



NIAMRRE CONFERENCE

20
25

MAY 13 - 15 | RALEIGH, NC



NIAMRRE

CHANGING
PERSPECTIVES
IN AMR

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Thank you to the sponsors of the 2025 NIAMRRE Annual Conference





HISTORY

NIAMRRE was established in 2018 by a joint effort of the Association of Public and Land-Grant Universities (APLU) and the American Association of Veterinary Medical Colleges (AAVMC) in recognition of the need for a coordinating body to carry out actionable recommendations to addressing AMR at a national scale.

THE CHALLENGE

Antimicrobial resistance (AMR) is one of the greatest global health threats to society, human and animal health, and economic prosperity. AMR happens when bacteria develop the ability to defeat the drugs designed to kill them. According to the CDC, antibiotic-resistant bacteria cause at least 2.8 million infections and 35,000 deaths in the United States every year.

OUR SOLUTION

NIAMRRE is a member organization that works to progress initiatives set out in the U.S. National Action Plan for Combating Antibiotic-Resistant bacteria, using a One Health approach. We address prioritized gaps in knowledge related to antimicrobial use, stewardship, and resistance while organizing resources, convening people, and coordinating ideas.

MISSION-DRIVEN

NIAMRRE drives cross-sector engagement and coordinated action to combat the global threat of antimicrobial resistance across humans, animals, plants, and the environment.

Welcome From the Executive Director

The NIAMRRE Annual Conference has always been a yearly highlight for me. I am grateful for the opportunity to visit with all of you face-to-face and work to change perceptions in AMR in antimicrobial resistance. We frequently talk about the complexity and challenges of addressing AMR from a One Health perspective, and that challenge is core to our shared vision and mission at NIAMRRE, but how do we do that?

I believe we can change perspectives by working together across disciplines, professions, and skills to align our efforts to look for common goals and take steps to create positive impact. While that sounds difficult, we in the NIAMRRE Operations Center have seen individuals collaborate and innovate across expertise and sectors on numerous occasions to bring forth new ideas and overcome challenges. Several themes emerge when we look at how those successful efforts develop. As we go into the 2025 conference, it is worth reviewing these principles and intentionally applying them this week.

- **Get to know people outside your field** - successful teams are built on trust and respect. It is easy to become critical of other sectors or individuals when we fail to look at the challenge from their perspective. One of the best remedies is to get to know one another and listen to their stories and perspectives over a meal or at the reception. I encourage you to seek out and get to know at least five individuals you have not yet met.
- **Develop a healthy perspective on what the diverse fields bring to the collective table** - so many times, we get stuck in our professional silos and forget the breadth of knowledge and value that comes from having diverse people and diverse fields all involved in the discussion. Use this meeting as an opportunity to foster this perspective, seek out other opinions and ideas, and explore how changing your perspective might yield new insights into the problem.
- **Ask yourself what you can apply from how others are addressing similar challenges** - I would encourage you to reflect, both during our intentional reflection periods and in your own time, on how you can implement what you have learned. Make a commitment to go home and try something new.

I sincerely thank our NIAMRRE Annual Conference Planning Committee and the Conference Chair, Dr. Jennifer Halleran, of North Carolina State University and her team for developing an outstanding program from the conference. Their efforts and those of many other volunteers and AMR stakeholders are making a difference, and we encourage you to engage in that process. If you are interested in becoming more involved in the work NIAMRRE does, please seek out one of the NIAMRRE staff members to learn more about how you can engage. Thank you for joining us!



DR. PAUL PLUMMER

DVM, PhD, DACVIM (LIAM), DESCHR

- Executive Director at NIAMRRE
- Dean at UTCVM



AGENDA



TUESDAY | MAY 13

8:30 - 11:30 AM

PRE-CONFERENCE INNOVATION SHOWCASE

Dr. Peter Bergholz, Dr. Daniel Czyz, Nick Conley, Brian Eller, Thomas Heymann, Dr. Michelle Kromm, Tobo Loaiza, James Millar, Dr. Brett O'Brien, Jiten Pant, Ronald Shebuski, Matthew Tebeau, Maria Thacker Goethe, Dwight Austin Van Horn

9:00 - 12:00 PM

PRE-CONFERENCE STUDENT WORKSHOP

Kathleen M. Fenner, Dr. Jennifer Halleran

1:00 - 1:45 PM

WELCOME & KEYNOTE PRESENTATION

➤ *Changing Perspectives Through Storytelling*

Dr. Julia Szymczak | University of Utah School of Medicine



1:45 - 2:45 PM

PRESENTATION

➤ *Success Stories: Changing Perspectives in AMR*

Dr. Gregory Lewbart | North Carolina State CVM

Thomas Heymann | Sepsis Alliance

Kelly M. Foltz | BluePearl Pet Hospital

Moderator: Dr. Ben O'Kelley

3:00 - 3:30 PM

BREAK

3:30 - 3:45 PM

PRESENTATION

➤ *AMR Research & Innovation at NC State*

Dr. Josh Stern | North Carolina State CVM

3:45 - 4:30 PM

LIGHTNING TALKS: ROUND 1

(See Page 10)

Moderator: Dr. Jennifer Halleran



TUESDAY NIGHT

4:30PM - 5:30 PM
POSTER SESSION

4:30PM - 7:00 PM
WELCOME RECEPTION



★ WEDNESDAY | MAY 14

6:15 - 7:30 AM

OPTIONAL MORNING HIKE

Weather permitting: To join the hike, meet in the hotel lobby at 6:15am. Hikers, led by Dr. Ben O'Kelley with BluePearl Pet Hospital will depart hotel at 6:30am and return around 7:30am.

8:30 - 9:30 AM

PRESENTATION

➤ *Changing Perspectives on AMR Through Surveillance Systems*

Dr. Claire Fellman | Tufts University

Dr. Sarah Rhea | North Carolina State CVM

Dr. Rachel Whitaker | University of Illinois Urbana-Champaign

Moderator: Dr. Daniel Czyz

9:30 - 10:30 AM

PANEL DISCUSSION

➤ *International Perspectives on AMR Following UNGA*

Dr. Sid Thakur | North Carolina State University

Dr. Paul Plummer | UTCVM / NIAMRRE

Dr. Kamada Lwere | Soroti University and Islamic University in Uganda

Dr. Arshnee Moodley | International Livestock Research Institute

Dr. David van Duin | UNC School of Medicine

Moderator: Dr. Dan Grooms

10:30 - 11:00 AM

BREAK

11:00 AM - 12:00 PM

PRESENTATION

➤ *Changing Perspectives on Fungal Diseases*

Dr. Steven Harris | Iowa State University

Dr. Ilan Schwartz | Duke University

Dr. Karen A. Norris | University of Georgia

Moderator: Dr. Jennifer Halleran

Continued on Next Page » » »



