

Kimberly James, Ph.D.

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Education:

- 2014 Ph.D. in Microbiology, University of Oklahoma, Norman, OK.
- 2015 B.S. in Microbiology with a minor in Chemistry and a minor in African American Studies, University of Oklahoma, Norman, OK.

Professional Experience:

- 2021-present Assistant Professor, Department of Biological Sciences, Florida Gulf Coast University, College of Arts and Science, Ft Myers, FL.
- 2016-2021 Postdoctoral Research Associate, Department of Microbiology and Cell Science, University of Florida, Gainesville, FL.
- 2015-2016 Postdoctoral Research Associate, Department of Microbiology and Plant Biology, University of Oklahoma, Norman, OK.
- 2010-2014 Graduate Research Assistant, Department of Microbiology and Plant Biology, University of Oklahoma, Norman, OK.

Teaching Experience:

- 2021 Adjunct Lecturer, Online Introduction to Microbiology Lab Course
Introduction to Microbiology MCB_3020L
Department of Microbiology and Cell Science, University of Florida, Gainesville, FL.
- 2017-2017 Biology Instructor, UFutures High School Teachers Institute, Department of Science Education, University of Florida, Gainesville, FL.
- 2016 Guest Lecturer Microbial Physiology, University of Oklahoma, Norman, OK
- 2015-2016 Lecturer and Academic Advisor, Introduction to Microbiology MBIO_2815
Department of Microbiology and Plant Biology, University of Oklahoma, Norman, OK.
- 2008-2014 Biology and Zoology Instructor, Sooner Upward Bound, University of Oklahoma, Norman, OK.
- 2008-2010 Teaching Assistant, Department of Botany and Microbiology, University of Oklahoma, Norman, OK.

Professional and Community Services:

- 2017-present Co-Director, Saturday Academy of Gardenia Gardens (Tutoring program for K-8th grade services low-income students), Gainesville, FL.
- 2021 Reviewer, 2021 Graduate Student Mentoring Award, University of Florida, Gainesville, FL. Reviewed student applications.
- 2020-2021 Member, Graduate Student Admissions Committee, Department of Microbiology and Cell Science, University of Florida, Gainesville, FL.
- 2020-2021 Member, Graduate Student Recruitment Committee, Department of Microbiology and Cell Science, University of Florida, Gainesville, FL.

- 2017-2020 Judge, Alachua County Middle School and High School Science Fair
Gainesville, FL.
- 2019 Judge, American Society of Microbiology: Annual Biomedical Research Conference
for Minority Students. Anaheim, CA.
- 2019 Judge, 3rd Annual Diversity Graduate Research Symposium, Gainesville, FL.

Publications (*indicates 1st Coauthor):

James, K. L. (corresponding author) and Rice, K.C. 2021. *Best practices for preparation of Staphylococcus aureus metabolomics samples*, in *Staphylococcus aureus: Methods and Protocols, Methods in Molecular Biology series (Springer)*.

Orsini, S.S., ***James, K. L.**, Reyes, D., Witte, A., Carroll, R.K., Rice, K.C., 2020. A bacterial-like nitric oxide synthase in the haloalkaliphilic archaeon *Natronomonas pharaonis*. *Environmental Microbiology*. *Microbiology Open*. doi: 10.1002/mbo3.1124.

James, K. L., Crable, B.R., Mouttaki, H., Sieber, J.R., Nguyen, H.N., Yang, Y., Xie, Y., Erde, J., Neil Q. Wofford, Loo, J.A., Ogorzalek-Loo, R.R., Gunsalus, R.P., and McInerney, M.J. 2019. *Syntrophus aciditrophicus* uses a core set of enzymes in a reversible manner to syntrophically degrade fatty, aromatic and alicyclic acids and to make aromatic and alicyclic acids from fatty acid. *Environmental Microbiology*. 21(5):1833-1846. doi: 10.1111/1462-2920.14601.

James, K. L., Mogen, A.B., Brandwein, J.N., Orsini, S.S., Ritter, M.J., Markiewicz, M.A., Bose, J.L., and Rice, K.C. 2019. Interplay of nitric oxide synthase (NOS) and SrrAB in modulation of *Staphylococcus aureus* metabolism and virulence. *Infection and Immunity*. 87(2) doi: 10.1128/IAI.00570-18.

Mogen, A.B., Carroll R.K., **James, K.L.**, Lima, G., Silva, D., Culver, J., Petucci, C., Shaw, L.N., and Rice, K.C. 2017. *Staphylococcus aureus* nitric oxide synthase (saNOS) modulates aerobic respiratory metabolism and cell physiology. *Molecular Microbiology*. 105(1):139-157. doi: 10.1111/mmi.13693.

