

Reed M. Stubbendieck

ASSISTANT PROFESSOR

Department of Microbiology and Molecular Genetics, Oklahoma State University

+1 405-744-7730 | [✉ stubbendieck@okstate.edu](mailto:stubbendieck@okstate.edu) | [🏠 stubbendiecklab.com](http://stubbendiecklab.com) | [📄 Google Scholar](https://scholar.google.com/citations?user=...) | [📄 0000-0003-1507-3272](https://orcid.org/0000-0003-1507-3272)

Education

Ph.D. Genetics

TEXAS A&M UNIVERSITY

2017

College Station, TX

- **Adviser:** Dr. Paul Straight, Ph.D.
- **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, Ph.D.

Graduate Research Associate

TEXAS A&M UNIVERSITY - DEPARTMENT OF BIOCHEMISTRY & BIOPHYSICS

2012-2017

College Station, TX

- **Adviser:** Dr. Paul Straight, Ph.D.

Post-Baccalaureate Research Assistant

UNIVERSITY OF NEBRASKA-LINCOLN - DEPARTMENT OF BIOCHEMISTRY

2011

Lincoln, NE

- **Adviser:** Dr. Cheryl Bailey, Ph.D.

Undergraduate Research Assistant

UNIVERSITY OF NEBRASKA-LINCOLN - DEPARTMENT OF BIOLOGICAL SCIENCES

2008-2011

Lincoln, NE

- **Adviser:** Dr. Eileen Hebets, Ph.D.

Support

GRANTS

Identification of Anti-*Staphylococcus aureus* Metabolites Produced by *Dolosigranulum pigrum* from the Human Nose

NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

2024-Present

[1R03AI182770-01](#)

- **Role:** PI
- **Award:** \$136,056

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

NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCES

2024-Present

[1P20GM152333-01](#)

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

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

2023

OKLAHOMA CENTER FOR RESPIRATORY AND INFECTIOUS DISEASES PILOT PROJECT GRANT

- **Role:** PI
- **Award:** \$100,000 (Declined)

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

2023-2024

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

*, 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

Fluorescent-Tagged *Moraxella catarrhalis* For Cell Culture Experiments

2021

WISCONSIN ALUMNI RESEARCH FOUNDATION

P210244US01

Awards

PLATFORM PRESENTATION AND POSTER AWARDS

Molecular Genetics of Bacteria and Phages Meeting

2016

OUTSTANDING POSTER AWARD

24th Annual Texas A&M University Biochemistry & Biophysics Graduate Student Oral Research Competition

2016

1ST PLACE AWARD

1st Annual Texas A&M University Genetics Graduate Student Oral Research Competition

2016

1ST PLACE AWARD

Texas A&M University Genetics Graduate Student Poster Competition

2016

4TH PLACE AWARD

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

2016

2ND PLACE AWARD

TRAVEL AWARDS

Oklahoma State University College of Arts and Sciences Travel Award

2023

RECIPIENT

- **Award:** \$1200

Texas A&M Genetics Graduate Student Association Travel Award

2016

RECIPIENT

- **Award:** \$500

Texas A&M Genetics Graduate Student Association Travel Award

2015

RECIPIENT

- **Award:** \$500

Texas A&M Biochemistry Graduate Student Association Travel Award

2014

RECIPIENT

- **Award:** \$500

Texas A&M Genetics Graduate Student Association Travel Award

2014

RECIPIENT

- **Award:** \$500

Mentoring

OKLAHOMA STATE UNIVERSITY (CURRENT: 8, TOTAL: 20)

Graduate Students (Current: 2, Total: 2)

Madeline Reichert

2024-Present

MICROBIOLOGY AND MOLECULAR GENETICS PH.D. STUDENT

Niladri Bhowmik

2023-Present

MICROBIOLOGY AND MOLECULAR GENETICS PH.D. STUDENT

Rotating Graduate Students (Current: 1, Total: 5)

Eduardo Tolentino Villalobos

2024

MICROBIOLOGY AND MOLECULAR GENETICS M.S. STUDENT

Sanjida Snigdha MICROBIOLOGY AND MOLECULAR GENETICS PH.D. STUDENT	2024
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: 11)

