.

6. E. Cosgriff-Hernandez, R. Moglia; The Texas A&M University System, assignee. "Fast-Curing, Porous Materials and Making Thereof," Patent Application **US20160243277A1**.

5. E. Cosgriff-Hernandez, R. Moglia; The Texas A&M University System, assignee. "Porous Microparticles with High Loading Efficiency," **US10363215B2**.

4. P. Singhal, S. Wilson, **E. Cosgriff-Hernandez**, D. Maitland; "Ultra Low Density Biodegradable Shape Memory Polymer Foams with Tunable Physical Properties," Patent **US9840577B2**.

3. P. Singhal, S. Wilson, **E. Cosgriff-Hernandez**, D. Maitland; "Device and Method for Treatment of Openings in Vascular and Septal Walls," Patent **US9670308B2**.

2. E. Cosgriff-Hernandez, R. Moglia, J. Holm, N. Sears; The Texas A&M University System, assignee. "High Porosity Materials, Scaffolds and the Making Thereof," Patent **US9180094B2**.

1. B. Russell, **E. Cosgriff-Hernandez**, M. Hook, M. Hahn; The Texas A&M University System, assignee. "Designer Collagen Hydrogels and Uses Thereof," Patent **US8618250B2**.

REFEREED PUBLICATIONS

H Index = 54; i10 Index = 107; Citations: 10,800+; *Maiden Name is Christenson*

130. I. Baurceanu, S. Pal, I. Orenuga, A. Kimmel, C. Anderson, V. Magidson, A. Harned, K. Narayan, **E. Cosgriff-Hernandez,** M. Wolf, "Cryogenic Sintering Decellularized Tissue Particles Creates Porous Scaffolds that Support Long-Term Alternative Macrophage Infiltration in Large Traumatic Injuries," *Biomaterials,* in revision (2026).

129. S. Peyton, B. Akpa, M. Bell, A. Bowden, **E. Cosgriff-Hernandez,** M. Ferrall-Fairbanks, J. Linnes, R. Willits, "How to Make Faculty Meetings more Productive, Values-Driven, and Meaningful," *Annals of Biomedical Engineering,* in press (2026).

128. SA. Madariaga, **E. Cosgriff-Hernandez**, EM. Rausch "The Nonlinear Mechanics of Single Electrospun Polyurethane Fibers Under Wet and Dry Conditions," *Journal of Extreme Mechanics Letters,* submitted (2026).

127. S. Guvenir Torun, S. Sreedhar, A. Amadio, A. Hicks, C. Kostelnik, D. Kennedy, J. Hakim, W.B. Saunders, L. Davis, **E. Cosgriff-Hernandez**, M. Rausch, "Anisotropic Structure and Mechanics of Vaginal Tissue in the Rabbit," *Acta Biomaterialia,* in revision (2026).

126. Y. Chen, et al. "Biofabrication and biomedical manufacturing research frontiers in the United States." *Bio-Design and Manufacturing,* 1-109 (2026).

125. E. He, S. Motiwale, **E. Cosgriff-Hernandez**, M. Sacks, "3D Microscale Mechanical Simulations of Hydrogel Coated Electrospun Meshes," *bioRxiv* (2026).

124. A. Budhwani, M. Haney, E. Cosgriff-Hernandez, "Failure-Informed Design Principles for Small-Diameter Vascular Grafts," *Advanced Healthcare Materials,* submitted (2026).

123. A. Nkansah, A. Fairley, N. Ang, M. Laude, A. Robinson, N. Grammer, X. Zhang, L.-J.J. Guo, M.T.Z. Nazari-Shafti, A. Elgalad, **E. Cosgriff-Hernandez, "**Off-the-Shelf Multilayer Vascular Grafts with Damage-Resistant Hydrogel Coatings Incorporating Integrin Targeting," *npj Biomedical Innovations,* in press (2026).

122. A. Nkansah, A. Budwhani, A. Fairley, A.C. Yedalla, A. Anand, N. Grammer, J. Allen, **E. Cosgriff-Hernandez, "**Mechanical History and Substrate Stiffness Shape Integrin-Mediated Endothelial Cell Behavior on Bioactive Hydrogels," *bioRxiv* 2026.07.28.741323 (2026).

121. D. Bashe, O. Jalife, A. Duvvada, B. Venkat, L. Jaworski, D. Bernard, M. John, A. Post, M. Razavi, **E. Cosgriff-Hernandez, "**Design of a Conductive Hydrogel Coating to Improve Catheter–Tissue Coupling in Radiofrequency Ablation," *Journal of Material Chemistry Part B,* in revision (2026).

120. M. Laude, V. Kolliopoulos, A.G. Mikos, L.J. White, **E. Cosgriff-Hernandez,** "Extracellular Matrix-Based Materials from Decellularized Tissue: Opportunities, Challenges, and Future Directions in Regenerative Medicine," *Advanced Healthcare Materials,* 15(1), e02107 (2026).

119. T. Moseley, A. Hicks, M.K. Rausch, **E. Cosgriff-Hernandez**, J. Hakim, "Finite element modeling in obstetrics and gynecology: advances, applications, and challenges," *Frontiers in Medicine,* 12, 1606989 (2025).

118. M. Grunlan, L. Korley, Q. Lin, C. Soles, R. Advincula, A. Jayaraman, **E. Cosgriff-Hernandez**, E. Reichmanis, J. Lutkenhaus, R. Priestly, B. Voit, T. Epps, **"**PMSE Centennial: Celebration of Success and New Frontiers in Polymer Materials Science and Engineering," *ACS Macro Letters* 14, 1465-1475 (2025).

117. A. Nkansah, A. Budhwani, N. Grammer, N. Ang, A. Fairley, S. Pietrosemoli Salazar, A. Anand, A. Chowdary Yedalla, S. Seidlits, J. Allen, **E. Cosgriff-Hernandez**, "Characterization of Sex-Based Differences in Integrin-Mediated Endothelial Cell Adhesion to Bioactive Hydrogels," *ACS Biomaterial Science,* 11(11), 6515-6520 (2025).

116. S. Granhold, A. Madariaga, M. Lohr, S. Jones, A. Robinson, **E. Cosgriff-Hernandez**, E. Lejeune, B. Dortdivanlioglu, M. Rausch, "The Non-Linear Visco-Hyperelastic Damage Mechanics of Individual Electrospun PCL Fibers: Experiments and Modeling." *Advanced Engineering Materials*, 27(13) 2500253 (2025).

115. S. Jones, I. Gilbert, M. Laude, Z. Oyebanji, R. Birur, A. Luengo Martinez, I. Gilbert, P. Baek, **E. Cosgriff-Hernandez "**Co-Electrospinning Extracellular Matrix with Polycaprolactone Enables a Modular Approach to Balance Bioactivity and Mechanics of a Multifunctional Bone Wrap," *Advanced Healthcare Materials,* e02020 (2025).

114. M. Green, O. Lanier, **E. Cosgriff-Hernandez**, "Introducing Health Equity into Biomedical Engineering Education," *Journal of Biomedical Engineering Education*, 5(2), 389-395 (2025).

113. A. Robinson, D. Jiang, J. Herrera Duran, J. Leung, L. Timmins, **E. Cosgriff-Hernandez**, "Design of a Corrugated Vascular Graft with Enhanced Compliance and Kink Resistance," *Journal of Biomedical Materials Research Part A,* 113, e37975 (2025).

112. A. Robinson, D. Jiang, A. Nkansah, J. Herrera Duran, M. Laude, J. Craig, L. Guo, L. Timmins, **E. Cosgriff-Hernandez**, "Advanced Manufacturing of Coil-Reinforced Multilayer Vascular Grafts to Optimize Biomechanical Performance," *Acta Biomaterialia*, 198, 281-290 (2025).

111. G. Rodriguez-Rivera, A. Post, M. John, D. Bashe, F. Xu, T. Larue, A. Nkansah, M. Wancura, M. Chwatko, C. Waldron, N. Kalkunte, J. Zoldan, M. Arseneault, A. Elgalad, M. Rausch, M. Razavi, **E. Cosgriff-Hernandez**, "Injectable hydrogel conductors: Advancing material design to transform cardiac pacing," *Biomaterials,* 317, 123071 (2025).

110. D. Jiang, A.J. Robinson, A. Nkansah, J. Leung, L. Guo, S.A. Maas, J.A. Weiss, E. M. Cosgriff-Hernandez, L.H. Timmins, "A Computational Framework to Optimize the Mechanical Behavior of Synthetic Vascular Grafts," *Journal of the Mechanical Behavior of Biomedical Materials*, 163, 106847 (2025).

109. S. Jones, I. Gilbert, C.Y. Lin, M.J. Lohr, P. Baek, C. Midkiff, N. Longbottom, Z. Oyebanji, R. Birur, S.J. Horn, F. Clubb, M.K. Rausch, S. McBride-Gagyi, **E. Cosgriff-Hernandez**, "Design of an Electrospun Wrap for Improved Durability and Infection Control in Masquelet's Induced Membrane Technique." *Cell Biomaterials,* 1(1) 100003 (2025).

108. G. Rodriguez-Rivera, F. Xu, M. Laude, V. Shah, A. Nkansah, D. Bashe, Z. Lan, M. Chwatko, **E. Cosgriff-Hernandez**, "Design of PEG-based hydrogels as soft ionic conductors," *Journal of Biomedical Materials Research Part A,* 13(1), e37840 (2025).

107. Z. Lan, A. Fletcher, E. Bender, W. Huang, L. Suggs, **E. Cosgriff-Hernandez**, "Hydrogel foam dressings with angiogenic and immunomodulatory factors from mesenchymal stem cells." *Journal of Biomedical Materials Research Part A* 112(9) 1388-1398 (2024).

106. N. Annabi, **E. Cosgriff-Hernandez**, A. Weiss. "Perspectives on Recent Developments and Directions in Tissue Engineering and Regenerative Medicine." *Tissue Engineering Part A* 30.23-24, 721-725 (2024).

105. A. Robinson, A. Nkansah, S. Bhat, S. Karnik, S. Jones, A. Fairley, J. Leung, M. Wancura, M. Sacks, P. Dasi, **E. Cosgriff-Hernandez**, "Hydrogel-polyurethane fiber composites with enhanced microarchitectural control for heart valve replacement," *Journal of Biomedical Materials Research Part A*, *112*(4), 586-599 (2024).

104. A.J. Hicks, C. Roberts, A. Robinson, K. Wilson, V. Kotamreddy, T. LaRue, A. Veyssi, F. Beltran, J. Hakim, M.K. Rausch, M. Grunlan, **E. Cosgriff-Hernandez**, "Polycaprolactone-based shape memory foams as self-fitting vaginal stents," *Acta Biomaterialia,* 187, 172-182 (2024).

103. S. Jones, A. Luengo Martinez, S. VandenHeuval, E. Burgeson, S. Raghavan, S. Rogers, **E. Cosgriff-Hernandez**, "Suspension Electrospinning of Decellularized Extracellular Matrix," *Bioactive Materials,* 41, 640-656 (2024).

102. Z. Lan, L. Guo, A. Fletcher, N. Ang, C. Whitfield-Cargile, L. Bryan, S. Welch, L. Richardson, **E. Cosgriff-Hernandez,** "Antimicrobial hydrogel foam dressing with controlled release of gallium maltolate for infection control in chronic wounds," *Bioactive Materials,* 42, 433-448 (2024).

102. S. Gao, H. Liu, A. Post, L. Jaworski, D. Bernard, M. John, **E. Cosgriff-Hernandez**, M. Razavi, H. Zhang, "Enhancing boundary detection of radiofrequency ablation lesions through photoacoustic mapping," *Scientific Reports*, 14, 19370 (2024).

101. G. Rodriguez-Rivera, A. Post, M. John, S. Buchan, D. Bernard, M. Razavi, **E. Cosgriff-Hernandez**, "Injectable hydrogel electrodes as conduction highways to restore native pacing," *Nature Communications,* 15, 64 (2024).

100. P. Dhavalikar, D. Jenkins, N. Rosen, A. Kannapiran, O. Shachaf, K. Salhadar, M. Silverstein, **E. Cosgriff-Hernández "**Hydroxyapatite Nanoparticle-Modified Porous Bone Grafts with Improved Cell Attachment," *Journal of Material Chemistry, Part B*, 11, 10651-10664 (2023).

99. L. Wang, Y. Wong, J. Correira, M. Wancura, C. Geiger, S. Webster, A. Touhami, B. Butler, G. O'Toole, R. Langford, K. Brown, B. Dortdivanlioglu, L. Webb, **E. Cosgriff-Hernandez**, V. Gordon "The accumulation and growth of Pseudomonas aeruginosa on surfaces is modulated by surface mechanics via cyclic-di-GMP signaling", *Biofilms and Microbiomes*, 9, 78 (2023).

98. G. Rodriguez-Rivera, M. Green, V. Shah, K. Leyendecker, **E. Cosgriff-Hernandez**, "A users guide to degradation testing of PEG-based hydrogels: From in vitro to in vivo studies," *Journal of Biomedical Materials Research Part A,* 112(8), 1200-1212. (2023).

97. E. Cosgriff-Hernandez, B.A. Aguado, G. Coloyan Fleming, E. Moore, A.M. Porras, P. Boyle, D. Chan, N. Chesler, K. Christman, T.A. Desai, B.A.C. Harley, M. Killian, K. Maisel, K. Maitland, S. R. Peyton, B.L. Pruitt, S. E. Stabenfeldt, K.R. Stevens, A.K. Bowden, "Equitable hiring strategies towards a diversified faculty." *Nature Biomedical Engineering,* 1-8 (2023).

96. M. Green, A. Hicks, T. Sullivan, P. Olivera, B. Venkat, **E. Cosgriff-Hernandez**, "New synthetic route to improve uniformity of cell-releasing PEG-based hydrogel carriers," *MRS Communications*, 1-6 (2023).

95. M. Wancura, A. Nkansah, M. Chwatko, A. Robinson, A. Fairley, **E. Cosgriff-Hernandez**, "Interpenetrating network design of bioactive hydrogel coatings with enhanced damage resistance," *Journal of Material Chemistry, Part B*, 11, 5416-5428 (2023).

94. M. Wancura, A. Nkansah, A. Robinson, M. Talanker, S. Toubbeh, S. Jones, **E. Cosgriff-Hernandez**, "PEG-Based Hydrogel Coatings: Design Tools for Biomedical Applications," *Annals of Biomedical Engineering*, 1-12 (2023).

93. Z. Lan, R. Kar, M. Chwatko, E. Shoga, **E. Cosgriff-Hernandez, "**High porosity PEG-based hydrogel foams with self-tuning moisture balance as chronic wound dressings" *Journal of Biomedical Materials Research Part A,* 111(4), 465-477 (2023).

92. O. Lanier, M. Green, G. Barabino, **E. Cosgriff-Hernandez,** "10 Simple Rules in Biomedical Engineering to Improve Healthcare Equity," *PLOS Computational Biology*, 18(10), e1010525 (2022).

91. A. Brock, A. Chamoun-Emanuelli, E. Howard, K. Huntzinger, S. Lawhon, L. Bryan, **E. Cosgriff-Hernandez**, N. Cohen, C. Whitfield-Cargile, "Wound swabs versus biopsies to detect methicillin resistant Staphylococcus aureus in experimental equine wounds," *Veterinary Surgery,* 51 (8) 1196-1205 (2022).

