Reed M. Stubbendieck

Assistant Professor

Department of Microbiology and Molecular Genetics, Oklahoma State University

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Education

Ph.D. Genetics *2017*

Texas A&M University *College Station, TX*

- **Adviser:** Dr. Paul Straight, Ph.D.
- **Dissertation:** Discovering Linearmycins in Bacterial Competition: Lysis, Autolysis, and Resistance

Certificate - Microbial Specialised Metabolites: Origins and Applications *2014*

John Innes Centre/Rudjer Bošković Summer School in Applied Molecular Microbiology *Dubrovnik, Croatia*

B.S. Biochemistry & Biological Sciences *2011*

University of Nebraska-Lincoln *Lincoln, NE*

Experience

Assistant Professor *2022-Present*

Oklahoma State University - Department of Microbiology and Molecular Genetics *Stillwater, OK*

Postdoctoral Research Associate *2017-2022*

University of Wisconsin-Madison - Department of Bacteriology *Madison, WI*

- **Adviser:** Dr. Cameron Currie, Ph.D.

Graduate Research Associate *2012-2017*

Texas A&M University - Department of Biochemistry & Biophysics *College Station, TX*

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

Post-Baccalaureate Research Assistant *2011*

University of Nebraska-Lincoln - Department of Biochemistry *Lincoln, NE*

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

Undergraduate Research Assistant *2008-2011*

University of Nebraska-Lincoln - Department of Biological Sciences *Lincoln, NE*

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

Support

Grants

Interactions Between the Microbiome, Immunity and Respiratory Health in Traditional Agrarian and Suburban children *2025-Present*

National Institute of Allergy and Infectious Diseases

- **Role:** Subawardee
- Part of: **5U19AI104317-13**

Identification of Anti-*Staphylococcus aureus* Metabolites Produced by *Dolosigranulum pigrum* from the Human Nose *2024-Present*

National Institute of Allergy and Infectious Diseases ***1R03AI182770-01***

- **Role:** PI

Characterizing Pathogen-Mediated Production of Secondary Metabolites in the Human Aerodigestive Tract Microbiome *2024-Present*

National Institute of General Medical Sciences ***1P20GM152333-01***

- **Role:** RPL
- 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
- Declined Award

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

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

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

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

Fellowships & Scholarships

Postdoctoral Fellowship in Computation and Informatics in Biology and Medicine *2018-2020*

National Library of Medicine

- **Part of:** T15 LM007359

Nebraska Institutional Development Award Program Networks of Biomedical Research Excellence Scholarship *2008-2011*

National Institutes of General Medical Sciences

- **Part of:** P20 RR016469

Nebraska Undergraduate Creative Activities and Research Experience Scholarship *2009-2010*

University of Nebraska-Lincoln

Publications

*, indicates co-first authorship. †, indicates corresponding author. underline, indicates mentees/trainees

Peer-Reviewed Publications

1. Ying Xu*, **Reed M. Stubbendieck***, Raghuvir Viswanatha*, Ajda Krč, Lisa S. Baik, Won Se Suh, Yanhui Hu, Huan Wang, Linxiang Yin, Enzo Mameli, John R. Carlson, Andrew C. Doxey, Pål Stenmark, Norbert Perrimon, Cameron R. Currie, Min Dong. (2026). *Streptomyces* produce a diphtheria toxin-like exotoxin that targets insects *Nature Microbiology*.doi: **10.1038/s41564-026-02315-5**. Highlighted in **Nature Reviews Microbiology**.
2. Mercedes Pérez-Pérez, Jacobey King, Paul A. Lawson, **Reed M. Stubbendieck†**. (2026). *Rothia similimucilaginosa* sp. nov., isolated from the human nasal cavity. *International Journal of Systematic and Evolutionary Microbiology*. doi: **10.1099/ijsem.0.007024**.
3. Padam Singh, Charles B. Kaufman, Lisa Whitworth, **Reed M. Stubbendieck**, Randy Morgenstein, Karen L. Wozniak, Avishek Mitra (2025). The PPE64 mycomembrane channel protein moonlights in heme acquisition and biofilm formation in *Mycobacterium tuberculosis*. *mBio*. doi: **10.1128/mbio.03281-25**.
4. Niladri Bhowmik, **Reed M. Stubbendieck†**. (2025). *Achromobacter* spp.: Emerging Pathogens in the Cystic Fibrosis Lung. *PLOS Pathogens*. doi: **10.1371/journal.ppat.1013067**
5. **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**.