Sydney Morabbi	2024-Present
Hariette Diarra	2024-Present
Elixiva Marcum	2024-Present
Jonathan Lee	2023-2024
Kalen Strunk	2023-2024
Madeline Reichert	2023-2024
Helen Zaghloul	2023
Addison Browning	2023
Reagan Decker	2022-2023
Luke Myers	2022-2023
Claire Daniel	2022-2023

Other Staff (Current: 2, Total: 3)

Elixiva Marcum LABORATORY TECHNICIAN	2024
Akram Al Daeriwsh LABORATORY TECHNICIAN	2024-Present
Mercedes Perez LAB MANAGER	2023-Present

UNIVERSITY OF WISCONSIN-MADISON (TOTAL: 7)

Rotating Graduate Students (Total: 3)

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

Undergraduate Students (Total: 4)

Kristi Hetchler

2019-2020

- **Project Title:** Detecting and Determining Mode of Action of Bacteria that Inhibit *Moraxella catarrhalis* Using Stress Response Promoters

Timothy Davenport

2019-2020

- **Project Title:** Sticking Our Noses in *Moraxella catarrhalis* Sensitivity to the Human Nasal Microbiome

Quin Perrault

2019

- **Project Title:** The Susceptibility of Nasal Bacteria to Lysozyme

Mia Temkin

2018-2019

- **Thesis Title:** Investigating the inhibition of *Moraxella catarrhalis* by the nasal microbiota

TEXAS A&M UNIVERSITY (TOTAL: 14)

Rotating Graduate Students (Total: 10)

Paul Merlau

2016

BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT

Neha Deshpande

2016

BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT

Huajun Han

2015

BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT

Donna Iadarola

2015

BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT

Ishita Chandel

2015

BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT

John Mosior

2015

BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT

Dakota Brock

2014

BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT

Chengxi Zhang

2014

BIOCHEMISTRY & BIOPHYSICS PH.D. STUDENT

Yue Xing

2013

GENETICS PH.D. STUDENT

Diana Medina

2013

GENETICS PH.D. STUDENT

Undergraduate Students (Total: 4)

Paolo Giovanelli

2016

- **Thesis Title:** Isolation and partial characterization of a specialized metabolite that induces sliding motility in *Bacillus subtilis*

Yifan Ma

2016

Roosheel Patel

2013-2015

- **Thesis Title:** *In vivo* transposon mutagenesis of *Streptomyces* sp. Mg1

- **Project Title:** Transposon mutagenesis to identify *Bacillus subtilis* resistance to lytic/degradative activity

UNIVERSITY OF NEBRASKA-LINCOLN (TOTAL: 1)

Undergraduate Students (Total: 1)

Travis Jensen

2011

- **Project Title:** A Simplistic Bioinformatics Approach to Clade Identification in *Chlorella*-like Green Algae

Teaching

COURSES

Oklahoma State University

Microbes: Friends or Foes

2023-Present

PRIMARY INSTRUCTOR

MICR 3103 (N)

Seminar

2023-2024

PRIMARY INSTRUCTOR

MICR 5160

Special Problems: Research

2022-Present

PRIMARY INSTRUCTOR

MICR 4990

Texas A&M University

Comprehensive Genetics Laboratory for Non-Majors and Majors

2015-2016

LABORATORY INSTRUCTOR

GENE 311 & 312

Comprehensive Genetics Laboratory for Non-Majors and Majors

2011-2012

LABORATORY INSTRUCTOR

GENE 301 & 302

University of Nebraska-Lincoln

Independent Research in Bioinformatics

2010-2011

TEACHING ASSISTANT

BIOC 498

Biochemistry I

2010-2011

TEACHING ASSISTANT

BIOC 431

General Chemistry I and II

2009-2011

UNDERGRADUATE TEACHING ASSISTANT CORPS

CHEM 109-110

Organismal Biology Laboratory

2009

LABORATORY INSTRUCTOR

BIOS 103

GUEST LECTURES

Advanced Honors Experience in Chemistry

2023

OKLAHOMA STATE UNIVERSITY

CHEM 3890

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

The Role of the Human Microbiome in Health and Disease

2021

UNIVERSITY OF WISCONSIN-MADISON

MMI 902

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

Introduction to Biomedical Engineering

UNIVERSITY OF CENTRAL OKLAHOMA

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

2019

BME 1311

Diversity, Ecology, and Evolution of Microorganisms

UNIVERSITY OF WISCONSIN-MADISON

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

2018-2019

MICRO 450

Service

PEER REVIEW

Ad Hoc Peer Reviewer for *Applied and Environmental Microbiology*, *Frontiers in Bacteriology*, *Frontiers in Microbiology*, *International Journal of Systematic and Evolutionary Microbiology*, *Journal of Bacteriology*, *Journal of Visualized Experiments*, *Microbial Genomics*, *Microbiology Spectrum*, *mSystems*, *PeerJ*, *Scientific Reports*, *Trends in Microbiology*, 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

