

Other

<u>Course</u>	<u>Role</u>	<u>Year</u>
AP Biology (BMD 201)	Consultant Lecturer	2014-2020
National Math and Science Initiative		

PROFESSIONAL AFFILIATIONS

2012-present; Member of American Heart Association
 2012-2024; Member of American Thoracic Society
 2012-present; Member of American Physiology Society
 2022-2024; Member of American Society of Biochemistry and Molecular Biology
 2022-present; Member of Association of Biochemistry Educators

HONORS AND AWARDS

VCOM Faculty of the Block (Block 4 Cardiovascular and Pulmonary Physiology, 2021; Block 1 Biochemistry, 2022 and 2023)

PROFESSIONAL SERVICE**Study Sections & Invited Reviewer**

Virology and Diseases Fellowship Study Section, American Heart Association (2022-present)
 Basic Science Signaling Fellowship Study Section, American Heart Association (2022-2023)

Other

<u>Activity</u>	<u>Level</u>	<u>Year</u>	<u>Role</u>
ABE Virtual Summit Abstract	National	2024	Judge
VCOM LA Research Day Posters	Local	2023-present	Judge
ULM Research Symposium	Local	2023	Judge
NBOME National Faculty	National	2017-present	Item Writer
APS Undergraduate Abstract Awards	Undergraduate	2019-present	Lead Judge
Handbook Committee	Medical	2018-2019	Member
Wiregrass District Science Fair	High School Middle School Elementary	2018-2020	Director
Wiregrass District Science Fair	Middle School Elementary	2018	Judge
SAMC Poster Day	Medical		

Wiregrass District Science Fair	High School Middle School Elementary	2017	Judge
Mobile Regional Science and Engineering Fair	High School	2016	Chair of Zoology
Mobile Regional Science and Engineering Fair	High School	2015	Judge
CREATE Committee for Research And Teaching Experiences	University	2014	Co-Founder
UCUR University Committee for Undergraduate Research	University	2014	Application Reviewer

Ad-hoc reviewer

Ad-hoc reviewer for several journals including: Frontiers in Physiology, Vascular Physiology Section, American Journal of Physiology: Lung Cellular and Molecular Physiology, PLoS One, Cureus Journal of Medical Science, Biomed Central Cancer,

INSTITUTIONAL SERVICE

Advise 20-22 students per year

2022-present; Professionalism and Ethics Standards Board (PESB) Chair

2022-present; Biochemistry Discipline Representative to Curriculum Oversight Committee

2022-present; Student Researcher of the Year Committee

2021-2023; Medical School Admissions Committee Member

2020-present; Medical School Interviewer

2020-2023; Faculty Senate Member

GRANTS and CONTRACTS

Pending

Principal Investigator: Sarah Voth, PhD

Cystatin C Modulates Endothelial Innate Defense in ExoY-

Dates: 07/01/2020 – 06/30/2022

Goal: The goal of this project was to determine whether loss of intracellular osteopontin promotes EndMT, which contributes to the hyperproliferative, invasive, and pro-inflammatory phenotype of pulmonary endothelium in PAH.

\$100,000

Principal Investigator: Audrey Vasauskas, PhD

The Role Of FK506 Binding Protein 51 In Pulmonary Arterial Hypertension

1R15HL137135-01A1

NIH/NHLBI

Role: Collaborating Investigator

Dates: 06/01/2018 – 05/31/2021

Goal: The goal of this project was to determine whether FKBP51 is increased and contributes to pro-proliferative and anti-apoptotic phenotype of pulmonary artery endothelial cells in pulmonary arterial hypertension.

\$277,277

Principal Investigator: Audrey Vasauskas, PhD

\$93,974

Principal Investigator: Troy Stevens, PhD

cAMP in Endothelial Permeability

2P01HL066299-11A1

NIH/NHLBI

Role: Postdoctoral Fellow/Trainee

Dates: 06/01/2012 – 12/31/2013

Goal: This proposal tested the hypothesis that endothelium lining the lung's extra-alveolar and alveolar blood vessels is phenotypically distinct, and that the unique behavior(s) of cells from these different vascular locations is necessary for them to fulfill their site-specific function(s).

catenin signaling in cancer. Oncotarget. 2016 Apr 5;7(14):17991-8005. PMID: 26908451

