

# Reed M. Stubbendieck

ASSISTANT PROFESSOR

Department of Microbiology and Molecular Genetics, Oklahoma State University

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## Education

### Ph.D. Genetics

TEXAS A&M UNIVERSITY

2017

College Station, TX

- **Adviser:** Dr. Paul Straight
- **Dissertation:** Discovering Linear mycins in Bacterial Competition: Lysis, Autolysis, and Resistance

### Certificate - Microbial Specialised Metabolites: Origins and Applications

JOHN INNES CENTRE/RUDJER BOŠKOVIĆ SUMMER SCHOOL IN APPLIED MOLECULAR MICROBIOLOGY

2014

Dubrovnik, Croatia

### B.S. Biochemistry & Biological Sciences

UNIVERSITY OF NEBRASKA-LINCOLN

2011

Lincoln, NE

## Experience

### Assistant Professor

OKLAHOMA STATE UNIVERSITY - DEPARTMENT OF MICROBIOLOGY AND MOLECULAR GENETICS

2022-Present

Stillwater, OK

### Postdoctoral Research Associate

UNIVERSITY OF WISCONSIN-MADISON - DEPARTMENT OF BACTERIOLOGY

2017-2022

Madison, WI

- **Adviser:** Dr. Cameron Currie

### Graduate Research Associate

TEXAS A&M UNIVERSITY - DEPARTMENT OF BIOCHEMISTRY & BIOPHYSICS

2012-2017

College Station, TX

- **Adviser:** Dr. Paul Straight

### Post-Baccalaureate Research Assistant

UNIVERSITY OF NEBRASKA-LINCOLN - DEPARTMENT OF BIOCHEMISTRY

2011

Lincoln, NE

- **Adviser:** Dr. Cheryl Bailey

### Undergraduate Research Assistant

UNIVERSITY OF NEBRASKA-LINCOLN - DEPARTMENT OF BIOLOGICAL SCIENCES

2008-2011

Lincoln, NE

- **Adviser:** Dr. Eileen Hebets

## Support

### GRANTS

#### Characterizing Pathogen-Mediated Production of Secondary Metabolites in the Human Aerodigestive Tract Microbiome

2024-Present

OKLAHOMA CENTER FOR MICROBIOME RESEARCH

- **Role:** RPL
- **Award:** \$1,003,298
- NIH Centers of Biomedical Research Excellence Program - Phase I
- [Oklahoma State University Press Release](#)

#### Identification of Antimicrobial Peptides against *Staphylococcus aureus* Produced by *Dolosigranulum pigrum* in the Nose

2023-Present

OKLAHOMA CENTER FOR RESPIRATORY AND INFECTIOUS DISEASES PILOT PROJECT GRANT

- **Role:** PI
- **Award:** \$100,000

## Discovering Mechanisms of *Staphylococcus aureus* Inhibition by Commensal *Dolosigranulum pigrum*

2023-Present

OKLAHOMA STATE UNIVERSITY COLLEGE OF ARTS AND SCIENCES RESEARCH PROGRAM SEED GRANT

- **Role:** PI
- **Award:** \$10,000

## Determining the Role of Siderophores from Brown-Rot Fungi in Copper Tolerance

2020-2022

UNITED STATES DEPARTMENT OF AGRICULTURE FOREST SERVICE

MSN244765

- **Roles:** preliminary data, analysis, and writing
- **Award:** \$10,000

## COVID-19 and the Nasal Microbiome: Potential Marker of Disease Outcomes and Novel Antivirals

2020-2021

WISCONSIN PARTNERSHIP PROGRAM

WPP4658

- **Roles:** project inception, writing, analysis, and management
- **Award:** \$49,452

## Identification of Novel MDR Antimicrobials from Human Microbiome Symbioses

2019-2022

NATIONAL INSTITUTE OF INFECTIOUS DISEASES CENTERS OF EXCELLENCE FOR TRANSLATIONAL RESEARCH

5U19AI142720-03 7250

- **Roles:** project inception, preliminary data, analysis, and writing
- **Award:** \$1,027,237

## FELLOWSHIPS & SCHOLARSHIPS

### Postdoctoral Fellowship in Computation and Informatics in Biology and Medicine

2018-2020

NATIONAL LIBRARY OF MEDICINE

- **Part of:** T15 LM007359
- **Award:** \$103,564

### Nebraska Institutional Development Award Program Networks of Biomedical Research Excellence Scholarship

2008-2011

NATIONAL INSTITUTES OF HEALTH

- **Part of:** P20 RR016469
- **Award:** \$10,450

### Nebraska Undergraduate Creative Activities and Research Experience Scholarship

2009-2010

UNIVERSITY OF NEBRASKA-LINCOLN

- **Award:** \$1000

## Publications

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\* , indicates co-first authorship. † , indicates corresponding author.