12:00 - 1:00 PM
NETWORKING LUNCH

8:30 - 9:30 AM
CONCURRENT FACILITATED DISCUSSION BREAKOUTS

➤ *Research*

[Dr. Kris Johansen](#)
NIAMRRE

[Dr. Paul Plummer](#)
UTCVM / NIAMRRE

➤ *Education*

[Dr. Daniel Czyz](#)
University of Florida

[Dr. Revati Masilamani](#)
Tufts University

[Dr. Andrew T. Maccabe](#)
Mars Veterinary Health

[Maria Thacker Goethe](#)
Georgia Life Sciences

➤ *Stewardship*

[Dr. Ben O'Kelley](#)
BluePearl

[Dr. Erin Brown](#)
UNC Health

[Dr. Melissa Johnson](#)
Duke University

2:30-3:00 PM
BREAK

3:00 - 3:30 PM
REPORT OUTS FROM FACILITATED DISCUSSION BREAKOUTS

9:30 - 10:30 AM
PRESENTATION

- *A Tale of Two Microbial Worlds—The Struggle of Antimicrobial Resistance*
[Dr. Peter Dorhout](#) | Iowa State University

3:30 - 4:00 PM
PRESENTATION

- *AMR Dashboard Update*
[Dr. Amanda Kreuder](#) | Iowa State University / NIAMRRE

5:00 - ~6:00 PM (Bus Loading at 4:45 PM)
OPTIONAL TOUR: NC STATE UNIVERSITY ANIMAL HOSPITAL



6:15 – 7:30 AM

OPTIONAL MORNING HIKE

Weather permitting: To join the hike, meet in the hotel lobby at 6:15am. Hikers, led by Dr. Ben O’Kelley with BluePearl Pet Hospital will depart hotel at 6:30am and return around 7:30am.

8:30 – 9:15 AM

KEYNOTE PRESENTATION

➤ *Changing Perspectives on Antibiotic Allergies*

Dr. Christina Sarubbi | UNC Health Rex



9:15 – 10:00 AM

LIGHTNING TALKS: ROUND 2

(See Page 10)

Moderator: Dr. Jennifer Halleran

10:00 – 10:15 AM

BREAK

10:15 – 10:45 AM

PANEL DISCUSSION

➤ *Changing Perspectives in Uncertain Times*

Dr. Erika Ganda | The Pennsylvania State University

Dr. Cristina Lanzas | North Carolina State University

Dr. Ivan Liachko | Phage Genomics

Dr. Sid Thakur | North Carolina State University

Moderator: Dr. Paul Plummer

10:45 – 11:00 AM

STUDENT POSTER AWARDS

11:00 – 11:30 AM

CLOSING REMARKS

Dr. Andrew T. Maccabe | Mars Veterinary Health



MARS
Veterinary Health



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Stuart B. Levy
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RESISTANCE AT THE
GRADUATE LEVEL**

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UNIVERSITY of FLORIDA

SCAN TO
LEARN
MORE:





LIGHTNING TALKS

ROUND 1 | MAY 13

Surface modified polyurethane for antimicrobial applications

Ali Abdulah / Jerald Dumas

➤ **North Carolina A&T State University**

Carbapenem-resistant Gram-negative bacteria and methicillin-resistant staphylococci rated as top Companion animal pathogens that threaten both companion animal and human health

Casey Cazer / Claudia Cobo Angel³, Amelia Frye¹, Abdolreza Mosaddegh⁴, Kurtis Sobkowich⁵, Zvonimir Poljak⁵, Scott Weese⁶

➤ **Cornell University**

1. Department of Clinical Sciences, College of Veterinary Medicine, Cornell University; 2. Department of Public and Ecosystem Health, College of Veterinary Medicine, Cornell University; 3. International Centre for Antimicrobial Resistance Solutions (ICARS); 4. Multidisciplinary Graduate Engineering Department, Northeastern University; 5. Department of Population Medicine, Ontario Veterinary College, University of Guelph, 6. Department of Pathobiology, Ontario Veterinary College, University of Guelph

Surveillance of azole-resistant *Aspergillus fumigatus* in air, soil, and compost samples from diverse environments in Ohio, United States

Melanie Lewis Ivey / Raees Paul, Sudharsan Sadhasivam, Timothy Frey, Pierce Paul

➤ **The Ohio State University**

Hydrodynamic shear stress increases adhesion of *saccharomyces cerevisiae*

Md Adnan Karim / Dennis Lajeunesse

➤ **University of North Carolina, Greensboro**

Galápagos tortoise smuggling leads to the discovery of a new parasite

Gregory Lewbart / Michael J. Yabsley^{7,8,9}, Andrea Loyola², James Flowers¹, Chelsea Drumgoole¹, Elizabeth Walsh¹,

Mateo Davila^{3,4,5}, Diego F. Cisneros-Heredia^{3,4,5}, Juan Pablo Muñoz-Pérez^{3,5,6}, Diego Páez-Rosas^{3,5}, Kayla B. Garrett⁹

➤ **North Carolina State CVM**

1. College of Veterinary Medicine, North Carolina State University, Raleigh NC, USA; 2. Departamento de Ecosistemas, Dirección Parque Nacional Galápagos, Galápagos, Ecuador; 3. Colegio de Ciencias Biológicas y Ambientales, Universidad San Francisco de Quito USFQ, Quito, Ecuador; 4. Instituto de Biodiversidad Tropical IBOTROP, Universidad San Francisco de Quito USFQ, Quito, Ecuador; 5. Galápagos Science Center, Universidad San Francisco de Quito USFQ & University of North Carolina UNC-Chapel Hill, Galapagos, Ecuador; 6. Faculty of Science and Engineering, University of the Sunshine Coast, Queensland, Australia, 7. Southeastern Cooperative Wildlife Disease Study, Department of Population Health, College of Veterinary Medicine, Wildlife Health Building, Athens GA, USA; 8. Center for the Ecology of Infectious Diseases, University of Georgia, Athens GA, USA; 9. Warnell School of Forestry and Natural Resources, University of Georgia, Athens GA, USA.

An AMR Déjà Vu: The emergence of the mobile colistin resistance (MCR) genes in sewage, surface water, and imported seafood in the USA

Issmat Kassem / Jouman Hassan¹, Marwan Osman²

➤ **University of Georgia**

1. University of Georgia, 2. Yale University

One Health landscape of antimicrobial resistance in Virginia bacteria (2007–2021)

[Chyer Kim](#) / Eunice Ndegwa

➤ [Virginia State University](#)

Tracking AMR dynamics in complex communities using proximity-guided metagenomics

[Ivan Liachko](#)

➤ [Phase Genomics](#)

Widespread dissemination of blaNDM-5-harboring Escherichia coli across refugee and host communities and their environment

[Marwan Osman](#)

➤ [Yale University](#)

Host genetics' effect on transfer of antimicrobial resistant plasmid between bacteria in the gut

[Melha Mellata](#)

➤ [Iowa State University](#)

ROUND 2 | MAY 15

Exploring antibiotic resistance in plant-pathogenic bacteria: A study on peach trees and its impact on orchard management in Pennsylvania

[Richard González Aquino](#) / Veronica Roman-Reyn, Kari Peter

➤ [The Pennsylvania State University](#)

Antibiotic stewardship education for nurses in primary care contexts: a program and pilot study

[Erina Farrell](#) / Madeline Jupina¹, Brian Mesquita¹, Shulun Wang¹, Yanmengqian (Alison) Zhou²

➤ [The Pennsylvania State University](#)