6. **Morrow KA**, Ochoa CD, Balczon R, Zhou C, *Cauthen L, Alexeyev M, Schmalzer KM, Frank DW, Stevens T. The *Pseudomonas aeruginosa* exoenzymes U and Y induce a transmissible endothelial proteinopathy. American Journal of Physiology - Lung Cellular and Molecular Physiology. 2016 Feb 15;310(4):L337-53. PMID: 26637633
7. **Morrow KA**, Seifert R, Kaever V, Britain AL, Sayner SL, Ochoa CD, Cioffi EA, Frank DW, Rich TC, Stevens T. Heterogeneity of Pulmonary Endothelial Cyclic Nucleotide Response to *Pseudomonas aeruginosa* ExoY Infection. American Journal of Physiology - Lung Cellular and Molecular Physiology. 2015 Nov 15;309(10):L1199-207. PMID: 26386118
8. Stevens TC, Ochoa CD, **Morrow KA**, Robson MJ, Prasain N, Zhou C, Alvarez DF, Frank DW, Balczon R, Stevens T. The *Pseudomonas aeruginosa* exoenzyme Y impairs endothelial cell proliferation and vascular repair following lung injury. American Journal of Physiology - Lung Cellular and Molecular Physiology. 2014 May 15;306(10):L915-24. PMID: 24705722
9. **Morrow KA**, Das S, Metge BJ, Ye K, Mulekar MS, Tucker JA, Samant RS, Shevde LA. Loss of tumor suppressor Merlin in advanced breast cancer is due to post-translational regulation. The Journal of Biological Chemistry. 2011 Nov 18;286(46):40376-85. PMID: 21965655

Book chapters and review articles (peer reviewed)

8. ~~Morrow KA~~

PROFESSIONAL PRESENTATIONS

1. **(INVITED)** “Breath from Salt” November 2, 2024. 10th Annual VCOM Research Retreat, Blacksburg, Virginia.
2. **(INVITED)** “Tau: It’s All Greek to Me” November 12, 2022. 8th Annual VCOM Research Retreat, Spartanburg, South Carolina.
3. “The Role of Intracellular Osteopontin in Pulmonary Arterial Hypertension” September 23, 2021. Research Rounds, Monroe, Louisiana.
4. **(INVITED)** “Bacterial Infection Leads to an Endothelial Proteinopathy” August 29, 2021. Louisiana Osteopathic Medical Association, New Orleans, Louisiana.
5. **(INVITED)** “Loss of Osteopontin Promotes EndMT in PAH” November 7, 2019. University of South Alabama College of Medicine, Mobile, Alabama.
6. **(INVITED)** “Alzheimer’s Disease-Associated -

- 17.** Dissertation Defense: "Elucidating the role of the tumor suppressor protein Merlin in breast cancer" March 19, 2012. University of South Alabama College of Medicine, Mobile, Alabama.
- 18.** Data in Progress: "The tumor suppressor Merlin inhibits Wnt signaling in breast cancer" January 17, 2012. University of South Alabama Mitchell Cancer Institute, Mobile, Alabama.
- 19.** Data in Progress: "Elucidating the role of the tumor suppressor protein Merlin in breast cancer" May 31, 2011. University of South Alabama Mitchell Cancer Institute, Mobile, Alabama.
- 20.** (

Automated, Label-free Method for Quantifying Intercellular Gap Formation in Images of Cell Monolayers. Experimental Biology Annual Meeting. Chicago, Illinois April 2017 FASEB J April 2017 31:837.11.

8. **Morrow KA**, Stevens TC, Agwaramgbo E, Langham G, Francis M, Balczon R, Stevens T. Studies on the Physical Properties of the *Pseudomonas aeruginosa*-induced Endothelial Prion Cytotoxin(s). Experimental Biology Annual Meeting. Chicago, Illinois April 2017 FASEB J April 2017 31:1074.1.
9. Lin MT, Balczon R, **Morrow KA**,

18. **Morrow KA**, Frank DW, Shevde LA, Stevens T. *Pseudomonas aeruginosa* decreases Merlin phosphorylation in pulmonary endothelium as a mechanism of growth suppression. American Thoracic Society Annual Meeting. Philadelphia, Pennsylvania May 2013 Am J Respir Crit Care Med 187; 2013:A3706.
19. Stevens TC, Ochoa CD, Robson MJ, Zhou C, **Morrow KA**, Alvarez DF, Frank DW, Balczon R, Stevens T. The *Pseudomonas aeruginosa* exotoxin Y impairs endothelial cell proliferation, angiogenesis, and vascular repair following lung injury. American Thoracic Society Annual Meeting. Philadelphia, Pennsylvania May 2013 Am J Respir Crit Care Med 187; 2013:A5916.
20. **Morrow KA**, Das S, Mulekar MS, Tucker JA, Samant RS, Shevde LA. Post-translational regulation leads to loss of tumor suppressor Merlin in breast cancer.