90. D. Jenkins, K. Salhadar, G. Ashby, A. Misha, J. Cheshire, F. Beltran, M. Grunlan, S. Andrieux, C. Stubenrauch, E. Cosgriff-Hernandez, "PoreScript: Automated Pore Size Algorithm for Scaffold Characterization," *Bioactive Materials,* 13: 1-8 (2022).

89. J. Picker, Z. Lan, S. Arora, M. Green, M. Hahn, **E. Cosgriff-Hernandez**, M. Hook, "Prokaryotic Collagen-Like Proteins as Novel Biomaterials." *Frontiers in bioengineering and biotechnology*, 281 (2022).

88. E. Cosgriff-Hernandez, L. Timmins. "Model-Directed Design of Tissue Engineering Scaffolds." *ACS Biomaterials Science & Engineering* (2022).

87. A. Post, S. Buchan, M. John, P. Safavi-Naeini, **E. Cosgriff-Hernández**, M. Razavi, "Reconstituting electrical conduction in soft tissue: the path to replace the ablationist," *EP Europace*, 23(12), 1892-1902 (2021).

86. Z. Tao, D. Jarrell, A. Robinson, **E. Cosgriff-Hernandez,** J. Jacot, "A Prevascularized Polyurethane-Reinforced Fibrin Patch Improves Regenerative Remodeling in a Rat Right Ventricle Replacement Model," *Advanced Healthcare Materials* 10(23), 2101018 (2021).

85. S. Motiwale, M. Russell, O. Conroy, J. Carruth, M. Wancura, A. Robinson, **E. Cosgriff-Hernandez**, M. Sacks, "Anisotropic elastic behavior of a hydrogel-coated electrospun polyurethane: Suitability for heart valve leaflets," *Journal of the Mechanical Behavior of Biomedical Materials,* 125, 104877 (2021).

84. I. Berezovska, K. Kapilov, P. Dhavalikar, **E. Cosgriff-Hernandez**, Michael S. Silverstein, "Reactive Surfactants for Achieving Open-Cell PolyHIPE Foams from Pickering Emulsions," *Macromolecular Materials and Engineering,* 306(6), 2000825 (2021).

83. K. Stevens, K. Masters, PI Imoukhuede, K. Haynes, L. Setton, **E. Cosgriff-Hernandez**, M. Bell, P. Rangamani, S. Sakiyama-Elbert, S. Finley, R. Willits, A. Koppes, N. Chesler, K. Christman, J. Allen, J. Wong, H. El-Samad, T. Desai, O. Eniola-Adefeso, "Fund Black Scientists," *Cell*, 184, 561-565 (2021).

82. J. McCracken, G. Calderon, A. Robinson, C. Sullivan, **E. Cosgriff-Hernandez,** J. Hakim, "Comparative Analysis of Animal Models and Alternatives in Vaginal Research," *Reproductive Sciences*, 1-15 (2021).

81. N. Richbourg, M Wancura, AE Gilchrist, S Toubbeh, BAC Harley, **E. Cosgriff-Hernandez**, NA Peppas, "Precise control of synthetic hydrogel network structure via linear, independent synthesis-swelling relationships," *Science Advances* 7 (7), eabe3245 (2021).

80. A. Robinson, A. Perez-Nava, S. Ali, J.B. Gonzalez-Campos, J. Holloway, **E. Cosgriff-Hernandez,** "Comparative Analysis of Fiber Alignment Methods in Electrospinning," *Matter*, 4, 821-844 (2021).

79. M. Roseen, R. Lee, A. Post, M. Wancura, J. Connell, **E. Cosgriff-Hernandez**, K. Jane Grande-Allen, "Poly(ethylene glycol)-Based Coatings for Bioprosthetic Valve Tissues: Toward Restoration of Physiological Behavior," *ACS Applied Biomaterials,* 3, 8352-8360 (2020).

78. T. Buie, M. Whitely, A. Balakrishnan, A. Jose, J. McCune, Z. Lan, J. Wenke, **E. Cosgriff-Hernandez**, "Comparative efficacy of resorbable fiber wraps loaded with gentamicin sulfate or gallium maltolate in the treatment of osteomyelitis," *Journal of Biomedical Materials Research,* 109(11), 2255-2268 (2021).

77. P. Dhavalikar, J. Shenoi, K. Salhadar, M. Chwatko, G. Rodriguez-Rivera, J. Cheshire, R. Foudazi, **E. Cosgriff-Hernandez**, "Engineering Toolbox for Systematic Design of PolyHIPE Microarchitecture," *Polymers*, 13(9), 1479 (2021).

76. A. Kishan, T. Buie, C. Whitfield-Cargile, A. Jose, L. Bryan, N. Cohen, **E. Cosgriff-Hernandez**, "In vivo performance of a bilayer wrap to prevent abdominal adhesions," *Acta Biomaterialia,* 115, 116-126 (2020).

75. M. Wancura, M. Talanker, S. Toubbeh, A. Bryan, **E. Cosgriff-Hernandez**, "Bioactive hydrogel coatings of complex substrates using diffusion-mediated redox initiation," *Journal of Material Chemistry, Part B*, 8, 4289 (2020).

74. T. Buie, J. McCune, **E. Cosgriff-Hernandez**, "Gelatin Matrices for Growth Factor Sequestration," *Trends in Biotechnology,* 38, 546-557 (2020).

73. P. Dhavalikar, A. Robinson, Z. Lan, D. Jenkins, M. Chwatko, K. Salhadar, A. Jose, R. Kar, E. Shoga, A. Kannapiran, E**. Cosgriff-Hernandez**, "A Review of Integrin-targeting Biomaterials for Tissue Engineering," *Advanced Healthcare Materials*, 9, 2000795 (2020).

72. L. Diaz-Gomez, M. Elizondo, G. Koons, M. Diba, L. Chim, **E. Cosgriff-Hernandez**, A. Melchiorri, A. Mikos, "Fiber engraving for bioink bioprinting within 3D printed tissue engineering scaffolds," *Bioprinting,* 18, e00076 (2020).

71. M. Dabrowski, D. Jenkins, **E. Cosgriff-Hernandez,** C. Stubenrauch, "Methacrylate-based polymer foams with controllable connectivity, pore shape, pore size and polydispersity," *Physical Chemistry Chemical Physics,* 22 (1), 155-168 (2020).

70. Z. Tao, S. Wu, **E. Cosgriff-Hernandez,** J. Jacot, "Evaluation of a polyurethane-reinforced hydrogel patch in a rat right ventricle wall replacement model," *Acta biomaterialia* 101, 206-218 (2020).

69. M Davis-Fields, LA Bakhtiari, Z Lan, KN Kovach, L Wang **E. Cosgriff-Hernandez**, V. Gordon, "Assaying How Phagocytic Success Depends on the Elasticity of a Large Target Structure," *Biophysical Journal* 117 (8), 1496-1507 (2019).

68. S. Cereceres, Z. Lan, L. Bryan, M. Whitely, T. Wilems, H. Greer, E.R. Alexander, R. Taylor, L. Bernstein, N. Cohen, C. Whitfield-Cargile, **E. Cosgriff-Hernandez**, "Bactericidal activity of 3D-printed hydrogel dressing loaded with gallium maltolate," *APL bioengineering*, 3(2), p.026102 (2019).

67. A. Post, P. Diaz-Rodriguez, S. Balouch, S. Paulsen, S. Wu, J. Miller, M. Hahn, E. Cosgriff-Hernandez, "Elucidating the role of graft compliance mismatch on intimal hyperplasia using an ex vivo organ culture model. *Acta biomaterialia*, 89, 84-94 (2019).

66. M. Wancura, J. McCracken, E. Steen, E. Cosgriff-Hernandez, S. Keswani, J. Hakim. "Emerging technologies in pediatric gynecology: new paradigms in women's health care." *Current opinion in obstetrics & gynecology,* 31(5), 309-316 (2019).

65. M. Smoak, A. Han, E. Watson, A. Kishan, J. Grande-Allen, **E. Cosgriff-Hernandez**, A. Mikos, "Fabrication and Characterization of Electrospun Decellularized Muscle-Derived Scaffolds. *Tissue Engineering Part C: Methods*, *25*(5), 276-287 (2019).

64. S. Cereceres, Z. Lan, L Bryan, M. Whitely, T. Wilems, N. Fabela, C. Whitfield-Cargile, **E. Cosgriff-Hernandez** "In Vivo Characterization of Poly(ethylene glycol) Hydrogels with Thio-β Esters" *Annals of Biomedical Engineering*, 48, 953–967 (2020).

63. M. Whitely, G. Rodriguez-Rivera, C. Waldron, S. Mohiuddin, S. Cereceres, N. Sears, N. Ray, and **E. Cosgriff-Hernandez**. "Porous PolyHIPE Microspheres for Protein Delivery from an Injectable Bone Graft." *Acta biomaterialia*, 93, 169-179 (2019).

62. A. Post, E. Wang, **E. Cosgriff-Hernandez**. "A review of integrin-mediated endothelial cell phenotype in the design of cardiovascular devices." *Annals of biomedical engineering* 47: 366-380 (2019).

61. A. Post, S. Isgandarova, M. Martinez-Moczygemba, M. Hahn, B. Russell, M. Hook, **E. Cosgriff-Hernandez**. "Elucidation of Endothelial Cell Hemostatic Regulation with Integrin-Targeting Hydrogels." *Annals of biomedical engineering,* 47:3, 866–877 (2019).

60. M Whitely, S Cereceres, P Dhavalikar, K Salhadar, T Wilems, B Smith, A. Mikos, **E. Cosgriff-Hernandez**, "Improved in situ seeding of 3D printed scaffolds using cell-releasing hydrogels," *Biomaterials* 185, 194-204 (2019).

59. N. Sears, T. Wilems, K. Gold, Z. Lan, S. Cereceres, P. Dhavalikar, R. Foudazi, **E. Cosgriff-Hernandez**, "Hydrocolloid Inks for 3D Printing of Porous Hydrogels," *Advanced Materials Technologies*, 4(2), 1800343 (2018).

58. B. Streifel, J. Lundin, A. Sanders, K. Gold, T. Wilems, S. Williams, **E. Cosgriff-Hernandez**, J. Wynne, "Hemostatic and Absorbent PolyHIPE-Kaolin Composites for 3D Printable Wound Dressing Materials," *Macromolecular Bioscience,* 18, 1700414-1700424 (2018).

57. A. Kishan, T. Walker, N. Sears, T. Wilems, **E. Cosgriff-Hernandez,** "Winner of the Society For Biomaterials Student Award in the Ph.D. Category: Development of a bimodal, in situ crosslinking method to achieve multifactor release from electrospun gelatin" *Journal of Biomedical Materials Research Part A*, 106(5), 1155-1164 (2018).

56. A. Post, A. Kishan, P. Diaz-Rodriguez, E. Tuzun, M. Hahn, **E. Cosgriff-Hernandez**, "Introduction of sacrificial bonds to hydrogels to increase defect tolerance during suturing of multilayer vascular grafts," *Acta biomaterialia* 69, 313-322 (2018).

55. A. Kishan, T. Wilems, S. Mohiuddin, **E. Cosgriff-Hernandez**, "Synthesis and Characterization of Plug-and-Play Polyurethane Urea Elastomers as Biodegradable Matrixes for Tissue Engineering Applications," *ACS Biomaterials Science & Engineering,* 3 (12), 3493-3502 (2017).

54. A. Kishan, E. Cosgriff-Hernandez, "Recent advancements in electrospinning design for tissue engineering applications: a review," *Journal of Biomedical Materials Research Part A*, 105A, 2892-2905 (2017).

53. M. Whitely, J. Robinson, M. Stuebben, H. Pearce, M. McEnery, **E. Cosgriff-Hernandez**. "Thiol-ene polyHIPEs as injectable bone grafts with improved resistance to oxygen inhibition," *ACS Biomaterials Science & Engineering,* 3 (3), 409–419 (2017).

52. N. Sears, P. Dhavalikar, **E. Cosgriff-Hernández,** "Fabrication of Biomimetic Bone Grafts with Multi-material 3D Printing," *Biofabrication*, 9 (2), 025020 (2017).

51. T.L. Landsman, T. Touchet, L.D. Nash, S.M. Hasan, C. Smith, J. Rivera, B. Russell, D.J. Maitland, **E. Cosgriff-Hernandez,** "Fabrication of a space filling antimicrobial hemostatic sponge," *Acta Biomaterialia*, 47, 91-99 (2017).

50. A. Kishan, A. Robbins, M. Jiang, V. Erel, M. Moreno, **E. Cosgriff-Hernandez, "**Fabrication of macromolecular gradients in aligned fiber scaffolds using a combination of in-line blending and air-gap electrospinning," *Acta Biomaterialia*, 56, 118-128 (2017).

48. D. Puperi, A. Kishan, Z. Punskea, Y. Wuc, **E. Cosgriff-Hernandez**, J. West, K. J. Grande-Allen, "Electrospun polyurethane and hydrogel composite scaffolds as biomechanical mimics for aortic valve tissue engineering*," ACS Biomaterials Science & Engineering*. 2 (9), 1546-1558 (2016).

47. N.A. Sears, G. Pena-Galea, **E. Cosgriff-Hernandez**, "Hybrid Polyurea Elastomers with Cell-Responsive Degradation and Tunable Mechanical Properties." *Journal of Tissue Engineering*, 7: 1–9 (2016).

46. E. Cosgriff-Hernandez, E. Tkatchouk, T. Touchet, N. Sears, A. Kishan, C. Jenney, A. Padsalgikar, E. Chen, " Comparison of clinical explants and accelerated hydrolytic aging to improve biostability assessment of silicone-based polyurethanes," *Journal of Biomedical Materials Research,* 104, 1805-1816 (2016).

45. J. Robinson**,** M. McEnery, H. Pearce, M. Whitely, D. Munoz-Pinto, M. Hahn, H. Li, N. Sears, **E. Cosgriff-Hernandez**, "Osteoinductive PolyHIPE Foams as Injectable Bone Grafts," *Tissue Engineering:Part A*, 22, 403-414 (2016).

44. N. Sears, P. Dhavalikar, **E. Cosgriff-Hernandez**, "A Review of 3D Printing in Tissue Engineering." *Tissue Engineering, Part B*, 22, 298-310 (2016).

43. N. Sears, P. Dhavalikar, **E. Cosgriff-Hernández**, "Emulsion Inks for 3D Printing High Porosity Materials," *Macromolecular Rapid Communication*, 37, 1369–1374 (2016).

42. J. Xavier, T. Thakur, P. Desai, M. Jaiswal, N. Sears, **E. Cosgriff-Hernandez**, R. Kaunas, A. Gaharwar **"**Bioactive Nanoengineered Hydrogels for Bone Tissue Engineering: A Growth-Factor-Free Approach" *ACS Nano*, 9, 3109-3118 (2015).

41. S. Cereceres, T. Touchet, M.B. Browning, C. Smith, J. Rivera, M. Höök, C. Whitfield-Cargile, B. Russell, **E. Cosgriff-Hernandez**, "Chronic Wound Dressings Based on Collagen-mimetic Proteins," *Advances in Wound Care*, 4, 444-456 (2015).