1. The Pennsylvania State University, 2. University of Buffalo

New York State companion animal veterinarians have a spectrum of beliefs on antimicrobial resistance

[Amelia Frye](#) / Casey Cazer^{1,2}, Jeanne Lawless², Lecsy Gonzalez^{2,3}, Amelia Greiner Safi²

➤ [Cornell University](#)

1. Department of Clinical Sciences, College of Veterinary Medicine, Cornell University; 2. Department of Public and Ecosystem Health, College of Veterinary Medicine, Cornell University; 3 Department of Clinical and Health Psychology, College of Public Health and Health Professions, University of Florida

One Health approaches for combating antimicrobial resistant pathogens

[Yosra Helmy](#) / Martin Gatton

➤ [University of Kentucky](#)

The effect of electrospun polyacrylonitrile on antifungal drug sensitivity in yeast

[Nooshin KianvashRad](#) / Maryam Pourtaghi¹, Dennis LaJeunesse², Lifeng Zhang¹

➤ [University of North Carolina Greensboro](#)

1. Joint School of Nanoscience and Nanotechnology, North Carolina Agricultural and Technical State University; 2. Department of Nanoscience, Joint School of Nanoscience and Nanoengineering, University of North Carolina Greensboro

Continued on Next Page » » »

H5 Influenza: An examination of science communications

Michelle Kromm

➤ Food Forward LLC

Porcine reproductive and respiratory syndrome virus impact on antibiotic usage in the growing pig population

Isadora Machado / Daniel Linhares, Gustavo Silva

➤ Iowa State University

A Summer Program for Young Scientists: Fostering AMR advocacy

Revati Masilamani / Claire Fellman, North Grafton, Cheleste Thorpe

➤ Tufts University

ProxiMeta™ Platform

Deep insights into complex microbial communities, including the moving parts

- Discover new microbial species, strains, and genes
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- Use integrated computational tools to analyze results
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- Annotate metabolic modules and identify new biosynthetic pathways

Genome-resolved metagenomics



Link AMR genes to microbes

Reconstruct metabolic pathways

Connect phages to their hosts



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POSTERS

Seasonal patterns of antibiotic resistance genes in community wastewater: a systematic review

Charles Adegbole / Togzhan Seilkhanova, Muhammed Rashid Bajwa, Rebecca Smith

➤ **University of Illinois, Urbana-Champaign**

Toward the development of photodynamically enhanced antimicrobial materials for hospital and combat wound care applications

David Alvarado / Dr. Reza A. Ghiladi, Dr. Frank Scholle

➤ **North Carolina State University**

Antibiotic resistance and virulence factors of staphylococcus isolated from homes impacted by sanitary sewer overflow events in maryland

Brienna Anderson-Coughlin / Emily M.H. Woerner¹, Priscila B.R. Alves², Taeilora Levell-Young¹, Taylor Smith-Hams³, Alice Volpitta³, Rita Crews⁴, Malika Brown⁵, Marccus D. Hendricks², and Rachel E. Rosenberg Goldstein¹

➤ **University of Maryland**

1. Department of Global, Environmental, and Occupational Health, School of Public Health, University of Maryland; 2. Stormwater Infrastructure Resilience and Justice (SIRJ) Lab, School of Architecture, Planning, & Preservation, University of Maryland; 3. Blue Water Baltimore; 4. Belair-Edison Community Association, Baltimore; 5. Cherry Hill Development Corporation, Baltimore

Engineering nanostructured surfaces for genomic disruption of biofilms

Omiya Ayoub / Dr. Dennis LaJeunesse

➤ **University of North Carolina at Greensboro**

Comparative analysis of integron-associated amr genes in salmonella typhimurium from dairy cattle and human

Sami Ullah Khan Bahadur / Nora Jean Nealon², Mo Salman¹, Josh Daniels¹, Muhammad Usman Zaheer¹, Sangeeta Rao¹

➤ **Colorado State University, Fort Collins**

1. College of Veterinary Medicine and Biomedical Sciences, Colorado State University; 2. College of Veterinary Medicine Veterinary, The Ohio State University

Extended-spectrum beta-lactamase (ESBL) producing enterobacterales near commercial-scale dairy production in the central valley of california

Claire Barlow / Heather K. Amato^{1,2}, Caroline McCormack², Gourav Velma³, Augusta Uwamanzu-Nna^{4,5}, Neha Lingam², Jacqueline Paredes-Kao², Amy J. Pickering^{2,6}

➤ **University of Maryland School of Public Health**

1. University of Maryland School of Public Health; 2. Department of Civil and Environmental Engineering, University of California; 3. College of Computer, Mathematical, and Natural Sciences, University of Maryland; 4. Department of Bioengineering, University of California; 5. University of California San Francisco School of Medicine; 6. Blum Center for Developing Economies, University of California

Dual use of bone scaffold for antibiotics delivery delays the onset of osteomyelitis

Gabriela Bastos / Tatiana D. Dias¹, David E. Anderson¹, Pierre Y. Mulon¹, Silke Hecht², Elizabeth Croy¹

> **University of Tennessee, Knoxville**

1. College of Veterinary Medicine, Large Animal Clinical Science, University of Tennessee, Knoxville; 2. College of Veterinary Medicine, Department of Small Animal Clinical Sciences, University of Tennessee, Knoxville

Investigating the efficacy of cuminaldehyde in reducing antimicrobial resistance gene spread in the poultry gut microbiome

Rithu Chandran / Lekshmi Edison¹, Varsha Bommineni¹, Neelawala Gedara Roshen N Neelawala¹, Thomas Denagamage², Subhashinie Kariyawasam¹, Kumar Venkitanarayanan³, Abraham Joseph Pellissery¹

> **University of Florida**

1. Department of Comparative, Diagnostic and Population Medicine, College of Veterinary Medicine, University of Florida; 2. Department of Large Animal Clinical Sciences, College of Veterinary Medicine, University of Florida; 3. Department of Animal Science, University of Connecticut, Storrs, CT

Epidemiology, genome features, and antimicrobial resistance of trueperella pyogenes isolated from farmed white-tailed deer (odocoileus virginianus) in Florida

An-Chi Cheng / Ting Liu^{2,3}, Austin C. Surphlis^{3,4}, John A. Lednicky^{3,5}, Samantha M. Wisely^{3,6}, Kuttichantran Subramaniam^{3,4}, Kwangcheol C. Jeong^{2,3}, Juan M. Campos Krauer^{1,6}

> **University of Florida**

1. Department of Large Animal Clinical Sciences, College of Veterinary Medicine, University of Florida; 2. Department of Animal Sciences, College of Agriculture and Life Sciences, University of Florida; 3. Emerging Pathogens Institute, University of Florida; 4. Department of Infectious Diseases and Immunology, College of Veterinary Medicine, University of Florida; 5. Department of Environmental and Global Health, College of Public Health and Health Professions, University of Florida; 6. Department of Wildlife Ecology and Conservation, Institute of Food and Agricultural Sciences, University of Florida

Impact of Antimicrobial Susceptibility Testing Report Styles on Antimicrobial Selection in Small Animal Practice

Dubrasca Diaz-Campos / Christy A. King¹, Joany C. van Balen², Dimitria Mathys¹, Emily Janovyak¹, Thomas Wittum¹