7. Patel K, Voth S, **Morrow KA**, Morrow RL. Expression of Amyloid Precursor Protein in Pulmonary Endothelial Infection. 2nd Annual VCOM Louisiana Research Recognition Day. Monroe, Louisiana February 23, 2024.
8. Kibodeaux E, Voth S, **Morrow KA**, Morrow RL. Expression of Pulmonary Endothelial Cell Components in Pseudomonas Infection. 2nd Annual VCOM Louisiana Research Recognition Day. Monroe, Louisiana February 23, 2024.
9. Mahmud MA, Paul R, Voth S, Ebrahim H, Torres S, Tarun MTI, Ahmed N, El Sayed KA, **Morrow KA**. Olive Oil Phenolics For the Control of Nosocomial Pneumonia. 2nd Annual VCOM Louisiana Research Recognition Day. Monroe, Louisiana February 23, 2024.
10. Lytle E, Morrow RL, **Morrow KA**, Choi CS, Lin M, Stevens T, Voth SB. ExoY Impairs TAK1-mediated Endothelial Amyloid Innate Defense. 1st Annual VCOM Louisiana Research Recognition Day. Monroe, Louisiana April 14, 2023.
11. Torres S, Morrow RL, Bee O, Voth S, **Morrow KA**. Amyloid Precursor Protein Modulates Inflammatory Response to Pseudomonas Aeruginosa Infection. 1st Annual Louisiana Research Recognition Day. Monroe, Louisiana April 14, 2023.
12. Torres S, Voth S, Ebrahim H, McLeod-van Amstel K, Hamilton CL, El Sayed KA, **Morrow KA**. Olive Oil Derivative, Oleocanthal, As A Novel Way to Fight Nosocomial Pneumonia. 1st Annual Louisiana Research Recognition Day. Monroe, Louisiana April 14, 2023.
13. Bee O, Morrow RL, DiGuseppe S, Voth S, **Morrow KA**. Altered Nuclear Localization of Pulmonary Endothelial Expressed TAR DNA-Binding Protein 43 In Response to Pseudomonas Aeruginosa Infection. 1st Annual Louisiana Research Recognition Day. Monroe, Louisiana April 14, 2023.
14. Salim N, Daidone C, Le K, McLeod van-Amstel K, Voth S, **Morrow KA**. Artificial Intelligence in Microscopic Analyses. 1st Annual Louisiana Research Recognition Day. Monroe, Louisiana April 14, 2023.
15. Dickey Z, Morrow RL, **Morrow KA**, Choi CS, Lin M, Stevens T, Voth S. The Role of SIRT1 In the Pathogenesis of Pseudomonas Aeruginosa Exoenzyme Y. 1st Annual Louisiana Research Recognition Day. Monroe, Louisiana April 14, 2023.
16. Hanna S, Morrow RL, **Morrow KA**, Wagener B, Pittet JF, Choi CS, Lin M, Stevens T, Voth S. Pathogenesis of Klebsiella Pneumoniae Induced Proteinopathy Is Amyloid Strain Dependent. 1st Annual Louisiana Research Recognition Day. Monroe, Louisiana April 14, 2023.
17. Kibodeaux E, Voth S, **Morrow KA**, Morrow RL. Expression of Pulmonary Endothelial Cell Components in Pseudomonas Infection. ULM Research Symposium. Monroe, Louisiana October 23, 2023.
18. Patel K, Voth S, **Morrow KA**, Morrow RL. Expression of Amyloid Precursor Protein in Pulmonary Endothelial Infection. ULM Research Symposium. Monroe, Louisiana October 23, 2023.
19. Voth SB, Choi CS, Morrow RL, Gwin M, Lin M, Gautam S, Frank DW, Audia JP, Stevens T, Sharma L, Cruz CD, **Morrow KA**. Amyloid-beta precursor protein: Essential to lung capillary barrier defense during acute infection. 8th Annual VCOM Research Retreat. Spartanburg, South Carolina November 12, 2022.

20. Morrow RL, Skains R, **Morrow KA**. Intracellular Osteopontin in Pulmonary Arterial Hypertension. 8th Annual VCOM Research Retreat. Spartanburg, South Carolina November 12, 2022.
21. Bettridge A, Morley T, Iyer G, Vasauskas AA, **Morrow KA**. Osteopontin Levels are Decreased in Pulmonary Artery Endothelial Cells that Show Evidence of Endothelial to Mesenchymal Transition. 5th Annual Wiregrass Chapter Society of Hospital Medicine Meeting. Dothan, Alabama November 7, 2020.
- 22.

43. Stevens RP, **Morrow KA**, Hartman LJ, Balczon R, Stevens T. ExoY impairs the rapid growth of pulmonary microvascular endothelial cells. (Abstract #41). 42nd Summer Medical Student Research Day. Mobile, Alabama July 31, 2015.
44. **Morrow KA**, Ochoa CD, Balczon R, Cauthen L, Alexeyev M, Schmalzer KM, Frank DW, Stevens T. *Pseudomonas* type 3 secretion system effectors induce a transmissible endothelial tauopathy. University of South Alabama College of Medicine Research Forum. Mobile, Alabama October 31, 2014.
45. Cauthen L, **Morrow KA**, Robson MJ, Housley NA, Balczon R, Stevens, T. *Pseudomonas aeruginosa* infection causes release of a cytotoxic factor from pulmonary microvascular endothelial cells. (Abstract #25). 41st Summer Medical Student Research Day. Mobile, Alabama August 1, 2014.
46. Harvey W, Cauthen L, **Morrow KA**, Robson MJ, Stevens T. *Pseudomonas aeruginosa*

Effectiveness of antibiotic