

C. LaShan Simpson, Ph.D.

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EDUCATION

Ph.D.	Bioengineering	Clemson University, Clemson SC	May 2010
M.S.	Bioengineering	Clemson University, Clemson SC	Aug 2009
B.S.	Biochemistry	Clemson University, Clemson, SC	May 2003

EXPERIENCE

Assistant Professor, Biomedical Engineering
Agricultural and Biological Engineering
Mississippi State University
Jan. 2013 – Present

Post-Doctoral Research Assistant
Rice University
Advisor: Dr. Jennifer West
May 2010 – Dec. 2012

PUBLICATIONS

Italicized Text Indicates Undergraduate Student

JOURNAL PUBLICATIONS

Mosier, J, Stealey, H, Stringfield, K, Webb, K, and Simpson, CL. Dextran Sulfate Based Gel Coating for Drug Eluting Balloon Angioplasty. American Journal of Undergraduate Research. 15, 2 (2018): 51-60.

Simpson, C. L., Dechert, E. "Work In Progress: The Use of Scaffolding and Peer-Reviews to Improve Effective Writing Skills in Biomedical Engineers." ASEE Annual Conference and Exposition, Conference Proceedings, vol 2018-June (2018).

Bennett, K, *Hybart, R, Simpson, CL.* "Differential Effects of Calcitriol, FGF-23, and Klotho on Vascular Smooth Muscle Cell Calcification and Their Role in Medial Calcification." Journal of Mississippi Academy of Sciences. 62 (2017): 370-378.

McArthur, K, Kay, A, Mosier, J, Grant, J, Stewart, JA, Simpson, CL. "Manipulating the Plasticity of Smooth Muscle Cells to Regulate Vascular Calcification." AIMS Cell and Tissue Engineering. 1, 3 (2017): 165-179.

Kay, A, **Simpson, CL**, and Stewart, JA Jr. "The Role of AGE/RAGE Signaling in Diabetes-Mediated Vascular Calcification." *Journal of Diabetes Research*. 2016 (2016) Article ID 6809703, 8 pages.

Smith, P, *Kay, A, Dunaway, L*, and **Simpson, CL**. "Injectable Biomaterials for Cell, Gene and Protein Therapy." *Materials Technology: Advanced Biomaterials*. 30, Supp 5 (2015): 264-B272.

Vasquez, E.S.; Cunningham, J.L.; *McMahan, J.B.*; **Simpson, C.L.** and Walters, K.B. "Fetuin-A Adsorption, Stabilization, and Solubilization of Amorphous Calcium Carbonate Nanoparticles," *Journal of Materials Chemistry B*. 3 (2015): 6411-6419.

Vasquez, E.S.; Cunningham, J.L.; *McMahan, J.B.*; **Simpson, C.L.** and Walters, K.B. "Front Cover" *Journal of Materials Chemistry B*. 3 (2015): 6393-6394.

Grant JN, **Simpson CL**. "Osteoclast-Mediated Demineralizing of Medial Vascular Calcification." *Journal of the Mississippi Academy of Sciences*. 59.1 (2014): 343-346.

Cunningham JL, Vasquez ES, Walters KB, **Simpson CL**. "Targeted Therapy to Treat Cardiovascular Calcification in ESRD Patients." *Journal of the Mississippi Academy of Sciences*. 59.1 (2014): 335-338.

Bennett K, **Simpson CL**. "Treatment of Vascular Calcification by Elastin-Targeted Nanoparticles," *Journal of the Mississippi Academy of Sciences*. 59.1 (2014): 170-173.

Sonnet, C, **Simpson, CL**, Olabisi, RM, Sullivan, K, Hipp, J, Lazard, Z, Gugala, Z, Gannon, F, Stice, S, Peroni, J, Weh, M, Sevick, E, Heggeness, M, Davis, AR, West, JL, Olmsted-Davis, EA. Cell Based Gene Therapy for Fracture Healing in a Rat Femoral Critical Size Defect. *Journal of Orthopedic Research*. 31 (2013) 1597-1604.

Lu, Y, Darne, C, Tan, I, **Simpson, CL**, Zhu, B, Hall, M, Lazard, Z, Davis, AR, Sevick-Muraca, E, Olmsted-Davia, EA. Far-red Fluorescence Gene Reporter Tomography for Determination of Placement and Viability of Cell-Based Gene Therapies. *Journal of Optics Express*. 21 (2013) 24129-24138.

Simpson, CL, Lindley S, Eisenburg C, Basalyga D, Starcher B, Simionescu D, Vyavahare N., Towards Cell Therapy for Vascular Calcification: Osteoclast-Mediated Demineralization of Calcified Elastin. *Journal of Cardiovascular Pathology, Cardiovascular Pathology*, 16 (2007) 29-37.

BOOK CHAPTERS

Mosier J, Nguyen N, Parker K, and **Simpson CL**. "Calcification of Biomaterials and Diseased States". *Biomaterials - Physics and Chemistry – New Edition*. Eds. Pignatello, R and Musumeci, T. London, United Kingdom: InTechOpen.(2018) 37-60.

