



| Date | Time | Track | Presentation Title | Speaker |
|-------|------------------|-------------------------------------|--|--|
| 8-Sep | 06:00 - 07:00 AM | Modeling Approaches - September 8th | Digital PCR using QIAGEN's QIacuity system: an introduction | Andreas Missel, PhD Director R&D, QIAGEN GmbH |
| 8-Sep | 09:00 - 10:00 AM | Influenza - September 8th | Keynote Presentation: A Universal Influenza Virus Vaccine | Peter Palese, PhD Professor and Chair Department of Microbiology, Professor in Department of Medicine and Infectious Diseases, Icahn School of Medicine at Mount Sinai |
| 8-Sep | 10:00 - 11:00 AM | Influenza - September 8th | Keynote Presentation: Single-cell virus sequencing of influenza infections that trigger innate immunity | Jesse D. Bloom, PhD Associate Professor, Fred Hutch Cancer Research Center, Investigator, Howard Hughes Medical Institute |
| 8-Sep | 12:00 - 01:00 PM | Influenza - September 8th | Keynote Presentation: Structure-based Vaccine Design for COVID-19 and other Respiratory Viruses | Barney S. Graham, MD, PhD Deputy Director, Vaccine Research Center, Chief, Viral Pathogenesis Laboratory, NIAID (National Institute of Allergy and Infectious Diseases) |
| 8-Sep | 11:00 - 11:59 PM | Modeling Approaches - September 8th | Applications of Machine Learning to Predict Clinical Provenance of Haemophilus influenzae | Joshua Earl, PhD Head of Bioinformatics, Drexel University College of Medicine |
| 8-Sep | 11:00 - 11:59 PM | Modeling Approaches - September 8th | Deep Learning by Analogy: Applying Text and Image Processing Techniques to Sequence Analysis | Will Dampier, PhD Assistant Professor, Department of Microbiology & Immunology, Drexel University College of Medicine |
| 8-Sep | 11:00 - 11:59 PM | Influenza - September 8th | Deep mutational scanning of SARS-CoV-2 receptor binding domain reveals constraints on folding and ACE2 binding | Tyler Starr, PhD HHMI Damon Runyon Postdoctoral Fellow in Jesse Bloom's lab, Fred Hutchinson Cancer Research Center |

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| 8-Sep | 11:00 - 11:59 PM | Influenza - September 8th | Development of Respiratory Syncytial Virus and Universal Influenza Virus Vaccines Conformationally Stabilized by Targeted Dityrosine Crosslinking | Mark A. Yondola, PhD Vice President, Research and Development, Calder Biosciences, Inc. |
| 8-Sep | 11:00 - 11:59 PM | Influenza - September 8th | Nanoparticle-based next-generation influenza vaccines | Masaru Kanekiyo, DVM, PhD Head, Molecular Immunoengineering Unit, Viral Pathogenesis Laboratory, Vaccine Research Center, NIAID |
| 8-Sep | 11:00 - 11:59 PM | Modeling Approaches - September 8th | Recombination, lineage-specific mutations and the emergence of SARS-CoV-2 | Ioan Filip, PhD Associate Research Scientist, Columbia University |
| 9-Sep | 06:00 - 07:00 AM | Immunology - September 9th | Keynote Presentation: Causes and consequences of immune gene diversity in plants | Detlef Weigel, Executive Director Max Planck Institute for Developmental Biology |
| 9-Sep | 07:30 - 08:30 AM | Immunology - September 9th | Using cryo-EM for designing next-gen therapeutics against HIV | Dmitry Lyumkis, PhD Assistant Professor Laboratory of Genetics The Salk Institute for Biological Studies |
| 9-Sep | 09:00 - 10:00 AM | Immunology - September 9th | Keynote Presentation: Human Monoclonal Antibodies for Emerging Agents | James Crowe, MD Director of the Vanderbilt Vaccine Center, Ann Scott Carell Professor of Pediatrics, Pathology, Microbiology and Immunology |
| 9-Sep | 10:00 - 11:00 AM | Immunology - September 9th | Immunoprotective vs. immunopathogenic responses during fungal-associated allergic airway inflammation | Chad Steele, PhD Professor and Chair, Department of Microbiology and Immunology Tulane University |
| 9-Sep | 12:00 - 12:45 AM | Immunology - September 9th | A New KIR Haplotype MSA Empowers Two New Interpretation Algorithms | David Roe PhD candidate Bioinformatics and Computational Biology, University of Minnesota |
| 9-Sep | 12:00 - 12:45 AM | Immunology - September 9th | Bacterial Epigenomes: Technology, Pathogens and Microbiome | Gang Fang Associate Processor, Genomics Department, Icahn School of Medicine at Mount Sinai |
| 9-Sep | 12:00 - 12:45 AM | Immunology - September 9th | Environmental stress shapes the evolution of a plant viruses towards a mutualistic relationship with its host | Santiago F. Elena Professor, CSIC, Chairman, Head of the Evolutionary and Systems Virology Group, Institute for Integrative Systems Biology |

