



Spring 2023 Meeting

University of Colorado – Anschutz Medical Campus
Nighthorse Campbell Native Health Building
13055 E 17th Ave, Aurora, Colorado, 80045

Saturday, April 22, 2023

7:45 Registration opens, poster set up, coffee

8:45 Opening and Welcome to the Rocky Mountain Branch meeting of the American Society for Microbiology,
Brad Borlee, RMB-ASM President (CSU)

8:55 Welcome to the University of Colorado - Anschutz, Mike Schurr

Oral Presentations: Session 1

Moderator: **Breck Duerkop**, University of Colorado – Anschutz

9:00 Hannah Ledvina (Postdoctoral Fellow, University of Colorado – Boulder) “Functional Amyloid Proteins Confer Defense Against Predatory Bacteria”

9:15 Timothy Enroth (Graduate Student, University of Colorado – Anschutz) “Elucidating the Role of MRSA SasF in Skin Colonization and Disease”

9:30 Shelby Andersen (Graduate Student, University of Colorado – Anschutz) “Coevolution Between a Phage and *Enterococcus faecalis* Reveals a Novel Method for Discovering Antiphage Defense Systems”

9:45 Phillida Charley (Postdoctoral Fellow, Colorado State University) “MERS-CoV passaged on Jamaican fruit bat cells leads to mutations in Orf5 gene”

10:00 Stephanie Marroquin (Postdoctoral Fellow, University of Colorado – Anschutz) “Elucidating the Role of *Akkermansia muciniphila* in Group B Streptococcal Vaginal Colonization and Ascending Infection”

10:15 Benjamin Radosevich (Undergraduate Student, University of Wyoming) “Localization Determinants Within a Pole-Directed Phosphotransfer Protein”

10:30 Coffee Break / Poster Session A

11:30 am

Keynote Lecture

Dr. Andres Vasquez-Torres, Ph.D. (University of Colorado – Anschutz)

“Metabolic Adaptations of Intracellular *Salmonella* to Oxidative Stress in the Mammalian”

12:30 Lunch / Business Meeting

Oral Presentations: Session 2

Moderator: **Grant Bowman**, University of Wyoming

- 1:30 Julie Raab (Graduate Student, University of Colorado – Anschutz) “How IpaC Functions During *Shigella* Intercellular Spread”
- 1:45 Ashley Abbott (Undergraduate Student, Colorado State University) “Optimizing Molecular Diagnostics for Parasitic Trematode Identification”
- 2:00 Garima Arya (Postdoctoral Fellow, University of Colorado - Anschutz) “Understanding Antibiotic Sensitization in Phage Resistant *Enterococcus faecium*”
- 2:15 Yasin Ahmed (Graduate Student, University of Wyoming) “Phospho-Regulation in *Caulobacter* Cell Asymmetry”
- 2:30 Uday Tak (Postdoctoral Fellow, University of Colorado – Boulder) “2',3'-cGAMP-Activated Ion Channels Mediate Antiviral Immunity in Bacteria”
- 2:45 Nicolas Zawadzki (Graduate Student, University of Colorado – Anschutz) “*Pseudomonas aeruginosa* FimS/AlgZ Senses Redox to Control AlgR-Dependent Phenotypes”
- 3:00 Coffee Break / Poster Session B

4:00 pm

Guest Lecturer

Dr. Brandon Kim, Ph.D. (University of Alabama)

“Group B Streptococcal Induced Unfolded Protein Response Contributes to Blood Brain Barrier Activation and Disruption”

4:30 pm

Guest Lecturer

Dr. Rebecca Ferrell, Ph.D. (Metropolitan State University of Denver)

“ASM & Me... and You”

5:00 AWARD Ceremony and closing remarks

Poster Session A (10:30 -11:30)

Board #	Name	Institution/University	Status	Title of Presentation
A1	Alyx Job	CU Anschutz	Graduate Student	Characterization of a Putative Toxin in the Group B Streptococcus Type VII Secretion System
A2	Sophia Kim	CU Anschutz	Graduate Student	The Arachnoid Barrier Response in a Neonatal Bacterial Meningitis Model
A3	Kaylan Schilling	U Wyoming	Graduate Student	One Domain to Bind Them All: N-Terminal Molecular Recognition Feature Facilitates Binding Promiscuity of PopZ