McMahan, J, *Hybart, R*, **Simpson, CL**. "Cells and Tissue Structures in Cardiovascular 3D Test Systems." *Engineering 3D Test Systems*. Eds. Burg, T, Dreau, D, Burg, K. Boca Raton, FL: CRC Press, (2017) 285-297.

CONFERENCE PROCEEDINGS AND PUBLISHED ABSTRACTS (Peer-Reviewed)

Mosier, J., Hybart, R., Mullins, V., Simpson, C.L., "Using an *In Vitro* Uremic Model to Determine the Effects of Fetuin-A on Vascular Calcification," Biomedical Engineering Society Annual Meeting. Atlanta, GA. 19 October 2018. Poster Presentation.

Rexrode, L., McArthur, K., Kay, A., Stewart, J.A., Simpson, C.L., "Sclerostin as a Potential Therapy to Treat Vascular Calcification," Biomedical Engineering Society Annual Meeting. Atlanta, GA. 19 October 2018. Poster Presentation.

Simpson, C.L., Rexrode, L., McArthur, K., Kay, A., Stewart, J.A., "Sclerostin as a Potential Therapy to Treat Vascular Calcification," International Society for Applied Cardiovascular Biology, Bordeaux, France. 17 September 2018. Poster Presentation.

Mosier, J., Hybart, R., Kay, A., Stewart, J. A., Simpson, C. L., "The Therapeutic Effect of Fetuin-A on the Calcified State of Smooth Muscle Cells," Society for Biomaterials, Atlanta, GA. 13 April 18. Oral Presentation.

Mullins, V., Simpson, C. L., "Alginate Hydrogels as an Osteoclast Delivery System," Society for Biomaterials, Atlanta, GA. 12 April 18. Poster Presentation.

Nguyen, N., Simpson, C. L., "Examining Cellular Mechanics in Vascular Calcification," Society for Biomaterials, Atlanta, GA. 12 April 18. Poster Presentation.

Parker, K., McArthur, K., Kay, A., Stewart, J. A., Simpson, C. L., "Protein-Based Inhibitor Used to Regulate the Phenotypic Switch of Smooth Muscle Cells," Society for Biomaterials, Atlanta, GA. 12 April 12 18. Poster Presentation.

Mosier, J., Hybart, R., Kay, A., Stewart, J. A., Simpson, C. L., "Novel Protein Therapy to Reverse and Inhibit Calcification of Vascular Smooth Muscle Cells," 34th Southern Biomedical Engineering Conference, Charlotte, NC. 9 March 18. Oral Presentation.

Rexrode, L., Parker, K., McArthur, K., Mosier, J., Kay, A., Stewart, J. A., Simpson, C. L., "Protein-Based Inhibitor Used to Regulate the Phenotypic Switch of Smooth Muscle Cells," 34th Southern Biomedical Engineering Conference, Charlotte, NC. 9 March 9 18. Oral Presentation.

Mullins, V., Simpson, C. L., "Alginate Hydrogels as an Osteoclast Delivery System," Biomaterials Day, Memphis, TN. 2 March 2 18. Poster Presentation.

Tyson, J. H., Simpson, C. L., "Understanding Cardiovascular Calcification through Mathematic Modeling of the Canonical WNT Signaling Pathway," Biomaterials Day, Memphis, TN. 2 March 18. Oral Presentation.

Mosier, J., Hybart, R., Kay, A., Stewart, J. A., Simpson, C. L., 83rd Annual Mississippi Academy of Sciences Meeting, "The Use of Fetuin-A to Attenuate Calcification of Smooth Muscle Cells," Mississippi Academy of Sciences, Hattiesburg, MS. 23 February 18. Oral Presentation.

Coats, L, Fisher, M, Scott-Bracey, P, and **Simpson, CL**. "Preparing Black Female Faculty for Prominence, Power, and Presence in the Academy." Mid-South Educational Research Association Annual Meeting. 8 November 17. Oral Presentation.

Mosier, J, Hybart, R, Kay, A, Stewart, JA, and Simpson, CL. “Effect of Fetuin-A Protein Therapy for Calcification of Vascular Smooth Muscle Cells in vascular calcification”. 2017 Biomedical Engineering Society Annual Meeting. Phoenix, AZ. 11 October 17. Poster Presentation.

McArthur, K, Kay, A, Stewart, JA, and Simpson, CL. “Sclerostin Supplementation as an Effective Therapy in Vascular Calcification.” 2017 Biomedical Engineering Society Annual Meeting. Phoenix, AZ. 11 October 17. Poster Presentation.

Coats, L, Fisher, M, **Simpson, CL,** and Scott-Bracey, P. “Preparing Black Female Faculty for Prominence, Power, and Presence in the Academy.” 10th Annual College of Education Faculty and Student Research Forum. 21 April 17. Oral Presentation.

Simpson, CL. “Improving Scientific Communication of Undergraduates through Peer Evaluation.” 2017 Society for Biomaterials Annual Meeting. Minneapolis, MN. 4 April 17. Poster Presentation.