### PEER-REVIEWED PUBLICATIONS

1. **Reed M. Stubbendieck**, Jillian H. Hurst, & Matthew S. Kelly. (2024). *Dolosigranulum pigrum*: a promising nasal probiotic candidate. *PLOS Pathogens*. doi: [10.1371/journal.ppat.1011955](https://doi.org/10.1371/journal.ppat.1011955).
2. Rauf Salamzade, J.Z. Alex Cheong, Shelby Sandstrom, Mary Hannah Swaney, **Reed M. Stubbendieck**, Nicole Lane Starr, Cameron R. Currie, Anne M. Singh, & Lindsay Kalan. (2023). Evolutionary investigations of the biosynthetic diversity in the skin microbiome using *IsaBGC*. *Microbial Genomics*. doi: [10.1099/mgen.0.000988](https://doi.org/10.1099/mgen.0.000988).
3. **Reed M. Stubbendieck**†, Eishika Dissanayake, Peter M. Burnham, Susan E. Zelasko, Mia I. Temkin, Sydney S. Wisdorf, Rose F. Vrtis, James E. Gern, & Cameron R. Currie. (2023). *Rothia* from the human nose inhibit *Moraxella catarrhalis* colonization with a secreted peptidoglycan endopeptidase. *mBio*. doi: [10.1128/mbio.00464-23](https://doi.org/10.1128/mbio.00464-23). Highlighted in **mBio** and **Nature Reviews Microbiology**.
4. Eishika Dissanayake\*, Rebecca A. Brockman-Schneider\*, **Reed M. Stubbendieck**, Britney A. Helling, Zhumin Zhang, Yury A. Bochkov, Charmaine Kirkham, Timothy F. Murphy, Carole Ober, Cameron R. Currie, James E. Gern. (2023). Rhinovirus increases *Moraxella catarrhalis* adhesion to the respiratory epithelium. *Frontiers in Cellular and Infection Microbiology*. doi: [10.3389/fcimb.2022.1060748](https://doi.org/10.3389/fcimb.2022.1060748).

5. **Reed M. Stubbendieck†**, Susan E. Zelasko, Nasia Safdar, & Cameron R. Currie. (2021). Biogeography of Bacterial Communities and Specialized Metabolism in Human Aerodigestive Tract Microbiomes. *Microbiology Spectrum*. doi: [10.1128/Spectrum.01669-21](https://doi.org/10.1128/Spectrum.01669-21).
6. Ming Tang, Jie Lie, Wenpeng Hou, **Reed M. Stubbendieck**, Han Xiong, Jie Jin, Jiyi Gong, Chen Cheng, Xiaoxin Tang, Yinglong Liu, Zhaofeng Li, Jianfeng Wang, & Yin Yi. (2021). Structural variability in the bulk soil, rhizosphere, and root endophyte fungal communities of *Themeda japonica* plants under different grades of karst rocky desertification. *Plant and Soil*. doi: [10.1007/s11104-021-04969-y](https://doi.org/10.1007/s11104-021-04969-y).
7. **Reed M. Stubbendieck**, Hongjie Li, & Cameron R. Currie. (2019). Convergent evolution of signal-structure interfaces for maintaining symbioses. *Current Opinions in Microbiology*. doi: [10.1016/j.mib.2019.10.001](https://doi.org/10.1016/j.mib.2019.10.001).
8. Mia I. Temkin, Caitlin M. Carlson, Aaron L. Stubbendieck, Cameron R. Currie, & **Reed M. Stubbendieck†**. (2019). High Throughput Co-culture Assays for Investigation of Microbial Interactions. *Journal of Visualized Experiments*. doi: [10.3791/60275](https://doi.org/10.3791/60275).
9. Marc G. Chevrette\*, Jennifer R. Bratburd\*, Cameron R. Currie, & **Reed M. Stubbendieck†**. (2019). Experimental Microbiomes: Models Not to Scale. *mSystems*. doi: [10.1128/mSystems.00175-19](https://doi.org/10.1128/mSystems.00175-19).
10. **Reed M. Stubbendieck†**, Daniel S. May, Marc G. Chevrette, Mia I. Temkin, Evelyn Wendt-Pienkowski, Julian Cagnazzo, Caitlin M. Carlson, James E. Gern, & Cameron R. Currie. (2019). Competition among Nasal Bacteria Suggests a Role for Siderophore-Mediated Interactions in Shaping the Human Nasal Microbiota. *Applied and Environmental Microbiology*. doi: [10.1128/AEM.02406-18](https://doi.org/10.1128/AEM.02406-18).
11. **Reed M. Stubbendieck**, Dakota J. Brock, Jean-Philippe Pellois, Jason J. Gill, & Paul D. Straight. (2018). Linearmycins are lytic membrane-targeting antibiotics. *The Journal of Antibiotics*. doi: [10.1038/s41429-017-0005-z](https://doi.org/10.1038/s41429-017-0005-z).
12. B. Christopher Hoefler\*, **Reed M. Stubbendieck\***, N. Kalyani Josyula, Sabrina M. Moisan, Emma M. Schulze, & Paul D. Straight. (2017). A Link between Linearmycin Biosynthesis and Extracellular Vesicle Genesis Connects Specialized Metabolism and Bacterial Membrane Physiology. *Cell Chemical Biology*. doi: [10.1016/j.chembiol.2017.08.008](https://doi.org/10.1016/j.chembiol.2017.08.008).
13. **Reed M. Stubbendieck**, & Paul D. Straight. (2017). Linearmycins Activate a Two-component Signaling System Involved in Bacterial Competition and Biofilm Morphology. *Journal of Bacteriology*. doi: [10.1128/JB.00186-17](https://doi.org/10.1128/JB.00186-17).
14. **Reed M. Stubbendieck**, Carol Vargas-Bautista, & Paul D. Straight. (2016). Bacterial Communities: Interactions to Scale. *Frontiers in Microbiology*. doi: [10.3389/fmicb.2016.01234](https://doi.org/10.3389/fmicb.2016.01234).
15. **Reed M. Stubbendieck**, & Paul D. Straight. (2016). Multifaceted Interfaces of Bacterial Competition. *Journal of Bacteriology*. doi: [10.1128/JB.00275-16](https://doi.org/10.1128/JB.00275-16).
16. **Reed M. Stubbendieck**, & Paul D. Straight. (2015). Escape from Lethal Bacterial Competition through Coupled Activation of Antibiotic Resistance and a Mobilized Subpopulation. *PLOS Genetics*. doi: [10.1371/journal.pgen.1005722](https://doi.org/10.1371/journal.pgen.1005722).
17. **Reed M. Stubbendieck**, Anthony J. Zera, & Eileen A. Hebets. (2013). No evidence for a relationship between hemolymph ecdysteroid levels and female reproductive behavior in *Schizocosa* wolf spiders. *The Journal of Arachnology*. doi: [10.1636/B12-71.1](https://doi.org/10.1636/B12-71.1).