A4	Adam Gillison	CSU Pueblo	Graduate Student	Functional Resistances of Airborne Bacteria that might Promote Survival in the Atmosphere
A5	Luke Joyce	CU Anschutz	Postdoc	The Glycolipid, Glc-DAG, Contributes to the Pathogenesis of Group B Streptococcal Meningitis
A6	Shannon Isenhardt	CSU Pueblo	Undergraduate Student	Isolation of Bacteriophage after Wildland Fires in Northwest Colorado
A7	Nadine Vollmuth	U Alabama	Postdoc	Estrogen Signaling Contributes to Group B Streptococcal Disruption and Invasion of Brain Endothelial Cells
A8	Lindsay Whalen	CU Boulder	Undergraduate Student	Using CRISPR-Cas13 to Investigate Host-phage Interactions
A9	Amy Conte	CU Boulder	Graduate Student	Uncovering Activation of a Bacterial NLR-Related Protein by an RNA Phage
A10	Nicole Natter	CSU	Undergraduate Student	Longitudinal SARS-CoV-2 Identification in Human Stool and Relationships with Systemic Immune Activation Markers
A11	Nicole Messner	CU Anschutz	Graduate Student	Phage-Antibiotic Synergy Inhibits Growth of <i>Enterococcus faecium</i>
A12	Samantha Ridgeway	CU Boulder	Undergraduate Student	Infection Detection: How Does a Bacterial Defense Protein Sense Phage?
A13	Grace Alexander	CSU	Undergraduate Student	Investigating Microbiome: The Recent Association Found Between the Cestode Microbiome and <i>Mycoplasma</i> spp.
A14	Shijun Zhan	CSU	RA - Staff	Sosuga Virus Infection of Jamaican Fruit Bat Primary Kidney Epithelial Cells
A29	Megan Moran	CSU	RA-Staff	Uncovering the Microbiome of Helminth Samples from Infected Marine Animals
A31	Matt Johnson	MSU-Denver	Graduate	Characterization of winter isolates of <i>E. coli</i> from Canada geese
A33	Emily Giedraitis	CUAMC	RA-Staff	Metabolomics analysis of secondary metabolite production from different <i>Pseudomonas aeruginosa</i> clinical isolates correlates with the swarming motility phenotype

Poster Session B (3:00 -4:00)

Board #	Name	Institution/University	Status	Title of Presentation
B15	Savannah Huyvaert	CU Boulder	Undergraduate Student	Investigation of Biofilm Formation in Diabetic Wound Bacteria
B16	Brady Spencer	CU Anschutz	Postdoc	Heterogeneity of the Group B Streptococcal Type VII Secretion System and Influence on Colonization of the Female Genital Tract
B17	Daniel Breiner	CU Anschutz	PRA - Staff	Mass spectrometry Analysis of the Effect of Hemin on <i>Pseudomonas</i>

				<i>aeruginosa</i> Alkyl Quinolone Production
B18	Amr Ramadan	CSU	Graduate Student	Characterization of Surface-Associated Polysaccharide Biosynthetic Clusters in <i>Burkholderia pseudomallei</i>
B19	Elizabeth Ninke	CSU	Undergraduate Student	Glial-Mediated Neuroinflammatory Response to Simvastatin in a Murine, in vitro model
B20	Rikayla Quezada	CSU Pueblo	Undergraduate Student	Bacterial Growth on Photovoltaic Panels: Analysis of Resistance to UV Radiation and Isolation of Bacteria
B21	Joy Love	CSU	Undergraduate Student	Metagenomic Analysis of Varying Data Sets: <i>Lactobacillus</i> Vaccine Vector
B22	Haley Hibler	CSU Pueblo	Undergraduate Student	Expressing <i>Chloracidobacterium thermophilum</i> Genes in <i>Escherichia coli</i> to Test Reactive Oxygen Species Protection Capabilities
B23	Alex Fulano	U Wyoming	Postdoc	Maple-Derived Lignan Disrupts <i>Listeria</i> -Plant Biofilms
B24	Haider Manzer	CU Anschutz	Graduate Student	Group B <i>Streptococcus</i> Epigenetically Regulates Mucin Metabolism to Promote Vaginal Colonization
B25	Emma Sheriff	CU Anschutz	Graduate Student	Proteomic-Driven Investigation of <i>Enterococcus</i> Phage Dynamics Reveals Role for GeIE During Infection
B26	Emily Kibby	CU Boulder	Graduate Student	Bacterial NLR-Related Proteins Protect Against Phage
B27	Carina Donne	CSU	Graduate Student	Do Plant Ecotypes and Soil Microbiome Interactions Protect Against Drought?
B28	Alyssa Margolis	CU Anschutz	Graduate Student	Arginine Metabolism Powers <i>Salmonella</i> Resistance to Oxidative Stress
B30	Phyllis Martinez	Fort Lewis College	Graduate Student	Isolation of <i>Pseudomonas aeruginosa</i> Specific Bacteriophages for Treatment of Challenging Clinical Infections
B32	Steven Poyer	University of Wyoming	Undergraduate	A MiST Opportunity: How Cell Differentiation Can Overcome Biofuel Constraints
B34	Ana Owens	CSU	Undergraduate	Simvastatin-Mediated Neuroinflammation Induces Neuronal Cell-Death