40. A. P. Kishan, R. M. Nezarati, C. M. Radzicki, A. L. Renfro, J. L. Robinson, M. E. Whitely and **E. M. Cosgriff-Hernandez**, "In situ crosslinking of electrospun gelatin for improved fiber morphology retention and tunable degradation," *Journal of Materials Chemistry B,* 3, 7930-7938 (2015).

39. R. Nezarati, M. Eifert, D. Dempsey, M.B. Browning, **E. Cosgriff-Hernandez**, "Electrospun Vascular Grafts with Improved Compliance Matching to Native Vessels," *J Biomed Mat Res Part B: Applied Biomaterials,* 103, 313-323 (2015).

38. A. Pradsalgikar, **E. Cosgriff-Hernandez**, G. Gallagher, A. Norlin-Wessenrieder, J. Runt, **"**Limitations of Predicting In Vivo Biostability of Multiphase Polyurethane Elastomers using Temperature Accelerated Degradation Testing**:** Observations from Cardiac Lead Implants" *J Biomed Mat Res Part B: Applied Biomaterials,* 103, 159 -168 (2015).

37. R. Moglia, M. Whitely, P. Dhavilikar, J. Robinson, H. Pearce, M. Brooks, M. Stuebben, N. Cordner, **E. Cosgriff-Hernandez**, "Injectable PolyHIPEs with Rapid In Situ Curing," *Biomacromolecules*, 15, 2870-2878 (2014).

36. R. Moglia, M. Whitely, M. Brooks, J. Robinson, M. Pishko, **E. Cosgriff-Hernandez**, "Solvent-Free Fabrication of PolyHIPE Microspheres for Controlled Release of Growth Factors," *Macromolecular Rapid Communications*, 35 (14), 1301–1305 (2014).

35. M.B. Browning, S. Cereceres, P. Luong, **E. Cosgriff-Hernandez,** "Determination of the *in vivo* degradation mechanism

of PEGDA hydrogels," *J Biomed Mater Res*, 102, 4244–4251 (2014).

34. D. Dempsey, R. Nezarati, C. Mackey, **E. Cosgriff-Hernandez**, "High compliance vascular grafts based on semi-interpenetrating networks," *Macromolecular Science and Engineering*, 299, 1455-1464 (2014).

33. M.B. Browning, V. Guiza, B. Russell, J. Rivera, M. Hook, M. Hahn, **E. Cosgriff-Hernandez,** "Endothelial cell response to chemical, biological, and physical cues in bioactive hydrogels," *Tissue Engineering,* 20, 23-24 (2014).

32. J. Robinson, R. Moglia, M. Stuebben, M. McEnery, **E. Cosgriff-Hernandez,** "Achieving Interconnected Pore Architecture in Injectable PolyHIPEs for Bone Tissue Engineering," *Tissue Engineering,* 20, 1103-1112 (2014).

31. D. Dempsey, C. Carranza, P. Gray, J. Eoh, S. Cerceres, **E. Cosgriff-Hernandez**, "Comparative analysis of in vitro oxidative degradation of poly(carbonate urethanes) for prediction of biostability," *J Biomed Mater Res*, 102, 3649–3665 (2014).

30. P. Luong, M.B. Browning, R. Bixler, **E. Cosgriff-Hernandez,** "Drying and Storage Effects on Poly(ethylene glycol) Hydrogel Mechanical Properties and Bioactivity," *Journal of Biomedical Materials Research,* 102, 3066 -3076 (2014).

29. R. Moglia, J. Holm, A. Muschenborn, T. Touchet, D. Maitland, **E. Cosgriff-Hernandez,** "Injectable and porous polyMIPE scaffolds for soft tissue regeneration," *Polymer,* 55, 426-434 (2014).

28. D. Dempsey, J. Robinson, R. Ward, A. Iyer, J. Parakka, **E. Cosgriff-Hernandez**, "Characterization of a Novel Poly(ester urethane) with Biodegradable Hard Segments," *J Biomat Sci, Polym Ed*. 25, 535-554 (2013).

27. P. Singhal, **E. Cosgriff-Hernandez**, D. J. Maitland and T. S. Wilson. "Low density biodegradable shape memory polyurethane foams for aneurysm treatment," *Acta Biomaterialia*, 10, 67-76 (2013).

26. M.B. Browning, B. Russell, M. Hook, **E. Cosgriff-Hernandez,** "Bioactive hydrogels with enhanced initial and sustained cell interactions," *Biomacromolecules,* 14, 2225-2233 (2013).

25. R. Nezarati, M. Eifert, **E. Cosgriff-Hernandez**, "Effects of Humidity and Solution Viscosity on Electrospun Fiber Morphology," *Tissue Engineering, Part C*, 19, 810-819 (2013).

24. M.B. Browning, **E. Cosgriff-Hernandez,** "Development of a biostable replacement for PEGDA hydrogels," *Biomacromolecules,* 13(3), 779-786 (2012).

23. M.B. Browning, D. Dempsey, V. Guiza, J. Rivera, M. Höök, B. Russell, F. Clubb, M. Miller, T. Fossum, M. Hahn, **E. Cosgriff-Hernandez, "**Multilayer Vascular Grafts Based on Collagen-Mimetic Hydrogels," *Acta Biomaterialia,* 8, 1010-1021 (2012).

22. R. Moglia, J. Holm, C. Wilson, D. Harrison, **E. Cosgriff-Hernandez**, "Development of Injectable PolyHIPEs as High Porosity Bone Grafts," *Biomacromolecules,* 12, 3621-3628 (2011).

21. H. Benhardt, N. Sears, T. Touchet, **E. M. Cosgriff-Hernandez**, "Synthesis of Collagenase-Sensitive Polyureas for Ligament Tissue Engineering," *Macromolecular Biosciences,* 11, 1020-1030 (2011).

20. M.B. Browning, T. Wilems, **E. M. Cosgriff-Hernandez**, "Compositional control of poly(ethylene glycol) hydrogel modulus independent of mesh size," *J Biomed Mater Res,* 98A, 268-273 (2011).

19. D. Dempsey, C. Schwartz, R. Ward, A. Iyer, J. Parakka, **E. M. Cosgriff-Hernandez**, "Micropatterning of Electrospun Polyurethane Fibers through Control of Surface Topography," *Macromol Mat Engin,* 295, 990–994 (2010).

18. **E. M. Cosgriff-Hernandez**, M. Hahn, B. Russell, T. Wilems, D. Munoz-Pinto, M.B. Browning, J. Rivera, M. Hook, "Bioactive Hydrogels Based on Designer Collagens," *Acta Biomaterialia*, 6, 3969-3977 (2010).

17. A. S. Mistry, Q. P. Pham, C. Shouten, T. Yeh, **E. M. Christenson**, A. G. Mikos, J. A. Jansen, "*In vivo* bone biocompatibility and degradation of porous fumarate-based polymer/alumoxane nanocomposites for bone tissue engineering" *J Biomed Mater Res,* 92A, 451-462 (2010).

16. H. Benhardt, **E. M. Cosgriff-Hernandez**, "The Role of Mechanical Loading in Ligament Tissue Engineering" *Tissue Engineering, Part B: Reviews*, 15, 1-9 (2009).

15. A. S. Mistry, S. H. Cheng, T. Yeh, **E. M. Christenson,** J. A. Jansen, A. G. Mikos, "Fabrication and in vitro degradation of porous fumarate-based polymer/alumoxane nanocomposite scaffolds for bone tissue engineering" *J Biomed Mater Res,* 89A, 68-79 (2009).

14. **E. M. Cosgriff-Hernandez**, A.G. Mikos, "New Biomaterials as Scaffolds for Tissue Engineering" *Pharmaceutical Research*, 25, 2345-2347 (2008).

13. E. J. Goodman, **E. M. Christenson,** A. M. Douglas, E. J. Ziegler, B. R. Lewis, "Reusable Laryngeal Mask Airways can be used more than 40 times," *J Clinical Anesthesia*, 20(2), 109-15 (2008).

12. **E. M. Christenson**, W. Soofi, J. L. Holm, N. R. Cameron, A. G. Mikos, "Biodegradable Fumarate-based PolyHIPEs as Tissue Engineering Scaffolds," *Biomacromolecules*, 8, 3806–3814 (2007).

11. **E. M. Christenson**, A. Hiltner, J.M. Anderson, "Biodegradation Mechanisms of Polyurethane Elastomers," *Corrosion Engineering Science and Technology,* 42(4), 312-323 (2007).

10. **E. M. Christenson**, K.S. Anseth, J. van den Beucken, C.K. Chan, B. Ercan, John A. Jansen, C.T. Laurencin, W.J. Li, R. Murugan, L.S. Nair, S. Ramakrishna, R.S. Tuan, T.J. Webster, A.G. Mikos "Nanobiomaterial Applications in Orthopaedics," *J Orthop Res*, 25(1), 11-22 (2007).

9. **E. M. Christenson**, S. Patel, J.M. Anderson, A. Hiltner, "Enzymatic Degradation of Commercial Poly(ether urethane) and Poly(carbonate urethane) by Cholesterol Esterase," *Biomaterials*, 27, 2920-2926 (2006).
8. **E. M. Christenson**, J.M. Anderson, A. Hiltner, "Antioxidant Inhibition of Poly(carbonate urethane) In Vivo Biodegradation," *J Biomed Mater Res,* 76A, 480-490 (2006).
7. **E. M. Christenson**, J.M. Anderson, E. Baer, A. Hiltner, "Relationship between Nanoscale Deformation Process and Elastic Behavior of Polyurethane Elastomers," *Polymer*, 46, 11744-11754 (2005).
6. **E. M. Christenson**, M. Dadsetan, J.M. Anderson, A. Hiltner, "Biostability and Macrophage-Mediated Foreign Body Response of Silicone-Modified Polyurethanes," *J Biomed Mater Res*, 74A, 141-155 (2005).
5. **E. M. Christenson**, M.J. Wiggins, J.M. Anderson, A. Hiltner, "Surface Modification of Poly(ether urethane urea) with Modified Dehydroepiandrosterone for Improved In Vivo Biostability," *J Biomed Mater Res*, 73A, 108-115 (2005).
4. **E. M. Christenson**, J.M. Anderson, A. Hiltner, "Oxidative Mechanisms of Poly(carbonate urethane) and Poly(ether urethane) Biodegradation: In Vivo and In Vitro Correlations," *J Biomed Mater Res*, 70A, 245-255 (2004).
3. **E. M. Christenson**, M.J. Wiggins, M. Dadsetan, J.M. Anderson, A. Hiltner, "Poly(carbonate urethane) and Poly(ether urethane) Biodegradation: In Vivo Studies," *J Biomed Mater Res*, 69A, 407-416 (2004).
2. M. Dadsetan, **E.M. Christenson**, F. Unger, M. Ausborn, T. Kissel, A. Hiltner, J.M. Anderson, "In Vivo Biocompatibility and Biodegradation of Poly(ethylene carbonate)," *J Control Release*, 93, 259-270(2003).
1. W. G. Brodbeck, J. Patel, G. Voskerician, **E. M. Christenson**, M. S. Shive, Y. Nakayama, T. Matsuda, N. P. Ziats, J. M. Anderson, "Biomaterial Adherent Macrophage Apoptosis is Increased by Hydrophilic and Anionic Substrates *In Vivo*," *Proc Natl Acad Sci USA,* 99, 10287-10292 (2002).

REFEREED CONFERENCE PROCEEDINGS

148. A. Hicks, K. Wilson, V. Kotamreddy, H. Nguyen, C. Roberts, M. Grunlan, J. Hakim, **E. Cosgriff-Hernandez**, "Design of a Self-Fitting Vaginal Stent to Prevent Post-Radiation Stenosis" 36th Annual BioInterface Workshop & Symposium, Salt Lake City, UT, October 2026.

147. A. Hohn, M. John, M. Razavi, **E. Cosgriff-Hernandez**, "Electrical Stability of an Injectable Hydrogel Electrode to Treat Ventricular Arrhythmias", 36th Annual BioInterface Workshop and Symposium, Salt Lake City, UT, October 5-8, 2026

146. A. Budhwani, A. Thoppay, J. Allen, **E. Cosgriff-Hernandez**, "Integrating Sex as a Biological Variable in Cardiovascular Material Design," 36th Annual BioInterface Workshop and Symposium, Salt Lake City, UT, October 5-8, 2026

145. D. Bashe, A. Duvvada, O. Jalife, B. Venkat, M. John, D. Bernard, L. Jaworski, M. Razavi, A. Post, **E. Cosgriff-Hernandez**, "Design of a Conductive Hydrogel Coating to Improve Tissue Contact in Radiofrequency Ablation," 36th Annual BioInterface Workshop & Symposium, Salt Lake City, UT, October 5-8, 2026.

144. M. Laude, S. Jones, Z. Oyebanji, R. Birur, A. Luengo Martinez, I. Gilbert, P. Baek, N. Longbottom, N. McCullough, S. Horn, C. Lin, M. Lohr, F. Clubb, M. Rausch, **E. Cosgriff-Hernandez**, "Co-Electrospinning of a Multifunctional Bone Wrap from Polycaprolactone and Decellularized Tissue," Society For Biomaterials 2026 Annual Meeting & Exposition, Atlanta, GA, March 25-28, 2026.

143. D. Bashe, A. Duvvada, O. Jalife, B. Venkat, M. John, D. Bernard, L. Jaworski, M. Razavi, A. Post, **E. Cosgriff-Hernandez**, "Design of a Durable Hydrogel Coating to Improve Tissue Contact in Radiofrequency Ablation" Society for Biomaterials Annual Meeting & Exposition, Atlanta, GA, March 25-28, 2026.

142. V. Zacher, S. Karnik, S. Bhat, M. Prejean, A. Robinson, A. Nkansah, **E. Cosgriff-Hernandez**, L. Dasi, "Hydrogel Electrospun Composite Material for TAVR Applications" Heart Valve Society 2026 Annual Meeting, Chicago, IL, April 15-18, 2026.

141. M. Prejean, A. Robinson, D. Jiang, A. Nkansah, J. Herrera, J. Leung, M. Laude, J. Craig, L. Guo, L. Timmins, E. Elgalad, **E. Cosgriff-Hernandez**, "Engineering a Coil-Reinforced Multilayer Vascular Graft to Balance Compliance and Kink Resistance" Society For Biomaterials 2026 Annual Meeting & Exposition, Atlanta, GA, March 25-28, 2026.

141. M. Laude, S.Jones, J. Saani, **E. Cosgriff-Hernandez**, "Electrospinning of Industrial-Grade Extracellular Matrix-Based Materials from Decellularized Tissue: Demonstrating Versatility of Suspension-Based Electrospinning," 35th Annual BioInterface Workshop & Symposium, Tempe, AZ, 30 September 2025.

140. A. Budhwani, A. Nkansah, N. Grammer, N. Ang, A. Fairley, J. Allen, **E. Cosgriff-Hernandez**, "Characterization of Sex-Based Differences in Integrin-Mediated Endothelialization on Bioactive PEGDA Hydrogels" 2025 Annual TERMIS Americas Conference and Exhibition, Detroit, MI, November 9 -12, 2025.

139. A. Nkansah, A. Fairley, N. Ang, M. Laude, A. Robinson, **E. Cosgriff-Hernandez**, "Multilayer Vascular Grafts with Integrin Targeting for Sustained Thromboresistance" 35th Annual BioInterface Workshop & Symposium, Phoenix, AZ, September 30–October 2, 2025.