#### BOOK CHAPTERS

1. **Reed M. Stubbendieck**, & Paul D. Straight. (2020). Specialized Metabolites for Bacterial Communication. *Comprehensive Natural Products III: Chemistry and Biology*. doi: [10.1016/B978-0-12-409547-2.14803-6](https://doi.org/10.1016/B978-0-12-409547-2.14803-6).

## Licenses

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### Fluorescent-Tagged *Moraxella catarrhalis* For Cell Culture Experiments

2021

WISCONSIN ALUMNI RESEARCH FOUNDATION

P210244US01

## Awards

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### PLATFORM PRESENTATION AND POSTER AWARDS

#### Molecular Genetics of Bacteria and Phages Meeting

OUTSTANDING POSTER AWARD

2016

#### 24<sup>th</sup> Annual Texas A&M University Biochemistry & Biophysics Graduate Student Oral Research Competition

1<sup>ST</sup> PLACE AWARD

2016

#### 1<sup>st</sup> Annual Texas A&M University Genetics Graduate Student Oral Research Competition

1<sup>ST</sup> PLACE AWARD

2016

#### Texas A&M University Genetics Graduate Student Poster Competition

4<sup>TH</sup> PLACE AWARD

2016

#### Nebraska's Institutional Development Awards Networks of Biomedical Research Excellence Annual Convention Poster Competition

2<sup>ND</sup> PLACE AWARD

2016

### TRAVEL AWARDS

#### Oklahoma State University College of Arts and Sciences Travel Award

RECIPIENT

- **Award:** \$1200

2023

#### Texas A&M Genetics Graduate Student Association Travel Award

RECIPIENT

- **Award:** \$500

2016

#### Texas A&M Genetics Graduate Student Association Travel Award

RECIPIENT

- **Award:** \$500

2015

#### Texas A&M Biochemistry Graduate Student Association Travel Award

RECIPIENT

- **Award:** \$500

2014

#### Texas A&M Genetics Graduate Student Association Travel Award

RECIPIENT

- **Award:** \$500

2014

## Mentoring

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OKLAHOMA STATE UNIVERSITY (CURRENT: 6, TOTAL: 13)

### Graduate Students (Current: 1, Total: 1)

#### Niladri Bhowmik

MICROBIOLOGY AND MOLECULAR GENETICS PH.D. STUDENT

2023-Present

### Rotating Graduate Students (Total: 3)

#### Md. Ikram Rafid

MICROBIOLOGY AND MOLECULAR GENETICS PH.D. STUDENT

2023

#### Niladri Bhowmik

MICROBIOLOGY AND MOLECULAR GENETICS PH.D. STUDENT

2023

#### Yashi Batra

MICROBIOLOGY AND MOLECULAR GENETICS PH.D. STUDENT

2023

## Undergraduate Students (Current: 3, Total: 8)

<b>Jonathan Lee</b>	2023-Present
<b>Kalen Strunk</b>	2023-Present
<b>Madeline Reichert</b>	2023-Present
<b>Helen Zaghloul</b>	2023
<b>Addison Browning</b>	2023
<b>Reagan Decker</b>	2022-2023
<b>Luke Myers</b>	2022-2023
<b>Claire Daniel</b>	2022-2023

