

CURRICULUM VITAE (CV)

K. Adam Morrow, Ph.D.
Associate Professor for Cell Biology and Physiology
Department of Biomedical Sciences
Edward Via College of Osteopathic Medicine

CONTACT INFORMATION

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EDUCATION

College	University of Central Arkansas, 2008, B.S. Chemistry
Graduate School	University of South Alabama College of Medicine, 2012, Ph.D. Basic Medical Sciences (Focus in Cancer Biology) Department of Cell Biology and Neuroscience
Postdoctoral Training	Postdoctoral fellowship, University of South Alabama Center for Lung Biology Department of Cell Biology and Physiology 2012-2016

ACADEMIC APPOINTMENTS

2014-2015; Adjunct Professor, Department of Biology, University of South Alabama, Mobil0.000092 re

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-present; Member of American Thoracic Society
 2012-present; Member of American Physiology Society
 2022-present; 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)

PROFESSIONAL SERVICE**Study Sections & Invited Reviewer**

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

Other

<u>Activity</u>	<u>Level</u>	<u>Year</u>	<u>Role</u>
NBOME National Faculty	National	2017-present	Item Writer
APS Undergraduate Abstract Awards	Undergraduate	2019	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	2017 and 2019	Judge

and Engineering Fair 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

5R01CA138850-02

NIH/NCI

Role: Graduate Student/Trainee

Dates: 05/01/2011 - 05/31/2012

Goal: This proposal tested whether the tumor suppressor protein Merlin played a role in breast cancer.

Active

Cytoprotective Endothelial Amyloids

Research Eureka Accelerator Program (Intramural)

Role: Co-principal Investigator

Dates: 07/01/2022 06/30/2023

Goal: The goal of this project is to determine the contribution of amyloid precursor protein to lung endothelial host defense and the mechanism of *Pseudomonas aeruginosa* Exoenzyme Y-mediated impairment of this defense.

PUBLICATIONS

Peer-Reviewed Journal Articles

1. Balczon R, **Morrow KA**, Leavesley S, Francis CM, Stevens TC, Agwaramgbo E, Williams C, Stevens RP, Langham G, Voth S, Cioffi EA, Weintraub SE, Stevens T. Cystatin C regulates the cytotoxicity of infection-induced endothelial-amyloid. FEBS Open Bio. 2020 Oct 8;10(11):2464-77. PMID: 33030263
2. Lin MT, Balczon R, Pittet JF, Wagener BM, Moser SA, **Morrow KA**, Voth S, Francis CM, Leavesley S, Bell J, Alvarez DF, and Stevens T. Nosocomial Pneumonia Elicits an Endothelial Proteinopathy: Evidence for a Source of Neurotoxic Amyloids in Critically Ill Patients. American Journal of Respiratory and Critical Care Medicine. 2018 Dec 15;198(12):1575-1578. PMID: 30280916
3. Balczon R, **Morrow KA**, Edmonds B, Zhou C, Alexeyev M, Pittet JF, Wagener BM, Moser SA, Zha X, Frank DW, and Stevens T. *Pseudomonas aeruginosa* Infection Liberates Transmissible, Cytotoxic Prion Amyloids. FASEB J. 2017 Jul;31(7):2785-2796. PMID: 28314768
4. **Morrow KA**, Das S, Meng E, Menezes ME, Bailey SK, Metge BJ, Buchsbaum DJ, Samant RS, Shevde LA. Loss of tumor suppressor Merlin results in aberrant Wnt/catenin signaling in cancer. Oncotarget. 2016 Apr 5;7(14):17991-8005. PMID: 26908451
5. **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
6. **Morrow KA**, Seifert R, Kaefer V, Britain AL, Sayner SL, Ochoa CD, Cioffi EA, Frank DW, Rich TC, Stevens T. Heterogeneity of Pulmonary Endothelial Cyclic Nucle1 215.3 307.61 169

5. **(INVITED)**

Dothan, Alabama.

6. **(INVITED)**

Alabama College of Osteopathic Medicine, Dothan, Alabama.

7. **(INVITED)** *Pseudomonas aeruginosa*

2016. Arkansas College of Osteopathic Medicine, Fort Smith, Arkansas.

8. *Pseudomonas aeruginosa*

01, 2016. University of South Alabama Center for Lung Biology, Mobile, Alabama.

9. **(INVITED)** University of South Alabama Biomedical Sciences Introduction to
Pseudomonas aeruginosa propagates damage through

Alabama College of Allied Health, Mobile, Alabama.

10. **(INVITED)** University of South Alabama College of Medicine Research Forum:
Pseudomonas type 3 secretion system effectors induce a transmissible endothelial
Medicine,

Mobile, Alabama.

11. **(INVITED)** 5th annual Trainee Highlights Breakfast at EB 2014 presented by the
Pseudomonas

aeruginosa infection causes endothelial Tau aggregation: evidence for an
endothelium, 2014. San Diego, CA.

12.

levels in response to *Pseudomonas aeruginosa*
of South Alabama Center for Lung Biology, Mobile, Alabama.

13.

Biology, Mobile, Alabama.

14. **(INVITED)** 132nd Annual Meeting of the Association of Post-

May 25, 2012. Mobile, Alabama.

15.

2. University of South Alabama College of Medicine,

Mobile, Alabama.

16.

Mobile, Alabama.

17.

Mobile, Alabama.

18. **(INVITED)** 7,

2011. University of Central Arkansas, Conway, Arkansas.

19. **(INVITED)**

2011. University of South Alabama College of Medicine, Mobile, Alabama.

20.