138. A. Hicks, K. Wilson, V. Kotamreddy, H. Nguyen, C. Roberts, M. Grunlan, J. Hakim, **E. Cosgriff-Hernandez,** "Design of a Self-Fitting Vaginal Stent to Prevent Post-Radiation Stenosis" 35th Annual BioInterface Workshop & Symposium, Phoenix, AZ, September 30-October 2, 2025.

137. A. Hicks, K. Wilson, V. Kotamreddy, N. Grammer, T. Sullivan, C. Roberts, M. Grunlan, J. Hakim, **E. Cosgriff-Hernandez**, "Design of Self-fitting Vaginal Stents to Balance Retention and Ease of Removal," Society for Biomaterials Annual Meeting, Chicago, IL, April 9-11, 2025.

136. D. Bashe, A. Duvvada, M. John, D. Bernard, L. Jaworski, M. Razavi, A. Post, **E. Cosgriff-Hernandez**, "Hydrogel-Mediated Ablation to Improve Safety and Efficacy of Arrhythmia Treatment" Society for Biomaterials Annual Meeting, Chicago, IL, April 9-12, 2025.

135. A. Nkansah, A. Budhwani, N. Grammer, N. Ang, J. Allen, **E. Cosgriff-Hernandez**, "Characterization of Sex-Based Differences in Integrin-Mediated Endothelial Cell Adhesion and Phenotype" Society for Biomaterials Annual Meeting, Chicago, IL, April 9–12, 2025.

134. S. Jones, I. Gilbert, A. Luengo Martinez, P. Baek, R. Birur, Z. Oyebanji, S. McBride-Gagyi, **E. Cosgriff-Hernandez**, "A Multifunctional Electrospun Wrap to Treat Infection and Enhance Bone Regeneration." 34th Annual BioInterface Workshop & Symposium. Minneapolis, MN, October 2-4, 2024.

133. A. Hicks., K. Wilson, V. Kotamreddy, N. Grammer, J. Hakim, **E. Cosgriff-Hernandez,** "Development of a Benchtop Pelvic Model for Iterative Design of a Self-Fitting Vaginal Stent," Society for Biomaterials Southwest Symposium, Austin, TX, September 19-20, 2024.

132. D. Bashe, A. Nkansah, F. Xu, T. Larue, M. Rausch, **E. Cosgriff-Hernandez,** "Fatigue Testing of Hydrogel Electrodes for Treatment of Ventricular Arrhythmia," Society for Biomaterials Southwest Symposium, Austin, TX, September 19-20, 2024.

131. A. Fairley, A. Nkansah, **E. Cosgriff-Hernandez,** "Tuning Hydrogel Chemistry for Damage Resistant Networks," Society for Biomaterials Southwest Symposium, Austin, TX, September 19-20, 2024.

130. N. Ang, Z. Lan, A. Fletcher, **E. Cosgriff-Hernandez**, "Efficacy of Gallium Maltolate in Treatment of Chronic Wound Infections," Society for Biomaterials Southwest Symposium, Austin, TX, September 19-20, 2024.

129. I. Gilbert, S. Jones, P. Baek, **E. Cosgriff-Hernandez,** "Electrospun Fiber Meshes to Improve Durability of the Induced Membrane and Enhance Bone Regeneration," Society for Biomaterials Southwest Symposium, Austin, TX, September 19-20, 2024.

128. A. Luengo Martinez, S. Jones, Z. Oyebanji, **E. Cosgriff-Hernandez,** "Co-Electrospinning a Multifunctional Wrap to Treat Infection and Improve Bone Regeneration," Society for Biomaterials Southwest Symposium, Austin, TX, September 19-20, 2024.

127. J. Leung, A. Robinson, J. Herrera Duran, D. Jiang, A. Nkansah, L. Timmins, **E. Cosgriff-Hernandez**, "Development Of A High Compliance Vascular Graft With Improved Kink Resistance" Society for Biomaterials Southwest Symposium, Austin, TX, September 19-20, 2024.

126. L. Guo, Z. Lan, E. Shoga, R. Grissom, **E. Cosgriff-Hernandez,** "Fabrication and Characterization of Polymeric Microspheres Delivering Antimicrobial Agents," Society for Biomaterials Southwest Symposium, Austin, TX, September 19-20, 2024.

125. S. Jones, A. Luengo Martinez, S. VandenHeyvekm R. Birur, E. Burgeson, S. Raghavan, S. Rogers, **E. Cosgriff-Hernandez** "Suspension Electrospinning of Decellularized Extracellular Matrix: A New Approach to Retain Bioactivity," Society for Biomaterials Southwest Symposium, Austin, TX, September 19-20, 2024.

124. A. Robinson, D. Jiang, A. Nkansah, J. Herrera Duran, J. Leung, L. Guo, J. Craig, L. Timmins, E. Cosgriff-Hernandez "Model-directed Design of a High Compliance Vascular Graft with Improved Kink Resistance," Society for Biomaterials Southwest Symposium, Austin, TX, September 19-20, 2024.

123. A. Nkansah, N. Ang, A. Robinson, E. Cosgriff-Hernandez "Integrin-Targeting Multilayer Vascular Grafts for Sustained Thromboresistance," Society for Biomaterials Southwest Symposium, Austin, TX, September 19-20, 2024.

122. E. Cosgriff-Hernandez, Z. Lan, "Multifunctional hydrogel foam wound dressings integrating moisture balance, infection control, and bioactive factors," American Chemical Society Fall 2024 National Meeting, Denver, August 18-22, 2024.

121. S. Jones, A. Luengo Martinez, S. VandenHeuvel, E. Burgeson, S. Raghavan, S. Rogers, **E. Cosgriff-Hernandez**, "Suspension Electrospinning of Decellularized Extracellular Matrix: A New Approach to Retain Bioactivity." Tissue Engineering and Regenerative Medicine International Society 2024 World Congress. Seattle, WA. 2024.

120. E. Cosgriff-Hernandez, A. Hicks, C. Roberts, M. Rausch, M. Grunlan, J. Hakim, E "Self-fitting Vaginal Stent Based on Shape Memory Foams", World Biomaterials Congress, Daegu, Korea, May 26-31, 2024.

119. A. Hicks, A. Veyssi, C. Roberts, M. Grunlan, J. Hakim, **E. Cosgriff-Hernandez** "Initiation Strategies to Improve Uniformity of Shape Memory Foams for Self-fitting Vaginal Stent", Society for Biomaterials Annual Meeting, San Diego, CA, April 19-22, 2023.

118. M. Green, T. Sullivan, **E. Cosgriff-Hernandez**, "Development of a Decellularized Bone Model to Test Efficacy of a Hydrogel Cell Carrier for HSC Transplantation." Society for Biomaterials Annual Meeting, San Diego, CA, April 19-22, 2023.

117. S. Jones, D. Donehoo, S. Raghavan, **E. Cosgriff-Hernandez**, "Electrospinning of Decellularized Tissue to Harness its Angiogenic and Immunoregulatory Bioactivity." Society for Biomaterials Annual Meeting, San Diego, CA, April 19-22, 2023.

116. Z. Lan, S. Jones, R. Kar, M. Chwatko, E. Shoga, **E. Cosgriff-Hernandez**, "A Hydrogel Foam Dressing with Self-Tuning Moisture Balance to Improve Chronic Wound Healing." Society for Biomaterials Annual Meeting, San Diego, CA, April 19-22, 2023.

115. E. Cosgriff-Hernandez, Y. Christenson, "Freedom-to-Fail Culture Drives Innovation in Polymer Research," American Chemical Society Fall 2022 National Meeting, Chicago, August 21-25, 2022.

114. S. Jones, T. Buie, A. Balakrishnan, E. He, J. Wenke, E. Cosgriff-Hernandez, "A Multifunctional Electrospun Wrap to Treat Infection and Enhance Bone Regeneration." Society for Biomaterials Annual Meeting, Baltimore, MD, April 26-30, 2022.

113. Z. Lan, R. Kar, E. Shoga, T. Buie, C. Whitfield-Cargile, E. Cosgriff-Hernandez, "A Hydrogel-Based Foam Dressing Controls Wound Infection and Provides Self-tuning Moisture Balance." Society for Biomaterials Annual Meeting, Baltimore, MD, April 26-30, 2022.

112. D. Jenkins, P. Dhavalikar, K. Salhadar, N. Rosen, A. Kannapiran, M. Silverstein, E. Cosgriff-Hernandez, "In Situ Surface Modification of Emulsion Templated Bone Grafts with Hydroxyapatite Nanoparticles Improves Cell Adhesion." Society for Biomaterials Annual Meeting, Baltimore, MD, April 26-30, 2022.

111. D. Jenkins, P. Dhavalikar, A. Kannapiran, S. Balaji, E. Cosgriff-Hernandez, "In Vivo Evaluation of Cell-Releasing Hydrogel in 3D-Printed PolyHIPE Scaffolds" Society for Biomaterials Annual Meeting, Baltimore, MD, April 26-30, 2022.

110. A. Robinson, S. Bhat, S. Jones, M. Wancura, M. Sacks, L. Dasi, E. Cosgriff-Hernandez, "Evaluation of a Hydrogel-Coated Electrospun Mesh as a Synthetic Heart Valve." Society for Biomaterials Annual Meeting, Baltimore, MD, April 26-30, 2022.

109. A. Nkansah, M. Wancura, A. Robinson, E. Cosgriff-Hernandez, "Control of Redox Diffusion-Mediated Crosslinking for Conformable Hydrogel Coatings". Society for Biomaterials Annual Meeting. Baltimore, MD, April 26-30, 2022.

108. M. Wancura, A. Nkansah, A. Robinson, E. Cosgriff-Hernandez, "Interpenetrating Network Hydrogel Coatings for Cardiovascular Applications". Society for Biomaterials Annual Meeting, Baltimore, MD, April 26-30, 2022.

107. O. Lanier, M. Green, E. Cosgriff-Hernandez, "10 Simple Rules in Biomedical Research Design to Ensure Health and Healthcare Equity." Society for Biomaterials Annual Meeting, Baltimore, MD, April 26-30, 2022.

106. M. Green, D. Jenkins, G. Rodriguez-Rivera, E. Cosgriff-Hernandez, "Design of Injectable Hydrogel Carrier to Improve Bone Marrow Transplantation for Sickle Cell Disease." Society for Biomaterials Annual Meeting, Baltimore, MD, April 26-30, 2022.

105. A. Kamatar, A. Robinson, C. Roberts, F. Beltran, J. McCracken, M. Grunlan, J. Hakim, **E. Cosgriff-Hernandez**, "Self-fitting Vaginal Stents from Biodegradable, Shape Memory Polymers." Society for Biomaterials Annual Meeting, Baltimore, MD, April 26-30, 2022.

104. S. Motiwale, M. Russell, M. Wancura, A. Robinson, **E. Cosgriff-Hernandez,** M. Sacks, "Mechanical Performance of a Hydrogel-Fiber Mesh Composite as a Synthetic Heart Valve Material," Society for Biomaterials Annual Meeting. Virtual, April 21-24, 2021.

103. D. Jenkins, **E. Cosgriff-Hernandez**, "Development of PolyHIPE Autograft Extenders for Improved Bone Regeneration." Society for Biomaterials Annual Meeting. Virtual, April 21-24, 2021.

102. G.J. Rodriguez-Rivera, M. Chwatko, A. Post, M. John, S. Buchan, C. Waldron, M. Razavi, **E. Cosgriff-Hernandez**, "Injectable hydrogel electrodes for treatment of ventricular arrhythmias." Society for Biomaterials Annual Meeting. Virtual, April 21-24, 2021.

101. A. Robinson, D. Jiang, L. Timmins, **E. Cosgriff-Hernandez**, "Model-Directed Design of Kink Resistant Vascular Grafts with High Compliance." Society for Biomaterials Annual Meeting. Virtual, April 21-24, 2021.

100. A. Robinson, F. Beltran, M. Wancura, J. McCracken, M. Grunlan, J. Hakim, **E. Cosgriff-Hernandez**, "Resorbable, Shape Memory Stents to Improve Vaginal Wound Healing." Biomedical Engineering Society Annual Meeting. Virtual, October 14-17, 2020.

99. E. Cosgriff-Hernandez, "Integrin-targeting Materials in Regenerative Medicine," 2020 Virtual AIChE® Annual Meeting, November 15-20, 2020.

98. E. Cosgriff-Hernandez, P. Dhavalikar, "Utility of a reactive diluent to increase pore size and cell infiltration in polyHIPE bone grafts," ACS Fall 2020 Virtual Meeting & Expo, August 17-20, 2020.

97. G. Rodriguez-Rivera, M. Chwatko, A. Post, M. John, C. Waldron, M. Razavi, **E. Cosgriff-Hernandez**, "Injectable Hydrogels to Restore Cardiac Conduction Across Scarred Myocardium", Cellular and Molecular Bioengineering (CMBE) Conference, Rio Grande, PR, January 2020.

96. E. Cosgriff-Hernandez, G. Rodriguez-Rivera, M. Chwatko, A. Post, M. John, M. Razavi, **"**Conductive Hydrogels with Rapid In Situ Cure to Improve Cardiac Pacing,"ACS Spring 2020 National Meeting, March 22-26, 2020.

95. E. Cosgriff-Hernandez, P. Dhavalikar, D. Jenkins, M. Silverstein, N. Rosen, **"**Hydroxyapatite Nanoparticle-stabilized polyHIPEs as Osteoinductive Bone Grafts,"ACS Spring 2020 National Meeting, March 22-26, 2020.

94. T. Buie, J. McCune, A. Kishan, **E. Cosgriff-Hernandez** "A multifunctional electrospun wrap to treat infection and enhance induced membrane formation in the Masquelet technique," 2019 Biointerface Annual Meeting, Park City, UT, September 3-6, 2019.

93. P. Dhavalikar, K. Salhadar, J. Shenoi, M. Whitely, N. Sears, **E. Cosgriff-Hernandez**, "Development of PolyHIPE Scaffolds for Improved Bone Regeneration." 2019 Biointerface Annual Meeting, Park City, UT, September 3-6, 2019.

92. M. Wancura, M. Talanker, S. Toubbeh, A. Bryan, **E. Cosgriff-Hernandez**, "Diffusion-Mediated Redox Initiation for Micro-Scale Conformable Hydrogel Coatings," Materials Research Society Spring Conference, Phoenix, AZ, 2019.

91. G.J. Rodriguez-Rivera, M. Whitley, C. Waldron, **E. Cosgriff-Hernandez**, "PolyHIPE Microspheres for Growth Factor Delivery from Bone Grafts." Ford Foundation Fellows Annual Conference 2018. Irvine, CA, October 18-20, 2018.

90. A. Khang, S. Wu, J. Carruth, W. Goth, J. Tunnell, **E. Cosgriff-Hernandez**, M. Sacks, "Characterization of Composite Electrospun-Hydrogel Materials for Prosthetic Heart Valves," 2018 Biomedical Engineering Society Annual Meeting, Atlanta, GA, October 17-20, 2018.