## Other Staff (Current: 1, Total: 1)

<b>Mercedes Perez</b> LAB MANAGER	2023-Present
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## UNIVERSITY OF WISCONSIN-MADISON (TOTAL: 7)

### Rotating Graduate Students (Total: 3)

<b>Susan Zelasko</b> MICROBIOLOGY DOCTORAL TRAINING PROGRAM M.D./PH.D. STUDENT	2018
<b>Kirsten Gotting</b> GENETICS PH.D. STUDENT	2017
<b>Lauren Lucas</b> MICROBIOLOGY DOCTORAL TRAINING PROGRAM PH.D. STUDENT	2017

### Undergraduate Students (Total: 4)

<b>Kristi Hetchler</b>	2019-2020
• <b>Project Title:</b> Detecting and Determining Mode of Action of Bacteria that Inhibit <i>Moraxella catarrhalis</i> Using Stress Response Promoters	
<b>Timothy Davenport</b>	2019-2020
• <b>Project Title:</b> Sticking Our Noses in <i>Moraxella catarrhalis</i> Sensitivity to the Human Nasal Microbiome	
<b>Quin Perrault</b>	2019
• <b>Project Title:</b> The Susceptibility of Nasal Bacteria to Lysozyme	
<b>Mia Temkin</b>	2018-2019
• <b>Thesis Title:</b> Investigating the inhibition of <i>Moraxella catarrhalis</i> by the nasal microbiota	

## TEXAS A&M UNIVERSITY (TOTAL: 14)

### Rotating Graduate Students (Total: 10)

<b>Paul Merlau</b> BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT	2016
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<b>Neha Deshpande</b> BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT	2016
<b>Huajun Han</b> BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT	2015
<b>Donna Iadarola</b> BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT	2015
<b>Ishita Chandel</b> BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT	2015
<b>John Mosior</b> BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT	2015
<b>Dakota Brock</b> BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT	2014
<b>Chengxi Zhang</b> BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT	2014
<b>Yue Xing</b> GENETICS PH.D. STUDENT	2013
<b>Diana Medina</b> GENETICS PH.D. STUDENT	2013

### Undergraduate Students (Total: 4)

<b>Paolo Giovanelli</b>	2016
• <b>Thesis Title:</b> Isolation and partial characterization of a specialized metabolite that induces sliding motility in <i>Bacillus subtilis</i>	
<b>Yifan Ma</b>	2016
<b>Roosheel Patel</b>	2013-2015
• <b>Thesis Title:</b> <i>In vivo</i> transposon mutagenesis of <i>Streptomyces</i> sp. Mg1	
<b>Daniel Labuz</b>	2018-2019
NATIONAL SCIENCE FOUNDATION RESEARCH EXPERIENCES FOR UNDERGRADUATES STUDENT	
• <b>Project Title:</b> Transposon mutagenesis to identify <i>Bacillus subtilis</i> resistance to lytic/degradative activity	

### UNIVERSITY OF NEBRASKA-LINCOLN (TOTAL: 1)

### Undergraduate Students (Total: 1)

<b>Travis Jensen</b>	2011
• <b>Project Title:</b> A Simplistic Bioinformatics Approach to Clade Identification in <i>Chlorella</i> -like Green Algae	

## Teaching

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### COURSES

#### Oklahoma State University

<b>Microbes: Friends or Foes</b> PRIMARY INSTRUCTOR	2023-Present MICR 3103 (N)
<b>Seminar</b> PRIMARY INSTRUCTOR	2023-Present MICR 5160

## Special Problems: Research

PRIMARY INSTRUCTOR

2022-Present

MICR 4990

## Texas A&M University

### Comprehensive Genetics Laboratory for Non-Majors and Majors

LABORATORY INSTRUCTOR

2015-2016

GENE 311 & 312

### Comprehensive Genetics Laboratory for Non-Majors and Majors

LABORATORY INSTRUCTOR

2011-2012

GENE 301 & 302

## University of Nebraska-Lincoln

### Independent Research in Bioinformatics

TEACHING ASSISTANT

2010-2011

BIOC 498

### Biochemistry I

TEACHING ASSISTANT

2010-2011

BIOC 431

### General Chemistry I and II

UNDERGRADUATE TEACHING ASSISTANT CORPS

2009-2011

CHEM 109-110

### Organismal Biology Laboratory

LABORATORY INSTRUCTOR

2009

BIOS 103

## GUEST LECTURES

### Advanced Honors Experience in Chemistry

OKLAHOMA STATE UNIVERSITY

2023

CHEM 3890

- **Instructor:** Dr. David Miller
- **Lecture:** Antibiotics and the Microbiome

### The Role of the Human Microbiome in Health and Disease

UNIVERSITY OF WISCONSIN-MADISON

2021

MMI 902

- **Instructor:** Dr. Lindsay Kalan
- **Lecture:** Airway Microbiomes

### Introduction to Biomedical Engineering

UNIVERSITY OF CENTRAL OKLAHOMA

2019

BME 1311

- **Instructor:** Dr. Scott Mattison
- **Lecture:** Antibiotics: From Below Your Toes to Inside Your Nose

