

Reed M. Stubbendieck

ASSISTANT PROFESSOR

Department of Microbiology and Molecular Genetics, Oklahoma State University

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This is an abbreviated CV with items from 2022 and beyond. [Click here](#) for the full-length version.

Education

Ph.D. Genetics

TEXAS A&M UNIVERSITY

2017

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

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

Publications

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

PEER-REVIEWED PUBLICATIONS

1. Niladri Bhowmik, **Reed M. Stubbendieck**†. (2025). *Achromobacter* spp.: Emerging Pathogens in the Cystic Fibrosis Lung. *PLOS Pathogens*. doi: [10.1371/journal.ppat.1013067](https://doi.org/10.1371/journal.ppat.1013067)
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. Wisor, 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).

Awards

TRAVEL AWARDS

Oklahoma State University College of Arts and Sciences Travel Award

2023

RECIPIENT

- **Award:** \$1200

Mentoring

OKLAHOMA STATE UNIVERSITY (CURRENT: 7, 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 (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: 12)

Seth Bowles	2025-Present
Sydney Morabbi	2024-Present
Hariette Diarra	2024
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 Pérez-Pérez LAB MANAGER	2023-Present

Teaching

COURSES

Oklahoma State University

Microbial Diversity, Ecology, and Evolution PRIMARY INSTRUCTOR	2025-Present MICR 4013/5013
Microbes: Friends or Foes PRIMARY INSTRUCTOR	2023-Present MICR 3103 (N)

Seminar

PRIMARY INSTRUCTOR

2023-2024

MICR 5160

Special Problems: Research

PRIMARY INSTRUCTOR

2022-Present

MICR 4990

GUEST LECTURES

Advanced Honors Experience in Chemistry

OKLAHOMA STATE UNIVERSITY

2023

CHEM 3890

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

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

2022-Present

Section: Molecular Bacteriology and Microbiome

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)

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-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

OUTREACH

Microbial Matters

2025

PODCAST INTERVIEW

- **Episode 88:** Microbial Interactions in Cystic Fibrosis. Please see [here](#) for the episode.

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](#).

Professional Activities

PLATFORM PRESENTATIONS & SEMINARS

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 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

POSTER PRESENTATIONS

Oklahoma Center for Respiratory and Infectious Diseases

2025

ANNUAL SYMPOSIUM

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

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, Helebn Zaghloul, Akram Al Daerwish, Mercedes Pérez-Pérez, **Reed M. Stubbendieck**
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- **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 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

Affiliations & Memberships

Latin American Natural Product Genome Mining Workshop

GUANAJUATO, MEXICO

2024-Present

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

Oklahoma Center for Microbiome Research

OKLAHOMA STATE UNIVERSITY

2023-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)

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