Section: Molecular Bacteriology and Microbiome

2022-Present

ADVISING ROLES

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

CO-ADVISER

2023-Present

JUDGING

Oral Presentation Judge at the 9th Conference on Beneficial Microbes

2024

STUDENT DISSERTATION & THESIS COMMITTEES

Oklahoma State University (Current: 7, Total: 8)

Rashna Sharmeen Shama

MICROBIOLOGY AND MOLECULAR GENETICS M.S. STUDENT

2024-Present

Bableen Kaur

MICROBIOLOGY AND MOLECULAR GENETICS PH.D. STUDENT

2024-Present

Niladri Bhowmik

MICROBIOLOGY AND MOLECULAR GENETICS PH.D. STUDENT

2023-Present

Abigail Meek

MICROBIOLOGY AND MOLECULAR GENETICS ACCELERATED M.S. STUDENT

2023

Mehraj Ansari

MICROBIOLOGY AND MOLECULAR GENETICS PH.D. STUDENT

2023-Present

Himidu Pitigala Arachchilage

INTEGRATIVE BIOLOGY PH.D. STUDENT

2023-Present

Autumn Hansen

MICROBIOLOGY AND MOLECULAR GENETICS M.S. STUDENT

2023-Present

Damilare Ajagbe

MICROBIOLOGY AND MOLECULAR GENETICS PH.D. STUDENT

2022-Present

OUTREACH

Latin American Natural Product Genome Mining Workshop

2024

CENTRO DE INVESTIGACIÓN EN MATEMÁTICAS

- **Roles:** Organizer and Faculty Instructor
- **Topics:** Introduction to Natural Product Biosynthesis & Ecology and Evolution of Natural Products

The Latin American Natural Product Genome Mining Workshop aims to engage with early career researchers across Latin America interested in natural products, their regulation and biosynthesis in an ecological context. For more information please see [here](#).

Skype a Scientist

2018-2022

ONLINE

I met 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

PLATFORM PRESENTATIONS & SEMINARS

University of Kansas

2024

CHEMICAL BIOLOGY SYMPOSIUM

- **Talk Title:** Bacterial Competition in the Aerodigestive Tract: Antibiotics, Probiotics, and Beyond

Oklahoma State University

2024

INTERACT SYMPOSIUM

- **Talk Title:** Bacterial Competition in the Aerodigestive Tract: Antibiotics, Probiotics, and Beyond

Centro de Investigación en Matemáticas

2024

LATIN AMERICAN NATURAL PRODUCT GENOME MINING WORKSHOP

- **Talk Title:** Bacterial Interactions and Secondary Metabolism the Human Aerodigestive Tract

Oklahoma State University

2024

OKLAHOMA CENTER FOR MICROBIOME RESEARCH

- **Talk Title:** Bacterial Competition as a Means To Identify Antimicrobials from the Human Microbiome

Oklahoma State University

2024

OKLAHOMA CENTER FOR RESPIRATORY AND INFECTIOUS DISEASES

- **Talk Title:** Bacterial Competition as a Means To Identify Antimicrobials from the Human Microbiome