6. 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 *lsa*BGC. *Microbial Genomics*. doi: **10.1099/mgen.0.000988**.

7. **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**. Highlighted in **mBio** and **Nature Reviews Microbiology**.

8. 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**.

9. **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**.

10. 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**.

11. **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**.

12. 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**.

13. 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**.

14. **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**.

15. **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**.

16. 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**.

17. **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**.

18. **Reed M. Stubbendieck**, Carol Vargas-Bautista, Paul D. Straight. (2016). Bacterial Communities: Interactions to Scale. *Frontiers in Microbiology*. doi: **10.3389/fmicb.2016.01234**.

19. **Reed M. Stubbendieck**, Paul D. Straight. (2016). Multifaceted Interfaces of Bacterial Competition. *Journal of Bacteriology*. doi: **10.1128/JB.00275-16**.

20. **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**.

21. **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**.

Book Chapters

22. **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**.

Preprints

23. Sydney M. Morabbi, Niladri Bhowmik, Shaz Sutherland, Evelyn A. Wylie, Reagan S. Decker, Akram Al Daerwish, Mercedes Pérez-Pérez, Elizabeth Pascual, Erika I. Lutter, Benjamin Philmus, **Reed M. Stubbendieck†**. (2026). Differential Metabolite Production Underlies Disruption of the Cystic Fibrosis Airway Microbiota by Pathogens. *bioRxiv*. doi: **10.64898/2026.07.16.738945v2**.

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

Texas A&M Genetics Graduate Student Association Travel Award *2016*

Recipient

Texas A&M Genetics Graduate Student Association Travel Award *2015*

Recipient

Texas A&M Biochemistry Graduate Student Association Travel Award *2014*

Recipient

Texas A&M Genetics Graduate Student Association Travel Award *2014*

Recipient

Mentoring

Oklahoma State University (Current: 7, Total: 28)

Graduate Students (Current: 3, Total: 3)

Sadia Amrin	Microbiology and Molecular Genetics Ph.D. Student	2026–Present
Madeline Reichert	Microbiology and Molecular Genetics Ph.D. Student	2024–Present
Niladri Bhowmik	Microbiology and Molecular Genetics Ph.D. Student	2023–Present

Rotating Graduate Students (Total: 5)

Eduardo Tolentino Villalobos	Microbiology and Molecular Genetics M.S. Student	2024
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: 18)

Alex Huntress	2026–Present
Campbell Ryan	2026–Present
Breanna Allen	2026–Present
Evelyn Abigail Wylie	2025
Samantha Ruiz	2025
Josie Hayes	2025
Seth Bowles	2025
Sydney Morabbi	2024–2025
Hariette Diarra	2024
Elixiva Marcum	2024–2025
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: 1, Total: 5)

Evelyn Abigail Wylie	Laboratory Technician	2026
Sydney Morabbi	Laboratory Technician	2026
Elixiva Marcum	Laboratory Technician	2024
Akram Al Daeriwsh	Laboratory Technician	2024–2025
Mercedes Pérez-Pérez	Laboratory 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

Timothy Davenport	2019–2020
Quin Perrault	2019
Mia Temkin	2018–2019

Texas A&M University (Total: 14)

Rotating Graduate Students (Total: 11)

Paul Merlau	Biochemistry & Biophysics Ph.D. Student	2016
Miguel Gonzales	Genetics Ph.D. Student	2016
Neha Deshpande	Biochemistry & Biophysics Ph.D. Student	2016
Huajun Han	Biochemistry & Biophysics Ph.D. Student	2015
Donna Iadarola	Biochemistry & Biophysics Ph.D. Student	2015
Ishita Chandel	Biochemistry & Biophysics Ph.D. Student	2015
John Mosior	Biochemistry & Biophysics Ph.D. Student	2015
Dakota Brock	Biochemistry & Biophysics Ph.D. Student	2014
Chengxi Zhang	Biochemistry & Biophysics Ph.D. Student	2014
Yue Xing	Genetics Ph.D. Student	2013
Diana Medina	Genetics Ph.D. Student	2013

Undergraduate Students (Total: 4)

Paolo Giovanelli	2016
Yifan Ma	2016
Roosheel Patel	2013–2015
Daniel Labuz	2018–2019

University of Nebraska-Lincoln (Total: 1)