89. **E. Cosgriff-Hernandez**, A. Post, P. Dhavalikar, T. Wilems, Z. Lan, "Integrin-targeting materials in regenerative medicine," 256th ACS National Meeting, Boston, MA, August 19-23, 2018.

88. **E. Cosgriff-Hernandez**, M. Whitely, P. Dhavalikar, G. Rodriguez-Rivera, "Improved in situ seeding of 3D printed polyHIPEs using cell-releasing hydrogels," 256th ACS National Meeting, Boston, MA, August 19-23, 2018.

87. A. Post, P. Diaz-Rodriguez, S. Paulsen, J. Miller, M. Hahn, **E. Cosgriff-Hernandez**, "Elucidating the role of graft compliance mismatch in intimal hyperplasia using an ex vivo organ culture model." Society for Biomaterials Annual Meeting 2018. Atlanta, GA, April 11-14, 2018.

86. T. Walker, A. Kishan, T. Wilems, **E. Cosgriff-Hernandez**. " Development of a Multi-functional Wrap for Bone Allograft Revitalization", Society for Biomaterials 2018 Annual Meeting and Exposition, Atlanta, Georgia. April 11-14, 2018.

85. A. Kishan, T. Walker, N. Sears, T. Wilems, **E. Cosgriff-Hernandez**. " Development of a Bi-Modal, In-situ Crosslinking Method to Achieve Multi-factor Release from Electrospun Gelatin", Society for Biomaterials 2018 Annual Meeting and Exposition, Atlanta, Georgia. April 11-14, 2018.

84. P. Dhavalikar, M. Whitely, S. Cereceres, K. Kapilov-Buchman, T. Wilems, M. Silverstein, **E. Cosgriff-Hernandez**, "Improved hMSC Seeding and Surface Modification of 3D Printed Bone Grafts," Society of Biomaterials Conference Annual Meeting, Atlanta, GA, April 11-14, 2018.

83. **E Cosgriff-Hernandez**. "Emulsion inks for 3D printing tissue engineering scaffolds," Regenerative Medicine Workshop at Charleston. Charleston, SC, 2018.

82. S. Cereceres, T. Wilems, H. Greer, E. Alexander, C. Whitfield-Cargile, N. Cohen, **E Cosgriff-Hernandez**. "3D Printed Hydrogel Gauze with Antimicrobial Activity for Chronic Wound Treatment," 28th Annual BioInterface Workshop and Symposium. San Diego, CA. 2017.

81. A. Post, A. Kishan, E. Tuzun, M. Hahn, **E Cosgriff-Hernandez**. "Multi-layered vascular grafts with improved compliance matching and resistance to suture damage," 28th Annual BioInterface Workshop and Symposium. San Diego, CA. 2017.

80. A. Post, A. Kishan, M. Hahn, **E. Cosgrff-Hernandez**, "Multi-layered Vascular Grafts with Improved Compliance Matching and Suturability for Long Term Patency," Society for Biomaterials Annual Meeting, Minneapolis, MN, 2017.

79. A. Post, M. Moczygemba, **E Cosgriff-Hernandez**. "Elucidating endothelial cell hemostatic regulation by isolating integrin-mediated adhesion to bioactive hydrogels." Society for Biomaterials Annual Meeting 2017. Minneapolis, MN, April 4-8, 2017.

78. P. Diaz-Rodriguez, T. Graf, J. Diaz Quiroz, V. Guiza-Arguello, A. Kishan, A. Post, **E. Cosgriff-Hernandez**, M.S. Hahn. "Compliance-induced intimal hyperplasia using an ex vivo arterial culture system." TERMIS-AM Annual Meeting, Charlotte, NC, 2017.

77. P. Diaz-Rodriguez, T. Graft, J. Diaz Quiroz, V. Guiza-Arguello, A. Kishan, A. Post, **E. Cosgriff-Hernandez**, M.S. Hahn. "Compliance-induced intimal hyperplasia using an ex vivo arterial culture system." Biomedical Engineering Society Annual Meeting, Phoenix, AZ, 2017.

76. T. Walker, A. Kishan, **E. Cosgriff-Hernandez. "**A Co-electrospun Periosteum for Bone Regeneration," Tissue Engineering and Regenerative Medicine Annual Conference, San Diego, CA. December 11-14, 2016.

75. A. Kishan, A. Robbins, M. Moreno, **E. Cosgriff-Hernandez**. "Aligned electrospun grafts with gradient properties for spatial control over cellular behavior," Tissue Engineering and Regenerative Medicine Annual Conference. San Diego, CA. December 11-14, 2016.

74. P. Dhavalikar, M. Whitely, **E. Cosgriff-Hernandez**. "Surface Modification of PolyHIPE Grafts to Enhance Integrin-mediated Osteogenesis". Tissue Engineering and Regenerative Medicine Annual Conference. San Diego, CA. December 11-14, 2016.

73. D. Puperi, A. Kishan, Z. Punske, E. Cosgriff-Hernandez, J. West, K. J. Grande-Allen, "Electrospun polyurethane and hydrogel composite scaffolds for aortic valve tissue engineering," International Society for Applied Cardiovascular Biology Biennial Meeting, Banff, Alberta, Canada, September 7-10, 2016.

72. D. Puperi, A. Kishan, Z. Punske, E. Cosgriff-Hernandez, J. West, K. J. Grande-Allen, "Electrospun polyurethane and hydrogel composite scaffolds to study valve cell fibrotic response," Biomedical Engineering Society Annual Meeting, Minneapolis, MN, October 5-8, 2016.

71. **E. Cosgriff-Hernandez**, A. Kishan, A. Robbins, M. Jiang, V. Erel, M. Moreno, "Multivariate Scaffold Designs that Mimic the Complexity of Tissue Interfaces" Biomedical Engineering Society Annual Meeting, Minneapolis, MN, October 5-8, 2016.

70. M. Whitely, N. Sears, C. Dodson, S. Cereceres, **E. Cosgriff-Hernandez,** "Injectable foams for the delivery of autologous mesenchymal stem cells," 10th World Biomaterials Congress. Montreal, QC Canada. May 17-22, 2016.

69. S. Cereceres, T. Touchet, B. Russell, J. Rivera, M. Höök, **E. Cosgriff-Hernandez**. "Development of Bioactive Porous Hydrogel Foams for Enhanced Wound Healing," 10th World Biomaterials Congress. Montreal, QC Canada. May 17-22, 2016.

68. N. Sears, P. Dhavalikar, M. Whitely, **E. Cosgriff-Hernandez,** "Emulsion inks for 3D printing porous materials," 10th World Biomaterials Congress. Montreal, QC Canada. May 17-22, 2016.

67. A. Kishan, R. Calderon, T. Touchet, **E. Cosgriff-Hernandez,** "In-line blending of electrospun fibers to generate aligned grafts with gradient properties," 10th World Biomaterials Congress. Montreal, QC Canada. May 17-22, 2016.

66. E. Cosgriff-Hernandez, "Bioactive Hydrogels Based on Designer Collagens" Fall 2015 Materials Research Society Meeting, November 29- December 4, 2015.

65. E. Cosgriff-Hernandez, J. Robinson, R. Moglia, M. Whitely "Injectable, High Porosity Bone Grafts by Emulsion Templating" TERMIS World Congress, September 8-11, 2015

64. E. Cosgriff-Hernandez, "Solid Freeform Fabrication of High Porosity, Biodegradable Scaffolds using Cure-on-Dispense Technology" *BioInterface* Conference, Surfaces in Biomaterials Foundation; Scottsdale, AZ, September 21-23, 2015

63. E. Cosgriff-Hernandez, "Bioactive Hydrogels Based on Designer Collagens" Tissue Engineering and Regenerative Medicine International Society-North America Annual Conference, Washington, D.C., December 13-16, 2014

62. J. Robinson, M. Whitely, M. C. Stuebben, H. Pearce, M. A.P. McEnery, T. Touchet, E. Cosgriff-Hernandez, "Development of Injectable Foams for the Delivery of Autologous Mesenchymal Stem Cells," Tissue Engineering and Regenerative Medicine International Society-North America Annual Conference, Washington, D.C., December 13-16, 2014.

61. A. Kishan, T. Touchet, C. Whitfield, N. Cohen, **E. Cosgriff-Hernandez, "**Hydrogel-Electrospun Mesh Composite for Prevention of Anastomosis Leakage" *2015 Society for Biomaterials Annual Meeting,* Charlotte, NC, April 15-18, 2015

60. T. Touchet, A. Kishan, M. Detamore, **E. Cosgriff-Hernandez**, "Development of Biodegradable Polyurethane-ureas as Gradient Scaffolds for Ligament and Tendon Repair, "*2015 Society for Biomaterials Annual Meeting,*Charlotte, NC, April 15-18, 2015

59. T. Touchet, N. Sears, E. Tkatchouk, C. Jenney, **E. Cosgriff-Hernandez**, "High Temperature Aging of Polyurethanes in the Prediction of *In Vivo* Biostability, " *2015 Society for Biomaterials Annual Meeting,*Charlotte, NC, April 15-18, 2015

58. M. Whitely, R. Moglia, M. Brooks, J. Robinson, M. Pishko, E. Cosgriff-Hernandez, "Solvent-free fabrication of polyHIPE microspheres for controlled release of growth factors," *2014 Biomedical Engineering Society Annual Meeting*, San Antonio, TX, October 22-25, 2014.

57. N. Sears, J. Robinson, M. Whitely, **E. Cosgriff-Hernandez**, "Solid Freeform Fabrication of Biomaterials Scaffolds via Photopolymerization of High Internal Phase Emulsions" *2014 Biomedical Engineering Society Annual Meeting*, San Antonio, TX, October 22-25, 2014.

56. T. Landsman, T. Touchet, L.D. Nash, S.M. Hasan, C. Smith, B. Russell, J. Rivera, **E. Cosgriff-Hernandez**, D.J. Maitland, "Antibacterial Shape Memory Polymer Foam-Hydrogel Composite Wound Dressing" *BioInterface*, Surfaces in Biomaterials Foundation; Redwood City, CA, 2014

55. E. Cosgriff-Hernandez, J. Robinson, R. Moglia, M. Whitely, T. Touchet, "Injectable polyHIPE bone grafts with tunable degradation rate, porosity, and cure time," *248th ACS National Meeting*, San Francisco, CA, August 10-14, 2014.

54. M Brooks, R Moglia, M Whitely, J Robinson, and E Cosgriff-Hernandez. "Development of tunable polyHIPE microspheres for controlled drug release." *39th Annual Meeting of the Society for Biomaterials*, Denver, CO, April 16-19, 2014.

53. A. Kishan, J. Robinson, M.B. Browning, R. Moglia, E. Cosgriff-Hernandez, "Biomaterial Applications Database for Primary and Secondary Education," *2014 Annual Meeting of the Society For Biomaterials,* Denver, CO, April 16-19, 2014.

52. M. McEnery, J. Robinson, M. Stuebben, **E. Cosgriff-Hernandez**, "Osteoinductive Modification of Injectable, PolyHIPE Bone Grafts," *2014 Annual Meeting of the Society For Biomaterials* , Denver, CO, April 16-19, 2014.

51. C. Radzicki, R. Nezarati, **E. Cosgriff-Hernandez**, "Development of Co-Electrospun Scaffolds with Tunable Mechanical Properties and Bioactivity," *2014 Annual Meeting of the Society For Biomaterials*, Denver, CO, April 15-19, 2014.

50. S. Cereceres, M.B. Browning, B. Russell, J. Rivera, M. Höök, **E. Cosgriff-Hernandez**, "Manipulation of Designer Collagen Sequence to Enhance Cell Interactions with Bioactive Hydrogels," *2014 Annual Meeting of the Society For Biomaterials*, Denver, CO, April 15-19, 2014.

49. G. Gallagher, A. Padsalgikar, **E. Cosgriff-Hernandez**, L. Mellin, A. Norlin-Weissenrieder, J. Runt, "Limitations of Predicting In Vivo Biostability of Polydimethylsiloxane Based Polyurethanes using Time Temperature Superposition" *2014 Society For Biomaterials Annual Meeting,* Denver, CO, April 15-19, 2014.

48. T. Touchet, T. Landsman, D.J. Maitland, T.S. Wilson, E. Cosgriff-Hernandez, "Fabrication of hydrogel coated shape memory polymer composites as hemostatic sponges," *247th ACS National Meeting*, Dallas, TX, March 16-20, 2014.

47. M. Whitely, R. Moglia, P. Dhavilikar, H. Pearce, N. Cordner, E. Cosgriff-Hernandez, "Method of Fabricating Rapidly Curing PolyHIPEs at Low Temperatures," *247th ACS National Meeting*, Dallas, TX, March 16-20, 2013.

46. J. Robinson, R. Moglia, M. Stuebben, M. McEnery, **E. Cosgriff-Hernandez**, "Injectable Foams for the Delivery of Autologous Mesenchymal Stem Cells," *2013 Tissue Engineering and Regenerative Society-North America Annual Conference,* Atlanta, GA, November 10-13, 2013.

45. E. Cosgriff-Hernandez, B. Russell, P. Luong, M.B. Browning, A. Hocking, M. Höök **"**Chronic Wound Dressings Based on Collagen-mimetic Proteins," *2013 Tissue Engineering and Regenerative Medicine Society-North America Annual Conference*, Atlanta, GA, November 10-13, 2013.

44. S. Cereceres, M.B. Browning, P.T. Luong, **E. Cosgriff-Hernandez**, "Characterization of the In Vivo Degradation Mechanisms of PEGDA Hydrogels" *Biomedical Engineering Society Annual Meeting*, Seattle, Washington, September 25-28, 2013.

43. J. Robinson, R. Moglia, M. Stuebben, M. McEnery, **E. Cosgriff-Hernandez**, "Development of Interconnected PolyHIPEs for Injectable Bone Grafts," *2013 Society For Biomaterials Annual Meeting,* Boston, MA, April 10-13, 2013

42. R. Nezarati, C. Radzicki, **E. Cosgriff-Hernandez**, "Development of *In Situ* Crosslinked Electrospun Gelatin Scaffolds" *2013 Annual Meeting of the Society For Biomaterials*, Boston, MA, April 10-13, 2013.

41. P.T. Luong, M.B. Browning, R.S. Bixler, **E. Cosgriff-Hernandez**. "Processing and Storage Effects on Poly(ethylene glycol) Hydrogel Mechanical Properties and Bioactivity." *2013 Annual Meeting of the Society For Biomaterials*, Boston, MA, April 10-13, 2013.

40. M.B. Browning, B. Russell, J. Rivera, P.T. Luong, M. Höök, **E. Cosgriff-Hernandez**, "Manipulation of Protein Sequence and Functionalization to Enhance Cell Interactions with Bioactive Hydrogels," *2013 Annual Meeting of the Society For Biomaterials*, Boston, MA, April 10-13, 2013.

39. R. Moglia, J. Holm, S. Buffington, T. Touchet, **E. Cosgriff-Hernandez,** "Fabrication of Injectable and High Porosity PolyMIPE Scaffolds for Soft Tissue Regeneration," *245th ACS National Meeting*, New Orleans, LA, April 7-11, 2013.

38. E. Cosgriff-Hernandez, "Biomedical Applications of Emulsion Templating," *245th ACS National Meeting*, New Orleans, LA, April 7-11, 2013.