### Diversity, Ecology, and Evolution of Microorganisms

UNIVERSITY OF WISCONSIN-MADISON

2018-2019

MICRO 450

- **Instructors:** Drs. Cameron Currie & Federico Rey
- **Lecture:** Community Ecology and Microbial Interactions

## Service

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### PEER REVIEW

Ad Hoc Peer Reviewer for *Applied and Environmental Microbiology*, *Frontiers in Bacteriology*, *Frontiers in Microbiology*, *Journal of Bacteriology*, *Journal of Visualized Experiments*, *Microbial Genomics*, *Microbiology Spectrum*, *mSystems*, *PeerJ*, *Scientific Reports*, and *World Journal of Microbiology and Biotechnology* (see **Web of Science** for a full list of verified reviews).

### EDITORIAL ROLES

#### Frontiers in Bacteriology

REVIEW EDITOR

2022-Present

Section: Molecular Bacteriology and Microbiome

## ADVISING ROLES

### American Medical Student Association (Pre-Med) - Oklahoma State University

2023-Present

CO-ADVISER

## STUDENT DISSERTATION & THESIS COMMITTEES

### Oklahoma State University (Current: 4, Total: 5)

#### Abigail Meek

2023

MICROBIOLOGY AND MOLECULAR GENETICS ACCELERATED M.S. STUDENT

#### Mehraj Ansari

2023-Present

MICROBIOLOGY AND MOLECULAR GENETICS PH.D. STUDENT

#### Himidu Pitigala Arachchilage

2023-Present

INTEGRATIVE BIOLOGY PH.D. STUDENT

#### Autumn Hansen

2023-Present

MICROBIOLOGY AND MOLECULAR GENETICS M.S. STUDENT

#### Damilare Ajagbe

2022-Present

MICROBIOLOGY AND MOLECULAR GENETICS PH.D. STUDENT

## OUTREACH

### Skype a Scientist

2018-Present

ONLINE

I meet with K-12 classes virtually across the United States for informal conversations about how microbiology influences our lives and to answer students' questions about careers in STEM fields.

### Wisconsin Science Expeditions

2017-2022

THE CURRIE LABORATORY - UNIVERSITY OF WISCONSIN-MADISON

Using interactive activities and a living display of a fungus-farming ant colony, members of the Currie laboratory educate the Madison community about symbiosis between animals and microbes, antimicrobial drug discovery, and the development of biofuels.

### Scientific Sidequests

2018-2019

ONLINE

I contributed articles to a blog called Scientific Sidequests that focused on explaining scientific concepts to a lay audience using examples from popular culture.

### Nebraska Science Olympiad

2011

SCIENCE OLYMPIAD

I generated and reviewed questions for the biology section of the Nebraska Science Olympiad contest.

### Upward Bound

2009-2011

THE HEBETS LABORATORY - UNIVERSITY OF NEBRASKA-LINCOLN

As a member of the Hebets laboratory, I was part of a university program that invited low-income first-generation high school students to participate in summer research experiences with the goal of helping students recognize their potential and encourage them to pursue future STEM education.

## Professional Activities

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### PLATFORM PRESENTATIONS & SEMINARS

#### University of Oklahoma Health Sciences Center

2023

DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY

- **Talk Title:** Actinobacteria Mediate Pathogen Inhibition and Iron Competition in the Nose

#### Southern Methodist University

2023

DEPARTMENT OF EARTH SCIENCES SEMINAR SERIES

- **Talk Title:** Actinobacteria Mediate Pathogen Inhibition and Iron Competition in the Nose