Undergraduate Students (Total: 1)

Travis Jensen	2011

Teaching

Courses

Oklahoma State University

MICR 4013/5013	Microbial Diversity, Ecology, and Evolution	Primary Instructor	2025
MICR 3103 (N)	Microbes: Friends or Foes	Primary Instructor	2023–Present
MICR 5160	Seminar	Primary Instructor	2023–2024
MICR 4990	Special Problems: Research	Primary Instructor	2022–Present

Texas A&M University

GENE 311 & 312	Comprehensive Genetics Laboratory for Non-Majors and Majors	Laboratory Instructor	2015–2016
GENE 301 & 302	Comprehensive Genetics Laboratory for Non-Majors and Majors	Laboratory Instructor	2011–2012

University of Nebraska-Lincoln

BIOC 498	Independent Research in Bioinformatics	Teaching Assistant	2010–2011
BIOC 431	Biochemistry I	Teaching Assistant	2010–2011

CHEM 109–110	General Chemistry I and II	Undergraduate Teaching Assistant Corps	2009–2011
BIOS 103	Organismal Biology Laboratory	Laboratory Instructor	2009

Guest Lectures

CHEM 3890	Advanced Honors Experience in Chemistry, Oklahoma State University Instructor: Dr. David Miller Lecture: Antibiotics and the Microbiome	2023
MMI 902	The Role of the Human Microbiome in Health and Disease, University of Wisconsin–Madison Instructor: Dr. Lindsay Kalan Lecture: Airway Microbiomes	2021
BME 1311	Introduction to Biomedical Engineering, University of Central Oklahoma Instructor: Dr. Scott Mattison Lecture: Antibiotics: From Below Your Toes to Inside Your Nose	2019
MICRO 450	Diversity, Ecology, and Evolution of Microorganisms, University of Wisconsin–Madison Instructors: Drs. Cameron Currie & Federico Rey Lecture: Community Ecology and Microbial Interactions	2018–2019

Service

Peer Review

Ad Hoc Peer Reviewer for *Applied and Environmental Microbiology*, *Essays in Biochemistry*, *FEMS Microbial Ecology*, *Frontiers in Bacteriology*, *Frontiers in Microbiology*, *International Journal of Systematic and Evolutionary Microbiology*, *Journal of Bacteriology*, *Journal of Visualized Experiments*, *mBio 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 *2022-Present*

Review Editor

Section: Molecular Bacteriology and Microbiome

Advising Roles

American Medical Student Association (Pre-Med) - Oklahoma State University *2023-Present*

Co-Adviser

Judging

Oral Presentation Judge at the 9th Conference on Beneficial Microbes *2024*

Student Dissertation & Thesis Committees

Oklahoma State University (Current: 9, Total: 13)

Ahmed Tajudeen	Microbiology and Molecular Genetics Ph.D. Student	2026–Present
Isabel Tobin	Animal Sciences Ph.D. Student	2026
Yiwen Liu	Biomedical Sciences Ph.D. Student	2025–Present
Sakalya De Silva	Microbiology and Molecular Genetics Ph.D. Student	2025–Present
Yashoda Aluth Gedara	Chemistry Ph.D. Student	2025–Present
Lou Vanhauwaert	Biochemistry and Molecular Biology Ph.D. Student	2025–Present
Rashna Sharmeen Shama	Microbiology and Molecular Genetics M.S. Student	2024–Present

Bableen Kaur	Microbiology and Molecular Genetics Ph.D. Student	2024–2025
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	2022–2025

Outreach

Third Latin American Natural Product Genome Mining Workshop *2026*

Centro de Investigación en Matemáticas

- **Roles:** Faculty Instructor
- **Topics:** Ecology and Evolution

The Latin American Natural Product Genome Mining Workshop aims to engage with early career researchers across Latin America to explore biodiversity through genomics, metabolomics, and machine learning. For more information please see **here**.

Microbial Matters *2025*

Podcast Interview

- **Episode 88:** Microbial Interactions in Cystic Fibrosis. Please see **here** for the episode.