37. M.B. Browning, B. Russell, J. Rivera, M. Höök, **E. Cosgriff-Hernandez**, "Utilization of Protein Functionalization to Improve EC Adhesion to Collagen-Mimetic Hydrogels," *2012 Fall Symposium for the Society for Biomaterials*, New Orleans, LA, October 4-6, 2012.

36. N. Sears, M. Hasan, G. Pena-Galea, **E. Cosgriff-Hernandez "**Collagenase Sensitive Polyurea Elastomers: Effect of Chain extender on System Gellation," *2012 Fall Symposium for the Society for Biomaterials*, New Orleans, LA, October 4-6, 2012.

35. R.M. Nezarati, D.K. Dempsey, M.B. Browning, **E. Cosgriff-Hernandez**, "Modulating the Mechanical Properties of an Electrospun Vascular Graft," *2011 Tissue Engineering and Regenerative Medicine Society-North America Annual Conference*, Houston, TX, December 11-14, 2011.

34. J. Holm, R. Moglia, S. Buffington, D. Munoz-Pinto, M. Hahn, **E. Cosgriff-Hernandez**, "High Porosity PolyHIPEs as Injectable Bone Grafts," *2011 Biomedical Engineering Society Annual Meeting*, Hartford, CT, October 12-15, 2011.

33. E. Cosgriff-Hernandez, "Development of Injectable PolyHIPEs as High Porosity Bone Grafts," *242nd ACS National Meeting*, Denver, Colorado, August 28 to September 1, 2011.

32. E. Cosgriff-Hernandez, **"**Fabrication of 3D Matrices for Tissue Regeneration," *4th International Conference on Tissue Engineering*, Crete, Greece May 31-June 5, 2011.

31. E. Cosgriff-Hernandez, M. Hahn, M.B. Browning, D. Dempsey, V. Guiza, J. Rivera, M. Höök, B. Russell, F. Clubb, M. Miller, T. Fossum, **"**Multilayer Vascular Grafts Based on Collagen-Mimetic Hydrogels," *35th Annual Meeting of the Society for Biomaterials*, Orlando, FL, April 13-16, 2011.

30. R.S. Moglia, N.A. Sears, H.A. Benhardt, **E.M. Cosgriff-Hernandez**, "Injectable PolyHIPEs as High Porosity Bone Grafts," 2010 *AIChE Annual Meeting*, Salt Lake City, UT, November 7-12, 2010.

29. D. Munoz-Pinto, B. Wang, M.B. Browning, **E. M. Cosgriff-Hernandez**, B. Russell, M. Hook, M. S. Hahn, "Bioactive Hydrogels Based on Collagen-mimetic Proteins," 2010 *AIChE Annual Meeting*, Salt Lake City, UT, November 7-12, 2010.

28. T.Touchet, H.A. Benhardt, E. Cosgriff-Hernandez, "Synthesis of Collagenase-Sensitive Polyureas for Ligament Tissue Engineering," *2010 Biomedical Engineering Society Annual Meeting*, Austin, TX, October 6-9, 2010.

27. C. J. Wilson, R. Moglia**, E. Cosgriff-Hernandez,** "Synthesis of a Biodegradable Methacrylated Ester for Bone Graft Fabrication," *2010 Biomedical Engineering Society Annual Meeting*, Austin, TX, October 6-9, 2010.

26. M.B. Browning, D.K. Dempsey, **E.M. Cosgriff-Hernandez**, "Reinforcing PEG Hydrogels with an Electrospun Mesh Sleeve to Form a Multilayer TEVG," *2010 Biomedical Engineering Society Annual Meeting*, Austin, TX, October 6-9, 2010.

25. D.K. Dempsey, A.F. Haque, R.S. Ward, A.V. Iyer, J.P. Parakka, **E.M. Cosgriff-Hernandez**, "In vitro biodegradation of a novel poly(ester urethane)," *2010 Biomedical Engineering Society Annual Meeting*, Austin, TX, October 6-9, 2010.

24. T.S. Wilems, M.B. Browning, M. Hahn, D. Munoz-Pinto, J. Rivera, M. Höök, B. Russell, **E. M. Cosgriff-Hernandez**, "Incorporation of Collagen-Mimetic Proteins into Bioactive Hydrogels," *34th Annual Meeting of the Society for Biomaterials*, Seattle, WA, April 21-24, 2010.

23. M.B. Browning, T.S. Wilems, M. Hahn, **E. M. Cosgriff-Hernandez**, "Decoupling PEG Hydrogel Mesh Size and Modulus with the Integration of 4-armed PEG," *34th Annual Meeting of the Society for Biomaterials*, Seattle, WA, April 21-24, 2010.

22. N. A. Sears, R. Moglia, H. Benhardt, **E. M. Cosgriff-Hernandez**, "High Porosity Tissue Engineering Scaffolds by Emulstion Templating for Use as Bone Grafts," *34th Annual Meeting of the Society for Biomaterials*, Seattle, WA, April 21-24, 2010.

21. D. Dempsey, C. Schwartz, R. Ward, A. Iyer, J. Parakka, **E. M. Cosgriff-Hernandez**, "Micropatterning of Electrospun Polyurethane Fibers through Control of Surface Topography," *34th Annual Meeting of the Society for Biomaterials*, Seattle, WA, April 21-24, 2010.

20. D. J. Munoz-Pinto, B. Wang, T. Wilems**, M. Browning*, **E. Cosgriff-Hernandez**, B. Russell, J. Rivera, M. Hook, M. S.Hahn "Bioactive Hydrogels based on Collagen-Mimetic Proteins for Controlled MSC Differentiation," *34th Annual Meeting of the Society for Biomaterials*, Seattle, WA, April 21-24, 2010.

19. J.M. Anderson, B. Jao, **E. Cosgriff-Hernandez**, "Cardiovascular Biomaterials and Polyurethanes: Issues and Perspectives," *34th Annual Meeting of the Society for Biomaterials*, Seattle, WA, April 21-24, 2010.

18. **E. M. Cosgriff-Hernandez,** N.A. Sears, H. A. Benhardt, "High Porosity Bone Scaffolds by Emulsion Templating," *238th American Chemical Society National Meeting***,** Washington, DC, August 16-20, 2009.

17. H. A. Benhardt, T.S. Wilems, **E. M. Cosgriff-Hernandez**, "Cell-Responsive Polyurethanes: Synthesis of Peptide-Based Polyol Soft Segments," *33rd Annual Meeting of the Society for Biomaterials*, San Antonio, Texas, April 22-25, 2009.

16. **E. M. Cosgriff-Hernandez,** T. S. Wilems, N. A. Sears, "Peptide-based Polyurethane Elastomers as Tissue Engineering Scaffolds," *Materials Research Society Meetin*g, Boston, Massachusetts, November 1-5, 2008.

15. **E. M. Christenson**, presenting author, "High Porosity Tissue Engineering Scaffolds by Emulsion Templating," *32nd Annual Meeting of the Society for Biomaterials*, Chicago, Illinois, April 18 - 21, 2007.

14. **E. M. Christenson,** presenting author, "Biodegradable PolyHIPEs as Tissue Engineering Scaffolds for Craniofacial Tissue Engineering," *IADR 85th General Session and Exhibition*, New Orleans, Louisiana, March 21-24, 2007.

13. **E. M. Christenson**, presenting author, "Biodegradable Fumarate-based PolyHIPEs as Tissue Engineering Scaffolds," *53rd Orthopaedic Research Society Meeting*, San Diego, California, February 11-14, 2007.

12. **E. M. Christenson**, presenting author, "Biodegradable Fumarate-based PolyHIPEs as Tissue Engineering Scaffolds," *AIChE Annual Meeting*, San Francisco, California, November 12-17, 2006.

11. **E. M. Christenson**, presenting author, "Biostability and Macrophage-Mediated Foreign Body Response of Silicone-Modified Polyurethanes," *30th Annual Meeting of the Society for Biomaterials*, Memphis Tennessee, April 27-30, 2005. (Student Award in the Graduate Degree Category)

10. **E. M. Christenson**, presenting author, "Oxidative biodegradation of poly(carbonate urethanes) and poly(ether urethane)," *Annual CAPRI Symposium*, Case Western Reserve University, June 2, 2004.

9. **E. M. Christenson**, presenting author, "Biostability of Polyurethane Elastomers: Effect of fatigue, polyol type and molecular weight," *Annual CAPRI Symposium*, Case Western Reserve University, June 2, 2004.

8. **E. M. Christenson**, presenting author, "The Effect of Material Surface Chemistry on the Macrophage-Mediated Foreign Body Response," *7th World Biomaterial Congress*, Sidney, Australia, May 17-21, 2004.

7. **E. M. Christenson**, presenting author, "Biostability of Silicone-Modified Poly(carbonate urethane)," *7th World Biomaterial Congress*, Sidney, Australia, May 17-21, 2004.

6. **E. M. Christenson**, presenting author, "Oxidative Biodegradation of Poly(carbonate urethane): *In Vivo* and *In Vitro* Correlations," *7th World Biomaterial Congress*, Sidney, Australia, May 17-21, 2004.

5. **E. M. Christenson**, presenting author, "Biostability of Poly(ether urethane urea) Containing Modified Dehydroepiandrosterone," *7th World Biomaterial Congress*, Sidney, Australia, May 17-21, 2004.

4. **E. M. Christenson**, presenting author, "Nanophase Morphology and Deformation Mechanisms of Poly(ether urethane) Elastomers," *Annual CAPRI Symposium*, Case Western Reserve University, May 28, 2003.

3. **E. M. Christenson**, presenting author, "Effect of Silicone-Modification on the Phase Morphology and Biostability of Poly(ether urethanes)," *Annual CAPRI Symposium*, Case Western Reserve University, May 29, 2002.

2. **E. M. Christenson**, presenting author, "Effect of Silicone-Modification on the Phase Morphology and Biostability of Poly(ether urethanes)," *28th Annual Meeting of the Society for Biomaterials*, Tampa, Florida, April 24-29, 2002.

1. **E. M. Christenson**, presenting author, "Inhibition of *in vivo* Inflammatory Cell Adhesion by Surface-Modifying End Groups," *27th Annual Meeting of the Society for Biomaterials*, St. Paul, Minnesota, April 24-29, 2001.

III. INVITED TALKS/SEMINARS

99. A Self-Fitting Vaginal Stent for Improved Management of Vaginal Stenosis
TERMIS-AP 2026 Conference, October 2026

98. Engineering Conductive Hydrogels to Transform Cardiac Rhythm Management
Purdue University, October 2026

97. Hierarchical design of a self-fitting vaginal stent based on shape memory foam
ACS Fall 2026 National Meeting, August 2026

96. From native tissue to engineered scaffold: Advanced manufacturing of decellularized tissue
ACS Fall 2026 National Meeting, August 2026
95. From Adhesion to Action: Engineering Cell Behavior with Integrin-Targeting Biomaterials
2026 Signal Transduction by Engineered Extracellular Matrices Gordon Research Conference, June 2026
94. Design, Tune, Regenerate: Next-Gen Polymeric Scaffolds for Tissue Engineering
American Physics Society, 2026 DPOLY Short Course: Polymers in Biotechnology, March 2026
93. Reconnecting Bioengineering to the Community Through Patient-Forward Design
2026 BMES CMBE Conference, January 2026
92. Design of a self-fitting vaginal stent based on shape memory foam
International Chemical Congress of Pacific Basin Societies, December 2025
91. Engineering Solutions to Women's Health
Arizona State University, October 2025
90. Design of a self-fitting vaginal stent based on shape memory foam
Biointerface Conference, October 2025
89. My faculty odyssey: A polymer love story
ACS Fall 2025 National Meeting, August 2025
88. Co-electrospinning extracellular matrix with polycaprolactone enables a modular approach to balance bioactivity and mechanics of a multifunctional bone wrap
ACS Fall 2025 National Meeting, August 2025
87. Advances in Cardiac Rhythm Management with Conductive Hydrogels
28th Annual TechConnect World Innovation Conference, June 2025
86. Science for Everyone: Building Bridges Between the Lab and the Public
TERMIS-AM 2025 Annual Conference, November 2025
85. Scaffold Design for Musculoskeletal Tissue Engineering
Advances in Tissue Engineering, August 2025
84. Suspension electrospinning of decellularized extracellular matrix: A new approach to retain bioactivity
8th International Conference on Tissue Engineering, May 2025
83. Engineering Solutions to Women's Health
University of California San Diego, January 2025
82. Applications of conductive hydrogels in cardiac rhythm management
University of California Santa Barbara, January 2025
81. Electrifying Heart Health: Breakthroughs in Cardiac Rhythm Management with Conductive Hydrogels
University of North Caroline, September 2024
80. Multifunctional Hydrogel Foam Wound Dressings
ACS Fall 2024 National Meeting, August 2024
79. My Faculty Odyssey: A Polymer Love Story
University of Florida, January 2024
78. Polymer Strategies in Musculoskeletal Tissue Engineering
2023 MRS Fall Meeting, December 2023
77. Injectable Hydrogel Electrodes as Conduction Highways to Restore Native Pacing
Terasaki Institute, September 2023
76. Point / Counterpoint: Synthetic Arterial Grafts Have Peaked
BioInterface Conference, September 2023
75. Integrin-Targeting Hydrogels to Promote Endotheliazation of Vascular Grafts
BioInterface Conference, September 2023
74. Applications of conductive hydrogels in cardiac rhythm management
ACS Fall 2023 National Meeting, August 2023
73. Emulsion Inks for 3D Printing Bone Grafts
Advances in Tissue Engineering, August 2023
72. Injectable Hydrogel Electrodes to Prevent Ventricular Arrhythmias
University of Illinois Urbana-Champaign, May 2023
71. Exploring Healthcare Disparities and Solutions-Driven Approaches in TERM
TERMIS-AM 2023 Annual Conference, April 2023
70. A users guide to degradation testing of resorbable polymers: From in vitro to in vivo studies
Society of Toxicology Meeting, March 2023
69. Injectable Hydrogel Electrodes to Prevent Ventricular Arrhythmias
Worcester Polytechnic Institute, February 2023
68. Injectable Hydrogel Electrodes to Prevent Ventricular Arrhythmias
Arizona State University, February 2023
67. Design of PEG-based Hydrogels for Biostable and Resorbable Applications