Hybart, R, Kay, A, Stewart, JA, and Simpson, CL. “Fetuin-A supplementation as an Effective Therapy in Regulating Phenotypic Differentiation of Smooth Muscle Cells in Vascular Calcification”. 2017 Society for Biomaterials Annual Meeting. Minneapolis, MN. 4 April 17. Poster Presentation.

McArthur, K, Kay, A, Stewart, JA, and Simpson, CL. “Phenotypic Switch of Vascular Smooth Muscle Cells in Vascular Calcification”. 33rd Annual Southern Biomedical Engineering Conference. Gulfport, MS. 17 March 17. Poster Presentation.

Parker, P and Simpson, CL. “Fluorescent Imaging of Calcified Vascular Smooth Muscle Cells.” 82nd Annual Mississippi Academy of Sciences Annual Meeting. Hattiesburg, MS. 23 February 17. Poster Presentation.

McMahan J, Kay A, Stewart JA, **Simpson, CL.** “Fetuin-A Supplementation as an Effective Therapy in Regulating Phenotypic Differentiation of Smooth Muscle Cells in Vascular Calcification.” 2016 Biomedical Engineering Society Annual Meeting. Minneapolis, MN. 6 October 16. Poster Presentation.

Alexander M, Simpson CL. “Three Dimensional Arterial Model to Simulate and Characterize Vascular Calcification In Vitro.” Mississippi Academy of Sciences Annual Meeting. Hattiesburg, MS. 18 February 2016. Poster Presentation.

Kay A, Grant J, Simpson CL. “Genetic Switching of Vascular Smooth Muscle Cells.” 2015 Biomedical Engineering Society Annual Meeting. Tampa, FL. 7 October 15. Poster Presentation.

McMahan, J.; Cunningham, J. L.; Vasquez, E.S.; Walters, K.B.; Simpson, C.L., “Fetuin-A Therapy: A New Approach for the Treatment of Vascular Calcification” Society for Biomaterials 2015 Annual Conference. Charlotte, NC. 15 April 15. Oral Presentation.

Cunningham, J. L.; Vasquez, E.S.; Walters, K.B.; **Simpson, C.L.,** “Human Fetuin-A Treatment for Demineralization of Arteriosclerosis” Society for Biomaterials 2015 Annual Conference. Charlotte, NC, April 15-18, 2015. Oral Presentation.

Bennett K, **Simpson CL**. "Treatment of Vascular Calcification with Elastin-Targeted Nanoparticles." 2014 Biomedical Engineering Society Annual Meeting. Henry B. Gonzalez Convention Center, San Antonio, TX. 25 Oct 2014. Poster presentation.

Grant JN, **Simpson CL**. "Osteoclast-Mediated Demineralizing of Medial Vascular Calcification." 30th Annual Southern Biomedical Engineering Conference. Courtyard by Marriott Beachfront, Gulfport, MS. 12 Apr 2014. Oral Presentation.

Cunningham JL, Vasquez ES, Walters KB, **Simpson CL**. "Targeted Therapy to Treat Cardiovascular Calcification in ESRD Patients." 30th Annual Southern Biomedical Engineering Conference. Courtyard by Marriott Beachfront, Gulfport, MS. 12 Apr. 2014. Oral Presentation.

Bennett K, **Simpson CL**. "Treatment of Vascular Calcification by Elastin-Targeted Nanoparticles." 30th Southern Biomedical Engineering Conference. Courtyard by Marriot Beachfront, Gulfport, MS. 11 Apr 2014. Oral presentation.

CONFERENCE PROCEEDINGS (Un-reviewed)

Gonzalez, A, Nguyen, N, and Simpson, CL. "Three-Dimensional Scaffold for Smooth Muscle Cell Viability." Mississippi Academy of Sciences Second Annual Summer Student Science Symposium. 26 July 2018. Poster Presentation.

Smith, A, Caulkins, R, and Simpson, CL. "Investigating the Effects of Vascular Smooth Muscle Cell Calcification on Media pH." Mississippi Academy of Sciences Second Annual Summer Student Science Symposium. 26 July 2018. Poster Presentation.

Mullins, V and Simpson, CL. "Alginate Hydrogels as an Injectable Cell Delivery System." Mississippi Academy of Sciences Second Annual Summer Student Science Symposium. 26 July 2018. Poster Presentation.

Rexrode, L, McArthur, A, and Simpson, CL. "Utilization of Sclerostin as a Potential Therapeutic Agent for Vascular Calcification." Mississippi Academy of Sciences Second Annual Summer Student Science Symposium. 26 July 2018. Poster Presentation.

Parker, K, Thornton, J and Simpson, CL. "3D Bacterial Cellulose in Tubular Form to Mimic an In Vivo Vascular Environment." Shackoul's Honors College Summer Undergraduate Research Symposium 2017. 27 July 2017. Poster Presentation.

Nguyen, N and Simpson, CL. "Examining the Use of AFM to Measure Stiffness in Calcified Vascular Smooth Muscle Cells." Shackoul's Honors College Summer Undergraduate Research Symposium 2017. 27 July 2017. Poster Presentation.