Second 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 - Univeristy 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

Centro de Investigación en Matemáticas *2026*

Latin American Natural Product Genome Mining Workshop

- **Talk Title:** Secondary Metabolites Mediate Bacterial Interactions in Respiratory Tract Microbiomes

American Society for Pharmacognosy *2026*

Annual Meeting

- **Talk Title:** Differential Metabolite Production Underlies Disruption of the Cystic Fibrosis Airway Microbiota by Pathogens

Murray State University *2025*

Department of Biology

- **Talk Title:** Interactions Mediated By Secondary Metabolism in Aerodigestive Tract Microbiomes

Oklahoma State University University for Health Sciences *2025*

School of Biomedical Sciences

- **Talk Title:** Interactions Mediated By Secondary Metabolism in Aerodigestive Tract Microbiomes

Oklahoma State University *2025*

Department of Biochemistry and Molecular Biology Seminar Series

- **Talk Title:** Interactions Mediated By Secondary Metabolism in Aerodigestive Tract Microbiomes

Oklahoma State University *2024*

Department of Microbiology and Molecular Genetics Seminar Series

- **Talk Title:** Interactions Mediated By Secondary Metabolism in Aerodigestive Tract Microbiomes

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 iseases

- **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 75TH Anniversary of Discovery of Streptomycin

- **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

- **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*

24TH 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
- 1st Place Award

Texas A&M University *2016*

1ST Annual Genetics Graduate Student Oral Research Competition

- **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

- **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*

5TH 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 Titers in *Schizocosa* Wolf Spiders

Nebraska Academy of Sciences *2009*

Annual Meeting

- **Talk Title:** The Effect of 20-Hydroxyecdysone in *Schizocosa* Wolf Spiders

Poster Presentations

Conference on Beneficial Microbes *2026*

University of Wisconsin-Madison

- **Poster Authors:** Madeline A. Reichert, Mercedes Pérez Pérez, Eishika Dissanayake, Luke J. Myers, Jillian H. Hurst, Matthew S. Kelly, James E. Gern, **Reed M. Stubbendieck**
- **Poster Title:** Secondary Metabolites From *Dolosigranulum pigrum* May Prevent Colonization by Respiratory Pathobionts

Annual Research Symposium *2026*

Oklahoma State University Department of Microbiology and Molecular Genetics

- **Poster Authors:** Madeline Reichert, Mercedes Pérez-Pérez, Luke J. Myers, James E. Gern, Matthew S. Kelly, **Reed M. Stubbendieck**
- **Poster Title:** Interactions Between the Nasal Mutualist *Dolosigranulum pigrum* and Other Upper Respiratory Tract Bacteria.

Oklahoma State University *2026*

Undergraduate Research Annual Symposium

- **Poster Authors:** Breanna Allen, Mercedes Pérez-Pérez, Matthew S. Kelly, **Reed M. Stubbendieck**
- **Poster Title:** Characterization of a Putative Toxin-Antitoxin System in the Upper Respiratory Mutualist *Dolosigranulum pigrum*.

Annual Symposium *2026*

Oklahoma Center for Respiratory and Infectious Diseases

- **Poster Authors:** Niladri Bhowmik, Sydney M. Morabbi, **Reed M. Stubbendieck**

- **Poster Title:** Interactions Between the Cystic Fibrosis Pathogens *Achromobacter* spp. and *Pseudomonas aeruginosa* Modulate Virulence Factor Production.

Annual Symposium *2026*

Oklahoma Center for Respiratory and Infectious Diseases

- **Poster Authors:** Madeline Reichert, Mercedes Pérez-Pérez, Luke J. Myers, James E. Gern, Matthew S. Kelly, **Reed M. Stubbendieck**
- **Poster Title:** Interactions Between the Nasal Mutualist *Dolosigranulum pigrum* and Other Upper Respiratory Tract Bacteria.

Annual Symposium *2026*

Oklahoma Center for Respiratory and Infectious Diseases

- **Poster Authors:** Sydney M. Morabbi, Niladri Bhowmik, Evelyn A. Wylie, Reagan S. Decker, Akram Al Daerwish, Mercedes Pé Erika I. Lutter, **Reed M. Stubbendieck**
- **Poster Title:** Antagonistic Bacterial Interactions Shape the Composition of the Cystic Fibrosis Microbiota.
- First Place Best Undergraduate Abstract Award

Annual Meeting *2026*

American Society for Microbiology Missouri Valley Branch

- **Poster Authors:** Niladri Bhowmik, Sydney M. Morabbi, **Reed M. Stubbendieck**
- **Poster Title:** Interactions Between the Cystic Fibrosis Pathogens *Achromobacter* spp. and *Pseudomonas aeruginosa* Modulate Virulence Factor Production.
- First Place Poster Award

INTERACT Symposium *2025*

Oklahoma State University

- **Poster Authors:** Madeline Reichert, Mercedes Pérez-Pérez, Luke J. Myers, James E. Gern, Matthew S. Kelly, **Reed M. Stubbendieck**
- **Poster Title:** Investigating Bioactivity of the Nasal Mutualist *Dolosigranulum pigrum*.