> **The Ohio State University**

1. Ohio State University College of Veterinary Medicine, Department of Veterinary Preventive Medicine; 2. Ohio State University College of Veterinary Medicine, Veterinary Medical Center

Training communication skills for antibiotic stewardship in primary care: evidence-based video resources

Farrell Erina / Yanmenqian (Alison) Zhou², Madeline Jupina¹, Brian Mesquita¹

> **The Pennsylvania State University**

1. The Pennsylvania State University; 2. University of Buffalo

Retrospective assessment of ampicillin and ampicillin-sulbactam prescriptions at a small animal veterinary teaching hospital

Claire Fellman / Monica Grady, Leah Fine, Ian DeStefano

> **Tufts University**

Lactobacillus-based probiotic vaccines to replace antibiotics in turkeys for the control of clostridial dermatitis disease

Carissa Gaghan / Dr. Sarah O'Flaherty, Dr. Rodolphe Barrangou, Dr. Ravi Kulkarni

> **North Carolina State University**

Risk ranking of antibiotic resistance genes and their impact on human health: a semi-quantitative framework integrating genomic data and expert elicitation

Jaber Ghorbani / Yanbin Yin¹, Xu Li², Jennifer Clarke^{1,3}, Adina Howe⁴, Michelle Soupir⁴, Amy Schmidt⁵, Shannon Bartelt-Hunt², Bing Wang¹

➤ **University of Nebraska-Lincoln**

1. Department of Food Science and Technology, University of Nebraska-Lincoln; 2. Department of Civil and Environmental Engineering, University of Nebraska-Lincoln; 3. Department of Statistics, University of Nebraska at Lincoln; 4. Department of Agricultural and Biosystems Engineering, Iowa State University; 5. Biological System Engineering, University of Nebraska at Lincoln

Genomic epidemiology of genomic modules in mobile genetic elements

Isaiah Goertz / Edward Andrews, Kenneth Ringwald, Jim Lowe, Rebecca Smith, Rachel Whitaker

➤ **University of Illinois at Urbana-Champaign**

Virulence and antimicrobial resistance of salmonella enterica isolated from equines: genomic insights into salmonella mbandaka

Ajran Kabir / Erdal Erol, Yosra Helmy

➤ **University of Kentucky**

Sewage surveillance highlights a widespread dissemination of the mobile colistin resistant gene (mcr-1) in escherichia coli in lebanon

Issmat Kassem / Marwan Osman², Jouman Hassan¹,

➤ **University of Georgia**

1. Univeristy of Georgia; 2. Yale University

A novel multidrug-resistant Enterobacter hormaechei ST2755 isolated from a wild-caught oyster in Georgia, USA

Issmat Kassem / Nivin Nasser

➤ **University of Georgia**

Investigating fecal and antimicrobial-resistant bacteria from tidal flooding in Carolina Beach, North Carolina

Jenna Kraemer / Natalie Nelson, Megan Carr, Julia Harrison, Katherine Anarde, Angela Harris

➤ **North Carolina State University**

New science communication modules for veterinary medicine students to improve antimicrobial stewardship

Amanda Kreuder / Sarah Al-Mazroa Smith¹, Andy King², Will Sander³, Emmanuel Okello⁴, Paul Plummer⁵

➤ **Iowa State University**

1. Iowa State University, Agriculture and Natural Resources Extension and Outreach; 2. University of Utah, Department of Communication; 3. University of Illinois at Urbana-Champaign; 4. University of California-Davis; 5. University of Tennessee, College of Veterinary Medicine

Quorum sensing autoinducer 2 (AI-2) inhibitors as a potential therapeutic target for controlling Salmonella infections in the food chain

Bibek Lamichhane / Khaled A. Shaaban¹, Larissa V. Ponomareva¹, Jon S. Thorson¹, Yosra Helmy²

➤ **University of Kentucky**

1. Center for Pharmaceutical Research and Innovation, and Department of Pharmaceutical Sciences, College of Pharmacy, University of Kentucky; 2. Department of Veterinary Science, College of Agriculture, Food, and Environment, University of Kentucky

Controlling the conjugative transmission of plasmids through dietary supplements

Melha Mellata / Logan Ott

➤ [Iowa State University](#)

Goat rumen microbiome as a reservoir of antibiotic genes

Eunice Ndegwa / Chyer Kim, Dahlia O'Brien

➤ [Virginia State University](#)

Antimicrobial resistance genes profiles of fecal samples from sheep and goats at a live-animal show using metagenomics

Ivan Odur / "Ivan Odur¹, Eunice Ndegwa², Patrick Pithua³, Amy Pruden⁴

➤ [Virginia Tech](#)

1. Genetics, Bioinformatics, and Computational Biology, Virginia Tech; 2. Agricultural Research Station, Virginia State University; 3. Virginia-Maryland College of Veterinary Medicine, Virginia Tech; 4. Department of Civil & Environmental Engineering, Virginia Tech

Assessment of VDL's opinions on procurement and sharing of antimicrobial susceptibility testing data from animals into a centralized database and dashboard tool

Raissa Raineri / Paul Plummer¹; Kristine Johansen²; Amanda Kreuder³

➤ [Iowa State University](#)

1. University of Tennessee, Knoxville; 2. National Institute of Antimicrobial Resistance Research and Education; 3. Iowa State University

Understanding contaminant transport through septic systems in shallow Adirondack soils under varying antecedent soil moisture conditions and user numbers

Rikesh Rasaili / Christine Georgakakos¹, Siwen Wang², Julie Maresca¹, Stacy McNulty¹, Claudia Braymer³

➤ [State University of New York](#)

1. State University of New York College of Environmental Science and Forestry; 2. Clarkson University; 3. Protect the Adirondacks! Inc.

Lipoxazolidinone natural product analog displays potent in vitro antibiofilm activity

Andrew Ratchford / Joshua G. Pierce^{2,4}, Lauren V. Schnabel^{3,4}

➤ [North Carolina State University](#)

1. Department of Plant and Microbial Biology, North Carolina State University; 2. Department of Chemistry, North Carolina State University; 3. Department of Clinical Sciences, North Carolina State University; 4. Comparative Medicine Institute, North Carolina State University

Examining streptococcal persistence and antimicrobial resistance in a veterinary teaching hospital

Britta Rued / Marina Oliveria, Cory D. Pair

➤ [Iowa State University](#)

Prevalence and antimicrobial resistance profile of *Escherichia coli* across the broiler production chain in Karnataka, India

Mohammad Nasim Sohail / S. Isloor¹, D. Rathnamma¹, Csaba Varga^{2,3}, S. Chandra Priya¹, B. M. Veeregowda¹, S. Wilfred Ruban⁴, Nagendra R. Hegde⁵, Nicola J. Williams⁶

➤ **University of Illinois Urbana Champaign**

1. Department of Veterinary Microbiology, Veterinary College, KVAFSU, Hebbal, Bengaluru; 2. Department of Pathobiology, College of Veterinary Medicine, University of Illinois Urbana-Champaign; 3. Carl R. Woese Institute for Genomic Biology, University of Illinois Urbana-Champaign; 4. Department of Livestock Products and Technology, Veterinary College, KVAFSU, Hebbal, Bengaluru; 5. National Institute of Animal Biotechnology, Hyderabad; 6. Department of Livestock and One Health, Institute of Infection, Veterinary and Ecological Sciences, University of Liverpool