James, K. L., Ríos-Hernández, L. A., Wofford, N. Q., Mouttaki, H., Sieber, J. R., Sheik, C. S., Nguyen, H. H., Yang, Y., Xie, Y., Erde, J., Rohlin, L., Karr, E. A., Loo, J. A., Loo, R.R.O., Hurst, G. B., Gunsalus, R. P., Szweida, L. I., and McInerney, M. J. 2016. Pyrophosphate-Dependent ATP Formation from Acetyl Coenzyme A in *Syntrophus aciditrophicus*, a New Twist on ATP Formation. *mBio*. 7(4): e01208-16. doi: 10.1128/mBio.01208-16.

In revision or recently submitted:

Burgin, D.J. and ***James, K.L.**, DeMars, Z, Edelmann, M.J., Bose, J.L., Rice, K.C., Dual deficiency of saNOS and SrrAB alters virulence production in *Staphylococcus aureus*. *mSphere* manuscript ID mSphere00733-20. [in revision]

Muroski, J.M., Fu, J.Y., Nguyen, H.H., Wofford, N.Q., Mouttaki, H., **James, K.L.**, McInerney, M.J., Gunsalus, R.P., Loo, J.A., Loo. The acyl-proteome of *Syntrophus aciditrophicus* reveals metabolic relationship with benzoate degradation. *Molecular and Cellular Proteomics*. Submitted 5/18/2021. [in review]

In Preparation:

James, K.L., Burgin, D.J., Brandwein, J.N., Sculthorpe, T.S., DeMars, Z, Bose, J.L., Rice, K.C. Characterization of virulence factors associated with hemolysis in *Staphylococcus aureus nos srrAB* double mutant.

Hauserman, M., Sullivan, L.E., **James, K.L.**, Edelmann, M.J., Carroll, R.K., Rice, K.C. A comparison of *Staphylococcus aureus* physiology response to spaceflight and ground-based simulated microgravity.

My bibliography can be found at the following link:

<https://www.ncbi.nlm.nih.gov/myncbi/1DKahaV1H6rom5/bibliography/public/>

Conference Oral Presentations:

James, K.L. and Rice, K.C., Regulation of NOS and its interplay with *Staphylococcus aureus* metabolism, 7th International Conference on Gram⁺ Pathogens, University of Nebraska Medical Center, Omaha, NE. October 17, 2018.

James, K.L. and Rice, K.C., Regulation of NOS and its interplay with *S. aureus* metabolism (invited), 103rd Annual American Society of Microbiologist Southeastern Branch Meeting, Tampa, FL. November 11, 2017.

James, K.L., Career Panelist (invited), ASM Professional Career Development Workshop, Florida American Society for Microbiologist, St. Petersburg, FL. October 13, 2017.

James, K.L., Summer Undergraduate Research at Florida (SURF) Closing Ceremony (invited). Importance of Inclusion and Diversity in the SURF. University of Florida, Gainesville, FL. August 4, 2017.

James, K.L. and McInerney, M.J., Novel Hydrogen Production Systems Operative at Thermodynamic Extremes. Mechanisms for Energy Production? Genomic Sciences Contractor-Grantee Mtg IX/USDA-DOE Plant Feedstock Genomics for Bioenergy Awardee Meeting, Washington D.C., April 2011.

Poster Presentations:

Hauserman, M., Sullivan, L.E., **James, K.L.**, Edelman, M.J., Carroll, R.K., Rice, K.C. A comparison of *Staphylococcus aureus* physiology response to spaceflight and ground-based simulated microgravity. American Society for Gravitational and Space Research Virtual Meeting, Nov. 2020.

Burgin, D.J., **James, K.L.**, Rice, K.C. Investigating virulence factor production of *Staphylococcus aureus* *nos* and *srrAB* mutants using differential media. University of Florida Virtual Undergraduate Research Symposium, Gainesville, FL., April 2020.

James, K.L., Brandwein, J.N., Orsini, S., Mogen, A.B., Ridder, M.J., Markiewicz, M.A., Bose, J.L., and Rice, K.C. Interplay of nitric oxide and SrrAB in modulation of *Staphylococcus aureus* metabolism. 18th International Society of Staphylococcal and Staphylococcus Infection, Copenhagen, Denmark. August 22-27, 2018.

Brandwein, J.N., **James, K.L.**, and Rice, K.C. Contribution of NOS and SrrAB to *Staphylococcus aureus* antibiotic tolerance. 18th International Society of Staphylococcal and Staphylococcus Infection, Copenhagen, Denmark. August 22-27, 2018.

Burgin, D.J., **James, K.L.**, and Rice, K.C. Investigating virulence factor production of *Staphylococcus aureus* *nos* and *srrAB* mutants using differential media, Undergraduate Research Day Symposium Cell Biology and Microbiology, University of Florida, Gainesville, FL. April 27, 2018.

James, K.L., Brandwein, J.N., Orsini, S.S., Mogen, A.B., and Rice, K.C. The role of *nos* and *srrAB* in the modulation of *Staphylococcus aureus* metabolism. Southeast Center for Integrated Metabolomics (SECIM) Workshop and Symposium. University of Florida. Gainesville, FL. April 26, 2018.

