2026 CEZAP INFECTIOUS DISEASES SYMPOSIUM

7:30 – 8:30 **Check In & Refreshments**
Atrium

Welcome and Opening Remarks
Latham Ballrooms

8:30 – 8:40 **CeZAP Introduction**
Kylene Kehn-Hall, Director of CeZAP
Randy Heflin, Senior Associate Vice President Research and Innovation
Aimée Surprenant, Dean of the Graduate School

8:40 – 8:50 **ID-IGEP Program Introduction**
Clay Caswell, ID-IGEP Co-Director
Bryan Hsu, ID-IGEP Co-Director

8:50 – 9:00 **Presentation of CeZAP Awards**
Luis Escobar, Chair of Awards Committee
Sarah Gouger, CeZAP Coordinator

Morning Keynote
Latham Ballrooms ***'Thoughts on the origin of microbial virulence'***
9:00 – 9:50 Arturo Casadevall
Chair, Molecular Microbiology & Immunology
Bloomberg Distinguished Professor
Alfred & Jill Sommer Professor and Chair
Professor
Johns Hopkins University

09:50 – 10:00 ***Break***

Morning General Session
Latham Ballrooms
Session Chairs:
Emily Mevers, Associate Professor, Department of Chemistry
James Weger, Associate Professor, Department of Biomedical Sciences and Pathobiology

10:00 – 10:20 **"Flipping the Small Molecule Discovery Process with Reverse Metabolomics"**
Emily Gentry, Assistant Professor, Department of Chemistry

10:20 – 10:40 ***"Toxoplasma Pathogenesis: Why Does it Cause Seizures"***
Ira Blader, Professor and Head, Department of Biomedical Sciences and Pathobiology

10:40 –11:00 **"Exploring the role of *Culex* territans mosquitoes in transmitting pathogens to frogs"**
Chloé Lahondère, Associate Professor, Department of Biochemistry

11:00 – 11:12 **"Directed Evolution Of Semliki Forest Virus Identifies Mutations Associated With Increased Oncolysis And Immunogenicity in Glioblastoma"**
Katie Tiller, Department of Biomedical Sciences and Pathobiology, ID IGEP affiliated student

11:13- 11:25 **"Streamlining Plant and Animal Disease Diagnostics Through a Metagenomics-based Pathogen Identification Service"**
Janet Lorv, Postdoctoral Associate, School of Plant and Environmental Science

11:25 – 11:30 ***Break***

11:30 – 1:30 ***Poster Sessions and Lunch***
Atrium

1:30 – 2:30 CeZAP Thematic Area Breakout Sessions

Breakout Session #1: Human Dimensions of Infectious Diseases

Smithfield

Session Chair: Tom Ewing, Professor, Department of History

Roundtable Discussion:
Tom Ewing, Professor, Department of History
Ariyan Nazemi, Department of Science Technology and Society
Ellen Serletis, Department of Public Health, Department of Population Health Sciences
John Aggrey, Assistant Professor, Department of Science Technology and Society
Yuba Gautam, Collegiate Associate Professor, Department of Population Health Sciences

Breakout Session #2: Antimicrobial Countermeasures

Cascades

Session Chair: Jingqiu Liao, Assistant Professor, Department of Civil and Environmental Engineering

1:30 - 1:42 **"Utilizing a Gene Deletion to Determine Genes Involved in the Fungal Response to Caspofungin"**
Rebecca Busch, Department of Biological Sciences, ID IGEP affiliated student

1:42 - 1:54 "**Cu Single Atom Catalyst Film Improves Safety of Refrigerated Catfish"**
Wei Wangyi, Department of Food Science and Technology

1:54 - 2:06 "**Structure-Activity Relationship Profiling of Substituted N-phthalimidopiperidine Analogs As Broad-Spectrum Antifungal Agents"**
Matthew Dupuis, Department of Chemistry, ID IGEP affiliated student

2:06 - 2:18 "**Inhibitory Canine Commensals Against *Staphylococcu pseudintermedius"***
Ghazal Soleymani, Department of Biological Sciences, ID IGEP affiliated student