Mullins, V and Simpson, CL. "Alginate Hydrogels as a Cell Delivery System." Shackoul's Honors College Summer Undergraduate Research Symposium 2017. 27 July 2017. Poster Presentation.

Mosier J, Hybart R, Kay A, Stewart, JA, and Simpson, CL. "Effect of Fetuin-A as Protein Therapy for Vascular Calcification of Smooth Muscle Cells." Shackoul's Honors College Summer Undergraduate Research Symposium 2017. 27 July 2017. Poster Presentation.

McArthur, K, Kay, A, Stewart, JA, and Simpson, CL. “Phenotypic Switch of Vascular Smooth Muscle Cells in Vascular Calcification”. Shackoul’s Honors College Spring Undergraduate Research Symposium 2017. 13 April 17. Poster Presentation.

McArthur K, Simpson CL. “Phenotypic Switch of Vascular Smooth Muscle Cells in Vascular Calcification.” Shackoul’s Honors College Summer Undergraduate Research Symposium 2016. Mississippi State University, Mississippi State, MS. 29 July 2016. Poster Presentation.

Offiah U, Simpson CL. “Fluorescent Imaging of Calcifying Vascular Smooth Muscle Cells.” Shackoul’s Honors College Summer Undergraduate Research Symposium 2016. Mississippi State University, Mississippi State, MS. 29 July 2016. Poster Presentation.

Hybart R, Simpson CL. “Qualitative Analysis of Vascular Calcification.” Shackoul’s Honors College Spring Undergraduate Research Symposium 2016. Mississippi State University, Mississippi State, MS. 15 April 2016. Poster Presentation.

Overholt S, Dunaway L, Simpson CL. “Oxidation of Alginate-Fibrin Microspheres for Optimized Degradation.” Shackoul’s Honors College Spring Undergraduate Research Symposium 2016. Mississippi State University, Mississippi State, MS. 15 April 2016. Poster Presentation.

Dunaway L, Overholt S, Simpson CL. “Characterization of Alginate-Fibrin Micro-Bead Degradation for Cell Delivery.” Shackoul’s Honors College Spring Undergraduate Research Symposium 2016. Mississippi State University, Mississippi State, MS. 15 April 2016. Poster Presentation.

Stringfield K, McMahan J, Simpson CL. “Gene Therapy for Vascular Calcification.” Shackoul’s Honors College Spring Undergraduate Research Symposium 2016. Mississippi State University, Mississippi State, MS. 15 April 2016. Poster Presentation.

Adeyemo P, Grant JN, Simpson CL. “Imaging of Calcified Vascular Smooth Muscle Cells.” Shackoul’s Honors College Summer Undergraduate Research Symposium 2015. Mississippi State University, Mississippi State, MS. 30 July 2015. Poster Presentation. Outstanding Research Award for 1st place in Biological Sciences and Engineering.

Kay A, Grant J, Simpson CL. “Genetic Switching of Vascular Smooth Muscle Cells.” 31st Annual Southern Biomedical Engineering Conference. New Orleans, LA. 30 April 15. Oral Presentation.

Kay A, Grant J, Simpson CL. “Genetic Switching of Vascular Smooth Muscle Cells.” Shackoul’s Honors College Spring Undergraduate Research Symposium 2015. Mississippi State University, Mississippi State, MS. 23 April 15. Oral Presentation.

Grant JN, Simpson CL. “Toward Cell Therapy: A Model for Vascular Calcification.” 12th Annual Graduate Student Research Symposium. Mississippi State University, Mississippi State, MS. 21 Mar 2015.

McMahan J, Cunningham JL, Vasquez ES, Walters KB, Simpson CL. “Characterization of the Fetuin- Calcium Binding Interaction.” Shackoul’s Honor College Summer Undergraduate Research Symposium 2014. Mississippi State University, Mississippi State, MS. 31 July 2014. Talk. Outstanding Research Award for 3rd place in Biological Sciences and Engineering.

McGuire KA, Grant JN, **Simpson CL**. “3D Model for Vascular Calcification.” Bagley College of Engineering Undergraduate Research Poster Competition. Mississippi State University, Mississippi State, MS. 23 Apr 2014. Poster Presentation.

McGuire KA, Grant JN, **Simpson CL**. “3D Model for Vascular Calcification.” Shackoul’s Honors College Spring Undergraduate Research Symposium 2014. Mississippi State University, Mississippi State, MS. 3 April 2014. Poster Presentation.

Cunningham JL, Vasquez ES, Walters KB, **Simpson CL**. “Targeted Therapy to Treat Cardiovascular Calcification in ESRD Patients.” 12th Annual Graduate Student Research Symposium. Mississippi State University, Mississippi State, MS. 22 Mar. 2014. Poster presentation. Outstanding Research Award for 1st place in Life and Biomedical Sciences and Engineering.

Bennett K, **Simpson CL**. “Treatment of Vascular Calcification with Elastin-Targeted Nanoparticles.” 12th Annual Graduate Student Research Symposium. Mississippi State University, Mississippi State, MS. 22 Mar 2014. Oral presentation.