<b>Society for Industrial Microbiology and Biotechnology Annual Meeting</b>	2023
CONFERENCE PRESENTATION	
<ul style="list-style-type: none"> <li>• <b>Talk Title:</b> Mining for Gold: Uncovering Biosynthetic Gene Clusters in the Human Nose, Mouth, and Beyond</li> <li>• Invited Speaker</li> </ul>	
<b>University of Central Oklahoma</b>	2023
TRI-CENTER SYMPOSIUM	
<ul style="list-style-type: none"> <li>• <b>Talk Title:</b> The Nose Knows: Commensal Actinobacteria as an Alternative to Traditional Antimicrobials</li> <li>• Invited Keynote Speaker</li> </ul>	
<b>University of Oklahoma</b>	2023
DEPARTMENT OF MICROBIOLOGY AND PLANT BIOLOGY SEMINAR SERIES	
<ul style="list-style-type: none"> <li>• <b>Talk Title:</b> Actinobacteria Mediate Pathogen Inhibition and Iron Competition in the Nose</li> </ul>	
<b>Texas A&amp;M University</b>	2022
GENETICS AND GENOMICS SEMINAR SERIES	
<ul style="list-style-type: none"> <li>• <b>Talk Title:</b> Actinobacteria Compete for Iron and Reduce Pathogen Colonization in the Human Nose</li> </ul>	
<b>International Society for the Biology of Actinomycetes</b>	2022
CONFERENCE PRESENTATION	
<ul style="list-style-type: none"> <li>• <b>Talk Title:</b> Actinobacteria Reduce Pathogen Colonization in the Human Nose</li> </ul>	
<b>Oklahoma State University</b>	2022
DEPARTMENT OF MICROBIOLOGY AND MOLECULAR GENETICS SEMINAR	
<ul style="list-style-type: none"> <li>• <b>Talk Title:</b> Microbial Competition: From Beneath Your Toes to Inside Your Nose</li> </ul>	
<b>Auburn University</b>	2021
DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY SEMINAR	
<ul style="list-style-type: none"> <li>• <b>Talk Title:</b> Natural Products in Microbial Competition: From Beneath Your Toes to Inside Your Nose</li> </ul>	
<b>University of Wisconsin-Milwaukee</b>	2021
DEPARTMENT OF BIOLOGICAL SCIENCES SEMINAR	
<ul style="list-style-type: none"> <li>• <b>Talk Title:</b> Bacterial Competition: From Beneath Your Toes to Inside Your Nose</li> </ul>	
<b>University of North Carolina Chapel Hill</b>	2021
CATALYST SYMPOSIUM	
<ul style="list-style-type: none"> <li>• <b>Talk Title:</b> Competition and Specialized Metabolism Shape Bacterial Communities in Aerodigestive Tract Microbiomes</li> <li>• Invited Speaker</li> <li>• Online Due to COVID-19 Pandemic</li> </ul>	
<b>University of Wisconsin-Madison</b>	2020
COMPUTATION AND INFORMATICS IN BIOLOGY AND MEDICINE SEMINAR SERIES	
<ul style="list-style-type: none"> <li>• <b>Talk Title:</b> Aerodigestive Tract Microbiomes Possess Extensive and Varied Potential for Specialized Metabolism</li> <li>• Online Due to COVID-19 Pandemic</li> </ul>	
<b>National Library of Medicine Informatics Training Conference</b>	2020
HOSTED AT OREGON HEALTH AND SCIENCES UNIVERSITY	
<ul style="list-style-type: none"> <li>• <b>Talk Title:</b> Investigating the Antibiotic Biosynthetic Potential of the Aerodigestive Tract Microbiome</li> <li>• Online Due to COVID-19 Pandemic</li> </ul>	
<b>Prokaryotic Pathogens Seminar Series</b>	2020
ONLINE	
<ul style="list-style-type: none"> <li>• <b>Talk Title:</b> Competition among Nasal Bacteria Suggests a Role for Siderophore-Mediated Interactions in Shaping the Human Nasal Microbiota</li> </ul>	
<b>Rutgers University</b>	2019
SYMPOSIUM CELEBRATING 75 <sup>TH</sup> ANNIVERSARY OF DISCOVERY OF STREPTOMYCIN	
<ul style="list-style-type: none"> <li>• <b>Talk Title:</b> Ants, Agriculture, and Antibiotics: Drugs from Bugs of Bugs and Beyond</li> <li>• Keynote Speaker</li> </ul>	