2:18 - 2:30 **"The First Use of the Biginelli Multicomponent Coupling Reaction to Rapidly Diversify the Natural Product Antibiotic Pleuromutilin"**
Toheeb Ajasa, Department of Chemistry, ID IGEP affiliated student

Breakout Session #3: Public Health, Clinical Microbiology, Pathogen Identification, and Disease Diagnostic

Solitude
Session Chair: Hanh Lam, Assistant Professor, Department of Biological Sciences

1:30 - 1:42 ***"A Fentanyl-Responsive Microneedle Patch for Harm Reduction"***
Penghui Zhao, Collegiate Assistant Professor, Academy of Integrated Science

1:42 - 1:54 **"Extracellular Membrane Vesicles, a Previously Unrecognized Component of *Staphylococcus aureus* Biofilms"**
Jinger Lei, Department of Biomedical Sciences and Pathobiology, ID IGEP affiliated student

1:54 - 2:06 **"Molecular Mechanisms Underlying HSV-1 and HSV-2 Lytic Infection in Mature Sympathetic Superior Cervical Ganglion (SCG) Neurons"**
Ama Amoakoma Agyei, Department of Biomedical Sciences and Veterinary Sciences, ID IGEP affiliated student

2:06 - 2:18 **"Diagnostic Methods for the Identification of Pathogenic Molds"**
Douglas Pluta, Department of Biomedical Sciences and Veterinary Sciences

2:18 - 2:30 **"Benchmarking Taxonomic Classifiers for Soil Metagenomes"**
Abbi Green, Department of Bioinformatics, and Computational Biology, ID IGEP affiliated student

Breakout Session #4: Vector Biology and Vector-borne Diseases

Latham Ballroom
Session Chair: Gillian Eastwood, Associate Professor, Department of Entomology

1:30 - 1:42 **"The Role of Viral Envelope Proteins in the 2015 Mayaro Virus Outbreak in Haitian Schoolchildren"**
Aryn Wright, Department of Biomedical Sciences and Veterinary Sciences, ID IGEP affiliated student

1:42 - 1:54 **"Evaluating the Immunogenicity and Efficacy of Novel mRNA Vaccine Candidates Against Cache Valley Virus Infection"**
Elise Hennessy, Department of Entomology, ID IGEP affiliated student

1:54 - 2:06 **"Exploiting sex-specific myosin genes to selectively eliminate flight in *Aedes aegypti*"**
Joseph Warren, Department of Biochemistry

2:06 - 2:18 **"Incorporating Temperature and Diapause Into Population Dynamics Models For The West Nile Vector, *Culex pipiens*"**
Lynn Bruncati, Department of Mathematics

2:18 - 2:30 **"Investigating the Male Determining Locus in *Aedes albopictus* and its Evolution"**
Christen Hughes, Department of Biochemistry

2:30 –2:45 ***Break***

2:45 – 3:45 CeZAP Thematic Area Breakout Sessions

Breakout Session #5: Environmental Microbiology

Smithfield
Session Chair: Sahar Abdelrazek, Research Assistant Professor, Department of Biomedical Sciences and Pathobiology

2:45 - 2:57 **"Biofilm-mediated Ultraviolet Tolerance of Acinetobacter radioresistens in Mono- and Polymicrobial Communities"**
Elizabeth Nowak, Assistant Professor, Carilion Division of Infectious Diseases; Virginia Tech Carilion School of Medicine

2:57 - 3:09 "**Exceptionally Low Mutation Rate of a Giant Virus"**
Victoria Fulgencio Queiroz, Postdoctoral Associate, Department of Biological Sciences

3:09 - 3:21 **"From Marine Symbionts to Medicine: Characterizing Glycoside Hydrolase Enzymes from the Moon Snail Egg Collar Microbiome"**
Cleo Orlando, Department of Chemistry

3:22 - 3:33 "**Metabolites in the Maize Xylem Environment Utilized by *Pantoea stewartii* subsp. *stewartii* for Growth"**
Abigail Heimbach, Department of Biological Sciences, ID IGEP affiliated student

3:33 - 3:45 **"Persistence and Diversity of *Salmonella newport* in Agricultural Water: A Genomic Perspective from the Eastern Shore of Virginia"**
Diego Fredes-Garcia, Department of Food Science and Technology