INVITED TALKS

Simpson, CL. “You’re on the Right Track.” Undergraduate Summer Research Symposium. Mississippi State University, Mississippi State, MS. August 2018.

Simpson, CL. “Assessment of Community-Engaged Courses.” Community-Engaged Learning Faculty Fellows Course. Mississippi State University, Mississippi State, MS. May 2018.

Simpson, CL. “Protein Therapy to Arrest the Phenotypic Switching of Smooth Muscle Cells in Vascular Calcification.” Darwin Week. Mississippi State University, Mississippi State, MS. February 2018.

Simpson, CL. “Cell and Protein Therapy to Treat Vascular Calcification.” Cardiovascular and Renal Research Center. University of Mississippi Medical Center, Jackson, MS. May 2017.

Simpson, CL. “Protein Therapy to Arrest the Phenotypic Switching of Smooth Muscle Cells in Vascular Calcification.” 2016 Southeast Symposium on Contemporary Engineering Topics. Jackson, MS. August 2016.

Simpson, CL. “Understanding and Treating Vascular Calcification.” Department of Medical Physiology. Texas A&M Health Science Center College of Medicine, College Station, TX. December 2015.

Simpson, CL. “Understanding and Treating Vascular Mineralization.” Geosciences Brown Bag Seminar. Mississippi State University, Mississippi State, MS. November 2015.

Cunningham J, McMahan J, **Simpson CL**. “Protein Therapy for the Treatment of Vascular Calcification in Patients with Chronic Kidney Disease.” Network of Minority Health Research Investigators South Regional Workshop. New Orleans, LA. November 2015.

Simpson, CL. “Targeted Therapies for Vascular Calcification.” Call Me Doctor Seminar Series. Clemson University, Clemson, SC. May 2015.

Simpson, CL. “Targeted Therapies for Cardiovascular Disease.” Department of Biological Sciences. Mississippi State University, Mississippi State, MS. October 2015.

CURRENT FUNDING

“SOAR”, Mississippi Department of Education, Co-PI (PI: Dr. Vemitra White), \$54,000 (2018 – 2019)

“The Effect of Vitamin D in Cardiovascular Disease in Poultry”, Mississippi Agricultural and Forestry Experiment Station, PI, \$50,000 (2018)

“Engaging Women and Minorities in Agriculture-Related Stem Disciplines through Mentoring, Leadership Development, and Experiential Learning”, USDA NIFA Women and Minorities in Science, Technology, Engineering, and Mathematics (STEM) Fields Grant Program, Co-PI (PI: Dr. Leslie Burger), \$94,866 (2018-2020)

PRIOR FUNDING

“The Effect of Vitamin D in Cardiovascular Disease in Poultry”, Mississippi Agricultural and Forestry Experiment Station, PI, \$50,000 (2017)

“Type 2 Diabetes-Mediated Vascular Calcification”, Mississippi State University Office of Research, PI, \$4,000 (2016-2017)

“Preparing Black Female Faculty for Prominence, Power, and Presence in the Academy”, National Science Foundation, Co-PI (PI: Dr. Linda Coats), \$57,373 (2016 – 2017)

“Clinical Working Group”, Mississippi State University Bagley College of Engineering, PI, \$5,000 (2017-2018)

“Domestic Hens as a Physiological Model for Calcium Homeostasis”, Mississippi State University Office of Research, PI, \$2,000 (2014)

“BioMedical Assessment of Zavatation Combined Magnetic Field (CMF) Device”, Zavatation, LLC, Co-PI (PI: Dr. Raj Prabhu), \$70,500 (2013-2014)

AWARDS

Teacher of the Year, College of Agriculture and Life Sciences, Mississippi State University, 2018

Excellence in Teaching Award, Undergraduate Upper Division, College of Agriculture and Life Sciences, Mississippi State University, 2018

Southeastern Conference Visiting Faculty Travel Grant Program, 2015

Call Me Doctor Seminar Series Invited Speaker. Clemson University, Clemson, SC, 2015