A yeast phenotypic screen to identify novel inhibitors of bacterial toxins

Amanda Taylor / Dr. Carly Catella, Dr. Deniz Durmusoglu, Dr. Nathan Crook. Department of Chemical Engineering

➤ **North Carolina State University**

Dynamics of spectinomycin selection in swine gut microbiome

Saralexis Torres / Edward E. Andrews, Sanjana Jose, Aiden Allenfort, Anne-Louise Anstey, Kaitlyn M. Sommer, Ryan Dilger, Rachel Whitaker

➤ **University of Illinois at Urbana Champaign**

Anionic block polymers with inherent antimicrobial properties to prevent the spread of contagious diseases

Kacie Wells / Daniela S. Ayala¹, Sarah J. Dejarnette², Jeremy P. Faircloth³, Padraic O'Reilly⁴, Reza A. Ghiladi⁵, Lee-Ann Jaykus³, Frank Scholle², Richard J. Spontak⁶, Anthony Griffiths¹, Yusuf Ciftci⁷, Revathi Govind⁷, Govindsamy VEDIYAPPAN⁷

➤ **North Carolina State University**

1. National Emerging Infectious Diseases Laboratories, Boston University School of Medicine; 2. Department of Biological Sciences, North Carolina State University; 3. Department of Food, Bioprocessing and Nutrition Sciences, North Carolina State University; 4. Molecular Vista, 5. Department of Chemistry, North Carolina State University; 6. Department of Chemical & Biomolecular Engineering, Department of Materials Science & Engineering, North Carolina State University; 7. Division of Biology, Kansas State University

Germs under surveillance: keeping an eye on superbugs in a veterinary medical center

Valeriia Yustyniuk / Melissa Boyd, Jeff B. Bender

➤ **University of Minnesota**

PmrR is involved in polymyxin resistance in *Escherichia coli*

Ximin Zeng / Ziqiang Guan¹, Jun Lin²

➤ **The University of Tennessee, Knoxville**

1. Department of Biochemistry, Duke University Medical Center; 2. Department of Animal Science, The University of Tennessee

A novel strategy to potentiate polymyxins by targeting RpoE stress response pathway

Ximin Zeng / Noah Sherman¹, Jun Lin¹

➤ **The University of Tennessee, Knoxville**

1. Department of Animal Science, The University of Tennessee



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SPEAKER BIOS

★ KEYNOTE SPEAKERS



PHD

DR. JULIA SZYMCHAK *Associate Professor / Epidemiology*
► *University of Utah School of Medicine*

Julia Szymczak, PhD is an Associate Professor in the Division of Epidemiology at the University of Utah School of Medicine, where she Co-Directs the Utah Quality Advancement Laboratory (UQuAL). **Dr. Szymczak** is a medical sociologist who leads research that integrates social science theory and methods into efforts to transform healthcare delivery so it is reliably safe, equitable, and high quality. Her work over the past eight years has focused on reducing the harm to patients and populations from antibiotic-resistant bacteria with the following objectives: 1) *Characterize the social determinants of antibiotics across clinical contexts* and 2) *Generate evidence about what works to improve how antibiotics are prescribed*, and 3) *advance the use of implementation science in antibiotic stewardship research*.



MBA, PHARM D

DR. CHRISTINA SARUBBI *Pharmacy Manager / Clinical Services*
► *Veterinary Medicine Extension at UC Davis*

Dr. Christina Sarubbi is the Manager of Clinical Services at UNC Health Rex. Dr. Sarubbi earned her undergraduate and pharmacy degrees from the University of North Carolina at Chapel Hill and also completed her MBA from the UNC Kenan-Flagler Business School. She completed her pharmacy residency at the University of California, San Diego Health System. Since completing her residency, Dr. Sarubbi worked as an Antibiotic Stewardship pharmacist at Duke University Hospital prior to joining UNC in late 2019. While at Duke, she contributed to research involving the evaluation of a pharmacist-led penicillin allergy assessment program as well as the influence of a reported penicillin allergy on mortality in methicillin-susceptible *Staphylococcus aureus* bacteremia. Her professional interests include medication safety, quality improvement, and Antibiotic Stewardship. Dr. Sarubbi continues to serve as an active member of the Rex Antibiotic Stewardship team and completes penicillin allergy assessments and de-labeling regularly.



SESSION SPEAKERS



PHARM.D, BCPS, BSN-RN

DR. ERIN BROWN *Clinical Pharmacist*

➤ **UNC Health**

Dr. Erin Brown is a Clinical Pharmacist working at UNC Health in Chapel Hill, North Carolina.



PHD

DR. DANIEL CZYZ *Assistant Professor*

➤ **University of Florida**

Dr. Daniel Czyz is an Assistant Professor in the Department of Microbiology and Cell Science at the University of Florida. He received his PhD from Northwestern University and completed postdoctoral studies in the Department of Microbiology at the University of Chicago. At UF, Dr. Czyz developed and teaches two courses on Antimicrobial Resistance (AMR): an online lecture and a laboratory section. Over 250 students complete his courses each semester. His research group utilizes various non-traditional approaches to battle AMR, including drug repurposing, bacteriophages, silver nanoparticles, and targeting the host to enhance the ability of phagocytic cells to scavenge and kill bacteria. The Czyz lab also employs *C. elegans* and tissue culture models to study the effect of bacteria on protein conformational diseases (PCDs). Antibiotics are the major contributor to AMR and gut dysbiosis, which is implicated in the pathogenesis of PCDs. Dr. Czyz served as the Vice-Chair (2020-2021) and Chair (2021-2022) of the NIAMRRE Advisory Council.



PHD

DR. PETER K. DORHOUT *Vice President for Research*

➤ **Iowa State University**

Dr. Peter K. Dorhout is VPR and Professor of Chemistry at Iowa State University as well as an Ames National Laboratory Affiliate. He came to ISU from Kansas State University after five years as VPR, following four years as dean of the College of Arts & Sciences. He served as the Interim Provost at Colorado State University-Pueblo, preceded by 20 years in various administration and faculty roles at Colorado State University-Fort Collins. Dorhout was recently the chair of the Chemistry Section for the American Association for the Advancement of Science. He has led professional organizations and foundations as a board member of the American Chemical Society – where he was the 2018 President – the Research Corporation for Science Advancement, ISU Research Park, and Iowa Innovation Council, among others.



DVM, PHD, DACVIM (SAIM), DACVCP

DR. CLAIRE FELLMAN *Assistant Professor*

➤ **Tufts University**

Dr. Claire Fellman is an Associate Professor of small animal internal medicine and clinical pharmacology at Tufts University. Claire co-chairs the Infection Control and Antimicrobial Stewardship Team at the Foster Hospital for Small Animals and leads research efforts seeking to adapt antimicrobial stewardship strategies used in human hospitals to companion animal veterinary settings. Claire's clinical interests include infectious and immune-mediated diseases.