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	
Society for Industrial Microbiology and Biotechnology Annual Meeting	2023
CONFERENCE PRESENTATION	
• Talk Title: Mining for Gold: Uncovering Biosynthetic Gene Clusters in the Human Nose, Mouth, and Beyond	
• Invited Speaker	
University of Central Oklahoma	2023
TRI-CENTER SYMPOSIUM	
• Talk Title: The Nose Knows: Commensal Actinobacteria as an Alternative to Traditional Antimicrobials	
• Invited Keynote Speaker	
University of Oklahoma	2023
DEPARTMENT OF MICROBIOLOGY AND PLANT BIOLOGY SEMINAR SERIES	
• Talk Title: Actinobacteria Mediate Pathogen Inhibition and Iron Competition in the Nose	
Texas A&M University	2022
GENETICS AND GENOMICS SEMINAR SERIES	
• Talk Title: Actinobacteria Compete for Iron and Reduce Pathogen Colonization in the Human Nose	
International Society for the Biology of Actinomycetes	2022
CONFERENCE PRESENTATION	
• Talk Title: Actinobacteria Reduce Pathogen Colonization in the Human Nose	
Oklahoma State University	2022
DEPARTMENT OF MICROBIOLOGY AND MOLECULAR GENETICS SEMINAR	
• Talk Title: Microbial Competition: From Beneath Your Toes to Inside Your Nose	
Auburn University	2021
DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY SEMINAR	
• Talk Title: Natural Products in Microbial Competition: From Beneath Your Toes to Inside Your Nose	
University of Wisconsin-Milwaukee	2021
DEPARTMENT OF BIOLOGICAL SCIENCES SEMINAR	
• Talk Title: Bacterial Competition: From Beneath Your Toes to Inside Your Nose	
University of North Carolina Chapel Hill	2021
CATALYST SYMPOSIUM	
• Talk Title: Competition and Specialized Metabolism Shape Bacterial Communities in Aerodigestive Tract Microbiomes	
• Invited Speaker	
• Online Due to COVID-19 Pandemic	
University of Wisconsin-Madison	2020
COMPUTATION AND INFORMATICS IN BIOLOGY AND MEDICINE SEMINAR SERIES	
• Talk Title: Aerodigestive Tract Microbiomes Possess Extensive and Varied Potential for Specialized Metabolism	
• Online Due to COVID-19 Pandemic	
National Library of Medicine Informatics Training Conference	2020
HOSTED AT OREGON HEALTH AND SCIENCES UNIVERSITY	
• Talk Title: Investigating the Antibiotic Biosynthetic Potential of the Aerodigestive Tract Microbiome	
• Online Due to COVID-19 Pandemic	
Prokaryotic Pathogens Seminar Series	2020
ONLINE	
• Talk Title: Competition among Nasal Bacteria Suggests a Role for Siderophore-Mediated Interactions in Shaping the Human Nasal Microbiota	

Rutgers University	2019
SYMPOSIUM CELEBRATING 75 TH ANNIVERSARY OF DISCOVERY OF STREPTOMYCIN	
<ul style="list-style-type: none"> • Talk Title: Ants, Agriculture, and Antibiotics: Drugs from Bugs of Bugs and Beyond • Keynote Speaker 	
University of Wisconsin-Madison	2018
COMPUTATION AND INFORMATICS IN BIOLOGY AND MEDICINE SEMINAR SERIES	
<ul style="list-style-type: none"> • Talk Title: Microbial Competition from Below Your Toes to Inside Your Nose 	
Conference on Beneficial Microbes	2018
HOSTED AT THE UNIVERSITY OF WISCONSIN-MADISON	
<ul style="list-style-type: none"> • Talk Title: Bacterial Competition Mediated by Siderophore Production from the Human Nasal Microbiota 	
Texas A&M University	2016
STUDENT RESEARCH WEEK	
<ul style="list-style-type: none"> • Talk Title: Crisis Control: Adaptation to Microbial Competition 	
Texas A&M University	2016
24 TH ANNUAL BIOCHEMISTRY & BIOPHYSICS GRADUATE STUDENT ORAL RESEARCH COMPETITION	
<ul style="list-style-type: none"> • Talk Title: Escape from Lethal Bacterial Competition through Coupled Activation of Antibiotic Resistance and a Mobilized Subpopulation • 1st Place Award 	
Texas A&M University	2016
1 ST ANNUAL GENETICS GRADUATE STUDENT ORAL RESEARCH COMPETITION	
<ul style="list-style-type: none"> • Talk Title: Escape from Lethal Bacterial Competition through Coupled Activation of Antibiotic Resistance and a Mobilized Subpopulation • 1st Place Award 	
Texas A&M University	2015
GENETICS GRADUATE STUDENT SEMINAR SERIES	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • Talk Title: Chemical Genetic Approach to Understanding Lysis and Degradation of <i>Bacillus subtilis</i> by <i>Streptomyces</i> sp. Mg1 	
Texas A&M University	2013
5 TH ANNUAL A. I. SCOTT SYMPOSIUM FOR EXCELLENCE IN BIOLOGICAL CHEMISTRY	
<ul style="list-style-type: none"> • Talk Title: Lysis and Degradation of <i>Bacillus subtilis</i> in Competition with <i>Streptomyces</i> sp. Mg1 	
Nebraska Academy of Sciences	2010
ANNUAL MEETING	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • Talk Title: Radioimmunological Determination of Ecdysteroid Titters in <i>Schizocosa</i> Wolf Spiders 	
Nebraska Academy of Sciences	2009
ANNUAL MEETING	
<ul style="list-style-type: none"> • Talk Title: The Effect of 20-Hydroxyecdysone in <i>Schizocosa</i> Wolf Spiders 	