TEACHING

COURSES TAUGHT

ABE 3813, Biophysical Properties of Materials, S14, S15, S16, S18

ABE 4911/4961, Engineering Seminar/ Seminar, F13, F14, F15, F16, F17, F18

ABE 4523/6523, Biomedical Materials, F13, F14, F15, F16, F17, F18

SUMMARY OF STUDENT EVALUATIONS

SEMESTER	COURSE NUMBER	CREDIT HOURS	ENROLLED STUDENTS	SIMPSON RATING	ABE AVERAGE	CALS AVERAGE	MSU AVERAGE
Fall 2013	ABE 4911 - 01	1	54	3.9	4.3	4.2	4.2
	ABE 4961 - 01	1	28	3.9	4.3	4.2	4.2
	ABE 4523/6523 - 01	3	20	3.8	4.3	4.2	4.2
Spring 2014	ABE 3813 - 01	3	57	3.1	4.1	4.3	4.3
	ABE 3813 - 02	NCL	29	3.3	4.1	4.3	4.3
	ABE 3813 - 03	NCL	28	3.4	4.1	4.3	4.3
Fall 2014	ABE 4911 - S01	1	58	3.7	4.2	4.2	4.3
	ABE 4961 - S01	1	15	4.1	4.2	4.2	4.3
	ABE 4523/6523 - 01	3	23	4.1	4.2	4.2	4.3
	ABE 4523 - 02	3	19	3.7	4.2	4.2	4.3
Spring 2015	ABE 3813 - 01	3	65	2.8	4.3	4.3	4.3
	ABE 3813 - 02	NCL	36	3.1	4.3	4.3	4.3
	ABE 3813 - 03	NCL	29	3.4	4.3	4.3	4.3
Fall 2015	ABE 4911 - S01	1	71	3.4	4.2	4.3	4.3
	ABE 4961 - S01	1	24	3.5	4.2	4.3	4.3
	ABE 4523/6523- 01	3	32	4	4.2	4.3	4.3
	ABE 4523 - 02	3	33	3.9	4.2	4.3	4.3
Spring 2016	ABE 3813 - 01	3	75	3.2	4.2	4.3	4.3
	ABE 3813 - 02	NCL	41	4.4	4.2	4.3	4.3
	ABE 3813	NCL	34	4.5	4.2	4.3	4.3

	- 03						
Fall 2016	ABE 4911 - S01	1	65	4.4	4.2	4.3	4.3
	ABE 4961 - S01	1	29	4	4.2	4.3	4.3
	ABE 4523/6523 - 01	3	20	4.3	4.2	4.3	4.3
	ABE 4523 - 02	3	29	4.5	4.2	4.3	4.3
Fall 2017	ABE 4911 - 01	1	83	4.3	4.2	4.3	4.3
	ABE 4961 - 01	1	29	3.4	4.2	4.3	4.3
	ABE 4523/6523 - 01	3	20	4.4	4.2	4.3	4.3
	ABE 4523 - 02	3	25	4.4	4.2	4.3	4.3
Spring 2018	ABE 3813 - 01	3	26	4.5			
	ABE 3813 - 02	3	25	4.4			
	ABE 3813 - 03	3	25	4.3			

****NCL – Non-Credit Laboratory**

****S before section number – Service-Learning Designated Course**

ADVISING APPOINTMENTS

Academic Advising: 25 undergraduate students

Pre-Med Advisor for Biological Engineering Students

Biomedical Engineering Association of MSU (B.E.A.M.) Student Organization Advisor

GRADUATE STUDENT ADVISING

MAJOR ADVISOR:

Jarell Colston (MS) (Aug 2015 - Dec 2017)

Justin McMahan (PhD) (Aug 2015 – Dec 2016)

Preston Smith (MS) (Jan-Aug 2015)

Janice Cunningham (MS) “Protein Therapy for the Treatment of Vascular Calcification in Patients with End-stage Renal Disease” (December 2015)

Joshua Grant (MS) “The Development of a Model for Vascular Calcification and the Effects of Magnesium Supplementation on In Vitro Calcification” (December 2015)

Kevin Bennett (MS) “Examination of the Effects of Vitamin D Supplementation on the in vitro Calcification of Vascular Smooth Muscle Cells” (December 2015)

COMMITTEE MEMBER:

Allison Healey, Biomedical Engineering, MS

Danielle Grimes, Engineering Education, PhD
 Austin Finney, Biomedical Engineering, MS
 Ojaswee Adhikari, Biomedical Engineering, MS
 Claudia Castaneda, Poultry Science, PhD
 Mark Mosher, Biomedical Engineering, PhD
 Amber Kay, Biological Sciences, PhD
 Jia Zhao, Biological Sciences, PhD (December 2017)
 Patrick Barton, Biomedical Engineering, MS (December 2017)
 Bradley Kindred, Biomedical Engineering, MS (August 2016)
 Anuhya Gottipati, Biomedical Engineering, PhD (May 2016)
 Casey Steadman, Biomedical Engineering, MS (August 2014)
 Courtney Cates, Biomedical Engineering, MS (May 2014)

UNDERGRADUATE STUDENT RESEARCH ADVISING

SENIOR DESIGN TEAMS:

“Dextran-Sulfate+RANK-L Loaded Hydrogel to Inhibit and Potentially Reverse Vascular Calcification” (2017 - 2018)

Jenna Mosier
 Kalifa Stringfield
 Hannah Stealey
 Katie Webb

“3-D In Vitro Vascular Test Model” (2017 - 2018)

Kadie Parker
 Nancy Nguyen
 Taylor Johnson
 Mariana Santana

“Dextran Coated Angioplasty Balloon” (2016 - 2017)

Rachel Hybart
 Christian Griffith
 Marc Quitlig
 Julia Dayoub

CALS/MAFES UNDERGRADUATE RESEARCH SCHOLARS:

Cameron Roach, Biochemistry (2018 -)
 Lindsay Rexrode, Biochemistry (2017 -)
 Kelsey McArthur, Biochemistry (2015 - 2017)
 Amber Kay, Biochemistry (2014 - 2015)