KATHLEEN M. FENNER *Director of Career Services*
► North Carolina State University

Kathleen M. Fenner (she/her/hers) is the Director of Career Services for the College of Veterinary Medicine at NC State University. She has 15 years of experience in higher education at a variety of institutions including an R1 large land grant university, a women's college, a small private university, and a community college. Kathleen's areas of expertise focus on career coaching, employer relations, teaching, internship program management, assessment, and academic advising. In 2025, she is serving as the past-president of NCACE. Fenner earned her Master of Education in Student Personnel Administration from UNC-Greensboro. In her free time, Fenner enjoys quality time with her husband and daughter, taking walks with her Golden Retriever, hiking in the mountains, reading, and drinking lattes.



CVT, VTS
KELLY M. FOLTZ *Veterinary Technician Specialist / Emergency & Critical Care*
► BluePearl Pet Hospital

Kelly M. Foltz is a 1999 graduate of Mercer University and a 2006 graduate of Athens Technical College who has been a credentialed veterinary technician for 19 years and a veterinary technician specialist in emergency and critical care since 2012. Prior to joining BluePearl in 2022, she spent the prior decade in veterinary teaching hospitals as a critical care technician, shift lead, and supervisor. In her current role as Divisional Nursing Partner, she supports 42 BluePearl hospitals as a subject matter expert in medical quality, training, and companion animal patient care. Her professional interests include feline and neonatal nursing, sepsis, polytrauma, medical futility and its impact on veterinary healthcare teams, veterinary technician development, and antimicrobial stewardship.



DVM, PHD
DR. ERIKA GANDA *Assistant Professor*
► The Pennsylvania State University

Dr. Erika Ganda, DVM, Ph.D., is an assistant professor of Food Animal Microbiomes at Penn State University Department of Animal Science, focusing on infectious diseases of humans and animals. With a background in veterinary medicine, her work addresses foodborne diseases, antimicrobial resistance, animal health, and animal-based food safety. She studies microbial ecosystems, including rumen and gut microbiomes, using sequencing and bioinformatics tools. Dr. Ganda values data analysis and visualization and collaborates across disciplines, mentoring students and engaging in international research projects.



DVM, PHD, DACVIM-LAIM
DR. JENNIFER HALLERAN *Assistant Professor in Ruminant Medicine*
► North Carolina State University

Dr. Jennifer Halleran is originally from New Jersey. She received a B.S. in Animal Science and Microbiology from University of Rhode Island. She attended Colorado State University for veterinary school and received her DVM in 2014. From there, she completed a ruminant health internship at North Carolina State University, followed by a large animal internal medicine residency at Oklahoma State University. She became a diplomate of the American College of Veterinary Internal Medicine Large Animal in 2019. Following her residency, she completed a PhD in Infectious Disease at NCSU. She is currently on faculty at NCSU with a research focus pertaining to enteric bacteria and their antimicrobial resistance profiles in large animals.



PHD, MS

DR. STEVEN HARRIS *Department Chair, Plant Pathology, Entomology, and Microbiology*
► Iowa State University

Dr. Harris possesses 30 years of experience working on the physiology, genetics, molecular biology, cell biology, and genomics of yeasts and filamentous fungi. As an independent investigator, his research program has sought to understand the mechanisms underlying hyphal morphogenesis, primarily in the model filamentous fungus *Aspergillus nidulans*. More recent efforts have focused on investigating the coordination of growth and stress responses with morphogenesis in *Aspergillus*, as well characterization of adaptations that enable fungi to colonize extreme environments.



MBA

THOMAS HEYMANN *President & CEO*
► Sepsis Alliance

Thomas Heymann is President and CEO of Sepsis Alliance and he has held that role since 2013. He has led Sepsis Alliance, the nation's first and leading sepsis patient advocacy organization, to consecutive years of growth helping sepsis awareness grow from 19% to 69% in the U.S.

Heymann has more than 30 years of senior business development and operating experience in the commercial and not-for-profit sectors. Prior to Sepsis Alliance, he served as Chief Operating Officer at Little Kids Rock, the country's largest free instrumental music charity, and before that as Executive Director at Young Audiences New York. He also served as General Manager of The Biography Channel as part of his 14 years of executive leadership at A&E Television Networks, where he earned an Emmy Award for "Biography: The Google Boys." Heymann is also a published author of six books for Random House including the "On An Average Day" series. He earned his BS in Communications from Northwestern University and his MBA from Columbia Business School.



PHD, MBA

DR. KRIS JOHANSEN *Associate Director of External Relations*
► NIAMRRE

Dr. Kris Johansen, a microbiologist with expertise in bacterial pathogenesis and molecular biology, leads NIAMRRE's external-facing efforts and serves as an AMR subject matter expert. She plays a key role in developing strong and sustained relationships with academic, professional, and industry stakeholders by leveraging her background in technology transfer, research commercialization, and startup company development. She holds a PhD in microbiology from the University of Missouri-Columbia and a master's in business administration from Iowa State University.



MHS, PHARM D

DR. MELISSA JOHNSON *Professor in Medicine*
► Duke University

Dr. Melissa Johnson is a Clinical Pharmacist/Professor of Medicine in the Division of Infectious Diseases & International Health at Duke University Medical Center (DUMC). After obtaining a Bachelor of Science in Biochemistry from the University of Georgia, she completed her Doctor of Pharmacy at Campbell University and a Fellowship in Infectious Diseases Pharmacotherapy at DUMC. She also completed a Masters of Health Science in Clinical Research at Duke University School of Medicine. Dr. Johnson maintains a clinical practice in infectious diseases at DUMC. Her clinical research interests include invasive fungal infections in immunocompromised hosts with special focus on immunogenetics, pharmacogenetics, and pharmacodynamics. She has served as investigator for numerous clinical trials with antifungal, antiretroviral, and antibacterial agents. She was the recipient of a 5-year NIH/NIAID Mentored Career Award to pursue patient-oriented research in invasive *candidiasis*, and was co-investigator on an NIH program grant to investigate microfluidic methods of detection for infectious pathogens including *Candida spp.*



PHD, DACVIM, DVM

DR. AMANDA KREUDER

Associate Professor for Vet Microbiology & Preventative Medicine ➤ Iowa State University
Associate Director for Research Strategy and Programs ➤ NIAMRRE

Dr. Amanda Kreuder, DVM, PhD, DACVIM(LAIM) is an Associate Professor in the Department of Veterinary Microbiology and Preventive Medicine at Iowa State University. She is also the Associate Director for Research Strategy and Programs at NIAMRRE where she leads several initiatives related to antimicrobial resistance stewardship including development of a dashboard for collecting antimicrobial susceptibility testing data from veterinary diagnostic laboratories and improving data collection related to epidemiological cutoff values to build a common language between human, animal and environmental health related to AMR. Her combination of clinical veterinary expertise in food animal internal medicine with a benchtop research focus on zoonotic infectious diseases has allowed her to engage in multiple efforts related to antimicrobial resistance and antimicrobial stewardship from a One Health perspective.