BioInterface Conference, September 2022

66. **Freedom-to-fail culture drives innovation in polymer research**
ACS Fall 2022 National Meeting, August 2022
65. **Injectable PolyHIPEs with high porosity as an autograft extender**
ACS Fall 2022 National Meeting, August 2022
64. **Polymer Strategies to Enhance Bone Regeneration**
Regenerative Medicine Essentials Course and World Stem Cell Summit, June 2022
63. **Engineered matrices to improve bone regeneration with the Masquelet Technique**
7th International Conference on Tissue Engineering, May 2022
62. **Keynote: Towards prevention of arrhythmias: Injectable hydrogel electrodes enable direct capture of inaccessible cardiac tissues** ACS Spring 2022 National Meeting, March 2022
61. **Tough Hydrogel Coatings via Diffusion-Mediated Redox Polymerization**
2021 MRS Fall Meeting and Exhibit, November 2021
60. **Strategic Biomimicry in Medical Device Design**
Macromex 2021, November 2021
59. **Model-directed Design of Tissue Engineering Scaffolds**
Tissue Engineering Next Generation, September 22 & 23, 2021
58. **Emulsion Inks for 3D Printing Bone Grafts**
Advances in Tissue Engineering, August 2021
57. **Strategic Biomimicry in Tissue Engineering**
Tissue Talks, June 2021
56. **Strategic Biomimicry in Biomaterial Design**
Society of Plastics Engineers, May 2021
55. **Emulsion Inks for 3D Printing of Tissue Grafts**
Design of Medical Devices Conference, April 12, 2021
54. **Integrin-targeting Materials in Regenerative Medicine**
2020 Virtual AIChE® Annual Meeting, November 15-20, 2020
53. **Engineered Matrices to Improve Bone Regeneration with the Masquelet Technique**
BioInterface 2020 Virtual Workshop & Symposium, October 23, 2020
52. **Emulsion Inks for 3D Printing of Tissue Grafts**
University of Virginia Center for Advanced Biomanufacturing, August 4, 2020
51. **Utility of a reactive diluent to increase pore size and cell infiltration in polyHIPE bone grafts**
ACS Fall 2020 Virtual Meeting & Expo, August 17-20, 2020
50. **Conductive Hydrogels with Rapid In Situ Cure to Improve Cardiac Pacing**
ACS Spring 2020 National Meeting, March 22-26, 2020
49. **Hydroxyapatite Nanoparticle-stabilized polyHIPEs as Osteoinductive Bone Grafts**
ACS Spring 2020 National Meeting, March 22-26, 2020
48. **Additive Manufacturing of Complex Materials**
National Academy of Engineering Gilbreth Lecture
47. **Osteoinductive Emulsion Inks for 3D Printed Bone Grafts**
TERMIS-AM Annual Meeting, December 2-5, 2019
46. **Biomedical Applications of Emulsion Templating**
TERMIS-AM Annual Meeting, December 2-5, 2019
45. **Biomedical Applications of Emulsion Templating**
Technion University, Haifa, Israel, 2019
44. **Strategic Biomimicry in the Design of Multilayer Vascular Grafts**
Brown University, 2019
43. **Emulsion Inks for 3D Printing Bone Grafts**
Advances in Tissue Engineering, 2019
42. **Additive Manufacturing of Complex Materials**
2019 China-America Frontiers of Engineering Symposium
41. **Strategic Biomimicry in the Design of Multilayer Vascular Grafts**
Chinese Biomaterials Congress, Dalian, China, 2019
41. **Integrin-targeting materials in regenerative medicine**
TCES-ESB Meeting, Nottingham, UK, 2019
40. **Emulsion Inks for 3D Printing**
ICAM-BM, Beijing, China, 2018
39. **Integrin-targeting materials in regenerative medicine**
256th ACS National Meeting, Boston, MA, August 19-23, 2018.
38. **Improved in situ seeding of 3D printed polyHIPEs using cell-releasing hydrogels**

256th ACS National Meeting, Boston, MA, August 19-23, 2018.

37. **Emulsion Inks for 3D Printing Bone Grafts**
Advances in Tissue Engineering, August 11-14, 2018
36. **Emulsion Templating of Tissue Engineering Scaffolds**
7th International Colloids Conference, Sitges, Spain, June 18-21, 2017
35. **Strategic Biomimicry in the Design of Tissue Engineering Scaffolds**
2nd Musculoskeletal Development and Regeneration Conference, Cancun, Mexico, February 24-27, 2017
34. **Multivariate Scaffold Designs that Mimic the Complexity of Tissue Interfaces**
Biomedical Engineering Society Annual Meeting, Minneapolis, MN, October 5-8, 2016.
33. **Multivariate Scaffold Designs that Mimic the Complexity of Tissue Interfaces**
Clemson University, October 27, 2016
32. **Emulsion Inks for 3D Printing Bone Grafts**
252nd ACS National Meeting, August 22, 2016
31. **Biodegradable Polymers for Tissue Engineering**
Advances in Tissue Engineering, August 11-14, 2016
30. **Bioactive Hydrogels Based on Designer Collagens**
Fall 2015 Materials Research Society Meeting, November 29- December 4, 2015
29. **Injectable, High Porosity Bone Grafts by Emulsion Templating**
TERMIS World Congress, September 8-11, 2015
28. **Solid Freeform Fabrication of High Porosity, Biodegradable Scaffolds using Cure-on-Dispense Technology**
2015 BioInterface Conference, September 21-23, 2015
27. **Fabrication of Synthetic Scaffolds for Tissue Engineering**
Advances in Tissue Engineering, August 12-15, 2015
26. **Multilayer Vascular Grafts Based on Designer Collagen**
St. Jude Medical Materials Forum, June 23, 2015
25. **Bioactive Hydrogels Based on Designer Collagens**
GCC Regenerative Medicine Symposium, June 2, 2015
24. **Bioactive Hydrogels Based on Designer Collagens**
TERMIS-AM Annual Meeting, December 15, 2014
23. **Fabrication of Synthetic Scaffolds for Tissue Engineering**
Advances in Tissue Engineering, August 13-16, 2014
22. **Biomedical Applications of Emulsion Templating**
The University of Oklahoma, October 24, 2013
21. **Fabrication of Synthetic Scaffolds for Tissue Engineering**
Advances in Tissue Engineering, August 13-16, 2013
20. **Multilayer Vascular Grafts Based on Collagen-mimetic Proteins**
MACROFRONTIERS 2013, June 6-8, 2013
19. **Biomedical Applications of Emulsion Templating**
245th American Chemical Society National Meeting, April 7-11, 2013
18. **Fabrication of Synthetic Scaffolds for Tissue Engineering**
Advances in Tissue Engineering
Rice University, August 8-11, 2012
17. **Polymeric Medical Device Design – Materials Selection and Characterization**
MD&M Texas 2012 Conference, March 14-15, 2012
16. **Injectable PolyHIPES as High Porosity Bone Grafts**
Purdue University, January 11, 2012
15. **Fabrication of 3D Matrices for Tissue Regeneration**
Polymers in Medicine, September 2-5, 2011
14. **Biodegradable PolyHIPEs as Injectable Bone Grafts**
Porous Polymers at the 242nd American Chemical Society National Meeting
Denver, Colorado, August 28 - September 1, 2011
13. **Fabrication of Synthetic Scaffolds for Tissue Engineering**
Advances in Tissue Engineering
Rice University, August 10-13, 2011
12. **Development of Hybrid Biomaterials as Tissue Engineering Scaffolds**
University of Texas San Antonio, October 13, 2010
11. **Polyurethanes in Biomedical Research**
Kinetic Concepts Inc., San Antonio, November 5, 2009
10. **Biomaterial Research: from Jello and Spandex to Contacts and Heart Valves**
Texas Lutheran University, October 2, 2009

9. **Bioactive Hydrogels Based on Designer Collagens**
   Center for Infectious and Inflammatory Diseases
   Texas A&M University Health Science Center, September 23, 2009
8. **Synthesis and Fabrication of Musculoskeletal Tissue Engineering Scaffolds**
   Stem Cells and Regenerative Medicine Workshop, TX-UK Collaboration
   Rice University, September 14-15, 2009
7. **Impact of Inflammation on Tissue Engineering**
   Advances in Tissue Engineering
   Rice University, August 12-15, 2009
   Rice University, August 13-16, 2008
6. **Role of Inflammation in Biomaterial Research**
   Arsenal Medical, Boston, December 2, 2008
5. **Biodegradable Polyurethanes in Regenerative Medicine**
   Keynote Address, Symposium on Molecular, Cellular and Tissue Engineering
   Houston Society for Engineering in Medicine and Biology, February 8, 2008
4. **High Porosity Tissue Engineering Scaffolds by Emulsion Templating**
   University of Texas San Antonio, September 20, 2007
3. **Biostability and Biocompatibility of Modified Polyurethane Elastomers**
   University of Durham, January 10, 2006
2. **Cell-mediated Biodegradation of Polymeric Biomaterials**
   Advances in Tissue Engineering
   Rice University, August 10-13, 2005
1. **Biostability of Modified Polyurethanes**
   Edwards LifeSciences, November 24, 2004

TEACHING

I. INSTRUCTOR

Health Equity in Engineering Design
Biological Responses to Medical Devices
Molecular Engineering
Polymer and Bioconjugate Chemistry: Principles and Practice

II. INDIVIDUAL RESEARCH MENTORING

Postdoctoral Researchers

Name	Research Focus	Dates
Siliang Wu	Synthesis of Biodegradable Polyurethanes	2017-2018
Mathieu Arseneault	Synthesis of PEG-based Macromers	2017-2018
Gosia Chwatko	Development of tough hydrogels for biomedical applications	2019-2020
Mykel Green	Hydrogel carriers for HSC transplants for Sickle Cell Disease	2021-2024
Fei Xu	Biomedical applications of conductive hydrogels in cardiac rhythm management	2024-2025

Masters Students

Student Name	Department	Thesis Title	
Nick Sears	BMEN	Synthesis of Biodegradable Polyureas as Ligament Grafts	Graduation: August 2013
Hugh Benhardt	BMEN	Synthesis of Cell-Responsive, Biodegradable Polyureas for Ligament Tissue Engineering	Graduation: May 2010
David Dempsey	MEEN *Co-Chair*	Characterization of a Novel Bioresorbable Poly(ester urethane) for Electrospun Cardiovascular Tissue Engineering Grafts	Graduation: August 2009

Doctoral Students

Student Name	Department	Thesis Title	
Mary Beth Browning	BMEN	Development of Multilayer Vascular Grafts Based on Bioactive Hydrogels *NSF Graduate Research Fellow, PEO Endowed Scholar*	Graduation: August 2013
David Dempsey	BMEN	Fabrication and Characterization of Electrospun Tissue Engineered Vascular Grafts	Graduation: Dec. 2013
Jenny Robinson	BMEN	Development of High Porosity Bone Grafts Using Emulsion Templating *TAMU Diversity Fellow, NSF Graduate Research Fellow, PEO Scholar*	Graduation: Dec. 2014
Bobby Moglia	BMEN	Biomedical Applications of PolyHIPE Scaffolds	Graduation: May 2014
Roya Nezarati	BMEN	Development of Electrospun Tissue Engineering Scaffolds with Tunable Mechanical Properties *TAMU Diversity Fellow*	Graduation: August 2014
Keith Hearon	BMEN *Co-Chair*	Post Polymerization Crosslinked Shape-Memory Polyurethanes *NSF Graduate Research Fellow*	Graduation: May 2014
Michael Whitely	BMEN	PolyHIPE Microspheres for Controlled Delivery of Growth Factors *LSAMP Fellow*	Graduation August 2018
Alysha Kishan	BMEN	Electrospinning Applications in Tissue Engineering *TAMU Diversity Fellow, NSF Graduate Research Fellow, SFB Outstanding Student Award*	Graduation: Dec. 2017
Nick Sears	BMEN	3D Printing of Tissue Engineering Scaffolds	Graduation: Dec. 2016
Stacy Cereceres	BMEN	Development of Chronic Wound Dressings with Tunable Moisture Control and Bioactivity *TAMU Diversity Fellow, TAMU LSAMP BTD Fellow, NSF Graduate Research Fellow*	Graduation: Dec. 2018
Allison Post	BMEN	Targeted Integrin Interactions on Bioactive Hydrogels *TAMU Diversity Fellow*	Graduation: Dec. 2018

Prachi Dhavalikar	BMEN	Fabrication of 3D Tissue Engineering Scaffolds *TAMU Diversity Fellow*	Graduation: November 2020
Taneidra Walker	BMEN	Development of Multifunctional Electrospun Wraps for Bone Healing *TAMU Diversity Fellow, TAMU BTD LSAMP Fellow, NSF Graduate Research Fellow, SFB Outstanding Student Award*	Graduation: November 2020
Megan Wancura	CHE	Hydrogel Coatings of Cardiovascular Devices	Graduation: August 2022
Gabriel Rodriguez-Rivera	CHEN	Development of an Injectable Hydrogel Electrode for the Treatment of Ventricular Arrhythmias *Ford Fellow*	Graduation: August 2022
Ziyang Lan	BME	Development of a multifunctional hydrogel foam as a first-line dressing for chronic wounds	Graduation: August 2023
Dana Jenkins	BME	Strategies to Improve the Regenerative Potential of PolyMIPE Bone Grafts *NSF Graduate Research Fellow*	Graduation: August 2023
Andrew Robinson	BME	Cardiovascular Applications of Electrospinning *AHA Predoctoral Fellow*	Graduation: December 2024
Sarah Jones	BME	Engineered Matrices to Enhance Bone Regeneration using the Masquelet Technique *NSF Graduate Research Fellow*	Graduation: May 2025
Abbey Nkansah	BME	Precision Vascular Grafts with Integrin-mediated Endothelialization *UT CSE Mentorship Fellow, NSF Graduate Research Fellow*	Graduation: August 2026
Ashley Hicks	BME	Vaginal Stents based on Shape Memory Foams	August 2022-
Derek Bashe	BME	Conductive Hydrogel-Mediated Ablation to Improve Treatment of Ventricular Arrhythmias	January 2023-
Maddie Laude	BME	Advanced Manufacturing of ECM Materials in Regenerative Medicine	August 2024-
Aashee Budhwani	BME	Investigation of the Role of Sex in Integrin-mediated Endothelialization of Cardiovascular Devices	January 2025-
Anthony Hohn	BME	Development of injectable hydrogel electrodes to prevent ventricular arrhythmias	August 2025-
Mabel Prejean	BME	A Self-Fitting Vaginal Stent for Improved Management of Vaginal Stenosis	August 2025-
Margaret Franks	BME	Model-directed design of electrospun grafts for cardiovascular applications	August 2026-

Undergraduate Students

Student Name	Department/School	Semesters Advised
Archita Duvvada	UT BME	Fall 2023-Spring 2026
Hanna Nguyen	UT BME	Fall 2025-Spring 2026
Adhwita Anand	UT BME	Fall 2024-
Aarushi Yedalla	UT BME	Summer 2024-
Ruchi Birur	UT BME	Spring 2024-
Octavio Jalife	UT BME	Summer 2025-Spring 2026
Aarushi Anand	UT BME	Fall 2024-
Ruchi Birur	UT BME	Fall 2023-
Nick Grammer	UT BME	Fall 2023-Fall 2025
Varsha Kotamreddy	UT BME	Fall 2023-
Kailey Wilson	UT BME	Fall 2023-
Bhanaviya Venkat	UT BME	Fall 2022-Spring 2026
Andres Martinez	UT BME	Fall 2022-Spring 2025
Phillip Baek	UT BME	Fall 2022-Spring 2024