RESEARCH EXPERIENCE FOR UNDERGRADUATES:

Virginia Mullins, Copiah-Lincoln Community College 2017
 Ursula Offiah, Jackson State University 2016
 Peace Adeyamo, University of Memphis 2015
 Kai Littlejohn, Tuskegee University 2014

MISSISSIPPI IDeA NETWORK OF BIOMEDICAL RESEARCH EXCELLENCE RESEARCH SCHOLARS:

Angelica Smith, Mississippi State University	2018
Phenique Parker, Mississippi State University	2016
Morgan Alexander, Holmes Community College	2015
Justin McMahan, Mississippi State University	2014

SHACKOUL'S HONORS COLLEGE RESEARCH FELLOWS:

Jenna Mosier	2017
Luke Dunaway	2016
Alison Richards	2014

STUDENT WORKERS/DIRECTED INDIVIDUAL STUDY:

Claire Travis	2018 -
Jada Boone	2018 -
Eric Lucas	2018 -
Angelica Smith	2018 -
Alex Gonzalez	2018 -
Olivia Schwartz	2018 - 2018
John Tyson	2017 -
Lindley Williams	2017 -
Virginia Mullins	2017 -
Kadie Parker	2017 - 2018
Nancy Nguyen	2017 -
Jake Manning	2016 -
Jenna Mosier	2016 - 2018
Phenique Parker	2016 - 2017
Rachel Hybart	2015 - 2017
Luke Dunaway	2015 - 2016
Kalifa Stringfield	2015 - 2016
Shannon Overholt	2015 - 2016
Rachel Williams	2015 - 2016
Benjamin Billingsley	2015 - 2016
Justin McMahan	2014 - 2016
Alison Richards	2014 - 2016
Matt Moseley	2014 - 2015
Shaquia Idlett	2013 - 2015
Katie McGuire	2013 - 2015
Joshua Grant	2013 - 2013

HIGH SCHOOL STUDENT RESEARCH ADVISING

Hayden Stokley,	Fall 2017-Spring 2018
Stewart Ippolito,	Summer 2013

TEACHING GRANTS AND TEACHING RELATED SCHOLARSHIP

GRANTS

“Current Topics in Biomedical Engineering” Honors College Teaching Grant, Shackouls Honors College, Mississippi State University, \$5,000 (2018 – 2019)

“Examining the Cellular Mechanics and Phenotypic Switch of Vascular Smooth Muscle Cells”, CALS/MAFES Undergraduate Research Scholars Program, Mississippi Agricultural and Forestry Experiment Station, \$6,000 (2018)

“The Use of Sclerostin to Arrest the Signaling Pathway that Leads to the Phenotypic Switch of Vascular Smooth Muscle Cells”, CALS/MAFES Undergraduate Research Scholars Program, Mississippi Agricultural and Forestry Experiment Station, \$3,000 (2017)

“Examining the Signaling Pathway that Leads to the Phenotypic Switch of Vascular Smooth Muscle Cells”, CALS/MAFES Undergraduate Research Scholars Program, Mississippi Agricultural and Forestry Experiment Station, \$5,000 (2016)

“K-12 Outreach Modules to Broaden Participation in STEM”, MSU CASLE (Center for the Advancement of Service-Learning Excellence) Mini Grant, \$300 (2016 – 2017)

“Phenotypic Switching of Vascular Smooth Muscle Cells”, CALS/MAFES Undergraduate Research Scholars Program, Mississippi Agricultural and Forestry Experiment Station, \$5,000 (2015)

“Improving Scientific Communication of Undergraduates through Peer Evaluation”, MSU Schillig Special Teaching Projects, \$1,000 (2015)

“Rehabilitation Service-Learning for Biological Engineering”, MSU CASLE (Center for the Advancement of Service-Learning Excellence) Mini Grant, \$300 (2014)

“Genetic Switch of Vascular Smooth Muscle Cells”, CALS/MAFES Undergraduate Research Scholars Program, Mississippi Agricultural and Forestry Experiment Station, \$5,000 (2014)

PROCEEDINGS AND PUBLISHED ABSTRACTS

Simpson, C. L., Dechert, E., "The Use of Scaffolding and Peer-Reviews to Improve Effective Writing Skills in Biomedical Engineers," American Society for Engineering Education, Salt Lake City, UT. 27 June 18. Poster Presentation.

Simpson, CL. “Improving Scientific Communication of Undergraduates through Peer Evaluation.” 2017 Society for Biomaterials Annual Meeting. Minneapolis, MN. 6 April 17. Poster Presentation.