James, K.L., Brandwein, J.N., and Rice, K.C. Regulation of NOS and its interplay with *S. aureus* metabolism. Emerging Pathogens Institute. University of Florida, Gainesville, FL, February 15, 2018.

James, K.L., Brandwein, J.N., and Rice, K.C. Regulation of NOS and its interplay with *S. aureus* metabolism. Graduate Student Research and Recruiting Symposium. University of Florida, Gainesville, FL. February 2018.

Rivera, B., Brandwein, J.N., **James, K.L.**, Rice, K.C. Contribution of *Staphylococcus aureus* nitric oxide synthase (saNOS) to gentamicin killing. American Society of Microbiology: Florida Branch, Clearwater, FL. October 2017.

James, K.L., Mouttaki, H., Yang, Y., Xie, Y., Rohlin, L., Loo, J.A., Loo, R.R., Gunsalus, R.P., McInerney, M.J., and Sweda, L. A new twist on ATP formation in bacteria: pyrophosphate-dependent

ATP synthesis from acetyl-coenzyme A. 2016 Bioinorganic Workshop, Penn State, State College, PA. June 2016.

James, K.L., Mouttaki, H., Yang, Y., Xie, Y., Rohlin, L., Loo, J.A., Loo, R.R., Gunsalus, R.P., and McInerney, M.J., Mechanism for substrate-level phosphorylation in the syntrophic fatty and aromatic acid degrader, *Syntrophus aciditrophicus*. 114th General Meeting, American Society for Microbiology, Boston, MA. May 2014. Received travel award for the poster presentation.

Thomas (James), K. L., Mouttaki, H., Yang, Y., Xie, Y., Rohlin, L., Loo, J. A., Loo, R. R., Gunsalus, R. P., and McInerney, M.J., *Syntrophus aciditrophicus* uses Multiple Systems for Substrate-level Phosphorylation. Extremophiles: The Key to Bioenergy? University of Georgia, Athens, GA. September 2011.

Thomas (James), K. L., Mouttaki, H., Yang, Y., Xie, Y., Rohlin, L., Loo, J. A., Loo, R. R., Gunsalus, R. P., and McInerney, M. J., *Syntrophus aciditrophicus* Uses Multiple Systems for Substrate-level Phosphorylation. 111th General Meeting of American Society for Microbiology, New Orleans, LA. May 2011.

McInerney, M. J., Tanner, R. S., Sieber, J. R., **Thomas (James), K. L.**, Maune, M. W., Hurst, G., Rohlin, L., and Gunsalus, R., Novel Hydrogen Production Systems Operative at Thermodynamic Extremes. Genomic Sciences Contractor-Grantee Mtg IX/USDA-DOE Plant Feedstock Genomics for Bioenergy Awardee Meeting, Washington D.C., April 2011.

Career Development Workshops and Courses:

- Responsible Code of Research Training Course for NIH Grants GMS7877. Gainesville, FL. 2021.
- Diversity, Equity, and Inclusion: Journey into Personal Awareness; Mentors, Coaches, and Sponsors; and Hidden Operational Bias. Hosted by Dr. Pamela Leggett-Robinson. Online workshop. Jan-May 2021.
- University of Florida Postdoc Writing Program. Selected participant. Gainesville, FL. Sept 24-Dec 5, 2020.
- Southeast Center for Integrated Metabolomics: Metabolomics Summer School. University of Florida. Gainesville, FL. August 19-21, 2019.
- Teaching Enhancement Symposium: Being a Mentor. University of Florida. Gainesville, FL. August 14, 2018.
- Grantsmanship Workshop. Straughn Center. University of Florida. Gainesville, FL. June 28, 2017.
- 4th Penn State Bioinorganic Workshop, Penn State, State College, Pennsylvania. June 2-10, 2016.

Honors and Awards:

- National Achievers Society Champion and Advocate Award, 2021.
- Annual Biomedical Research Conference for Minority Students Judge Travel Award, 2019.
- International Conference on Gram⁺ Pathogens Travel Award, 2018.
- American Society for Microbiology Student Travel Grant, 2014.
- Lois Pfiester Women in Science Scholarship, 2013.
- Genomic Sciences Meeting Student Travel Grant, 2011.
- McNair Scholar, University of Oklahoma, 2004.

Mentees:

Graduate Students

Meghan, Berryman, University of Florida, 2019

Matthew Hauserman, University of Florida, 2019
Teresa Collins, Ph.D., University of Florida, 2016-2017
Zaynab S. Mohamed, Ph.D., University of Florida, 2017
Jessie Brandwein, University of Florida, 2016
Charlene Barginda, University of Florida, 2016

Undergraduate Students

Dylan Burgin, University of Florida, 2018-2020
Keyonna Smith, University of Florida, 2018-2019
Brenda Rivera, UF SURF program University of Florida, Summer 2017
Nicole Rodriques, University of Oklahoma, 2015