21. Shevde LA, **Morrow KA**, Metge BJ, Das S, Ye K, Samant RS. Osteopontin Foils
. FASEB Science Research Conference: Osteopontin Biology.
Steamboat Springs, Colorado August 2010.

OTHER ABSTRACTS

1.

11. Gonzalez M, Morrow RL, Brown JR, **Morrow KA**, Vasauskas AA. Pulmonary Arterial Hypertension. 96th Annual Meeting of Alabama Academy of Sciences. Tuskegee, Alabama February 20, 2019.
12. Gonzalez M, Carter AG, Cullifer JT, Vasauskas AA, Morrow RL, Brown J, **Morrow KA**. Altered Intracellular Osteopontin and Merlin Signaling May Drive Endothelial-to-Mesenchymal Transition in BMP2 Deficient Pulmonary Artery Endothelial Cells. 3rd Annual Wiregrass Chapter Society of Hospital Medicine Meeting. Dothan, Alabama September 28, 2018.
13. Carter AG, Cullifer JT, Gonzalez M, Vasauskas AA, Morrow RL, Brown J, **Morrow KA**. Pulmonary Endothelial Cells Predisposed to PAH Have Increased Sensitivity to *Pseudomonas aeruginosa* Infection. 3rd Annual Wiregrass Chapter Society of Hospital Medicine Meeting. Dothan, Alabama September 28, 2018.
14. Cullifer JT, Carter AG, Gonzalez M, Vasauskas AA, Morrow RL, Brown J, **Morrow KA**. BMP2 Knockdown Enhances Hyperproliferative Phenotype of Pulmonary Endothelium. 3rd Annual Wiregrass Chapter Society of Hospital Medicine Meeting. Dothan, Alabama September 28, 2018.
15. Shoham S, Dukes D, Morrow RL, Brown J, **Morrow KA**, Vasauskas AA. Altered Balance of FKBP51 and FKBP52 in BMP2-deficient Pulmonary Artery Endothelial Cells May Influence Cellular Phenotype and Migration. 3rd Annual Wiregrass Chapter Society of Hospital Medicine Meeting. Dothan, Alabama September 28, 2018.
16. Decker EP, Vasauskas AA, Morrow RL, **Morrow KA**, Brown J. FKBP51 Regulates
rd Annual
Wiregrass Chapter Society of Hospital Medicine Meeting. Dothan, Alabama September 28, 2018.
17. Kim EH, Mehindru A, **Morrow KA**, Hernandez M. Cytoskeletal Reorganization of the Astrocyte After Exposure to Cholesterol-depleting Detergent. 3rd Annual Wiregrass Chapter Society of Hospital Medicine Meeting. Dothan, Alabama September 28, 2018.
18. Quigley NR, Ceballos R, **Morrow KA**. Substrate stiffness alteration decreases pulmonary artery endothelial cell proliferation. (Abstract #33) 2nd Annual Wiregrass

22. Huetteman RE, **Morrow KA**, Balczon R, Stevens T. Characterization of cytotoxin induced endothelial inclusion bodies. (Abstract #23). 42nd Summer Medical Student Research Day. Mobile, Alabama July 31, 2015.
23. 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.
24. **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.
25. 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.
26. Harvey W, Cauthen L, **Morrow KA**, Robson MJ, Stevens T. *Pseudomonas aeruginosa* release of monomeric and oligomeric endothelial tau as a putative mechanism of cytotoxicity. (Abstract #26). 41st Summer Medical Student Research Day. Mobile, Alabama August 1, 2014.
27. Bartz N, Palanki R, Stevens RP, **Morrow KA**, Robson MJ, Housley NA, Alvarez DF, Stevens T. *Pseudomonas aeruginosa* exoenzyme Y preferentially disrupts resident endothelial progenitor cell barrier integrity. (Abstract #37). 41st Summer Medical Student Research Day. Mobile, Alabama August 1, 2014.
28. **Morrow KA**, Ochoa CD, Alexeyev M, Frank DW, Audia JP, Balczon R, Stevens T. The *Pseudomonas aeruginosa* exoenzyme U stimulates endothelial cell tau oligomerization. (Abstract #22). University of South Alabama College of Medicine Research Forum. Mobile, Alabama December 13, 2012.
29. Huettemann RE, Stevens TC, Robson MJ, **Morrow KA**, Stevens T. The *Pseudomonas Aeruginosa* Exotoxin Y induces a Tau phosphorylation signature that coincides with endothelial cell gap formation. 39th Annual Medical Student Research Day. (Abstract # 23). Mobile, Alabama August 3, 2012.
30. **Morrow KA**, Das S, Menezes ME, Samant RS, Shevde LA. The tumor suppressor Merlin suppresses Wnt signaling in breast cancer. University of South Alabama College of Medicine Research Forum. Mobile, Alabama December 9, 2011.
31. **Morrow KA**, Das S, Menezes ME, Samant RS, Shevde LA. The tumor suppressor Merlin suppresses Wnt signaling. Mitchell Cancer Institute Research Colloquium. Mobile, Alabama October 14, 2011.

OTHER

<u>Activity</u>	<u>Level</u>	<u>Year</u>	<u>Role</u>
Youth Soccer	2 nd - 4 th grade	2019	Coach
Church Leadership	Community	2018-2019	Deacon
Youth Soccer	3 rd -5 th Grade	2016	Coach
Youth Soccer	2 nd -3 rd Grade	2015	Coach
Bible School	College	2015-2016	Instructor
	High School	2014	Laboratory
School (9 th grade)			Instructor