Nicolai Ang	UT BME	Fall 2022-Spring 2025
Ashauntee Fairley	UT BME	Fall 2022-Spring 2026
Rykhr Grissom	UT BME	Fall 2022-Spring 2023
Patience Olivera	UT BME	Fall 2022-Spring 2025
Taylor Sullivan	UT BME	Fall 2022-Spring 2025
Neha Jayarajan	UT BME	Fall 2022-Spring 2024
Isabelle Gilbert	UT BME	Fall 2022-Sring 2025
Gabriella Bastidas	UT BME	Fall 2022-Spring 2023
Jonathan Leung	UT BME	Fall 2022-Spring 2025
Alan Fletcher	UT BME	Fall 2022-Summer 2023
Orren Shachaf	UT BME	Fall 2022-Spring 2024
Leo Gouch	UT BME	Spring 2022 -Spring 2024
Maddie Laude	ND ChE	Summer 2022
Destiny Harris	UT BME	Fall 2021-Spring 2022
Evan He	UT BME	Fall 2021-Spring 2022
Vani Shah	UT BME	Fall 2021-Spring 2024
Sahana Balaji	UT BME	Fall 2021-Spring 2022
Kathleen Leyendecker	UT BME	Fall 2021-Spring 2022
John Craig	UT BME	Spring 2021-Spring 2022
Sierra Jackson	UT BME	Fall 2020-Spring 2021
Shan Ali	UT BME	Spring 2020
Aparajith Kannapiran	UT BME	Fall 2019-Spring 2022
Erik Shoga	UT BME	Fall 2019-Spring 2022
Annika Balakrishan	UT BME	Fall 2019-Spring 2022
Mila Wetz	UT BME	Fall 2019-Spring 2021
Anita Mishra	UT BME	Fall 2019-Spring 2021
Jason Shenoi	UT BME	Fall 2018-Spring 2021
Sophia Ty	UT BME	Fall 2018-Spring 2019
Nick Ray	UT BME	Fall 2018--Spring 2021
Anupriya Jose	UT BME	Fall 2018-Spring 2019
Shireen Toubbeh	UT BME	Fall 2018-Spring 2020
Ronit Kar	UT BME	Spring 2018- -Spring 2021
Julia Romero	UT BME	Spring 2018-Summer 2019
Elzbieta Chwatko	UConn	Summer 2018
Alex Bryan	UT BME	Fall 2017-Spring 2019
Joshua McClune	UT BME	Fall 2017-Spring 2020
Jennifer Yoon	UT BME	Fall 2017-Spring 2019
Karim Salhadar	UT BME	Fall 2018-Spring 2020

Michael Talankar	UT BME	Fall 2018-Spring 2020
Christina Waldron	UT BME	Spring 2018-
Christian Kaculini	Biochemistry	Spring 2018
Natalia Fabela	BMEN	Fall 2016 – Fall 2017
Sahar Mohiuddin	BMEN	Summer 2016 – May 2017
Ugochi Ibekwe	TAMU Prairie View	Summer 2016
Kyla Kouadio	TAMU Prairie View	Summer 2016
Nico Medellin	Rice University	Summer 2015
Job Schiach	Stanford	Summer 2015
Hannah Pearce	BMEN	Fall 13- Spring 15
Clayton Smith	BMEN	Fall 13- Summer 14
Chibuzo Onwuzuruike	BMEN	Fall 13- Spring 14
Audrey Renfro	BMEN	Summer 13 – Summer 14
Keegan Smith	BMEN	Spring 13 – Summer 13
Prachi Dhavalikar	UC Santa Cruz	Summer 13
Madison McEnery	BMEN	Fall 12 – Spring 14
Chris Radziki	BMEN	Fall 12 – Spring 14
Megan Brooks	CHEN	Fall 12 – Spring 14
Nicole Cordner	BMEN	Fall 12 – Spring 13
Melissa Stuebben	BMEN	Fall 12 – Spring 14
Calvin Mackey	BMEN	Fall 12 – Fall 13
Stacy Cereceres	BMEN	Fall 12 – Spring 14
Michelle Eifert	BMEN	Fall 11 – Spring 13
Chris Carranza	BMEN	Fall 11 – Spring 13
Scott Bixler	BMEN	Spring 11 – Summer 12
Shelby Buffington	BMEN	Spring 11 – Summer 12
Geraldine Pena	BMEN	Fall 11 – Spring 11
Andrew Moorman	BMEN	Spring 11 – Fall 11
Tyler Touchet	BMEN	Fall 09 – Spring 2012
Ahmed Haque	BMEN	Fall 09 – Spring 2011
Mithil Chokshi	BMEN	Spring 10 – Summer 10
Caitlin Wilson	TLU	Summer 10
Thomas Wilems	BMEN	Fall 07 – May 10
Nick Sears	BMEN	Summer 08 – May 10
Kelly McClurg	BMEN	Fall 08 - Summer 08
Susan Vanderzyl	BMEN	Spring 08 – Fall 08
Ericka Schwan	BMEN	Fall 07

III. TRAINEE HONORS AND AWARDS

NSF Graduate Research Fellowship, Patience Olivera, 2026
SFB 3MT Award, Derek Bashe and Maddie Laude, 2026
NSF Graduate Research Fellowship, Abbey Nkansah, 2023
AHA Predoctoral Fellowship, Andrew Robinson, 2023
CSE Student Leader Award, Andrew Robinson, 2022
EOE Program Academic Leaders Hall of Fame, Gabriel Rodriguez-Rivera, 2022
SFB PRA, Mykel Green, 2022
SFB 3MT Award, Gabriel Rodriguez and Sarah Jones, 2022
Student Leadership Award, Andrew Robinson, 2022
UT CSE Mentorship Fellowship, Abbey Nkansah, 2021
SFB Outstanding Student Award, Taneidra Buie, 2021
Ford Dissertation Fellowship, Gabriel Rodriguez-Rivera, 2021
Agnes T. and Charles F. Wiebusch Fellowship, Taneidra Buie, 2020
Student Leadership Award, Gabriel Rodriguez-Rivera, 2020
Faraday Teaching Award, Megan Wancura, 2020
NSF Graduate Research Fellowship, Sarah Jones, 2020
NSF Graduate Research Fellowship, Joshua McCune, 2020
NSF Graduate Research Fellowship, Dana Jenkins, 2020
CMBE Graduate Student Travel Award, Gabriel Rodriguez-Rivera, 2020
Biomaterials Day Presentation Award, Michael Talanker, 2018
Ford Predoctoral Fellowship, Gabriel Rodriguez-Rivera, 2018
SFB Outstanding Student Award, Alysha Kishan, 2018
Biointerfaces Poster Award, Prachi Dhavalikar, 2016
NSF Graduate Research Fellowship, Stacy Cereceres, 2016
NSF Graduate Research Fellowship, Taneidra Walker, 2016
TAMU Diversity Fellowship, Prachi Dhavalikar, 2015
TAMU LSAMP BTD Fellowship, Taneidra Walker, 2015
TAMU LSAMP BTD Fellowship, Stacy Cereceres, 2015
TAMU LSAMP BTD Fellowship, Michael Whitely, 2014
TAMU Diversity Fellowship, Stacy Cereceres, 2014
TAMU Diversity Fellowship, Allison Post, 2014
NSF Graduate Research Fellowship, Madison McEnery, 2014
NSF Graduate Research Fellowship, Alysha Kishan, 2014
Research Opportunities for Engineering Scholarship, Madison McEnery, 2013
Acta Biomaterialia Student Award, Mary Beth Browning, 2013
TAMU Diversity Fellowship, Alysha Kishan, 2013
Tissue Engineering Poster Award, **Society for Biomaterials Annual Meeting,** Jenny Robinson, 2013
Tissue Engineering Poster Award, **Society for Biomaterials Annual Meeting,** Pauline Luong, 2013
2nd place in the SFB Educational Challenge, Mary Beth Browning, Bobby Moglia, 2013
P.E.O. Scholar Award, Jenny Robinson, 2013
Ethel Ashworth-Tsutsui Memorial Award for Research, Mary Beth Browning, 2012
Tissue Engineering Poster Award, Society for Biomaterials Fall Meeting, Mary Beth Browning, 2012
Outstanding Engineering Graduate Student, Mary Beth Browning, 2012-2013
Research Opportunities for Engineering Scholarship, Michelle Eifert, 2012
TAMU Diversity Fellowship, Pauline Luong, 2012
Biomaterials Day Poster Award, Jenny Holm, 2012
P.E.O. Endowed Scholar Award, Mary Beth Browning, 2012
NSF Graduate Research Fellowship, Jenny Holm, 2012
TAMU Graduate Student Research and Presentation Grant, Roya Nezarati, 2011
TAMU Diversity Fellowship, Marziya Hasan, 2011
TAMU Graduate Student Research and Presentation Grant, Jenny Holm, 2011
NSF Graduate Research Fellowship, Thomas Wilems, 2011
NSF Graduate Research Fellowship Honorable Mention, Jenny Holm, 2011
Biomaterials Day Poster Award, Tyler Touchet, 2011
TAMU Graduate Student Research and Presentation Grant, Mary Beth Browning, 2011
TAMU Diversity Fellowship, Roya Nezarati, 2010

TAMU Diversity Fellowship, Jenny Holm, 2010
USRG Poster Award, Mithil Chokshi, 2010
TAMU Student Research Week, Materials Science Taxonomy Award, Ahmed Haque, 2010
NSF Graduate Research Fellowship, Mary Beth Browning, 2010
NSF Graduate Research Fellowship Honorable Mention, Thomas Wilems, 2010
Biomaterials Day Poster Award, Mary Beth Browning, 2010
Biomaterials Day Poster Award, Thomas Wilems, 2010
Regent's Fellowship, Mary Beth Browning, 2009

SERVICE

I. PROFESSIONAL ACTIVITIES

Associate Editor, 2019-present
Journal of Materials Chemistry B and *Materials Advances*

Associate Editor, 2020-2025
Annals of Biomedical Engineering

Associate Editor, 2014-2019
Journal of Biomedical Materials Research: Part B - Applied Biomaterials

Editorial Board
Journal of Biomaterial Science, Polymer Edition
Journal of Biomedical Materials Research: Part B - Applied Biomaterials
Journal of Biomedical Materials Research: Part A
Bio-Design and Manufacturing
Reactive and Functional Polymers
Tissue Engineering
Biomaterials Advances

Scientific Advisory Board
ECM Biosurgery
Rhythio Medical

Biomaterials Day at Texas A&M University
Society for Biomaterials, Chair 2009-2011

Texas Biomaterials Day
Society for Biomaterials, Steering Committee, 2011-2019

Society for Biomaterials
Chair, Awards, Ceremonies, and Nominations Committee, 2025-2026
Past President, Chair of Presidential Advisory Committee, 2023-2024
President, 2022-2023
President Elect, 2021-2022
Program Chair, Hawaii Symposium, 2020-2022
Secretary/Treasurer, 2019-2021
Chair, Diversity Task Force, 2019-2020
Secretary/Treasurer Elect, 2017-2019
Education & Professional Development Committee Chair, 2016-2017
Member at Large, 2015-2016
Women's Networking Luncheon, Chair, 2012, 2013, 2015, 2017, 2018, 2019, 2021, 2022
2015 Annual Meeting Program Committee
Education & Professional Development Committee, 2011-2015
Tissue Engineering Special Interest Group, Program Chair, 2011-2013
Tissue Engineering Special Interest Group, Vice-Chair, 2013-2015
Long Range Planning Committee, 2013, 2015
Biomimetic Materials Session Chair, 2009-2012, 2015

Tissue Engineering and Regenerative Medicine International Society
TERMIS World Congress Co-Chair, 2023-2024
Women's Luncheon, Moderator 2023
Joint TERMIS-SFB Webinar, Virtual Screening of "Picture a Scientist"
Awards Committee, 2020-2024
Membership Committee, 2020-2022
Council Member, 2014-2019
Nominating Committee, 2015-2019
Scaffolds, Matrices and Biomaterials TWIG, Vice Chair 2013-2015, Chair 2015-2017
Engineering Tissue Interfaces Session organizer, TERMIS World Congress, 2015
Decellularized Tissue Session Chair, TERMIS-AM Annual Meeting, 2014
Gradients, Patterning and Processing of Biomaterials Session Chair, TERMIS-AM Annual Meeting, 2014
Scaffold Materials Session Chair**,** TERMIS-AM Annual Meeting, 2011

American Institute of Medical and Biological Engineering
Board of Directors Member, 2021-2026
Council of Societies Chair, 2021-2023
Diversity and Inclusion Committee, 2019-2024

American Chemical Society
PMSE, Fellow Selection Committee, 2023-2027
Women's Networking Mixer, Co-Chair, 2022
PMSE, Executive Committee, 2013-2022
PMSE, Member-at-Large, 2016-2022
PMSE Doolittle Award, Chair, 2013-2017

Biomedical Engineering Society
Board of Directors, 2022-2025
Diversity Committee, 2019-2022
Biomaterials Track Chair, 2014
"Meet the Faculty Candidate" Chair, 2010
Musculoskeletal Tissue Engineering Session Chair, 2010

External Advisory Board
Georgia Tech/Emory, 2021-present

II. UNIVERSITY SERVICE

University Level
- Network for Collaborative Research Impact, 2023-2024

Department of Biomedical Engineering
- Alumni Engagement Committee, 2024-
- Community and Culture Committee, 2023-
- Associate Chair of Faculty Affairs, 2021-2023
- Diversity Committee Chair, 2020-2023
- Graduate Admissions Committee; 2017-2022
- Faculty Search Chair 2018-2019, 2019-2020, 2020-2021, 2021-2022
- Women in Engineering Program Representative, 2017-2021
- Graduate Studies Committee; 2017-2018
- Writing Group Co-Lead, 2017-2023
- Budget Council, 2017-

III. FEDERAL SERVICE

National Institutes of Health
Musculoskeletal Tissue Engineering Study Section Member and Chair, 2014-2019
Ad Hoc Reviewer, 2011 - present

National Science Foundation
Review Panel, 2009 – 2011, 2014, 2021

Department of Defense Congressionally Directed Medical Research Programs (CDMRP)
Nanomaterials Bone Regeneration (NMBR), 2015

IV. COMMUNITY BUILDING ACTIVITIES

BME UNITE, Executive Committee, 2024-

DEI Committee, Society for Biomaterials, Member, 2020-2023

DEI Committee, UT BME, Chair, 2020-2023

Diversity Committee, Biomedical Engineering Society, Member 2019-2022

Diversity Task Force Chair, Society for Biomaterials, Chair 2019-2020

Women's Networking Luncheon, Society for Biomaterials**,** Chair, 2012-2022, 2025-

TAMU NSF ADVANCE
Peer Mentoring in Biomedical Engineering, Co-Chair 2011-2013
New Moms Success Circle, Chair 2010-2017

Societal Impact Operating Council, American Institute of Chemical Engineers, Member 2010

Women's Initiatives Committee
American Institute of Chemical Engineers, Past Chair 2010
American Institute of Chemical Engineers, Chair 2009
American Institute of Chemical Engineers, Vice-Chair, 2008

V. JOURNAL REVIEWER

Journal of Biomedical Materials Research: Part A, 2001-present
Journal of Biomedical Materials Research: Part B, 2004-present
Journal of Applied Polymer Science, 2004-present
Biomaterials, 2005-present
Tissue Engineering, 2005-present
Biomacromolecules, 2008-present
Macromolecules, 2008-present
Langmuir, 2008-present
Advanced Healthcare Materials, 2015-present
PNAS, 2016-present
Science Advances, 2019-present

VI. SOCIETY MEMBERSHIPS

Society for Biomaterials, 2000-present
Orthopaedic Research Society, 2006-present
American Institute of Chemical Engineers, 2006-present
American Society for Engineering Education, 2007-present
American Chemical Society, 2008-present
Biomedical Engineering Society, 2009-present
Tissue Engineering and Regenerative Medicine International Society, 2011- present
American Institute for Medical and Biological Engineering, 2016-present