American Society for Pharmacognosy *2025*

Annual Meeting

- **Poster Authors:** Niladri Bhowmik, Sydney Morabbi, Josie Hayes, Elixiva Marcum, Reagan S. Decker, Helen Zagloul, Akram Al Daerwish, Mercedes Pérez-Pérez, **Reed M. Stubbendieck**
- **Poster Title:** Secondary Metabolite-Mediated Interspecies Interactions Among Cystic Fibrosis Pathogens

Oklahoma State University *2025*

Undergraduate Research Annual Symposium

- **Poster Authors:** Elixiva Marcum, Sydney Morabbi, Akram Al Daerwish, Reagan S. Decker, Niladri Bhowmik, **Reed M. Stubbendieck**
- **Poster Title:** Using Microbial Competition in the Cystic Fibrosis Lung to Identify Antibiotic Activity

Oklahoma Center for Respiratory and Infectious Diseases *2025*

Annual Symposium

- **Poster Authors:** Niladri Bhowmik, Reagan S. Decker, Helen Zagloul, Akram Al Daerwish, Mercedes Pérez-Pérez, **Reed M. Stubbendieck**
- **Poster Title:** Secondary Metabolite-Mediated Interactions Between *Achromobacter dolens* and *Pseudomonas aeruginosa*

Oklahoma Center for Respiratory and Infectious Diseases *2025*

Annual Symposium

- **Poster Authors:** Madeline Reichert, Mercedes Pérez-Pérez, Luke J. Myers, James E. Gern, Matthew S. Kelly, **Reed M. Stubbendieck**
- **Poster Title:** The Nasal Mutualist *Dolosigranulum pigrum* Inhibits Respiratory Pathobionts Through Secondary Metabolite Production

Oklahoma Center for Respiratory and Infectious Diseases *2025*

Annual Symposium

- **Poster Authors:** Elixiva Marcum, Sydney Morabbi, Akram Al Daerwish, Reagan S. Decker, Niladri Bhowmik, **Reed M. Stubbendieck**
- **Poster Title:** Using Microbial Competition in the Cystic Fibrosis Lung to Identify Antibiotic Activity

American Society for Microbiology Missouri Valley Branch Meeting *2025*

Annual Meeting

- **Poster Authors:** Niladri Bhowmik, Reagan S. Decker, Helen Zagloul, Akram Al Daerwish, Mercedes Pérez-Pérez, **Reed M. Stubbendieck**
- **Poster Title:** Secondary Metabolite-Mediated Interactions Between *Achromobacter dolens* and *Pseudomonas aeruginosa*
- 2nd Place Award

American Society for Microbiology Missouri Valley Branch Meeting *2025*

Annual Meeting

- **Poster Authors:** Madeline Reichert, Mercedes Pérez-Pérez, Luke J. Myers, James E. Gern, Matthew S. Kelly, **Reed M. Stubbendieck**
- **Poster Title:** The Nasal Mutualist *Dolosigranulum pigrum* Inhibits Respiratory Pathobionts Through Secondary Metabolite Production

American Society for Microbiology Missouri Valley Branch Meeting *2025*

Annual Meeting

- **Poster Authors:** Elixiva Marcum, Sydney Morabbi, Akram Al Daerwish, Reagan S. Decker, Niladri Bhowmik, **Reed M. Stubbendieck**
- **Poster Title:** Using Microbial Competition in the Cystic Fibrosis Lung to Identify Antibiotic Activity

Molecular Genetics of Bacteria and Phages Meeting *2024*

University of Wisconsin-Madison

- **Poster Authors:** Madeline Reichert, Mercedes Pérez-Pérez, 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, Marc 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 BoÅ¡kovic 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 Excellence Annual Research Convention *2010*

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)

American Society for Pharmacognosy

Northbrook, IL *2024-Present*

- Member (2024-Present)

Oklahoma Center for Microbiome Research

Oklahoma State University *2024-Present*

- Research Project Leader (2024-Present)
- Member (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 *2024*

National Institutes of Health

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

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