POSTER PRESENTATIONS

Molecular Genetics of Bacteria and Phages Meeting

2024

UNIVERSITY OF WISCONSIN-MADISON

- **Poster Authors:** Madeline Reichert, Mercedes Perez Perez, Luke Myers, James E. Gern, & **Reed M. Stubbendieck**
- **Poster Title:** Genomic Insight Into Mechanisms Underlying Pathobiont Protection by Nasal Probiotic *Dolosigranulum pigrum*

Conference on Beneficial Microbes

2024

UNIVERSITY OF WISCONSIN-MADISON

- **Poster Authors:** Niladri Bhowmik, Akram Al Daerwish, Elixiva Marcum, & **Reed M. Stubbendieck**
- **Poster Title:** Identification of Secondary Metabolites and Biosynthetic Gene Clusters from Cystic Fibrosis Microbiomes

Annual Undergraduate Research Symposium

2024

OKLAHOMA STATE UNIVERSITY

- **Poster Authors:** Jonathan Lee & **Reed M. Stubbendieck**
- **Poster Title:** Investigation of the Effects of L-Lactic Acid on the Pathobiont *Moraxella catarrhalis*

Oklahoma Center for Respiratory and Infectious Diseases

2024

OKLAHOMA STATE UNIVERSITY

- **Poster Authors:** Niladri Bhowmik & **Reed M. Stubbendieck**
- **Poster Title:** Identification of Secondary Metabolites and Biosynthetic Gene Clusters from Cystic Fibrosis Microbiomes

Molecular Genetics of Bacteria and Phages Meeting

2023

UNIVERSITY OF WISCONSIN-MADISON

- **Poster Authors:** **Reed M. Stubbendieck**, Eishika Dissanayake, Peter M. Burnham, Susan E. Zelasko, Mia I. Temkin, Sydney S. Wisdor, Rose F. Vrtis, James E. Gern, & Cameron R. Currie
- **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 Authors:** **Reed M. Stubbendieck**, Eishika Dissanayake, Peter M. Burnham, Susan E. Zelasko, Mia I. Temkin, Sydney S. Wisdor, Rose F. Vrtis, James E. Gern, & Cameron R. Currie
- **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 Authors:** **Reed M. Stubbendieck**, Mia I. Temkin, Caitlin M. Carlson, James E. Gern, & Cameron R. Currie
- **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 Authors:** **Reed M. Stubbendieck**, Mia I. Temkin, Caitlin M. Carlson, James E. Gern, & Cameron R. Currie
- **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 Authors:** **Reed M. Stubbendieck**, Daniel S. May, Mard G. Chevrette, Mia I. Temkin, Evelyn Wendt-Pienkowski, Julian Cagnazzo, Caitlin M. Carlson, James E. Gern, & Cameron R. Currie
- **Poster Title:** Bacterial Competition Mediated by Siderophore Production in the Human Nasal Cavity

Madison Microbiome Meeting

2018

UNIVERSITY OF WISCONSIN-MADISON

- **Poster Authors:** Reed M. Stubbendieck, Julian Cagnazzo, Caitlin M. Carlson, James E. Gern, & Cameron R. Currie
- **Poster Title:** Bacterial Competition Mediated by Siderophore Production in the Human Nasal Cavity

Molecular Genetics of Bacteria and Phages Meeting

2016

ANNUAL MEETING

- **Poster Authors:** Reed M. Stubbendieck & Paul D. Straight
- **Poster Title:** Interface of Specialized Metabolism and Developmental Functions to Promote the Fitness of Bacteria in Competition
- Outstanding Poster Award