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| 9-Sep | 12:00 - 12:45 AM | Immunology - September 9th | Fc gamma receptor activation during viral infections: a double-edged sword | Raymond A. Alvarez, PhD Assistant Professor, Division of Infectious Diseases, Ichan School of Medicine at Mount Sinai, Co-Founder and CEO, Ichor Biologics |
| 9-Sep | 12:00 - 12:45 AM | Immunology - September 9th | How Plant Virology Informs Emergence of Zoonotic Viruses Such as SARS-COV-2 | Michael Goodin, PhD Professor, Department of Plant Pathology, University of Kentucky |
| 9-Sep | 12:00 - 12:45 AM | Immunology - September 9th | Immune-derived extracellular traps in COVID-19 and other infections | Imre Varju, MD, PhD, MPH Research Fellow, Semmelweis University, Academic Trainee, Columbia University Mailman School of Public Health |
| 9-Sep | 12:00 - 12:45 AM | Immunology - September 9th | Leveraging SMRT sequencing to resolve complex immune loci | Melissa L. Smith, PhD Assistant Professor, Biochemistry and Molecular Genetics, University of Louisville |
| 9-Sep | 12:00 - 12:45 AM | Immunology - September 9th | Lung immune cells as drivers of influenza outcomes | Juliet Morrison, PhD Assistant Professor, Department of Microbiology and Plant Pathology University of California, Riverside |
| 9-Sep | 12:00 - 12:45 AM | Immunology - September 9th | Understanding the role of virus-host interactions in tissue tropism of plant viruses | Svetlana Y. Folimonova Associate Professor, Department of Plant Pathology, Plant Molecular and Cellular Biology Program, University of Florida |
| 10-Sep | 06:00 - 07:00 AM | Infectious Disease - September 10th | Structure-guided design of SARS-CoV-2 antivirals | Quan Wang, PhD Assistant Professor Principal Investigator ShanghaiTech University Renhong Yan, PhD Postdoctoral Researcher Westlake University |
| 10-Sep | 07:30 - 08:30 AM | Microbial Communities - September 10th | Keynote Presentation: Discovery of a gene-microbiome interaction in lung cancer: lessons learned and future directions | K. Leigh Greathouse, PhD, MPH, MS, RD Assistant Professor, Baylor University |
| 10-Sep | 09:00 - 10:00 AM | Infectious Disease - September 10th | Congenital Cytomegalovirus - An Unrecognized and Preventable Problem: Fundamentals of Prevention, Diagnosis and Management | William Rawlinson, PhD Director of Serology and Virology Division (SAViD), Director Organ and Tissue Donor screening laboratory, Director NSW State Reference Laboratory for HIV, Chair Biosecurity Quality Assurance |
| 10-Sep | 10:00 - 11:00 AM | Microbial Communities - September 10th | Keynote Presentation: Squeezing out understanding from sequences: Genome to Phenome Connections in Viruses of Microbes | K. Eric Wommack Fellow American Academy for Microbiology, Deputy Dean and Assoc. Dean for Research & Graduate Education, College of Agriculture & Natural Resources, University of Delaware |