- University of Wisconsin-Madison** 2018  
COMPUTATION AND INFORMATICS IN BIOLOGY AND MEDICINE SEMINAR SERIES
- **Talk Title:** Microbial Competition from Below Your Toes to Inside Your Nose
- Conference on Beneficial Microbes** 2018  
HOSTED AT THE UNIVERSITY OF WISCONSIN-MADISON
- **Talk Title:** Bacterial Competition Mediated by Siderophore Production from the Human Nasal Microbiota
- Texas A&M University** 2016  
STUDENT RESEARCH WEEK
- **Talk Title:** Crisis Control: Adaptation to Microbial Competition
- Texas A&M University** 2016  
24<sup>TH</sup> ANNUAL BIOCHEMISTRY & BIOPHYSICS GRADUATE STUDENT ORAL RESEARCH COMPETITION
- **Talk Title:** Escape from Lethal Bacterial Competition through Coupled Activation of Antibiotic Resistance and a Mobilized Subpopulation
  - 1<sup>ST</sup> Place Award
- Texas A&M University** 2016  
1<sup>ST</sup> ANNUAL GENETICS GRADUATE STUDENT ORAL RESEARCH COMPETITION
- **Talk Title:** Escape from Lethal Bacterial Competition through Coupled Activation of Antibiotic Resistance and a Mobilized Subpopulation
  - 1<sup>ST</sup> Place Award
- Texas A&M University** 2015  
GENETICS GRADUATE STUDENT SEMINAR SERIES
- **Talk Title:** Escape from Lethal Bacterial Competition through Coupled Activation of Antibiotic Resistance and a Mobilized Subpopulation
- Texas A&M University** 2015  
BIOCHEMISTRY GRADUATE STUDENT SEMINAR SERIES
- **Talk Title:** Chemical Genetic Approach to Understanding Lysis and Degradation of *Bacillus subtilis* by *Streptomyces* sp. Mg1
- Texas A&M University** 2013  
5<sup>TH</sup> ANNUAL A. I. SCOTT SYMPOSIUM FOR EXCELLENCE IN BIOLOGICAL CHEMISTRY
- **Talk Title:** Lysis and Degradation of *Bacillus subtilis* in Competition with *Streptomyces* sp. Mg1
- Nebraska Academy of Sciences** 2010  
ANNUAL MEETING
- **Talk Title:** The Relationship between 20-Hydroxyecdysone and Reproductive Behavior and Physiology in Wolf Spiders
- Nebraska's Institutional Development Award Networks of Biomedical Research Excellence** 2009  
ANNUAL RESEARCH CONFERENCE
- **Talk Title:** Radioimmunological Determination of Ecdysteroid Titters in *Schizocosa* Wolf Spiders
- Nebraska Academy of Sciences** 2009  
ANNUAL MEETING
- **Talk Title:** The Effect of 20-Hydroxyecdysone in *Schizocosa* Wolf Spiders
- POSTER PRESENTATIONS
- Molecular Genetics of Bacteria and Phages Meeting** 2023  
UNIVERSITY OF WISCONSIN-MADISON
- **Poster Title:** *Rothia* from the human nose inhibit *Moraxella catarrhalis* colonization with a secreted peptidoglycan endopeptidase

## Conference on Beneficial Microbes

2022

UNIVERSITY OF WISCONSIN-MADISON

- **Poster Title:** Human nasal *Rothia* mitigate *Moraxella catarrhalis* infection through production of secreted antimicrobial proteins

## Computation and Informatics in Biology and Medicine Training Program and the Bio-Data Science Program Annual Retreat

2019

UNIVERSITY OF WISCONSIN-MADISON

- **Poster Title:** Investigating the Human Nasal Cavity Microbiome as a Source of Novel Narrow-Spectrum Antibiotics

## Molecular Genetics of Bacteria and Phages Meeting

2019

ANNUAL MEETING

- **Poster Title:** Digging for Antibiotic Gold from the Human Nasal Cavity Microbiome

## Computation and Informatics in Biology and Medicine Training Program and the Bio-Data Science Program Annual Retreat

2018

UNIVERSITY OF WISCONSIN-MADISON

- **Poster Title:** Bacterial Competition Mediated by Siderophore Production in the Human Nasal Cavity

## Madison Microbiome Meeting

2018

UNIVERSITY OF WISCONSIN-MADISON

- **Poster Title:** Bacterial Competition Mediated by Siderophore Production in the Human Nasal Cavity

## Molecular Genetics of Bacteria and Phages Meeting

2016

ANNUAL MEETING

- **Poster Title:** Interface of Specialized Metabolism and Developmental Functions to Promote the Fitness of Bacteria in Competition
- Outstanding Poster Award

## 5<sup>th</sup> Conference on Prokaryotic Cell Biology

2015

AMERICAN SOCIETY FOR MICROBIOLOGY

- **Poster Title:** Lysis of *Bacillus subtilis* in Competition with *Streptomyces* sp. Mg1

## Genetics Graduate Program Graduate Research Competition

2015

TEXAS A&M UNIVERSITY

- **Poster Title:** A Mechanism of Resistance in a Model Bacterial Competition
- 4<sup>th</sup> Place Award

## Microbial Specialised Metabolites: Origins and Applications

2014

5<sup>TH</sup> JOHN INNES-RUDJER BOÅĀKOVIC SUMMER SCHOOL IN APPLIED MOLECULAR MICROBIOLOGY

- **Poster Title:** Chemical Genetic Approach to Understanding Lysis and Degradation of *Bacillus subtilis* by *Streptomyces* sp. Mg1

## Microbial Stress Response

2014

GORDON RESEARCH CONFERENCES

- **Poster Title:** Chemical Genetic Approach to Understanding Lysis and Degradation of *Bacillus subtilis* by *Streptomyces* sp. Mg1

## 6<sup>th</sup> Annual Genetics Graduate Student Association Mini-Symposium

2014

TEXAS A&M UNIVERSITY

- **Poster Title:** Chemical Genetic Approach to Understanding Lysis and Degradation of *Bacillus subtilis* by *Streptomyces* sp. Mg1