PHD, MS, VMD

DR. CRISTINA LANZAS Professor of Infectious Disease

➤ North Carolina State University

Dr. Cristina Lanzas is a Professor of Infectious Disease in the Department of Population Health and Pathobiology at the Veterinary College at North Carolina State University. Her lab applies quantitative methods to enhance understanding of antimicrobial resistance dynamics and the transmission of antimicrobial-resistant organisms across the one-health continuum. Her research on antimicrobial resistance has been supported by NIH, CDC, FDA, and USDA, among others.



PHD

DR. GREGORY LEWBART Professor / Assistant Department Head, Clinical Sciences

➤ North Carolina State CVM

Dr. Gregory Lewbart received his B.A. in biology from Gettysburg College in 1981, an M.S. in biology with a concentration in marine biology from Northeastern University in 1985, and a V.M.D. from the University of Pennsylvania School of Veterinary Medicine in 1988. He worked for a large wholesaler of ornamental fishes before joining the faculty at the North Carolina State University College of Veterinary Medicine in 1993, where he is Professor of Aquatic, Wildlife and Zoological Medicine and an Assistant Clinical Sciences Department Head. He is a diplomate of the American College of Zoological Medicine and the European College of Zoological Medicine. In 2007 was named Exotic DVM of the Year by Exotic DVM Magazine. In 2012 he received the William Medway Award for Excellence in Teaching from the International Association for Aquatic Animal Medicine. In 2024 he received the ARAV/ ZooMed RAVE Award for contributions to reptile and amphibian medicine.



PHD

DR. IVAN LIACHKO Founder & CEO

➤ Phase Genomics

Dr. Ivan Liachko is the Founder/CEO and Chief Scientist of Phase Genomics and one of the inventors of their core technology. He received his B.S. at Brandeis University, his Ph.D. at Cornell University, and went on to do his postdoctoral work in the Department of Genome Sciences at the University of Washington. He has authored more than 50 academic papers and a number of patents in the field of genomics and synthetic biology. He founded Phase Genomics in 2015 and leads the organization in an executive as well as technical roles.



PHD

DR. KAMADA LWERE *Physician-Scientist / Clinical Microbiologist*

► Soroti University & Islamic University in Uganda

Dr. Kamada Lwere is a physician-scientist and Clinical Microbiologist with over 17 years of medical experience, currently serving as a Lecturer at Soroti University and Islamic University in Uganda. He teaches microbiology and public health and is actively engaged in research on infectious diseases and antimicrobial resistance, with a focus on strengthening microbiological diagnostics and surveillance in low-resource settings. Dr. Lwere's work bridges clinical care, laboratory science, and public health. His research involves leading studies on bacterial infections, sepsis, and hospital-acquired infections, and he has been involved in capacity-building initiatives for infection prevention and control (IPC). His research also explores the intersection of microbial resistance and host factors in vulnerable populations, including older adults with neurodegenerative diseases.



DVM, MPH, JD

DR. ANDREW T. MACCABE *Global Vice President for Medical Education & Academic Affairs*

► Mars Veterinary Health

Dr. Andrew T. Maccabe is the Global Vice President for Medical Education and Academic Affairs at Mars Veterinary Health. As part of the Medical Affairs Leadership Team, he oversees training programs for veterinary medical students, interns, residents and Associates across 3,000 veterinary clinics worldwide. He received his Bachelor of Science and Doctor of Veterinary Medicine degrees from The Ohio State University in 1981 and 1985, respectively, and began his professional career working in a mixed animal practice with primary emphasis on dairy herd health. Dr. Maccabe completed his Master of Public Health degree at Harvard University in 1995 and his Juris Doctor degree, Magna Cum Laude, at the University of Arizona in 2002. He has been elected as a Distinguished Fellow of the National Academy of Practice and holds memberships in many professional organizations, including the American Veterinary Medical Association and the District of Columbia Veterinary Medical Association. He is a member of the Bar of the District of Columbia and is a licensed patent attorney.



PHD

DR. REVATI MASILAMANI *Assistant Professor*

► Tufts University

Dr. Revati Masilamani is an assistant professor of medical education at Tufts University School of Medicine in Boston Massachusetts.



PHD

DR. ARSHNEE MOODLEY *AMR Team Lead*

► International Livestock Research Institute

Dr. Arshnee Moodley is the AMR Team Lead at the International Livestock Research Institute in Nairobi, Kenya, and holds a joint Associate Professorship at the University of Copenhagen, Denmark. With over two decades of experience in AMR research, her work bridges science and policy to promote more responsible antimicrobial use and reduce the risk of AMR in livestock. She focuses particularly on smallholder and semi-intensive farming systems in low- and middle-income countries. Her research also addresses the environmental impacts of antimicrobial use in animals, including links to greenhouse gas emissions and environmental ecotoxicity. She leads the Fleming Fund Regional Grant on AMR One Health, which supports surveillance and capacity strengthening across eight countries in East and Southern Africa, and also plays an active role in global AMR governance as a member of WOA's Working Group on AMR and Chair of the Steering Committee of the AMR Multi-Stakeholder Partnership Platform.



PHD

DR. KAREN A. NORRIS *Professor of Infectious Diseases*

► **University of Georgia**

Dr. Karen A. Norris, is professor of Infectious Diseases and the Charles H. Wheatley Chair in Immunology & Translational Biomedical Research at the Center for Vaccines and Immunology at the University of Georgia. Her laboratory has developed and is testing a broadly protective vaccine and immunotherapeutic agents to prevent and treat fungal infections, including pulmonary aspergillosis and invasive candidiasis. She holds patents for related technologies and her work has led to the establishment of NXT Biologics, Inc, a company whose goal is the advancement of life-saving vaccines and immunotherapies for fungal diseases.



DVM, DACVECC

DR. BEN O'KELLEY *Regional Vice President of Medicine*

► **BluePearl Pet Hospital**

Dr. Ben O'Kelley is a small animal critical care specialist with over 15 years of experience working as a veterinarian in emergency and specialty hospitals. He currently supports twenty such hospitals as Regional Vice President of Medicine for BluePearl's Mid-Atlantic region. He is BluePearl's representative for the Mars Veterinary Health (MVH) Responsible Pharmaceutical Stewardship committee. Working in conjunction with leaders from other MVH businesses in the USA, Canada, and Europe, they develop and oversee MVH-wide antimicrobial stewardship efforts. Dr. O'Kelley earned a BS in Biology from the University of North Carolina at Chapel Hill and DVM from North Carolina State University. His post-graduate training included a rotating small animal internship at Tufts University and a critical care residency at the Angell Animal Medical Center. Post-residency, he worked as a critical care doctor and medical director at two separate multispecialty hospitals. He then served as Chief Medical Officer for Pet Partners, a Mars Veterinary Health company with more than 85 hospitals, prior to joining BluePearl in his current role.



DVM, PHD, DACVIM (LIAM), DESCHRM

DR. AMANDA KREUDER

Executive Director ► **NIAMRRE**

Dean ► **University of Tennessee CVM**

Dr. Paul Plummer is the Executive Director of NIAMRRE, the Dean of the University of Tennessee College of Veterinary Medicine and the Chair of the Presidential Advisory Council on Combatting Antibiotic Resistant Bacteria. His veterinary specialty is large animal medicine with a particular interest in infectious disease and he holds a PhD in Veterinary Microbiology. His research interest primarily focuses on antimicrobial resistance and infectious disease at the animal, human, and environmental interface.