Breakout Session #6: Host Pathogen Interactions

Latham Ballroom

Session Chair: Jonathan Auguste, Associate Professor, Department of Entomology

2:45 - 2:57 **"The SCF-E3 Ubiquitin Ligase Complex Repress Stage-Specific Gene Expression in *Toxoplasma gondii"***
Gustavo Baptista, Research Assistant Professor, Department of Biomedical Sciences and Pathobiology

2:57 - 3:09 **"Zika Virus Glycoproteins are Necessary for Viral Shedding in Semen"**
Taylor Nolen Department of Biomedical Sciences and Veterinary Sciences, ID IGEP affiliated student

3:09 - 3:21 **"Engineering Temperate Phages for Genetic-based Anit-virulence of Bacterial Pathogens"**
Rita Makhlouf, Department of Biological Sciences, ID IGP affiliated student

3:22 - 3:33 **"Titan cells are essential *for Cryptococcus neoformans* latent infection"**
Rachel Burg-Murante, Postdoctoral Associate, Department of Biomedical Science and Pathobiology

3:33 - 3:45 **"Sex-specific Effects of Ambient Temperature on House Finch Responses to *Mycoplasma gallisepticum*"**
Jesse Garrett-Larsen, Department of Biological Sciences, ID IGEP affiliated student

Breakout Session #7: Ecology, Epidemiology, and Computational Biology and Disease Modeling

Solitude

Session Chair: Wendy Hernandez, Postdoctoral Associate, Department of Fish and Wildlife Conservation

2:45 - 2:57 **"Identifying Cross-protection Between Dengue and Zika: A Mechanistic Analysis of Subnational Transmission Regimes in Brazil"**
Daniela Florez Pineda, Postdoctoral Associate, Department of Mathematics

2:57 - 3:09 **Prevalence of Powassan Virus in Ticks Sampled from Hunted Deer in Southwestern Virginia**
Anjali Pamulapati, Department of Entomology

3:09 - 3:21 **"Fatal Attraction: Exploring the Interaction Between *Aedes japonicus* Mosquitoes and a Toxic Appalachian Wildflower"**
James Moloney, Department of Biochemistry

3:22 - 3:33 **"Invading Epidemic Activity Stabilizes Extinction-prone Spatially Coupled SIS Systems"**
Sara Shabani, Department of Physics

3:33 - 3:45 **"Ecological and Genomic Insights into Drivers of Antimicrobial, Resistance in Soils Across the United States"**
Emma Thrift-Cahall Postdoctoral Associate, Department of Civil and Environmental Engineering

Breakout Session #8: Zoonotic Diseases and Immunology

Cascades

Session Chair: Ran Lu, Postdoctoral Associate, Department of Biomedical Sciences and Pathobiology

2:45 - 2:57 **"Immunogenicity and Efficacy of Replicon-RNA Vaccines for Cache Valley Virus in Multiple Murine Models"**
John Muller, Postdoctoral Associate, Department of Entomology

2:57 - 3:09 **"Septins are Required for Proper Spore Cell Wall Organization in *Aspergillus fumigatus*"**
Sofia Renner Andreu, Department of Biological Sciences, ID IGEP affiliated student

3:09 - 3:21 **"Comparative Vector Competence and Transmission Study of Bunyamwera, Ngari, and Batai Viruses in African *Anopheles* spp. Mosquitoes"**
Muhammed Camara, Department of Entomology, ID IGEP affiliated student

3:22 - 3:33 **"Behavior of *Salmonella* spp. on Fresh-Cut Tropical and Subtropical Fruits"**
Caroline Clark, Department of Food Science and Technology, ID IGEP affiliated student

3:33 - 3:45 **"Variable Endotoxin Exposure Elicits Distinct Immune Memory States In Monocytes"**
Blake Caldwell, Postdoctoral Associate, Department of Biological Sciences

3:45 – 5:00 *Social, Activities and Awards*

Latham Ballrooms

4:00 - 4:20 Science Trivia with the Pathogems

4:20 - 4:40 Infectious Disease Costume Contest

4:40 - 4:45 Presentation of video abstract awards

4:45 - 5:00 Announce Passport Networking Challenge Winners