## Genetics Graduate Student Research Competition

2014

TEXAS A&M UNIVERSITY

- **Poster Title:** Chemical Genetic Approach to Understanding Lysis and Degradation of *Bacillus subtilis* by *Streptomyces* sp. Mg1

- 5<sup>th</sup> Annual Genetics Graduate Student Association Mini-Symposium** 2013  
TEXAS A&M UNIVERSITY
- **Poster Title:** Identifying Molecules Responsible for Competitive Lysis and Degradation of *Bacillus subtilis*
- Genetics Graduate Student Research Competition** 2013  
TEXAS A&M UNIVERSITY
- **Poster Title:** Identifying Molecules Responsible for Competitive Lysis and Degradation of *Bacillus subtilis*
- Biochemistry Department Bioinformatics Poster Session** 2010  
UNIVERSITY OF NEBRASKA-LINCOLN
- **Poster Title:** Annotation of the CG11148 Isoform Splice Sites and fd19B Gene Location in *Drosophila grimshawi*
- Nebraska's Institutional Development Awards Networks of Biomedical Research Excellence Annual Research Convention** 2010  
ANNUAL RESEARCH CONFERENCE
- **Poster Title:** Investigating the Functions of Ecdysteroids in *Schizocosa* Wolf Spiders
  - 2<sup>nd</sup> Place Award
- Biochemistry Department Bioinformatics Poster Session** 2010  
UNIVERSITY OF NEBRASKA-LINCOLN
- **Poster Title:** Proposed Annotation for an ATP Synthase F0 Subcomplex b Subunit Gene in *Cellulomonas flavigena*
- Undergraduate Creative Activities and Research Experience Annual Poster Session** 2010  
UNIVERSITY OF NEBRASKA-LINCOLN
- **Poster Title:** The Effect of 20-Hydroxyecdysone in *Schizocosa* Wolf Spiders

## Affiliations & Memberships

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- Oklahoma Center for Respiratory and Infectious Diseases** 2023-Present  
OKLAHOMA STATE UNIVERSITY
- Member (2023-Present)
- American Society for Microbiology** 2014-Present  
WASHINGTON, DC
- Member (2014-Present)
- Biochemistry Graduate Student Association** 2012-2017  
TEXAS A&M UNIVERSITY
- Member (2012-2017)
- Genetics Graduate Student Association** 2011-2017  
TEXAS A&M UNIVERSITY
- President (2013-2014)
  - Treasurer (2012-2013)
  - Member (2011-2017)

## Professional Development Courses & Workshops Attended

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- Safe Zone Training** 2023  
OKLAHOMA STATE UNIVERSITY - OFFICE OF MULTICULTURAL AFFAIRS
- Early Career Faculty Program** 2022  
OKLAHOMA STATE UNIVERSITY - INSTITUTE FOR TEACHING AND LEARNING EXCELLENCE
- Wisconsin Idea STEM Fellows Workshop** 2020  
MORGRIDGE INSTITUTE FOR RESEARCH
- Deciphering the Microbiome Workshop** 2019  
NATIONAL SCIENCE FOUNDATION
- Invited Participant

<b>Interacting with the Media: Tips for Scientists Workshop for Postdocs</b> UNIVERSITY OF WISCONSIN-MADISON	2019
<b>Delta Internship Seminar Series</b> UNIVERSITY OF WISCONSIN-MADISON - CENTER FOR THE INTEGRATION OF RESEARCH, TEACHING AND LEARNING COURSE	2019
<b>Writing Across the Curriculum</b> UNIVERSITY OF WISCONSIN-MADISON - CENTER FOR THE INTEGRATION OF RESEARCH, TEACHING AND LEARNING COURSE	2019
<b>Teaching in an Internationally Diverse Classroom</b> UNIVERSITY OF WISCONSIN-MADISON - CENTER FOR THE INTEGRATION OF RESEARCH, TEACHING AND LEARNING COURSE	2018
<b>Did Your Students Learn What You Wanted Them To? Writing Effective/Measurable Learning Outcomes</b> UNIVERSITY OF WISCONSIN-MADISON	2018
<b>Research Mentorship Series</b> UNIVERSITY OF WISCONSIN-MADISON	2018
<b>Project Management Workshop</b> UNIVERSITY OF WISCONSIN-MADISON	2018
<b>Applying for NIH K Awards</b> UNIVERSITY OF WISCONSIN-MADISON	2018
<b>Microbiota Data Analysis in R</b> UNIVERSITY OF WISCONSIN-MADISON - BIOTECHNOLOGY CENTER	2017
<b>Microbiota Data Analysis in mothur</b> UNIVERSITY OF WISCONSIN-MADISON - BIOTECHNOLOGY CENTER	2017
<b>Assessing Your Transferrable Skills</b> UNIVERSITY OF WISCONSIN-MADISON	2017
<b>Mentoring Undergraduates</b> TEXAS A&M UNIVERSITY	2011