PROFESSIONAL DEVELOPMENT

Minority Faculty Development Workshop “Engineering A World of Difference: Convergence in Manufacturing”
September 26-29, 2018 University of Michigan

National Research Mentoring Network: Grant Writers Coaching Group

October 28-29, 2017 Washington, DC

Minority Faculty Development Workshop “Engineering A World of Difference: Academic-Industry Connections”
September 20-23, 2017 University of Houston

Maroon Institute for Writing Excellence	May 8-25, 2017	MSU
Keeping Teaching Fun	March 29, 2017	MSU
Evaluating Teaching Effectiveness	March 23, 2017	MSU
Tenure and Time Management	March 1, 2017	MSU
Who's Not at the Table? Building Research Capacity for Underserved Communities in Engineering	October 30, 2016	Clemson University
Strategies to Support Students with Autism Spectrum Disorder	September 23, 2016	MSU
Metacognition: The Key to Improving Writing and Learning	November 5, 2015	MSU
Writing Grant Proposals	September 10, 2015	MSU
Who's Citing You? Tracking the Impact of Your Research	April 22, 2015	MSU
Academic Research and Leadership Network Symposium	March 27-28, 2015	Anaheim, CA
Jump Start! Tips on Writing an NIH R01 Application	February 16, 2015	MSU
Brown Bag Series	November 12, 2014	MSU
Fundamentals of Quality Graduate Student Mentorship Parts 1 & 2	October 2 & 17, 2013	MSU
Teaching Academy for New Faculty	August 14, 2013	MSU

SERVICE

PROFESSIONAL

Manuscript Reviewer, Journal of Patient Experience (2018 -)

Manuscript Reviewer, Regenerative Engineering and Translational Medicine (2018 -)

Biomedical Engineering Society Annual Meeting, "Black Women in Biomedical Engineering: Lessons for Healthy and Successful Career Advancement" Special Event Organizer (2018)

Mississippi Academy of Sciences President-Elect (2018 -)

National Science Foundation Chemical, Bioengineering, Environmental and Transport Systems, Tissue Engineering Review Panel (2018)

Society for Biomaterials, Biomaterials Education Special Interest Group, Chair (2017 -)

Society for Biomaterials, Biomaterials Forum, Education Reporter (2017 -)

Mississippi Academy of Sciences Innovation and Technology Chair (2016 -)

Mississippi Academy of Sciences Board of Directors (2015 - 2018)
Manuscript Reviewer, Tissue Engineering (2015 -)
Ohio Cancer Research Associates Proposal Reviewer (2015)
National Science Foundation Cellular Dynamics and Function CAREER Award Review Panel (2015)
Abstract Reviewer, Biomedical Engineering Society Annual Meeting (2014 -)
Society for Biomaterials, Biomaterials Education Special Interest Group, Web Contact (2014 – 2017)
Southern Biomedical Engineering Conference, Program Committee (2014 -)
National Science Foundation Nanotechnology Undergraduate Education Proposal Review Panel (2014)
Society for Biomaterials Annual Meeting, Session Organizer and Chair (2013 -)
Manuscript Reviewer, BioMed Research International (2013 -)
National Science Foundation Nanotechnology Undergraduate Education Proposal Review Panel (2013)
Manuscript Reviewer, Annals of Biomedical Engineering (2012 -)
Abstract Reviewer, Tissue Engineering & Regenerative Medicine International Society Annual Meeting (2011)
Committee Member, Society for Biomaterials K-12 Outreach Committee (2006 – 2010)

UNIVERSITY

Community-Engaged Learning Faculty Fellow Program Working Group (2018)
College of Agriculture and Life Sciences Diversity Council (2017 -)
Provost Office Pen Pal Program (2016 – 2017)
Bagley College of Engineering Associate Dean for Research Search Committee Member (2016)
Maroon & Write Quality Enhancement Plan Focus Group (2016)
Community Engagement Committee (2015 -)
Biological Sciences Undergraduate Research Program Symposium Judge (2015)
Shackoul's Honors College Undergraduate Summer Research Symposium Judge (2014 -)
Panelist for Bagley College of Engineering Office of Diversity and Student Development seminar "How Women Lead and the Difference It Makes" (2014)
Judge for Bagley Graduate Research Poster Competition (2014)
Pre-Medical Student Advisor (2013 -)
Academic Insight, Freshman Recruiting Coordinator (2013 -)
Bagley College of Engineering Associate Dean for Research Search Committee Member (2013)

Regions Bank – Division of Agriculture, Forestry, and Veterinary Medicine Superior Faculty Awards, Co-Chair (2013)

ABE Freshmen Mentoring Group (2013)

PUBLIC

Generation S-Studio School, Department of Counseling, Educational Psychology, & Foundations, Mississippi State University (2018)

LeaderSTATE STEM Day, Office of Student Leadership and Community Engagement, Mississippi State University (2016 - 2018)

LeaderSTATE, Office of Student Leadership and Community Engagement, Mississippi State University (2014 - 2018)

Women in Action Summer Camp, Bagley College of Engineering, MSU (2014)

Engineering for Everyone, Bagley College of Engineering, MSU (2014)

Women in Science and Technology Conference, East Mississippi Community College (2013 – 2014)

Quest Camp, Bagley College of Engineering, MSU (2013)

PROFESSIONAL ASSOCIATION MEMBERSHIPS

Society for Biomaterials

Biomedical Engineering Society

American Heart Association

American Society for Engineering Education

Mississippi Academy of Sciences

NIH Network for Minority Health Research Investigators

*last updated 10/30/18