PHD, MPH, DVM

DR. SARAH RHEA *Assistant Professor*

► **North Carolina State CVM**

Dr. Sarah Rhea earned her DVM from Purdue University and then worked in small animal community practice in Indiana before obtained her MPH and PhD in Epidemiology from the University of North Carolina at Chapel Hill. Following her graduate training, Dr. Rhea served as an Epidemic Intelligence Service Officer with the Centers for Disease Control and Prevention (CDC). She subsequently completed CDC's Preventive Medicine Residency/Fellowship program. Dr. Rhea joined the non-profit research institute, RTI International, in 2016 where she rose to Senior Research Epidemiologist. She began her faculty appointment at NCSU in 2021.



PHD, MD

DR. ILAN SCHWARTZ *Associate Professor of Medicine*

► **Duke University**

Dr. Ilan S. Schwartz is an assistant professor at Duke University School of Medicine. He is also an infectious disease specialist in Durham, North Carolina, affiliated with Duke University Hospital.



PHD, CVM

DR. JOSH STERN *Associate Dean for Research & Graduate Studies / Professor of Cardiology*

► **North Carolina State University CVM**

Dr. Joshua Stern serves as the Associate Dean for Research and Graduate Studies at North Carolina State University College of Veterinary Medicine. He is also a Professor of Cardiology in the Department of Clinical Sciences at NC State. Dr. Stern obtained his DVM from Ohio State University, completed his cardiology residency training at NC State, and obtained a PhD focusing on translational cardiac genetics at Washington State University. He is the Principal Investigator for the Stern Translational Cardiac Genetics and Pharmacogenomics Laboratory which focuses on training clinician scientists and developing novel therapies for inherited heart disease. Dr. Stern serves as an Associate Editor for the Journal of Veterinary Internal Medicine and is the current President for the Subspecialty of Cardiology in the American College of Veterinary Internal Medicine. He was honored with the 2024 AVMF Career Achievement Award in Feline Medicine. Dr. Stern is an avid supporter of clinician scientists and is passionate about training the next generation of veterinary academic leaders. Together, with his laboratory teams, Dr. Stern has published over 140 peer-reviewed research manuscripts contributing to the advancement of companion animal genetics and translational cardiology.



MPH

MARIA THACKER GOETHE *President & CEO*

► **Georgia Life Sciences**

With over 18 years of experience Maria Thacker Goethe has helped build the organization into one of the top state bioscience and medtech associations in the country. Her a strong reputation for her industry knowledge and expertise with Georgia businesses, leaders and legislators, Thacker Goethe has invigorated the life sciences sector statewide as the industry has seen dramatic growth in the last 4 years. Before her time at Georgia Life Sciences (previously Georgia Bio,) Maria Thacker Goethe participated in an ORISE fellowship at the Centers for Disease Control & Prevention/Agency for Toxic Substances and Disease Registry in environmental investigations, working closely with the National Center of Environmental Health in Chemical Demilitarization. She holds a master's in public health from Tulane School of Public Health and Tropical Medicine, and a Bachelor of Arts in Environmental Studies from Sweet Briar College. Thacker Goethe serves on the boards of the CJD Foundation, Southeast Life Sciences Association, KSU Research Foundation, Greater Atlanta Red Cross, FutureVerse, MyHealthID Global, as immediate past chair for the Council of State Bioscience Associations, and is a founding board member of the Coalition of State Bioscience Institutes. Most recently, she was named to Georgia Trend magazine's 2023 and 2022 Georgia 500 List, 2023, 2022 and 2021 "100 Most Influential Georgians" list, 2022 Power 100 and a top visionary by Atlanta Business Chronicle and is a 2022 graduate of the Leadership Atlanta program. Additionally, Thacker Goethe has volunteered for 11 years with the Junior League of Atlanta and serves on the Piedmont Atlanta Patient & Family Advisory Council.



PHD, MPH, DVM

DR. SID THAKUR *Professor & Executive Director of Global One Health Academy*
► North Carolina State University

Dr. Siddhartha “Sid” Thakur is the Executive Director of Global One Health Academy and Professor of Molecular Epidemiology at the College of Veterinary Medicine, NC State. In his current role, Dr. Thakur is responsible for expanding NC State’s One Health research and education efforts, as well as increasing opportunities for undergraduate and graduate students, with a focus on interdisciplinary project-based experiences, and the development of evidence-based recommendations for tackling current and future global threats. He is an NC State Chancellor faculty scholar. He received his Degree in Veterinary Medicine and Master of Veterinary Public Health from India, and his Ph.D. from NC State. His research focus is to fill critical knowledge gaps that exist in the complex chain of events leading to the development, dissemination and persistence of antimicrobial resistant (AMR) bacterial foodborne pathogens at the interface of humans, animals, and the environment. Dr. Thakur’s research is centered on two predominant themes. The first revolves around understanding the phenotypic and genotypic similarity and/or diversity of AMR bacterial strains reported in animals and humans. This involves characterizing and elucidating the mechanisms of AMR at the molecular level, analyzing DNA fingerprint patterns, and determining the risk factors that predispose the animals and humans to infections by these strains. The second theme focuses on using phylogenetics to study the evolution of drug-resistant bacterial strains at the population level. In this, molecular approaches are undertaken to analyze pathogen evolution on an evolutionary scale. Dr. Thakur has authored or co-authored 95 peer-reviewed publications, and edited two books on Food Safety.



PHD, MD

DR. DAVID VAN DUIN *Professor of Medicine*
► UNC School of Medicine

Dr. David van Duin is the founding Director of the Immunocompromised Host ID service. His main research interests are multi-drug resistant Gram-negative bacteria, and infections in immunocompromised patients. He is the PI for the MDRO Network of the Antibacterial Resistance Leadership Group. Within the MDRO Network, the consortium on resistance against carbapenems in Klebsiella and other Enterobacterales (CRACKLE) has been completed. In addition, studies on ESBL-producing Enterobacterales, carbapenem-resistant Pseudomonas aeruginosa, and carbapenem-resistant Acinetobacter baumannii are ongoing. He is also funded to explore the community origins of highly resistant bacteria.



PHD, MD

DR. RACHEL WHITAKER *Professor of Microbiology*
► University of Illinois, Urbana-Champaign

Dr. Rachel J. Whitaker, Ph.D. is a Professor of Microbiology at the University of Illinois Urbana-Champaign and the Harry E. Preble Professor in Liberal Arts and Sciences. She leads the Infection Genomics for One Health (IGOH) theme at the Carl R. Woese Institute for Genomic Biology, where she focuses on multiscale interactions that shape microbial ecosystems. Her research integrates evolutionary biology, microbial ecology, and microbial host-virus interactions, with a particular emphasis on gene flow by semi-autonomous mobile genetic elements (MGEs) and antibiotic resistance. By examining how horizontal gene transfer, CRISPR-Cas immunity, and plasmid dynamics shape microbial populations, Dr. Whitaker aims to develop predictive models for the spread of antimicrobial resistance in both environmental and clinical settings. An advocate for interdisciplinary collaboration, she is dedicated to advancing our understanding of microbial evolution in the context of One Health to inform public health strategies and antibiotic stewardship.

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