5th Conference on Prokaryotic Cell Biology

2015

AMERICAN SOCIETY FOR MICROBIOLOGY

- **Poster Authors:** Reed M. Stubbendieck & Paul D. Straight
- **Poster Title:** Lysis of *Bacillus subtilis* in Competition with *Streptomyces* sp. Mg1

Genetics Graduate Program Graduate Research Competition

2015

TEXAS A&M UNIVERSITY

- **Poster Authors:** Reed M. Stubbendieck & Paul D. Straight
- **Poster Title:** A Mechanism of Resistance in a Model Bacterial Competition
- 4th Place Award

Microbial Specialised Metabolites: Origins and Applications

2014

5TH JOHN INNES-RUDJER BOÅKOVIC SUMMER SCHOOL IN APPLIED MOLECULAR MICROBIOLOGY

- **Poster Authors:** Reed M. Stubbendieck & Paul D. Straight
- **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 Authors:** Reed M. Stubbendieck & Paul D. Straight
- **Poster Title:** Chemical Genetic Approach to Understanding Lysis and Degradation of *Bacillus subtilis* by *Streptomyces* sp. Mg1

6th Annual Genetics Graduate Student Association Mini-Symposium

2014

TEXAS A&M UNIVERSITY

- **Poster Authors:** Reed M. Stubbendieck & Paul D. Straight
- **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 Authors:** Reed M. Stubbendieck & Paul D. Straight
- **Poster Title:** Chemical Genetic Approach to Understanding Lysis and Degradation of *Bacillus subtilis* by *Streptomyces* sp. Mg1

5th Annual Genetics Graduate Student Association Mini-Symposium

2013

TEXAS A&M UNIVERSITY

- **Poster Authors:** Reed M. Stubbendieck & Paul D. Straight
- **Poster Title:** Identifying Molecules Responsible for Competitive Lysis and Degradation of *Bacillus subtilis*

Genetics Graduate Student Research Competition

2013

TEXAS A&M UNIVERSITY

- **Poster Authors:** Reed M. Stubbendieck & Paul D. Straight
- **Poster Title:** Identifying Molecules Responsible for Competitive Lysis and Degradation of *Bacillus subtilis*

Biochemistry Department Bioinformatics Poster Session

2010

UNIVERSITY OF NEBRASKA-LINCOLN

- **Poster Authors:** Reed M. Stubbendieck & Cheryl P. Bailey
- **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

2010

Excellence Annual Research Convention

ANNUAL RESEARCH CONFERENCE

- **Poster Authors:** Reed M. Stubbendieck, Anthony J. Zera & Eileen A. Hebets
- **Poster Title:** Investigating the Functions of Ecdysteroids in *Schizocosa* Wolf Spiders
- 2nd Place Award

Biochemistry Department Bioinformatics Poster Session

2010

UNIVERSITY OF NEBRASKA-LINCOLN

- **Poster Authors:** Reed M. Stubbendieck & Cheryl P. Bailey
- **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 Authors:** Reed M. Stubbendieck, Anthony J. Zera & Eileen A. Hebets
- **Poster Title:** The Effect of 20-Hydroxyecdysone in *Schizocosa* Wolf Spiders

Affiliations & Memberships

Latin American Natural Product Genome Mining Workshop

GUANAJUATO, MEXICO

2024-Present

- Faculty Instructor (2024-Present)
- Organizer (2024-Present)

Oklahoma Center for Respiratory and Infectious Diseases

OKLAHOMA STATE UNIVERSITY

2023-Present

- Member (2023-Present)

American Society for Microbiology

WASHINGTON, DC

2014-Present

- Member (2014-Present)

Biochemistry Graduate Student Association

TEXAS A&M UNIVERSITY

2012-2017

- Member (2012-2017)

Genetics Graduate Student Association

TEXAS A&M UNIVERSITY

2011-2017

- President (2013-2014)
- Treasurer (2012-2013)
- Member (2011-2017)

Professional Development Courses & Workshops Attended

Raising Resilient Scientists

NATIONAL INSTITUTES OF HEALTH

2024

Safe Zone Training

OKLAHOMA STATE UNIVERSITY - OFFICE OF MULTICULTURAL AFFAIRS

2023

Early Career Faculty Program

OKLAHOMA STATE UNIVERSITY - INSTITUTE FOR TEACHING AND LEARNING EXCELLENCE

2022

Wisconsin Idea STEM Fellows Workshop

MORGRIDGE INSTITUTE FOR RESEARCH

2020

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