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| 10-Sep | 11:00 - 12:00 PM | Microbial Communities - September 10th | Optimizing the extraction of human microbiome samples | Dominic O'Neil, MS, MBA Director of Microbiome Product Development, QIAGEN |
| 10-Sep | 12:00 - 01:00 PM | Infectious Diseases - September 10th | Bacterial strain typing and genomics characterization of multi-drug resistance with QIAGEN CLC Genomics Workbench | Jonathan Jacobs, PhD Senior Director of Bioinformatics, ATCC |
| 10-Sep | 01:00 - 02:00 PM | Infectious Disease - September 10th | Keynote Presentation: Evolution of host-specific virulence in an RNA virus of Pacific salmonid fish | Gael Kurath, PhD Research Virologist, Fish Health Section, USGS Western Fisheries Research Center |
| 10-Sep | 02:00 - 03:00 PM | Microbial Communities - September 10th | Dynamic live yeast and bacterial cell imaging using CellASIC ONIX2 microfluidic platform | Cindy Chen, PhD Applications Lead |
| 10-Sep | 03:00 - 04:00 PM | Microbial Communities - September 10th | Plant Microbiome: Harnessing Core Microbiome for Sustainable Agricultures | Brajesh Singh Professor, Western Sydney University |
| 10-Sep | 12:00 - 12:45 AM | Microbial Communities - September 10th | A novel strategy to investigate longitudinal changes within the gut microbiome: Insights from mouse models of sepsis and Alzheimer's disease | Candice M. Brown, PhD Assistant Professor, Department of Neuroscience and Rockefeller Neuroscience Institute, West Virginia University School of Medicine |
| 10-Sep | 12:00 - 12:45 AM | Infectious Disease - September 10th | Challenges in tracking horizontal gene transfer of antimicrobial resistance | Amy Mathers, MD, D(ABMM) Associate Professor of Medicine and Pathology, University of Virginia |
| 10-Sep | 12:00 - 12:45 AM | Infectious Disease - September 10th | Host responses to SARS-CoV-2 | Angela L. Rasmussen, PhD Associate Research Scientist, Center for Infection and Immunity, Columbia Mailman School of Public Health |
| 10-Sep | 12:00 - 12:45 AM | Infectious Disease - September 10th | Identifying and linking antimicrobial resistance genes in metagenomes with new DNA sequencing technologies | Derek Bickhart, PhD Research Microbiologist/Bioinformatician, US Department of Agriculture's Dairy Forage Research Center |
| 10-Sep | 12:00 - 12:45 AM | Microbial Communities - September 10th | Insights into Aquatic Biofilm Dynamics by High-Throughput Identification of Bacterial Isolates and Full-Length 16S rRNA Gene Surveys | Joerg Graf, PhD Professor and Associate Department Head, Molecular and Cell Biology, University of Connecticut |

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| 10-Sep | 12:00 - 12:45 AM | Microbial Communities - September 10th | Long read sequencing of the 16S-23S rRNA operon to characterize gut microbial changes associated with multiple sclerosis | Erin Longbrake, MD, PhD Assistant Professor of Neurology, Yale University |
| 10-Sep | 12:00 - 12:45 AM | Microbial Communities - September 10th | Precision infectious disease discovery using next-generation sequencing and AI to provide insights into respiratory, urine, and stool samples | Niamh O'Hara, PhD Co-founder and CEO of Biotia, Research Assistant Professor at SUNY Downstate Health Sciences University |
| 10-Sep | 12:00 - 12:45 AM | Infectious Disease - September 10th | Visualizing viral replication of oncogenic human herpesviruses | Lindsey M. Costantini, PhD Assistant Professor, Biological and Biomedical Sciences, North Carolina Central University |